

ORANGE CO

Beekeepers



March Meetings

Don Hopkins, one of our inspectors, was our speaker for our March Meeting as well as our second to last bee class. Over those two Thursdays, he spoke to us about pests and diseases that affect honey bees.

The first Thursday, he concentrated almost exclusively on Varroa Mites, our number one problem in the hive. Varroa Mites have two life stages. One is the phoretic stage when a female mite will attach to a drone or a nurse bee. When this mated female smells a larvae, especially drone larvae, about to be capped over, she will drop into the cell. In the cell she will lay one male egg and many female eggs. In the capped cell the mite feed on the bee larvae. As well as weakening the larvae by stealing its hemalin, they are vectors for many bee diseases especially deformed wing virus.

The key to taking care of mites is careful monitoring. Numbers of mites can be determined by three different methods: sticky boards, sugar shake test, and observing drone brood. Mite numbers increase in line with growing brood numbers but in late summer as brood falls off, the mite numbers continue to increase and can overwhelm a colony. When testing for mites, look for threshold numbers, these will change depending on the time of year.

Mites can be treated by a number of combined methods, including chemical treatments, break in the brood cycle, drone brood trapping and the sugar shake method. Almost any colony will have some level of Varroa Mites, so it is important to stay on top of their numbers.

Highlights



Treasurer's update

Dick Merritt gave us a current update on OCBA's treasury account. As of March 11th we have \$2500 in our account.

Membership

Dick also announced our current membership status. We have 56 paid up members and out of those, 42 are also members of the NCSBA.

Field Days

We will be holding three field days for our bee students:

Wednesday March 17th at 12 at Busy Bee

Saturday March 20th at 11:30 at Busy Bee

Saturday March 27 at 9:30 at Cedar Grove Bee Works

Call for Programs

Our vice-president, Gayle Young is asking for programs for upcoming meetings. If you would like to share your experiences with bee keeping or have an idea for a meeting, please contact Gayle at ngayle.young@verizon.net

Varroa and other Pests and Diseases

Don Hopkins continued his talk on pests at our Thursday meeting. He began by reviewing Varroa Mites. Then he spoke on American Foul Brood. This highly contagious bacteria once decimated American hives. Since the introduction of bee inspectors in NC, its numbers have fallen to less than 3% occurrence. It is still important to know what to look for. AFB has a distinctive bad odor, and can be spotted by a poor brood pattern, with concave cappings, stringing behavior of dissolved larvae and scale formed on lower edge of cells where affected brood has dried out. This is where the spores of the AFB bacteria can be found and spread.

Since the spores are extremely small and a single scale can contain over 2.5 billion spores, it is easy to spread the critical amount, 15-30 spores, to other hives.

Don went on to discuss other pests and diseases including Chalkbrood, which appears as pasty dry white rice cells. They will rattle in the cells. Most often the bees will take care of this issue. If there is a problem, a break in brood will take care of the problem.

He discussed EFB, European Foul Brood, which is not as destructive as AFB and can be treated with Terramycin.

He spoke to us about pests that attack weakened hives, including Small Hive Beetle and Wax moths. A strong hive can handle both of these pests, but reducing the number of supers on a hive will reduce areas that the bees can't patrol. An entrance reducer can help exclude pests especially in the winter. Combining weakened hives can also prevent these pests.

Also discussed were Tracheal Mites, was a severe problem but now under control. There was a brief discussion of Nosema which had been identifiable by dysentery and is controlled by the antibiotic, Fumigillan.

Not a disease but still an issue, is laying workers. This can occur when a queen has failed or is failing and some of the workers begin laying multiple eggs in cells. Since unmated all eggs will produce drones and the colony will quickly collapse.



Report from Spring Meeting

Highlights

The NCSBA's spring meeting was a great success. From Orange county, Randall Austin, Gail Young, John Wallace, Fred and Tony Fesel, Jack Tapp, Rey Aponte, Dick Merritt, Geneva and Lewis attended. Also there were Don Hopkins, and Will Hicks our state inspectors with Glen Hackney from the NC Bee Lab plus the crew from State including Dr. Tarpy, Jen Keller, and the latest member of that team, Juliana Rangel.

After the usual meeting announcements,

Dr. Tarpy welcomed us and invited everyone to come and show off the NCSBA to the world at the EAS meeting this summer in Boone. He then gave some initial findings in his recent drone study which points to a problem with the viability of the sperm that are mated to the queens coming from commercial queen breeders.

Then we had a report on research on Small Hive Beetle

by Dr. Lilia deGuzman. One of her studies concerned the wide variance in developmental time in SHB. She found that SHB will develop much faster under warmer conditions. Related to this was information following seasonal population development which typically peaks in August. Her research is conducted out of Baton Rouge, LA, an area where SHB has been a large problem. She has also researched variance in bee strains ability to remove both live and dead beetles. Russians seem to be better at this than Italians. She has studied a variety of traps and lures.

She recommends outside traps in the spring using white pvc for the traps and hanging them under 46cm, and inside traps during the late summer.

