President’s Message ~ Spring 2019

The weather this winter has been somewhat fickle with plenty of warmth, rain then snow and extreme cold. Weather fluctuations stress the bees and they tend to use more food stores if they are able to move. Hopefully you are monitoring your colonies and making sure they have plenty of feed. Keep a close eye on them and if you have any weak hives make plans to order packages or “nucs” early. Let’s hope that all of your varroa mite monitoring and treating this past season paid off and that we will have less colony loss to report this upcoming season.

The Mass Bee board of director’s have been preparing for our spring conference on March 16th at Topsfield Fairgrounds. We are planning a great program and a fabulous lunch for all tastes and appetites. ECBA is our host county and they do a great job preparing for all conference attendees’ comfort. The conference particulars follow in the newsletter with all the necessary registration forms and deadlines. We will also have the Friday evening meet and greet for early arrivals and vendors at the Bee Building at the Fairgrounds. This casual evening is usually great fun and you might even learn a little from our own Mel Gadd who will be speaking.

Please plan to attend and learn from our speakers. Bring along a friend. Beekeeper or not, there’s always plenty of information to absorb.

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Remember to place your product orders with the vendors early and they will bring your order with them and you’ll save on the cost of shipping. As always come prepared to ask plenty of questions for our speakers as well as other conference attendees. Again, we will ask attendees to give us feedback about the conference and request suggestions for future meetings. There will be an evaluation form and a box at the entrance of the hall that you can deposit your forms. See you at the conference!

Pete

Peter Delaney, President
Massachusetts Beekeepers Association

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Mass Bee Queen/Ambassador Program

The BoD at its meeting in January decided to expand the Honey Queen program to include Ambassador’s going forward. We are currently rewriting the rules so that both male and female can participate. (See the article from American Bee Journal about the Essex County Honey Ambassador.) The BoD realize that this is a very worthwhile program for our young beekeepers and pollinator concerned individuals.

I ask that all of our county presidents bring forward a candidate for consideration by the Mass Bee BoD’s. This will allow a young person to represent the beekeeping community at various venues across the state of Massachusetts. Additionally, these young individuals will be eligible for a scholarship allowing them to continue their education. With the cost of education any additional funds make a difference.

Our past Honey Queen did a tremendous job representing Massachusetts beekeepers across the State. She also was a contestant in the National Honey Queen program held by ABF in Myrtle Beach this past January. Check out some of her events on the Mass Bee Facebook page.

Please keep this program alive, send us your candidate!

Chris Delaney
Several years ago studying Natural Resources Management at an agricultural high school, I realized my deep interest in environmental science which I went on to continue studying in college. Throughout my education on the Earth and its systems, teachers have always provided snippets about the importance of bees and other pollinators at least here or there throughout the curriculum. Their vast benefits to the world and to our food system fascinated me, to the point where thinking about it sparked the idea to become a beekeeper. It only made sense, why wouldn’t I? I want to support a species that helps plants thrive and that make their own wax and honey? Being a kid living at home, I was then faced with the challenge of convincing my parents. A hive full of roughly 50,000 insects that can sting-living in the backyard? Imagine that conversation. “We can’t have bees, we live in a cape” was always their go to answer, claiming there wasn’t room in the yard. However, as I attended “bee school” for beginners and we joined our local beekeeping association, the dream began to seem more and more attainable.

One day when my mom was poking around online learning about the Essex County Beekeepers’ Association (ECBA) we had recently joined and the local Topsfield Fair, she stumbled upon a write-up about one of the previous Essex County Honey Ambassador. When I heard the phrase “Honey Ambassador”, I was hooked. I had to do it, even if at that point in time I had absolutely no idea what it actually meant. As I learned the duties associated with the role, educating people about bees and representing the Essex County Beekeepers’ Association, it only sounded better. I’m a large proponent of education, and having already jumped on the “Save the Bees” bandwagon this was the perfect chance to get involved. I applied, and the ECBA decided I was qualified enough to teach people about bees. You know Dr. Seuss’s Lorax who speaks for the trees? Well, as of now, I’m that guy but for the bees.

At home this is what I feel tipped the scales and made my mother finally agree to get a hive, so I ordered a package before my dad got the chance to say “No”. You may be saying, “How can a first-year beekeeper teach people about bees if he doesn’t know anything yet?”, but that is part of the beauty of this role. One doesn’t have to be an expert to be an ambassador, but only be someone who’s willing to learn. The ECBA had me attend their own beekeeping school to gain more knowledge, and being a first-year beekeeper only further embodied the idea that anyone can start up the hobby. Whenever I told people I’d only physically had bees at home for so many months, it made it clear that you don’t have to be a lifelong beekeeping master to support honey bees. The Honey Ambassador role is based on education, not on expertise. To me that’s very important, as it puts the educator and the student at the same level to create a more comfortable space to have conversations people can take something away from. Even if you just learn a little and plant some flowers, in my book you’re doing your part.

As the Essex County Honey Ambassador, the biggest event one attends is the previously mentioned Topsfield Fair. Our Bee Building has several activities for fair-goers including looking at observation hives, making your own beeswax candle, taking in a multitude of displays, and buying some delicious, local honey products. The Ambassador position may come with glamour, but as I was told, you have to work for that sash. In my opinion, this “work” was all fun. I got to interact with visitors at each of these stations throughout the fair. Honestly, is
there any better way to spend a day than answering questions about bees and being surrounded by beekeeping paraphernalia?

This year the Topsfield Fair was graced with the presence of not only the Massachusetts Honey Queen Desiree Gracie, but the American Honey Queen Kayla Fuselier. It was only fitting that we should have visiting royalty, as the Topsfield Fair is home to the largest Beekeeping and Honey Show in all of North America. Together, we did the rounds manning the stations of the Bee Building to promote positive visitor experiences. When you see someone wearing a sash, it’s pretty hard not to get excited. When people are excited, they’re more open to having a learning experience with new information. Even if they don’t take away anything new, it still helps people to have more fun. At the Topsfield Fair, that’s a big part of why we do what we do.

