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# February 2017



**NORTHEAST NEW JERSEY BEEKEEPERS ASSOCIATION OF NEW JERSEY**  
A division of New Jersey Beekeepers Association

President	Frank Mortimer	201-417-7309	3 <sup>rd</sup> V. Pres.	Karl Schoenknecht	201-891-0947
V. President	Rich Schluger	201-693-6949	Secretary	Jaimie Winters	551-486-7479
2 <sup>nd</sup> V. Pres.	John Gaut – <b>Mentor Coordinator</b>	201-961-2330	Treasurer	Bob Jenkins	201-218-6537

Meeting on: **Friday, February 17th 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, February 17th** when we present our own Frank Mortimer and John Gaut as they trot out their favorite beekeeping tools, gadgets and doodads. Watch with wonder as they tell us what they all use those gadgets for. You can ask why and what for and learn how they do their beekeeping.

## **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:

Happy Frozen February Northeast NJ Beekeepers!

The last few weeks have certainly had the most winter-weather of 2017. Snow, ice and freezing temperatures have been hitting us, and my guess is that we will see a few more blasts from old man winter before spring is finally here. We did have a few very warm days, and I was super happy to hear about so many members taking the opportunity to put Apivar into their hives! The more proactive you are with mite treatments, the stronger & healthier your hives will be. Also, by planning and implementing strategies to ensure the health of your hives means that you are a true bee-keeper, and not just a bee-haver.

It is also extremely important to remember that most colonies die in the last few months of winter, namely February and March. Many hives run out of food and starve to death, so for the survival of your hives it is essential that you are confirming they have food to last until spring starts to bloom. The best way to know if your bees need food is take off the outer and inner covers and look to see where the bees are. If you have bees at the top of your hive, then you should feed that hive. The rule of thumb is: If you see bees, they are hungry.

One of the aspects of beekeeping that I love is how there is always something new to learn, and recently, I learned a “new” way to feed my bees. Last month I checked on my hives, and I saw bees at the top of all my hives. I knew that one of my hives was a tad light going into winter, and I was expecting to feed it, but the other four were REALLY heavy, so I was surprised those hives would have gone through all their stores. I thought I’d check the weight on the other four hives, and sure enough, all of them were all still quite heavy. After I felt how heavy the hives were, I thought I might be OK NOT to feed them. But, because I was always taught, if you see bees, you need to feed your hives; I thought I would check with Grant Stiles, (I consider Grant my mentor, as I go to him with my questions/concerns. It’s good to remember that no matter how long you’ve been keeping bees, it’s always good to talk with other beekeepers that know more, have more experience, and may be able to offer another perspective.) I’m thankful I checked, because I was told I should indeed feed them. Grant went on to say that even though the hives were heavy, I didn’t know what they were heavy with. The weight of a hive is not just honey, and my hives could have had a large amount of pollen

and very little honey. He went on to say that you cannot go by weight alone, but you have to also see what the bees are doing. This made sense to me, especially when I also thought about how bees easily move up in a hive to find food, but are not so adept at moving back down.

In past winters, I have fed fondant to my bees during the winter. I would wrestle with a 50-pound box of the taffy-like monster, cut it into 5 roughly equal parts, one for each hive, and manage to get a thin layer of the gooey, messy food into all the hives and all over most of me and my bee equipment. I was telling Grant about my epic battles with fondant, he asked, “Why don’t you use sugar?” He went on to tell me that many commercial beekeepers use regular granulated sugar, as it’s cheaper than fondant and easier to use. So, I decided that I would give it a try and see how well it worked.

The idea is that you take off your inner and outer covers. Then, you lay a piece of newspaper over the top of the hive, directly on the top bars of the hive. Then you put a shim/rim/spacer on the hive to give you space to put the sugar. Next, you pour the granulated sugar onto the newspaper and “fill up” the space you have made with your shim. Then, put your inner and outer cover back on and close up your hive.

Now, even though the sugar is “loose,” thanks to the natural moisture in a hive and what the bees “give off,” the sugar will absorb the moisture, clump up, and become a solid sheet of sugar. So, the theory is that while you’re pouring in loose granulated sugar, not to worry, as the bees will turn it into a solid. However, since I have never done this before, I had nightmares that the bees would eat the newspaper away with the same speed and vigor they do when you combine two hives, causing a sugar avalanche that would destroy my hard-working colonies. I had visions of opening my hives and finding all of my bees at the bottom of the hives, smothered under a huge pile of loose, granulated sugar.

