

CENTRAL COAST BEEKEEPERS ASSOCIATION

CCBA Monthly Meeting Notes

Date: Monday, February 20, 2017

Location: Oak Creek Commons Great Room, Paso Robles, CA

Attendance: 43

Networking

Practicum: Swarms by Sue Hulsman

- Catching a swarm can increase your apiary. Even if you don't keep the queen, you can still add a swarm hive (without the queen) to your other hives
- Club is a good source of swarms – need to be prepared, but is a good source of positive publicity for CCBA
- Pheromones:
 - Pheromones = a secretion that affects the behavior of others
 - Pheromones are considered a “smell” but bee's don't have olfactory sense, BUT they do “smell” through receptors on their antennae
 - Queen secretes pheromones from various glands on her body
 - Each queen has her own individual “fragrance”. Each colony recognizes its own queen. So much so, that if you pull a queen out and replace her too quickly, the new queen could get killed because the colony has not adjusted to her scent.
 - If a queen is raised in small colony without a lot of royal jelly, her smell could be weaker
 - The queen's “smell” is described as a “plume”. Virgin queens are not born with their plume in place – thus they don't smell as “good” as mated queens. Winter queens (not well mated) may not have as well developed of a plume as a well mated queen. Well mated queen will have a larger retinue. Younger queens tend to have stronger plumes than an old queen – ageing out.
 - A newly mated queen's plume takes about 24 days to fully develop
 - The pheromones draw the hive bees to the queen and the pheromones are transferred through the hive by the retinue. The plume is also absorbed by the comb. The queen's smell signals to the hive that she is present - the bees in the hive know that she's there.
 - Bees also have “tarsal” secretions that exude from their feet. All bees have this but the queen's tarsal smells are the strongest.
 - Brood also have pheromone. The brood pheromone lets the nurse bees know that the brood needs to be feed
 - Adult workers have a nasonov pheromone that exudes from the glands in the abdomen and the bees will fan their abdomens to express that smell. This pheromone helps the swarm stick together during a swarm.
 - All this pheromones in concert drive the hive. Pheromones also drive the swarm.

HOW SWARMING STARTS

- In spring queen may be aging and colony could be congested with bees and honey. If aging queen's pheromone is not strong and hive is large enough that queen is not walking on all comb, her tarsal pheromone may not spread out
- If the nurse bee-to-brood ratio is out of balance, the nurse bees may start building queen cups. This may suggest that that queen's pheromone is not spreading around the hive sufficiently. These initial queen cups tend to be for practice, and will likely not actually be fostering new queens.
- BUT at certain times the queen gets a message the balance of the hive is off and it's time to leave and may start laying eggs into these cups. The number of queen's cells varies from hive to hive. Some huge colonies can have 30-50 queen cells.
- When the queen starts laying eggs in the queen cells, the worker bees start chasing her around and restrict her food to slim her down and get her ready to fly again. At the same time the workers start to prepare to leave by gorging on honey and bulk up. At the same time the scouts start to look for a new home. Scout bees are some of the older foragers, so they know where a good home might be. Some people in the south like to put sugar water in their bait hives; Sue does not think this is a good idea.

WHY SWARMING HAPPENS

- Majority of bees in swarm will be 20-35 days old. Queenless bees may also join a swarm drawn by the nasonov pheromones.
- Swarms tend to occur between 10 am- 2 pm
- Swarms departure may be delayed due to weather. When queen cells are sealed and capped (about day 9), it is time for the queen to leave. If on day 9, the weather is not good, they will wait until a good weather day. PAY ATTENTION TO THE WEATHER – swarms tend to happen on a warm day after a few cold or windy days.
- The departure happens quickly – in about 10- 15 minutes. The foraging activity will suddenly cease and then the bees will pour out. During swarm activity will be many more departures from the hive than normal arrivals.
- The bees will pour out and go to a temporary location. The temporary location will be near the original hive. You can usually track the bee traffic back to the original hive and it will likely be nearby. The scent of the queen and nasonov pheromones will linger and other swarming will tend to come back to this location.
- The bees will cluster with queen in center. Her pheromones and the nasonov pheromones will hold cluster in place. If cluster is sloppy, that may signify that there could be two queens OR a virgin queen.
- 75% of swarms perish/do not make it through the first winter without beekeeper intervention. So it's VERY IMPORTANT for beekeepers to go and get them.

