



nnjbees.org

March 2018



NORTHEAST NEW JERSEY BEEKEEPERS ASSOCIATION OF NEW JERSEY

A division of New Jersey Beekeepers Association

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Meeting on: **Friday, March 16th 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*



NUCS 4 SALE

The Club will once again be ordering nucs.

Reserve your nuc with a \$50 deposit.

Nucs are \$170, and we expect delivery late April.

Order today, as quantities are limited!





Message from the President:

Happy March Northeast NJ Beekeepers!

March is the calm before the beekeeping storm and the cold before the bloom. While New Jersey keeps getting hit with snow and colder weather, before we know it April will be here and our hives will be exploding with bees! March is always such a weird month, it's either so cold that we're worried if our bees are going to make it for another month, or spring weather has already sprung and now we're trying to get everything done we told ourselves we were going to get done before the beginning of beekeeping season. So, while it is still too cold to be working your bees, now is the time to get as much of the other bee stuff done while you can. If you're planning on adding any hives, now is the time to get all your equipment ordered, assembled, and painted. Now is also a great time to inspect all your equipment to make sure everything is in working order, and if something is not, then now is a great time to fix it.

Also, now is a great time to clean all your equipment before you start using it. Think of March as spring cleaning for beekeepers. For example, I like to take my hive tools and let them soak in soapy boiling water to get all the propolis, honey, and junk off of them. (Sometimes, it also takes the paint off.) The more you use your smoker, the more you need to make sure to clean it. I scrape all the soot from my smoker so it's not covered with caked-on creosote.

I have also heard that some beekeepers will use a blow torch to burn away any creosote from inside their smoker. Also, if you have been putting off cleaning your veil and jacket, March is the perfect time to do it. You can clean it, let it air out so it is fresh and ready for the beekeeping season. I have the Brushy Mountain hat & veil combo that zips onto their inspector's jacket. I will unzip it, and put the jacket in the washer machine on the longest, hottest setting, and then I always put it through an extra rinse cycle or two. Once it's been washed, I let it air dry instead of putting it in the dryer. I will also put my gloves in the washer, but I have found it is better to do the gloves separately, as they tend to discolor the jacket. (Which yes, I did learn about this the hard way.) For my veil, I will wash it in the bathtub. I'll use the hottest water I can stand to touch, and then put some laundry soap into the bathtub. I'll dunk my veil into the tub to get it completely wet. I've found that it's the hat and the cotton mesh that zips to the jacket, that gets really dirty, so I spend most of the time soaking and scrubbing those parts of the veil. I will let the veil soak in the tub, hat side down, for about 30 minutes to make sure I get the inside of the hat extra clean. Once the veil looks (and smells) clean, I wash out all the soap, and then hang it to dry. I have not had any issues with cleaning my veil and as long as am careful, it has retained its shape. The veil and jacket both take about one day to dry, and they're ready to use by the next day.

Last, I also like to go through my beekeeper's box, the one I bring with me to the hives, to make sure it's fully stocked with everything I might need. Usually by the end of the season, I need to replace a few things, which is why I like to inventory what I have and what I need before I head to my hives. Also, now is a good time to replace your lighters for your smoker. (Yes, I always carry two lighters, just in case one doesn't work, I always have a backup.)

If you'd like to hear more of Frank's cleaning tips, I'll be happy to share them at this Friday's meeting. I look forward to seeing you, and hear how yours and everyone else's hives are doing!

See you Friday!

Bee Well,

Frank Mortimer

President, Northeast NJ Beekeepers

Join Us this Friday for:

Urban Beekeeping Best Practices

presented by

Landi Simone

Landi is an EAS Master Beekeeper. Many of us have taken her short course and heard her speak. Her talk at this Friday's meeting will focus on how we all can be good beekeeping neighbors, and how to follow the NJDA Beekeeping Guidelines.

- What's the best way to provide water for your bees?
- What about flight path fencing?
- And what techniques should we be using to keep our bees calm and gentle when we work them?
- Landi will cover these topics, and more!

