



nnjbees.org



January 2020

NORTHEAST NEW JERSEY BEEKEEPERS ASSOCIATION
A division of the New Jersey State Beekeepers Association

| | | | | | |
|--------------------------|---------------------------------------|--------------|--------------------------|--------------------------|--------------|
| President | Frank Mortimer | 201-417-7309 | 3 rd V. Pres. | Rich Stellingwerf | 201-693-2571 |
| V. President | John Gaut – Mentor Coordinator | 201-961-2330 | Secretary | OPEN | -- |
| 2 nd V. Pres. | Jaimie Winters | 551-486-7479 | Treasurer | Bob Jenkins | 201-218-6537 |

Meeting on: **Friday, January 17th 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*



This Month's Meeting:

Joe Lelinho

Hilltop Honey

How to Make Creamed Honey





Message from the President:

Hello Northeast NJ Beekeepers!

Welcome to a new 2020, which marks a new decade and also my 10th year as president of the club. As I look back at the last ten years, I am amazed at how much we've done, and how many great things still lay ahead of us to do. Ten years ago, our membership consisted of 37 members, with no more than a dozen attending our monthly meetings. Since that time our membership rolls have added another 200+ members and attendance at our monthly meetings runs anywhere from 80 to over 100 people each month. Also through a lot of fund raising efforts, our club went from barely being able to afford day-old cookies to being able to pay for the top beekeeping experts from across the country to come and speak at our club. We have also been able to bring in a vast amount of beekeeping resources for our members including, beekeeping books, mite treatments, club shirts, and of course, bees, bees and more bees.

Over the past decade, we have started several wonderful annual events, including the Honey Cup, our honey tasting competition that's open to the public and brings in lots of great PR for local beekeepers. Also, our annual holiday party that is the one event that my family and I look forward to the most every year.

But enough about the past, looking towards the future all I can say is that we are just getting started! I expect 2020 to be the best of the best for our club and all of its members. We have lots of great meetings planned and I hope that everyone takes advantage of everything the club has to offer. Additionally, for our club to keep getting better, it's important that all its members stay active. If you've been keeping bees for a few years and think you know all you need to know, to be blunt—you're wrong. Beekeeping is something that no matter how much you know, there is always *that* much more to learn. When you listen to Tim Schuler, Grant Stiles, or even Randy Oliver, all of them will tell you that they're still learning. So if the beekeeping greats have more to learn, certainly the rest of us do too.

This season our club will need more mentors, so if you have had a mentor, or if you've successfully kept bees for a few years, now it's your time to teach others. It's time for you to pay it forward and help new beekeepers start off on the right foot.

This year, our club also has some specific needs. First, we need a new club secretary. If you are comfortable with computers, can format and send emails, maybe even have a design or web background, please see me. **The club needs you.**

Or, if you want to help, but not sure how, please see me and we'll find a way for you to give back to the club.

We have several amazing speakers lined up this year, and I hope everyone will make an extra effort to make it to the meetings and learn something new from someone they haven't heard speak before. I am very proud that we are kicking our year off by having **Joe Lelinho from Hilltop Honey** as our January speaker. Joe is one of NJ's best beekeepers and I am excited to hear him speak. For those that don't know him, Joe keeps hive on top of Valley Hospital, at Liberty Science Center, and whole host of other commercial locations. Joe has done a lot in the Essex branch and at for the State Association. Mostly, I'm excited for him to find out why the Northeast branch is the best! Joe's talk will be on how to make his award-winning creamed honey, and once you meet him, I'm sure you'll see why NJ's lucky to have him.

Yes, 2020 is going to be a great year for our club, and with your help, we can continue to call the Northeast NJ beekeepers the world's best beekeeping club. I look forward to speaking with you about volunteering and I look forward to seeing everyone at Friday's meeting.

