North Carolina

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The Official Magazine of the NCSBA

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Demystifying the Smoker

Summer 2024

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North Carolina Bee Buzz

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It's All About the Mites

North Carolina State Beekeepers Association

~ Since 1917 ~

On the Cover:

Beautiful Queen

Photo: Joel Coldren

North Carolina State Beekeepers Association

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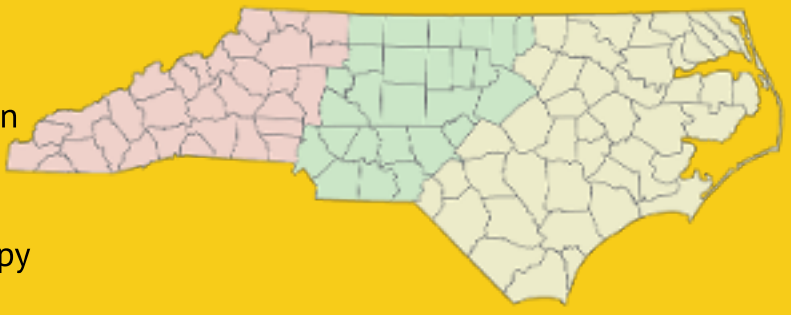

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From the *Bee Buzz* Editors:

***Bee Buzz* Story Submission Deadlines: Spring : Jan 14 - Summer: Apr 21 - Fall: July 21 - Winter: Oct 21**

We enthusiastically accept article and photo submissions! Please send us your articles and photos of news and information you'd like to share about your local association's latest events, successes and failures, a biography on a long-standing NCSBA member you would like to honor, or a young beekeeper you'd like to see highlighted. All honey bee-related topics will be considered for publication. While we regret that we cannot always include every submission, we will do our best to print as space permits. Submit your article in .doc or .docx format. Photos should be high quality jpg or tiff format. Please include a caption for photos. Do not embed captions in your photos or photos into your news article, but submit these as separate files. If you do not have access to a computer, we will accept typed or clearly handwritten articles. Mail written submissions to: *Bee Buzz* Submissions PO Box 1771 Pittsboro NC 27312.

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Message From The President

Why Are We doing This?

by: Rick Coor, NCSBA President

There is great news for the apiculture research facility. The groundbreaking ceremony has been scheduled for August 21; this time next year the NCSU Apiculture Program will be in the new facility! Meanwhile, our remarkable progress on the endowment (NCSBA Distinguished Professor in Apiculture) will in time bring to fruition a permanently established apiculture research program at NCSU. In addition to an expanded apiculture research program, the new facility will enable an advanced level of extension and beekeeper engagement. The endowed professorship in conjunction with the new facility will make the NCSU Apiculture Program more competitive for prestigious national research grants and top flight research associates. Considering that the NCSBA's Apiculture Science Initiative began in 2015, these achievements by our Association have been years in the making.

But what is the full significance of these achievements? What motivated the beekeepers to lobby the General Assembly for funding for the new facility? Why the initiative to establish an endowed professorship? Why are we doing this? The answer is because in 2015 the NCSU Apiculture Program was once again in danger of becoming extinct but the beekeepers of the NCSBA have taken action to make sure that does not happen. But is that an accurate assertion or just a dramatic statement?

Until a few years ago, I had always thought that it was the honey bee that was in danger, not honey bee research.

If you are one of the more than 2,940 beekeepers (59% of the active membership) that have joined the NCSBA since January 1st of 2021 then you likely haven't heard the story of the NCSBA and the NCSU Apiculture Program. In fact, a majority of the current membership may not be familiar with the story. I am not referring to how the beekeepers lobbied the legislature for the new lab or how the leadership initiated the endowed professorship. Those are relatively latter-day events that most of us are familiar with; they are achievements destined to be long remembered.

No, I am referring to some of the forgotten history of the Apiculture Program and the NCSBA; events of decades past. This is a story of those events.

The "old guard", with respectful reference, was keen to state that if not for the NCSBA there would not be an apiculture program at NC State. I can recall some of the words of the late Bill Sheppard (NCSBA President 1974) that he said to me in 2015 during my first term as President, "whatever you do, don't let NC State discontinue the Apiculture Program. It has almost happened twice before but the beekeepers stepped in and kept it going." His words (loosely quoted) were to become a timely and ominous warning. The same sentiment was echoed by other members of the old guard. The story was held that in 1974, the University was going to close the program. It can be found in the text of *A history of the NCSBA 1917-1997* by James F. Greene, Jr., and John T. Ambrose that in 1974 the General Assembly created a full-time Apiculture position at NCSU. This was done in response to lobbying efforts of NCSBA leaders. The following year the University hired Dr. John T. Ambrose who proceeded over the next two decades to excel at extension and teaching. The late Dr. Ambrose helped the NCSBA expand from five county chapters to about thirty-six at the time of his retirement. When Dr. Ambrose retired in 2000, University officials again debated whether to rehire the Apiculture position. The beekeepers, led by the late J.D. Faust (NCSBA Past President), persuaded the University to continue the Program. The University hired Dr. David Tarpy in 2003 who wasted little time to establish himself as a skilled teacher and noted researcher. But, in 2011, the NCDA cut funding to the Apiculture Program from $60,000 per year to $15,000 per year. The $60,000 had been allocated years prior to support the salary of a technician for the research lab. Unfortunately, the UNC University System suffered at the hands of the 2011 budget cuts that came through the legislature. Dr. Tarpy's role was redefined to be 40% teaching, 45% research and 15% extension. Once again, the Program found itself lacking in support where it mattered most. The bad news continued four years later. In 2015, the University unveiled long-range facilities plan for the Research Farm at Lake Wheeler which called for the demolition of the apiculture lab with no

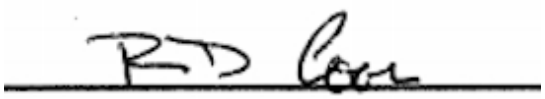
plans to build a new one. Of course, if you have ever seen the now condemned apiculture lab you would understand why it was to be demolished. But why would NC State, one of North Carolina's two land grant universities (NC A&T is the other) endeavor to discontinue the State's leading apiculture program? What would compel the current leadership at the NCSU College of Agriculture and Life Sciences (CALS) to shut the program down? The answers are simple: lack of funding. This has not been written to discredit our partners at CALS. The CALS leadership is very interested in apiculture, understands fully the value of the honey bee to agriculture and is very supportive of our efforts to raise the Program to national prominence. Without their support and counsel, we would not be able to build the new lab or fund the endowment. But everything requires financial resources; that never changes. In the old days as is now, funding remains an issue. Without funds, research programs of all disciplines cannot remain viable.

Suffice it to say, when the NCSBA leadership got wind of the plan to demolish the old lab and not build a new one the news was taken seriously as a harbinger of doom for the Apiculture Program. It was no great revelation to realize that upon the retirement of Dr. Tarpy, the University would not rehire the position due to lack of resources (the issue of funding is a major problem for university programs). It became clear that without action on our part, the University would not have a choice but to close the Program.

So then, the Apiculture Program has almost been outright discontinued twice, once in 1975 and then again in 2000. It suffered a major setback in 2011 when the funding for the technician's salary was cut from $60,000 to $15,000. The building that housed the Program was marked for demolition in 2015 and later condemned by the City of Raleigh in 2020. But the NCSBA has never backed away from the NCSU Apiculture Program.