A must for every beekeeper in Northeast NJ



Beekeeping in March

by John A. Gaut

We had several nice snowfalls in March, the second was over 24 inches of snow in Mahwah and the latest was only about 3 inches. Just before the big snow, during some warm days at the end of February, I was able to take a quick look at my colonies. They are all starting to raise more brood. The hive weights are decreasing now. The bees are consuming the honey and pollen to feed the young larva. Below is the Broodminder weights for one of my hives. There was very little weight loss in December and January. Then in February the hive started losing weight. I expect all hives to lose much more weight in March and April as the colonies raise more brood.



I have been feeding protein patties inside the hives, right over the cluster of bees. I put only enough in for a week or two. Any longer and any Small Hive Beetles (SHB) will lay eggs and the patty will be infested with SHB larva. The bees will protect the patty from SHB if they can. (I do not place the patty on top of the inner cover. Patties on the inner cover often become infested more quickly because the bees cannot protect the patty as effectively.) Once infested with SHB larva, I discard the patty and put fresh patty in. I want to raise bees, not Small Hive Beetles!



Protein Patty in a hive with a typical cluster of bees in late February. Notice the ApiVar strip in the center of the cluster. The burr comb will have drone brood soon!

I also have water sources at hives. At one yard, a neighbor has a “salt water” pool. There are ponds closer to the hives than the salt water pool, but the bees were going to the pool in the middle of summer. The bees must have really liked the minerals in the salt water! So, I put a pinch of sea salt in the water sources. The bees have been using the water source already! (Sea salt contains many micro-nutrients besides sodium chloride.) The colony needs water to dilute the honey so the nurse bees can digest it to make larva food (jelly). Some bees will forage for water on warmer days. (This is hazardous duty! Sometimes these foragers get too cold to return to the hive.) Some beekeepers have water available to the bees constantly using a Boardman feeder. Bob Vitalli has been successful using Boardman feeders in the entrance. I sometimes place a feeder jar of water over the hole in the inner cover.

I also have been open feeding dry protein powder. The bees really enjoy the protein on the nice days! The bees will bring the protein back and either consume it right away to make brood food or store the protein powder in the comb just like real pollen. (The colony only consumes the protein patties as needed; they do not store any of the patty.) Nutrition is very important for the colony now. They need honey as an energy source (to stay warm and to feed the young) and they also need protein to feed the young.



Open Protein (Pollen Substitute) Feeding.
Normally the lid is inside the barrel to protect
the feed from the rain.

The main beekeeping tasks now are verifying the colonies have plenty of honey and are building. One beekeeper recently expressed a concern that all they saw was eggs; no larva or capped brood. This can be a sign of a protein deficiency in the hive. The beekeeper will look to see if there any pollen stores in the hive and will start feed in some protein patty. (If the bees do not have enough protein, they could be consuming any eggs the queen lays, just to survive.)

Preparing equipment for the upcoming season and making plans for queen rearing are my other priorities. I did take nosema samples from all my colonies and performed the analysis over several days; it's a tedious process! Most of the colonies have low or no nosema, but a couple of them do have high levels. Those with high levels seem to be building just like the other colonies, but I know the lives of the individual bees are shortened and they cannot feed the larva as effectively as an uninfected bee. The good news is the two breeder queens from last year had very low levels. I'll probably use these queens as breeders again since their daughters overwintered nicely. One breeder queen will be 3 years old; she gets extra points for being a good queen that long! I'll be looking at multiple criteria to select other breeder queens for this year. I'll be adding drone frames to the selected "drone colonies" by the end of March. I'll make the final selection for Breeder Queens the beginning of April.

I'll be removing the ApiVar strips at the end of March, a full 56-day treatment. I typically only have the hive open for a minute to pull the strips. I tip up the top deep, pull the strips in the bottom while counting frames of bees and then do the same in the top deep. I will only open a hive when the bees are flying. I need to be organized to have the hive open for only a minute or two.

In April I'll perform mite counts on each colony using the alcohol wash method. I'll also collect another set of samples for Nosema analysis. While I am in the hives, I will be assessing the overall colony condition: Frames of Bees, Frames of Brood any signs of disease or other issues. Knowing the number of bees (Frames of Bees) and amount of brood is important for Swarm Management. If some colonies are much stronger than others, I will equalize the colony size by moving frames of capped brood (and clinging bees to keep the brood warm, but NO Queen) from the "above average" to the "below average" colonies.