But, even though I was nervous, I decided to try it. The one extra step I took to speed up the natural clumping of the sugar was that I brought a spray bottle of water with me, and after I poured in a layer of sugar, about ½ inch – 1 inch deep, I sprayed the sugar with water. I made sure that I had enough sugar down so the moisture would not be able to go beyond the sugar and impact the bees. Also, I only misted/spritzed the sugar so it could not seep too deep into the sugar. Then I poured more sugar on top with the thought that the water would start the clumping and help prevent a tsunami of sugar from burying my bees alive.

Then I waited.

A few weeks later, I went back into my hives to check on the bees my mountains of sugar. To my delight, in every hive, I saw bees! I also saw that the sugar had indeed hardened and the bees seemed happy with their food supplies. It was cool to see how the bees were working the sugar. In each hive it looked a bit different, but it was clear they were eating it mostly from the underside, while still creating at least one opening all the way through to the top.

Having fed my bees every winter, and having tried fondant, candy, and now just loose sugar, I can easily tell you which one I prefer—the sugar. I like the ease of pouring the sugar into my hives. There was no additional mess either from bear-hugging a bunch of fondant, or from cooking up bee candy in the kitchen. I also like that I am buying the same sugar that I use to make sugar syrup, so

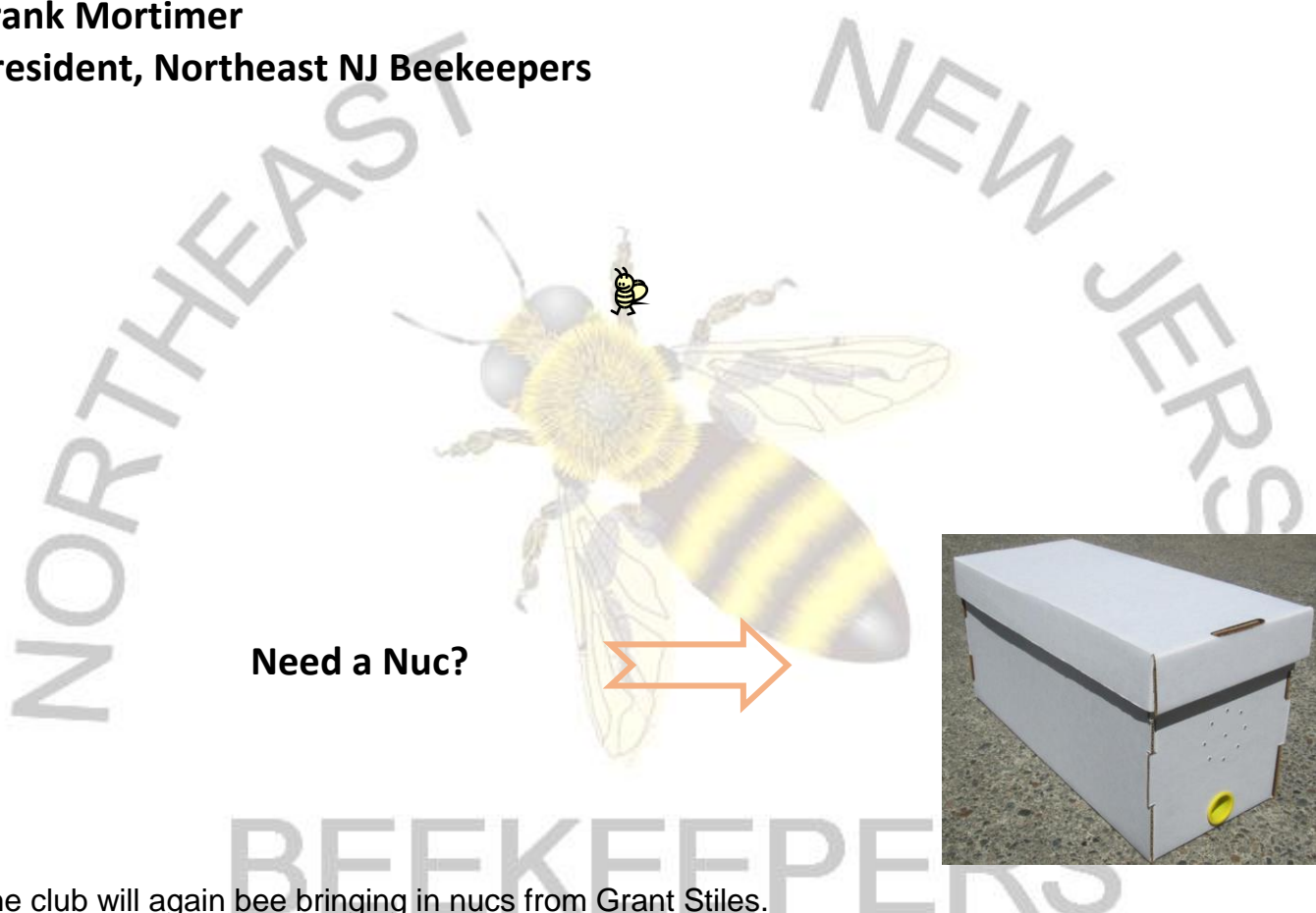


any extra sugar will be used at some point. Last, sugar is a lot cheaper than fondant, and it's always good to save a few \$\$\$\$. So, I learned that granulated sugar is cheap, easy to use, and the bees like it. Now, the only other thing I still need to figure out is why did I wait so long to try it?

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

Bee well and remember to always keep learning!

**Frank Mortimer**  
**President, Northeast NJ Beekeepers**



**Need a Nuc?**

The club will again be bringing in nucs from Grant Stiles.

**Each nuc is \$160.** You can reserve yours with a **\$60 per nuc non-refundable deposit.**

The nucs will be delivered to Ramapo College sometime around April 19th. (More info to follow)

There are only a limited number of nucs available, and when they're gone, they're gone, so please reserve yours early.

**Please see or contact Bob Jenkins to reserve your nuc today!**



## Happy Announcement

It is with great pleasure that we announce a new family addition for the Mortimers. Here is Ella. Already she looks like the queen bee. Congratulations to Frank, Sophie, Svea and Miles!



## Resealing ApiVar

John A. Gaut

Many of us are using ApiVar in the winter clusters now to reduce the mite populations. This is an excellent Mite Management Practice since most of the mites are phoretic (on the bees and not in the brood) and the bee population is at its lowest, resulting significantly reduced mite population.

