

Mountain Empire Beekeepers Association

Minutes

February 23, 2017

The meeting was called to order at 7:00 p.m. by Tim Service in room 201, Galax Hall Wytheville Community College.

Minutes and Treasurer's Report: Motion to approve—Herman Hearn, seconded by Linda Bracken. Minutes approved. Mick presented the treasurers report. The report was filed for audit.

Pop Quiz- Winners Katrina Reynolds- soap prize, Linda Bracken- mug prize, Connie Armentrout- soap prize

Speaker: Jackson Means - Research Assistant and PhD candidate in millipede taxonomy at Virginia Tech mjacks4@VT.edu, studies centipedes, pheromones and swarm prevention

Presentation: Chemical communication with honeybees through pheromones and swarm prevention

Spring Management Objectives-

- 1) Ensure Survival of colonies
- 2) Encourage Colony growth
- 3) Prevent Swarming

- The brood build-up peaks in May and end of summer. Summer bees live for about 6 weeks while winter bee live for about 6 months. Summer bees work themselves to death.

1st Exam in January (Late January)–

- 1.) Check to see that the colony is alive. If the colony died, seal it up and remove it. It may have disease. You don't want robbing to occur.
- 2.) Check the amounts of food stores. It may get cold in March and April again. The bees may be active and burn through the food stores and starve.
- 3.) Feed bees sugar syrup 1:1 liquid– if warm weather (If weather is still cold- dry sugar, fondant or pollen pattie)
- 4.) Check equipment

2nd Exam Early Spring (1st week of March)–

- 1.) Check food stores
- 2.) Check the queen (look for eggs, capped brood, or try to see the queen- This is a hard time for the hive to requeen.
- 3.) Evaluate the strength of the hive.
- 4.) Clean the bottom board.
- 5.) Check frames for honey. There should be 3-4 full deep frames of honey. Feed 1:1 sugar syrup and continue to feed pollen. * Hive beetles love pollen patties, so use traps.
- 6.) Check frames for capped brood. Check for full solid capped brood. (In March there should be 7-8 frames, 3-4 frames capped brood. April should have 10-12 frames of capped brood.)

2nd Exam Late Spring (late March)–

- 1.) Check for American Foul Brood (AFB) – There will be a foul smell. Spores will be forming. Bacteria can live more than 100 years! To get rid of it you must burn everything.
- 2.) Look for Chalk Brood
- 3.) Check for European Foul Brood (EFB) – Perforated cappings are a sign of disease.

End of March/Early April

Swarm Prevention –

*10%-40% of colonies in unattended apiaries will swarm.

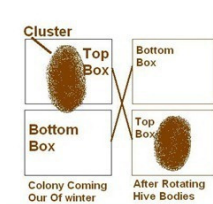
*There is no perfect technique to prevent swarming.

* The specific causes are unknown.

* Crowding and the age of the queen seem to be factors.

* Usually occurs in late March –early April.

* One thing that a beekeeper can do to help prevent swarming is reversing the brood boxes in the spring. By switching the position of the hive bodies, it allows for upward expansion of the colony. The



queen will not go down to lay brood.

www.honeybeesonline.comhttp://basicbeekeeping.blogspot.com/2011/01/lesson-93-rotating-hive-bodies-in.html

*Split a hive- must move it away more than 2 miles or kilometers or turn the hive 180°.

Damaree Method – is a swarming prevention method first published by George Damaree (1832–1915) in an article in the American Bee Journal in 1884. The Damaree Method involves separating the queen from the brood. It reduces overcrowding in the beehive and therefore reduces the bees' desire to swarm by separating the unsealed brood and eggs from the queen. Brood goes above the excluder and the queen below. This method makes it possible to retain the total colony population; thus maintaining good honey production. The technique has the advantage of allowing a new queen to be raised as well. The Damaree Method needs to be applied at the correct time. The timing will vary depending on each season and the rate of colony expansion and nectar source in the area.