Once again, the beekeepers of the NCSBA have stepped up to save the Program. With the help of the General Assembly (especially the efforts of Senator Brent Jackson) the new facility has been funded and is soon to be constructed. With the outstanding support of NCSBA beekeepers, our friends in the agricultural community, and the partnership with CALS, the endowed professorship is on the horizon. Unlike the previous effort in 1974, this time a permanent apiculture research program at NCSU will be established, with a new building to work in. Our current trajectory is sound and our course is steadfast. We are not quite there yet but the achievement of our goals is at last within our sights.

That is why we are doing this.



Congratulations, Lesa Pierce!
First North Carolina AHSTC Cerified Honey Judge

BeeFeeders

North Carolina Pollinator Plants

by: Ulana Stuart, NC State Extension Master Gardener Volunteer

Many so-called lawn "weeds" can provide precious forage for honey bees, especially if you let them bloom. Using the highest mower platform setting and mowing around plants can encourage useful and even important Beefeeder plants such as:

Photo: Lane Kreitlow

Dandelion

Dandelions (*Taraxacum officinale*) are perennials native to Europe and are now the familiar naturalized yellow flower in yards throughout the eastern US. Dandelions bloom very early so the pollen can stimulate brood rearing and the nectar can help rebuild the colony. Honey bees will collect both nectar and pollen. Dandelions can bloom February through November depending on your location in North Carolina. Depending on specific location and solar exposure it is not uncommon to find blooms in December or January. A well-respected beekeeper used to joke that dandelions are the only plant that blooms 13 months out of the year!

Photo: Stephanie Brundage

Daisy Fleabanes

Daisy fleabanes (*Erigeron annuus*) are annual native wildflowers of grassy or open areas. Many pollinators including honey bees will gather both pollen and nectar from fleabane flowers. Due to its fairly long bloom period starting in April, it can be a BeeFeeder filler between other pollen and nectar sources.

Photo: Lane Kreitlow

White Clover

White Clover (*Trifolium repens*) is a very common perennial in our NC grass lawns that can provide nectar and pollen in spring through summer. It does best in cooler weather and stops blooming in the hottest and driest parts of the summer.

Here are two more great late summer into fall blooming honey bee plants:

Photo: David J. Stang

Wingstem or Yellow Ironweed

Wingstem or **Yellow Ironweed** (*Verbesina alternifolia*) also known as Golden Honey Plant by beekeepers because it is such a great source of nectar for up to five weeks during late summer dearth depending on its location. Wingstem is a tough, heat tolerant native perennial which thrives throughout NC, growing in Zones 4a to 8b. It occurs naturally along woodland edges, fields and roadsides and along ponds and streams. Wingstem is a taller (three to six foot or more) perennial plant that typically looks best towards the back of a garden border or in a naturalized area because it tends to spread. The yellow flowers are composed of small yellow florets that form heads which bloom for four to five weeks. Bees love wingstem flowers for their plentiful nectar but they also provide lots of medium size yellow pollen pellets as well. Finally, wingstem is deer and rabbit resistant.

For more information on gardening use the North Carolina -Extension Gardener Plant Toolbox at plants.ces.ncsu.edu

Spotlight Perennial

Anise Hyssop

(*Agastache foeniculum*) is a fragrant native perennial that grows in Zones 5a to 9b. Anise hyssop (Agastache) is drought and heat tolerant and has a long bloom season of six to eight weeks in mid to late summer and even into the fall, depending on your location. It typically grows three to five feet tall and will flower best in full to part sun. Anise hyssop's small blue to purple flowers form dense spikes that produce lots of nectar that bees love. Flowering typically starts in late July and can last well into late autumn even under harsh conditions. The foliage has an anise to licorice scent and can be used as flavoring in salads and teas. This same scent makes this plant very deer and rabbit resistant. In addition to all the nectar it produces, anise hyssop produces yellowish-green pollen pellets. **Photo: David J. Stang**

In the Apiary:
Summer 2024

by By Dr. Josée Bourget, Keeper of bees
& Shirley Harris, Apiary Inspector, NCDA&CS

If you are one of those beekeepers

who could not wait for spring to arrive, then your wish was certainly granted! And if you are one of those people who procrastinate to get your apiary equipment serviced during winter, then let this year be a reminder that beekeeping is definitely a year round endeavor. Not only did we get an early spring this year, but Mother Nature seems to have spared many regions from the usual frost and drought setbacks so commonly experience in our North Carolina climate.

The 2024 swarming season definitely started early, especially if you fed your bees coming out of winter. Luckily, with the help of NC Cooperative Extensions, most beekeeper clubs seem to have well-organized swarm call lists. This is good news for beekeepers who want to save bees while growing someone's apiary, and a great way to prevent duplication of swarm removal efforts! It can also help raise public awareness about honey bees. Good job, NC!

By the time May arrives, NC has usually received between two to four inches of rain, depending on what part of the state you live in. The bulk of NC summer rain falls in May, just in time for honey flow. This spring, it felt like rain came more regularly. Couple that with generally warmer spells and that poised us for the best honey harvest we've had in a while. Here's hoping this year's nectar flow broke records for everyone.

So, what can we expect this summer? That depends on what you managed your apiary for as early spring showed up. Did you manage for apiary growth? Or did you try to secure your honey bee work force for honey production? Maybe you managed for both. . .

One way or the other, varroa mites should have been on everyone's radar, right behind making sure your bees didn't starve themselves out. Dr. Dewey Caron advocates for springtime varroa management above all. Managing for healthy bees in the spring makes as much sense as boosting bee population for honey production, if not more. If we imagine bees as analogous to cells in the body, then spring is when cell turnover- bee turnover for the superorganism- is at its highest. If we didn't manage for varroa in the spring, before or early on during the honey flow, then summer is our next best opportunity to take care of business. We don't want to miss it! Our colonies depend on us . . .

Veteran apiarists have a huge role to play in supporting new beekeepers who are trying to learn our ropes. Fear of the unknown, coupled with the harsh summer heat, are tough hurdles to overcome in the first few years. A successful first year beekeeper is one that is likely to continue. Not to mention that helping newcomers also helps keep our own apiaries healthy. As a mere 0.04% of the US population, beekeepers need all the help they can get! Local club field days are great opportunities for experienced beekeepers to lend a hand; especially with making sure new beekeepers get comfortable with mite checking.

The conversation about how much honey should be left to the colonies when June harvest arrives, versus how much fall feeding we need, is a very important one. Many entomologists – starting with Dr. Tom Seeley - have stated that general apiculture practices also contribute to *Apis mellifera's* demise, not just climate change and habitat loss. We don't seem to talk about it much but we sure should! An eco-friendly apiarist seeks to find the balance between managing for healthy colonies and honey production. Science tells us that sugar water is no substitute for honey nutritionally speaking. While feeding sugar water does help keep the superorganism alive so it may live through another season, taking too much honey not only leaves the bees potentially short on food at the end of winter, but more importantly, it robs the bees – therefore the superorganism - of important nutrients. The bees' personal battle against viruses is AS IMPORTANT - if not more - as ours in helping them keep the mites load in check. Varroa may be the vector for all those viruses, but weakening the bees' immune system by compromising their nutrition is definitely compounding the problem.