At our January meeting, we talked about ApiVar losing its effectiveness once the package is opened. The strips are vacuum sealed in a metalized film package. Once the vacuum is broken, the amitraz (miticide in the plastic strip) begins to migrate out of the strip and contact with moisture in the air causes the amitraz to breakdown, losing its effectiveness. Phil Craft is the technical representative for ApiVar in the USA. This is what he had to say, "There is no way to re-seal the packaging. I recommend making use of all the strips within 2 weeks of opening the package."

Some have also told me they are storing the ApiVar in the freezer. While it should be stored in a cool place, it is not necessary to store ApiVar in a freezer. From a Food Safety perspective, it is not a good practice either! Mixing poisons with the food you eat is risky!

## Problems in Understanding Defensive Bee Behavior

(sourced from: The "Hive and the Honey Bee")

John A. Gaut

Sometimes we beekeepers try to explain honey bee behavior as if they were humans. Several beekeepers have expressed frustration when feeding their bees, "Those ungrateful bees sting me when all I was doing was giving them some food!"

While I do admit it is fun to think and talk about bees like they are little humans, anthropomorphic thinking does not lead to an objective assessment of observed honey bee behaviors.

Anthropomorphic, now there is a big word! Anthropomorphic means ascribing human characteristics to nonhuman things.

Beekeeping is more fun and successful as we learn and apply bee biology. The honey bees have not changed significantly in thousands of years. What has changed is our understanding of how and why bees behave as they do. We are learning more all the time; often the new information replaces old, somewhat traditional beliefs about bee behavior.

Bees simply react without thought or conscious awareness of the mechanisms and consequences of their behavior. These mechanisms have been perfected over millions of years! The behaviors are like a mouse trap; once the trap has been triggered, the spring is released. What are the factors that affect behavior? They include:

- Internal Factors such as the stage of development (e.g. a young nurse bee can produce brood food but not are not likely to sting while an older foraging bee cannot produce brood food but can sting)
- External Factors detected with sensory systems (e.g. a bee can taste with their front legs and proboscis, and smell with their antenna)
- Time Factors (e.g. foragers know what time of day is more productive to collect nectar)

So trying not to think anthropomorphically, why do bees sting? Bees are not aggressive; they are defensive though. Bees have many enemies. A small number of bees, typically less than a half percent functions as “guard” bees. The slightest disturbance stimulates the guard bees to be alert and make buzzing “alarm” sounds. Vibrations, odors (especially exhaled carbon dioxide), motion (especially fast), and dark colors elicit this behavior and the subsequent stinging action. These defensive behaviors occur near the hive. Bees foraging on flowers are totally benign unless they are grabbed or stepped upon.

