nnjbees.org

June 2017

NORTHEAST NEW JERSEY BEEKEEPERS ASSOCIATION OF NEW JERSEY

A division of New Jersey Beekeepers Association

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Meeting on: **Friday, June 16th at 7:30 PM**, Location: **Ramapo College of NJ, 505 Ramapo Valley Rd., Mahwah, NJ 07430**

Bee Enthusiasts & Bee Curious always welcome! *Weather permitting.*

Please join us on **Friday**, **June 16th** when The Northeast NJ Beekeepers proudly presents the New Jersey State Apiarist, Tim Schuler. Tim will talk about mite treatments and other aspects of beekeeping. Bring your questions and enthusiasm. See you there!

Yearly Dues are payable now!

*Your $25 yearly dues goes to fund all of our activities, our post meeting refreshments, club supplies and all other necessities required to bring the best possible programs, headline speakers, classes, mentoring and to introduce new beekeepers to the art and craft of the hobby we all love so much. See **Bob Jenkins** to make your timely dues payment and from all the officers,*

"Thank you for your continued support."

Message from the President:

Hello Northeast NJ Beekeepers!

Happy summer to one and all! The weather we have been having, lots and lots of rain with some cooler days have continued to increase the difficulty level of beeing a Beekeeper. One of the things that I really enjoy about keeping bees is that just when you think you know what you're doing, the bees prove you wrong. Working closely with bees can teach you the wonderment of nature, or it can frustrate the propolis out of you. I remember when I got my first hive, it was a colony that was extracted out of a wall of house and the comb was put into frames so it could be transferred to a Langstroth hive. I received that colony at the end of May, and for the following month of June, it rained 26 out of 30 days. I fed them like crazy, but when you get that much rain, there is no way your bees are going to be bringing in a bumper crop of honey. While this year's weather has not been as bad as it was my first year, I do think this year's weather has been some of the more challenging we have faced in the past 5-6 years.

However, do not let this get you down. As the eternal optimist, I say to you that it is seasons like this when you learn how to be a Beekeeper. This year has been plagued by swarms and slow colony build up. (Based on all the calls and emails I have received, these seem to be this year's two most common problems.) My advice is to think of years like this as a learning experience. Whenever your hives do not do "what you want them to do", ask yourself, why? Why did my hive do that? What are my bees trying to teach me?

Beekeeping is a hobby where you are always learning. Yes, you will get better at working your bees, and yes, you will know more about bee biology and colony behavior, BUT, you will never be an all-knowing master of your bees, able to control everything they do.

The more you interact with the big-time bee experts; one of the first things you'll notice is how they always say that they have so much more to learn. And this is coming from experts who have already forgotten more than most of us will ever know. I think it is important to remind yourself, and keep telling yourself, that beekeeping is a process, a journey from one season to the next. It is not an exact science, for if it were, every time you followed the exact steps in the same order, you would see the same results year over year with every single hive. Yes, the science of beekeeping is extremely

important, as it makes it easier to predict your results, but beekeeping is much more complicated than simply following the instructions like a recipe on the side of a box and getting a perfect outcome every single time. Bees will always keep you on your toes, and it can be humbling when they throw something unexpected at you. But that's the joy of keeping bees. There are always new bee-opportunities for beekeepers to experience, and it is up to you to learn from everything the bees can teach us.

For example, I have never used queen excluders. I have had queens lay some brood in my supers, but it's been early in the season and the bees have always backfilled those frames with honey, so it has not been a problem. However this year, my queens went overboard with the amount of brood they laid in my supers and they've gone much later into the season than I've seen in years past. I think the reason it's happening this year is because of all the rain. The workers can't go out and collect nectar when it's raining, so my queens are taking advantage of all the "extra space." And believe me, they are REALLY taking advantage! It will be a new experience for me, but I have ordered queen excluders for all my hives and I will put them on as soon as they are delivered. And I guess that's another "rule" or beekeeping, “never say never,” as it is important to always be willing to try a new approach, especially when your old way isn't working.