Bee well and talk soon,

Frank Mortimer
President, Northeast NJ Beekeepers

Beekeeping in January

by **John A. Gaut**
EAS Master Beekeeper

We had a few warmer than normal days earlier this month so I took advantage above average temperatures to put ApiVar strips in some of my hives. I will get strips in the remaining hives by mid-January. I only opened the top of the hive. Most of the bees were in the top box so I placed two strips in the cluster. (One strip for every five frames of bees.). I also made a quick visual assessment of honey stores. Most colonies had adequate stores. There were a few that I will monitor more closely to be sure they do not starve. The colonies typically will have a small amount of brood in mid-January. The colonies will continue to expand their brood nests as they are able. Temperature and colony size are the main factors determining how fast the brood nest expands. (I insulate my colonies so honey consumption is typically lower than an uninsulated colony and the cluster is as able to maintain temperature in a larger brood nest. Uninsulated colonies may need more food and may not be able to expand the brood nest yet.)

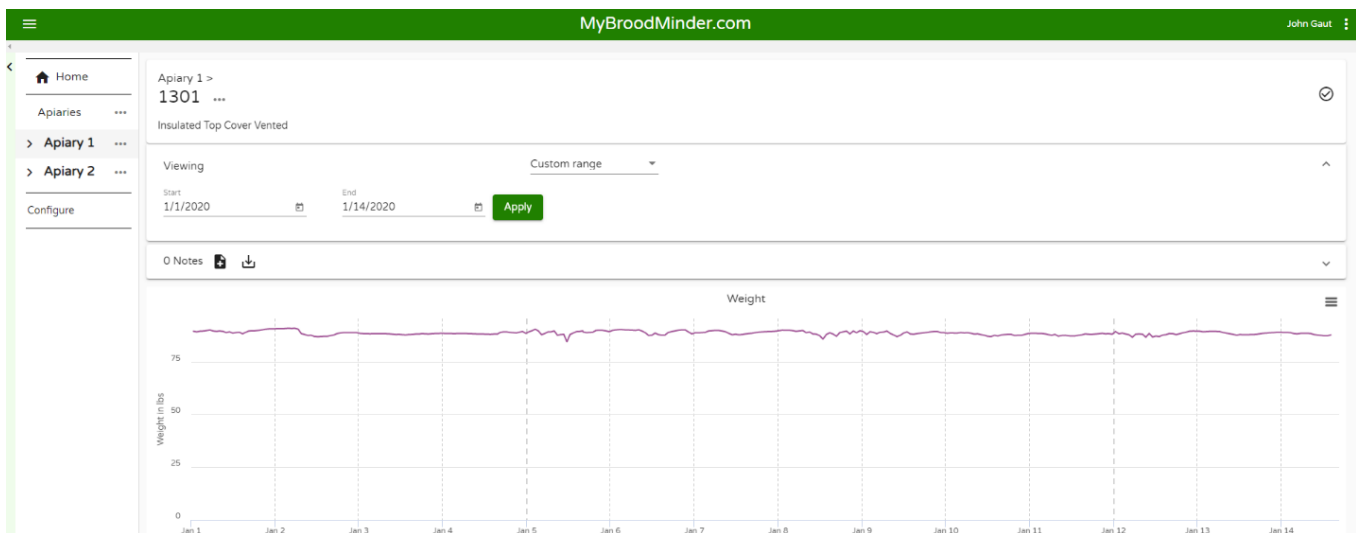
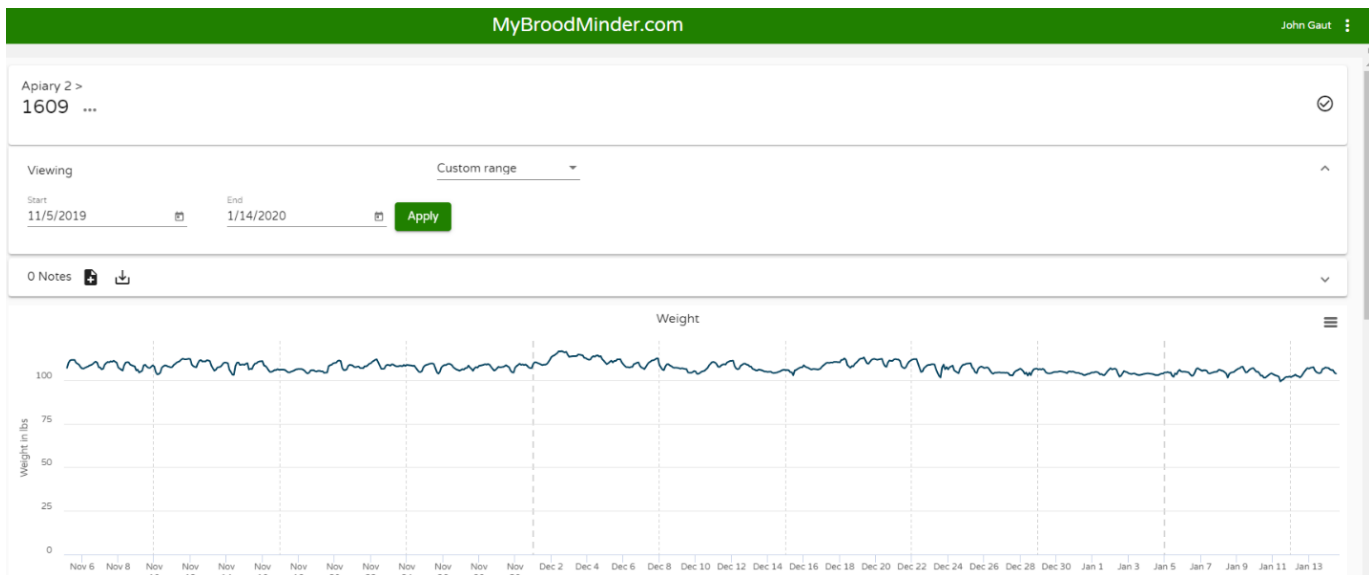
When we get some warmer days in mid-February, I will open the hives and move the strips if needed. I will scrape any wax and propolis off the strips too. The bees need to contact the ApiVar strip for the miticide to work. Scraping the strips improves the effectiveness of the strips. Typically, the cluster moves as they consume honey and build the brood nest. The ApiVar strips are only effective if they are in contact with the bees and mites!

