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the honeycomb

The Monthly Newsletter of the Mecklenburg County Beekeepers Association August 2017

President's Buzz

by Ed Moyers

Location, location, location . . . Or perhaps I should call this, "A Tale of Two Apiaries."

We have two apiaries that we maintain, one in our backyard, and the other at a friend's farm in Weddington, that are about 13 miles apart, as the bee flies. One's inclination is to think that they are in the same geographic and weather region, so nectar and pollen flows should be similar. Also, pest problems should be similar, too . . . right?

Actually, that's not the fact. As we've discovered over the last few years, they produce different honeys, struggle with different pests, and have different nutritional issues. (The one commonality they seem to share is a desire to "swarm, baby, swarm!")

In the Charlotte area, we teach beekeepers that in a "typical year", they can count on a honey flow from roughly April 1st to June 30th, give or take a couple of weeks. And that has proven to be true for our bees in the back-yard.

Not so for our Weddington hives. After three years of honey production, with different weather conditions each year, we've finally come to realize that after a strong early spring flow, the honey flow grinds to a halt around mid-May. We'll leave the supers on until around the end of June, but the amount of honey produced between mid-May and the end of June is zero, or very near that.

Another difference we see is available nutrition at the two sites from mid-Summer to late Fall. Most years, the bees in our backyard are able to get through the summer and into the fall with no feeding. (We typically do feed heavy sugar water in the mid- to late Fall to help them prepare adequate food stores for the winter.) This is in spite of the fact that there are a lot of backyard beekeepers around our home whose bees share resources with our bees.

Not so at the farm. If hives are lacking significant honey and pollen stores,

August's Meeting

August 17
7 PM

Mouzon United Methodist Church
3100 Selwyn Avenue
Charlotte, NC

Guest Speaker will be George McAllister talking about the Many Uses of the Queen Castle

Refreshments provided by Teresa Hedin

I have to start feeding them in July, and continue, off and on, until closing them up for the winter. One year, I even had to feed them small amounts of pollen substitute.

There are also differences with pests. But here, the Weddington location is the clear winner, especially when it comes to hive beetles. Looking at this year, for example, both locations started out with a few hive beetles in some of the hives, with the beetles completely disappearing by mid-spring. But, as I always warn new beekeepers, hive beetles have a habit of making a comeback in the summer, and this year was no exception. But what a difference between the two locations!

At the farm, hive beetle numbers have been low, with a couple of hives showing none. I have placed beetle traps in all of them as a precaution, but haven't found many dead beetles in them.

The story at home is different, and rather sad, with a couple of weaker hives succumbing to hive beetles, not only driving off the bees, but destroying the comb. In one hive, the bees courageously drove hundreds of beetles to their deaths in the Beetle Blasters over a period of just a couple of weeks, but still did not survive. Other hives have survived, but after just two weeks, we've had to replace their beetle traps.

This beetle trap was inserted into the hive just two weeks earlier, along with another one. Both were filled with hive beetles, and yet the hive was already rampant with beetle larvae. The surviving bees were transferred to another hive, but almost all of the frames slimed and had to be discarded.

Although the difference isn't quite as clear, we've seen similar differences with varroa mites, with higher average counts for the hives in our backyard than for the hives out in Weddington.

So, if you're having problems with your hives, and it seems to be the same problem, it may not be your bees, or even your beekeeping skills (although that's the first thing I check when I have problems). Get with your mentor, or another experienced beekeeper, and get them to evaluate your bees and your beekeeping practices. If those are fine, then maybe you should consider an alternate location . . .

Time to start prepping for winter . . .

It's the beginning of August, and winter seems a long way off. Yet, as counterintuitive as it may seem, it's time to start preparing your bees for winter. Winter preparations you should be thinking about include:

-Checking and treating your bees for varroa mites
-Consider requeening some of your hives
-Split really strong hives to increase your hives
-Combine weak hives

Hope to see all of you at this month's meeting!
Thanks!
Ed

Feeding and Removing Bees

by Andrew Thiessen

Feeding Follow-up

Last month I talked about how—as a rule—feeding is not a regular part of my beekeeping program. BUT! If anyone's bees are light (i.e. less than a full deep of capped honey at this time of year), I recommend laying on the feed non-stop until there is a deep box full of capped syrup. First reduce the entrance to about 1-2 bee width (I like to use aluminum tape as a simple entrance reducer.) to help prevent robbing, and keep those feeders full! Sure, go ahead and layout a solid hive management program to avoid the need to feed next year and beyond. But for now, keep the bees alive and fill those feeders!