For those of you that haven’t done it before, let me tell you: Hanging out with other beekeepers, talking on and on about bees, and competing to see who can sell the most twelve-pound jars of honey is one heck of a good time. For those of you who have done it, I’m sure you agree. However, the positive memories made weren’t limited to volunteering in the building. The superintendents and administrators of the fairgrounds work to get Ambassadors and Honey Queens around to the highlights of the fair. We were able to ride the Morrisville Equine College 6-Horse Hitch, participate as judges in the Cock Crowing Contest (yes, it exists), see the Canadian Royal Mounted Police, attend special guest performances, and throw goodies to excited families while riding in parades (I only had to apologize about six times for accidentally hitting people in the head with honey candy). These are some of the perks that came with the role, but each of the numerous memorable events are difficult to describe fully in the richness they deserve.

On the county level, it’s my job to stay local and teach people about how awesome bees are in my area. On the state and national level, Desiree and Kayla are in charge of educating and advocating in their respective regions. In the past, Essex County had a “Honey Queen”, but the title was changed to “Honey Ambassador” to open the opportunity up to all genders. As of now, the state and national levels are only open to females. I’m immensely thankful that my community has done away with the gender limitation, as this has been an amazing opportunity that I’ve gotten a lot out of. Working alongside the American Honey Queen, I learned some of the things I didn’t know about bees (did you ever realize they have five eyes?). I got to see my local fair from a perspective I never could have imagined. I met so many people, not only beekeepers but folks around the fairgrounds from various attractions that I never would have gotten the chance to make friends with on a personal level had I not served in this role. It’s unique, and it lifts your spirits by yond cloud nine when you’re able to be a part of something as amazing as the Topsfield Fair, or any form of beekeeping education. I may not be able to advance beyond my county, but I would imagine the state and national level are equally as rewarding.

Looking back, I feel this role truly does help to to make a difference. Talking to a young woman at an observation hive, I explained how drones are kicked out of the hive for the winter. Then, as someone she didn’t even know approached, the woman started teaching the stranger about all she had learned just moments before. She did a darned good job, and I couldn’t help but smile. This demonstrated that what she learned would stick with her, and that she was starting to look at bees as more interesting than frightening. Even outside of the fair, I’ve seen my family beginning to change. From not wanting bees at all, my mom now comes out with me every time I open the hive so that she can take pictures. My dad asks questions, and is no longer afraid to use a leaf blower in the yard. My older brother, despite being stung, no longer tells me he’s going to set the hive on fire. Even my extended family and friends are interested, wanting to learn more about the bees (“Do they hibernate in the winter?”), and being taken aback when they hear something new (“Joez By, there’s THAT many of ‘em?”). I’m confident that the Honey Ambassador role has taught a lot of other people, who I do and don’t know, a lot more about bees. I believe that the more people there are out there who know how great honey bees are, the more people will support local beekeepers (thus supporting the hives) and step up to help “Save the Bees.” People. I’m looking forward to more opportunities to teach people about bees, and can’t wait for next year’s Fair.

Ryan Duggan is twenty years old and is currently enrolled at North Shore Community College in the Environmental Studies Program. After earning an Associate’s Degree he plans to then pursue a Bachelor’s, and ultimately become a park ranger or conservationist.

American Bee Journal
In January Representative Carolyn Dykema re-filed her pollinator protection bill from last session, \textit{H.4041}. The new bill, Docket number \textit{HD.3339 - An Act to protect Massachusetts pollinators}, has been co-sponsored by an unprecedented 153 legislators and Massachusetts Attorney General Maura Healey, easily surpassing the 135 cosponsors that \textit{H.4041} received in the previous session. Please note that \textit{HD.3339} is a docket number not a bill number. The next step is for the bill to be assigned to the Joint Committee on Environment, Natural Resources and Agriculture (ENRA) and to be assigned a bill number.

\textit{HD.3339} is essentially the same bill as its predecessor, \textit{H.4014}, with a couple of minor changes. It limits the use of the neonicotinoid class of systemic pesticides to licensed pesticide applicators only. It also contains a disclosure component that gives consumers the information they need to opt out of purchasing pesticide application services where neonicotinoids are used. The states of Maryland and Connecticut have already passed similar legislation and it is common sense legislation whose time has arrived.

As a result of the increasing public awareness of the negative environmental effects of pollinator habitat loss, neonicotinoids and glyphosate, there are at least eight bills that either or directly or indirectly impact pollinators if passed.

There are three bills that specifically target pollinators.

- \textit{HD.1857 - An Act to protect pollinator habitat}. Representative Mary Keefe.
- \textit{HD.3339 - An Act to protect Massachusetts pollinators}. Representative Carolyn Dykema.

There are also five other bills that, while not specifically targeting pollinators, will have a positive impact on pollinators if they pass.

- \textit{HD.291 - An Act empowering towns and cities to protect residents and the environment from harmful pesticides}. Representative Dylan Fernandes.
- \textit{SD.755 - An Act relative to the use of glyphosate on public lands}. Senator Jason Lewis.
- \textit{HD.1500 - An Act relative to improving pesticide protections for Massachusetts schoolchildren}. Representative Carmine Gentile.
- \textit{HD.1761 - An Act relative to the prohibition of the transfer or use of glyphosate in the Commonwealth}. Representative Carmine Gentile.
- \textit{SD.2175 - An Act empowering towns and cities to protect residents and the environment from harmful pesticides}. - Senator Julian Cyr. \textit{SD.2175} is a companion bill filed to demonstrate support for \textit{HD.291}.

Please note that these are all docket numbers, not bill numbers. All of these bills are likely to be assigned to ENRA and will be assigned bill numbers around that time. To learn more about the Massachusetts legislative process please refer to \textit{How An Idea Becomes A Law - Massachusetts Legislature}. 
TIPS FROM THE BEE INSPECTOR

By Ken Warchol

It seems that the summer and fall seasons flew by faster than usual. The bees have fared well going into the winter months, which are always the most trying. Mite counts throughout the summer, and even into the fall, were much lower than in recent years. My own counts remained low with my first treatment at the beginning of September, and even then, just reached treatment levels. The fall was a wet season, slowing down the nectar flow and leaving many colonies without a large store of honey meaning they had to be fed to ensure sufficient wintering stores. Pollen stores, likewise, were not what they have been in previous years requiring supplementary pollen feeding. This may be the reason that brood rearing ended rather abruptly by the third week of October which was interesting. Was this because of the shortage of pollen coming in this fall?

With all that being said—what should we be doing to keep our hives alive throughout the winter months? I would suggest hefting each side of our colonies to get an assessment of honey stores. Colonies should be very heavy when you heft, even almost impossible to lift. If they heft easily, you may need to consider feeding sugar patties earlier than usual to sustain the bees through the cold. If you do not know what your pollen stores are then you might consider inserting a pollen patty near the cluster. Open the outer cover gently, if you see the bees coming through the hole in the inner cover, they may be looking for honey especially once brood rearing starts. Your bees may have honey in the outside frames but may have depleted the honey stores in the middle where brood is being reared. They will not leave the brood, leaving them to starve.