Chemical communication with honeybees through pheromones -

Trophilaxis- Touching, licking and kissing to communicate, exchange of food, and in some species behavior is affected as well

Queen mandibular pheromone (QMP) – lets bees know the queen is there, recognition of the queen, inhibits queen formation and raising of queens, differentiates between being a queen and not being a queen, inhibits worker's ovary development, stimulates comb making and how to divide the labor, stimulates foraging and brood rearing, acts as a modulator for division of labor

Retinue pheromone –attracts the workers to clean and feed the queen (If you transport a queen, you must put a few worker bees in with the queen to take care of her.)

Foot print pheromone- to follow and find the queen

Feces and fertility pheromone – This tells the bees the status of the health of the queen and if she is a virgin.

Egg Marking pheromone – The queen has the ability to tell whether an egg is a drone, worker or fertilized

Alarm pheromone or Aggregation pheromone – worker pheromone works as an alarm to tell them when to bite with their jaws or stinger, tells them when to swarm or mate, located in the mandibular glands, it disperses quickly to help with the flight of the bees from the hive. It recruits bees from the hive. It increases the response of the bees to moving objects. It marks the target.

Worker pheromone- For both social regulation and foraging – to become a forager or not

Broad recognition pheromone- feed me, cap me, keep me warm, decreases worker ovary development, stimulates pollen foraging, increases pollen store

Drone pheromone – recognition and care

Bee Biology- Honeybee Hearts and What They Pump-

- Open Circulatory system (red tube)
- Bee blood, Hemolymph is located in the exoskeleton. It flows freely through the bees' body
- Does **not** transport oxygen
- Carries nutrients and hormones to organs
- Picks up waste and transports it to excretory organs
- Hemolymph helps keep bees warm in the cluster.
- Dorsal Aorta- located in the thorax and head, ostia - little holes (When the heart part of the tube pulsates, it can pull in hemolymph -dorsal aorta opens right into the brain. Where Hypopharyngeal gland makes royal jelly. It goes around and washes over organs. The blood is **not** red. It is located all through the body.

Bees in the News:

- There has been a budget shortfall at Virginia Tech for honeybees and other insects. The pesticide control fund has been discontinued.
- Robo Bees – Robo Drone –to fix pollination problem
- 3.2 Trillion bees in the United States
- Cedar Rapids City in Iowa -1,000 acres of land planted flowers for pollinators. Virginia sprays kill everything but grass along road sides. North Carolina just appropriated money for more wild flowers
- Thousands of dead bees washed up on a section of a Florida Beach. It is a mystery as to why this happened.

Old Business:

- A decision was made to start a half hour earlier in April at 6:30.

New Business:

- More cash on-hand for the treasurer to be able to make change when needed.
- Highlands Beekeepers Association will sponsor **A Honeybee Symposium** Saturday April 8, 2017 9:00 a.m.- 5:00 p.m. at the Southwest VA Higher Education Center in Abingdon, Virginia. Pre-registration fee is \$40.00. Registration at the door is \$50.00. Cutoff date for preregistration is March 31. Online registration available at www.highlandsbeekeepers.com. Vendors will be on site. Register early due to a limit of 250 attendees. Registration and check can be mailed to Phil Blevins, Extension Agent Washington Co. Extension Service 234 W. Valley St. Abingdon, Virginia 24211. For questions call (276) 676-6309.

What We Should Be Doing with Our Bees Right Now

March Spring Exam

- Continue to feed fondant or dry sugar and pollen patties.
- Look for mouse damage in hives.
- Clean up any dead-outs.
- Prepare equipment for spring. S & W Farm Supply has a 5% discount on wooden ware in May.
- Do maintenance in the bee yard.

Raffle:

Sundance pollen trap – winner Kayron C. Carowan

Fondant- winner Herman Hearn

Feeder spacer- winner Kayron C. Carowan

Adjourned at 8:50 p.m.

Respectfully submitted,

Connie Armentrout

Secretary, MEBA