Structural Bee Removal…From a Different Point of View

Something sticks in my craw about structural bee removal. Now before I get started, I have done and will likely continue to do a bunch of live colony removal work. I've spoken about it, taught others the trade, built specialized equipment to get the job done well and partnered with top-notch contractors to repair the damage and ensure honey bees do not return to the cavity. Each spring I have a pretty good business around it. But something about it just doesn't sit well with me.

First, insurance never covers the tremendous cost of safely removing a live honey bee colony from a building. And the cost is high! How much? By the time I've removed the bees and set them up in hive, the contractor cleans the cavity and rebuilds everything I tore apart, we're at a start ing point of $2,500. I've been part of removal jobs that went over $10,000—in both residential and commercial settings. Holy smokes! Now think about the fact that insurance NEVER covers this cost. Ever. That's cash out of pocket for the homeowner. And for what?

It's not like the bees in their wall or soffit is the last honey bee colony on earth or even close to it. Also, keep in mind that about a third of these colonies end up queenless or abscond from their new hive within a week or two. Finally, only about half of the bees that settle into their new hive live through the winter. So, in the end we're talking about a 33% survival rate of bees removed from structures. If the minimum cost for a removal job (including repair) is $2,500, we can figure that the value of the one that lived through the first winter is now $7,500…for one hive of bees!!!

I graft queens and make a bunch of nucs each spring. My cost to produce a nuc is about $14 plus a couple hours of time. About 60-70% of those live through the first winter. You see where I'm going here? Don't get me wrong. I'm very grateful for the business, and I've gotten some really good genetics from bees I've pulled out of walls. But it seems to me if we're looking at the big picture, it's much more productive and cheaper to just exterminate the structural cavity and focus on making up the loss through producing a nuc or two.

Wait a minute! You'd still have to clean up that mess inside the cavity. Sure. But a contractor or handyman can

do that very quickly and more efficiently once the bees have been exterminated, which would yield a much lower cost to the homeowner. Bear in mind, I typically work 6-8 hours on a live bee removal job by the time I get the bulk of the bees & comb into their new hive, return after dark to do the final removal of the bees that were flying during the daytime and then transport that hive to its new home in one of my bee yards. Finally, I have an hour or two of equipment cleaning. All of that is billable hours. A contractor could likely open the wall and cleanout the mess of an exterminated colony in 2 hours or less. And if he opens the cavity, he'll likely cause less damage than I would, which would yield a less costly repair bill…dead bees don't run & have to be chased three rafter bays over from their original colony location!

I'm simply asking us to take an objective look at it. I've removed bees from a wall where there was a beekeeper with hives in his backyard three houses away…and there was a marked queen heading up that in-wall colony. Guess where those bees almost certainly came from? I don't know how those two homeowners worked out that $4,000 bill, but I know how it should have been worked out!

As beekeepers in an urban environment, we bear a tremendous responsibility…on many fronts. Let's all just stew on these thoughts for a while and see what we come up with in our hearts.

What's Blooming in August: Goldenrod

by Matt Burgoon

Common Name: Goldenrod
Botanical Name: *Solidago spp.*
Plant Type: Rhizomatous perennial herb
Typical Bloom Period: July - October
Nectar Usefulness: medium
Pollen Usefulness: medium

Honey bee on goldenrod, photo courtesy of Bryan Fisher

In 2016, the biological journal Proceedings of the Royal Society published a study by Lewis Ziska which measured raw protein content of *Solidago canadensis* pollen and compared it to atmospheric concentrations of carbon dioxide. The study analyzed pollen samples collected and preserved at the Smithsonian from as long ago as 1842. At the same time, goldenrod was grown in controlled atmospheres with a range of carbon dioxide levels, and pollen from those was analyzed. The study established a correlation: more carbon dioxide in the atmosphere yields less raw protein in the pollen.

Goldenrod is a composite aster like sunflower and dandelion — each bloom is a cluster of many whole flowers. In Mecklenburg County, the more common species of goldenrod are *Solidago arguta*, *S. pinetorum*, *S. erecta*. All of these grow in clumps of stalks from shared rhizomes, or root material. *S. arguta* is tallest, growing to six feet or more. Leaves alternate up a the tall woody stem — this is called cauline leaf arrangement — and the yellow flowers are on a long raceme at the top.