Following this we were introduced to Dr. Juliana Rangel

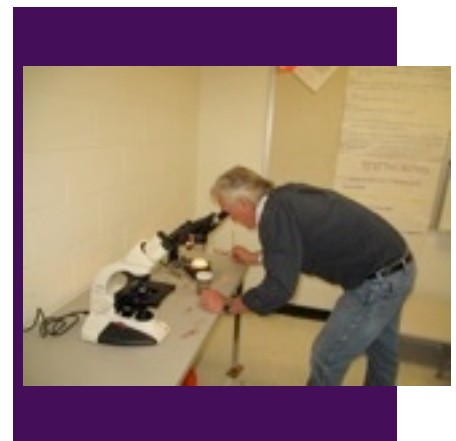
who is the newest addition to the research team at NC State where she is working on her postdoc. She shared her fascinating research at Cornell with Tom Seely involving bee behavior prior to and during swarming. According to this work, a few bees decide it is time to swarm and begin scouting for a new home a few days before the actual swarm. These same bees are responsible for the initial piping that prepares the bees for departure. They then are the first bees to switch to the buzz run signal which is then taken up by other bees who attempt to touch as many bees as possible to make them leave. Both of these signals work by vibration although they can be heard by the human ear. While the core group of signalers may begin an hour before departure, the actual leaving of the swarm can take only 10 to 18 minutes at which point there is much frenetic buzz running. Dr Rangel has some wonderful footage of this remarkable behavior which she will share with us at our June 10th meeting.

Following a short break the workshops began. They included an opportunity to learn about how diseases are analyzed in the lab, crisis management in the bee yard, ways to improve your chapter, and preparing honey for competition.

Our keynote speaker was Dr.

Lilia deGuzman who took us on a quick visit to her native Philippines and all over Asia to learn about Asian Honey Bees and the pests that affect them. The talk was fascinating and included cavity nesting bees similar in behavior to our *Apis mellifera* such as *Apis cerana*, and open nesting bees including the giant honey bees like *Apis dorsata* and the dwarf honeybees like *Apis florea*. It was amazing to see the single comb hives hanging from tree limbs and thick with bees especially those of *dorsata* which can be 1 to 3 meters across.

While they have many similar pests to *Apis mellifera*, the one that is being watched is *Tropiaelaps clareae*. It behaves much the same as *Varroa destructor* but outcompetes it in Asia despite its smaller size. Although it can only survive for 3 days outside of brood, it could pose a threat in the southern United States. Bees coming into the country from outside sources are being closely checked especially those from Australia which has colonies of *Apis cerana*, the native host of *Tropiaelaps*.

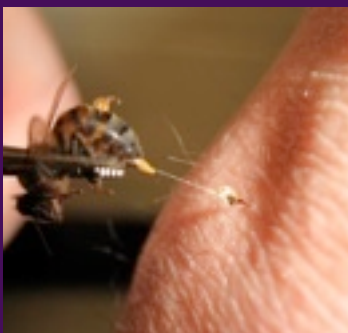


Saturday Conference continues...

Saturday morning began with some opening remarks and door prizes.

The first speaker was Frederique Keller, DOM, LAc who is the President of the American Apitherapy Society. She spoke to us on the many medical uses of bee products including bee venom. She spoke of the long history of bees and medicine as well as current research being conducted around the world.

She was followed by workshops which included Mead Making, Bee Venom Therapy, Cooking with Honey, Pros and Cons of Top Feeders and Bottom Boards, Bee Removal and Pesticide Training. The variety of workshops meant there was something for every type of beekeeper. Our very own, Jack Tapp, co-taught the workshop on Top Feeders and Bottom Boards.



After the workshops we saw our state inspectors rewarded for all the hard work they do keeping our bees safe and us well informed. Please be sure to congratulate them when you see them.

Then Will Hicks, NC State Inspector and President of the Eastern Apicultural Society, told us about the exciting events scheduled for the EAS summer meeting in Boone.

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The esteemed John Ambrose arranged to have a visit from Francoise Huber, the Swiss honey bee researcher from 1750. Despite his blindness, with the help of Francoise Burens, he was able to apply the scientific method to his observations of bees and learn a great deal about bees including queen mating behaviors.

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The meeting concluded with an Ask the Speakers Panel. The audience had the chance to discuss the information shared over the weekend.

Questions ranged for more information about trapping SHB to the new product due to be released soon for the treatment of Varroa, MiteAway Quickstrip. Of particular interest were the questions about CCD. The Symptoms of CCD are 1. a rapid drop in adult population, 2. good brood in cells, 3. low Varroa count, and 4. no dead bees. While North Carolina has suffered some losses in hives, no lost hives match all of these symptoms. At a national level, losses are expected to be worse this year. It is unclear if this mainly is confined to commercial beekeepers.

Order Your OCBA T-Shirt!



On this page you will find the colors available for long sleeve t-shirts. The long sleeves are \$16.50. The next page includes the short sleeve colors.



Ordering is easy. Simply tell me what you want! Pick your color, pick your size, choose long or short sleeves. Remember that the ink will always be white so the very light colors may not work so great. I'll place the order on March 25th. You can pick up and pay for your shirt at the April meeting. Simple! Email your order to lewis@hivebody.com

Short sleeve colors.

Short sleeve shirts are \$15.

