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**Bee Buzz**

The Official Magazine of the NCSBA

**Pollen Analysis**  
**NCSBA Spring Meeting**  
**Honey Shows: A New Direction**

Winter 2023-24

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# North Carolina Bee Buzz

Winter 2023 - 2024



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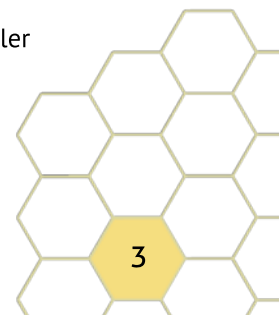
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**On the Cover:**  
Photo: Tammy Butler



# North Carolina State Beekeepers Association



The mission of the NCSBA is to advance beekeeping in North Carolina through improved communication with members, improved education about beekeeping, and support of science enhancing the knowledge of beekeeping.

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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

by: Rick Coor, NCSBA President

***The establishment of the NCSBA Distinguished Professorship in Apiculture will be the most significant accomplishment in NCSBA history; it will change the trajectory of the entire apiculture program at NC State.***

### When the Apiculture Science

Initiative was first envisioned in 2016 the prospects of funding a new apiculture facility and simultaneously funding an endowed professorship were daunting, and for good reason. To bring to fruition a multimillion-dollar facility and an endowment of \$1,000,000 would prove to be unprecedented endeavors of the Association. But patience and persistence have borne fruit and we will soon begin to see tangible results of our efforts. After seven years of conferring, lobbying, and planning for the new apiculture research facility at NCSU, the groundbreaking ceremony is only months away. To add luster to the occasion will be the remarkable success of the endowed professorship; it is quite possible that it could be funded by then. We have the potential to make that happen.

To establish an endowed professorship, it was understood that a minimum of \$1,000,000 would be required. It was a lofty goal. NCSU would provide one-third of that amount therefore \$667,000 would have to be raised by the beekeepers. To begin the fund, the NCSBA made a pledge of \$250,000; thus an additional \$417,000 was required. Numerous chapters and about 1,500 individuals joined the initiative with donations and pledges ranging from \$5 to \$25,000. The NC Watermelon Association committed \$50,000. Bee Downtown donated \$18,000. The NC Farm Bureau and the county Farm Bureaus donated over \$53,000. Donations have been received from several non-beekeeper groups. The endowment fund currently totals over \$590,000 in contributions and pledges. The remaining amount needed is no longer \$1,000,000 or

\$667,000 or \$417,000; we now need less than \$77,000 to achieve the threshold of \$667,000, the minimum amount required for NCSU to add enough money to make the fund \$1,000,000.

A membership renewal donation campaign is underway which could help get us even closer to our goal. A donation of \$10 or more from a significant portion of the more than 5,000 active NCSBA members would be another step forward. Small contributions early on may not have seemed to have had much impact on the balance of \$417,000 but they did. All the donations of \$10- \$100 have been steadily adding up. Now that the remaining balance is less than \$77,000, a small contribution will have an ever-increasing impact. Every \$500-\$1,000 gets us closer to our goal.

About one-third of the membership contributed during last year's Ten Dollar challenge. If you are unsure about supporting the endowment, please consider the value of continued honey bee research; the value of interactive apiculture extension and education; the ability for NCSU to win lucrative apiculture research grants and attract top-notch faculty and research associates. An endowed professorship will ensure that an apiculture research and extension program will remain at NCSU in perpetuity.

The conception and advancement of the apiculture facility and the endowment has not happened by itself; to the credit of the beekeepers of the NCSBA, we have led the way from the start. The NC General Assembly and the College of Agriculture and Life Sciences at NCSU have walked with us to help us reach our goals. As an Association, we are at the threshold of what will be the greatest season in our history.

With best regards,

Rick Coor, President, NCSBA



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# BeeFeeders

## North Carolina Pollinator Plants

by: Ulana Stuart, NC State Extension Master Gardener Volunteer

### What Not to Plant!

#### Some potential BeeFeeder plants

produce chemicals in their pollen and/or nectar, which can be toxic to honey bees, brood, or toxic in the honey. Most of these plants are native to North Carolina and occur here naturally. In most cases, honey bees will ignore these questionable blooms and forage on better nectar sources. Even if honey bees do visit these plants, the nectar will typically be diluted with the pollen or nectar of other flowers. If you already have these plants in your garden, there is probably no need to remove them. However, if there is only a small garden area available, beekeepers should consider not planting the following in their bee garden:

Photo: Cathy Dewitt



**Carolina jessamine (*Gelsemium sempervirens*)**

Carolina jessamine (*Gelsemium sempervirens*) is a native high-climbing or trailing evergreen woody vine that twines. It produces charming showy lemon-yellow flowers in early spring and will engulf almost anything it grows on. Carolina jessamine grows naturally in the Piedmont and Coastal Plain regions. The nectar may be toxic to honey bees, but additional research is needed. When the flower is surrounded by other flowering plants, honey bees will preferentially forage from safer species. I once had a Carolina jessamine in my garden and removed it in an abundance of caution.

Titi (*Cyrilla racemiflora*) is a Southeastern native woody shrub that has white fragrant blooms in early summer. When Titi pollen and nectar is fed to the larvae it can lead to purple brood. Purple brood describes larvae that look blue or purple instead of white. It can be fatal to the larvae and negatively affect both adults and pupae. Titi blooms are considered a beekeeping issue periodically in Florida, South Carolina, Georgia, and Mississippi.



Photo: Pegannum

**Titi (*Cyrilla racemiflora*)**

North Carolina mountains are famous for their rhododendron and mountain laurel (*Kalmia latifolia*) bushes. These beautiful native shrubs are found mainly in the mountains but also grow on Piedmont rocky outcrops. The nectar and pollen of rhododendron and mountain laurel contain grayanotoxins which are poisonous to honey bees as well as humans. Although the toxin can kill honey bees, it is diluted with water in the nectar. As the water is removed from the nectar to produce honey, the toxin can concentrate to poisonous levels. Honey bees are rarely seen on these plants though they are often pollinated by bumble bees, which are not affected by grayanotoxins.

American Basswood (*Tilia americana*) – is an excellent nectar source for honey bees to produce the best tasting honey. However, during extreme drought conditions this nectar can become somewhat toxic to honey bees.



Rhododendron /Mountain Laurel ( *Kalmia latifolia* )

Filmy Angelica (*Angelica triquinata*) is a perennial native wildflower that grows throughout North Carolina. The whole plant is poisonous to humans but the nectar is particularly poisonous to bees and other insects.

Usually, honey bees will ignore the plants mentioned above and choose to forage on other nectar sources. Very rarely are humans sickened by consuming toxic honey. However, it is always wise to understand foraging conditions and to observe environmental factors.

For more information on gardening use the North Carolina -Extension Gardener Plant Toolbox at [plants.ces.ncsu.edu](http://plants.ces.ncsu.edu).

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# In the Apiary: Winter 2023-2024

by Dr. Josée Bourget Keeper of Bees  
and Shirley Harris Apiary Inspector, NCDA&CS



**As 2023 comes to an end,** it's hard to suppress the excitement of thinking ahead about bee colonies brooding up again as warm weather starts poking its nose. For some, the anticipation makes winter go by slowly, as if it were going to last forever. Like our bees, our sights are on the cyclical magic of spring rebirth.

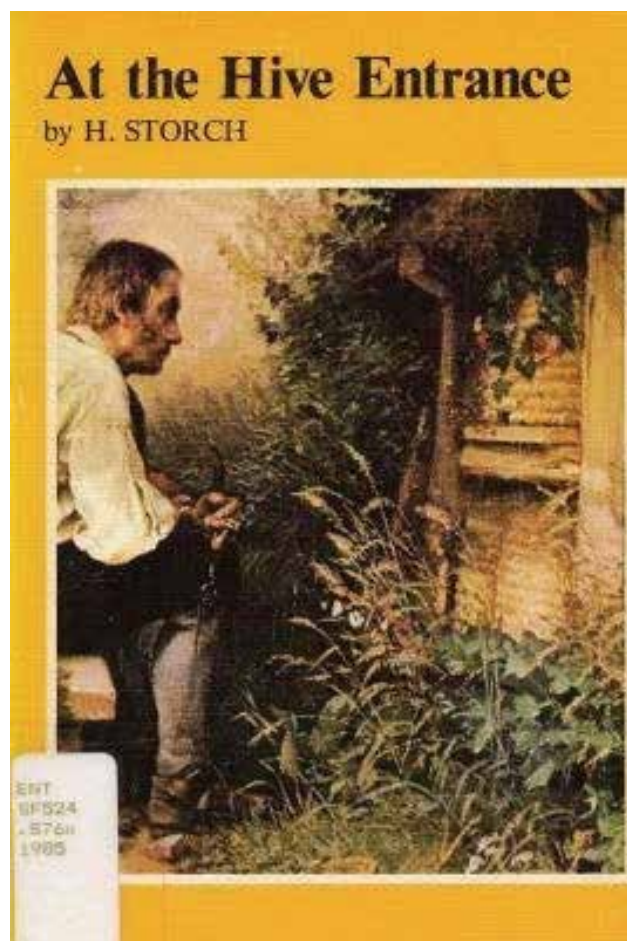
For honey bee colonies, winter is a lot like a marathon: lots of good training is required for strength and endurance to develop; proper nutrition is needed before, during and after the event; and most importantly, the participant must be healthy at the start of the event, or something is bound to go sideways. Problems encountered during an event often compromise the athlete's readiness for the next race. So, the question is: What will be the health condition of your apiary athletes when their winter marathon is over and honey bee spring is knocking at the door?

