



nnjbees.org

August 2018



NORTHEAST NEW JERSEY BEEKEEPERS ASSOCIATION OF NEW JERSEY

A division of New Jersey Beekeepers Association

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2 nd V. Pres.	Jaimie Winters	551-486-7479	Treasurer	Bob Jenkins	201-218-6537

Meeting on: **Friday, July 20th at 7:30 PM**

Location: **Ramapo College of NJ, 505 Ramapo Valley Rd., Mahwah, NJ 07430**

Bee Enthusiasts & Bee Curious Always Welcome! *Look for the Bee-u-tiful Yellow Signs*



Got Mites? Get Apivar!

The Club will be selling Apivar at

Friday's meeting.

Apivar 10-pack = \$35.00





Message from the President:

Hello Northeast NJ Beekeepers,

I hope you and your bees are ready for the hot and humid month of August. Beekeepers often refer to August as the start of the beekeeping year, because what you do this month will have a direct impact on how well your bees survive the winter and their honey making abilities for next spring.

August is when you have to make sure your bees are healthy and have plenty of stores for the winter months. The Cornell University Beekeeping Calendar for the Northeast says that a full-sized colony should have at least 70-90 pounds of honey to eat by the beginning of October. If your colonies feel light, or if you're in doubt, then feed feed feed. The club has arranged for a bulk order of Mann Lake Pro Sweet, which is a great option because it's 4-1 (sugar to water) ratio making it about as thick as honey and easy for the bees to store for winter. Feeding sugar syrup is also an option; only it requires the bees to remove most of the liquid before storing it.

August is also the month when everyone in our area needs to start aggressively monitoring and treating for varroa mites. Our colonies are already making preparations for winter, and varroa is the number one reason why colonies die in the winter months.

Beginning in August, the queen starts laying worker eggs that will develop into winter bees. Winter bees differ in their physiology compared to summer bees, and they are seen within a colony from August through November. In the summer, worker bees usually live up to six weeks, while winter bees have a much longer life expectancy, as they can live up to five months. Winter bees are also built differently than summer bees so they can better regulate the temperature in the brood nest and keep the colony warm throughout the winter. Winter bees have lower levels of juvenile hormone than summer bees, they have much larger hypopharyngeal glands, and most importantly, they have larger and more numerous fat body cells than summer bees. The fat body is what stores fat and glycogen (stored sugar) for energy production in times of food shortage.

Samuel Ramsey, from the University of Maryland, recently discovered that varroa mites are primarily feeding on the honeybee's fat body tissue, not its hemolymph ("bee blood"), as was once thought. Knowing that varroa lives off the fat bodies, and fat bodies are what bees need to survive the winter better explains why colonies die in the winter. Winter bees need their fat bodies to survive the cold, and a high varroa infestation means that the winter bees are just not equipped to survive.

This is why it is so important for everyone to aggressively monitor and treat for varroa. If your colonies have too many mites, then your bees will die this winter. Also, since we live in such a populated area it is even more important that everyone monitors and treats for mites. Colonies that go untreated will become mite bombs that will infect healthy colonies that are in a close proximity to it. In Northeast NJ, every beekeeper's bees "touch" someone else's bees; so a few mite bombs could significantly devastate how many of our club's hives make it through the winter. When someone doesn't treat his/her hives, that person is not just killing his/her bees, as those mite bombs are also going to kill your bees and my bees.

Monitoring your hives for mites by doing mite washes is important because it will help you identify a problem before it's too late. Remember, it's usually your strongest colony, the one with the most bees that has the largest number of mites, so you can't judge how healthy your hives are by how many bees you see at the entrance. The only way you can tell is by doing a mite check.

A few weeks ago I was doing mite washes to confirm how my bees were doing. I have two bee yards that are about 2-3 miles from one another, and I was amazed at how different the results were. In my first yard, I found 1 mite over four hives sampled. I was thrilled! (Since I use a 300 bee sample, that was 1 mite per 1200 bees, which is well below the threshold of 1 mite per 100 bees.) However, in my other yard the results were much different, as I found 3 mites per 100 bees sampled. Since the hives in my second yard were all nucs with Apivar in them through May that means my bees picked up mites from other bees that were in the neighborhood. I was amazed that my two yards could have such vastly different mite levels and still only be 2-3 miles from one another. It also showed me why it's important to take samples from all your yards/hives, because unless you check, you'll never know.