During February when I am moving the strips, I will reassess the honey stores and be prepared to feed if needed. I plan to feed granulated sugar if the honey stores are low. I find the bees consume the granulated sugar as well as fondant or sugar cakes. I typically place the sugar on a paper plate on the inner cover next to the handhole. I'll turn my top insulating shims over then to make a little space above the inner cover. I will also add a small protein patty under the inner cover as a protein source for the nurse bees. I'll only put about ½ of a pound on each hive. The Small Hive Beetle likes the protein patty too!

I try not to overfeed my colonies. Many beekeepers automatically feed thinking they are ensuring the bees do not starve. Often overfeeding in early Spring will result in swarming later in the Spring. The colony consumes the sugar placed in the hive by the beekeeper and does not consume the honey. The queen will need plenty of room to lay in April and May. If the brood frames still have an abundance of honey, there will be no place for the queen to lay eggs and the colony will swarm. Putting feed on as “insurance” can result in early swarms. **Beekeepers should assess the honey stores in the colony before feeding!**

I have Broodminder Scales under two of my hives. The hives are in different yards. The scales give me an indication if the colony is consuming honey now and later in the Spring, I will see nectar coming in.

Below are the scale graphs from January 14th. One scale shows the weights since November 5th and the other shows from January 1st.



Note that the weights have not changed. Both these hives are insulated on the top and sides. The colonies do not need much honey now. I see posts of beekeepers worried that the bees are too active and eating all the honey, especially on warmer days. The bees do not use much energy when they are flying on warm days. Their flights are short distance and short duration. The weights will start to decrease in March and April as the colonies now consume honey to feed the brood and keep it warm.



How Cold Is Too Cold For Oxalic Acid?

by

Frank Mortimer

As any good beekeeper knows, Varroa destructor is the number one threat to *Apis Mellifera*, responsible for more deaths of honeybee colonies than any other contributing factor. According to *Cornell University*, since Varroa first entered the United States in 1987 they have become more deadly and our colonies can no longer handle as mite loads as high as they once could. Varroa is a carrier of multiple bee-killing viruses and it now takes fewer mites to devastate our honeybee colonies, which is why monitoring mite levels and developing a yearly treatment calendar is essential to keep your bees alive.