Being a beekeeper is a lot like being an elite athlete coach. Looking at a hive as a superorganism, each apiary is like a group of athletes trained to deliver a performance at some point in time during the year. Surviving winter is arguably the harshest event of them all, next to building a nest in a new home after swarming. Over the course of the bee calendar year, our job as apiary coaches is to bring the best out of the super-athletes. With a little luck and some good coaching, our colonies can cross the winter finish line and be roaring ready for the start of the spring brooding race.

Fortunately for us, our mild NC winters afford us the occasional opportunity to check in on our athletes during that fight for survival. If training up the superorganisms from the middle of summer and leading up to winter was heavy hands-on work—keeping mites under control, boosting food reserves, and ensuring good population growth—then coaching them through winter means shifting gears and slowing down, but coaching must certainly go on.

There was a time when cracking open a hive to inspect it was impossible. A good sense of observation and powers of deduction were the only tools at a beekeeper's disposal. There is a lot to be said about

figuring out what is happening by simply watching the entrance. Translated in multiple languages, *"At the Hive Entrance"* by H. Storch was first written in German in 1985 and has been a go-to for many who have limited opportunities to inspect hives for one reason or another. We must consider our North Carolina climate while consulting it, but honey bee behavior is honey bee behavior. The book is now part of the Creative Commons and is downloadable for free. Winter is already a huge challenge for our bees. Every beehive disruption is like putting a hill in the middle of a marathoner's path. It slows them down and robs them of energy.



If you are a technology enthusiast, there is also Bluetooth hardware available to keep an eye on hive weight, humidity and temperature. The real-time data provided is a definite tool for the diehard apiarist if your budget can support it. This technology can be especially handy in the spring, when hive weight

quickly goes up, or when the inside temperatures indicate a swarm is brewing. However, the old school—analogue—ways work well, too, in the hands of a dedicated beehive coach.

If you must take a peek inside a hive in an emergency – athletes do sprain ankles - consider the daily temperatures and be as brief as possible. Wind chill is indeed a factor for the bees' tiny bodies; especially the Queen, not to mention how quickly a frigid wind chills brood. Like an elite athlete, a Queen catching cold would possibly see her spring performance diminished if not entirely stopped.

Low temperatures also mean the bees cluster more-or-less loosely, most of the time. So, each attempt at removing frames is a very delicate operation when compared to summer interventions when the foragers are out of the hive. In addition, doing so disrupts the wonderful propolis seal the bees put in place to protect their home. Though sometimes required to save a hive, winter visits are definitely counter indicated.

Recall that the environment is a key factor for successful overwintering, as mentioned in our Fall Bee Buzz article. It bears repeating because this point is often overlooked. Without the heat of the summer to help evaporate extra moisture, a hive can get very moist inside. Condensation that drips down on the cluster is fatal over time. Bees must be able to remain in the cluster to keep warm. Anything that knocks them off it chips away at cluster size, thereby reducing the survivability of the super-athlete. The bee muscle that keeps the Queen cozy until spring must stay healthy for the entire winter race. That does not happen if the bees are damp and/or drop off the cluster.

Adjusting for moisture is the same everywhere in nature. Moisture is removed either by evaporation, absorption, air circulation or a combination of these methods. There are certainly many ways to achieve this. Just find one that works for your coaching style. Hard candy board and quilt boxes have become very popular because of their dual purpose. The candy, or fondant, provides reserve food stores should the bees run out of their own, and the wood-chip filled quilt boxes substitute as tree trunks that would otherwise absorb moisture in nature. The condensation also moistens the candy below the quilt, which in turn assists the bees in processing it. It takes water for bees to convert sugar for consumption.

Questions about hive insulation are often brushed off

because of our mild NC winters but consider the following. Condensation happens when air is cooled to its dew point. That forces the water vapor in the air – the humidity – to turn liquid and come out of the air in the form of droplets. Just as it is for our homes, ideal humidity in a hive is between 50-60%. If moisture in the air is high, which is often the case during our subtropical winter climate both inside and outside the hive, the quick cooling effect will precipitate condensation. Insulation slows down the daily up-and-down changes in temperature, which helps the bees regulate their home environment. We know the bees can make it without insulation. But anything we do to help them manage hive conditions in our human-made beehives increases their odds of crossing the winter finish line healthy. Though anecdotal, an experiment done this past summer by a NC club, using Bluetooth internal sensors, compared hive climate regulation between a well-insulated Apimaye hive and a typical Langstroth hive. The results revealed a great deal less daily fluctuations in cluster temperatures in the Apimaye. This suggests that the bees don't have to work as hard to regulate hive microclimate in an insulated hive. There is good reason to believe this principle applies year round, especially in the winter when the cold and damp northern wind blows. We consistently witness the same phenomenon in our own homes.



Photo: Dr. Josée Bourget

### Making a Candy Board

Feeding during the winter is also possible for us lucky North Carolinians but it is a bit tricky. Though we should all strive to prepare the bees to winter without our help, sometimes it is necessary to supplement, especially in the later part of winter if you didn't use candy board. Some will trickle syrup from the top all winter long. Just remember that feeding liquid to bees adds to the condensation problem already compounded by cold temperatures. It also puts the cluster in danger

of getting soaked should a leak occur but it can be done successfully with great care.

Many often ask if pollen feeding is necessary come January. That all depends on what you see “At the Hive Entrance” and what objective you have in mind for your super-athletes when the spring nectar flow race arrives. If a beekeeper spends time observing bees as they come and go on warmer winter days, quite a gamut of pollen colors should naturally be seen in their baskets. Supplemental pollen feeding is more about accelerating brood rearing than anything. And if one is not careful, it contributes to early swarming.

Hive pests are much less of a problem in the winter. If you took good care to keep your mite load under control, and ensured adequate food supply, the healthy hive-athlete will run along just fine until the red maples start to bloom. Depending on where you live, field mice and other small critters might seek refuge from the cold in the bees’ home. Many creative mouse guards exist, but a small piece of ½ inch chicken wire inserted in the entrance opening will do the trick in a pinch.

As we enjoy the holidays, take a bit of a break from the hot summer apiary work, and celebrate our harvest, we apiary coaches can benefit from reflecting on what worked and what went wrong so we can better prepare our hive-athletes for the New Bee Year race calendar. Winter is also a great time to further your formal beekeeper knowledge. Most local beekeeping schools are held during the winter. For a listing, consult [www.ncbeekeepers.org](http://www.ncbeekeepers.org), or check with your local community college. Out-of-state bee schools can also offer helpful new perspectives. Consider supporting bee school programs. There’s nothing like teaching to deepen one’s knowledge and make a difference. You might discover something new that makes your apiary superorganisms perform better. Take the opportunity to inventory your equipment and perhaps spruce it up as time permits. The bees don’t give us much warning unless we stay attuned to them. Having no equipment to house an early spring swarm is disappointing. This is our chance to plan ahead!

Perhaps our beekeeper motto should be “Bee Ready!”



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# Master Beekeeper Program: Certification is a Team Effort

by Randall Austin MBP Co-Chair



**The NCSBA** Master Beekeeper Program (MBP) is the product of a lot of enthusiastic, dedicated people from across the state. The folks on the MBP Committee may get noticed at NCSBA Conferences but it is the chapter MBP coordinators, bee school instructors, mentors and those who administer field tests (Certified Practical Exams) who do most of the collective work. That's the way it should be, because the whole point of the NCSBA Master Beekeeper Program is to promote the sharing of Best Beekeeping Practices in every hamlet and hollow across North Carolina. One person, or even a small group, cannot do that by themselves. That's why Roger Morse developed the first MBP to begin with (see the Spring 2022 Bee Buzz for more on that story).

With so many people doing so much work in such far-flung places, coordination can be an interesting challenge. A great example has to do with an initiate's record of progress toward the Certified level. The record has two parts: 1) the result of the Certified Written Test and 2) the outcome of the Certified Practical Exam (the in-hive field test). Once the first result has been amended with the second, a person has achieved Certified status and receives a very nice certificate, suitable for framing, plus the admiration of their peers. They also become eligible to progress toward the next MBP step, Journeyman.

However, part one and part two are not always conducted by the same people. For example, a person may attend Mecklenburg Beekeeper Association's bee school and take the Certified Test with them at its conclusion. But they may be a member of Cabarrus County Beekeepers. And maybe their Certified friend from Union County Beekeepers oversees their Certified Practical Exam. Or maybe they took the Certified Written Test at a NCSBA Conference or Special Testing Event, such as the ones following NCSU BEES Academies. Where is their record? How do parts one and two get joined? Getting straight to the point, how do they get their certificate?

The MBP's online record-entry system is the basis of the solution. Each county chapter has their own

account, administered by the chapter's MBP Coordinator. When Certified Written Tests are administered by a chapter, the Coordinator creates an electronic record for the candidate. After the Practical has been completed, the Coordinator updates the electronic record with that result and submits it to the MBP Committee. The Committee makes sure that all the "t"s are crossed and "i"s are dotted, then sends it off to the certificate printer.