During cold spells the bees cannot survive long without access to honey. I usually place my sugar patties on by the middle of January along with pollen. If they do not use them it usually means they have enough honey. Last year brood rearing started in late January—my thermometer in the hive was reading 90 degrees in the cluster. Once they start brood rearing, they need a steady supply of pollen to feed the young larva. During the cold spells they often cannot get to pollen stores down below.

Another task of wintering is to check the inner cover for moisture. If there is a lot of moisture you need to better ventilate. I like to put popsicle sticks on the four corners of the top brood chamber and the inner cover on those. This does the job for me. Another tip is to take a wire hanger and pull out the dead bees blocking the entrance preventing the flow of air to ventilate the hive.

I also recommend closing your screened bottom board during the winter months to avoid an excessive wind tunnel which may cause your bee cluster to break up. If you experience heavy winds blowing at your hive you may want to put a blockade, such as hay bales, six feet in front of your hive entrance or a stockade type of fencing.

Check your sugar patties and pollen patties once a week as I have had clusters consume one a week when they have run out of stores. Place the patty on wax paper just overlaying the cluster by 6 inches where they can warm it up.

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Now kick back, build your equipment, read some bee books and attend winter meetings before the busy season begins in March. Remember—beekeeping is a constant challenge. To think you can get things perfect and they will stay that way, is a mistake. You must always be there for your bees. Do not let them down this winter. If they came through the fall in good shape, keep it that way with good winter management.

—Happy Wintering, Ken

I predict: Brood rearing will start earlier this year because the bees ended brood rearing early in October and that means less young bees by February and March.

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Experimental Approach to Capturing Small Hive Beetles: EXTERNAL ATTRACTANT TRAP

As most people are aware, we have seen a major increase in the number of hives being infected with Small Hive Beetles in the Northeast. As climate change continues to affect our region specifically, one of the results has been that optimal conditions for small hive beetle growth has increased drastically and is starting to become a serious problem to our regions beekeeping practices. We as beekeepers will have to add this issue to the many that we already have to deal with in order to insure the health of our honeybees. To help deal with this increasing problem I bring up a new tool that has been developed to deal with the small hive beetle problem.

Based upon a recently completed study performed under the auspices of AgriFutures Australia a new recommendation for capturing of Small Hive Beetles prior to their entering the beehive has been issued in Australia. The research suggests that instead of trying to capture the small hive beetles within the hive, a more efficient and effective approach would be to capture the small hive beetles prior to their entering the hive. The study reviewed a number of different possible approaches to accomplishing this, with the final

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recommendation being to use some form of baited trap on the outside of the hive, thereby capturing the small hive beetles prior to their entering and infecting the hive itself.

The basic approach recommended is to use a commercially available lantern trap with a simple yeast-based attractant mixture deployed strategically from Spring to Autumn to intercept and trap the SHB flying towards an apiary.

Lantern trap (fly trap) is filled with the following attractant mixture - Attractant Recipe:

1 tsp  Baking Yeast
2 Tbsp  Granulated Sugar
1 Tbsp  Raw Honey
1 Cup  Water

Pour this mixture into the Lantern trap and hang the trap, hopefully from a tree branch between 65-300 feet from your hives.

A brief You Tube video can be found at the link listed below showing how to deploy this SHB trap.

https://www.youtube.com/watch?v=YHUmK5SlzXU&t

For those interested in reviewing the full study, a free pdf copy of the study can be downloaded at:


As part of my work at Mass Audubon Drumlin Farm, I am planning on setting up a test program using this approach during the 2019 Beekeeping season. As with as number of the other studies we have been implementing under the Drumlin Beekeeping program, I will report upon our findings using this approach at the end of the beekeeping season.

Mel Gadd
Mass Audubon Drumlin Farm Beekeeper

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Small Hive Beetles (SHB)

**Fig. 1.** SHB adults are often observed in the hive with their head and antennae tucked down beneath the thorax. They are oblong in shape, around 6 mm long, and with variable coloration that ranges from tan to reddish-brown, dark brown or black.

**Fig. 2.** SHB larvae will grow to about 1/2" in length. They possess 3 pairs of well-developed legs and have rows of short spines projecting from their bodies.

Source for figures and descriptions: https://articles.extension.org/pages/60425/managing-small-hive-beetles
Are You Planning on Celebrating World Bee Day?

Is Your County Bee Club or Other Bee-Loving Organization Planning on Celebrating the 2nd Annual World Bee Day? If so, Mass Bee Wants to Highlight Your Efforts in the Fall 2019 Newsletter.

What is World Bee Day and Why 20 May?

World Bee Day is an international initiative to raise awareness of the importance of bees and beekeeping and help improve conditions for bees and other pollinators.

Slovenia originally proposed to the United Nations (UN) that they proclaim 20 May as World Bee Day. On 20 December 2017, the UN Member States unanimously approved Slovenia’s proposal, thus proclaiming 20 May as World Bee Day. The initiative was supported by all UN states, while 115 countries also acted as co-sponsors, including major countries such as the USA, Canada, China, Russia, India, Brazil, Argentina, Australia, and all EU Member States.

Slovenia proposed May because it is the time of the year that the northern hemisphere sees bees and nature develop profusely, while the southern hemisphere enters autumn, when hive products are harvested, and the season of honey and honey-based products begins. They chose the 20th of May because it is the birthday of Anton Janša (1734–1773), a Slovenian beekeeper, the pioneer of modern beekeeping.

Bees as Part of a Bigger Picture

The main purpose of World Bee Day is to have at least one day devoted to raising awareness around the world about the importance of bees and other pollinators for humankind. While it is a day to celebrate the importance of bees, it is also an opportunity to discuss bees as part of a larger picture on bee conservation, sustainable farming and living, and the global drive to combat hunger.