Using this knowledge, how can we work with the bees while minimizing stinging?

- Defensive behavior increases as the colony population increases; there are more guard bees. More care is needed with large colonies than small.
- Alarm pheromone is released by a recent sting and is a major stimulus for defensive behavior. Remove stingers and smoke the stung area to mask the pheromone.
- Quick movements, vibrations and dark colors near the hive stimulate stinging behavior. Wear light colored clothes, move slowly and carefully; do not bang equipment causing vibrations!
- Use smoke that is dense, white and cool to mask the alarm pheromone when the colony is disturbed. A little smoke in the entrances and under the outer cover before opening the colony disrupts the defensive behavior. Wait a few minutes after applying a small amount of smoke before opening the colony.
- Defensive behavior increases near sundown and persists through the night.
- Crushed bees release alarm pheromone. Handle equipment and comb in a manner to not injure and crush bees.
- Crushed comb stimulates defensive behavior. Minimize the scrapping of burr comb and leave any scrapping until the end of inspection. The scrapping vibrations alert the bees to be defensive.
- Poor foraging conditions will result in the hive being more defensive; more foragers will be in the hive and “on guard” for robbing. It is really pleasant to work with the bees during a strong nectar flow! More challenging when there is a dearth.
- Finally the defensive behavior of the colony is strongly affected by the genetic composition of the population. If a colony is overly defensive, re-queen with known stock that is demonstrated to be gentle.

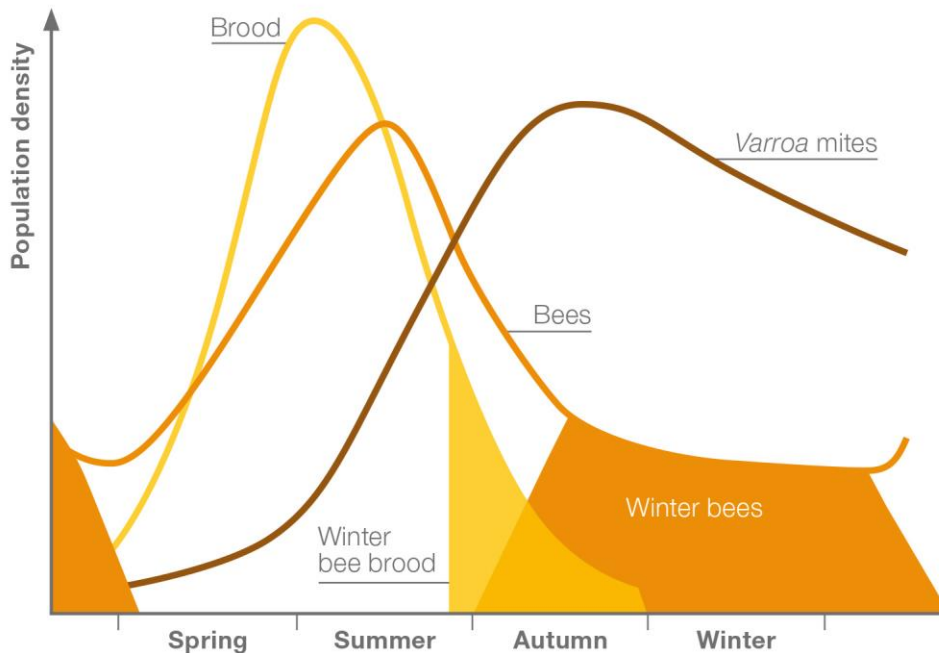


# Mite Management Plan

John A. Gaut

A mite management plan has three major parts. The most important part is understanding the population dynamics of both the bee and mite population in a colony. The second is frequent monitoring and the third is treating as necessary. I have found it is really important to monitor for mites in the late fall. Hives that were treated and had low mite infestation levels in the fall can suddenly (within a few days) have high mite infestation levels and will die during the winter. The high infestation levels are from colonies that were not effectively treated and are collapsing in the fall. The strong colonies rob the weak colonies and the bees from the weak colonies drift to the strong colonies, carrying the mites with them.