For this to work, it is critical that there is only one record for a candidate and that the record is updated when the file is completed. That means that, in our example, the person who administers the Practical Exam must send the result to the Coordinator who owns the candidate's record. In the first example, that would be the Mecklenburg Coordinator since the Written Test result is entered in Mecklenburg's account. Note that if the Written Test was completed at a NCSBA event, the result is entered in the MBP Committee account, not a chapter account.

This requires friendly cooperation between NCSBA chapters, which fortunately is always the case. It also requires that the test-taker remembers where they took their Written Test, and that they tell the person administering the Practical to send the result to that chapter. Consider that a part of the test!

These instructions are clearly described at the bottom of the Certified Written Test. Given that, and given the dedication and cooperation of chapter MBP Coordinators, the whole process typically works out without any problems. But when hiccups occur, the Committee and the Coordinators do a pretty good job of sorting things out. If you aren't yet Certified, why don't you go through the process and see for yourself?

# Wolfpack's Waggle: BUILDING A BUILDING: STEP 5—REALITY STRIKES

by Dr. David Tarpy NC State Extension Apiculturist



**If there is one thing** that I have learned through this process of designing a new, state-of-the-art apiculture building is that it is very iterative. I didn't really appreciate at the beginning just how much back and forth there is to make the many, many decisions involved, from location selection (Step 1) to preliminary design (Step 2), to room functionality (Step 3), to landscaping (Step 4). In all this time, it has been important to think conceptually, functionally, and utilitarian. In doing so, the process is to make a best first guess, incorporate anything that we need without constraint, and include everything that one would ever want.

Of course, eventually the reality of a finite budget must sink in. Of the \$4M from the state legislature, 25% was taken off the top by NC State for overhead to pay for the architects and design team, leaving exactly \$3M in funds for the final brick and mortar building. It is impossible to create a cost estimate without a preliminary design, so the initial drawings and renderings were a great start to make some more concrete calculations. The good news is that we don't have to go back to the drawing board, and that our proposed location and main concepts will stay intact. The bad news is that the cost estimates for our original dream lab was overbudget by about \$1M.

Once that reality struck, I have to say I wasn't really prepared for it and was pretty disappointed; after spending so much time thinking about one's dream building, anything less than that feels relatively diminished. But disappointment quickly turned to focused concentration, making some hard decisions about what to prioritize, what to reduce, and what to outright jettison. The team from biloba Architecture was terrific in identifying the various options and how to trim the budget. They have been carefully listening to our priorities and identifying the purpose of each space, both inside and out, to keep the spirit of what we were initially hoping for.

A careful combination of different factors got us under budget. First, the original design was slightly over 6,000 square feet, and the final design (Figure 1) is a bit under 5,000 square feet. Second, we placed

several larger expenses on an alternative list that could be added on later. For example, the final design will include a concrete pad for a backup generator but not the generator itself. That way, we can easily add it on later if new inputs are acquired, but initially we won't have backup power since it is nice to have but not critical. Similarly, the walk-in incubator that we've envisioned in the main experimental lab is another potential add-on; we can build the footprint for it and plan around it, but we have plans to write an NSF Equipment grant to see if we can secure funds for the incubator. Third, we will be keeping pretty much all the same spaces (extension conference center, student open office, hive demonstration porch, research lab with observation hive room, workshop with walk-in freezer, equipment storage, and open storage), but they will each be correspondingly smaller rather than cutting any one of them. That means our open office is only going to have one main communal desk rather than two, our research lab is going to have less bench space and cabinetry, and our workshop is going to have a smaller overall footprint. Importantly, though, we have prioritized the extension conference room, which was only reduced from a capacity of 76 to a final capacity of 64 people. While one option was to significantly reduce this space by half, keeping a larger training and meeting room will enable us to have outreach and extension events at the lab. Finally, some of the bells and whistles won't be included, such as the moveable glass wall on the conference room and the full pollinator garden, but we will have more conventional elements for those.

In the end, the final design of the building is still exactly what we wanted and need, even if the size and scope is slightly less than we had been thinking. The really exciting aspect of this is that the process going forward is going to be less iterative and much more full speed ahead. The project will be going out for competitive bids in the coming months, with the goal for ground-breaking in early to mid-2024. From there, it is expected to take about a year for construction.

Again, we thank the NCSBA and everyone who have worked behind the scenes to make this happen, and we will all be excited to see the final structure up and running in 2025!



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## NC Beekeepers Attend EAS at UMASS

by Doug Galloway EAS Master Beekeeper & Historian

**NC Beekeepers** joined beekeepers from 36 states and the District of Columbia plus nine other countries at the Eastern Apicultural Society of North America's 68th Anniversary Conference held this summer at the University of Massachusetts in Amherst, MA. The Monday through Friday event included a two-day "Short Course" program designed to allow beekeepers the opportunity to choose from a wide selection of educational classroom and apiary courses that met their individual interests and experience levels. Immediately following the short course, the three-day Conference began and included morning sessions with key note speakers addressing a broad spectrum of interests while the afternoons provided breakout sessions both in the classroom and the apiary. Several day trips were offered as well, to provide alternative choices for beekeepers, friends, and family. A large vendor area provided a perfect place to meet up with beekeepers and vendors sharing ideas and methods to make beekeeping both enjoyable and profitable. Evening events included a Dine-Around-Town option on Monday, Beekeeper Olympics and barbeque dinner Wednesday, a live auction and dinner Thursday and a closing Awards Banquet on Friday. In addition to the live auction, both a virtual auction held prior to the event and daily silent auctions held during the conference provided another level of entertainment. The Painted Hive Silent Auction is always a fun event, offering a surprising level of creativity and talent.



*Pictured are Wade Turner, Jody Moore, Doug Galloway, and Lisa Ghezzi. Lisa is an EAS Master Beekeeper from Maryland, where the 2024 EAS Conference will be held at Turf Valley Resort in Ellicott City, MD from August 4 – 9, 2024.*

During the week, a Honey Show was held to judge the many and varied offerings from beekeepers seeking to compare the quality of their hive products with those of other beekeepers. The challenge is that products came from all over North America, so the variety and level of competition was stiff. North Carolina beekeepers competed and fared rather well.



*University of Massachusetts in Amherst, MA*

The Eastern Apicultural Society (EAS) offers a Master Beekeepers Certification Program at its Conferences each year. The program, the first Master Beekeeper program in the United States, was established by Dr. Roger Morse at Cornell University. In 1981, Dr. Morse passed the program to EAS. Quoting Dr. Dewey Caron, "Roger Morse gave EAS the Master Program he started in NY state with beekeeper training in 1976. I was part of the first training session to certify beekeepers in 1978 at Ithaca and again in 1979. He (Dr. Morse) originally toyed with the idea of having the EAS MB be a training effort, but then settled for the concept that the EAS program should not interfere with the local and state bee clubs who would do the training of beekeeping (all beekeeping is local) and eventually worked to establish EAS MB as a certification of mastery." From the EAS Master Beekeepers webpage, "Certification as an EAS Master Beekeeper indicates a high level of beekeeping expertise and the ability to educate others in the art of beekeeping."

This year, two North Carolina beekeepers successfully completed the challenging EAS Master Beekeeper Certification Program. Jody Moore and Wade Turner, both members of the Chatham County Beekeepers,

were recognized by EAS as Master Beekeepers. They can attest to the rigors of the two-day testing process including four exams covering all aspects of beekeeping, honey bee anatomy, familiarity with pollinators and the ability to speak effectively. The ability to share their ideas and opinions about various topics relating to beekeeping with other beekeepers and the general public is an integral part of fulfilling their responsibilities as EAS Master Beekeepers.

It is a joy to spend a week with like-minded folks, sharing ideas, stories, and anecdotes about beekeeping. EAS was conceived on June 18, 1955, holding its first Conference at the University of Rhode Island in 1956. North Carolina joined EAS in 1978, due to the efforts of Dr. John Ambrose, and has been a vibrant supporter of the Society ever since. NC hosted an EAS Conference in 1991 at New Bern, and again in 2010 at Appalachian State University in Boone. Both Dr. Ambrose and Dr. Tarpy have served pivotal roles over the years in support of EAS programs. Don Hopkins has attended and served in support of EAS since 1976 and along with Jennifer Keller has managed the EAS teaching

apiary at its conferences since 2008. EAS is a 501 C 3 non-profit corporation totally dependent upon volunteers. These generous North Carolinians have and continue to make a significant contribution to the Society and Beekeepers.



If you have a question about membership in EAS or attending the 2024 Conference in MD, information will be available on their website at [www.EasternApiculture.org](http://www.EasternApiculture.org)



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## NCSBA Library Update

### LIBRARY SERVICES STILL ON HOLD

No one has been hired to take Terri's place at the Wayne Community College library. So, they cannot ship any DVD in the NCSBA's collection to any NCSBA members making a request.

#### **The collection is inactive.**

As it stands, the DVDs will remain at the Wayne Community College library until a decision is made about what we should do with the collection or until the college hires staff for the vacant positions as well as opting to continue servicing the NCSBA collection.