As part of the first observance of World Bee Day, an international ministerial conference on the significance of bees and other pollinators for sustainable agriculture and food security was held on 19 May 2018 in Brdo pri Kranju. Ministers and representatives from 22 countries from all continents and representatives of international
organizations discussed the situation, activities, and the required measures to protect bees in the world. In the joint declaration, the ministers stressed that bees play an important role in sustainable agricultural production and food security. They are also important for conserving the environment because their work contributes to biodiversity and a greater diversity of species and genetic diversity. Pollination is an important activity in the ecosystem, and it allows small producers and vulnerable groups, mainly women and young people, to engage in agricultural production, thus ensuring a more stable income and their easier survival. As a result, this contributes to the development of the countryside where the majority of the impoverished and famished population of the world lives. Among other things, bee-keeping creates new, green jobs and opportunities for young people and women, such as the development of bee-keeping tourism, bee products with added value, and apitherapy.

How Can You and/or Your Organizations Help?

There are a lot of different ways groups and individuals can celebrate World Bee Day and support the goals of the initiative including hosting or participating in community events to talk about the importance of bees - World Bee Day has provided a PowerPoint presentation to help!  [https://worldbeeday.org/files/PPT_WBD_EN.pptx](https://worldbeeday.org/files/PPT_WBD_EN.pptx)

A suggestion is that beekeeping associations contact kindergartens and schools to organize potential activities including:

- Visits to beekeepers to become acquainted with their work
- Learning about honey and hive products
- Learning about nectar-bearing plants
- Making and setting up a farm for bees and other pollinators in your home garden, yard, terrace, etc.
- Preparing a breakfast that contains honey and other hive products
- Organizing art competitions on the topic of beekeeping and pollinators

Beekeeping associations can also promote the principle that every individual can contribute to the preservation of bees and other pollinators through any of the following actions:

- **Plant nectar-bearing flowers** for decorative purposes on balconies, terraces, and gardens.
- **Buy honey and other hive products** from your nearest local beekeeper.
- **Raise awareness among children and adolescents** on the importance of bees and **express your support for beekeepers**.
- **Set up a pollinator farm** on your balcony, terrace, or garden; you can either make it yourself or buy at any home furnishings store.
- **Preserve old meadows** – which feature a more diverse array of flowers – and **sow nectar-bearing plants**.
- **Cut grass on meadows only after the nectar-bearing plants have finished blooming**.
- **Offer suitable farming locations** for the temporary or permanent settlement of bees so that they have suitable pasture; as a consequence, they will pollinate our plants, which will thereby bear more fruit.

And don’t forget to [send us the photos](correspondingsecretary@massbee.org) of your event so we can showcase them in the Fall 2019 Newsletter!
The 10th Annual Greenfield Langstroth Bee Festival
Saturday, June 1st 2019 (9:00 am – 12:00 noon)

As many of you know, Lorenzo Langstroth spent much of his life in Massachusetts. From 1836 to 1839, Langstroth resided as Pastor of the South Congregational Church in Andover. Also, in Andover, Langstroth was the principal of Abbot Academy, the first incorporated educational institute for girls and young women in New England.

In 1839, Langstroth moved to Greenfield, MA and became Headmaster of the Greenfield School for Girls. In 1843, he was installed as pastor of the Second Congregational Church in Greenfield. Langstroth developed the moveable frame beehive and in 1852 he received the patent on the “Langstroth Hive”. In 1853, Langstroth wrote the instructional beekeeping manual “The Hive and the Honey Bee” which was first published in Northampton, MA.

To honor Lorenzo Langstroth’s life, each year Greenfield and other Franklin County towns celebrate Bee Week. This year is the tenth annual Greenfield Langstroth Bee Festival, which will be held at Second Congregational Church in Greenfield on June 1 from 9 a.m. to noon.

This year an arts grant was received to produce six large scale Fiberglas bee sculptures which will be installed on the downtown Greenfield sidewalks. You may have seen downtown permanent public art installations such as Cows in Vermont cities, Sneakers near the Springfield’s Basketball Hall of Fame or Clam Shells on Cape Cod. The bee sculptures will rest on a three-foot cubic bases, their height will be exceed five feet tall. The bee sculptures will be professionally decorated by local artists.

To alleviate costs, a sponsorship campaign was designed. The $2,500 sponsorship covers the cost of creating the sculpture, commissioning the artist and sidewalk installation.

In an effort to support Langstroth’s legacy, we are looking to execute an “Umbrella Sponsorship” having Massachusetts Beekeepers Association and County Bee Clubs contribute the needed monies towards one sponsorship. Each participating County Club will be recognized as a supporter and named on a plaque on the base of the bee sculpture in perpetuity. The photo is a 3D-printed mock-up of the unpainted bee sculpture.

Yours in Fellowship,

Dan Conlon - Warm Colors Apiary    Franklin County Beekeepers – President
Tom Graney - Franklin County Beekeepers Association Treasurer
Connie Clarke - Franklin County Beekeepers

Please send your checks made out to:
   Franklin County Beekeepers Assoc.
   c/o Tom Graney
   206 Mill Village Road Deerfield, Ma 01342
New Resource Available for Applied Materials!

Mass Bee has a newly formed committee to help answer questions about directly or indirectly applied materials (products and chemicals/pesticides) used either by the beekeeper or that the bees may be exposed to when foraging. The committee is chaired by Wayne Andrews who many of you already know and may have contacted in the past on these types of issues. Wayne is an entomologist, master beekeeper, bee detective, and past vice president of Mass Bee. Joining Wayne on the Committee are Renea Barton, Dick Callahan and Cliff Youse.

The purposes of this committee are to provide assistance to beekeepers with specific questions about applied materials, provide unbiased information to the MBA beekeeping community through articles in the MBA newsletters and if timing is a necessity, provide notices via the Mass Bee Facebook page and MBA Membership email, and provide assistance in interfacing with MDARs Pesticide Program staff. The intent is that this committee is a collaborative committee designed to share information. If you would like to join the committee or give ideas on topics or other suggestions on how this committee can best serve the MBA beekeeping communities, please contact Wayne at appmat@massbee.org and/or come to the March 16th Spring 2019 Meeting in Topsfield, MA and talk directly with the team.

UMass Extension Update

1) Visit our new website! https://ag.umass.edu/resources/pollinators
   Use the site to find information about pollinator research and upcoming workshops at UMass, and to discover recommended web resources about honey bees.

2) Check out the first article of The Research Buzz in this edition of the Mass Bee newsletter. It is a recurring column where I highlight new and interesting bee research.

3) Explore our upcoming workshops in the events section of this newsletter!

How to get in touch

If you have any questions or comments, please reach out to me at: hwhitehead@umass.edu
Also - I’m trying to meet as many beekeepers as I can, so please reach out if you’d like me to speak at your club meeting!

