January 2017

Volume 2, Issue 1

LCBA

Lincoln County Beekeepers Association Newsletter

In this issue:

"The honey bee is more honored than other animals, not because she labors, but because she labors for others."

-St John Chrysostom

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We are Beekeepers…

This is the official newsletter for the Lincoln County Beekeepers Association, a non-profit organization dedicated to the well-being of honey bees and to the fields of beekeeping, apiculture, research, and education. We are a diverse bunch of individuals who share a fascination for the honey bee and its workings. Our members range from full-time beekeepers and pollinators with thousands of hives to hobbyists involved in back-yard beekeeping. Some members do not even keep bees, but are fascinated by the six legs and four wings of *Apis mellifera*.

Meeting Notes:

This month we dove into the coming adventures in swarm season and a group discussion of early season events. I hope you are all geared up and ready for whatever these intriguing creatures throw at us. Even though its just January, spring will be upon us in no time.

What is your tried and true method for swarms: Do you manage the colony by pinching swarm cells? Do you bait traps outside the hive and hope they can't resist it? Do you make splits and add your own new queens to the new colony? Or do you let nature take its course and add to the feral bee population?

No matter what your ritual is for the coming season, I hope your bees cooperate and you are able to add new colonies to your apiaries. Winter can be so long and harsh and slow for beekeepers! These past few warm days have not only us keepers excited but the bees as well. Here's to hoping for an early prosperous spring.

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NEXT MONTH'S TOPIC: Splits & what we are doing wrong
March 9th -
(topics subject to change)

NEXT MEETING: February 9th @ 7pm

James Warren Citizen Center, 115 West Main Street, Lincolnton, NC 28092

Volunteer Opportunities:

****Any events, programs, etc you would like announced need to be emailed before the next monthly meeting*****

Member News:

If anyone rented the extracting equipment and forgot to return the fume board, PLEASE return to Dick Walker ASAP!

Announcements:

- Check out the NCSBA website for this months quizzes and new games. Each month a new quiz for all levels to test your knowledge and or study for the next levels test.
- Spring Conference will be held in Winston-Salem NC on March 3-4th. Please check the NCSBA website for more details. Testing will also be held at the conference fro anyone looking to venture to the next level in the Master Beekeeping Program.
- We need your tried and true recipes using honey for our newsletter recipe section! Pictures to accompany them are great as well! Send to bethnoles@bluebikerealty.com or reply to the newsletter email.

FOR SALE: If you make or have items for sale, make plans to list them here!

Extracting Equipment Rental:

Call Dick Walker @ 704 575 0925
wizz22789@aol.com

Rental fee is $7 per day
Extractor, hot knife, uncapping tub, strainers etc

Swarm Prevention

By Michael Bush

Swarming is when the old queen and part of the bees leave to start a new colony. Afterswarms are after the old queen has left and there are still too many bees so some of the swarm queens (which are unmated queens) leave with more swarms. Sometimes a hive has a several afterswarms. Generally swarming is considered a bad thing because you usually lose those bees. But if you catch them it's a bonus because swarms are notorious for building up quickly. The bees are focused on it already and it's in the natural order of things. Back in the days of skeps and box hives it was always considered a good thing. It was a chance to make increase.

Causes of swarming: It's good to realize that swarming is the normal response of a hive to success. It means they are doing well enough to reproduce the hive. It is the natural order of things. However, it is inconvenient for the beekeeper to have them swarm, so let's think about what causes them to want to swarm. First there are two main types of swarms. There are reproductive swarms and there are overcrowding swarms. There are a variety of pressures that push them toward swarming.