Oxalic Acid (OA) as a treatment for varroa is still relatively new in the United States, as the EPA only approved it in March of 2015. As more and more beekeepers in the United States start using OA, more questions arise on how to effectively use it as a mite treatment. Since OA is best used when a colony is broodless, one of the most frequently asked questions is in regard to outside temperature. When is it too cold to treat? At what temperatures is OA still effective?

Even though it's new in the United States, OA has been used to combat the Varroa mite in Europe for decades. So to answer the question of temperature, I reviewed the scientific literature and found that a lot of research has been done in countries where OA had been used for years.

All the information below is from reviewed journal articles, meaning that the scientific community has deemed the science behind these studies to be accurate and on point. So unless you're a flat earther, this is science that you can trust!

In the First study:

**Oxalic acid for the control of varroosis in honey bee colonies
– a review
Eva Rademacher, Marika Harz
Apidologie 37 (2006) 98–120**

It says you can sublime (vaporize) Oxalic Acid when there's an outside temperature of greater than 2° Celsius (35° Fahrenheit).

The article also states that for the dribble method you need to have an outside temperature that's greater than 3° C (37.4° F)!

It is interesting to consider that where you live and the variance in temperature that you experience has an impact on what you consider to be “too cold,” “too hot,” and “just right.”

It's clear that people in other countries think about temperature differently than we do. What's cold in Sweden is certainly different from what's cold in Egypt, yet it's important to remember that *Apis m.* is native to both regions. So while it might be hard to imagine dribbling sugar syrup onto your bees when the outside temperature is only 37.4° F, it's more important not to anthropomorphize the weather, instead remembering that bees are insects and temperature affects them differently than it does humans.

In the Second study:

Biology and control of *Varroa destructor*
Peter Rosenkranz, Pia Aumeier, Bettina Ziegelmann
Journal of Invertebrate Pathology
Volume 103, Supplement, January 2010, Pages S96-S119

It states that Oxalic Acid applied by trickling, spraying, fumigating or as pure crystals (e.g. sublimated with heat) has an efficacy greater than 90% when colonies are broodless, and less than 60% when there is brood present. More importantly, it answers our question by stating:

“efficacy is independent from temperature.”

In other words, it says that temperature has no impact on how effective Oxalic Acid is at killing mites. It works no matter what the outside temperature is.

The third study is:

Oxalic acid treatment by trickling against Varroa destructor: recommendations for use in central Europe and under temperate climate conditions

Jean-Daniel Charrière & Anton Imdorf

Bee World, 83:2, 51-60

And it simply says: “Carry out treatment at an outdoor temperature of above 0°C (32° Fahrenheit)”

Last, I reviewed a Swedish article that translates as, “***Oxalic Acid Vaporization in Field Trials.***” Please note that this article appeared on the Swedish Beekeeping site, “Alltom Biodling.”

The original article is:

Oxalsvraförångning i fältförsök

Thomas Radetzki, Markus Bärman

Mellifera e.V., Vereinigung für wesensgemässe

Bienenhaltung

Fischerühle, D-72348 Rosenfeld

<https://alltombiodling.se/oxalsyraforangning-i-faltforsok/>

What's interesting about this study is that it shows the impact the outside temperature has on the treatment's effectiveness. You'll see that the effectiveness didn't drop off until they treated at -2°C to 0°C (28.4°F to 32°F).

Since most people reading this article are not fluent in Swedish, I have attached a table from the study where I added the English words to it.

Tabell 4

| | Temperature | Temperatur | -2-0 | 0-2 | 2-4 | 4-6 | 6-8 | 8-10 | 10-12 | 12-14 | 14-16 |
|---------------------------------|-------------|------------------|------|------|------|------|------|------|-------|-------|-------|
| 1.4 gram oxalic acid | | 1,4 g os | | | | | | | | | |
| # of Hives Treated | | Antal samhällen | 5 | 0 | 21 | 131 | 140 | 75 | 62 | 5 | 16 |
| Results % | | Verkan i % | 72,8 | | 95,8 | 95,9 | 96 | 94,5 | 92,3 | 97,7 | 91,5 |
| 2.8 gram oxalic acid | | 2,8 g os | | | | | | | | | |
| # of Hives Treated | | Antal samhällen | | 13 | 23 | 102 | 262 | 151 | 99 | 43 | 25 |
| Results % | | Verkan i % | 0 | 99,4 | 98,4 | 96,3 | 94,3 | 94,8 | 92,7 | 96,7 | 96,4 |
| Average % | | Genomsnitt % | | | | | | | | | |
| 1.4 & 2.8 gram doses | | 1,4 o. 2,8 g dos | 72,8 | 99,4 | 97,2 | 96,1 | 94,9 | 94,7 | 92,5 | 96,8 | 94,5 |