Since I am hoping to catch a fall nectar flow at my second bee yard, I did not want to treat with Apivar. Instead, I am using oxalic acid vaporization. Oxalic vapor is quick and super easy to use, as long as you take all the precautions and follow all the directions. Oxalic does not penetrate capped brood, so to effectively get all the mites; I am repeating the treatment once a week for a total of 4 weeks. Before I treat, I use a fume board to drive the bees out of my honey supers, and then I remove the honey supers, close up the hive and treat. After the 4th treatment, I will check for mites and see how well the oxalic acid treatment worked. Then, once I pull my supers after the fall flow, I will treat all my hives with Apivar for 56 days, which will protect my hives through October, which will also help thwart-off any other mite bombs. Finally, in December, when my hives are essentially broodless, I will again treat with the oxalic acid.

To successfully keep bees, you have to think ahead, have a plan, and be proactive. The club is here to help, and at Friday's meeting we will have mite washers, Apivar, and bee books for sale. Please pick up what you need, and if you have questions or you're not sure what to do, just ask, we're here to help! Last, for the sake of your bees and your fellow beekeeper's bees, please treat for mites. Thank You.

Sincerely,

Frank Mortimer
President, Northeast NJ Beekeepers

Beekeeping in Late August and September

by John A. Gaut
Master Beekeeper, EAS

July and August were very wet in Northern New Jersey. There was enough nectar coming in in my area that I did not have to feed any full-sized colonies so far. I did have to feed some smaller queen mating nucs; the larger nucs were able to gather enough nectar to sustain themselves. This is unusual, typically I need to be feeding all colonies so they maintain some brood rearing. Some colonies are storing honey in the supers I placed above the inner cover too! And golden rod is starting to bloom. The cost and time for feeding may be significantly reduced this year due to the moisture in the soil and good fall nectar flows. Every year is different. The bees are taking advantage of the wet weather while it lasts!

Robbing has been much less of an issue this year too, at least so far. Robbing can start very quickly though, so I always am careful and do not have a hive open too long. Usually I try to only open the hives in the morning when there is some nectar flow. By afternoon the nectar sources are dried up and there are a lot of robbing bees following me around. I feed just before dark and try to not have any spills or drips that might get robbing started.

The most important things to help the bees survive the winter are adequate honey stores and low mite counts. I will be monitoring my colonies during September and October to verify they are storing at least 60 pounds of honey for the winter

Low mite counts are very important. If the mite counts are high (3 % or more), the colony may not survive the winter. The viruses the mites transmit weaken the colony and cause paralysis, preventing the colony from maintaining a warm cluster in the winter. Mites also spread bacterial diseases. Mite counts should be below 1%; very difficult to achieve this time of year because the bee population is naturally decreasing while the mites keep reproducing and increasing. I treated hives with MAQS in July and August. ApiGuard is another option. (There were a few opportunities to treat with MAQS and ApiGuard in-between the hot weather spells.) After treatment, I always check for mite levels to verify the treatment was effective. Many beekeepers assume the treatment worked without verifying; unfortunately, an incorrect assumption in some cases and a disaster for the bees! In September I'll perform mite counts on all my colonies and apply a final treatment of ApiVar to reduce the mites going into winter. I leave ApiVar in the hive for the full 56 days. I use up to 4 strips for each full-sized hive (Double Deep), less if there are less than 20 frames of bees. If you haven't treated yet, please treat ASAP! And check the mite count after treatment to verify the treatment worked.

Most of the colonies built up nicely in the Spring and produced more honey this year than average. The colonies are now preparing for the winter. They will be raising plenty of "fat winter bees" in late September and October. If there is not enough nectar, feeding will be necessary. A 2-part sugar (white table cane sugar) to 1-part water is feed in the Fall. I feed as often as needed to get the hive to at least 150 pounds total (60 pounds of "syrup honey") by mid-October. **We need to help the colonies prepare for winter by keeping the mite levels low and feeding as needed.**



Volunteers Needed for the 2018 Honey Cup.

This year's Honey Cup will be Saturday, September 15th, from 1pm – 4:30pm at Ramapo College in Friends Hall, (Room SC219). We need *YOUR* help to make this year's Honey Cup a success!

