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Spring 2022



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North Carolina Bee Buzz Spring 2022

"Intruder Alert!" Mite on Larva Photo by Rebekah Gunn

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2021 NCSBA Conference Photos



Bee Lab Funding



Good, Bad, & Ugly of Bee Research



BeeKeeper or BeeHaver?



North Carolina State Beekeepers Association

~ Since 1917 ~

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On the Cover: "Swarm Story" 5CBA State Fair Booth Winner 2021

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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Contact information for the NCSBA Officers and Regional Directors can be found in your Yellow Book Directory and on the NCSBA website **www.ncbeekeepers.org**

Webmaster Todd Walker webmaster@ncbeekeepers.org

From the Bee Buzz Editors:

Bee Buzz Story Submission Deadlines: Spring : Jan 7 - 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: Doug Vinson, NCSBA President

Early spring beekeeping activity

should be under way as you receive this *Buzz* issue. I hope that your overwintering efforts were effective, and you have the colony numbers that you desire to enter the spring management phase. I do know from personal experience as well as interaction with others that starvation was more of an issue than normal due to the late onset of wintry weather. Balmy conditions in late fall, early winter allowed bees to be continually active and thus very hungry, consuming stores needed for later into winter. I hope that everyone recognized this phenomenon so that losses from starvation were minimal.

Now history but worth mentioning, the delayed 2021 Summer Conference was well attended and enjoyed as a welcome change from virtual gatherings of recent times. Despite health concerns and approaching holiday season, about three hundred were in attendance. The educational program was excellent due to the quality and expertise of the presenters. I have heard nothing but praise regarding the entire event. This should set the stage for 2022 Conferences.

After a couple of years of the state legislature and the governor's inability to adopt a state budget, they were able to come to agreement late last year. This is of importance to NC beekeepers because the budget allocates monies for a new field laboratory at NCSU. The University has announced that bids for architectural design will be begin this spring. More details regarding this and the history of the entire effort is reported later in this edition.

Additionally, the state budget allocated \$150,000 to assist NC Future Farmers of America with existing or new beekeeping programs. The plan is to distribute \$1,500 to 90 FFA high school chapters before June 30, 2022. Application for the grant must be made to NC FFA prior to March 1, 2022. In support of this program, local NCSBA chapters are being asked for volunteer time and other assistance that may be requested by the selected FFA program in their county. This can be a great outreach effort for the NCSBA.

Speaking of outreach, it is timely to make a concerted effort to promote the NCSBA more actively, its programs and accomplishments. Visiting a respectable number of chapters over the past ten months I have noticed two recurring similarities. First, attendance numbers are alarmingly low, and secondly the median age of members present is younger than ever. (I know, I know everyone appears young to me!) Without question the Covid pandemic is responsible; at least in part, for both. As we get back to normal or more likely accept a new normal, attendance will improve. As local chapter schools, 4-H and FFA programs turn out more beekeepers the median age will continue to trend downward.

Adapting to this trend should challenge us promote better, more up-to-date communication between the Association leadership and the general membership. I top the stack of these offenders but intend to address the communication chasm with more frequent updates of pertinent information. A monthly newsletter is being considered along with ideas to better utilize social media. Podcasts and video clips are commonplace today and should become part of our effort to better engage the membership and to make their beekeeping experience more fun and exciting.

With the distinction of being the US state with the largest number of members, the NCSBA is doing and has done some things right for a long time. Our accomplishments are not bragging rights but should not buried in an inwardly focused association either. We should be modest in our promotion and marketing but should not be so modest as to not do it at all.

To the best of my knowledge there are no dos and don'ts regarding this column but one of my self-imposed don'ts has been to avoid solicitation for volunteer involvement. The membership has always responded generously to volunteer job needs but the concepts of promotion, marketing, and advertising advocated in the preceding paragraphs are innovative ideas and avenues; therefore, I'm not sure who would be interested in working to investigate and/or implement these ideas so if anyone reading would like to discuss involvement, please feel free to contact me at any time.

Looking ahead to the Summer Conference, you will see a speaker lineup in this issue that should impress you. In addition to that, will have a variety of interesting workshops for special interests. Honey contests are hugely popular so we happy to announce their return. We will be having "Honey Show," "Black Jar" and "Cooking with Honey" so you will have an opportunity to display your new 2022 honey crop! Read carefully, this is important: Announcements that the Summer Conference will be in Hickory have appeared in multiple places and publications in past months. The Hickory Metro Convention Center has plans for an addition to the building, namely the west end that we typically use. Start and completion dates are vague, raising concerns regarding the possibility of seeking a different venue. We do not need the disruption of ongoing construction during a conference. Respecting need to be able to make early summer vacation plans, a decision regarding the selected venue location will be coming soon.

Bee safe and thanks for reading!



Correction

Correction: Etienne Nadeau is the author of *American Beekeeping Federation Annual Conference* on page 11 in the Winter 2021 issue of the *Bee Buzz*.

Attention NC beekeepers

We are excited to open registration for our upcoming 2022 Spring Conference March <u>3-5, 2022, at the New Bern</u> <u>Riverfront Convention Center, New Bern NC!</u>

New Bern is always a popular site for NCSBA conferences, and we expect this one to be no less and potentially much better considering the strong educational program. Plan to attend and enjoy beekeeping education, fellowship, and the quaint flavor of New Bern. Delicious fried oysters anyone?

Conference planners have been hard at work arranging what we anticipate being a special beekeeping gathering. Our keynote speakers are top notch and will present material that should appeal to all levels of beekeeping experience.