**Bob Kemper, NCSBA Fred Deer Librarian**

kemper27530@gmail.com 919-731-2146

# Making the Most Out of Winter Beekeeping

by: Richard Dunnagan, NC Journeyman Beekeeper

**As most of us** are tucking our bees in for the winter, I thought it would be a good time to approach topics that rarely get discussed. For a few months, we get a breather from the beekeeping tasks that demand so much of our time from spring to fall. Other than just work on equipment, winter provides the ideal time to spend on the cerebral aspects of our endeavors. In other words, time to work on yourself.

During most of the year, our activities as beekeepers are necessarily reactive to the cycles of our bees. Once we get them buttoned up for the cold, we have a bit of a break where we can decide how to spend our time. This annual pause is a great time to renew, reflect, and prepare. Rather than just watch football and eat too much, take the time to get ahead of your beekeeping education.

Professional ice hockey teams have spread from the cold north into warmer regions of this country in the past few decades. For people who have never been on ice skates, watching these players perform their skillful maneuvers at such intensity and speed is mind-boggling. These athletes all have one thing in common. They have developed skating as such an instinctive action, they can focus all their mental and physical energy on chasing the puck.

People who attempt to do beekeeping without first mastering the basics are like someone trying to play ice hockey when they can't even skate. A person who is struggling just to stand up on the ice is unable to give any attention to the fast-moving players around them, much less try to find or move the puck. Similarly, it doesn't matter how many years you have been keeping bees, if you don't fully comprehend the basics, you will find yourself constantly overwhelmed by the pace of the bees and be unable to keep up.

Facebook is filled with posts by beekeepers who have important questions which need immediate answers. While it is helpful to have a community of peers who can help guide us out of a jamb, what if you proactively studied about bees during the off season and learned the answers to many of your questions before they arise?

There are so many published resources available to learn about bees that it can be overwhelming. The intimidation factor of where to begin often keeps people from getting started. I want to help eliminate the feelings of inadequacy so many have and inspire you to take charge of your growth and understanding about bees by breaking it down into something more manageable.

If you notice in my wording, I intentionally refer to learning about bees. The biggest mistake newbies make is to study other beekeepers, thinking that is the way to learn how to do things. Unfortunately, that is the shortest path for how to become confused. The only common denominator in beekeeping is bees, not the wide variety of humans keeping them. If you want to become an expert at something, the way to do so is study that thing.

The FBI trains its people how to spot counterfeit bills by having agents learn every detail and nuance of a real bill. A beekeeper can learn to spot irregularities in a hive by understanding what a strong healthy hive should look like. When they spot irregularities, they can then seek help if needed, to determine what is causing those things.

The underlying work of every beekeeper is narrow. Our job is managing the health and well being of the bees, keeping a strong queen in the hive, and helping the bees prepare for and endure winter. Learning how to do these things well includes some basic knowledge every beekeeper should master early in their career. If you fail to grasp the essentials necessary to keep a healthy hive, none of your other goals can be accomplished.

**The basic knowledge every beekeeper should have includes:**

1. **a complete understanding about bee anatomy,**
2. **the life cycle and role of each bee in a colony,**
3. **the normal activities of a healthy colony,**
4. **reading a frame,**
5. **bee seasons, and**
6. **things that threaten bees.**

Part of keeping a colony healthy is knowing the specific things that harm it. While there are many threats with which to be concerned, there are fewer than there are items on a fast-food menu.

**There are four major invasive pests, which include:**

1. **varroa mites**
2. **tracheal mites,**
3. **small hive beetle, and**
4. **wax moths.**

**While there are over 20 viruses, there are only a handful of common ones that most beekeepers will encounter which include:**

1. **Sacbrood,**
2. **Deformed Wing Virus (DWV)**
3. **Bee Paralysis Viruses (et al)**

Nosema is a microsporidian, recently classified as a fungus, that can harm the health of bees individually, and if widespread, can impact the health and survival of an entire colony. Chalkbrood is another fungal disease that can destroy brood and devastate a colony.

Of course, there is the spore-based plague called American Foul Brood (AFB) and its bacterial and less deadly European cousin. While AFB is horrific and the worst thing that can happen to a colony, the most important thing you need to learn about these diseases and any of the viruses, is how to spot the signs quickly and accurately, and who to call or what to do if you think you found it. Would you like fries with that?

A beekeeper who has a firm grasp on the above basics by the end of their first year will be miles ahead going into their next season. All the popular online discussions about feeding, treatment methods, when to do this or that can become distractions which keep you from ensuring the health of your bees. Those other things are important beekeeping practices, but they should be considered secondary to learning about the bees themselves. A healthy colony will make honey. A healthy colony will replace a failing queen. A healthy colony will fend off beetles and wax moths. A healthy colony will build up stores for winter.

After the basics, there is still plenty to learn about bees. Swarming is a natural colony instinct and has been extensively studied and documented by scientists in the bee community. Since every beekeeper is annually faced with this concern, it makes sense that

you understand the behavior from the bees' perspective, if you want a reasonable chance of managing it in your apiary.

As you continue to dive deeper into bees, you will want to start learning more about queens, bee communication, pheromones, hive preferences, environmental and seasonal impacts on colonies. Queen rearing is an art in and of itself and since every successful colony needs a good queen, it becomes a priority with advanced beekeepers with many colonies they want to keep queenright.

Most beehives are completely dark inside, so bees communicate extensively in non-visual ways. We understand much about their use of pheromones, waggle dances, vibrations, and other physical contact. We may not be able to fully understand bee speak, but the more accurately you learn their language by reading visual clues, the better you will be at helping your bees.

Wherever you are in your beekeeping career, this winter, do a personal assessment. Take time to review or learn these basics so that you are completely fluent in all you need to know about keeping bees healthy. Don't wait until you have an issue in the middle of bee season to learn about something important to the bees. Study varroa mites, their life cycle, how and where they reproduce, what they feed on and how their presence in a hive affects bees.

Once you understand WHY mites are a problem, then learn the various means of treating a hive for this destructive pest. Know the types of treatments by category first and the differences in how each works to kill mites. Then learn the different products which are available in each category. Study the non-chemical treatments that have been tried and discover the pros and cons of each.

Develop a personal learning plan where you begin to explore the deeper concepts about bees, such as swarms and queens and bee diseases. Build a library of informational books about bees. Create a group of friends in your local club to share resources and encourage each other to keep studying and learning. The lessons you learn while working your bees are reactive and can often cost you or your bees in the process. The things you learn reading and studying are proactive and will become reinforced as you apply them in the field.

The North Carolina State Beekeepers Association has

the Master Beekeeping Program, which includes four levels. If you attended beekeeping school or have been keeping bees for several years, you probably already know what is required for the Certified Beekeeper level. I encourage you to consider reviewing the curriculum found at the NCSBA website and testing for this designation.

Beyond that first level, the subject matters are more detailed and complex, but the longer you keep bees, the more important that knowledge becomes. If only for your own satisfaction, I hope you will consider becoming part of this program and advance to whatever level interests you.

In beekeeping, if you are not moving forward, you are backing up, which unfortunately means you are losing bees, and I doubt that was on anyone's list for why they got into this in the first place.

*Richard Dunnagan has been keeping bees since 2017 and is the owner of Boutique Bee-keeping™. He designs and builds complete custom woodenware and has created dozens of hives, unique hive pieces and architecturally themed hive roofs. He is a North Carolina Journeyman Beekeeper, a member of eight local beekeeping chapters, Vice President of Person County chapter and the Recording Secretary for the North Carolina State Beekeepers Association. He creates educational videos on a wide variety of topics available on YouTube. He performs cut-outs, mentors new beekeepers, is a frequent speaker at local chapters and public events, and consults on beekeeping topics nationwide.*

<https://BoutiqueBeekeeping.com>

[rdunn54@gmail.com](mailto:rdunn54@gmail.com)

919-606-3980



## Lee County is Buzzing!

by: Dennis Brown, President Lee County Beekeepers



*"I would like to use this article to introduce Lee County Beekeepers: A relatively new club in central NC"*

**It has been a busy year** for the small club. First, at the end of 2022 we were working with Lee Senior High School to request a grant to set up an apiary at the school. Katlyn Lewis FFA program administrator and I signed the paperwork and began the process. Ms Lewis received the grant and began work with the shop teacher and students to build the hive stands, assemble boxes and equipment. With the purchase of their first nuc in April 2023, the program was up and running. The hive provided resources for the STEM program over late spring. We at Lee County Beekeepers provided educational materials and moral support. Ms Lewis has now left school on maternity leave and has turned over the program to Ms Teri Spivey; we will be there to support her any way we can.



Lee County Senior High School Apiary

## Another major project

we undertook was working with Scout Troop 2019 on a project.

I was approached by Avery Freyer, a scout in Troop 2019 and was asked how much trouble would it be to build a Long Langstroth hive. Beekeeper Jerry Dewitt at Holly Springs Food Cupboard wanted to convert to that system.



**Prepping the site**

Avery worked on a plan to provide a hive to Holly Springs Food Cupboard. She then approached troop leader Neil Haggard with the idea. Mr Haggard agreed but it would have to be a kit type assembly as some of scouts were too young to use power saws. She then asked for some help. She came down and worked for about six hours with us as we took plans and pre-cut materials for the hive.