Bakers:

We need bakers to donate baked goods using honey and with the recipe attached. The baked goods will be for sale at the honey cup. If you would like to get involved with the baking, please contact Celia at artteacher@verizon.net.

Volunteers:

We will also need people to volunteer to staff our club tables, (honey sales, books and t-shirts sales, & food) and to help set-up and cleanup. If you would like to volunteer, please contact Jaimie Winters at jaimw@aol.com.

Honey Sales:

Members are welcome to sell their honey through our honey sales table. Each seller should provide up to 24 bottles of honey and a squeeze bottle taster with your label. Prices are set at \$8 a half-pound, \$15 a pound, with the club receiving \$1 for each jar sold. If you would like to sell your honey, please contact Mike Miller at m45537@gmail.com.

Member Sales:

Club members are also invited to sell their honey, wax and bee-related products at our product tables. Only bee-related items will be sold, as we want to educate the public about our amazing bees and what they can produce. We are asking each vendor to donate a portion of their sales to club. Please contact Jaimie Winters at jaimw@aol.com for registration and approval to sell your items.

The Honey Cup is when the *Northeast NJ Beekeepers* invites the General Public to learn about, and celebrate backyard beekeeping and local honey. Please remember that the more of our neighbors who like what we do, the better it is for all local beekeepers.

The Honey Cup is our club's celebration of all the work that goes into being a beekeeper, and tasting the sweet taste of success, HONEY! Our hobby requires a lot of hard work, and it is important that we stop and celebrate all the work that we have done, and that's why we have the Honey Cup!

Now, who's ready to help?



Requeening in the Fall

**By John A. Gaut
Master Beekeeper, EAS**

Colonies often do requeen themselves. One way is by swarming; the old queen flies off with the swarm and a new queen remains behind. Letting your bees swarm can be a problem for beekeepers and their neighbors in many neighborhoods. As good neighbors in populated areas, beekeepers should try to prevent swarming. Colonies also requeen by supersedure.

Many beekeepers are reluctant to requeen their colonies though.

One very experienced beekeeper was reluctant to requeen a very defensive hive. They believed more defensive hives produce more honey. Gentle colonies can produce large honey crops too. There is no relationship between defensiveness and productivity.



This gentle and productive hive produced over 200 pounds of honey. This hive is next to a pool. Overly defensive bees cannot be tolerated in this location and neighborhood.

As responsible beekeepers, we cannot let our neighbors be adversely affected by our bees. Overly defensive colonies must be requeened with more gentle stock. One defensive colony in an apiary can also cause more defensiveness in the other colonies. The pheromones associated with defensive behavior from one colony spreads to nearby colonies, increasing their defensive behavior too.

Some beekeepers tolerate poor or bad performance from a queen, or are slow to recognize problems. Queens that are not laying as much as other queens, or have a spotty brood pattern, or are beginning to lay drones in worker cells should be replaced.

Some beekeepers have an emotional attachment to the queen. These emotions are anthropomorphic; the beekeeper is giving human like characteristics to the honey bees and queen. A more accurate way to think of the colony is as a super organism. The queen is just one part of the super organism, specifically the colonies ovaries. For a colony to thrive, they must have a good set of ovaries! Fortunately, a colony's ovaries are easy to replace.

Obtaining a queen can be a challenge. In the Spring, there is a huge demand for queens from commercial beekeepers. Finding one or two quality queens can be difficult. The queens in the spring are from warmer climates; the Southeastern States, California and even Hawaii. They may not be well adapted to Northern Winters. While the queen breeders really do try to produce quality queens, it is difficult to keep up with the demand. Commercial beekeepers want thousands of queens in the early Spring. Most queen breeders ship a queen once she is laying. (It takes a couple additional weeks before a queen's brood and laying pattern can be evaluated.) Sometimes queens have a difficult time mating in the Spring due to the weather and small drone populations. Shipping can also be a problem, reducing the quality of the queen.



Unfortunately, this new queen had to be “pinched.” A week before, I noted she was laying a good pattern of eggs. The eggs turned out to be a mix of worker and drone brood shown by the type of cappings. Laying drone eggs in worker cells is “cause for termination.” While a drone laying queen does not happen often, inspecting capped brood is the only way to be sure the queen is not a “drone layer.” A **proven queen** is laying a good capped worker brood pattern; only then will she be promoted to a full-sized colony.