Getting back to our normal three-day format will allow time for workshops to offer education for special interests. Small group workshops permit attendee interaction that general sessions do not always have, thus we are glad to again offer these opportunities.

MBP testing will be available for all levels on Saturday, March 4. Exact times and location will be available soon.

A new feature will be a training session for Regional Directors. This training is recommended for Regional Directors and chapter officers.

Honey contests will have to wait until the Summer Conference due to space constraints and time of year. Be prepared for both honey show and black jar contests this summer!

See you in New Bern! Early registration is much appreciated.



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North Carolina Pollinator Plants

by: Ulana Stuart, NC State Extension Master Gardener Volunteer

~ 5 Year Review ~

It has been 5 years since this column was first published. My editors and I thought it would be helpful to list all of the plants reviewed as a quick reference. The N column specifies which plants are native to North Carolina. Reference the *Bee Buzz* issue listed for complete details- back issues are available on the NCSBA website. For more information on gardening use the North Carolina Extension Gardener Plant Toolbox at plants.ces.ncsu.edu

Common Name	Species Name	Type	<u>Native</u>	Issue
Goldenrod	Solidago spp.	Perennial	Ν	Fall 2016
Smooth blue aster	Symphyotrichum laeve	Perennial	Ν	Fall 2016
Eastern aromatic aster	Symphyotrichum oblongifolium	Perennial	Ν	Fall 2016
Eastern doll's daisy	Boltonia asteroides	Perennial	Ν	Fall 2016
Climbing aster	Ampelaster carolinianus	Vine	Ν	Fall 2016
Witch hazel	Hamamelis virginiana	Shrub	Ν	Winter 2016
Frost aster	Symphyotrichum pilosum	Perennial	Ν	Winter 2016
American hazelnut	Corylus americana	Shrub	Ν	Winter 2016
Winter aconite	Eranthis hyemalis	Perennial		Winter 2016
Snowdrops	Galanthus nivalis	Perennial		Winter 2016
Redbud	Cercis canadensis	Tree	Ν	Spring 2017
Dwarf fothergilla	Fothergilla gardenii	Shrub	Ν	Spring 2017
Yellow wild indigo	Baptisia tinctoria	Perennial	Ν	Spring 2017
Henbit	Lamium amplexicaule	Annual		Sprin <mark>g 2017</mark>
Inkberry, Gallberry	llex glabra	Shrub	Ν	Summer 2017
Basswood, Linden	Tilia americana	Tree	Ν	Summer 2017
Sourwood	Oxydendrum arboreum	Tree	Ν	Summer 2017
Boneset	Eupatorium perfoliatum	Perennial	Ν	Fall 2017
American spotted horesemint	Monarda punctata	Perennial	Ν	Fall 2017
Japanese apricot	Prunus mume	Tree		Winter 2017
Sweetbox	Sarcococca hookeriana	Shrub		Winter 2017
Winter jasmine	Jasminum nudiflorum	Shrub		Winter 2017
Spiderwort	Tradescantia virginiana	Perennial	Ν	Sprin <mark>g 2018</mark>
American holly	llex opaca	Tree	Ν	Spring 2018
Little silverbell	Halesia carolina	Tree	Ν	Spring 2018
Oakleave hydrangea	Hydrangea quercifolia	Shrub	Ν	Spring 2018
Black locust	Robinia pseudoacacia	Tree	Ν	Spring 2018
Silverleaf mountain mint	Pycnanthemum incanum	Perennial	Ν	Summer 2018

	A · · · ·	_		. ()
Common Name	<u>Species Name</u>	<u>Түре</u>	<u>Native</u>	Issue
Short-toothed mountain mint	•	Perennial	Ν	Summer 2018
Slender mountain mint	Pycnanthemum tenuifolium	Perennial	Ν	Summer 2018
Buttonbush	Cephalanthus occidentalis	Shrub	Ν	Summer 2018
Hercules club	Aralia spinosa	Shrub	Ν	Summer 2018
Purple milkweed	Asclepias purpurascens	Perennial	Ν	Summer 2018
Swamp milkweed	Asclepias incarnata	Perennial	Ν	Summer 2018
Common milkweed	Asclepias syriaca	Perennial	Ν	Summer 2018
Peegee hydrangea	Hydrangea paniculata	Shrub		Fall 2018
Gold & silver chrysanthemum	Chrysanthemum pacificum	Perennial		Fall 2018
Late boneset	Eupatorium serotinum	Perennial	Ν	Fall 2018
Serviceberry	Amelanchier laevis	Tree	Ν	Winter 2018
Blackberry	Rubus fruticosus	Perennial		Winter 2018
African Blue basil	Ocimum hybrid	Herb		Winter 2018
Basil	Ocimum basilicum	Herb		Winter 2018
Spearmint	Mentha spicata	Herb		Winter 2018
Thyme	Thymus vulgaris	Herb		Winter 2018
Sage	Salvia officinalis	Herb		Winter 2018
Rosemary	Rosmarinus officinalis	Herb		Winter 2018
Oregano	Origanum vulgare	Herb		Winter 2018
Chives	Allium schoenoprasum	Herb		Winter 2018
Lavender	Lavandula angustifolia	Herb		Winter 2018
American persimmon	Diospyrus virginiana	Tree	Ν	Spring 2019
Asian persimmon	Diospyrus kaki	Tree		Spring 2019
Raspberry	Rubus idaeus	Woody		Summer 2019
Highbush blueberry	Vaccinium corymbosum	Shrub	Ν	Summer 2019
Sweetbay magnolia	Magnolia virginiana	Shrub	Ν	Fall 2019
Glossy abelia	Abelia grandiflora	Shrub		Fall 2019
Crocus	Crocus speciosus	Bulb		Fall 2019
Siberian squill	Scilla siberica	Bulb		Fall 2019
Glory of the snow	Chinodoxa luciliae	Bulb		Fall 2019
Iceland poppy	Papaver nudicaule	Annual		Winter 2019
Oriental poppy	Papaver orientale	Annual		Winter 2019
Buckwheat	Fagopyrum sagittatum	Annual		Winter 2019
Sunflower	Helianthus annuus	Annual	Ν	Winter 2019
Mexican zinnia	Zinnia augustifolia	Annual		Winter 2019
Mexican sunflower	Tithonia rotundifolia	Annual		Winter 2019
Borage	Borago officinalis	Herb		Winter 2019
AND A LINE - I				