Hanna Whitehead, M.S. Honey Bee Extension Educator
University of Massachusetts Amherst
Biology/221 Morrill, 611 N. Pleasant St.
Amherst, MA 01003
Email: hwhitehead@umass.edu
Welcome to the first article of The Research Buzz, a recurring column where I will summarize some of the newest and coolest in honey bee research. For all studies, I will provide a link to the full research paper so that you can dive deeper. If you can’t access the full paper from your home computer, you can usually download it for free at your local library or university. Of course, don’t worry if you don’t have time to track down academic papers – that’s why I’m providing the highlights!

Each Research Buzz will highlight five new studies. For some of the studies, I will link to a more detailed description on the UMass Extension website. This first installment brings you some interesting research about Varroa mite biology, locally adapted genetics, the meaning of a “good” brood pattern, and some fun facts about bee behavior during a solar eclipse!

1 Re-Thinking Varroa

Researchers from the University of Maryland showed that Varroa mites feed on honey bee fat bodies and not hemolymph. Sam Ramsey spoke about this research at the Mass Bee Fall Conference, so it may not be news to many of you, but this is an EXTREMELY IMPORTANT paper, overturning a 50-year old “fact” and changing the way we think about the relationship between honey bees and Varroa mites.

Why is this research important?

This discovery has huge implications for Varroa research and control. Fat body tissue detoxifies harmful compounds, plays a role in bee development, and synthesizes and stores proteins and fats (including antimicrobial compounds and wax precursors). This research explains why Varroa infested bees have a lower pesticide tolerance, lowered immune response, lowered ability to store protein and synthesize fat, and earlier foraging. It suggests that it is important to treat for Varroa as early as possible to have healthy bees going into winter! This discovery will hopefully pave the way to new Varroa control methods.

You can read a more detailed summary on the UMass website here. If you missed Sam’s talk, you can watch a short video here. Or you can read the full study here.
A New Science-Based Guide to Hive Care

The Honey Bee Health coalition recently published a list of Best Management Practices for hive health! It is long, but does a good job summarizing the latest knowledge on honey bee management and is well worth exploring. (TIP: to make this guide more manageable, skip to the sections that you are most interested in – no need to read it from cover to cover!).

You can find the full guide here.

Comparing Northern and Southern Queens

A research team from Penn State University compared the performance of queens bred in southern vs. northern regions at three apiaries in a northern climate (central PA). They found that queen origin did not impact colony weight, population or overwintering success. However, colonies that were heavier and more populous in the fall were more likely to survive the winter. In fact, apiary location, not genetic stock, was most related to hive size, honey stores, and overwintering success. The researchers concluded that floral resources and fall weight/population may be more important for overwintering success than queen origin.

Why is this research important?

In a previous study from the northern US, packages that were re-queened with stock from northern queen breeders had better overwintering success compared to colonies left with the original “package” queen (more info here). This study is different because it compares northern and southern queens from queen breeders (rather than package producers). It suggests that, when comparing carefully-selected queens from different regions, floral resources may have a bigger impact than genetic stock. The researchers point out that larger clusters have an advantage going into winter: they are able to maintain the same temperature as smaller clusters while consuming less honey. Overall, this study underscores the importance of going into winter with a robust population and adequate honey stores.

Read a more detailed description on the UMass Extension site here. Read the full study here.
Can Brood Pattern Tell us about Queen Quality?

A research team from the University of Minnesota explored the relationship between brood pattern and queen quality. The researchers found no differences in queen size or sperm quantity/viability between good-brood and poor-brood hives. They also found no differences in Nosema, Varroa or virus levels. However, when choosing colonies, the researchers found it hard to select poor-brood colonies that did not have clinical signs of brood disease. They also found that the number of pesticide residues was higher in poor-brood colonies. Additionally, the brood pattern of poor-brood queens improved significantly when they were transferred into good-brood colonies, suggesting that environmental conditions might affect brood pattern.

Why is this research important?

Many beekeepers and queen breeders use brood pattern as a tool for choosing high-quality queens (find more info about brood pattern here). This study suggests that a poor brood pattern might be more related to environmental factors (like brood diseases and pesticides) than queen failure. The researchers propose other factors (irregular egg-laying, supersedure, low brood production, etc.) that may be more reliable than brood-pattern for diagnosing queen failure. However, certain genetic lines may be more or less susceptible to brood diseases, which do affect brood pattern. In short, more research is needed to understand the complex interactions between genetics and environment.

Read a more detailed description on the UMass website here. Find the full article here.

What do Bees do During a Solar Eclipse?

A team of researchers studied bee navigation during the total solar eclipse of August 2017. They found that foraging decreased during the eclipse but did not totally stop. The number of bees returning to the hive increased before the eclipse, and decreased during the totality of the eclipse, suggesting that the bees’ homing behavior may be impaired during a total eclipse – and that bees might treat the eclipse similar to other adverse weather conditions.

You can find the full article here.

Contact: Hannah Whitehead, UMass Extension, hwhitehead@umass.edu
Message from Kim Skyrm, MA Chief Apiary Inspector

We have been busy with field work evaluating Dead-Outs this week and providing trainings. As a result, I do not have any updates on Regulations yet to share except that they are still being reviewed internally.

Upcoming MDAR events (each on a Saturday from 10am-noon unless otherwise noted):

- April 13th – Winter Evaluation and Spring Management Part 1 – State Apiary Amherst only (Danvers apiary colonies will not be installed in time for workshops)
- May 11th – Spring Management, Part 2
- May 18th – Queen Workshop I – State Apiary Amherst
- May 25th – Queen Workshop II – State Apiary Amherst
- June 8th – Summer Management
- July 13th – Pest, Parasites and Pathogens
- August 10th – Fall Management, Part 1
- Sept 14th – Fall Management, Part 2
- Sept 21st – Honey Extraction – 10 am-2pm; Location TBD
- October 12th – Winter Prep

More information is available at our State Apiary webpage as well: https://www.mass.gov/service-details/mdar-state-apiaries

Currently, we are only offering health inspections for the following:

- Dead-Out/Dead Colony
- Emergency Issue (must consists of mass mortality, sudden death, or unexpected weakened state causing mortality)
- Any other colony/hive state that is not at risk of causing brood damage or health issue if opened during inclement weather conditions

Our inspection staff will resume normal live hive inspections starting April 1st, 2019 as weather permits. We look forward to supporting you and your honey bees this season!