**Frame assembly**



**Troop 2019: Job well done!**

I took her to Midnight Bee Supply in Vass, NC and showed her an assembled hive and acquired materials for 30 deep frames. She then put together a plan to do assembly at the site. I transported all materials to the site and the girls of Troop 2019 proceeded to prep ground for hive by digging up area, leveling ground, and setting up assembly areas. An area was set up for box build and one for frame assembly. It took two days to complete the project due to rain but it went great. Approximately 12 weeks after completion and turning over the hive to Mr. Dewitt at the food cupboard, Avery was awarded Eagle Scout recognition. Congratulations to Mr. Haggard and girls of Troop 2019.



**Completed and installed: Congratulations New Eagle Scout Avery Fryer**



# Sanford Recognized as "Bee City USA"

**Congratulations are in order** to the City of Sanford for being recognized as "Bee City USA"!

Bee City USA is a program administered by the Xerces Society that recognizes communities that have committed themselves to the conservation of pollinators.



A board of advisors was created to guide the process, which consisted of Liz Whitmore, Brian Flynn, Jimmy Randolph, Amanda Wilkins, David Schau, and Lee County Beekeepers President Dennis Brown.

Chatham Park, a pollinator-friendly development in nearby Pittsboro which maintains multiple "Pollination Stations", gifted the city with three hives in April. Master Beekeeper Jody Moore installed and maintains the colonies. The hives are off to a strong start, producing 50 lbs of surplus honey in their first year.

The Sanford Parks Department, led by Nick Fortune, visited multiple apiaries before planning one of their own at the Sanford Municipal Center. Once the location and orientation has been decided upon, the Parks Department completed the landscaping and fencing for the new apiary.



**Apiary at City of Sanford**

The City of Sanford was awarded Bee-Friendly status in spring of 2023 with an official dedication October 19, 2023. The celebration was addressed by Mayor Rebecca Wyhof Salmon, who expressed her belief that "the best of what is going to come from being part of the Bee City is yet to be seen".

Each year, there will be a new pollinator friendly activity for the citizens of Sanford to promote awareness and appreciation for pollinators.



**Bee City - Sanford, NC Dedication Ceremony**  
Jimmy Randolph, Liz Whitmore, Mayor Rebecca Wyhof Salmon, Dennis Brown, Amelia Wilkins, David Schau, Brian Flynn, Jody Moore



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# Honey Pollen Analysis Provides Valuable Information for Beekeepers

by: Angelina Perrotti, Ph.D



**For beekeepers,** understanding the pollen within honey is invaluable. It offers insight into the floral sources that bees utilize to produce their honey which is information that can be passed on to their customers. A leader in this field was the renowned palynologist (pollen analyst), Dr. Vaughn M. Bryant. Dr. Bryant dedicated his career to analyzing thousands of honey samples from independent beekeepers, commercial apiaries, and honey importers. As a Professor of Anthropology at Texas A&M University, he encouraged his students to refine their palynology skills by studying honey, given its diverse pollen composition.

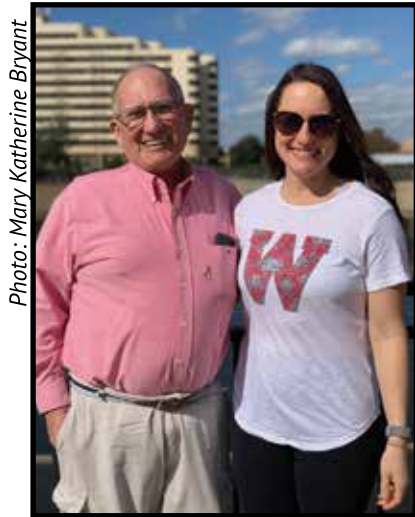


Photo: Mary Katherine Bryant

## Dr. Bryant and Dr. Perrotti in College Station Texas, 2018

During my time at Texas A&M University from 2012 to 2018, I had the privilege of working closely with Dr. Bryant. He had meticulous attention to detail, extending even to the correct way to stir honey samples during pollen extraction. Dr. Bryant methodically constructed a digital pollen reference collection that is an irreplaceable resource still in use by his colleagues. His dedication was so unwavering that, while undergoing leukemia treatment in a strict isolation ward, he petitioned for a microscope in his hospital room to continue his work. He once wrote to me, "No patient had ever had a microscope and

certainly no one else was identifying and counting pollen in honey samples...it was great fun and I enjoyed sharing stories about my research with the nurses and doctors on the ward. I suspect they don't teach pollen analysis in medical school!"

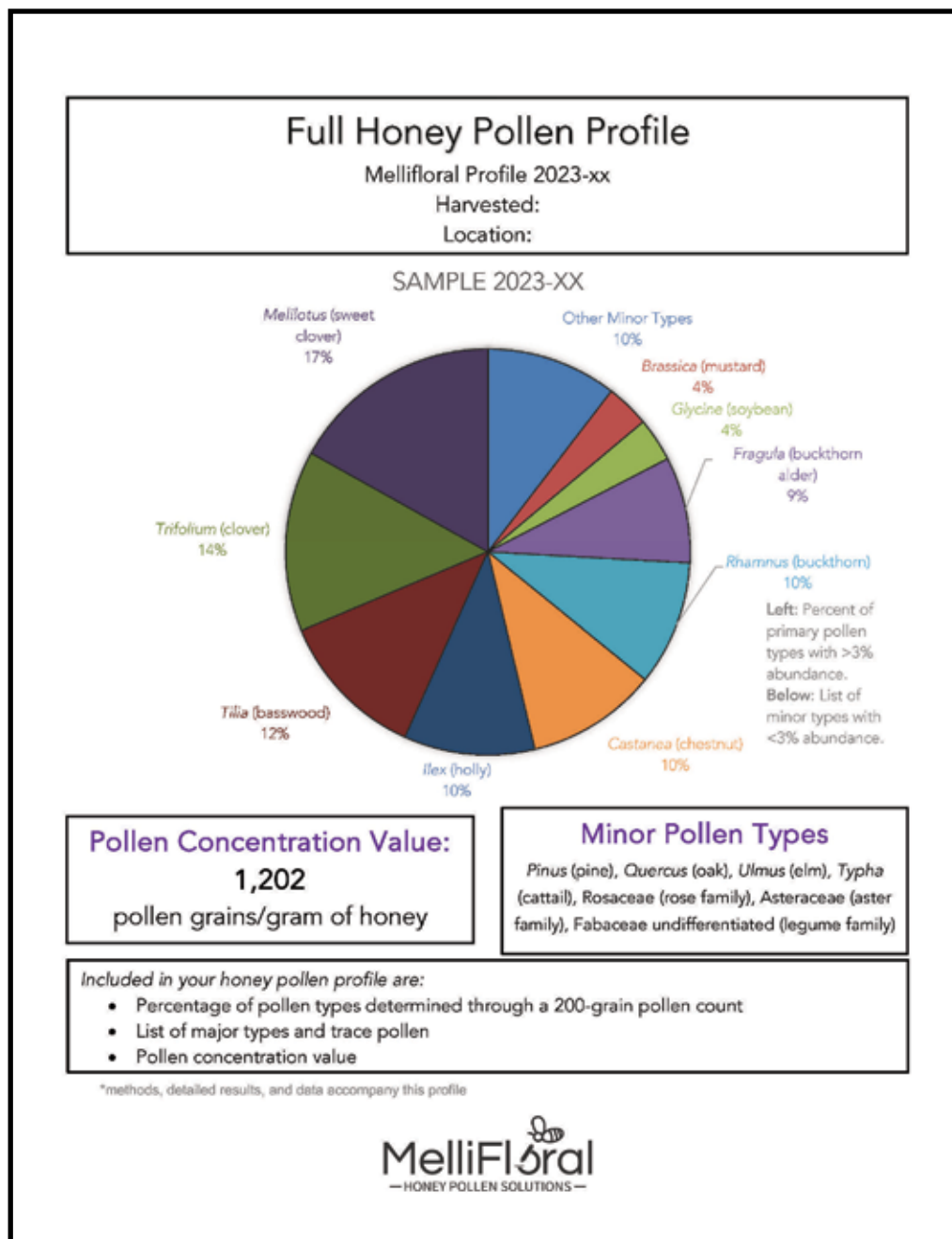
In 2021, Dr. Bryant's passing left a void in numerous communities. Although the University has recruited new professors and other anthropologists and geologists offer palynology services, the beekeeping community still grapples with a shortage of accessible honey pollen analysis services. After years of academic palynological research, I established Mellifloral this year to provide consistent, prompt, and reliable honey pollen analyses.

Mellifloral is inspired by the work of Dr. Bryant and other trusted palynology mentors and colleagues. We've considered how beekeepers can use melissopalynology (honey pollen analysis) to gain insights into their bees, manage local environments, and effectively market their honey. From this vision, we crafted our signature pollen profiles. These reports contain comprehensive scientific information while presenting the most vital details on a single, easily interpretable page. A colorful graphic displays your honey's pollen makeup, and each report features a QR code that can be scanned with a smartphone for direct access to the online report. Our clients use these reports in presentations, display them at farmers' markets and fairs, and even print them on their product labels.

The analysis process begins by measuring the honey and dissolving sugars with water and ethanol. We then introduce club moss spores, which bees do not forage on, as marker grains for the analysis. The next step is acetolysis, where we remove cellulose and nuclear material from the pollen, exposing the pollen "skeleton," making it more identifiable. We then stain the pollen to enhance its structures and count over 200 pollen grains to ascertain the relative abundance of different pollen types and the total pollen concentration in the honey.