Common Name	<u>Species Name</u>	Туре	<u>Native</u>	Issue
Cherry laurel	Prunus laurocerasus	Shrub		Spring 2020
Texas sage	Salvia coccinea	Herb		Summer 2020
Mexican bush sage	Salvia leucantha	Herb		Summer 2020
Purple heart	Tradescantia pallida	Annual		Summer 2020
Japanese climbing hydrangea	Hydrangea anomala	Vine		Fall 2020
Trumpet-creeper	Campsis radicans	Vine	Ν	Fall 2020
Swamp rose	Rosa palustris	Shrub	Ν	Winter 2020
Shrubby St John's wort	Hypericum prolificum	Shrub	Ν	Winter 2020
Possumhaw	llex decidua	Shrub	Ν	Spring 2021
Winterberry	llex verticillata	Shrub	Ν	Spring 2021
Dwarf or winged Sumac	Rhus copallinum	Shrub	Ν	Summer 2021
Cilver's Root	Verionicastrum virginicum	Shrub	Ν	Summer 2021
Blackgum tupelo	Nyssa sylvatica	Tree	Ν	Fall 2021
New Jersey tea	Ceanothus americaneum	Shrub	Ν	Fall 2021
Nodding onion	Allium cernuum	Bulb	Ν	Winter 2021
Garlic chives	Allium tuberosum	Bulb		Winter 2021
Spanish bluebells	Hyacinthoides hispanica	Bulb		Winter 2021
Purple heart Japanese climbing hydrangea Trumpet-creeper Swamp rose Shrubby St John's wort Possumhaw Winterberry Dwarf or winged Sumac Cilver's Root Blackgum tupelo New Jersey tea Nodding onion Garlic chives	Tradescantia pallida Hydrangea anomala Campsis radicans Rosa palustris Hypericum prolificum Ilex decidua Ilex verticillata Rhus copallinum Verionicastrum virginicum Nyssa sylvatica Ceanothus americaneum Allium cernuum	Annual Vine Vine Shrub Shrub Shrub Shrub Shrub Shrub Tree Shrub Bulb	N N N N N N	Summer 2020 Fall 2020 Fall 2020 Winter 2020 Winter 2020 Spring 2021 Spring 2021 Summer 2021 Summer 2021 Fall 2021 Fall 2021 Winter 2021

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In the Apiary: Spring 2022

by Nancy Ruppert, Apiary Inspector, NCDA & CS

Spring can be very exciting for

beekeepers in North Carolina: "new-bees" are getting their first colonies of honey bees; healthy established hives suddenly explode in population; honey production may occur at a fast and furious rate if weather conditions, nectar sources and hive health all convene favorably between early March and mid-July. In general, life is good for honey bees during spring.

However, ideal conditions as described above can also lead to swarming. If a productive queen and her healthy workers run out of room, they are likely to end up in someone else's yard, and that someone else might not want a colony of bees in their yard. We owe it to our neighbors—and to our bees—to limit swarming events, especially if our hives are in urban or suburban areas. Simply adding more room to the colony in a timely way can be a very effective measure against swarming, as can splitting one colony into two or three new colonies. Splitting beehives can be a very cost-effective way to build one's apiary, and depending on which splitting method is used, can also give the colony a brood break to help fight against the destructive varroa mite.

For more details on how to split a hive, consult your local experienced beekeepers. Many local clubs have educational programs during late winter or spring about how to split a hive.

In early January of 2022, several beekeepers reported earlier and fuller-than-expected brood buildup in south-central NC, likely related to favorable weather and resources. While this can be of great benefit for establishing robust spring populations that can make copious amounts of honey and/or bees, these early brood buildups can also lead to early varroa mite buildup, being that varroa reproduction is directly tied to the presence of brood in the beehive. Therefore, early implementation of sound IPM practices* will be even more important than usual this spring, to prevent an early explosion of varroa and the sicknesses that they bring into the hives.

Early brood build-up also increases the risk of colony starvation, since early-season nectar like maple and redbud may not be plentiful enough when the first new adult bees of the season emerge hungry (and also have to feed their younger siblings). For most NC beekeepers, it's worth the limited investment to feed sugar or honey for a while during February and March, so that the productive living machinery of healthy colonies has no hiccups as they sail into spring. Pollen supplements in early spring may not be needed since natural pollen tends to be plentiful then.