- MDAR Apiary Program Bee Team

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Kim Skyrm, Ph.D. Chief Apiary Inspector/Apiary Program Coordinator
Massachusetts Department of Agricultural Resources (MDAR)
101 University Dr, Suite C4
Amherst, MA 01002
email: Kim.Skyrm@state.ma.us
office: 413-548-1905 fax: 413-548-1901 cell: 857-319-1020
MASSACHUSETTS BEEKEEPERS SHINE AT 2019 GOOD FOOD AWARDS

In January 2019, the nation’s leading food crafters, grocers, chefs, journalists and activists gathered tonight at a gala Awards Ceremony in San Francisco to honor the 220 Good Food Awards winners of 2019. An annual recognition program now in its ninth year, the Good Food Awards celebrates American food and drink crafters who demonstrate a commitment to creating tasty, authentic and responsible products and in doing so, bettering our nation’s food system. Each of the 2019 winners demonstrates both a mastery of their craft and a commitment to maintaining exceptionally high social and environmental standards in their work.

This year, the Good Food Awards distinguished makes in sixteen categories (beer, charcuterie, cheese, chocolate, cider, coffee, confections, elixirs, fish, honey, oils, pantry, pickles, preserves, snacks, spirits). The 2019 winners come from 34 states and Washington, D.C., rising to the top amongst 2,035 entries in a blind tasting with 262 judges held in September. The highest scoring entries underwent a rigorous vetting process to verify they were not only exceptionally tasty but met the sustainability and social responsibility criteria required to become a Good Food Award winner. Of the 220 winners selected from 324 finalists, 55% are first time winners. The greatest number of winners come from the Golden State, followed by Oregon (25), Washington (19), Massachusetts (12) and a three-way tie between Virginia, New York and Colorado (11 each). Following closely were Vermont and Missouri (10 each).

For more information about the Good Food Awards or events visit https://goodfoodfdn.org. Congratulations to our very own Massachusetts beekeeper awardees:

- **Beverly Bees** - Honey - Raw MA Wildflower Honey & Comb, Beverly
- **C&C Orchards** - Honey – Wildflower Honey, Sunderland
- **Tewksbury Honey** - Honey - Spring Harvest 2018, Tewksbury

~Thanks to Kim Skyrm for sharing the good news!~
MARCH 16, 2019
8AM-5PM

SAVE THE DATE FOR:

MASS BEE SPRING 2019 MEETING

HOSTED BY ESSEX COUNTY BEEKEEPERS ASSOCIATION

Mass Bee Presents:

Speakers: Dr. Robert Bruker from the Rowland Institute, at Harvard University, Rick Reault owner/operator of New England Beekeeping/Carlisle Honey, and Angela Roell of Yard Birds Farm in Montague, MA, will be featured at this year’s Spring Meeting in Topsfield, MA. The day will also showcase vendors and include a cookie contest (entries available to eat following judging), and raffle.

Please visit the Mass Bee and Essex County Beekeepers Association websites for more information including meeting and lunch registration forms.

Topsfield Fairgrounds
Coolidge Hall
US Route 1
207 Boston Street
Topsfield MA 01983

WWW.MASSBEE.ORG

www.essexcountybeekeepers.org
Mass Bee Spring 2019 Meeting Details
Saturday, March 16, 2019         8 AM – 4 PM
Topsfield Fairgrounds, Coolidge Hall,
US Route 1, Topsfield MA

Come join us for an outstanding educational event hosted by Essex County Beekeepers Association!

SPEAKERS

Rick Reault  is the owner/operator of New England Beekeeping/
Carlisle Honey/Tyng Town Mead, and the past President of Middlesex County and Massachusetts State
Beekeeping Association and a longtime member of Essex County Beekeepers.
Rick's presentation:
Creating a Beekeeping Business

Dr. Robert Brucker  is a Junior Fellow at the Rowland Institute at Harvard, Harvard University and
founder of the Brucker Lab.
Dr. Brucker's presentation:
The Heritable Effects of Acute Pesticide Poisoning

Angela Roell  is an educator, evaluator, facilitator, organizer, author and beekeeper running a apiary
and apicultural business (Yard Birds Farm and Bees).
Angela’s presentations:
Planning for Regenerative Apiary Management in the Northeast
Climate Resilient Beekeeping

CONFIRMED VENDORS

* BETTERBEE  * SOLUTIONBEE  * BEE WEAR CLOTHING
* MANN LAKE   * VERMONT QUILT BEE  * SLOVENIAN BEEKEEPING TOURS & HIVES
* STARHART HOLLOW

(Please contact the correspondingsecretary@massbee.org if you are interested in being a vendor.)

COOKIE CONTEST!

Mass Bee and the Essex County Beekeepers Association (ECBA) welcome beekeepers
to submit cookie samples for this year's cooking contest. Your entries will be tasted and
evaluated by a panel of judges who will decide which entries stand out above the rest.
There will be first, second and third place winners. To enter the contest, please provide 24 cookies (minimum) of
any type. The only requirement is that 25% of the sweetener must be honey. After the judging, the cookies will be
shared with meeting attendees.
Preregistration for event encouraged in order to provide Mass Bee with an estimated headcount. Register at: https://www.massbee.org

All attendees must be current Mass Bee members or current high school. If you are not currently a member or student, you can join online or pay for membership at the door ($15 for individual, $25 for family and $50 for organization.) Payments by credit card are accepted on our web site via Mass Bee’s online membership form → https://www.massbee.org/membership/

**LUNCH OFFERING:**
Soup, Green Salad, Pasta Salad, cold cut platter, lettuce & tomato platter, condiments, chips, water, coffee, tea and dessert cookie, cupcake tray ($12 per/person)

Advance registration for lunch is required – lunches will not be available for purchase at the event.

Register for lunch by Friday MARCH 8th at https://www.massbee.org/events/spring-meeting/

**Friday March 15, 2019**
**SPEAKERS DINNER**
Bee Building at the Topsfield Fairgrounds

6:00 PM: Social Greeting: Appetizers, Beer & Wine, Dinner – Soup, Green Salad, Rolls, Italian Buffet, water and coffee & dessert ($17. Per/person, prior reservation required)

7:30 PM: Speaker: Mel Gadd will be discussing mushrooms as a natural approach to treating honey bees for viruses and Varroa mite problems.