Beekeepers can make a difference. When you harvest your honey this June, consider the long-term view. It is the weakened organism that falls sick. Diseases are just a part of biology terrain. As with all living creatures, healthy bees live longer and stronger, as do the colonies of which they are members. Those few extra weeks of life matter a great deal come end of winter. Managing for healthy colonies is not just about keeping mite counts low and having good queens. It is also about potentially reducing our own interventions – and costs - by working with Nature's design in mind to keep our bees healthy. We can choose to make a difference by giving them what is due to them for everyone's benefit. Sugar water ought to be about making up the difference in the event of the unforeseen, given that it is not an equitable replacement for honey.

No one should be surprised to find high mite counts after honey flow if no spring monitoring happened. Understandably, beekeepers leave the bees to their

spring work of stocking up on honey stores. Considering the rate of reproduction of varroa, it is not a question of if mites are present after honey flow; it's a question of math. So don't delay your summer routine. Get an early start on honey harvesting if you can, and make mite checking a part of your process. Keep in mind that mite numbers nearly double every two to three weeks, and that bee population begins to decline in late June. It helps to organize an efficient apiary management schedule around your life and the weather.

Summer does offer opportunity for more focused colony management. If most manage colonies for honey and bee production in the spring, possibly at the expense of bee health, then summer management should definitely be all about colony health as we edge into fall. It's a good time to check on queen quality before drones fade out of congregation areas. Ask a more experienced beekeeper what to look for if you're not sure you have good queens, and how you might replace them.

In NC, we also must keep an eye on the effects of the nectar dearth on the superorganism. Bees need a lot of water to keep the hives cool. They prefer murky water so no need to go crazy about it. They will find what they need. We just need to make sure they have access to it. Encourage your neighbors to participate in this exercise with simple bird baths. Sensitizing them to honey bee needs can't hurt, right?

Don't have time to plant for pollinators? What about letting those dandelions decorate a part of your lawn? Their medicinal value is off the chart for us humans, and all sorts of pollinators love them, especially our honey bees. Mother Nature does not create "weeds". What a great conversation topic while you bring up water availability for the bees to your friends and neighbors!

Finally, if you are not sure what do to next and are looking to plan ahead, you can find former NC Apiary Inspector Nancy Ruppert's monthly calendar where she organized general beekeeping guidelines by month. It's a fabulous go-to for less seasoned beekeepers. Look for it at: https://tinyurl.com/NCBKcalendar

It's hard to overstate how important it is to keep educating ourselves as we progress in our craft. The Master Beekeeper Program is an excellent way to self-impose consistent learning about our fascinating honey bees. New beekeepers, as well as experienced ones, have a lot of gain by participating in, and even contributing to, the program. Find out all about the MBP at the NCSBA conference this summer, while catching up with new and familiar fellow beekeepers.

Wishing everyone bountiful honey harvests!

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Master Beekeeper Program

by Eric Talley MBP Coordinator

When I was in High School in the 1970's, I read a quote by Henry Ford that said something like, "If you think you can, you can. If you think you can't, you can't". I believe his statement is directed straight at those individuals in all walks of life that have decided either to charge ahead and get somewhere or to stay where they are because they have already decided they can't accomplish whatever task is in front of them.

There are four levels to the Master Beekeeper Program. Most beekeepers who complete the Certified level never attempt to advance to the Journeyman level or beyond. I believe that most who don't advance have a mindset that they "can't" complete the requirements to advance.

What does it take to change the way a person thinks? I don't know. What does it take to change someone's desire to accept a challenge to advance? I don't know that either. I do acknowledge that there are some beekeepers that have no desire to advance in the Program, and no amount of prodding will change their position.

There are mentors and Chapter leaders across the state that have what it takes to motivate some of these Certified and Journeyman beekeepers to learn and advance in the Program. I know that when we as beekeepers learn more and acquire more information concerning the honey bee that we not only become better beekeepers, but we're also better prepared to meet the challenges of beekeeping today; better prepared to promote healthy bees and reduce the load of pests.

Mentors and Chapter leaders who are involved in assisting other beekeepers to advance in the MBP are learning as well in the process. This in turn will incentivize mentors and Chapter leaders to advance to the next level of the Program.

Getting involved in public service, speaking to bee associations, and at outreach events, etc. can increase your knowledge as well. These public service events are also a requirement for advancement in the MBP. It is my intent to provide the tools needed to assist Chapters and individual beekeepers, and to encourage as many as possible to advance in the MBP.

I wrote in the last *Bee Buzz* that "the local chapters of the NCSBA are the backbone for teaching, mentoring, offering guidance, encouragement, and camaraderie through beginning and advanced beekeeping courses. The purpose of the NCSBA Master Beekeeper Program is, and always has been, to educate beekeepers and the general public". Hence the requirement to complete public service credits to advance.

In the last issue of the *Bee Buzz*, I announced the availability of the official curriculum for the Certified level beekeeping courses. Those nine Certified level PowerPoints can be used at Chapter meetings for educational material as well as beginner beekeeping courses. I am looking forward to some feedback from Chapters as they teach and finish their beginner beekeeping courses.

In this article I am announcing an advanced level curriculum that is available to assist beekeepers who are planning to test and complete the requirements for the Journeyman level beekeeper. I have given thumb drives containing this advanced course to all the Regional Directors; hopefully by now they are coordinating courses in their regions.

The prepared PowerPoints and instructor outlines are intended to get the Certified beekeeper thinking more like a Journeyman beekeeper. All the information contained in the PowerPoints will not appear on any single test; these PowerPoints are not intended to teach all the information needed to pass the Journeyman test.

Reading textbooks to advance your knowledge about the honey bee is the best way to prepare for the next level of advancement in the MBP. Journeyman candidates are encouraged to read the suggested reading list, to be better prepared for the examination:

The Hive and The Honey Bee – Dadant & Sons

Honey Bee Biology & Beekeeping – Dewey Caron

What do You Know – Clarence Collison

Honey Plants of North America – John H. Lovell

There are six PowerPoints, complete with instructor outlines. To teach the entire advanced level class requires about eight hours. The class can be taught in one day, or spread out over several days or weeks. Again, these PowerPoints are not intended to cover everything that might be on a Journeyman test, but to get the candidate thinking beyond a Certified beekeeper level. Between the suggested reading list and the PowerPoints, the Journeyman candidate should be able to successfully pass the exam.

PowerPoint	Approximate teaching time
Honey Bee Biology	**1.5 hours**
Honey Bee Diseases & Virus's	**1 hour**
Honey Bee Pests	**2.5 hours**
Honey and Wax	**.5 hour**
Plants and Pesticides	**1 hour**
Seasonal Management	**1.5 hours**

I would challenge all beekeepers who have decided they "can't" complete the next level of the Master Beekeeper Program to change their thinking and start working towards advancement in the program. The NCSBA is the largest state beekeeper's organization in the USA and our numbers should reflect the largest number of Certified, Journeyman, Master and Master Craftsman beekeepers of any organization as well.

Beekeepers in other state beekeeper organizations should be hounding their leadership to mirror what the NCSBA is accomplishing in every aspect. From lobbying the NC General Assembly for funding for a new apiculture research facility at NCSU, to collaborating with the College of Agriculture and Life Sciences at NCSU to create an endowed professorship. The membership of the NCSBA has stepped up in many ways to get involved in both of these initiatives.

Now it's time to see how many beekeepers will take this challenge to read, study and test for the next level of the Master Beekeeper Program. Along the way you will gain the knowledge that will make you not only a better spokesperson to the public, but a more informed and experienced beekeeper who is actively working to promote healthy bees and reduce pests.