Spring is usually the most productive season for NC honey bees, and those beekeepers who consistently implemented best management practices are most likely to see the greatest return on their investment of time and other resources during the previous 8-10 months—*in general*, healthy NC colonies will never make more honey, more bees, or more healthy queens than they do during the spring, when their instincts and nutritional provisions are peaking for growth. The beekeepers who stay ahead of (or at least keep up with) spring colony growth will have their honey supers and fresh wax ready *before* the nectar flow is peaking; those who fall behind lose significant amounts of honey due to swarming and twisted burr comb full of nectar.

This will be my last "In the Apiary" column as apiary inspector for NCDA & CS, as I expect to be retired effective February 1, 2022. <u>Thanks</u> to the *Bee Buzz* staff, Dr. Lane Kreitlow and Jody Moore, and thanks to those of you who support this newsletter, the NCSBA and the NCDA&CS. Bee well!

*For more on varroa mite IPM, see <u>https://www.honeybeehealthcoalition.org/resources/varroa</u>

The editors of the Bee Buzz would like to sincerely thank Nancy Ruppert for the outstanding job she has done with the "In the Apiary" column, and for her dedication to NC beekeeping. She has helped an untold number of NC beekeepers become better at their craft. We wish her the very best of luck!









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NCSBA's Master Beekeeper Program (MBP) has a long and distinguished history. The concept was developed in the 1970s at Cornell University by Dr. Roger Morse. According to Dr. David Tarpy, who was a student at Cornell and then later worked closely with Dr. Morse's protégé, Dr. John Ambrose, Dr. Morse was the Extension Apiculturist for all of New York State. Dr. Morse frequently received pleas for help from beekeepers in places such as Long Island, a five-hour drive from Ithaca. How can one person serve an entire state when a single apiary visit takes over a whole workday just to drive there and back? His solution was to create a program to train ordinary beekeepers so they could essentially become "deputized extension apiculturists" and assist with the overwhelming task of providing experienced and educated advice to other beekeepers.

Dr. Ambrose brought the concept and the MBP to North Carolina in 1982. The first NC program was a partnership of NC Cooperative Extension, NCDA&CS Apiary Services and NCSBA, and was administered by Cooperative Extension at NCSU. State budget cutbacks a dozen years ago made it impossible for NCSU to continue running the program in the high-quality manner that made it the envy of other state programs, so NCSBA stepped up in 2012 to take over ownership and day-to-day operations. Since then, it has grown in numbers and reach across the state, continually seeking to improve and to uphold the legacy that it represents.

Under NCSBA's leadership, there have been many MBP Committee chairs and members who have volunteered countless hours toward the program. Most recent was Doug Galloway and his dedicated committee. Due to various health and family-needs reasons, Doug and key team members Chris Apple and Cynthia Speed were compelled to pass on the baton this past fall. The fact that their departures coincided was very unfortunate but unavoidable. Their contributions to the MBP in the past few years have made it strong and resilient, in excellent shape to be entrusted to the next group of caretakers.

Moving forward, Robert Smith and Randall Austin will co-chair the MBP Committee, assisted by Greg Wolgemuth. All three have served NCSBA as well as the MBP for many years in various leadership capacities. However, these three are only a tiny part of the Master Beekeeper Program. The MBP is really conducted by a huge team that includes the chapter volunteers who organize Bee Schools and the chapter MBP Coordinators who administer and record results of Certified tests. But by far the most important members of the Master Beekeeper Program are the hundreds of dedicated beekeepers who have studied hard, demonstrated their competence and have shown a willingness to share with and teach others. These are the fruit of the scheme Dr. Morse implemented 50-ish years ago and are the reason for its existence.



Randall Austin MBP Co-Chair



Robert Smith MBP Co-Chair

Greg Wolgemuth MBP

The NCSBA MBP program isn't like MENSA, where we keep out all but the smartest nerds. Yes, we want our Bee Ambassadors to be competent and share "the right stuff" - that's why we emphasize education and pursuit of new experiences. But the ultimate goal is sharing with others, and that is how we must be judged. The smartest person in the world isn't worth a plug nickel if he or she keeps that information to themselves. In light of that, we must never think that the term "Master" in Master Beekeeper means "one who knows everything" or "one who is in control"; those concepts are absurd in beekeeping! Instead "Master" should be thought of with the general definition of the German word "Meister" or "teacher", as in "headmaster" of a school. It is our sharing that defines us. If you aren't part of us yet, please join! To learn more, see: https://www.ncbeekeepers.org/programs/mbp

NC Bee Buzz - Spring 2022

Wolfpack's Waggle: Successful Move to a New (But Temporary) Field Lab by Dr. David Tarpy NC State Extension Apiculturist



Just before winter break, we finally

and successfully moved to a new home, thanks to many beekeepers from Wake, Five County, Franklin, and other local clubs who graciously donated their time.

If you recall, our field research has been conducted at the Lake Wheeler Honey Bee Research Facility off Inwood Drive for the last 18 years. The structure was a former private residence that was purchased by the university so that condos or McMansions weren't constructed in and amongst the rest of the research farm. In the fall of 2020, that structure was partially condemned by the fire marshal for several structural, health, and safety violations, and thus we were working out of the "non-condemned" half ever since.