Registration Required

**AREA ACCOMMODATIONS**

- SpringHill Suites by Marriott Boston-Peabody
  Address: (US 1 North), 43 Newbury St, Peabody, MA 01960
  Phone: (978) 535-5000

- Homewood Suites by Hilton Boston-Peabody
  Address: 57 Newbury St, Peabody, MA 01960
  Phone: (978) 536-5050

- Hampton Inn
  Boston-Peabody
  Address: 59 Newbury St, Peabody, MA 01960
  Phone: (978) 536-2020

**Silent Auction items needed - Please bring your donated items Saturday morning during registration.**

RSVP by MARCH 8th for the Speakers’ Dinner at: https://www.massbee.org/events/spring-meeting/
SAVE THE DATES! Upcoming Events, Meetings & More
(All events on Saturday unless otherwise noted)

*Thursday February 21st – Dan Conlon “Getting Ready for Packages & Nucs/Care and Feeding Tips” – Franklin County Beekeepers

*Sunday February 24th – 12th Annual Agriculture & Food Conference, hosted by SEMAP with workshops presented by members of Mass Bee, Bristol County Agricultural High School

*March 2nd (10am-12pm) – WCBA All Day Conference featuring Marla Spivak, Grafton High School, Grafton MA.

*March 9th (10am-12pm) – Varroa Mite IPM (sponsored by UMass Extension and MDAR), Berkshire Botanic Gardens, Stockbridge MA

*March 16th – Mass Bee Spring Meeting, Topsfield Fair Grounds

*Thursday March 21st – Judy Turner “Swarming/Prevention & Control” – Franklin County Beekeepers

*March 27th (9:30am-3pm) - Ag Day On The Hill (hosted by Massachusetts Farm Bureau), Massachusetts State House, 24 Beacon St., Boston, MA

*April 6th (10am-4pm) – Honey Bees Under the Microscope (UMass Extension with MDAR) – Adler Lab, UMass Amherst, Amherst MA


*April 18th - Rick Church “Bee Math” – Franklin County Beekeepers

*May 11th – MDAR’s Spring Management, Part 2, MDAR, UMass Amherst

*May - TBD – “Learn How to Fight the Mite!” (hosted by UMass Extension and MDAR)

*May 11th – MDAR’s “Hive Dive” Spring Management Part 2 – UMass Amherst

*May 18th – MDAR’s Queen Workshop I – UMass Amherst

*May 25th – MDAR’s Queen Workshop II – UMass Amherst

*June 1st – Langstroth Bee Fest, Greenfield

* June 8th – MDAR’s “Hive Dive” Summer Management – UMass Amherst

*June 15th – Mass Bee Field Day – UMass Amherst

*July 13th – MDAR’s Pests, Parasites and Pathogens – UMass Amherst

*August 10th – MDAR’s Fall Management, Part 1 – UMass Amherst

*September 8-12 – 46th APIMODIA, Montreal, Quebec, Canada

*September 14th – MDAR’s Fall Management, Part 2 – UMass Amherst

*September 21st (10 AM -2 PM) – MDAR’s Honey Extraction - Location TBD

*October 12th – MDAR’s Winter Prep

*Saturday November 16th – Mass Bee Fall 2019 Meeting (hosted by Norfolk County Beekeepers Association)

If you have an event you would like listed in the next newsletter, please contact correspondingsecretary@massbee.org
Beekeeping Tips*

**February:**
- Late in the month, some queens may start to lay eggs. As a result, the hive will consume food faster than in January.
- Check wintering colonies for honey reserves by hefting the hive or peeking in on a warm day with no wind. Feed sugar candy, or dry sugar if needed. Continue checking entrances for blockages of bees and/or snow.
- Do not remove any frames, as this will chill the brood. If the colony is light on honey reserves, you may want to consider emergency feeding options (sugar patties/fondant).
- You might also consider placing a pollen patty on top of the upper hive body. This will really work well if the end of winter is extremely mild and there are many warm days. Pollen patties stimulate the laying of more eggs. However, if the weather turns cold again, then the bees may not be able to keep this early brood warm and fed. So, it is a gamble this early.
- Consider treating hives with oxalic acid. Record mite drops in the following two weeks to let you know how badly your colony is infected.
- Plan what you want to do with your apiary in the coming year.

**March:**
- If the hive was low on honey going into winter, then March is the month they may starve out. They have probably moved all the way up in the hive and their overall population is very low due to normal die-outs throughout the winter.
- The bees are going to be flying more in March, and they will find pollen as the month passes.
- The queen’s rate of egg laying will begin to increase in mid-March. The entire hive will begin to return to an almost normal operation now - there will be cold snaps, but the bees will do fine as they begin to expand.
- Their need for food will rapidly increase. **Continue to monitor and feed as needed through month.**
- If temperatures are warm enough place frame or top feeders on the hive and feed 1:1 sugar water.
- **Feed pollen substitute to strong hives with plenty of honey stores in mid-March.**
- March may provide you with a few days when the temperature will rise to 60 degrees or higher. At this temperature you can look in the hive and pull out a few frames. Keep in mind that since there is not a heavy nectar flow, and since it is cooler, the bees might be a bit more aggressive. Beekeepers are stung more during these cold inspections than the rest of the year. So, wear protective gear.
- Set up equipment for new packages/nucs.
- Install bear fences if your apiaries are in areas with high bear activity.

*Pollinator Friendly Plants: Snow Crocus, Hellebore, Hazelnut*

**April:**
- April begins the busiest season for the beekeeper.
- Brood production is ramping up this month. A few good pollen and nectar sources will start blooming, but poor weather may hinder the ability of foragers to access it.
- Continue monitoring food reserves and feed light syrup (1:1) inside the hive if necessary. Keep feeding your weaker hives until the heavy nectar flow is in progress; feeding helps the bees build up. No supers should be

*These are general suggestions. Each year is different, and each colony is different and hive management should be based on weather and individual hive conditions. Talk to your mentor or bee club leaders if you have any questions.

[Information sources – various including the Maine Beekeepers Association, Cornell University, Northern Neck Beekeepers.]
Beekeeping Tips* (continued)

April (continued from previous page):

on your weaker hives yet, so their intake of sugar is not going into your honey product. You are just feeding to help the hive off to a great start. Keep the pollen patties on top, too.