Speaking of experts, we are very fortunate to have one of the best, NJ State Apiarist, Tim Schuler, as our guest speaker this Friday. If you are a new beekeeper, or if you have never heard Tim speak, then I would urge you to make an extra-special effort to bee at Friday's meeting. All of us who have heard Tim speak before will certainly bee there, because we already know that we will always continue to learn from him. Tim is awesome, and his talks are always amazing. Bottom line, every member owes it to his or her bees to bee there on Friday.

I look forward to seeing you at Friday's meeting!

Bee there or bee square.

Frank Mortimer
President, Northeast NJ Beekeepers

Time to Prepare for the NJ State Fair/Sussex County Farm & Horse Show

2017 Honey Competition

by Bob Vitali

The NJ State Fair Honey Competition is an annual show hosted by the Sussex County Beekeepers Association. Last year, I entered my spring honey as a first year beekeeper and as a member of the Northeast NJ Beekeepers. I was greeted and tutored by very friendly people from the Sussex County club. All judging was done by Tim Shuler. As usual Tim was great, always taking the time to explain and teach the various criteria used to judge the honey. Additionally, this show has so much more than just honey! I was surprised to see over 20 different Beekeeper-related categories that NJ Beekeepers could enter. The NJ State Fair is a great place for anyone interested in the proper way to show their honey, candles, lip balm, or soap, in a friendly, fun, and rather informal environment.

Go to http://www.scba.club/honey-show/ for all the information. There you will find links to all the different entry forms, the show rules, and the various judging sheets.

From what I could see last year, I was the only one outside their club participating. Everyone is invited, so why should they have all the fun? Let's have a great turn out and show Sussex County how wonderful our Northeast NJ honey is!

Beekeeping in June

By John Gaut

I hope the new beekeepers are doing well with their new colonies. I've looked at some of the nucs from Grant Stiles and most are doing fine. Some where a little slower to ramp up while others ramped up quickly. Every nuc is different just like every hive is different. Nucs installed in hives with drawn comb and some honey left from a previous colony were the ones that ramped up quickly and possibly swarmed.

There have been a lot of swarms again this year. I had a few colonies swarm, even though I gave them plenty of room for nectar. The colony populations are ramping back up now and we are in a very strong nectar flow this week. Maybe the colonies will lose interest in reproducing and focus on honey production!

A Varroa treatment tip for swarms: I have treated some of my swarms with an Oxalic Acid dribble to knock down any mites they may have brought along with them. Treating a swarm with Oxalic Acid dribble is very easy and inexpensive. Since there is no brood, the treatment is very effective. I use a solution of 2.8% Oxalic Acid and Sugar Syrup (1:1). Once the swarm is in a hive, I treat each seam of bees with 5 mL of the solution. Be careful to not over treat though.

Mentors should help the new beekeepers ensure the colony is healthy and continues to build both in bee population and stores (honey and pollen). Below are a few discussion points:

- Colony evaluation and Record Keeping
  - Count and record Frames of Bees, Frames of Brood, Frames of Honey
- Diseases
  - American Foul Brood, European Foul Brood
- Mite Monitoring
- Mite Treatment options and planning
- Supering: When and how many

As beekeepers we are also mite managers. The bees do their part; they need our help or will be overwhelmed with mites. The ApiVar strips in the nucs from Grant Stiles should be removed this week. You will want to check the mite count in about 2 weeks.

If you have high mite counts (more than 2%), you will need to treat. Mite Away Quick Strips, MAQS are a good option since they can be used even with honey supers on the hive. MAQS is the only treatment that kills the mites in the capped brood. Many beekeepers have had success with using only one strip (half treatment) per hive. Using one strip instead of the two is less stressful on the bees and queen; one strip does not kill as many mites though. Follow the one strip treatment with a second strip two weeks later. Then check the mite counts 2 weeks after the second treatment.

A few tips for applying MAQS:
Verify the MAQS is not out of date. The strips lose their effectiveness over time and the gel to slow the release of the formic acid loses its effectiveness too.
Apply only when the daytime high is forecast to be less than 85 F for the next 3 days; less the 80 is even better.

Apply the strip in the evening; ideally an evening when it will be cool overnight.
Close the bottom board (insert the IPM board). THIS IS VERY IMORTANT!
Remove the entrance reducer. The entrance should be fully open.
Refrigerate or freeze the MAQS before application to reduce the initial evaporation of the formic acid.
Minimize the disturbance to the colony; open the colony, place the strips and close the colony quickly and gently. Use only a few "breaths" of smoke.