The new temporary Field Lab

Thankfully, our administration and the Superintendent of the Lake Wheeler Farm were gracious enough to provide an alternative building before we were completely barred from the old one. A former hay barn, it was renovated and used as a retreat site, first for the Dix hospital then for the College of Agriculture & Life Sciences after it was donated several decades ago. It is located on the completely opposite side of the research farm off Mid Pines Road, tucked away behind some horticulture research plots and adjacent to two ponds. The structure was emptied, cleaned out, and cleaned up and so that we could move all our lab equipment, incubators, freezers, microscopes, and other scientific infrastructure. In early December, we hired a moving company to move all the heavy machinery and equipment, but that still left our hive equipment since there is no such storage space at the new Dix facility.



Thank you moving crew!

Thanks to several beekeepers getting the word out, we had many volunteers come out for one day to help us move our hive equipment, much of which was stored in the basement of the old building off Inwood Drive. Since the Dix facility does not have anywhere to store hive equipment, we had to improvise. Luckily, our Department of Applied Ecology has some research buildings just down Inwood Drive where they study aquiculture (farming of fish), one of which has been sitting unused for a couple of years. We formed a bucket brigade of beekeepers to move equipment out of the basement and the old facility, onto trailers and pickups, and into the "Fish Barn" for storage. Many hands make light work, and we were all but done by lunch. We can't thank those who helped us with this move enough!

While our on-campus facilities remain the same, our new field operation will have live bees at our original apiary (and several additional out-yards), our stored hive equipment at the Fish Barn, and our research laboratory at the Dix facility. We will also be paying \$700 per month in "rent" for the new Dix facility to cover utilities, internet, and janitorial services. But this too should be temporary, since the NCSBA's efforts in raising funds for a new permanent apiculture research facility was recently passed in the NC State budget, so plans are in the works to create a new building that we hope will be the envy of all other honey bee programs. We are extremely excited and thankful for this opportunity, and there will be much more to come as that eventuality develops. In the meantime, we will make the best of our current situation and continue our extension and research efforts in the Dix facility, and we are grateful to all those who helped make it happen.



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PHOTO HIGHLIGHTS FROM 2021 NCSBA ANNUAL MEETING







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How it Happened: Funding for a New Bee Lab: \$4 Million

by: Charles Heatherly, Chair NCSBA Legislative Committee

The Apicultural Program at NC State

University is about to get a new home for its field research efforts. That is the result of two lines in the 800-page, new state budget which appropriates \$4 million for the facility. Planning has already begun for the project, which is estimated to take a minimum of two years to build.



The old NCSU Bee Lab

It was not an easy effort. Six years ago, the leadership of the North Carolina State Beekeepers Association became alarmed after NCSU Apiculturist Dr. David Tarpy mentioned that an inspector from the North Carolina Fire Marshall's office visited the facility and gave it a failing report. The roof sagged and leaked. There was a big crack in a foundation wall. These were major deficiencies, the inspector noted; however, he ended his report with just a warning.



Condemned!

At the 2015 Spring Meeting in New Bern, the NCSBA Full Assembly passed resolution in support of replacement of the existing lab, and made this a priority for the Association.

Following that meeting, a delegation led by then NCSBA President Rick Coor and several prior NCSBA presidents met with Dr. Richard Linton, Dean of the NCSU College of Agriculture and Life Sciences and



Dr. Linton agreed that the need was great but noted that as result of recent budget cuts by the General Assembly, he did not see much hope for any relief soon. He suggested a first step of conducting a "Scoping Study" that would quantify the need for such a new facility and then determine what it might look like and most important, determine the cost.

We accepted the challenge and funded such a project at a cost of nearly \$10,000. A local architectural firm was hired to design a new lab that would adequately serve for the next fifty years.

With that plan in hand, we began meeting with various members of the General Assembly to make them aware of the urgent need to build a new field laboratory for the NCSU Apiculture Program.

In Asheville, Janet Peterson and Scott Davis visited Rep. Chuck McGrady to enlist his support. After a visit to the lab, he was convinced.



Rep. Charles Graham

Rep. Charles Graham of Robeson County visited the lab and set up a meeting, with the help of Rep. Jimmy Dixon of Duplin County, with the Joint House Senate Agriculture Committee. Meeting in Asheboro at the State Zoo, the Committee was supportive.

Rep. Chuck McGrady visits the lab and is impressed. He attempts to put \$2 million in the House Budget in (FY 19-20) but is outgunned by competing interests.



Jennifer Keller, Rep. Chuck McGrady and Past NCSBA President Rick Coor

Sen. Brent Jackson of Duplin County tours the lab and is impressed by an exhibit of foods pollinated by honey bees, especially a watermelon grown in Mexico. He is the largest grower of melons in the southeastern USA.

During this phase of our support of a new bee lab, the University was not onboard. The Chancellor instructed University lobbyists to work against it, which they did ineffectively.



Charles Heatherly with Sen. Brent Jackson and two of his aides

When the 2019-20 House budget goes to the Senate, Sen. Jackson inserts a \$2 million appropriation for the bee lab in the budget which passes the legislature but is vetoed by the Governor.

Meanwhile, the veteran Fire Marshall inspector retired. His replacement was not so tolerant of the lab's shortcomings. When he saw the deficiencies that had been noted earlier but not corrected, he condemned the building and marked much of it as unsafe and off limits for the staff there.

The situation was now urgent, and that message was quickly conveyed to our friends in the legislature.

In 2021 it the Senate's turn to prepare the budget. Sen. Jackson puts \$4 million in the budget for the bee lab. It stayed in the House version and remained in the much-delayed conference report. Four months after the July 1 deadline for passage of a new budget, the Governor signed it into law, after he learns there were not enough votes from his party to sustain a veto in either the House or Senate.