What would my ideal colony look like at the end of March? There is some judgement required, so the numbers have some ranges. I'm also allowing that brood frames will have some honey and pollen on them.

- **Frames of Bees:** Between 10 and 15. (Judgement is definitely required since the size to the "cluster" will be much looser on warm days.) The bees should be able to cover all the brood.
- **Frames of Honey:** 4 to 6 full deep frames (30 to 45 pounds) with half in the bottom deep and half in the top deep, ideally on the outside positions. (I may add honey frames to a colony that has less than 4 from a hive that has more than 6 frames of honey.)
- **Frames of Pollen:** At least 2 pollen frames near the brood nest. If there is not enough Pollen in the hive, I'll add more protein patty.
- **Frames of Brood:** 1 frame of eggs, 2 to 3 frames of larva and 3 to 4 frames of pupa (capped brood) would be ideal. If I find more than 4 frames of capped brood, I may pull one for a hive that is behind.
- **Open Comb:** At least 4 frames of open comb just on the outside of the brood nest.

All my hives are well insulated so cold snaps usually do not result in a “chilled brood” issue; the colony can expand the brood nest to the walls of the hive if they want. Honey consumption is lower too since there is less heat loss. The colony absolutely does need the upper entrance to ventilate the moisture and carbon dioxide out of the brood nest. As the colony grows, the cluster produces much more moisture and carbon dioxide through normal respiration. Insulation over the inner cover prevents the moisture from collecting in the hive. Any moisture condensing on the inner cover could drip down on the bees and brood, chilling them. Excess moisture in the hive can also result in Chalkbrood, a fungal disease of the pupa. Moisture inside the hive also results in moldy frames.

The queen will need much more space in April to raise brood. The queen will need at least 4 open frames of comb in early April to lay eggs. Not every frame will be completely open; some frames will contain honey and/or pollen. If there are defects in the comb (e.g. foundation not drawn out or too much drone comb), that will decrease the frames useful brood area. In Northeast NJ, strong colonies that do not have enough open comb will begin swarm preparation as early as the first week in April and actually swarm beginning the second week of April on a nice warm day.

I hope these notes describing how I am managing my colonies, and why I am taking specific steps helps you with the management decisions of your colonies. Since every colony is different, and every beekeeper has their own preferences, I feel more comfortable sharing what I am doing and why, instead of prescribing something that may not work in your situation. If you do not understand why I am doing something, I would be glad to talk with you more. And never let me (or anyone) just tell you to do something without also letting you know WHY! Any feedback about these notes is always appreciated.

If you have any topics that you would like to see more information about, let me know!

BEEKEEPERS



Swarm Management

by John A. Gaut

One of the topics at our March meeting is Swarm Management. I have been developing a better understanding of the swarming phenomena, but I still have a lot to learn. I no longer think about swarm control or swarm prevention. I cannot control natural processes and I cannot prevent all swarms. I can work with the bee's natural instincts though. (I work with the bee's natural swarming instincts every time I raise a batch of queens.) I now practice Swarm Management, a more systematic way of thinking about colony reproduction.

What is Swarm Management?

Swarm Management is proactively managing colonies to reduce the Swarming Impulse and being prepared for swarms despite the beekeeper's best efforts. A swarm is the natural reproduction of a strong, healthy colony. About half of the colony, mostly older bees leave the hive with the queen. The swarm leaves behind multiple queen cells along with younger bees and capped brood. In our area, a strong healthy colony will swarm at least once if left unmanaged. Swarming is a deeply engrained instinctual behavior; it is a necessary behavior for survival of the species. The problem in our area is we have a lot of neighbors close by, many that do not appreciate a large clump of stinging insects hanging in their tree. Also, the smaller colony left behind is not going to be able to produce as much honey as a larger colony would.

Let's explore the "Swarming Impulse." I like the term impulse; it reflects what I observe in a colony getting ready to swarm. The colony switches from foraging and brood rearing to swarm preparation. The preparation period is typically 10 days. Swarming seems impulsive, like something has triggered the colony to start to prepare to swarm. Once the colony is triggered, it is very difficult to reverse the "swarm impulse."