Journeyman and Master Beekeeper candidates can take both the written test and practical exam for the level they are working on at the same testing event.

Wolfpack's Waggle:
BUILDING A BUILDING STEP 7: THE CALM BEFORE THE STORM

by Dr. David Tarpy NC State Extension Apiculturist

NORTH CAROLINA STATE UNIVERSITY
APICULTURE PROGRAM

As of the writing of this column, the architectural team (bioloba) is soliciting bids from contractors, subcontractors, and sub-subcontractors to execute the plan of the new Honey Bee Research & Extension Center on the Lake Wheeler Research Farm complex at NC State (to get up to speed, check out the previous six columns in this series in the NCSBA *Bee Buzz*). In doing so, many 'alternates' are included in this progress, so that if projects come in under budget, we might be able to include some of the nice-but-not-completely necessary aspects of our original design. Overall, though, this means it's been a relatively quiet time for the involvement of our program in meetings and decision-making, except for some infrequent (and unexpected) exceptions.

First, for the mundane: dumpsters. Yes, we've had no fewer than three meetings to discuss this, since it is (again) far more complicated than I would have imagined. We had to talk about how the dump truck was going to be able to enter and exit the driveway, how big the concrete slab needs to be depending on if we also want recycling and composting bins (which, by the way, we will have both), whether we need those heavy metal posts to protect vehicles from accidentally backing into them, and of course placement. The initial design had the dumpsters placed directly in front of the pull-up garage door to our workshop, since they thought it would be convenient for us so that we didn't have to walk out of the building to throw things away. But when I mentioned that we need to be able to back our bee truck up to the workshop and unload all our hive equipment, we decided on a spot on the other side of the parking lot. Thank goodness!

Second, we've been revisiting the surrounding grounds with Landscape Operations, who have been terrific partners. Since this is a capital project (that is, funded by state legislative funds), this facility will technically be an on-campus building even though it is on the Lake Wheeler Research Farm. That means (among other things) the Facilities Division gets a formula budget for maintenance and operating (M&O in the building lingo!) and—after 21 years without it—we will have janitorial services. But another thing is that the campus grounds crew will help maintain and beautify the outdoors immediately surrounding the facility. While the original hope was to plant an ornate pollinator garden (see Step 4—Getting into the Weeds in the Fall 2023 Buzz), the lack of a comprehensive plan for horticulture maintenance makes that unlikely, at least initially. After all, the one worse thing than not having a pretty pollinator garden around the facility would be one that is not maintained and becomes an eyesore. Enter Landscape Operations, who have been active partners in making NC State a BeeCampus USA in their focus on pollinator-friendly habitats all over campus. In our case, they would like to implement a Piedmont prairie habitat that has robust wildflowers, native grasses, and flowering hedges that (once established) require significantly less maintenance and mowing than many alternatives. While there are still many details to be worked out, this plan seems to strike the perfect balance between pragmatism and sustainability, so we are very much looking forward to partnering with them.

Third, there have been some exciting developments when it comes to our desire to have a walk-in incubator for our experimental laboratory space in the new building. This didn't make the final cut in the design, but we will include a concrete footprint for its eventual construction even after the building is built. Well, two new opportunities have arisen that might make that happen sooner rather than later. The first is that we were only one of two internal proposals in the University permitted to submit a proposal to the USDA Equipment Grants Program, which would enable us to secure the funds for the incubator. While certainly no guarantee, since these grants are extremely competitive and only have about a 5% funding rate, it is still a great opportunity to try and secure external resources to make this happen. The second is that several members of our state beekeeping community (who I will not mention by name upon their own request) have very generously initiated a brand-new fund—the Apiculture Facility Fund—which will be completely separate from our Apiculture Science Fund, Endowed Professorship, or the monies used in construction. In doing so, they will be donating and hope to further raise funds for infrastructural needs of the new facility, including the

walk-in incubator. We cannot thank these individuals for having the leadership and vision to enable such a mechanism, and we hope that between these and other options we will be able to include the incubator in our final building plan.

Again, we thank the NCSBA and everyone who have worked so hard behind the scenes to make this happen, and we will all be excited to see the final structure up and running.

Be sure to check out our column in the next issue of the NCSBA *Bee Buzz* on the memorial groundbreaking event scheduled for **August 21st!**

Example walk-in incubator that we hope to include in our final building design.

Beekeepers of the Neuse

Grant from NC AgVentures for Education Initiatives About Sustainable Beekeeping Practices

by Robin DeMark NC Beekeeper / Freelance Writer

Goldsboro, NC - March 25, 2024-

Beekeepers of the Neuse (BKOTN), a local advocate for beekeeping education in Goldsboro, North Carolina, is delighted to announce the receipt of a $2,900 grant from the NCSU, College of Agriculture and Life Sciences, NC AgVentures Grant Program awarded on Feb. 14, 2024.

"We are thrilled to have been selected as recipients of the NC AgVentures Grant," said Janet Ott, BKOTN President. "This funding will allow us to implement important education and outreach initiatives to benefit our local and surrounding beekeeping communities."

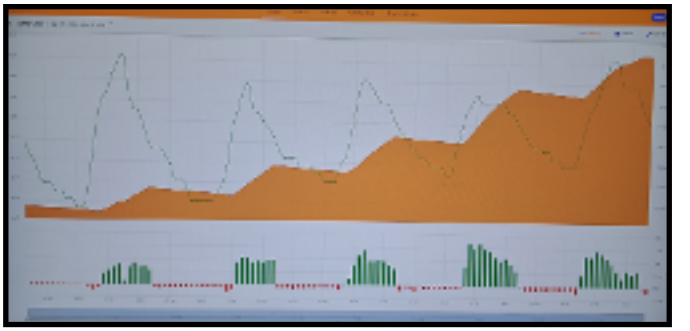
The grant funding helped BKOTN purchase weight scales, hive monitoring devices, a Hive Hub for Wi-Fi connectivity, and a Bluetooth transmitter. This equipment will collect data to help beekeepers make informed decisions about maintaining the health of the honey bee colonies and hive maintenance in their apiaries.

Photo: Kim Guillemete,

Hive sits on scale in apiary

"What really excites me about getting the SolutionBee hive monitoring equipment is the data we will collect," added Ott. "We will be able to chart the hive weight and internal temperature and humidity of the hives. This will help beekeepers understand when the nectar flow starts in the spring, and when we should add another super (honey box) to our hives. It also helps us know when a dearth (a lack of nectar) occurs, so we can begin to feed the bees. For new beekeepers, this is necessary to learn so they can develop their skills, keep their hives alive, and become better beekeepers. Seeing real data and visuals will be an invaluable learning tool for all of us! Another learning advantage with this equipment is the accessibility of data in the cloud so our members can view it from their home computers. Beekeepers can also see swarming and robbing events occurring when they are not at the apiary. By showing beekeepers real data and what is happening at our apiary, it's much easier for them to understand and helps us teach them how to resolve any of these problems with proper intervention."

Collecting hive data can provide new and seasoned beekeepers with detailed information to educate and to train them about hive maintenance and how to keep honey bee colonies healthy and sustainable.



Screenshot of SolutionBee data

"We are deeply grateful to the NC AgVentures Grant Program for their support of our mission," added Kim Guillemette, Board of Directors, and Treasurer of BKOTN. "Our members are so excited about this educational format that they helped contribute to cover additional expenses needed for this project. We are thankful to our members and to have received our first grant."