We are indebted to the entire General Assembly for their overwhelming passage of the budget that included bee lab funding. However, two members deserve special recognition for their early support and persistence in seeing the job done. They are former Representative Chuck McGrady, now retired, and Senator Brent Jackson, who continues to serve in a top leadership position in the North Carolina Senate.



Proposed Bee Lab and Floor Plan

After a persistent 6-year effort, we now have funding for a new bee lab at NCSU. Many of our member beekeepers contributed to this effort by contacting their own legislative representatives and making the case for funding a new bee lab.

Members of the NCSBA Legislative Committee deserve special recognition. They are, in addition to me: Doug Vinson, Rick Coor, Paul Newbold, Greg Clements, Danny Jaynes, Janet Peterson, Scott Davis, Kenny Jones, Paul Madren, Carrie Donley and Beverly Keen.

We have just learned that NCSU will advertise for bids to design the lab in March. It is not a done deal yet, but we are closer than ever before.

NC Bee Buzz - Spring 2022



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The Surry County Beekeepers

Association and North Carolina Cooperative Extension, Surry County Center was awarded a grant by the NC Pesticide Board during their March meeting in 2020. That seems like a lifetime ago! The reason for the grant was to see if we could find a better way of enclosing bees during a pesticide application rather than closing the entrance or using wet burlap if moving the hives were not an option.



Surry County Beekeepers Association

A Charter Chapter of the NC State Beekeepers Association

Problem: Surry County Beekeepers along with N.C. Cooperative Extension, Surry County Center, Dr. David Tarpy, and NC Apiary Inspectors Don Hopkins, Louis Cauble, and Bridget Gross calibrated the project design. First, what is the problem? During a pesticide application we as beekeepers have only one of two options, move our bees or close the bees up with either wet burlap or use hardware cloth on the entrance. Closing the bees will cause undue stress and is known to kill colonies. The problem is the stress due to heat buildup within the hive, due to overcrowding during the heat of the day, without the option of relieving that stress by foraging or bearding. The problem is how to keep the bees confined to the hive location while still relieving the stress.

Plan: Use 30 colonies of bees divided into three different study groups. The first 10 colonies would be free flying, the next 10 would have #8 hardware cloth used to enclose the bees, the last 10 would have a small mesh tent placed over the top. The study groups all started from packages with new woodenware and foundation. The yard was set up in early spring of 2020 just as the world as we knew it was falling apart.



Starting test adding tents and entrance closures

Growing Pains: Everything that could have gone wrong did in 2020. Let's just say along with a pandemic there were some growing pains. The bees themselves did well in the spring and summer. They did so well, most of them swarmed in June and July. This put most of the colonies in a queen event when the study was supposed to have been started in early June. The decision was made to get the bees through the winter and start again in the spring of 2021. Again, those growing pains showed back up and rarely does a plan go as you want it to. During winter, we lost all but five of the colonies. This was a heartbreak and a point where we all just wanted to throw our hands up and walk away, but for this group of beekeepers that was not an option. We had an obligation that we were going to meet. It should go without saying, but I will say it anyway, 2020 was a learning experience for us all. On paper it was easy. There were no problems, everything went like it was supposed to. In practice, not so much.



Bees gathered in the upper corner trying to get out

2021 Problem Solving: Starting in early spring, we spent many hours meeting about how to overcome the problems we had encountered in 2020. We discussed how to overcome the swarming problem and how to keep better records on each hive so everyone would be able to understand. We devised a system to use color thumb tacks. Five different color thumb tacks were used to identify the strength of each colony. Black thumb tacks were used to identify deadouts, red was used for weak, yellow was used for just right, green was used for strong, and blue was used for queenless. The plan was to be able to inspect the yard then use the color code to identify the strong and weak colonies. We could use the strong to boost the weak, doing two things at one time: reducing strength in the ones that were most to likely swarm and boosting the ones that were struggling, resulting in all vellow colonies right where they needed to be. It worked; our plan finally worked. It worked so well, in fact, when all the colonies where equalized we had made up five, 5-frame nucs that were moved to another yard.

Do what we set out to do: During the first of June we started the test. Three study groups of equal strength were

finally started. We had finally started! It will all be over soon! Five-day test, six inspections and we are done! So, I thought! Have you ever inspected double-deep hives from top to bottom, taking weights, temperatures, looking at each frame giving the percent of bees, brood, honey, and pollen, did you see the queen, all ages of brood found, did you do a mite sample, and hive beetles seen? Well, it really was not that bad until we got to August. It was hot, humid, bees were not happy, beekeepers were not happy, and robbing took place. It took about 25 minutes from start to finish to do an inspection per hive. That was over 12 hours for each inspection and over 84 hours total for no less than three people. This included an inspector, data recorder, and someone prepping hives and closing them up. Lots of work, but there is no way this could have been done without an outstanding group of people.



Dead bees after five days in tent

Findings: There is no better feeling than to spend two years doing something to hear it was legit. All the data look good. There was no bias in the original starting conditions of the colonies among the three groups. During the 5-day enclosure period, the temperatures of the hives varied but not in the expected way. We predicted that the screened colonies would have the highest temperatures (since they couldn't ventilate very well) and the open colonies would have the lowest (because they could ventilate normally) with the tented in between, but the tented colonies actually had the lowest temperatures during the 5-day enclosure period (likely because of shading during the day). When we look at the resultant colony strength (adult bee populations and frames of brood), all three groups saw a steady decrease in both for the 12 weeks following the enclosure period (since they are naturally brood down during late summer). Interestingly, those in tented colonies had higher average strength than the other two groups including the "open" negative control. This suggests that tenting can be a better option than doing nothing (keeping the hives open) or screening.