Overcrowding swarm: Since it's the simplest and can happen anytime, lets briefly look at the overcrowding swarm. The factors that seem to contribute are: No place to put nectar so it gets stored in the brood nest. Prevention: add supers. Honey or pollen clogging the brood nest so that the queen has no where to lay. Prevention: remove combs of honey and add empty frames so that the bees will be occupied drawing wax and the queen will have somewhere to lay and the bees will have more room to cluster in the brood nest. No place to cluster near the brood nest. The bees like to cluster near the queen (who is in the brood nest) and this clogs the brood nest making it crowded. Prevention: Slatted racks give room to cluster under the brood nest. Follower boards on the outside give room to cluster on the sides of the brood nest. These are a ¾" wide top bar with a sheet of plywood or Masonite or similar material in the middle the size of a frame. One on each end replaces one frame in the brood nest. Too much traffic congesting the brood nest. Prevention: a top entrance will give foragers a way in without going through the brood nest. So basically, if you keep supers on and provide ventilation you can prevent an overcrowding swarm.

Reproductive swarm: The bees have been working toward this goal since last winter when they tried to go into winter with enough excess stores to build up in the Spring before the flow enough to cause a swarm that will then have the optimum chance to build up enough to survive the following winter. The first mistake people make about preventing swarms is they think you can just throw on some supers and they won't swarm. But they will. Yes, it's nice to have room for them to store the honey, so the supers are helpful, but the bees intend to swarm and the supers will not deter them from the plan to do a reproductive swarm. Back to the sequence in the Spring, the bees, during winter, rear little spurts of brood. The queen lays a little and they start rearing that batch, but they don't start any new brood until that brood emerges and they take a break. Then they rear another little batch. When pollen starts coming in they start to rear more brood to build up. They also start using up the honey they have stored. This is used to feed brood and also it makes room for more brood. When the bees think they have enough bees they start filling all of that back in with honey, both to stop the queen from laying, and to have adequate stores in case the main flow doesn't pan out. As the brood nest gets backfilled it makes more and more unemployed nurse bees. These nurse bees start doing a keening buzz that is quite different from the typical harmonious buzz you usually hear. More of a warble. Once the brood nest is mostly full of honey they start swarm cells. About the time they get capped the old queen leaves with a large number of bees. Even if you catch the swarm, the hive has still stopped brood production and has lost (to the swarm) a lot of bees. It's doubtful it will make honey. If there are still enough bees, the hive will throw afterswarms with virgin queens heading them. If I don't catch them in time, once they make up their mind I always make splits because not much will dissuade them. Destroying queen cells only postpones the inevitable and most likely leave them queenless. My guess is that most people destroy the queen cells AFTER the hive has swarmed without realizing it. If you catch them trying to swarm between about two weeks and just before the main flow, a cut down split with the old queen and all but one frame of the open brood in a new location is a nice swarm prevention method. Leave the old hive with all the capped brood, one frame of eggs/open brood, no queen and empty supers. Usually, the old hive won't swarm because they have no queen and hardly any open brood. Usually the new hive won't swarm because they have no foragers. This is best done just before the main honey flow. I often just put every frame that has some queen cells on it with a frame of honey in a two frame nuc to get good queens. Does using swarm cells for queens lead to swarmy bees? In my opinion no. Here's a quote that mirror's my opinion:

> "For years our bee journals have been printing reams of articles on the question of a non-swarming strain of bees. It has always seemed to me there was a lot of time wasted advocating such an improbable accomplishment, because nature would hardly yield to an arrangement that in itself might destroy the species. If accomplished it would be tantamount to breeding the mating instinct out of domestic animals." --P.C. Chadwick ABJ, April 1936

I have to admit, though, it depends on your definition of swarmy bees. If a hive is trying to swarm under normal circumstances and in normal amounts (a primary and possibly a secondary) I don't consider that "swarmy". If they swarm and afterswarm and afterswarm until there are no bees left, I consider that "swarmy". Those I do not want queens from. Of course, the real object is to avoid the swarm and the split (unless you want to do the cutdown split) so you'll have a bigger stronger hive that will make more honey.