The NC AgVentures Grant Program, administered by the North Carolina Cooperative Extension, aims to strengthen agricultural initiatives across the state by providing financial assistance to farmers and agricultural organizations for innovative projects.

About Beekeepers of the Neuse:

Beekeepers of the Neuse is a beekeeping organization in Goldsboro, NC that has supported local beekeeping education in Wayne and surrounding counties since 2012. The local group has more than 90 members with 72 of these beekeepers owning one or more hives. The club's apiaries provide an educational resource for hands-on training for new and continuing education for beekeeping members. They host a Beginners Bee School each year that is open to the public and held at the University of Mount Olive. Apiaries owned by BKOTN provide honey at community events such as the Taste of Wayne County, We Dig It Farm Fest, University of Mount Olive AgFest, National Honeybee Day, and the Wayne Regional Agricultural Fair. Beekeepers of the Neuse is a registered local chapter with the North Carolina State Beekeepers Association with more than four thousand members statewide and is the largest state beekeeping organization in the country.

For more information about Beekeepers of the Neuse, visit Beekeepers of the Neuse, on Facebook or email neusebeekeeper@gmail.com

Media Contact: Robin DeMark, NC Beekeeper and Freelance Writer, rkd506@gmail.com

Photo: Kim Guillemete, NC Master Beekeeper

Beekeepers of the Neuse (BKOTN) representatives attended the University of Mount Olive Ag Fest to exhibit their new hive monitor system to more than 2,000 students and attendees on March 21, 2024.

Photo from left - Cary Faulcon - NC Certified Beekeeper, Janet Ott - NC Certified Beekeeper and President of BKOTN, and Buddy Scott - NC Journeyman.

NCSBA Library Update

THE NCSBA LIBRARY OF DVD's IS BACK IN BUSINESS!

Mark Lee, the new Director of Library Services at Wayne Community College's library, has agreed to provide services for the NCSBA Fred Deer Library including the shelving and distribution of our DVDs. NCSBA members may check out DVDs just as they have in the past. More details in the next edition of the *BUZZ*.

Bob Kemper, NCSBA Fred Deer Librarian

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Changes in NC State Apiculture Program

by Jennifer Keller Extension & Outreach Coordinator - NCSU Apiculture Lab

There have been some exciting changes within the NC State Apiculture Program over the last several months. First, there have been some personnel changes. Lauren Paturzo, the genetics lab technician, has moved on to a new position in RTP. During her time with us she did an amazing job of receiving and testing samples for the various honey bee viruses and pathogens and kept the lab running smoothly. She will be greatly missed. Currently, interviews are being conducted for her replacement. The second member of the lab that will also be missed is Sharon Munger. For the last seven years Sharon has been invaluable in helping the Apiculture Program run smoothly. Her main responsibilities were administrative although she was also willing to help in the bee yard when needed. Sharon retired at the end of February and is now busier than ever. We wish both Lauren and Sharon well!

Another big change is with my position. I have been the lead beekeeper for the last 20 years. I am moving away from beekeeping as my primary responsibility and will become the Extension & Outreach Coordinator. This means I will be taking over many of Sharon's administrative duties, as well as setting up the BEES Academies and other advanced training opportunities, and eventually I hope to put together classes and field days when our new building is up and running. There is work being done to hire a new full-time beekeeper, and hopefully by the time this is published that person will be on board.

One more exciting event that happened over the winter was the announcement that we were awarded a grant which will involve queen rearing classes. This project will be a major portion of my new role. Because of the timing, we will not be able to get things up and running this spring, but I will be assisting with the Born & Bred Queen Rearing Program offered by the NCSBA. Later, we will be offering advanced classes on raising queens along with an opportunity for a select few to attend a course on genetics and breeding. For that last proposed goal of the grant, we will work with several county groups to set up a communal apiary specific for producing queens for the beekeeping community in that county. The goal is to develop enough beekeepers with the skill for raising queens locally so that there will no longer be the need to order queens from outside North Carolina, what we call "microbreeders." Details are still being worked out but be on the lookout for more information on our website and in future editions of the *Bee Buzz*.

Finally, I want to make sure everyone is aware of the next 'Intermediate' BEES Academy so you can save the date. In previous years we have held multiple BEES Academies across the state. This year there will be just one. This is a two-day training involving both classroom setting and hands-on activities. It is designed to give current beekeepers a refresher course on the basics of beekeeping including honey bee biology, best management practices, and mite control, while diving a bit deeper into each of these topics. This year Wilson County will be the host of the BEES Academy September 20-21st, and thanks to the Wilson County horticulture agent, Thomas Batts, for collaborating with us on this training. Registration is not open yet (will open sometime in June, roughly three months prior), but be sure to save the date!

Building a Russian Scion

by: Dennis Brown President Lee County Beekeepers

I would like to share a simple project we started Spring of 2023 and repeated this spring. The device is meant to be used in conjunction with a swarm trap to make hiving swarms easier. It is a version of the Russian scion, which provides swarming bees a temporary resting place (much like a tree branch) but one that we have more control of, and that allows us to move the bees quickly and easily to a hive box.

Center the hole on lid for the eye hook

Our version of the scion has been successful two years running. It consists of a five-gallon bucket and lid, an eye hook, some burlap, hardware cloth, a 2x2 piece of lumber, and some rope to tie up the completed scion. You will also need some beeswax and staples and glue to attach the hardware cloth. I attached our scion to an eight-foot shepherd's hook, but you can hang on a low-hanging tree branch instead.

Wax-coated, burlap wrapped 2x2 attached

To make the scion: drill a 1/8" hole in the center of the bucket lid. Next, cut the non-treated 2x2 a few inches shorter than the depth of the bucket. Screw the eye hook through the hole and into the 2x2 underneath. Wrap the 2x2 in burlap and staple. Melt some beeswax onto the burlap seam to help prevent it from unraveling. Thread the rope through the eye hook to use as a hanger.

Finally, drill two 11⁄2" ventilation holes in the bucket, one high and one low. Cover the holes with 1/8" hardware cloth and attach with staples and glue. The bucket can be used to transfer bees back to your apiary. So far, I have been able to transport the bees successfully without using the bucket.

Ventilation holes allow for transport

When ready to use, spray the burlap with sugar water and put a couple drops of Swarm Commander before hanging.

Hang the scion from a shepherd's hook or low tree limb about 15 feet from your hives. A week after hanging this trap, I was successful in attracting a swarm.

We also had a beekeeper who heard about it and built one that he hung near his apiary. He then left to pick up supplies and when he returned he already had a swarm on it! This improvised tool makes hiving swarms a little easier and allows for better swarm management. *Photos: Dennis Brown*

Success!

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Spring Artisan Show HUGE Success

by: Mark Case NC Master Beekeeper

Be careful. Be very, very careful when you ask for something. You might be put in charge! Late October 2023, I had a conversation with NCSBA president Rick Coor, why don't we consider an artisan show only for the spring meeting? It would give another opportunity for our judge candidates to earn credits. It would give participants an opportunity to learn how to read the judge comment cards to better prepare items for the summer meeting. I would give more value to the spring meeting. It was a win-win-win proposition. "Go ahead, make it happen!" was Rick's reply.