Goldenrod spreads by the rhizomes – a clump of goldenrod is likely a set of clones. It also spreads seeds like a dandelion, flying on the wind with a pappus parachute. It can grow in diverse soils, is tolerant of soil contamination, and takes advantage of disruptions along roads or field edges. *S. canadensis* is studied and managed as an invasive weed in China.

Mecklenburg beekeepers look forward to the goldenrod bloom, as their honey bees are building back reserves lost in the dearth of a hot summer and storing nectar and pollen for the shorter days ahead. A colony foraging goldenrod might take on a distinctive odor — think "dirty socks." This honey may be harvested; many beekeepers report that the smell dissipates over time and goldenrod honey has a distinctive flavor.

Goldenrod sometimes gets blamed for an increase in allergic reactions in August and September. A more likely culprit is ragweed — *Ambrosia spp.* — which blooms at the same time and has small windborne pollen grains which cause allergies. In contrast, Solidago pollen grains are relatively large and sticky, and are carried by pollinators. *Solidago* pollen pellets are, as you may have guessed, golden.

Concerning the nutrition of the pollen, my mother wrote back with the following:

> *"You come from at least three generations of women (and are married to Mya) who were concerned about the nutrition levels of the food they prepared for their families, even in times of the Depression, WWII with no meat available to purchase, and unemployment with scarce money to purchase meat. The*

concern was always healthy eating with occasional lapses of junk food by choice. I wonder about the "innocents" who are foraging for their protein source assuming that it is nutritious enough to tide them."

Most of the information in this article was from the following sources:
General information:
https://plants.usda.gov/plantguide/pdf/pg_soca6.pdf

On establishment and spread:
https://link.springer.com/article/10.1007/s11515-007-0030-6

On protein content of pollen:
http://rspb.royalsocietypublishing.org/content/283/1828/20160414

The following is a rich source of native plant information:
Manual of the vascular flora of the Carolinas.
by Albert E Radford; Harry E Ahles; C Ritchie Bell
Publisher: Chapel Hill, N.C. Univ. of North Carolina Press 1976, 1976

In the Beeyard

by David Segrest

There are several pests that beekeepers have to deal that seem to increase this time of year. Mites, SHBs, wax moths and neighbors. The last one is the hardest to control. The problems this time of year stem mostly from the lack of food. The bees start robbing each other, they raid trash cans and they begin to brood down. The robbing makes them more defensive.

The varroa mites are building up while the bees are brooding down, causing an increase in the number of mites per bee. This threatens the hive and makes the bees more irritable. The small hive beetles seem to like this time of year to pick on the honey bee colonies. They also eat fruit. There is plenty of rotten fruit on the ground giving them a chance to raise their numbers. This irritates the bees as well.

So the bees are brooding down. The mites are brooding up. The SHBs are really hitting the hives. The bees are losing territory in their home and this leaves a gap that the wax moths are eager to take advantage of. Now the bees are really unhappy. They are both irritable and defensive. They not only sting those who are too close to their colony. They sting people just because they are able to do so. They chase people and sting dogs causing vet bills. This is what makes the neighbors unhappy.

These are some of the problems. What are some of the answers? We all know how to treat for mites. Do it!! Re-queening can help solve the "brooding down" situation according to Mel Disselkoen. The little broodless period provides an opportunity to get the phoretic mites with Oxalic acid. Don't assume that the broodless period by itself will wipe out the mites. According to Randy Oliver, a mite can live for a year just riding around on adult bees. Keeping the bee population numbers up helps control SHBs and Wax moths but it aggravates the shortage of food. Feeding is required and that aggravates the robbing situation. Put the robbing screens on.

This time of year may bring the biggest balancing act a beekeeper can face. Just remember it is the challenges that makes a job necessary and interesting. It also steepens the learning curve. If it doesn't kill you it will make you stronger.

The Bee Bowl

by George McAllister

Our Bee Bowl Team Wowed the Crowd at the NC State Beekeepers Association Summer Conference

The most knowledgeable beekeepers from eight local bee clubs put on an impressive display of beekeeping knowledge at the NC State Beekeepers Association Summer Conference's Bee Bowl event held in Winston-Salem this past month.

The questioning started at the certified beekeeper level and moved up to Journeyman and then Master Beekeeper. As the questions got tougher you could see the teams struggle with the answers. Not the Mecklenburg bee club team. Jeanie Frye, Libby Mack and Jodie Rierson looked confident throughout the completion.