In Conclusion, How Cold Is Too Cold For Oxalic Acid?

Based on a review of the scientific literature, treating with OA in any temperature above freezing — 0° Celsius, 32° Fahrenheit — will be an effective varroa treatment if you're using sublimation (vaporization), and 37.4° Fahrenheit and above if you're using the dribble method. Finally, it's worth noting that OA is most effective when a hive is broodless, which also happens to coincide with when our temperatures dip down into the low thirties. Therefore to ensure its maximum effectiveness, schedule your oxalic acid treatments during the winter months when brood levels are at their lowest point, now knowing that you need to be less concerned with the outside temperature to keep your bees healthy and your mite counts low.



All the equipment needed for the sublimation of Oxalic Acid. Please note the important safety equipment, including the organic acid/vapor respirator, safety goggles, & gloves.



American Beekeeping Federation Conference

John A. Gaut

Master Beekeeper, EAS

This years American Beekeeping Conference was held in Schaumburg, Illinois very near the Chicago airport. The conference center included a hotel so it was very convenient to get to the conference every day!

First a few things I learned:

The Varroa mite and the viruses they transmit continues to be the NUMBER ONE KILLER of honey bees. I have modified my perspective about mites and viruses slightly. I now think viruses are the killer, the mites are just the vector. **As beekeepers we must manage the virus transmission to the honey bees.** The significance of the managing the viruses may change some beekeepers varroa treatment approach, specifically the type of treatment and timing. To have healthy bees, especially going into winter, the beekeeper must keep the virus infections in the hive low when the winter bees are being reared, August through November. For example, Formic Pro (full treatment) is the most effective treatment if applied in July since it kills mites under the brood capping. By killing most of the mites at one time, including those under the capping, the virus infections in the bees can be significantly reduced. Another effective treatment is ApiVar, a slow release of miticide. Treatments that are not effective enable viruses to continue to circulate in the colony and result in winter bees with poor health.

Dr Samuel Ramsey was a keynote speaker and updated everyone with his observations about the Tropilaelaps mite. This mite is now in Asia; he studied the mite in Taiwan.

- Tropilaelaps is about 1/3 the size of Varroa; it is really small!
- Tropilaelaps moves much faster; difficult to find!
- Tropilaelaps is similar in color to comb; difficult to see!
- Tropilaelaps has a much shorter phase on adult bees; difficult to treat!
- Tropilaelaps reproduces more quickly; populations increase quickly!
- Tropilaelaps moves on its own between hives; does not need to ride on bees!
- Tropilaelaps may over winter on mammals to keep warm.

Nicole Medina was the 2019 American Honey Princess. Nicole and the American Honey Queen traveled across the US speaking to kids and adults about honey bees, beekeeping and pollinators. They promoted honey and its various uses. The American Honey Queen and American Honey Princess generate a tremendous amount of free publicity for honey and beekeeping. The good will is invaluable. While there are travel costs, there is a tremendous return in free advertising.

There were many vendors at the conference. In-between sessions and during some evenings, we got to see the latest and greatest in beekeeping. Meeting the vendors is a great opportunity to learn about their products face to face. I had a few questions for several vendors and got good answers quickly.

There was much more that I learned! It's impossible to convey everything! If at all possible, the American Beekeeping Convention worth attending every year! The conference will be in Las Vegas next January. I guess I have to go.....