- Swarms tend to be very docile **initially**. The bees are engorged so they often cannot curve their abdomens to sting. **HOWEVER**, after a few weeks in a temporary location the swarm of bees may become aggressive – **BE CAUTIOUS**
- Scouts are very important at this time. If you have an empty hive in your yard, the scouts may come and hover at the outside before flying in. They will then go inside and “measure up” the new hive location. The scout will then go back to the swarm and do a “dance” to communicate the location. If it’s a good spot the scout will dance very aggressively to get more bees attention.
- First temporary location tends to be 6-12 ft off ground
- Largest swarm Sue has seen is 6 lbs. Pineapple to watermelon size is average
- Sometimes when you pick up a swarm, they may still fly off if they have already agreed to go to another location. Watch the swarm’s behavior – if a lot of scouts of flying and dancing around the swarm, they may be getting ready to move. Good approach to quiet them is to spray them lightly with water or sugar water.
- What does swarm need to survive?
 - 1) A hive to put the bees in. In an established colony wet brood, anchors the colony by releasing pheromones.
 - So if you want to anchor a swarm, bring just 2) a little bit of wet brood as this will help to quickly settle the swarm. Its also good to include eggs with brood in the event queen is injured and they need to make a good one
 - 3) Good to offer old drawn comb, ideally with pollen
 - 4) Food – better not to bring honey, bring sugar water with feeder

BACK AT THE OLD HIVE

- The queen’s daughters will emerge on day 15-16. If there are two queen cells, leave both and one may make it. **BUT**, if there are many queen cells, problems can arise, because multiple queens may continue to throw swarms – consider removing some.
- So, if your colony has left more than three queen cells, you do not want to leave all of them. You can remove these cells to make other hives, or just remove. Swarming after an initial swarm can empty a hive.

HOW TO COLLECT A SWARM

- **ASK QUESTIONS –**
 - Where is it? High up? Need a ladder Ask for a photo so you can determine what you will need to access it
 - Ask how long the swarm has been there? If only 15 minutes, you may have time, if 24 hours – **HURRY**, it may be getting ready to leave
 - Ask how big it is in relation to a baseball, basketball, etc? – To gauge the size of the swarm
 - **ASK ABOUT ACCESS** – can you drive up to the location of the swarm? Will you need to hike in to it?
 - Did anyone spray the swarm?

- **HOW TO RESPOND -**
 - Tell folks when you will arrive to pick up
 - Describe yourself and your car so they know what to look for
- **YOUR FEES**
 - If under 6 ft and short drive, Sue does not charge
 - If farther or up high, consider a fee to charge
- **PREPARE YOURSELF – gear you should bring to collect**
 1. Queen clip – looks like a hair clip, get a metal one, they last longer. If you find the queen, open the clip, set it next to her and let her WALK INTO IT. Avoid trying to push her in - Be careful not to smoosh her! THIS IS A KEY TOOL
 2. Keep your gear in a tub so its all together and ready to go
 3. Temporary box or 5 gallon pail (with lid with very small holes – bees will land on top and then can be shaken in)
 4. Hive - with drawn comb and bottom and lid, screen to close door of hive
 5. White sheet – put this below the swarm, so you can see bees and so they don't get dirt in their wings
 6. Strap - to hang the box (or pail) close to original location to allow scout bee to return to location and join backa with swarm before you remove
 7. Step stool
 8. Scale (if you want to weigh the swarm)
- **HOW TO PICK UP SWARM**
 - From a higher position - Once initial swarm cluster is in box, position near swarm location (may need to hang with straps).
 - From flat location – put box next to cluster and use something flat to push them in
 - In grass – position the hive next to bees, show them wet brood to entice them also drawn comb, put a sheet to the hive, the bees should walk in. You can also smoke them from back, but smoke can make them fly.
 - Center of bush or some other tricky spot – USE A BEE VACUUM! Sue uses a modified 5 gallon bucket that she attaches a shop vac to. Need to be careful not to hurt queen doing this. Still have to put them in box and leave until night fall so scout bees can come back and can rejoin the swarm.
 - Really high up in the air – Sue uses her bee vacuum on extension pole (pole pruner). You can also use a fabric bag on a extended pole – there are some you can buy pre-made on Dadant or Mann Lake. Try not to get on a ladder if you can avoid. For bees high up in a tree, you can throw long rope over and then use to shake branch.
 - AFTER YOU COLLECT THE HIVE – need to wait until dusk or dawn to ensure that all forager bees return to the swarm before you take
 - DON'T TAKE THIS SWARM TO YOUR BEE YARD – you don't know if they have mites or disease, so better to take to some other out yard until you can assess them