Distinguishing supersedure cells from swarm cells: There is a myth that supersedure cells are always in the middle and swarm cells on the bottom of the frames. This may be a good generality, but you need to look at the entire context of the situation. I would assume that queen cells on the bottom were swarm cells if the hive is building up quickly and is either very strong or very crowded. On the other hand if they are not strong or crowded and building, then I would assume they are not swarm cells. If the cells are more in the middle and conditions otherwise would cause me to expect swarm cells, then I would tend to view these as swarm cells. If the hive were not building and not crowded I would assume they are supersedure cells or emergency cells. Also swarm cells tend to be more numerous. To put it another way, you should be looking for the underlying causes of swarming. If none of them are present they are probably not swarming, they are probably superseding. If many of those swarm triggers and signs are present, they are probably swarming, not superseding. Those triggers and signs include the time of year, crowding, rapid growth, lots of drone brood and backfilling of the brood nest. Also swarm cells are not all the same stage of development. Supersedure cells usually are the same age. Emergency cells are usually all the same age.

Continued on next page...

Preventing swarming: I do love to catch swarms but who has time to watch the hives all the time to catch them? And if you have that much time, then you have the time to prevent them.

Opening the broodnest: This, of course is what we want to do. What we need to do is interrupt the chain of events. The easiest way is to keep the brood nest open. If you keep the brood nest from backfilling and if you occupy all those unemployed nurse bees then you can change their mind. If you catch it before they start queen cells, you can put some empty frames in the brood nest. Yes, empty. No foundation. Nothing. Just an empty frame. Just one here and there with two frames of brood between. In other words, you can do something like: BBEBBEBBEB where B is brood comb and E is an empty frame. How many you insert depends on how strong the cluster is. They have to fill all those gaps with bees. The gaps fill with the unemployed nurse bees who begin festooning and building comb. The queen will find the new comb and about the time they get about ¼" deep, the queen will lay in them. You have now "opened up the brood nest". In one step you have occupied the bees that were preparing to swarm with wax production followed by nursing, you've expanded the brood nest, and you've given the queen a place to lay. If you don't have room to put the empty combs in, then add another brood box and move some brood combs up to that box to make the room to add some to the brood nest. In other words, then the top box would probably be something like EEEBBBEEEE and the bottom one BBEBBEBBEB. The other upside is I get good natural sized brood comb. A hive that doesn't swarm will produce a LOT more honey than a hive that swarms.

When to open the brood nest: It's best to do this as early as they can fill the gap, where you want to put the empty frame, with festooning bees before they start getting "honey bound." This should be done anytime in the spring when the nights are no longer frosty and when you observe the brood nest getting clogged with honey and the brood nest contracting instead of expanding, while the population of bees is peaking and *before* they start building swarm cells.

Checkerboarding aka Nectar Management: Checkerboarding is a technique from the late Walt Wright that involves interspersing drawn and capped honey *over* the brood nest. It in no way involves the the brood nest itself. This is a method that also fools the bees into believing that the time has not yet come to swarm. It works without disturbing the brood nest. Basically it's putting alternating frames of empty drawn comb and capped honey directly ABOVE the brood nest.





Left to right: Bees swarming out. Swarm.

Swarm (photo by Judy Lillie). Swarm being hived.

Swarm Cells.

LCBA would love to include your favorite beekeeping stories, pictures or interesting articles that you find worthy of sharing.

Flower Report (as of 1/17/17) By Ralph Harlan

So far, I have seen only a few blooms this year. The ubiquitous pansy from the landscapers servicing developments with the accompanying kale is blooming. Dandelion is also blooming but is not very plentiful, yet. I have not seen other blooms either in my yards or as I ride to different locations in Mecklenburg, Gaston, and Lincoln Counties. Next week, I will probably start putting out pollen substitute/supplement in the dispenser since there is not a supply of pollen yet. As pollen becomes available, the queen will start to lay (if she hasn't been all along). Typically we get the red maple bloom about the second week of February, but it was the first week of January last year and the end of January the year before. Watch for the maple bloom as this will signal the start of the "New Year" for the beekeeper. When the maple bloom is early the whole beekeeping calendar can and usually does shift. Of course this can mean that swarming can be earlier and more often so put into practice what Rick was telling us at the last meeting!