The New Jersey: Meghan McConnell (our new State Apiarist), Fran Wasitowski, Nicole Medina (2019 American Honey Princess), Stan Wasitowski, Eileen Hyland and John Gaut

Hotboxing with Oxalic Acid

by

Frank Mortimer

with special thanks to Ian Keller

In my never-ending quest to be the nerdiest beekeeper on the planet, and because I'm constantly looking to Sweden for how to have fun with my bees when it's cold outside, I like to visit Swedish beekeeping websites.

<gasp!>

I like to look at what they're doing and use it for inspiration and new ideas that I could incorporate into my own beekeeping practices. Swedes have long relied on Oxalic Acid (OA) for their mite treatments, and one of the things I stumbled upon was how they vaporize OA from the top of their hives instead of the front entrances, which like ours, are located at the bottom of the hive.

The two videos I found were:

https://youtu.be/w9JSdu_9pr8

https://youtu.be/nSy_gM1uqT8

Once I watched these videos, I realized that it would be a huge timesaver to start using this method. I have mouse guards attached to my hive entrances, and vaporizing OA always takes extra time because I have to remove the guards, treat the hives, and then replace the guards.

Additionally, since the bees are usually closer to the top of the hive, or already at the top of the hive, by initiating the OA treatment closer to where the bees are already located, it could help ensure the effectiveness of the top-down mite treatment. My thought was, bring the vapor to the bees instead of the vapor working itself up to the bees.

The only problem with executing my plan of using this Swedish technique: I have absolutely no carpentry skills and there's no way I could recreate what I saw on the videos. So, instead of trying to build it myself, I did the next best thing, I sent the video links to NNJ member Ian Keller and begged him to help me. In addition to having the skills, equipment, and materials to build the Swedish OA Hotboxes, Ian also had a vision to improve upon their design. So even though my carpenter skills are poor, thankfully I am lucky to be friends with someone who knows what he's doing and enjoys being a co-conspirator in my bee-craziness.

In both of the videos, the Swedes used two shims; a small bottom one with a groove cut out for the Varrox Vaporizer to sit in. Plus a top shim that's deeper, allowing for room (3-4 inches) between the vaporizer and the top of the hive. The added space was to ensure the heat from the vaporizer didn't burn the top of the cover.

Ian's idea was to attach the two shims together with hinges and permanently attaching a cover to the top. With Ian's design, it would be easier to open the Hotbox with one hand, while pulling the vaporizer out with the other. Making it easier and faster to remove the vaporizer—and by building two boxes—it would be faster and more efficient to treat a lot of hives, with a lot less down time.

The dimensions Ian used were:

Bottom Shim: two 1-1/2" tall pieces at 18-3/8" & two at 16-1/4"

Top Shim: two 3-1/2" tall pieces at 18-3/8" & two at 16-1/4"

Ian used thin plywood for the top, and he stapled felt weather seal around the bottom to ensure there were no leaks. He also attached a handle on the front for easy lifting.

Here are a few photos of the OA Hotbox:



Here is a shot of Ian's OA Hotbox sitting on a hive. Please note the handle and the hole for the vaporizer.



Here is a shot the box when it's open. Please note how easy it is to open with one hand.



**Here is a shot with the vaporizer in place
Please note it's well above the bees and how happy
they look knowing they're about to be vaporized.**

The end result was that it worked like a charm! In several of the hives, I could see wisps of vapor coming from underneath the hive where the inserted bottom board wasn't fully sealed. (Which is exactly why I always wear my 3M organic acid respirator when vaporizing OA.)

Actually, I was pleased to see the OA vapor coming from the bottom of the hive, as it validated what the narrator on the Swedish video had said, “OA Vapor will travel down and gas the whole hive.” The OA hotboxes did considerably cut down the time it took for me to vape my hives. I also liked how the vaporizer was safely positioned away from the bees, wax and all the other (flammable) parts of the hive.

So far, the only negative side effect from using the Swedish method is that now my bees are craving Swedish Meatballs and tiny IKEA furniture.



Beekeeping Courses

The biggest factor in determining if a new beekeeper will be successful is education.

There are several courses nearby this month and next month. These courses are good. If you haven't taken a course, please attend at least one.

The state regulations now require new beekeepers to take a beekeeping course.