A final problem for some beekeepers is not being able to find the queen. I know this is difficult sometimes too! I raise queens in 2 frame or 5 frame mating nucs. I have spent 15 minutes trying to find the queen on only two frames. I could not find her on the frames or in the box! Other times the queen very easy to find, she easily stands out on the frame. Most of the time I can find the queen if I work the hive calmly with minimal smoke. The old queen definitely needs to be located and terminated before introducing a new queen.

I will requeen my colonies anytime there is a failing queen. I do plan to requeen most of my colonies in the Fall though. Even year-old queens that are doing well in the early Fall will get replaced. Too many times I have not replaced an older queen in the Fall and watched the colony fail or struggle in the Winter and Spring. Maybe I had a little emotional attachment too, or just believed the queen could make it another year. I usually regretted the decision to hold on to an older queen when the next Spring rolled around. If I do have a queen that has performed exceptional well, I will overwinter her in a nuc as a potential “breeder queen” for the following year.

Requeening in the Fall has several advantages:

- Better winter survival
- Quicker spring buildup
 - Less swarming

Requeening in the Fall with a proven vigorous queen will enable the colony to raise more winter bees. A higher population of young winter bees results in larger winter clusters, critical on those cold Winter nights. The larger cluster will also be able to maintain a larger brood nest in late Winter. The young queen wants to lay as many eggs as possible; she is only limited by the ability of the cluster to maintain the brood nest temperature and feed the brood. A large population of young Winter bees can feed a larger brood nest.

The swarming impulse seems to be less with younger queens, possibly because they have a higher intensity of pheromones. The beekeeper must still practice good swarm management techniques or the young vigorous queen will swarm too.

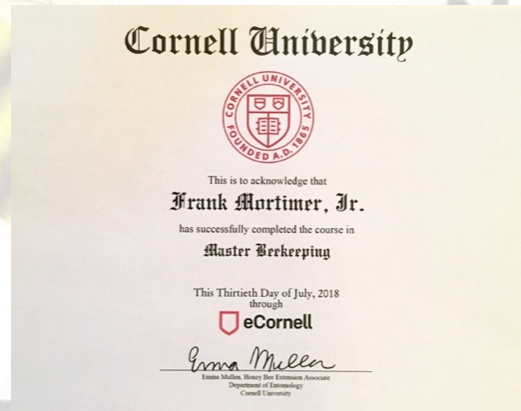
For my area, the golden rod flow is a good time for queen replacement. The colony accepts the new queen more readily during a nectar flow and the strong aroma of golden rod nectar being processed may help the colony transition to a new queen's bouquet. If the colony fails to accept the queen, there is still time to introduce a second queen.

Requeening is part a necessary part of beekeeping. Requeening in the Fall helps reduce winter losses, enables colonies to build quickly in the Spring and reduces the swarming impulse.



Our Club's Newest Master Beekeeper

On July 27th 2018, Frank Mortimer passed his Master Beekeeping exams, certifying him as a Master Beekeeper. Frank was in Cornell University's certificate program, which was comprised of four separate courses; I) Honey Bee Evolution, Biology, and Behavior; II) The Science and Art of Beekeeping; III) Managing Pests and Diseases; and IV) The Rewards and Contributions of Bee Keeping, as well as a written exam, a field test, and a presentation of an experiment that he conducted. Frank is happy and honored to be a Certified Master Beekeeper, thoroughly having enjoyed and benefiting from his experience at Cornell.



The look of satisfaction after successfully passing all your exams

The Official Certificate



Dyce Lab at Cornell University



Bee yard at Dyce Lab

More scenes from Dyce Lab



One of research sheds at Dyce Labs. Note the different shapes and colors used for the various hive entrances.



Small research hives on posts.



An antique wax foundation press.



Antique beekeeping tools. Note the wax queen cups in the glass jar that were used before plastic cups were available.

You're Invited!

Honey Tasting Competition

September 15th 1:00 pm – 4:30 pm
Ramapo College, Mahwah, NJ
Friends Hall, (Room SC219)



Free Admission & Everyone is Welcome!

- ✧ Taste Dozens of Pure Natural Local Honey!
- ✧ Vote for the 2018 Honey Cup Champion!
 - ✧ Free Face Painting for the kids!
 - ✧ Live Music by *Dog Food aka The Hive!*
- ✧ Local Honey & Honey-Related Products For Sale!
 - ✧ Fun For The Whole Family!