- Scrape bottom boards and quickly check the brood pattern on a mild day (calm and above 50F).
- If weather permits, sample wintered colonies for varroa mites using sugar or alcohol roll and if Varroa are detected above threshold apply mite treatments appropriate for the weather. (Read and follow product label directions, including safety instructions, carefully.) Avoid using a treatment like formic acid at this time of year as it could kill the queen.
- Some parts of April can be cold and wet which means that your bees may have limited opportunities to fly out for food. So, you must continue to inspect the hive to be sure they have enough food stores. Also, when temperatures reach 60 degrees or higher, inspect your hive for any abnormalities and take appropriate action based upon the condition of the individual hive. You want to see a solid brood laying pattern from your queen. If not, consider replacing her now.
- A majority of packages will be installed during the month of April. Make sure that you are familiar with the requirements for starting packages and provide sufficient care to ensure their success. Feed light syrup and continue feeding nucs and package bees until they have drawn out the comb in their brood chambers.
- Once your bees are no longer taking the sugar feeding, discontinue, put supers on, as the bees are now collecting nectar from a growing number of sources; maple trees, locust trees and other early spring flowering plants and trees.
- April is a great time to consider equalizing your hives. A weak hive is an invitation for pests and disease.
- RED ALERT!! BEES CAN SWARM/BEGIN SWARMING PREPARATIONS IN APRIL (sometimes late March!) You will have to implement a swarm management strategy. There are various steps that can be taken to try to prevent swarming. It is important to keep in mind that you must provide room for your hive to expand. You can put on honey supers in early April (or earlier depending on the strength of your colony). Some experts think it is good practice to have a minimum of two drawn honey supers on all hives during the nectar season; however, three or four supers may be even better for super strong colonies. Don't wait to add your supers or you may miss particular nectar flows.
- Consider having extra, empty hives on hand so you'll be able to capture a swarm. You will want to capture your own swarms, or you will probably receive phone calls once your neighbors learn you are a beekeeper.

Pollinator Friendly Plants: Crocus, Siberian Squill, Dandelion, Andromeda

*These are general suggestions. Each year is different, and each colony is different and hive management should be based on weather and individual hive conditions. Talk to your mentor or bee club leaders if you have any questions.

[Information sources – various including the Maine Beekeepers Association, Cornell University, Northern Neck Beekeepers.]
Honey Request - AG DAY ON THE HILL – Spring 2019

Every year MASS BEE sends a contingent of Beekeepers to the State House to distribute small jars of Honey to all the state Legislators and Representatives.

We need your help to accomplish this task; I am requesting that each county club contribute two cases of ½ lbs. glass jars of UNLABELED honey for our distribution.

2019 Labels will be printed; each County that contributes will be named on this label.

This donation is needed in early March 2019. In recent years the following clubs and companies have contributed:

Berkshire County,
Franklin County
Norfolk county
Plymouth county
Worcester County
Merrimack Valley Apiaries

I plan on attending the spring Mass Bee meeting in March to accept your clubs donation.

Please feel free to reach out to me with any questions or concerns.

Thank you!
Susan Robinson  
smrbus10@msn.com
It’s time to renew your Mass Bee Membership!

We are now accepting online applications! This makes it easy to join & keep dues and information up to date using a credit card. The form can be accessed here: https://www.massbee.org/membership/

2019 Mass Bee Board Members:

President: Peter Delaney 978-887-5726 president@massbee.org
Vice President: Mary Duane 508 335 0433 vicepresident@massbee.org
Recording Secretary: Alexandra Bartsch recordingsecretary@massbee.org
Corresponding Secretary: Kitty de Groot 508-308-1453 correspondingsecretary@massbee.org
Treasurer: Alexander Rancourt 339-244-1022 treasurer@massbee.org
Registrar: Evelyn Schraft 401-573-9480 registrar@massbee.org
Program/Communications Director: Ed Szymanski 508-528-1317 webmaster@massbee.org
Applied Materials Committee - Wayne Andrews 508-824-8469 appmat@massbee.org

Web Site: www.massbee.org
Facebook: https://www.facebook.com/MassachusettsBeekeepers

Don’t forget to register for the Spring 2019 Meeting

https://www.massbee.org/events/spring-meeting/

Hope to see you there!
Become a Member of Mass Bee

Benefits of Mass Bee membership:

✓ Three Membership Meetings a Year
  - The Field Day at UMass in June. The Field Day is a tremendous event allowing interactive, hands-on bee demonstrations that give great confidence to attending beekeepers of all skill levels.
  - The Spring and Fall meetings. The location of these meetings moves from County to County allowing all areas of the State to participate. At these meetings we strive to bring you 2 keynote speakers on relevant beekeeping topics. While hosted by a County, Mass Bee covers the costs of the event (venue, speakers fees and travel, food, etc.).

✓ Legislative Support
  Monitoring and responding to issues arising both locally and State wide. This Committee is politically active meeting face to face with law makers and regulators to rally for and protect Honeybees and pollinators. Updates on issues are presented in each Mass Bee Newsletter.

✓ Pesticide Support/Advisory
  The Mass Bee board of directors newly created a voting member position of Director of Applied Materials. This position is a resource for all members and County Associations looking for the correct response to questions about the application of pesticides, fungicides, and herbicides.

✓ State Representation
  We speak for all beekeepers in Massachusetts and make our point of view to all the states in New England. We are paid memberships to all surrounding states, allowing us to keep members aware of surrounding States activities.

Our hope is that you continue to support Mass Bee with your membership and also become active members helping to guide and implement Mass Bee activities. Please join or renew your membership today.
Massachusetts Beekeepers Association Membership Application

Application Date: _____________________________
Check #: _______ Amount: _____________________
Membership Year: _____________________________
New: ____________ Renewal: _________________

All Memberships run from January 1st through December 31st in a given year.

NAME(S): __________________________________________________________________________

ORGANIZATION: _____________________________________________________________________

ANNUAL MEMBERSHIP TYPE:   Individual    $ 15.00  ____________
                                Family     $ 25.00  ____________
                                Organization $50.00  ____________

ADDRESS: __________________________________________________________________________
____________________________________________________________________________________

EMAIL #1: __________________________________________________________________________

EMAIL #2: __________________________________________________________________________

PHONE: ____________________________________________________________________________

County Beekeeping Association: _______________________________________________________

Completed applications along with payment made out to the “MBA” should be mailed to:

MBA Memberships
PO BOX 234,  Halifax, MA  02338

Applications may also be emailed to treasurer@massbee.org

This Membership Application can also be downloaded from our web site www.massbee.org

*Annual membership dues are subject to change; please check our web site for current information.*