Two beginning beekeeping courses close to us are **Essex County Beekeepers Basic Beekeeping course** and the **Sussex County Beekeepers Association course**. Both include the State organization fee and the local branch fee. (You will need to pay a separate small fee to be part of the Northeast Branch. See our Treasurer.

Here is the link to the New Jersey Beekeepers Association Education Page

<http://njbeekeepers.org/Education.htm>

You can find the links there to register for either of these courses. Both still have openings.

Grant Stiles and Tim Schuler are teaming up to share their combined 79 years of beekeeping expertise with interested beekeepers. The **classes will be held at Stiles Apiaries' new facility: 511 New Brunswick Avenue, Fords, NJ 08863**. The first class is tentatively scheduled for Wednesday, February 19, 2020. The topic will be "Spring Management and All That Goes into It." Planning, feeding, varroa control, equipment, when to start, and population dynamics for honey production are just a few of the things a successful beekeeper must consider. Students who sign up should have beekeeping experience as well as an understanding of beekeeping vocabulary. Interested beekeepers can **reserve a spot by sending an e-mail to:**

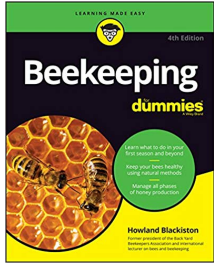
Education@stileshoney.com In the subject bar, put Next Level Beekeeping. Grant and Tim look forward to seeing you there.

There is a lot of misinformation on the internet. Your best source of information are these courses, club meetings and reading recommended books. The club sells recommended books at discount prices.

If you take the time to attend a course or two, read some basic books and attend club meetings, you will be able to start successfully in beekeeping. The club may be able to match you up with an experienced beekeeper to mentor you. The mentor is not expected to teach you everything you need know about beekeeping. The mentor will be able to help with questions and difficult issues though, once you understand the basics.



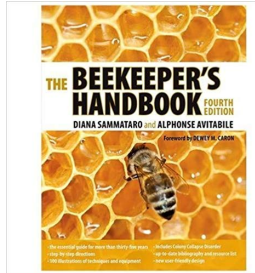
Northeast NJ Beekeepers Bee Books for Sale



Beekeeping for Dummies

An excellent basic intro guide to beekeeping

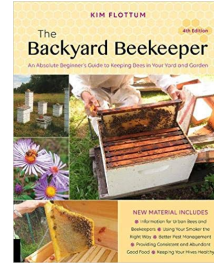
Price: \$20



Beekeeper's Handbook, 4th

If you're only going to buy one book, this is the best guide to the hobby & profession of beekeeping

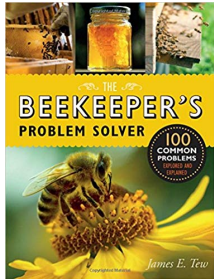
Price: \$25



Backyard Beekeeper 4th

The premiere introduction to backyard beekeeping

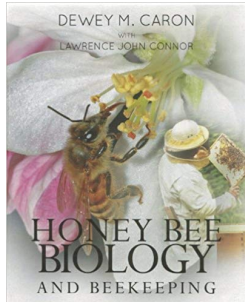
Price: \$20



Beekeeper's Problem Solver

100 Common Beekeeping Problems Explored and Explained

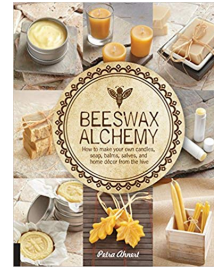
Price: \$20



Honey Bee Biology and Beekeeping

The only beekeeping textbook teaching college students & beekeepers the science & practice of bees & beekeeping

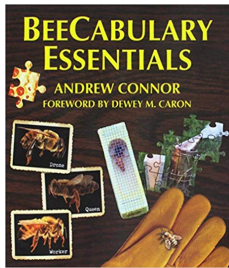
Price: \$45



Beeswax Alchemy

Over 40 DIY projects that's the perfect combo of recipe, craft book, & beekeepers' guide

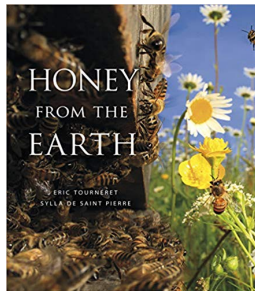
Price: \$20



BeeCABULARY Essentials

All the special terminology about bees and beekeeping

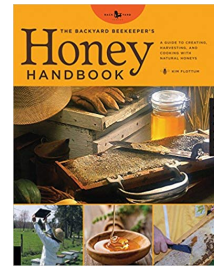
Price: \$30



Honey From the Earth

Internationally acclaimed honeybee photographer Eric Tourneret spent FIFTEEN YEARS traveling the world to capture the breathtaking diversity of bees and beekeeping traditions on six continents.