Although melissopalynology is a rigorous science, the following things should be considered regarding how well the pollen profile mirrors the nectar sources for the honey. Some bees efficiently remove pollen from their bodies or the nectar they collect before returning to the hive, while others do not. The size and shape of the pollen grains also affect how efficiently they can be removed. Moreover, plants vary in nectar production, and the nectar-to-pollen ratio isn't always straightforward. Coefficients have been developed to account for these differences, but they are not available for every plant. Finally, the total pollen concentration in a honey sample can be influenced by factors like variations in the effective pollen load of foraged plants, bee efficiency in removing pollen from nectar, environmental variables impacting pollen production, bees foraging on non-plant sugar sources, and perhaps even the speed at which honey cells are capped.

Honey pollen analysis provides valuable information for hobbyist and commercial beekeepers, as well as honey buyers and importers. It reveals nectar sources, validates claims of geographic origin, and satisfies the curiosity of beekeepers and honey consumers alike. In an era where 46% of Americans prefer to buy local and over 70% are willing to pay more for locally sourced products, this knowledge is more crucial than ever.



**Sample honey pollen profile. A full pollen profile from Mellifloral includes a chart with the relative abundance of major pollen type, a list of minor pollen types, and the pollen concentration value determined through a 200-grain pollen count. This one-page profile is also accompanied by a more detailed report including methods, data, interpretations, and select photos of pollen from your honey.**

Visit [mellifloral.com](http://mellifloral.com) to learn more about honey pollen analysis. You can purchase your analysis on our website, and a confirmation email will be sent with shipping instructions. Our average turnaround time for 2023 is 16.4 days, ensuring you get your honey profile quickly.

*Dr. Angelina Perrotti is the founder and owner of Mellifloral, a company that provides honey and bee pollen analysis. She received a Ph.D. from Texas A&M University in 2018 and is also a part time Research Scientist at the University of Wisconsin-Madison. Currently, her favorite honey is basswood.*

**Use code BEEBUZZ for 5% off through December 31, 2023.**

# A Hive of Expertise



*John Ambrose holds a mass of bees during a demonstration for his students.  
Photo courtesy of The Arkansas Democrat Gazette, 2010.*

**Honey bees play an important role in agriculture, and North Carolina State University has played an important role in honey bee health for decades.**

by Emma Macek



**CALS Magazine**

## **For thousands of students** and

beekeepers, North Carolina State University Professor John Thomas Ambrose taught lessons not just about bee biology and behavior but about life itself.

“He taught over 5,000 students over multiple generations that when we all work together, like a hive, we can collectively create a lasting change in the world,” says Leigh-Kathryn Bonner, one of his former students.

Ambrose’s lesson was Bonner’s inspiration for starting Bee Downtown, which sets up hives on corporate campuses to teach employees about the importance of honey bees. Bee Downtown now partners with around 130 corporations in eight cities, managing more than 500 hives for leading companies such as Microsoft, Porsche, Wellstar Health, Bandwidth and MetLife.

Over his 40-year career, Ambrose built a strong beekeeping—or apiculture—research and NC State Extension program. When Ambrose joined the university as an apiculture Extension specialist and researcher in 1975, interest in beekeeping was spreading statewide through the work of the North Carolina State Beekeepers Association (NCSBA).

In 1976, NCSBA created the Apiculture Science Fund to help advance the growth of apiculture in North Carolina. The following year, Ambrose began teaching an introductory course on honey bees and beekeeping.

His first class had 31 students and enrollment grew to 200 later in his career.

When we all work together, like a hive, we can collectively create a lasting change in the world.

To improve beekeeping statewide, Ambrose started the Master Beekeeper Program with NCSBA in 1982. The program—one of the nation’s earliest, strongest and largest—teaches beekeepers to train others. Ambrose served as executive secretary of NCSBA for many years, received its distinguished service award and was president when he died in 2015.

Ambrose’s work continues at NC State with David Tarp, a professor and Extension apiculture specialist in the Department of Applied Ecology.

Because of Ambrose and Tarp’s lasting impact, Bee Downtown made a gift to the NCSBA Faculty Award in Apiculture, an endowment to create a permanent faculty position in apiculture research at NC State.

“The professorship will help ensure that research and Extension in honey bee biology and management at NC State continue in perpetuity, solidifying the great relationship we have with the state beekeepers,” Tarp says.

*To contribute to the Apiculture Science Fund or the North Carolina State Beekeepers Association Faculty Award in Apiculture fund, visit [go.ncsu.edu/beefunds](https://go.ncsu.edu/beefunds)*

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# 2024 NCSBA Spring Conference

## Featured Speakers



### Dr. Olav Rueppell

"Olav Rueppell is a professor of honey bee biology and health at the University of Alberta, Canada. During the past 23 years of his research on honey bees, he has mentored over 100 students and published over 100 scientific articles. The topics that he is addressing include the behavior, life history, and genome of honey bees, as well as understanding stress, selective breeding, and the interactions of honey bees with the two major biological threats to honey bees: Varroa and viruses."



### Jeff Horchoff

Bees have been a passion of mine for over 30 years, but that passion was never fully realized until I became the lone bee wrangler for a group of Benedictine monks at Saint Joseph Abbey in Southeast Louisiana, about 50 miles north of New Orleans. It was there that I began seeing bees in a different light, a marvel of God's creation. As I had every intention of becoming a monk, and I spent over 12 years discerning that vocation, the prayer life seeped into my everyday life, and this greatly influenced my beekeeping practices. As the fledgling Abbee Honey Operation at St. Joseph was just beginning, as well as my YouTube channel about the bees at the abbey, the flood of 2016 hit, causing over 33 million dollars in damage to the abbey and washed away every hive we had. I had to make the decision, to call it quits or move forward. Well, I chose the harder route and aggressively began building up colonies by doing removals, making splits, and catching swarms. And God blessed the proceedings. We went from zero hives in 2016 to over 200 in 2020. Then, after considering our exact needs of the operation, we scaled down to 150 which is where I want to stay. As I said earlier, I discerned monastic life for over 12 years, but the vows I took at the end of last September were not religious vows. Instead, they were marriage vows and I married Mona whom I met from my YouTube channel. Thank you, Jesus!



### Randy McCaffrey

Randy McCaffrey has 33 years as a contractor and structural claims specialist. In 2010 at the age of forty he assisted his brother in the removal of a honey bee colony from an old furniture warehouse. This experience began his development of a fascination with honey bees. In 2010, armed with his knowledge of construction and his newfound fascination with bees he began removing and relocating feral bee colonies from commercial and residential structures along the Mississippi Gulf Coast. As of the summer of 2023, the number of cut outs (hive removals/relocations) he has done total nearly one thousand and swarm catches total approximately five hundred. Randy typically keeps forty to fifty colonies of his own but regularly works alongside large commercial beekeeping operations purely for the enjoyment and education to be gained. His family, including himself, his father, and his brother, keep approximately two hundred and fifty colonies in total. Much of his work with bee removals includes mite load and disease resistance studies in feral or otherwise chemically untreated honey bee colonies. He video records much of his work which he shares through social media platforms such as YouTube, Instagram and TikTok to help educate, entertain, and inspire current and future generations of beekeepers. His work can be found on most large social media platforms under the channel name 628DirtRooster with the tagline "Where Hobby Beekeeping Is a Way of Life". Randy along with his wife Elizabeth are continuing to grow their beekeeping and mentoring business. They recently added a subsidiary named Coastal Grove Bee Works which will focus on mentoring beekeepers, honey sales and a lady's beekeeping apparel line.



## Silent Auction in New Bern 2024

This March, at our spring conference in New Bern, we will again have a silent auction. Chatham County agreed to organize it because the cooperation from all involved was fantastic. NCSBA had 48 items to auction off at the 2023 Spring meeting. People were generous with the donations and their bidding. Ten counties and the vendors supplied all 48 items with Chatham donating 28 and earned over half of the total bids. Mecklenburg had 12 donations of gorgeous ceramic pottery. There were two beautiful observation hives that brought in good amounts. This isn't bragging but explaining how few of the state's associations were involved in earning funds.