Hive Report (as of 1/17/17) By Ralph Harlan

Are your hives holding up to our winter so far? How do you know? Are you walking up to the front and watching for anything to come out and leaving it at that? Are you checking to see if there is still a water supply close by? Is there food available in the colony? Are the few bees you see coming and going on warmer days just robbing out the supplies of the colony that died during the snow and cold?

The only way to monitor your colonies is to open the lid and look in. At this time of the year there are days that are above 55^{o} which means you can take a quick peek, which is enough to monitor nucs and single story colonies. It may be appropriate for two story colonies, particularly if the bees have moved up into the top box; but then you need to be sure they are not running out of food. I still have colonies that are 4 and 5 boxes deep, and wait for the days that are above 65^{o} (yes, we have a fair share of them each month) to look deeper.

Our winters are pretty mild and often we have a lot of bees flying. There is little food, either pollen or nectar, available other than what is in the box, so having "bee candy" or fondant available in each hive is a good idea and is easy to make happen. During the times you look into your hives, it is a good idea to monitor the fondant supply. Each winter we have warm spells followed by "sudden" cold snaps with temperatures in the low double digit or the single digits. During those cold snaps, the bees are in a tight cluster and, particularly if there is brood, cannot or will not move to where the food is stored. Picture the situation of the bees clustering in one area, eating the food immediately next to them. When the temperature suddenly drops, the cluster compacts leaving a wider space around them to the food. Especially if there is brood present (the cluster will not leave the brood) as the cluster shrinks the outer band of brood will die with the cold and the distance to food may be greater because they had been taking the food in a perimeter area around the brood so now there is the ring of dead brood and the ring of empty food cells before they can reach the stored food. Now, depending on the duration of the cold spell, the bees do not eat and starve with food only an inch or so away. Happens every year! Fondant can often be the food source in this situation, but it must be within reach of the cluster or the bees will still die. Fondant can also bring a colony through the winter if there was just not enough food put away (or the colony was robbed of too much of the honey by the beekeeper). So, fondant is good insurance for the winter and is best if it is directly over and within an inch of the cluster. It is not a guarantee of hive survivability, though. So, on the warmer days, your job as a manager of the colony is to check the fondant supply and the location of the cluster and make sure they correspond. As the bees move up in the boxes, you will need to move the queen ring up so the fondant is in reach above the cluster. Often, I see clusters staying under the fondant if the fondant supply is always there. It only takes seconds to lift one end of the box(es) where the queen ring is to check the location of the cluster, the supply of fondant, and to slide in another chunk of fondant. Often, my bees do not even get airborne in the time it takes to slide in fondant.

Test Your Knowledge:

Certified Level:

1.The Africanized Honey Bee (AHB) can sting a person more than once. (2 points)

- True
- False

2.The Africanized Honey Bee.... (2 points)

- does not produce any honey
- cannot be managed by beekeepers
- is able to sting more than one time, unlike European honey bees
- have fairly good disease and pest tolerance, possibly due to absconding and swarming characteristics

3.The compound eyes of the honey bee are the three eyes located on the top of their heads that they use to see in poor light conditions. (2 points)

- True
- False

4.The queen will only lay eggs in a cell that has been cleaned and prepared by the workers to raise brood (2 points)

- True
- False

5.If your bees exhibit "K wing" (wings extended at odd angles / not folded in normal position), you can be certain that your bees are suffering from pesticide poisoning. (2 points)

- True
- False

6.Mating between the queen and drones occurs.... (2 points)

- outside the hive in mid-flight
- at night when the rest of the colony is sleeping
- in a lower box on the hive, usually the brood box
- on the ground, usually just in front of the hive entrance

7.What do bees forage for outside of the hive? (2 points)

- nectar, pollen, plant resins, honeydew, and water
- only nectar and pollen
- nest building materials

8.Approximately, how many bees can be expected to be in a pound of bees? (2 points)

- 1,000
- 2,500
- 3,500
- 10,000

9.It's a good idea to avoid placing hives in deep, dark shade because... (2 points)

- the bees cannot raise brood in the dark
- it will make it difficult for you to see while doing inspection
- it can make the hive damp, bees listless, & small hive bee
- shade makes honey darker