- Spring swarms will take off and grow fast
- Fall swarms are different, smaller, and slower to grow, mites can be a problem (hives overrun by bees may swarm in the fall), starvation or ants in the fall can cause fall swarms. Could more likely have more Africanized traits.



Sue Hulsman showing her beevac during her swarm presentation at the Feb 20, 2017 CCBA meeting



Beevac close up of suction side (left); beevac close up of side connecting to a shop vac (right)

- **HOW TO LURE A SWARM**

- Some times swarms that you put into a hive may take off
- BUT, swarms that move in of their own accord are not likely to take off
- Tom Seely had done a lot of research on this. He says swarms prefer a hive that is 10-18 gallons in size (two stacked nucs, or 1 deep) - if too heavy consider a cardboard lure hive. They prefer a 2 inch entrance at bottom.
- Label the bait hive so it does not get taken

- LOCATION – ideal is 10-15 feet up, but need to figure out what elevation you are comfortable with
- Make sure its level
- Make sure its near a landmark – like a big rock, fork in a tree, trees near a meadow
- **John C – uses a burlap used for filtering wax and hanging in tree – it is a good way to attractant as a temporary location, then put the swarm into hive. John prefers centrifuge vial lure that can be stuck into comb wax – put in queen juice (queen in everclear with lemongrass and geronol)**
- Near decent forage
- REUSE SUCCESSFUL SITES!
- When to put a bait hive out – this is about the hive. When you see your hive building queen cups, when you see purple-eyed capped brood
- Bait hives are more attractive to swarms on a flow
- Include a LURE:
 - Old timers put old dead queens in a jar of alcohol. (Put old queen in freezer to euthanize, then put in jar of alcohol)
 - You can also buy synthetic queen pheromone
 - Nasonov pheromone can also be used as lure – this pheromone smells like lemongrass (citrol) and geraniums (geronol). There are lots of recipes for lures using essential oil



- “Swarm commander” – made by a guy in South Carolina, mimics nasonov pheromone (directions say apply every two weeks). Sue says this works.
- Dip the q-tip in pheromone sticking out of baggy with the pheromone – then staple to back of hive
- REMEMBER – **not too much** or bees will not like it. Just use a few drops
- Include some wax and propolis and rub in hive or use an old hive

- **AFTER COLLECTING A SWARM and OTHER THOUGHTS**
 - If you don't want more bees to return to that location (usually a homeowner not into bees)
 - If you enter a house – then you need a pest control license. If you charge, you may also need a business license.
- **Majority of beekeepers want to prevent swarms to ensure they don't end up in their neighbors yard**
- Sue would like to see a map on our website to track locations where swarms are captured
- **If you want to be on swarm list:**
 - Mike has swarm list for North county – talk to them to get on list
 - Bruce has swarm list for South County
- There are other swarm lists – State Beekeepers Association, etc.
- What does Sue do with her swarms? She is looking for the perfect queen – but usually she does not find them to be so good compared to breed queens.

CLUB BUSINESS

Member dues:

- Please pay – this year paying members will get a permanent name badge

Meeting Calendar:

- Anna has handed out a tentative calendar for the year with an earlier November meeting to avoid the holidays
- SLO meeting will be at SLO Grange (“SLO GUILD”)
- **NEXT MEETING: March 20 – at SLO Guild**

Networking

Communications Report

- Cynthia not in attendance tonight

Education

Public Awareness – which events do we want to support?

List of events CCBA has decided to participate in for 2017:

- Conservation Celebration, April
- Cambria Bee Faire, May
- Pollination Celebration (SLO), June
- Golden Oak Honey Festival (Paso Robles), October

Other items:

HIVE RAFFLE – John is raffling a live nuc hive for the club on March 15. Tickets are \$5.

Call John C

Adjourned: 8:20 pm