What triggers the Swarm Impulse? There are several primary factors:

- Seasonal factors including longer days along with pollen and nectar flows (Ideal conditions for both the old and new colony to survive!)
- Limited space to store and process nectar
- Limited space for the queen to lay eggs
- A large population in the hive

Beekeepers cannot control the seasonal factors. However, beekeepers can proactively manage the other three factors to reduce the swarming impulse. The three effective beekeeping management practices to reduce the swarming impulse are:

1) Provide space to store and process nectar

The beekeeper must supply plenty of room for nectar processing and honey storage. I will add honey supers just over the brood nest in early April. I verify there is not an existing honey barrier above the brood nest. If there is I'll move honey frames to the bottom and sides of the brood boxes if needed. If there is honey above the brood nest, the colony may not perceive the open storage above the honey. Also, if there is honey above the brood nest, the colony senses

it has enough stored honey (resources) for the smaller colony after the swarm departs. Honey above the brood nests is called a “honey dome” and could trigger the swarm impulse.

2) Provide space for the queen to lay eggs

First, do not use queen excluders during swarming season (May and June). Queen excluders can slow the transfer of nectar to honey supers. The colony may perceive the slower transfer as limited space. Once the nectar flow is reduced and about 24 days before I extract, I verify the queen is in brood boxes and put a queen excluder over the brood boxes. Any brood in the supers will emerge over the next 24 days (workers in 21, drones in 24) and the colony will fill the open cells with honey.

Some beekeepers talk about a colony being “honey bound” when there is nectar in the open cells of the brood nest instead of eggs and larva. Nectar in the brood nest is actually a preparatory step to swarming. The colony has been triggered and is already working under the swarming impulse. The colony is preparing to swarm and leaving nectar in the brood nest as a ready food source for the young nurse bees remaining and the newly emerging bees. Backfilling the brood nest with nectar does not cause swarming, it’s preparation step for swarming. A swarm will occur very soon or has just occurred when the brood nest is backfilled with nectar. By the time nectar is being backfilled in the brood nest, there are typically multiple queen cells and the queen has significantly reduced in size in preparation for the swarming flight. If the brood nest is being backfilled, adding supers now may be too late. The colony has already been triggered to swarm about 10 days ago and swarming preparation is underway! During a strong nectar flow, I may need to add supers weekly. I add the supers under the other supers and just above the brood nest. When the colony has open comb immediately above the brood nest, the swarming impulse is less likely to be triggered.

Part of Beekeeping during swarm season includes insuring the queen has plenty of room to lay eggs. (If not, she will lay in the queen cups, triggering the swarm impulse. Early in the season, reversing brood boxes may be enough. Before I reverse entire brood boxes, I verify there is no brood in the bottom brood box. I do not want to separate the brood nest. (Separating the open brood will set the colony back and can be very stressful on the colony.) More often I remove individual frames of capped brood and bees from strong colonies (verifying the queen is not on the frame!). I put the frames of capped brood and bees in weaker hives or in Nucs with a queen cell. (Removing frames of brood also helps with Population Management; see below.) And then I put frames of comb at the outside of the brood nest. The open comb provides additional space for the queen to lay, reducing the swarming impulse.

3) Managing the Colony Population

A good working knowledge of bee biology is needed to manage hive populations. Strong colonies raise brood rapidly. A population of approximately 30,000 to 40,000 bees and approximately 5 or 6 frames of brood will trigger the swarming impulse. This population of bees would nearly fill two 10 frame deep brood boxes (2000 bees on each frame). Once the brood emerges from 5 or 6 frames, there could be another 40,000 bees, totally over 70,000 bees! The colony would be huge!! The colony senses once they reach more than 30,000 to 40,000 bees and 5 to 6 frames of brood, they are ready to swarm. Reduced queen pheromone

and increased levels of brood pheromone may be the way the colony senses increasing population. Therefore, the beekeeper needs to proactively manage the colonies population. The tactic of removing frames of capped brood to open up the brood nest for the queen to lay also helps manage the population. Some beekeepers remove the frames of brood, bees and other resources (honey and pollen) to start new colonies with a new mated queen or queen cell (a “split”), or they let the “split” colony raise their own queen from young larva in the new hive. Another technique is to switch positions of weak colonies and strong colonies. This should be done during a nectar flow to prevent fighting and defensive behaviors. The forages from the strong hive will return to the weaker hive, reducing the population in the stronger hive. Managing hive populations (bees and brood) is a continuous process during swarming season.