It took months to work with the senior honey judge, the NCSBA Executive Committee and volunteers to plan this first-ever artisan show. The anticipated participation: 30-75 exhibits. Steve Genta became the judge in charge of the show and helped assemble a great staff: Judges Mary Cahill-Roberts and Lesa Pierce. Secretaries: Rosalind Severt, Michelle Maust. Stewards: Amy Kaiser, Otto Kaiser, and Jennifer Welsh.

Photo: Bruce Simmons

NCSBA Spring artisan show staff. Left to right: Steve Genta, Mary Cahill-Roberts, Lesa Pierce, Michelle Maust, Jennifer Welsh, Amy Kaiser, Otto Kaiser, Mark Case.

According to Genta, there were 143 exhibits from 40 unique exhibitors. Nearly every category was represented in the artisan show with photography being the most popular category. Exhibitors had the opportunity to visit with judges to understand the score they received. They all got tips to make their presentation better for the summer show.

"When a ribbon is awarded by American Honey Show Training Council, it truly deserves the recognition. It meets the standard", said Steve Genta during the recognition ceremony at the meeting. "We want excellence and North Carolina is stepping up to show it knows how to prepare excellence", continued Genta.

The Best in Show was awarded to John Pledger with his woodcraft related to beekeeping. "The exhibit was perfect. Edges, finish, presentation, description card, everything was perfect", according to the judges.

Photo: Mark Case

"Best of Show" winner John Pledger

There have been two training sessions in our state how to prepare for a honey show. If your club would like to hold a training session, contact AHSTC candidates. We would like to help you get better! The training session in January at Beez Needz was a half-day session. Your training can be tailored to your club needs.

A class on how to become a honey judge is currently being planned. Watch for the announcement and plan on attending if you would like to start the journey to become a honey judge.

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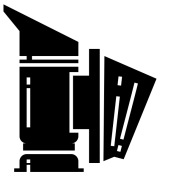
Demystifying the Smoker

by: By Dr. Josée Bourget, Pupil of the Honey Bee Colony



Not all smokers are created equal.

If using "the right tool for the job" is a cardinal rule to get any job done well, so is having that same tool perform as intended. As with a dull knife, the tool might make the job more challenging and dangerous. Sometimes the problem is the user, other times the issue is the tool, and sometimes it's BOTH! I was reminded of those facts during my first summer of beekeeping.

When I started having problems keeping my smoker lit, I got very frustrated. I did not want to disrupt my bees any longer than necessary. When you are a new backyard beekeeper, quick decisions are not exactly forthcoming. Add to that the WOW factor every time you pull a frame out, and looking for the Queen, and you have a longer-than-necessary visit from the beginning. So having to relight my smoker two or three times - sometimes more - was just not an option for me, especially since it cut back on my WOW time.

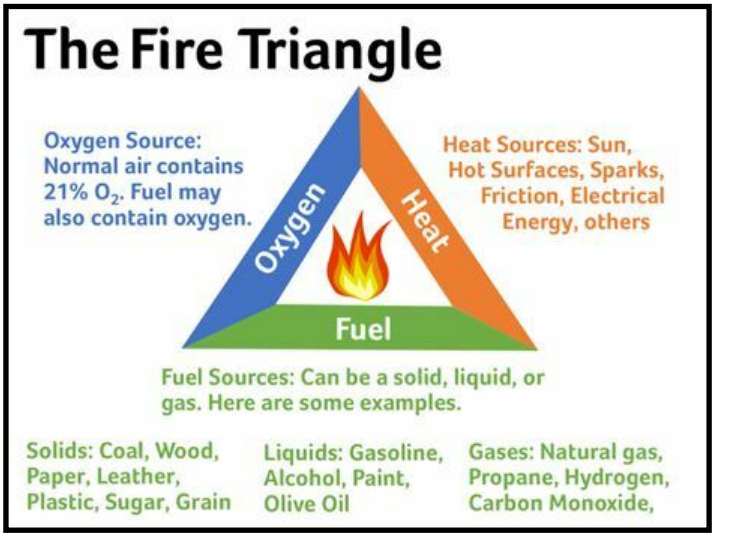
I tried different fuels, packing the smoker in different ways, lighting long before my apiary visit; all to no avail. *Not good!* I knew it. As a former volunteer firefighter, I certainly understood what was needed to light a fire. What was I missing? I must have been obsessing about the bees so much that I failed to examine the smoker more closely. A chance glimpse inside a higher quality smoker sparked a fire in my brain.

It's probably fair to say that we all intuitively know what it takes to build a fire. However, understanding the chemistry behind it makes all the difference in the world. It might sound crazy but, there is science behind building and sustaining a fire, and it is definitely knowledge worth having in my opinion. Smokey the Bear says nine out of ten forest fires can be prevented, and fire statistics tell us that almost half of the house fires start in the kitchen. If an ounce of prevention is worth a pound of cure, why not better understand fire magic, especially if it also helps you keep your smoker smoking cool, right?

Three components MUST be present for a fire to catch and self-sustain, as seen in *The Fire Triangle* diagram.

If you remove any ONE of those three components, the fire will not even start, or it will die soon after ignition. Water is very effective at putting out most fires because it affects both heat and oxygenation at the same time.

This Triad is the most important lesson taught firefighters. It is known as the *Fire Triangle* or *Fire Tetrahedron*. If you understand this concept, you understand how to start and sustain a fire. More importantly, you also understand *how to put one out*! External factors will affect the *Fire Triangle,* like the type of fuel and the ambient temperature, but the three elements are not negotiable.



The smoker is nothing more than a miniature, portable fireplace with a very small hearth opening, a very large chimney and a funneled chimney top. Where we might blow air into a fireplace hearth to help a fire catch, a bellow was permanently attached to perform the same task on a beekeeper smoker.

As with a fireplace, the chimney is cold when you first light your smoker. If a warm chimney is necessary to get a fire going in your home fireplace, the same applies to the smoker. Heat is one of the three components of the *Fire Triangle*. It also causes air to move up, thereby creating a directional flow known as *draft*. Because the chimney is so large, the hot air escapes faster with the smoker open at ignition. This can prevent the heat buildup needed to get the fire started. Partially closing the top can help create the necessary heat to help ignition.

Notice how the hearth opening and the chimney hole are of similar size on a smoker. A house fireplace has a

large hearth with a much smaller chimney hole in comparison. We throttle the flow of air with the flue to keep a constant draft. This optimizes the fire triangle to obtain a contained roaring fire. In smokers, we adjust the balance of the tetrahedron to create a constant cool smoke. The bellow attached is not just to push the smoke out for beekeeper use. It affords a means to fan the flame in such a way that we keep the fire going in its initial phase. We keep the coals "on ice" – so to speak – until we fan them again. In this manner, we have slowed down the combustion process. The fuel *type* and *how* we pack smoker fuel also offer mechanical ways to adjust air flow.

Have you ever noticed what happens to your smoker once you run low on fuel? More air flows, heat rises inside and the smoker burns hot. Combustion is accelerated until the fuel runs out and the fire dies. Blacksmiths leverage this latter phase of the *Fire Tetrahedron* to create a lot of heat to melt metal. This is important to understand and to notice when it happens, because heated smoke and air - and the embers that usually accompany them - are not good for our bees. If your smoker starts smoking on its own, it's because it's time to rebalance the *Triad* to "cool off" combustion again.

I eventually discovered that my inexpensive smoker could use some design improvement. Every time I would pack my smoker, the tabs intended to lift the bottom aerator - to allow air to flow - would eventually collapse, essentially chocking the fire by making it hard for it to breathe while not in use. No air – NO FIRE! My smoker would start when well fanned with the bellow, but it would not stay lit.