If we could have each county pledge two donated items, we could at the very least double what we earned in 2023. We had a huge range in prices from \$10 to \$265. There were items from duck eggs to pollen catchers. We had observation hives, books, earrings, soaps, woodenware, tools, artwork, and more! Please make an effort to get your association to agree to at least two items. More information will become available as we get closer to the spring meeting. - Pat Weisbrodt

### Thursday, March 7, 2024 \*Tentative Schedule

10:00 AM	Registration & Check-in Opens	Presenter
	Vendors Market Opens	
	Silent Auction Item Drop-Off	Pat Weisbrodt
	Amiflax Pesticide class	Pat Jones / Pat Farquhar
12:30 PM	Call to Order	NCSBA President
12:45 PM	NCSBA Program Updates - MBP, GAP, CHP, B&B	
1:15 PM	Break	
1:30 PM	Cotton and it's Value to Beekeeping	Dr. Guy Collins, Extension
2:20 PM	Break	
2:35 PM	Apiary Inspectors & NCDAG & CS Updates	Team Don Hopkins; NCDAG & CS
3:00 PM	Silent Auction Drop-Off Closes	Pat Weisbrodt
3:05 PM	Updates in the Pesticide World of Bees	Pat Jones & NCAGR Team
3:35 PM	Break	
3:50 PM	Abbee Honey and Becoming the Beekeeper at St. Joseph Abbey	Jeff Horchof
4:30 PM	NCSBA Board of Directors Meeting	
5:30 PM	Vendor Day Closes	
	Conference Day 1 Concludes	

# Friday, March 8, 2024

**\*Tentative Schedule**

8:00 AM	Registration & Check-in Opens	Presenter
	Vendors Market Opens	
	Silent Auction Opens	Pat Weisbrodt
8:30 AM	Call to Order	1st Vice-President; NCSBA
8:40 AM	Lessons from Feral Colonies	Randy McCaffrey
9:30 AM	Break	
9:45 AM	Making Splits Using a Double Screened Board and Swarm Cells	Jeff Horchof
10:35 AM	Break	
10:50 AM	Workshop:	
	Workshop: Mite Monitoring and Control	Joe Komperda; Happy Busy Bees
	Workshop: Beekeeping as a Small Farm	Cyndi Knudson; NE Cooperative Extension at NC
	Workshop:	Scott Davis; NCSBA Master Beekeeper
11:45 AM	Lunch	
1:00 PM	Door Prizes	
1:15 PM	NCSBA Announcements & Recognitions	
1:30 PM	Question and Answer with our State Inspectors	Lewis Cauble; State Apiary
1:30 PM	Question and Answer on 4-H Education Grant Program	Gary Winebarger
2:15 PM	Break	
2:30 PM	Updates from the NC State Apiculture Program	Dr. Tarpy
2:50 PM	Hives for Heroes	Matt Booth
3:10 PM	Break	
3:15 PM	Master Beekeeping Program Review	Robert Smith; MBP
3:25 PM	The Business of Beekeeping	Randy McCaffrey
4:15 PM	Break	
4:30 PM	Towards IPM Control of Varroa	Dr. Olav Rueppell
5:20 PM	Break	
6:00 PM	Vendor Day Closes	
	Conference Day 2 Concludes	

**Saturday, March 9, 2024**

**\*Tentative Schedule**

8:00 AM	Registration & Check-in Opens	Presenter
	Vendors Market Opens	
	Silent Auction Opens	Pat Weisbrodt
8:30 AM	Call to Order	2nd Vice-President, NCSBA
8:40 AM	Viruses; The Big Tiny Unknowns in Honey Bee Health	Dr. Olav Rueppell
9:00 AM	Master Beekeeping Testing (9:00 - 12:00 pm) Certified / Journeyman / Master written and Journeyman / Master Practicals. <u>No in-hive exams</u>	Randall Austin; MBP Chairman
9:30 AM	Break	
9:45 AM	Door Prizes	
9:55 AM	Cut Outs; What They Teach Us	Randy McCaffrey
10:45 AM	Break	
11:00 AM	Processing Honey at the St. Ambrose Honey House	Jeff Horchof
11:00 AM	Silent Auction Closes	Pat Weisbrodt
11:45 AM	Lunch	
11:45 AM	Silent Auction Pick-up	Pat Weisbrodt
1:00 PM	NCSBA Announcements & Closing Remarks	President, NCSBA
1:20 PM	Workshop: Getting Ready for Spring" (making splits, dealing with weak hives, and spring inspections).	Dana Stahlman; EAS Master
	Workshop: Controlling Varroa Mites without using	Eric Tally; NCSBA Master
	Workshop: Capturing Swarms	Kirk Kern; Bearding Bees Farm
2:05 PM	Break	
2:20 PM	Workshop:	
	Workshop: Mite Monitoring and Control	Joe Komperda; Happy Busy Bees
	Workshop: Beekeeping as a Small Farm	Cyndi Knudson; NE Cooperative
3:10 PM	Break	
3:45 PM	Conference Concludes	
4:00 PM	Vendor Market Closes	

**visit [www.ncbeekeepers.org](http://www.ncbeekeepers.org) for the latest info**



# Tobacco Road Honey Classic Show

by: Lesa Pierce NCSBA Journeyman, AHSTC Honey Judge Candidate



**Judges, Secretaries and Stewards that served at the honey contest from left to right: Lisa Vogel, Axel Elling, Celeste Mayer, Brutz English, Lesa Pierce, Steve Genta, Ryan Chamberlain, Caramen Brown, John Welty, Mary Anne Rhyne, and Leslie Lovett.**

The Orange County Beekeepers Association (OCBA) and the Durham County Beekeepers Association (DCAB) joined forces to host the inaugural Tobacco Road Honey Classic Show on Saturday, September 30, at the Agricultural Extension building in downtown Durham, NC. All prizes were donated by Bailey Bee Supply of Hillsborough, NC. What a success it was! Thirty-two exhibitors (including three juniors) entered 81 entries over 14 categories. This does not include the 17 entries in the black jar honey contest. Participants came from seven counties and two states. Overall, there were many very high-quality entries.

The clubs got the idea to host a honey show when a total of nine members from the two organizations attended the honey show training workshop at the NCSBA 2023 spring meeting. The organizing committee, chaired by Nancy Oglesby from OCBA and Mark Smith from DCBA, met every two to four weeks from April through September to plan for the event.

The renowned Brutz English and Steve Genta served as the Sr. Honey Judges. Secretaries were Mary Anne Rhyne, Lisa Vogel, and Leslie Lovett. Head Steward was

Ryan Chamberlain and assisting him were Caramen Brown, Axel Elling, John Welty, Celest Mayer and Lesa Pierce. All these stewards and secretaries are working toward their honey judging certificates as part of the American Honey Show Training Council.

The proud winner of Best in Show and a \$50 gift certificate to Bailey Bee Supply was James Blye for his light extracted honey. The sweepstakes winner was Tim Hyde who won 1st place in Creamed Honey, 1st place in Beeswax Bars, 1st place in Candy, 2nd place in Beeswax Candles, 3rd place in Light Extracted Honey, and 3rd place in Dark Extracted Honey. Best Junior Exhibitor was Amber Welsh for her 1st place entries in Crafts, Color Photos, and Baked Goods. The Black Jar winner was Bruce Simmons.

According to Brutz English, this was a remarkable first effort and he is happy these clubs have brought the event to this area of North Carolina. For more information on how to host a honey show or how to begin training to become a steward, secretary, or judge, please visit the American Honey Show Training Council website at [www.honeyshowusa.com](http://www.honeyshowusa.com).



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# New Direction for Honey Shows

by: Mark Case, Sr. NC Journeyman Beekeeper, AHSTC Honey Judge Candidate



## What do dogs, art and honey all

have in common? Yup, you got it. They are all judged in shows. The biggest difference is HOW they are judged. Dog shows, art shows, music competitions, gymnastic competitions and more are based on a point system and entries are judged accordingly to the points.

The historical way for judging honey and other bee products has been comparing each entry against the others where the best one gets first, second best and so on. The problem becomes inconsistency from show to show, fair to fair. An item that took best of show in one fair may only get third place in the next show. Judging has been based upon the other entries in that same show.

Photo: Janet Straats



**Honey display at NCSBA summer meeting honey show**

There needs to be a systematic method of judging honey and bee products based on criteria, not the subjective preferences of the judge. There are at least four methods in the US currently. One of them is based on a widely accepted systematic method being used across Europe. The American Honey Show Training Council (formerly known as the Welsh System) is quickly becoming the most accepted process for judging honey and other hive products in the USA.

Dr. Keith Delaplane, University of Georgia, brought the Welsh training to the USA in 2001. It was quickly and widely accepted across the southeast USA and is the standard in many state fairs. The American Honey Show Training Council (AHSTC) has its roots in the

system and has refined the method to suit the American apiary culture.

Brutz English is the current president of the AHSTC and a Sr. Honey Judge. Brutz has been keeping bees and harvesting honey for over 15 years. He has won more honey shows than he cares to admit (or count!). However, his best source of apiary pride is helping others compete and win. "I get excited when I see someone I have trained win a blue ribbon!" Brutz thinks it is time for the US to adopt a standard in honey judging. We have a valuable commodity, and we cheapen it when we don't set a standard to meet.

NCSBA President Rick Coor recently stated that "the American Honey Show standards bring quality to a competition that beekeepers appreciate; the results speak for themselves. Our honey competition at the 2023 Summer Meeting incorporated the American Honey Show standards and was the better honey competition that we had ever had; there were over 230 entries; it was a very nice looking event." The NCSBA has over 5,000 members and Rick feels that "our honey competition should become known as the model for quality honey competitions among beekeeping associations."

Marc Eden is a NC Journeyman beekeeper and a honey judge candidate. He has entered multiple fairs across our state. Marc is frustrated with the inconsistency judging from fair to fair. "The advantage to having standardized rules is that the person putting their effort on the line, knows that it will be judged fairly according to the set of rules and that the individuals judging have been trained to put bias aside."



Photo: Mark Case

**Demonstrating how to use a torch (flashlight) to judge wax**

The AHSTC rules are very easy to follow. They set standards for jar cleanliness, appearance, lack of impurities, consistency in bottling and casting, and more. Judging is based on the 'perfect' entry. Each judging point can trace its origin to a step in the process of getting the honey from the hive to the container. From proper steps harvesting at the hive, to transporting it to the honey house, the sanitary processing of the honey and packaging it, to the proper handling of the end-product.