Swarming Preparation is underway! In the Spring, the colony is on a mission to reproduce; proactive swarm management is often successful, but not always. If colonies are actively preparing to swarm (they have open queen cells and or backfilling the brood nest), beekeepers can use techniques that basically makes a swarm before the real swarm occurs.

These techniques include:

- The Demaree Method
- The Snelgrove Method
- Artificial Swarming

You can find more information about all these methods in the beekeeping books the club sells. The “Beekeepers Handbook” and “Honey Bee Biology” are both excellent references. Learn about these techniques and be prepared to prevent the colony from actually swarming.

Capturing a Swarm: Unfortunately, I still have some colonies that actually swarm. Usually it’s because I was not entirely effective in managing one of the three triggers. It is humbling! Sometimes they just want to reproduce!!! So, I have to be prepared to collect the swarm if at all possible. Frank Mortimer has an excellent article in the latest issue of “Bee Culture” related the Swarm Collection Kit he carries in his car. I carry a similar kit with me and a couple of plastic nuc boxes with frames of comb and foundation. I also am prepared with empty hives in the apiary for any swarms. I also put swarm bait hives around the apiaries, at least 300 feet from the hives. During swarm season, if I get a call in the afternoon of a nice sunny day, it’s probably about a swarm hanging in a tree!

Varroa Mite Management Tip: Treat the swarm with Oxalic Acid Dribble once the swarm is in their new hive for a couple of days. The treatment will be very effective before any brood is capped. Do an Alcohol Wash just before treatment and then a few days after treatment to verify mite levels are low (less than 1%).

Spring is a very busy time of year for the bees and the beekeeper! To proactively manage swarming, a beekeeper needs to assess each colony once a week. If the beekeeper 1), provides plenty of space for nectar storage, 2) provides plenty of space for the queen to lay and 3), manages the hives population, the swarming impulse is less likely to be triggered. If the swarming impulse is triggered but the colony has not swarmed yet, there are several methods to prevent an actual swarm. Finally, if the colony has swarmed, be prepared to capture the swarm.

Beekeeping Memories

How I Started Beekeeping

by

Karl Schoenknecht

The year was 1982 and I remember watching honeybees at work. I was at George Hewitt's home in Ridgewood NJ. George was my father-in-law and he asked me to join The Northeast Beekeepers Association. I was welcomed by a friendly group of beekeepers at one of their pot-luck outdoor picnics with lots of homemade salads and farm fresh corn and tomatoes. I joined and soon replaced George as the club Treasurer. At first I worked with my father-in-law who kept all payment records in a hand written ledger. I eventually put information on my computer using Word software and later Excel software because I could not easily keep membership records nor wanted to spend the time correcting mistakes that were hand written.

In the beginning, I found that our Northeast Branch wanted to separate from the NJ Beekeepers Association because the members thought they were losing control of the dues and contributions. After much work with the NJBA, our branch members and input from other branches, we resolved all issues. The branch constitutions are now uniformly worded and in sync with the NJBA Constitution. Amendments have since been made to improve the wording and branches were added but the organization remains united.

George Hewitt had neighbors that were proud of their roses and kept spraying them even after George asked them to stop because they were killing his bees. He did not want a fight with his neighbors so he brought his bees and equipment to my house, including his Treasurer's briefcase, and the rest is history. I think George knew he had Parkinson's but stayed active and did not share his secret for several years. George taught me the basics of beekeeping and it was easy before the 1990's when I could harvest light and dark honey from the same hive in the same year. George also taught me about positive thinking when he lost sight in one eye and said "My other eye works just fine and I can still read or play Bridge with my friends".

I kept between one and four hives and would give gifts of at least a gallon of honey to my sister Diana and another gallon to Helen my mother-in-law for their baking. Diana's three children usually ate most of the honey before my sister could use it for baking. Helen baked cakes and cookies but later let George use the honey for his wine and mead making. George and Helen are gone now but their memories continue.





Northeast New Jersey Beekeeper...

Public Group

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...



Our Facebook Group has **over 1775 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

**Installing/Caring for your new nucs,
& Swarm Management**



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