10.When doing an inspection, you find a frame that has a lot going on. See Photograph. In the photograph, there are two large cells - what are they? (2 points)

- queen swarm cells
- queen supercedure cells
- queen cups
- drone cells
- burr comb

Test Your Knowledge:

Journeyman Level:

1. Where do honey bees collect water from when the temperatures outside the hive are freezing?

   (2 points)

2. U.S. Grade B honey must not contain more than

   % moisture. (1 point)

3. What is the name of YOUR regional NCDA&CS Apiary Inspector? (spelling is not graded)

   (1 point)

4. is primarily composed of lipids and hydrocarbons (2 points)

5. Worker bees perform a variety of tasks within the colony. The tasks change as the bee ages. Match the following tasks with the order in which they generally take the task on. (6 points)

   handling incoming nectar from foragers

   producing wax & building comb

   field bee - foraging nectar &/or pollen

   guard bee at hive entrance

   cleaning brood cells in preparation for the queen to lay eggs in

   serving as a nurse bee (feeding brood)

   a. first task
   b. second task
   c. third task
   d. fourth task
   e. fifth task
   f. sixth task

6. The smoker is an indispensable tool. List THREE ways in which a smoker effects bee behavior (3 points)

7. What is the advantage of reversing boxes on a bee-hive in the early spring? (2 points)

8. What is queen piping ? Identify the differences between quacking and tooting. (2 points)

9. Identify 3 signs, or symptoms, of laying workers in a honeybee colony (3 points)

10. Name three (3) differences (physical, behavioral, etc.) between wasps and the honey bee. (3 points)

Test Your Knowledge:

Master:

1. A "cultivar" of a plant differs from a "variety" of a plant species in that a cultivar is "man made"; a variety occurs In nature. (2 points)

   True

   False

2. On a flowering plant, the slender stalk of the stamen that supports the anther is called

   the .... (2 points)

3. The NC Apiary Inspection Service issues "Permits to Sell Bees" in North Carolina. There are three circumstances as a North Carolina resident that a permit is not required. One of those is "the renting of bees for pollination purposes or the movement of bees to gather honey." What are the other TWO? (2 points)

4. Placing a slatted rack between a solid bottom board and the first hive body is a practice sometimes used by beekeepers. What might be a benefit of the use of this piece of equipment? (2 points)

4. Why is it that honey bees do not forage upon; therefore do not make good pollinators of tomatoes? (2 points)

Answers:

Certified:

1. FALSE
2. D
3. FALSE
4. TRUE
5. FALSE
6. A
7. A
8. C
9. C
10. A

Journeyman:

1. CONDENSATION INSIDE
2. 18.6%
3. Greg Farris
4. Beeswax
5. 4,3,6,5,1,2
6. Tends to disperse bees; driving them away from the hands or areas of the hive that the beekeeper wishes to manipulate. 2. Discourages guarding in one of two ways: 2.1 causes some of the bees to take flight 2.2 causes some of the bees to gorge on honey 3. masks odors (such as the alarm chemical)
7. Bees Move Up; Give them room for Spring Build-up; and therefore can aid in swarm prevention
8. A sound made by queens just prior to swarming HHB '05 pg. 337 2. A series of shrill sounds made by a queen just prior to emerging from her cell, and is considered as a challenge to other potential queens within the colony. WDYK pg. 61 PIPING is both TOOTING and QUACKING sounds TOOTING done by queens prior to swarming TOOTING done by queens challenging contenders QUACKING done by queens about to emerge (gathering a supportive retinue)
9. (1.) poor brood pattern; shotgun, random (2.) multiple eggs in an open cell (3.) eggs attached to the side walls of open cells (because the abdomen of the worker bee is not long enough to lay eggs at the bottom of cells) (4.) More drones present (population and/or brood) (5.) bees are more aggressive than normal (6.) colony population reduced (7.) queen not see
10. 1. barbs on stinger found on honey bees / no barb on stinger found on wasps. 2. honey bees store honey / wasps do not store honey 3. honey bees are vegetarians (thouh sometimes cannibalize their own larvae) / wasps are omnivorous 4. they each possess a different chemical composition of venom answer found on internet 5. Plumose hairs on honey bee 6. Differences in social behaviors 7. Wasps cannot be managed