Now, with that being said, almost every study does not answer every question, if any at all, and most of the time you come out with more questions than answers and this study was no exception. At the beginning, we all thought that at least half of the screened group would have been lost to

overheating. I know personally that I have moved several hives and forgot to open one of them for 24 hours and return to find a dead hive. No fun. So, with that in mind, the prediction was "at least half would be lost". Well, that was not the case. We only lost two and that was not until several weeks after the test. We also lost two of the tented hives and one open hive. Again, not until several weeks after test. One would think that temperatures got too high, but that would not be the case. In all five hives that where lost, the temperatures where below (rather than above) average.



SCBA Porter all smiles taking a break

Talk about a head scratcher we have here! To date, there is no explanation for the drop in temperatures. However, the thought is that the tent enclosure and closed entrance did so well during the study due to both having food and water. During the test, a double-sided feeder was placed on each hive with syrup and water put in each. The thinking is that this was used to cool the hive to help to reduce heat stress. Now, moving is always better than closing hives for any length of time, and under no circumstance would I enclose my hives for five days, two at the most. If you choose to close your hive you should also provide food and water for the entire duration.



Joanna Radford, NC Cooperative Extension -Surry County Center, recording data

Lessons Learned: Research takes a lot of time, patience, money, and the willingness to fail. We have already talked about the time that was put into the study; however, that did not take into consideration the time spent inspecting and managing before the study started, feeding, treating for mites, and doing mite samples. It was a lot of time! It does take a lot of patience because things don't always go the way you would like for them to go. For example, 2020 was supposed to be the year, but here we are one year later doing the same thing over again. Money- it takes a lot of it! This project came in just short of \$22,000.00. To me and most everyone else, that is a lot of money and from what I understand very cheap for most bee research projects. And the willingness to fail. Well, not really fail but not get an answer or willing to except an outcome that you were not looking for. This does not mean you have failed but still have some work to do.

Thanks: The Surry County Beekeepers would like to thank the Pesticide Environmental Trust Fund, N.C. Cooperative Extension, Surry County Center, Dr. David Tarpy, and the NC Apiary Inspectors. There is no way this could have happened without you. We thank you for your time and willingness to pass along your knowledge. It was truly a pleasure to have worked with you all.

Most Important: As a bee club this experience was something that will last a lifetime. We learned so much. We



Surry County Beekeepers and Apiary Inspectors that worked on the project

took thirty complete hive setups to teach how to put hives together during our bee school. Participants got the chance to put together as many frames as they wanted to, given there were only 600 to do. We learned how to reduce swarming and how to recognize when a colony needs feed, but not too much or they will fill the brood nest and swarm, and how the brood tells the whole story. To be honest the project was about finding out how to better protect the bees during a pesticide application, and there were some answers to that question, but as the Surry County Beekeepers **we learned so much more!**



Volunteers Needed at NC Zoo Honey Bee Exhibit

by: Phil Uptmor Zoo Coordinator

The NC Zoo Honey Bee Garden

exhibit was opened in 2009 by a cooperative effort of the NC Zoo Park, NC Zoological Society, North Carolina State Beekeepers Association (NCSBA), NC Farm Bureau, and Syngenta to educate the public about our beloved honey bee. Beekeepers had been conducting informal demonstrations at the NC Zoo for many years, but it wasn't until 1994 when three members of NCSBA – Dr. John Ambrose, Bill Sheppard, and then NCSBA president Irvin Rackley – discussed the possibility of partnering with the NC Zoo to provide an observation hive and beekeeper volunteers on weekends in a more systematic way. This beautiful exhibit is the result of many volunteer hours and a great deal of fundraising.

The success and popularity of the Honey Bee Garden exhibit has been very good the past 12 years. Almost 200 beekeepers have volunteered their time and services contributing more than 25,000 hours.The exhibit is very popular with guests. Children enjoy the challenge of finding the queen in the observation hive.There are many stories shared by adults about how their grandfathers or family members kept honey bees and visiting the exhibit at the Zoo brings back fond memories. Many parents pushing double strollers in the summer are eager to learn more about our state insect while appreciating the shade and light breeze from the ceiling fans in the exhibit.

There are minimum requirements to serve as a Zoo volunteer and additional requirements specific for beekeeper volunteers. Volunteers must maintain an active NCSBA membership, be able to talk to guests about honey bees, have a basic understanding of pollinators in general, speak about the importance of pollinator plants, and be able to explain the activity seen in the observation hive. There are several benefits to beekeeper volunteers, too. The Zoo allows beekeepers to sell their honey with specific conditions and many guests enjoy buying local North Carolina honey and supporting NC beekeepers. Many beekeepers have volunteered at the Zoo to gain service credits for their Journeyman or Master level beekeeper certifications for the NCSBA Master Beekeeper Program. However, many of these beekeepers return even after their service credits were fulfilled because of the satisfaction and enjoyment volunteering in the Honey Bee Garden brought them.

North Carolina



The Zoo resumed volunteer activities in June of 2021 after being on hold because of the pandemic. Resuming volunteer services on site came with specific conditions and we were very fortunate to have a core group of volunteers serve 358 hours. Looking forward in 2022, the Zoo needs to ensure the exhibit has weekend volunteer coverage when guest attendance is the greatest. When the Zoo welcomed volunteers back onsite after being closed, many beekeeper volunteers did not return, and we need many more to keep the exhibit staffed.