Taste is only part of the criteria for judging. Steve Genta, Sr. Honey Judge for AHSTC said, "We are producing a food product. We need to provide the best for our customers. The label should not be the only thing they look at." Steve was the Senior Honey Judge at the August 1 honey show sponsored at the Randolph County Beekeepers Association meeting. Although the number of entries was on the low side, Steve was able to provide VERY detailed training for honey judge candidates. "When we do better at a honey show, it makes us better beekeepers," says Genta.

Photo: Mark Case



**Senior Honey Judge Steve Genta conducts training**

At this current time, there are no AHSTC honey judges living in North Carolina. Yup, that's right. None.

The NCSBA sponsored a honey judge training course before the spring meeting, 2023. Sixty-five people completed the training program and are now in the process to become honey judges. It is a long process.

To become a judge, each candidate must serve as a show secretary twice, under two separate Sr. Honey judges. In addition, each candidate must serve as a steward three times under three separate Sr. Honey Judges. Each candidate must earn a minimum of 50 contest points from honey shows. Finally, candidates

must pass a written test AND present a honey judging kit for inspection. Honey judge candidates must travel to shows, often without reimbursement.

Sheryl Brousseau is a Sr. Honey Judge from South Carolina. "This is my hobby. I love to travel, meet people, educate people and talk about bees."

To become a Sr. Honey Judge, it is rinse and repeat for being a judge, but on steroids! "The average person takes about five years from initial training to become a Sr. Honey Judge," said Steve Genta.

How can you help? First, ask your club to sponsor a show. It does not have to be big and elaborate. A small show is a great way to start. Your club can expect to spend about \$300-\$500 on your first show. It is a great way to give back to the beekeepers in our state!



**The judges, secretaries and stewards from the Randolph County Show, August 1, 2023**

To sponsor a show, the first thing you need to decide: what is your goal? Having a show just to have a show will frustrate you and a lot of people. Set a goal. Is it educational? How about for contest points? Is it to show off talent? The why of your show will determine the direction you take. Who can enter your show? Be very clear from the beginning.



**Henry Campbell, Sr Honey Judge is reviewing rules and standards with two participants at the SC Honey Show**

Next step: get a show secretary. You can contact the NCSBA for a roster of AHSTC honey judge candidates. Each of them is ready to serve as a secretary. The AHSTC is ready to help them! The show secretary can help you secure a senior honey judge. The show secretary is the person responsible for paperwork, coordinating with the host organization and the senior honey judge.

The show secretary can help line up additional secretaries and stewards. You need one secretary for every 50 entries you anticipate having at the show. You will need one judge for every 50 entries you anticipate having at the show. You will need two stewards for each judge. There's your staffing.



**Hive Life Conference Honey Show 2023**

Decide on your categories. At the current time, there are 63 categories from which to choose. Start small! Going big for your first show is daunting. Coordinate with your senior honey judge and show secretary to come up with a management plan. Use the model show rules and tweak it to suit your club.

Your host location needs to be large enough for many tables. You will need a minimum of one table per category you pick.

Order ribbons. Ribbons are available from many online stores. It can take up to a month to get ribbons so plan ahead. Stewards, secretaries and judges love pins! Get some pins that represent your town or club and plan to present them to the show workers. Once you see their coats, you'll understand!

Promote. Don't worry, the word will spread very quickly that you are hosting a show. There's more to planning the show, but you get the gist.

You can enter a show. Watch the NCSBA calendar for shows. Enter! Read the comment cards when you are done and improve for the next show. It won't take long if you read the cards and you will be bringing home many ribbons.

Standardized rules for honey shows are not going away. They are growing in popularity across the country. NCSBA has decided to embrace this trend and is here to help you plan your event.

The NCSBA has always been ahead of the curve in research, implementing new techniques and methods of beekeeping and advocating for our hobby. The NCSBA is now adopting and promoting this new direction and method of judging honey. Let's get the honey the recognition it deserves.

*Mark Case, Sr. is a Journeyman Beekeeper, President, Randolph County Beekeeper Association and American Honey Show Training Council honey judge candidate.*



Photo: Rosalind Severt

**The spring 2023 honey judge training class sponsored by the NCSBA**

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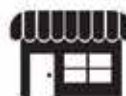


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# 2023 NC State Fair Highlights



Thanks to Jennifer Welsh and Jennifer Keller For Photo Contributions



## 2023 State Fair Wrap-Up:

by: Jennifer Keller NCSU Apiculture Technician

At the time of this writing, the North Carolina State Fair is in full swing. By the time you read this it will be winter with fair season long behind us, but with plenty of time to plan for next year's fair. It is never too early to start planning!

First off, a big thank you to all the clubs that put together a county display booth. This requires a tremendous amount of work to organize and set up, but it is such a great opportunity to demonstrate the importance of honey bees to the general public.

Club participation was outstanding this year, and the competition was tough! Caldwell, Cumberland, and Moore Counties were all newcomers this year, but their displays looked as if they had been doing this for years. Caldwell County picked up the 2nd Place spot. Beekeepers of the Neuse came back for their second straight year and really kicked up their display a notch or two. Chatham, Wake and Five County extended their runs of participation, continuing to set the standards very high. Top honor this year with the blue ribbon for best county display goes to Chatham County with the theme of their display "Bee School is in Session". Caldwell County came in a very close 2nd Place with the theme "We Need Pollination to Survive". Five County Beekeepers can also claim bragging rights as they won the Sweepstakes Award, which is awarded to the club with the most points based on ribbons won for all entries. Congratulations to everyone and thank you to all the team leaders and the individuals that spent many, many hours putting these displays together.

The competition between individuals wasn't any easier. Extracted honey was the most competitive category with a total of 92 entries. Amber honey had the most entries at 43. Light amber had 31 entries, while extra light and dark amber had 8 and 10, respectively. Mark Smith of Durham won best of show with his nearly flawless entry that received a 99.75 from the judge. Congratulations!!!

Mead was another big category this year as interest continues to grow. All three categories – dry mead, sweet mead, and sweet mead with

fruit, were well represented. We hope to expand it next year by adding a few more categories.

Although there weren't as many entries as in previous years, the pure beeswax products that were entered were of high quality. Entries for the Foods Cooked with Honey division was also rather light this year, compared to other years, but there were some delicious treats entered!

The Junior division had some impressive entries. It was tightly contested with both Amber Welsh and Katie Bryan picking up several ribbons. Amber also won the Sweepstakes for juniors in the Foods Cooked with Honey category, while Katie won the Sweepstakes in the Junior Honey category, as well as Best in Show in the Junior division. Hopefully the Junior division will gain more interest as this is an excellent way for all family members to participate.



**No Sideshow: Live in the Bee Cage!**

The North Carolina State Fair is one of the largest in the southeast with as many as 100,000 visitors each day from across NC and many neighboring states. This event is a great way to show off your talents, but more importantly, it is an opportunity for the public to gain a better understanding of the importance of honey bees. These displays help promote bees, honey, and products of the hive to the public and may even help to recruit new members to your local beekeeper association. A successful fair takes a cooperative effort of all the volunteers, county clubs, the NCDA&CS state apiary inspectors, and the judges. A lot of man hours go into making this possible. Thank you to all that participated!

# Carla's Corner

## Passin' the Hive Tool

by: Carla Robertson, Henderson County Beekeepers Association Vice President



**Hey everyone!** I'm Carla Robertson. My family owns and operates Hoopers Creek Bee Company. We strive to provide quality bees and Amish wooden wear, along with many other great products that beekeepers may need!

My dad and I got into beekeeping in 2018 after moving to Hoopers Creek, which is tucked in a beautiful mountain valley in Henderson County, NC. After a complete failure our first year (due to a lack of knowledge), we started up the following year with four nucs which quickly grew to several hundred colonies (and growing)! To this day we are still expanding our knowledge about bees, and still in awe by the amazing show of God's handiwork in these little insects. It's safe to say, we are hooked!



I'm currently attending Isothermal Community College to earn an Agriculture Business degree, with my main goal of using my knowledge to help grow our family business and teach others about the importance of our favorite pollinator. I am blessed to be the Henderson County Beekeepers Association Vice President, and the NCSBA Summer Conference reporter. I am extremely thankful for all the amazing people I was able to serve with and meet this year.

One of my goals is to use genetics to help with varroa mites and other ailments within our hives. I'm currently rearing the queens for our operation as well as selling them to other beekeepers in our area. During the week, I work with the bee crew as well as in our bee store. I've also had the opportunity to talk about our need for my generation to get into beekeeping and agriculture multiple times via national television, the newspaper, and on the radio. As of 2021, the average age of

commercial beekeepers in the U.S. is 51. I believe it is time for Gen Bee to step up! We are the future of our commercial beekeeping world, and a big part of feeding the world. Many parts of the media will tell you agriculture is dying and is simply not a field or career path a young person should take; I couldn't disagree more. There will always be a need for food, therefore there will always be a need for bees! We need to be getting young people into beekeeping. Yes, it's a lot of hard work and hot days, but it's also one of the most rewarding jobs there is.

I am over the moon about having this opportunity to be a small part of the *Bee Buzz* and can't wait to share my experiences, mistakes, and my passion for beekeeping with y'all. We can all continue to learn more about bees together!



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