Remove the strips after application when you are doing the second treatment or taking the mite counts.

Checkout this video: http://nodglobal.com/application-usa/

The NOD website has other good information about mite management too.

I have been very busy raising queens this last month. The first cohort was very successful. Many queen producers will ship a queen once she is laying eggs. I like to let the queens in the mating nucs for a couple more weeks to verify she is laying worker brood (not drones) and has a nice pattern. Once I verify the queen is good, I mark her (yellow this year). I grafted the second cohort of queens two weeks ago and they are in the mating nucs now. This looks like a good batch too; the queens were very well feed while they were larvae. At the same time, I have been trying to keep up with supering! And I will be testing for mites too!!

Laying Workers

John A. Gaut

One topic that seems to be a concern to many beekeepers is laying workers in a colony that appears queenless. Basic Beekeeping classes teach that once a colony is queenless and broodless, laying workers will develop. Once laying workers develop, it is very difficult to requeen the colony and it becomes "hopelessly queenless." The colony will raise drones from the unfertilized eggs of the laying workers as long as they have resources and the nurse bees. (This is the only way a queenless colony can pass along its genes to the next generation.) The colony will continue to dwindle until it dies. Beekeepers want to prevent this scenario!

If a colony swarms or supercedes the queen, the new queen must mature and mate before laying eggs. In the meantime any brood is maturing and emerging. The colony could be broodless for a few days to over a week until a new queen starts to lay. It is during this time a beekeeper may think the colony is queenless and believes they need to introduce a new queen. They should wait for a few days though. If a new laying queen (with her big abdomen) is introduced, the younger more agile queen will very likely kill her.

If the beekeeper has a "resource nuc" or another strong colony, they could take a frame of brood with eggs, larva and capped brood (but no queen!) and put it in the suspected queenless colony. If the colony is truly queenless, the colony will raise a queen from a young larva. Otherwise the frame of brood helps reinforce the colony population. Every beekeeper should have a nuc or two to support the honey producing colonies.

So how long can a colony be queenless and broodless before laying workers develop?

Actually, there are always a few (1 in 10,000) laying workers in a colony. There are other workers that "police" the egg laying of these laying workers by removing most of the eggs. (Some eggs do survive in queen right colonies in the drone cells!)

All workers have ovaries. Most are not developed or very underdeveloped. Workers cannot mate so any eggs they lay are unfertilized and will be male drones. Both the queen pheromones and the pheromones from the brood suppress the development of ovaries in the workers. (Based on my observations with queen rearing, the brood pheromone seems like it is the major factor in suppressing the ovary development.) As the brood pheromone decreases due to decreasing brood population, more young workers (4 to 8 days old) develop functional ovaries. Also, less policing occurs. Once a colony is queenless and broodless for a few weeks, there could be a hundred or more laying workers in a colony! They look like any other worker though. (Laying workers may have a slightly larger abdomen; so do workers with a large nectar load in the honey stomach.)

How do you deal with laying workers?

The method of shaking the bees off the frames over 100 feet from the hive has never worked for me (or many other beekeepers). All the bees including the laying workers seem to be able to fly back to

the hive. (Most of the bees are back at the hive location before I can get back there with the empty frames!)

Another option is to put frames of brood in the colony. If the laying workers have not developed too much, frames of brood (3 or more) often “shuts down” the laying workers. The colony may raise a queen from young larva on the frame. Or a queen can be introduced a few days later in between these frames of brood; that is still risky for the new queen though. Laying workers produce pheromones similar to a queen, making the colony think they have a queen resulting in the death of any introduced queens.

Many beekeepers place the laying worker colony over a strong queen right colony with a queen excluder in between and maybe a sheet of newspaper too. The pheromones from the queen and brood below the queen excluder help shut down the laying workers and increase policing. After a week or two, the queen excluder can be removed and the combined colony can be inspected to verify it is still queen right. (There is a small risk to this queen too!)