Below is a diagram showing how the population of bees build during the season and also how the population of mites also increase (lagging behind the bee population build). Low mite levels early in the year will build to high levels in the fall if the colony is not treated. If the colony does survive the winter, it is unlikely to survive the next season because the mites were high at the beginning of the season and increased even more during the season. Often these colonies will collapse in the fall and mites will be spread to nearby colonies.



Graphic: *Varroa* population

*Varroa* mite population through the seasons.

© Bayer Bee Care Center, Bayer AG | Source: Brochure <<The *Varroa* mite>>



Below is a summary of my plan:

## Mite Management Plan

<u>Planned Date</u>	<u>Task</u>
Thursday, January 19, 2017	Treat with ApiVar (56 + 14 days before honey supers)
Tuesday, February 14, 2017	Move ApiVar Strips After 4 weeks 56+14-28
Thursday, March 16, 2017	Remove ApiVar Strips
Saturday, April 01, 2017	Mite Check
Saturday, April 01, 2017	Add Honey Supers
Saturday, April 15, 2017	Mite Check
Tuesday, May 16, 2017	Mite Check
Thursday, June 15, 2017	Mite Check
Tuesday, July 04, 2017	Treat with MAQS or Oxalic Acid and Glycerin Towel
Tuesday, July 18, 2017	Check for Mites
Wednesday, August 16, 2017	Check for Mites
Monday, September 04, 2017	Remove Honey Supers
Monday, September 04, 2017	Check for Mites
Monday, September 04, 2017	Treat with ApiVar
Monday, October 02, 2017	Move ApiVar Strips
Monday, October 30, 2017	Remove ApiVar Strips
Monday, November 13, 2017	Check for Mites
Wednesday, November 29, 2017	Check for Mites



## Why Did my bees Die? What is wrong with my bees?

John A. Gaut

There is a plethora of information on-line related to colony losses.

The best site is <https://beeinformed.org/2016/03/08/why-did-my-honey-bees-die/> Often, starvation is misdiagnosed as the cause when a high mite population was the root cause. Megan Milbrath of the Bee Informed Partnership describes the symptoms of a colony with high mite parasitism.

The site has potential but has a few wrinkles to work out. <http://www.thebeemd.com/>

Another site that may be helpful is Beverly Bees. <http://www.beverlybees.com/how-to-autopsy-a-honey-bee-colony/>. This site has basic information about many of the common reasons for hive losses in the winter.

### The New Jersey Beekeepers Winter Meeting

John A. Gaut

The NJBA meeting was a great success. The fall meeting was canceled due to the speaker's emergency. So Chris Yates and others organized a two day meeting. It was a very informative 2 days! We heard from Jeremy Bemis from Arkansas about how he started a beekeeping business and also how bees are kept in his area. Jim Tew, a contributor to the Bee Culture magazine was very engaging and informative in his presentations. There were many other presentations.

One of the best was by Sam Ramsey, a Ph.D candidate from Dennis van Engledorf's lab at the University of Maryland. Sam found that the Varroa mite primarily feeds on the bees fat bodies, not the hemolymph!!! The "conventional wisdom" was the mite is sucking out the bees blood (hemolymph) based on assumptions from over 30 years ago. His research shows the mite feeds on the adult bee's and pupa's fat bodies for its nourishment. This discovery may lead to better ways to deal with the mites. Just another example of how we are learning something new all the time and the conventional wisdom is sometimes incorrect. Sam also provided some entertainment at the Saturday evening banquet; he is an amazing singer too!

The winning entries from the Honey Show were on display and were auctioned off by tricky tray. Kelly Palazzi's First Place honey and Tom Fuscaldo's First Place Mead were among the entries. Nice entires Kelly and Tom!

The Northeast branch was well represented at the meeting.





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## 1,656 Strong!!!

We quickly blew through the 1,600 member milestone and are, as of this writing **1,656** 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.njbees.org> is your website! Check that site for everything Northeast New Jersey Beekeeping!

### ❖ Volunteers ❖

<b>Celia Miller</b>	Refreshments – Cakes, cookies, brownies, tea, etc.
<b>Jennifer Phillips</b>	Refreshments – Cakes, cookies and other treats
<b>Billy Neumann</b>	Club photographer
<b>Hugh Knowlton</b>	Workshop/Event coordinator and presenter
<b>Mike Miller</b>	Club apparel
<b>Emma Stein</b>	Resident artist
<b>Bob Slanzi</b>	Meadmaster

### Next Month

The Northeast NJ Beekeepers is proud to present Landi Simone and our own John Gaut who will present: There's More Than Honey: Making "Value added Products" & Mentoring Program