Here are some of the first round questions our team was given.

What is the organ located between the honey stomach and ventriculus in a worker bee? Answer: proventriculus

Why is the year 2009 significant to North Carolina beekeeping? Answer: This is the year the North Carolina Zoo honey bee exhibit opened.

What is the active ingredient in Apviar? Answer: Amitraz

What is the maximum allowable moisture content for grade A honey as defined by the US Department of Agriculture? Answer: 18.6%

At the end of the first round, our team answered all the questions correctly defeating the Wake County club 6 - 3 to advance to the second round.

For the second round, here are some of the questions presented to our team.

For plants, what is the definition of pollination? Answer: The team gave a detailed definition way to long for this article.

Do Africanized bees build more or less cells in comb per square inch than Italian bees? Answer: More

What is the name of the process for making crystalized honey? Answer: Dyce method. The confidence our team showed in answering this impressed the moderator and audience.

At the end of the second round, our team defeated the Durham County club 5 - 2 to advance to the championship round with the Five County bee club.

For the third and final round our team was presented with these questions which they answered correctly.

If two or more rows of hives are in an apiary what is the minimum distance between rows to discourage robbing? Answer: 10 feet

During the cold months do bees regulate the temperature in the cluster or the entire cavity? Answer: The cluster

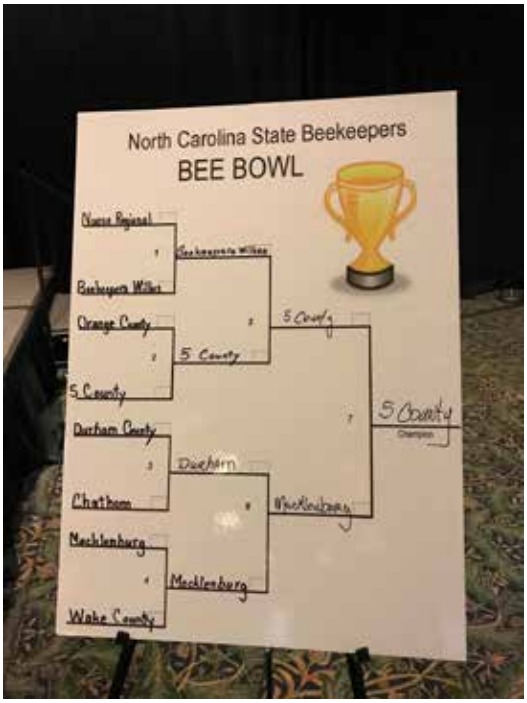
The transportation of honey bees is regulated by what government legislation and what year was the legislation enacted? Answer: Honey Bee Act enacted in 1922.

What is the only chemical treatment approved to treat small hive beetles in North Carolina? Answer: Checkmite+

During the championship round our team and Five County bee club answered all the questions correctly. This caused a little drama from the crowd due to the rules. The Five County bee club won the coin toss at the start of the round and elected to receive the first question. The rules state that nine questions are asked during each round. The bee bowl organizers did not realize the team that gets the first question and answers all the questions correctly will win regardless of how the other team performs. Therefore our team could only get second place even if both teams answered all the questions correctly. Of course this is exactly what happened.

The moderator, realizing the flaw in the rules, summed up the final round to the crowd as a round where there were no losers. The judges and moderator quickly announced next year the winner of the final round will have to win by two points instead of one. They named this new rule the "Mecklenburg rule".

The bee bowl was well attended and the crowd was vocal in support their team. The questions were challenging. The crowd applauded when a team got a tough question correct. Our team looked confident throughout the competition, answering the questions with little if any hesitation. They came prepared and it showed. Way to go Jeanie, Libby and Jodie. You showed the state our club has some smart beekeepers.



2017 MCBA OFFICERS

President: Ed Moyers (meckbeespres@gmail.com)

Vice President: Andrew Thiessen (meckbeevp@gmail.com)

Treasurer: Don Rierson (meckbeetreas@gmail.com)

Membership Secretary: Jodie Rierson (meckbeesec@gmail.com)

Chaplain: Don Rierson

Webmaster: Kevin Freeman (meckbees@gmail.com)

Contact Us

Email us with questions at meckbeespres@gmail.com

Picture and Article Submissions are always needed and are greatly appreciated.

Email submissions to:

Rachel.E.G.Woodhouse @gmail.com