Some beekeepers say the workers move eggs or larva! The beekeepers did not actually witness the event, they only observed eggs above a queen excluder for example. A much more likely explanation for eggs in an area of the hive where there is no queen is laying workers. Laying workers will lay in any cell; drone cells, worker cells and even queen cells. Typically, there are multiple eggs; extra larva is “culled” once the eggs hatch. All these eggs will develop into drones, including the eggs in worker cells and queen cells. The queen cells with drones will look small and not shaped like a normal queen cell.

Most colonies successfully requeen themselves and do not develop laying workers. The few days before the new queen begins laying can challenge the beekeeper’s skills to be patient! Once the new queen has been laying, evaluate the brood pattern. If the new queen is not laying well or the colony becomes too defensive with her new genetics (she may have mated with some very defensive drones), consider requeening. Requeening is much more successful in a colony that has brood and is queen right.

My Colony Swarmed! When Will I See Eggs?

John A. Gaut

We had a lot of swarms again this year. I have had a lot of questions about "queenless" colonies. Often, the colony may not be queenless, the new queen just had not started laying yet. Also, a colony that supercedes the queen will look queenless for a few days to over a week.

I use an Excel spreadsheet to manage my queen rearing schedule. I simplified the Excel sheet so it could be used to predict the dates a new queen would begin laying eggs after a swarming or supercedure event. While the predicted dates may vary due to several factors, you can see it really takes about 3 to 4 weeks before the new queen starts laying! This means the colony will be broodless for a while; a few days or a week. If the colony has an after-swarm, the timing may be even later.

The spreadsheet will be posted on our club site.

Here is an example. June 1st entered into the YELLOW area and the rest of the dates were calculated in the spreadsheet. Download the spreadsheet from our club site and try it!

Queen Schedule After A Swarm or Supercedure

	Note: **The predicted dates may vary a few days!**			**John A. Gaut**
	Enter the Date the colony Swarmed ----------> **Or the Supercedure Cell was capped**		**Thursday, June 01, 2017**	
Date	**Age**	**Hive Status**	**Notes**	**Actual Date**
Wednesday, May 24, 2017	0	Egg laid in Queen Cup		
Sunday, May 28, 2017	4	Egg has hatched into a larva now		
Thursday, June 01, 2017	8	Cells capped.	Swarming usually occurs when the first cell in capped or nearly ready to cap. Poor weather may delay the swarm. There is usually multple swarm cells.	
Friday, June 09, 2017	16	First Queen emerge. Queen will try to terminate other queens.	Small cell queens may emerge earlier. "Enlarged" queens may be on time or a day or two late. In hot weather expect them a day early. In really cool weather they may be a day late.	
Wednesday, June 14, 2017	21	First possible day to mate		
Tuesday, June 20, 2017	27	Possibly Still Mating if weather was poor		
Tuesday, June 20, 2017	27	First day eggs could be found. Look for eggs.	Weather can set timing back. Check again in about 5 days and then again in 5 days.	
Sunday, June 25, 2017	32	Treat with Oxalic Acid Dribble 3 to 5 mL of 2.8% OA:50% Sugar Solution per seam of bees, a maximum of 50 ml per colony Any old Brood has emerged and new brood has not been capped.		
Friday, June 30, 2017	37	If no eggs are found by now the queen isn't going to lay or will be a drone layer (or it is so late in the year the bees don't want to rear brood). Remove the queen and requeen or combine.	If a queen is not present, laying workers may be laying eggs. If there are eggs, verify they are layed by a queen and not laying workers.	
Friday, July 14, 2017	51	Evaluate Queen for egg laying pattern. If pattern is not satisfactory, consider requeening.	The queen should have been laying for 3 weeks or more and a capped brood pattern should be evaluated.	

Find us on Facebook

1,700 Strong!!!

We quickly blew through the 1,600 member milestone and are, as of this writing **1,700** members strong, and growing on our Facebook page! Be sure check it out. See the great pics and stories posted by the Facebook fans from all over the world!

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 and presenter
Mike Miller	Club apparel
Emma Stein	Resident artist
Bob Slanzi	Meadmaster

Next Month

The Northeast NJ Beekeepers is proud to continue with our BeeTalk series. The subject will bee Honey extraction. Bring all your questions.