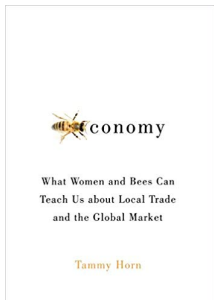
Price: \$50



Backyard Beekeeper's Honey Handbook

More than just a cookbook, it introduces the literal cornucopia of honey varieties available

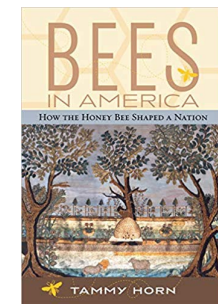
Price: \$20



Beeconomy: What Women & Bees Can Teach Us about Local Trade & the Global Market

Examines the fascinating evolution of the relationship between women & bees around the world

Price: \$20



Bees in America: How the Honeybee Shaped a Nation

Cultural history of bees and beekeeping in the United States, from the colonial period, when colonists first introduced bees to the present

Price: \$20



Better Beekeeping

Takes beekeepers past the beginning stages and offers solutions and rewards for keeping bees a better way.

Price: \$20

All Books are only available to members at our monthly meetings

Beekeeping Memories

“Looking Back at the NNJBA”

By

Karl Schoenknecht

After so many years have passed I started to look at old files and remember what the Northeast New Jersey Beekeepers Association was like a number of years ago. I was the Treasurer for many years and the memories return when I see an old non-digital photo or find an old paper file. I changed computers a few times and I only have paper records that go back more than 15 years.

Our club has changed a lot in recent years and with easy computer access we are growing much faster. Much of the old paper files were discarded like the giant ledger checkbook that Stanley Debiak kept before my time in the 1970's. My father-in-law George Hewitt was next in line as treasurer and reduced the check sizes. George came aboard at a time when Northeast Beekeepers almost became a separate organization from the New Jersey Beekeepers Association. Of course the problem was money. We increased our dues to \$5.00 but the NJBA wanted the lion's share because they did the insurance and made us a legal 501C entity. We wanted to raise our \$3.00 dues to \$4.00 but if the NJBA had their way with a 60/40 split, our branch would only get \$2.00.

In 1983 George gave me his brief case and I became the NNJBA treasurer. I worked with NJBA President Pat Henderson and members of other branches and came up with junior, single and family memberships. Family included husband, wife and all the little ones up to age 12 for only \$15.00. For the next 20 years we met monthly at the Glen Rock annex building. We held our club together with John Nazarian and Tom Fuscaldo being long term Presidents. Tom was the hardest worker sending out the monthly newsletter.

I am talking a hard paper copy where Tom copied the newsletter on one side and the mailing address on the other side. He folded each copy into three parts to equal an envelope size then sealed, stamped and brought to the post office.

We had refreshments bought by Al and Jeannette Stoel for each meeting. Marie Springer later took over making homemade meals and desserts. For years, we lost a few members and gained some new ones but rarely had more than 35 in any year.

I included photos from our trip with Tom Fuscaldo to the Paterson falls where the industrial revolution began in the USA. Alexander Hamilton helped to raise funding to build the complex waterways that fed power to Paterson's factories. This area developed the Submarine, the first large loom and the first widely used Locomotive. It is an amazing place to visit.



Beekeeper William Dipillo repaired the three large generators in the building in the foreground and Tom Fuscaldo brought us to a nearby place for Lunch.



William Depillo 2006



Tom Fuscaldo 2006





Our Facebook Group has **over 1877 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 it for everything Northeast New Jersey Beekeeping!

**Next Month:
Winter Hive Management
February 21st**



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