

Orange County Beekeepers Association

Meeting Minutes

September 8, 2022

Tim Struttman, OCBA President, opened the meeting and welcomed everyone for the September meeting. The meeting was attended by approximately 35 members (15 via Zoom, and approximately 20 in-person at the Orange County Extension Office in Hillsborough).

Nancy Oglesby, OCBA Vice President, introduced our speaker (our first in-person speaker since Spring 2020!), **Dr. Elsa Youngsteadt**, of the Youngsteadt Urban Ecology Lab at NCSU. The Urban Ecology Lab works at the interface of urbanization and climate change. Their goal is to understand and manage ecological responses to modern stressors, such as changes in climate, air quality, and habitat structure. Focal study systems include plant-insect interactions. Approaches incorporate field studies, historical datasets, and manipulative experiments in the lab and field.

Presentation:

“Wild Bees in the City: Challenges and Opportunities” -- Elsa Youngsteadt

Dr. Youngsteadt started her presentation with an overview of wild bee representation in North Carolina. Most NC native bees are solitary (60%), with social bees accounting for only 16% of species (although none come close to the degree of sociality that honey bees have). Interestingly, 24% of NC native bees are parasitic, neither collecting their own pollen nor constructing their own nests to raise brood, instead, using the provisions and nesting cavities of other bee species! Of the native NC bees, 74% are ground nesters and 26% are cavity nesters. Dietary characteristics range from specialists (in some cases, foraging on a single plant species) to generalists. This diversity of traits is essential for effective pollination.

As urbanization increases (urbanization in the southeast USA was 7.4% in 2009 and is estimated to be 17.8% by 2060), it is imperative to study the effects this has on bees. Causes of bee decline such as habitat loss, parasites, pathogens, pesticides, nutrition, and climate can be more exaggerated in cities and urban areas. While bee abundance and diversity can be high in cities overall, there are declines in the most urbanized places within cities.

One of Dr. Youngsteadt’s research topics focuses on the heat tolerance of different bee species. In an urban environment, subtle differences in local temperature can lead to pockets of bee species populations. In field experiments, her lab found that some bee species (e.g. bumblebees) are less heat tolerant than others. Next, they correlated their field data with lab experiments that measured the heat tolerance of various bee species. From their studies they could conclude that at heat extremes of real-world conditions, bumblebee body temperature approaches the lethal limit. Therefore, the bee must balance overheating/death with spending more energy on cooling, reducing pollen foraging energy expenditures, etc. Interestingly, honey bees appear to be more susceptible to dehydration, rather than heat (data from colleagues in Toledo, Ohio). One potential explanation is that honey bees are very adept at evaporative cooling, however, this makes water availability the limiting factor.

Dr. Youngstead's lab is now collaborating with a group of researchers across the US to study urban bees in cities located in different climate zones (Denver, Phoenix, Detroit, Raleigh, and Atlanta, to start). With a goal of cataloguing bee health, pollination, and surrounding habitat characteristics, they hope to get a better understanding of where in the US bee health and pollination are at the most risk from warming, and which bee species are at the greatest risk. This information will be essential for prioritizing conservation strategies and to determine the consequences for pollination.

The presentation concluded with a hopeful message—there are things we can do in our own yards that make a difference! To that end, Dr. Youngstead and collaborators are working on a garden design/planner application for native NC pollinator friendly plants. More details can be found here: <http://youngsteadtlab.org/index.php/extension/pollinator-garden-planner/>

For more information on the Youngsteadt lab's research, visit the lab website: <http://youngsteadtlab.org/>

Club Business:

Bee Buddy Program

Tim reminded everyone about the Bee Buddy Program and encouraged anyone looking for an informal way to collaborate with another beekeeper to compare notes with etc, to reach out—either by posting a message to the listserv or by asking around at the monthly meetings.

Hillsborough Holiday Parade

Janet Staats provided an update on this event, which will be held December 4th starting at 4 pm. A location has been found to build the float, and a number of people have already volunteered to help with construction of the float. There is still a need for the following specific tasks:

- Looking for an artist who could draw a rendering/plan of the float which can be used as an aid during construction.
- Need a trailer that can be used for ~ 6 weeks.

OCBA Educational Video Project

Carrie Donley spoke about the video project that OCBA started last year. The goal is to create high quality educational videos that answer common questions that new beekeepers have, with the target audience being beekeepers in central NC. The educational video committee is looking for volunteers to tackle additional topics. People with video, photography, and video editing skills are especially encouraged to volunteer, but no experience is necessary!

Master Beekeeper Program Testing

Randall Austin announced that Certified, Journeyman, and Master level testing will be available following the NCSU BEES Academy at 3:30 September 17th in Pittsboro, and at a testing event hosted by the Granville County Beekeepers Association at 3:00 on October 2nd in Oxford. Email Randall to sign up.

Endowed Professorship in Apiculture at NCSU

Randall provided the group with an overview of the NCSBA's campaign to raise money to help create an Endowed Professorship in Apiculture at NCSU. An endowment would ensure that NCSU will continue to fund apiculture research in the future. The goal is to raise \$1 million (NCSU will contribute the balance once two-thirds of the required \$1 million has been secured). Contributions can be made individually directly to the school (tax deductible), or through NCSBA's campaign (not tax deductible). The OCBA will be making Chapter Contributions (details to be discussed at the next Board of Directors meeting). Corporate donors will also be needed, therefore, a strong early showing of contribution progress will be needed. Randall will send more information to the listserv. For more information on this campaign, see: <https://www.ncbeekeepers.org/ncsu-endowed-professorship>.

State Fair Volunteer Opportunities

There are 2 separate opportunities for OCBA members to volunteer at this year's State Fair:

1. State Fair NC Agriculture Bee Information Booth (this is the booth that has the on-site observation hive).
2. The NCSBA Honey Sales Booth –while OCBA is NOT signing up for a “day”, members are welcome to sign up for any available spots on an individual basis.

Randall sent out an email to the listserv with more information and links to sign up. He also encouraged members to enter the Honey Competition. More information can be found at:

<http://ncstatefair.org/2022/Competitions/Entering/BeesandHoneyCompetition.htm>

Bee School 2023

Randall made a brief announcement regarding the 2023 Bee School, which is slated to run January 17th through March 21st (on Tuesday evenings). Registration is not open online yet, but probably will be in October. As last year, it will again be a hybrid zoom/in-person format. Carrie Donley will be co-director again in 2023.

Outreach

Dawn Rogers, Community Outreach Director, announced that there are currently no requests for upcoming presentations.

Door Prizes

1. T-shirt: (in person winner)
2. Honeycomb earrings/necklace: (online) Erika Wittchen
3. 12 honey bottles/caps: (in-person) Vikki Robertson

Next Month's Speaker

The invited speaker on October 13th 2022 will be Jon Zawislak from the University of Arkansas (via Zoom). He will be presenting on pheromones and honey bee communication.

Erika Wittchen
OCBA Secretary