A better smoker would cost me at least $50. I didn't want to spend more money on a venture I did not know would become part of my life. I also avoid contributing to the landfill if I can help it. So, like many beekeepers do, I put on my hacker hat.

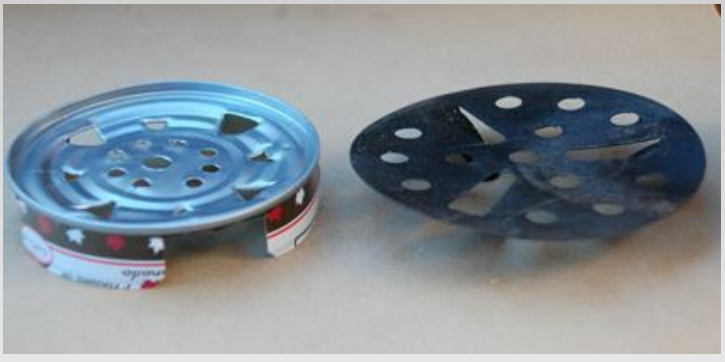
I thought I would share what I call "*Josée's Smoker Hack*". It has been six years since I installed my jury-rigged support. I have never looked back or bought another smoker. Every time I light my smoker, I'm reminded that with knowledge, solving problems becomes easier and often cheaper. I hope this idea can inspire others who, like me, enjoy frugal solutions to important problems. Think about the *Fire Tetrahedron* next time you have trouble with your smoker, or a tough time lighting any other fire for that matter. I promise you, getting it started will come easier to you.

May your smoker be gentle on you . . . and your bees

JOSÉE'S SMOKER HACK

Find a can that is slightly smaller in diameter than that of your smoker. Metal from food cans is less likely to contain toxic metals. The paint is not really a concern as it will burn off after using it. Cut the can at an even height which mimics the height of your existing aerator. Mine is about ¾ inches.

Use a can opener and drill to create breather holes to mimic the original aerator piece. Use tin snips to create four legs. To make the folding of the tin easier, cut alternating tabs in the middle and use the pliers to bend the metal out of the way.



Fold sharp edges in with pliers for safety in handling.

Insert your improvised aerator support first, legs down. Having a gap between the rim of the improvised support and the smoker walls only adds to the air flow. That's a good thing.

Your improvised support will prevent the complete collapse of the flue as previously experienced.

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It's All About the Mites!

by: Richard Dunnagan NC Journeyman Beekeeper

Photo: USDA

I read an online post recently by a new beekeeper who was frustrated that everyone was answering his questions by first asking about his mite count. There is so much to learn about raising bees, it may seem as if mites were just one of the things on that long list. Well, that is partially true and partially false. Let me explain.

The varroa mite has forever changed beekeeping. There are veterans today who have been raising bees for so long, they can remember a time before mites were a concern. Australia has just started down this path that the US began in 1987. Because we are still in the early learning stages, it becomes the focal point of nearly every discussion about beekeeping.

New beekeepers are constantly bombarded with information from their mentors, their bee clubs, bee journals and online forums for how to treat, count and manage the mite populations in their hives. Unfortunately, there is a period in the early life of a beekeeper where that becomes their mantra and identified as the culprit of every problem a newer beekeeper must be encountering. Even seasoned beekeepers who jump to the blunt question of mite count, may come across dismissive to someone who was looking for a simple answer to what seemed a simple question.

The presence of varroa mites in a hive is different from any other issue, other than one of the dreaded foulbroods. Beetles and wax moths are a nuisance, but neither are killers if the bees are healthy and there is a strong population. The mite count is important, but the real problem with varroa in a hive is that they vector over five viruses. The bigger the mite population, the higher the danger of one or more of these viruses starting to overwhelm the bees. Considering that most of the active mites are inside capped brood, and many of the treatments don't affect them, you can see how complicated this can get.

Mites breed and reproduce quickly inside the brood cell. Mites' incestuous reproductive method allows them to mate, lay eggs, develop and even mate again during the time the cell is capped, especially with drones, which take 24 days from egg to eclosure (emergence).

While one mite may go in, six or more could be present at various stages of development when the new bee emerges. The immature mites can remain in the cell and wait for another cycle. Others come out and start the process all over again by hitching a bee ride to a different part of the nest or out in public to jump to other bees. Mites of all ages feed off the fat bodies of the bees, larvae, or pupae they are near. In addition to tissue damage, this allows them to be prolific spreaders of any viruses which might have entered the hive or infected any bees.

What makes mites particularly robust is that a lack of proper conditions or food does not deter them. They can wait it out, remaining in their current stage of development until there is enough brood for them to go through an entire reproductive cycle inside a cell.

Early beekeepers ask what the best mite treatment is for their colonies. If only it were that easy. There are numerous products on the market, and each have their pros and cons. On top of that, the mites in some hives might respond differently to one treatment than another. When you hear that you need to test for mites before and after you treat, there is a reason for that. Without a baseline, you won't know if your treatment had any impact.

If all you are looking for is a good number, you won't have the full story. What is most important to know is how much your treatment changed the mite population so you can determine whether you need to consider other options. What we know today about managing mites is because of beekeepers who have kept good records to help us understand the efficacy of different treatment methods. Until we have an effective way to manage mites in every hive, we all must be diligent in keeping the reigns on this dangerous pest.

When a colony becomes unhealthy due to high mite counts, the spread of viruses, or the resulting dwindling bee population, then the other issues you know about become significant. Hive beetles can run rampant in a hive of sick bees or with smaller populations. If the beetles run off the bees, then wax moths are happy to take over.

Think about the common cold. We carry cold viruses in our bodies almost continuously. When we are strong and healthy, we do not succumb to their effects. Our normal defenses keep the viruses in check. But when our immune systems are weakened, then the virus can replicate, and we start to display symptoms. Similarly, hives continually have mites, beetles, and wax moth eggs all just looking for a chance to have their day. And many of these viruses are present in hives but capitalize on the weakened bees or larvae resulting from mites literally sucking the life out of them.

By doing a good job of managing mites, you put your bees in the best position to take care of the rest. When someone asks you what your mite count is, whether they understand it or not, they know it is an important indicator, which signals a concern that the beekeeper needs to take measures or other bad things will or have already started to happen.

Swarm Trap Tips and Tricks

by Michael Smith NC Certified Beekeeper

Whether you're new at keeping bees or a veteran, catching swarms can be a fun activity. You may or may not already be using many of these tips and tricks below. Hopefully there will be something new for you to try out this year!

Timing:

• Hang your swarm traps at the beginning of the swarm season. Typically, in North Carolina this will start in March. Each year can vary by a few weeks.

• Look for drones in your hives. If you are seeing drones emerging in the brood nest, this is a good sign that swarms are occurring in the area.

Location:

• Choose a location where the landscape has good parallel lines. For example, a long driveway or road that parallels to a wood line.

• Choose a location where there is an open field next to a prominent tree line.

• Ensure that the swarm trap has a good open clearing for the bees to find. If necessary, remove small branches that may interfere with the flight path of the bees.

• Ensure your swarm trap is facing a south to southeastern direction.

Hanging:

• Hang the swarm trap at a height that is comfortable and safe for you.

• Ensure the swarm trap is hung level to the ground. Tip: Bring a small level with you when hanging your trap.