Master:

1. TRUE
2. FILAMENT
3. **Sample answer:** A permit [to sell bees] is not required for.... (1) the sales of less than 10 bee hives in a calendar year (2) a one time going-out-of-business sale of less than 50 beehives…
4. **Sample answer:** 1.) improves air circulation throughout the hive 2.) more eggs, more honey 3.) encourages the queen to lay closer to the front, and lower in the hive 4.) reduce swarming…
5. **Sample answer:** 1.)The tomato plant flower produces minimal nectar. Therefore, there is no "reward" for the bee that would encourage them to forage upon it. 2.)The pollen produced by the tomato plant is extremely difficult for a honey bee to forage upon. The flower hangs upside down, and must be vibrated to loosen the pollen. A bee must hang upside down and "buzz" to release the pollen. Therefore, a honey bee will not actively forage on tomato for as a pollen resource...

Library:

LCBA has started library as a resource for members only. At each meeting you may check out a book, video or any resource item for the 4 weeks until the next meeting when you can return the item. Please make sure to sign out the item on the board inside the closet! Feel free to donate to any unneeded books or items to our resource closet at any time!

The Hive and The Honey Bee

The ABC & XYZ of Bee Culture

Hive Management

Natural Beekeeping

Honey Bee Biology

Swarm Essentials

Successful Queen Rearing

Garden Pants for Honey Bees

Honey in the Comb

Honey handbook

Beeswax Alchemy

Presentation Resources:

Teaching Hive

Photo Board

Flowers, fruits, veggies for displays

Kids games

Plastic Honey bee

Other Items:

Brochures

Coloring pages

Crayons

Catalogs

Local Breeder List:

Billy Boyd	5803 Old Monroe Rd	Indian Trail	704 821-7310	russian bees	
Bob Doty	6325 Stirewalt Rd	Kannopolis	704 934-2640 704 651-2555	nucs-minn hyg	odiedody@ctc.net
Ray Revis	P O Box 2520	Marion	828 652-3524	nucs/queens-russians	
Gerry & Libby Mack	121 Hermitage Road	Charlotte	704 953-0565	nucs - russians	
Ralph Harlan	1295 Brevard Place Rd	Iron Station	704 807-6207	nucs	harlanmgmt@live.com
Wayne Hansen	8004 Southway Rd	Charlotte	704 287-4805 704 287-4805		whansen318@yahoo.com
Jeff Ritchie	3901 Piney Rd	Morganton	828 438-1720	nucs/queens	
Jimmy Brooks	126 Cedar Lake Farm Rd	Cherryville	704 477-6242	nuc/queens-russian	cj99brooks@hotmail.com
Chad Williamson	907 Tot Dellinger Rd	Cherryville	704 530-7489	nuc/queens-vsh	blackrockfarms@aol.com

New Members & Renewals

New Member ☐ **Renewal** ☐ **Membership #:** _____

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Email: _____

Phone: _____

County of Residence: _____ Local Chapter: _____

1 year dues: NCSBA (state) $15 + LCBA (local) $5 = **$20 total**

You can only be listed under one local chapter in NCSBA "Yellow Book" membership directory. If you choose to be designated **"at-large"** with no chapter affiliation, **check here:** ☐

I want to receive the NCSBA quarterly ***BEE BUZZ*** newsletter by (check only **ONE**):

Email ☐ US Mail ☐ NONE (I don't want it) ☐

I want to receive notices of bee-related **EDUCATIONAL** opportunities by email: YES ☐ NO ☐

I want to receive bee– and beekeeping-related **SOLICITATION** emails: YES ☐ NO ☐

This form may be turned in during our monthly meetings to the treasurer or by sending with payment to:

Eddie White
6576 Lineberger Road
Sherrills Ford, NC 28673

Make checks out to LCBA or Lincoln County Beekeepers association