Orientation and training will be offered in early spring of 2022. If you are interested, please complete an online form at:

https://www.nczoo.org/contact/volunteer_application You will be notified of training opportunities when they become available.





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BeeKeeper or BeeHaver: Which One Do You Want To Be?

by: Lane Kreitlow NC Master Craftsman Beekeeper

Spring is approaching and bee fever

abounds! Fortunately, there is no shortage of beekeeping schools and workshops around the state, catering to the influx of new beekeepers eager to jump on the *beeandwagon*. To all you *newbees*, as you become more involved in beekeeping, you will often hear veteran beekeepers lecturing about the importance of being a bee*keeper* rather than a bee*haver*. What exactly does that mean? Isn't merely having bees enough to qualify you as a bona fide beekeeper? You will quickly learn that it is not. Which one do you want to be?

Beekeeper:

•Spends months contemplating and preparing before purchasing first colonies

Joins NCSBA and a local chapter

•Attends a beekeeping school and NCSBA chapter meetings prior to obtaining bees

•Talks with many different types of beekeepers to gather as much first-hand information as possible

•Gets to know their local apiary inspector and stores their number in their Contacts list

•Reads multiple books on beekeeping written by industry experts

•Finds a mentor from whom to seek advice when something unusual/bad happens to the bees

•When inspecting hives, wears full protective gear without concern for being shamed or teased by fellow beekeepers

·Knows how to properly light, use and store a smoker

•Conducts regular inspections throughout the season and applies any necessary management action

•After the honey flow, leaves enough honey for the bees, even if that means there is nothing left for the beekeeper to harvest

•Carefully goes through the checklist for preparing hives for winter as listed by regional experts

•Stresses about the time and/or expense of monitoring, managing, or treating for varroa mites, *but does it anyway*

•Comes out of winter with thriving colonies; looks forward to a fruitful honey harvest

•Bee fever has transformed into a lifelong love and appreciation for honey bees

Beehaver:

•On a dare after a few rounds at the local pub, purchases several full hives from a veteran beekeeper that happens to frequent the same pub

•Spends Tues evenings at said pub rather than at the local beekeeping chapter meeting

•Has never raised bees but ascribes to the attitude, *I can just pick up what I need to know along the way*

•Has a *Live in the Moment* philosophy that spills over into their style of bee management

·Often heard flippantly boasting, "How hard can it be?"

•Plops the hives in chosen spot with no forethought; forgets about them until honey harvest, without checking the queen or performing a wellness inspection

·Is an ardent displayer of beekeeping machismo; often teases fellow beekeepers who choose to wear full protective gear

•Gets all their beekeeping tips by following some guy in Montana on YouTube; fails to consider that management practices are largely regional

•Burns truck seat when they haphazardly toss a hot smoker onto the passenger seat

•Harvests every drop of honey, excited about the windfall it will yield; forgets or doesn't care about the bees' needs and the impending nectar dearth

•When fall arrives, if the bees are still alive, figures, the bees are wild creatures and therefore should be able to fend for themselves going into winter

•Foregoes all mite management strategies under the rationale that natural selection will breed mite-resistant bees; learns the hard way that replacing bees is far more expensive than simply treating or managing for mites in the first place.

•Comes out of winter with no live colonies, a sunken morale, and no real hope for succeeding at beekeeping

·Laments the money spent and decides beekeeping is not for them after all \sim



Bee a beekeeper, not a beehaver!

NC Bee Buzz - Spring 2022

Congratulations, Eric Talley!

Last September the American Beekeeping Federation put out a call for beekeepers to submit practical beekeeping ideas that are relevant to other beekeepers. There would be only one award nationwide, and it comes with a \$2000.00 check. Eric Talley, NC Master Craftsman from Hubert NC, submitted two paragraphs explaining his pollen patty feeder and how to make them for very little expense. The pollen patty feeder allows a beekeeper to feed pollen patties without fear of small hive beetles infesting the patties.



Eric was notified in mid-November that he had won the award! The American Bee Journal has published an article in the January 2022 issue, page's 100-101 about Eric's idea. The article is due to be published in the American Beekeeping Federation Quarterly magazine as well.





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Main Stage Speakers

Stephen Repasky: Commercial beekeeper, speaker, author and consultant from Pittsburgh, PA. EAS Certified Master Beekeeper, President of the Pennsylvania State Beekeepers Association, author of "Swarm Essentials" (Wicwas Press, 2014).

No.



Dr. Brock Harpur: Assistant Professor of Entomology at Purdue University. Mite-biting genetics and genetic tracing of bees for the advancement of honey bee breeding.





Dr. Margarita Lopez-Uribe: Lorenzo L. Langstroth Early Career Professor, Assistant Professor of Entomology at Penn State University. Feral bees projects for bee breeding.





Dr. Robyn Underwood: Assistant Research Professor of Entomology Penn State Extension. Comb project on the comparison of chemical free beekeeping vs conventional beekeeping. Q&A forum with some NC beekeepers who treat and some that do not treat.

Mark Gingrich: Owner/operator of Gingrich Apiaries, 2nd Vice President of Pennsylvania State Beekeepers Association. Purdue Leg chewing stock in a commercial apiary, development of queen/bee breeding cooperative, and ongoing grant research involved with Purdue stock.

Additional speakers and workshop presenters TBA Registration Open - Visit www.ncbeekeepers.org



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Photo: Greg Sides