For more information, please email: northeastnjbeekeepers@gmail.com

New Jersey Honey Queen

John A. Gaut
Master Beekeeper, EAS

This past Saturday, the New Jersey Beekeepers had the picnic and auction. I had the pleasure to meet and talk with the **New Jersey Honey Queen, Nicole Medina**.

The American Beekeeping Federation facilitates the Honey Queen program. The purpose of the program is to promote beekeeping and educate the public about honey bees and honey. The Honey Queens purpose is exactly aligned with our clubs' goals! The Honey Queen travels around the state educating at schools, county fairs and other venues. All these events are free publicity for beekeeping.



I fully support the Honey Queen Program. Besides promoting Beekeeping and Honey, the program provides a great role model for young women. Women of all ages have started beekeeping after meeting a Honey Queen.

Nicole will be a fantastic representative of New Jersey at the American Beekeeping Conference. We should all be proud that we have a great Honey Queen in our State. Please talk with Nicole at the meeting on Friday evening and please supporting her in every way you can. Wish her the best at the ABF Conference!

Beekeeping Memories

Combining My Hives or Not

by

Karl Schoenknecht

After many years of keeping bees as a hobbyist, I find that I have few opportunities to get hands on experience with many hive chores. The environment has changed too and I notice a reduction in the surrounding understory of flowering plants due to an increase in the deer population. My apple, pear and peach trees were stripped of fruit by squirrels and chipmunks before the fruit reached quarter size. In years past I was able to get many swarms gathered by others but now I need to keep my bees healthy for an ever-increasing demand for pollination by my environment.

After splitting my hive (I actually captured my hive's swarm) this spring, I harvested about 40 lbs. of honey from the new split with the old queen. I am now in the process of reducing both hives back to the two-box hive size. I have treated for mites with Mite Away strips and reduced the mite count. I put spacers beneath the remaining honey supers to encourage the bees to bring the honey down into the main hive of each of my two hives. I have some extra frames with honey set aside to help either hive once I decide if I want to keep two hives or combine them.

Both hives have slowed the brood rearing and are bearding on the front of the hive. The weather is rainy, hot and very humid, not ideal for honeybees. I added a couple of metal sheets on top of each hive to act as awnings to protect the entrance and beard of bees from the heavy downpours. I do not expect the bees to gather a late honey crop because the near-by aster and goldenrod fields have been developed into weed-free home sites. My bees are still gathering water and minerals from the soil of my garden plants. The only flowers I see them working on are my cucumber plants and weeds in the lawn. Downsizing is never easy but in the past few years I only had one hive to get through the winter.

In the next few days I will check mite count, the amount of capped honey and the amount of brood on each hive and determine if I should combine hives. If I need to combine, it will be because the weak hive can be reduced to a few good frames of honey and brood that fit into one brood box. If two brood boxes are nearly full, then I should start feeding the weak hive to maintain colony strength. The strong hive should also be reduced to two brood boxes and fed. If mite count is high then ApiVar treatments should be started.

I will combine hives if my weak hive is reduced to one box. I will remove both covers on the strong hive, cover the frames with a sheet of newspaper after smoking the bees down into the top box. I will poke a few holes in the paper and fold and tape the paper around the box so it cannot shift. Next I will place the weak hive brood box on top of the paper and add inner and outer covers to complete the work. The bees will decide on which queen they want to keep and will chew away most of the newspaper. The hives should merge in a day or two.

No matter what people are taught or what they think will work – the proof comes with doing.



This is how my hives look today 8/13/2018 after a rainy day at 2:00 PM.



Our Facebook Group has **over 1822 fans** from all over the world! It's a great place to connect to other beekeepers, so be sure check out all the great bee pics, bee stories, and bee info.

Remember: <http://www.nnjbees.org> **is your website!**

Check that site for everything Northeast New Jersey Beekeeping!

❖ Volunteers ❖	
Celia Miller	Refreshments – Cakes, cookies, brownies, tea, etc.
Jennifer Phillips	Refreshments – Cakes, cookies and other treats
Billy Neumann	Club photographer
Hugh Knowlton	Workshop/Event coordinator
Mike Miller	Club apparel
Bob Slanzi	Meadmaster

NEXT MONTH
The 2018 Honey Cup!!!



The First Rule of Bee Club: Tell Everyone about Bee Club!