• Ensure the swarm trap leans slightly forward towards the ground to prevent less rain from entering the entrance.

• Utilize a ratchet strap to secure the swarm trap to the tree or other object so it will not come down in the wind.

Design:

• Use a swarm trap that is around 40 liters or roughly 10 gallons in size.

• You can utilize old hive equipment such as an old 10-frame Langstroth hive and bottom board nailed or screwed together.

• Utilize a mouse guard or mesh to ensure the entrance is protected.

• The entrance should be small, roughly 1 ½ - 2 ½ square inches.

What Goes Inside:

• First and foremost, place a frame of old brood comb in the swarm trap. Bees love the smell of home. This frame goes closest to the entrance.

• Next utilize a heavily wax coated frame of foundation.

• Lastly, utilize three empty frames with no foundation. This gives the appearance and feel of a larger cavity for bees during scouting missions. You can also use starter strips if desired.

• If you have excess propolis or old wax place that into the swarm trap as well. You can melt and paint on old wax to the inside walls and drop in some old propolis.

• Finally, utilize lemongrass or a swarm trap lure like *Swarm Commander*. There are several methods for utilizing these lures, but one thing is certain- too much of it can deter bees. I personally utilize two squirts on the top bars of the frames and then I spray one squirt at the entrance of the hive. I refresh this one squirt of lure every seven days until I catch a swarm.

• If you are using a 10-frame Langstroth hive you can double the frame types as listed above by putting the old combs in the center and the two heavily waxed foundation frames one on either side of the old comb frames. Lastly, the six empty frames will go three on each side of the heavily waxed foundation frames.

Once a Swarm has been caught:

• If you think a swarm has been caught, observe the bees entering the swarm trap and ensure you see pollen coming into the hive. This is a pretty sure sign that you have a swarm.

• If you check your swarm traps often, ensure that the swarm has established the hive as their home by allowing them to stay in that spot for a few days.

• When you take down the swarm trap, do so in the late evening to capture as many of the foragers as possible.

• Move the swarm trap a minimum of a few miles away. If you do not, the bees may go back to the spot where you originally had the swarm trap located.

• If the swarm trap is on your property and you can't move your trap a few miles away, you can always move the trap to your apiary at the desired location and put some evergreen type branches in front of the entrance to force them to reorient. However, this may not always work.

• Some beekeepers also like to put a frame of brood into the swarm to force the swarm to commit to making it their new home.

• If you don't like or want natural comb to be built onto the starter strips or empty frames you can also swap out those frames for heavily waxed foundation frames or drawn comb frames once the swarm has been caught.

Don'ts:

• Don't hang swarm traps on other people's property without permission.

• Don't hang swarm traps so high in a tree or other object as to create a safety issue.

• Don't allow any light to enter your swarm trap other than through the entrance.

• Don't paint the inside of your hive with latex or oil-based paints.

Photo: Jody Moore

Low-Stress Swarm Capture

by: Jody Moore, *Bee Buzz* Co-Editor

Swarm catching *can* be a calm event! Instead of jarring a twelve-foot high swarm, and hoping the queen will fall into your container, the SwarmReacher allows the beekeeper to calmly move bees into the hive. Designed to attach to an extendable pole (used with paint rollers), the clamp attaches to a frame and is gently presented to the swarm. Drawn comb is a magnet for the bees and they will readily move onto it. The frame can then be gently lowered and inspected for the queen. Repeat with a new frame, as needed, until the queen is located. Use a queen clip to confine her in the hive and watch the rest of the swarm move in! This worked really well! More info at www.swarmreacher.com and your local Bee Supply store.

Photo: Jody Moore

Carla's Corner

The Trinity of Beekeeping Part Two: Queens

by: Carla Robertson, Henderson County Beekeepers Association Vice President

Hey there, I'm so glad you're back! Today, we are going to be talking about something that is not only the foundation of your colony, but also a critical part in your colonies' productivity, pest and disease resistance and overwintering success. That's right, we're talking about Queens. As a breeder, I'm always paying attention and choosing queens that have specific traits. These traits are High Productivity, Pest and Disease Resistance, and Overwintering Success. When I find a queen that meets each of these, the queen then gets tested for our breeder program. You don't have to be a commercial beekeeper to take these same principles and apply them to your own colonies. By paying attention and applying these principles you can improve the genetics in your own bee yard and local bee population, and by extension the local drone population. So, let's talk about what those traits are and why they are so important.

Productivity

Have you ever had a weak colony that even when it's packed full of bees, it seems like the hive is two steps behind your other colonies? Or how about a colony that you even moved thinking the hive wasn't getting the morning sun as early, but to no avail? For some hives that may be the case OR maybe your queen isn't from productive stock, making her daughters lazy too. Lazy bees will not bring in as much natural pollen, significantly decreasing brood production, leading to small clusters that will not produce excess honey. As my dad always says, "Lazy bees are dead bees." So, here's a question for you: do your bees fly out of the hive in a straight line or straight out and up? Productive bees will fly out and straight up, getting to work as soon as they can. I had never thought of this until talking to a third-generation queen breeder. He said that ever since he was a little boy, he remembers watching hives with his grandfather making sure the bees were flying out and up, or straight up and right to work. Now this is something we look for in our hives. But you can also consider the amount of honey the bees make or the amount of brood in the boxes, in case you don't have hours to stare at your bees...

Pest and Disease Resistant

This is huge! When it comes to mites or even hive beetles, there are certain colonies that just do better; they keep mite levels low, and hive beetles corralled at the top of the hive (we LOVE to see this!). If there is one thing you should be consistently doing it is checking for mites. Do regular mite checks and keep good records, so you can look back and see what colonies were performing well and what queen was exhibiting those genetics. Once we select a possible breeder queen, we will look back on her mite levels to see if she has any natural resistance. If she does, she is a candidate for our breeding program, but if we seem to come back and treat more often, we will disqualify

her. Another trait to keep an eye on is hygienic behavior. If the bees are uncapping and recapping cells, as well as uncapping, and removing infected larvae, the bees are taking the time to clean themselves up and strengthen the colony. While there are many kinds of queens that you can purchase that have some kind of mite resistance you have to remember that unless they are inseminated, half of those genes will be lost in mating. So, remember that when your bees keep their mite levels down you will find that disease will be hard to find!

Overwintering Success

Healthy, Strong, Big clusters with the proper nutrition will lead to great overwintering success!

There are a lot of important tips I've learned in beekeeping, but this specific one has stuck with me. Last summer I had the opportunity to spend some time with Krispen Givens from Purdue University. As a queen breeder himself, he shared some wisdom. He said, "You can spend hundreds and in some cases thousands of dollars on inseminated or open mated queens, but what I've learned though all my experience and research, is the best queen you will ever find or make, can simply be found in your backyard and with the proper selection you can have Rockstar Queens without having to spend an arm and a leg."

Let me encourage you to start the selection process within your own apiaries, and if you have something special don't gatekeep it, but share it! Sell queens or queen cells for others to put in a spilt so those genetics will continue to flourish. All beekeepers, not just the big guys, need to work on our genetics. More than ever there's a movement to start moving away from chemical mite treatments (I AM NOT SUGGESTING YOU JUST STOP TREATING) and start working towards resistant queens which produce colonies that exhibit those traits. I hope that you will jump on this crazy train with me not only to save a couple bucks by not buying bees every year or not spending money on mite treatment, but so that we can better the bee community as a whole!

Passin' the hive tool, *Carla*

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