

The Managed Mentoring Program on getting started in beekeeping.

Managed Mentoring



Managed Mentoring

Robbing Behavior

Lesson | Robbing



What is Covered in this Module

Foraging Behaviors

Robbing Catalysts

Robbing Events

Robbing vs. Orientation Flights

Robbing Prevention

Mitigating a Robbing Event

Robbing Signs

Robbing Behavior Insights



Conventional Foraging

Natural Foraging

- Foragers will leave the hive in search of resources
 - Conventionally that means plant materials and water: Nectar, Pollen, Propolis and Water
 - Bees also forage for other materials that they bring back to the colony and/or ingest along the way.
 - You might see them in wood materials for pulp, in mud seeking minerals, scavenging bird feeders for various particles and so on.
 - One form of foraging is the taking in of cast offs from insects. Insects consume something and excrete it out the other end as a sugary substance
 - □ Aphid Forest Honey, Lanternfly Honey, and other examples are prevalent



Alternative Foraging

Opportunistic foraging

- Sometimes content is presented through circumstances
 - Factories that make sugary goods, County Fairs, and other man made event present opportunity for bees to find sugar based solutions to harvest
- Robbing Other colonies
 - Colonies that do not survive in the wild; Colonies that are weak and subject to attack when resources are scarce.
 - Bees will attack other colonies and take them over to get their resources



Robbing

Susceptibility

- A normal colony is typically safe from other colonies
 - European honeybees have developed behaviors where guards are posted that prevent other predators, including foreign honeybees, from making entrance for raiding resources
 - If one maintains a strong colony, then typically the colony can defend from robbing
- Weaknesses present opportunities
 - If a colony is not balance in contrast to the other bees in the ecosystem, then it can present as a target

Robbing:

Opportunistic foraging behavior of honeybees taking resources from other colonies



Expanding upon Weaknesses

□ Weak Hives

• If a colony has a small population in contrast to competitors, it may not be able to muster enough of a defense to protect itself

□ Size Mismatches

- If one hosts large full size colonies alongside smaller form factors,
 Nucs for example, this can lead to problems
 - Even a full sized, well staff Nuc may find problems protecting itself in an extreme onslaught of a better manned attacker



Intense Foraging Pressures

Sometimes conditions will encourage robbing

 Lean seasons, during a dearth for example, will result in an uptick in aggression for opportunistic foraging

Artificial Stimulation

- It is more than a suggestion that open feeding gives a taste for forager exploration
 - Many times, beekeepers notice that if food is provided in the area, bees will somehow exhibit a penchant for searching far and wide for more, including probing other hives in the area

Consider the practice of setting harvested honey supers out for bees to clean up



Varroa Transference

□ Connection of Robbing and Varroa

- Sometimes colonies succumb to pressures of varroa
 - They either dwindle due to impacts, or abscond outright
- Opportunistic foragers will find week hives and raid them
 - As they are in collecting the resources, they can pick up any errant varroa in the colony and bring them back to the host colony
- Beekeepers need to be on watch in late summer and through fall
 - Sometimes neighborhood hives collapse later in the year and colonies that were clean are suddenly laden with mites late in the fall



Robbing vs. Normal Forager Activity

What happens during a Robbing Event?

- Foragers look to raid resources through force entry
 - In a normal arrival of a friendly forager, the bee will land on the entrance of the hive and walk into the entrance
 - □ During the entry, the bee would be inspected either directly or indirectly
 - Sometimes guards physically encounter the bees, other times they may respond to the odor of the bee and come to alarm.
 - One of the key clues to detect a friendly bee is scent. Do they smell like other bees in the colony? Or, sometimes, if they are carrying a bounty they will be let through
 - □ If they do not match the scent of the colony, or they are a foreign entity (wasp, or other predator for example) they will be challenged



Robbing vs. Normal Forager Activity (cont.)

□ Forced Entry

- Land and Scuffle, Dart Past the guards, or Full Onslaught
 - On some occasions a robber will simply land and try to walk in.
 - A more common approach is an attacker looking to dart directly into the entrance, and bypass any guards
 - □ Typically once a bee gets past the guard they bully their way into the resource, raid it, and take their bounty back out to their destination
 - In extreme situations, a large compilation of bees will simply attack all at once and overrun any colony defenses, in a an all out barrage



Confusion: Robbing vs. Orientation

Sometimes it can be confusing

- Robbing Bee Flight Behavior vs. Orientation Flights
 - Both present as a lot of bees flying around the entrance in an unusual fashion
 - Sometimes it is hard to discern which type of activity is going on, but with some more precise evaluation, you can often tell the difference
 - Robbing is more assertive
 - Robbing bees move like a prize-fighter. They bob and weave in more direct lines and can often be seen dart toward the entrance to bypass guards.
 - They inspect for weaknesses. Bees will be looking all around at seams, under the lid, seeking cracks or weaknesses to bypass security
 - □ Orientation flights never involve bees tussling at the entrance



Confusion: Robbing vs. Orientation (cont.)

Orientation

- Timing and Circumstance
 - Orientation flights, are more purposeful: bees flying in circles taking in the surroundings and the hive and not assertive in any way
 - □ One thing to keep in mind about Orientation is that it is based on new bees coming out and inspecting the landscape.
 - □ It happens usual at certain times of the day, and when the colony is rearing bees in earnest
 - If at the time a robbing event is going on, use the knowledge above to think about normal orientation. Consider if the event being witnessed falls in line with what is a periodic orientation activity or is it out of character?





Protection Against Robbing

□ Primary Defense

- Make the entrance defensible
 - The number one tactic is to close the entrance down to slow the possibility of a colony being overtaken and give the guards a fighting chance
 - Closing down the entrance is a first-best-action. Use an entrance reducer
- Consider Robber Screens in times where risk is high
 - Devices have been devised to alter the entrance design of colonies to provide even further defense





Robber Screens

Video of Simple Robber Screen in Action



□ Simple to Complex Designs

- Bee Catalogs and Internet Designs abound
 - Some are simple, and others are quite sophisticated. It is personal prefence on how you might want to employ tactics to deal with this
- Design Features
 - One key tactic of many designs is to alter the path to entry; blocking off the normal entry.
 - □ The colony learns quickly the alternative path while robber bees are thwarted when they try to dart into the hive through a barrier.
 - Some guards provide the ability to fully close off a colony if needed



Avoiding Enticements

□ Setting off Inadvertent Robbing

- Beekeepers should avoid needlessly enticing the bees
 - Use care when performing hive inspections that you do not leave resources out that could start a robbing event
 - Leaving frames unattended, spilling honey, and other items could set off events that stir robbing impulses
 - Open feeding in any form
 - □ A key aspect to open feeding, if you are going to practice it at all, is to present any resources at a distance where it presents as 'just another forage source'.
 - ☐ There is not enough information to give specifics about how to do with any assurance and as a new beekeeper you might want to simply avoid the practice altogether.



Encountering Events (Live)

□ From a small skirmish to a massive event

- Robbing comes in several forms
 - Sometimes you might see a small contingent of bees trying to break through the entrance
 - Other times it can scale up to a full-on skirmish
 - □ There will be a super aggressive mass of bees flying at the colony, bees will be boiling off the entrance falling to the ground, bees fighting everywhere and a lot of tension in the air.
- In either case solving the problem comes from denying entry
 - Solutions include Entrance reducers to more aggressive direct interactions





Mitigation

□ Denying Entry – Correcting Root Causes

- Small Scale: Entrance reducers
 - Employ entrance reducers or robber guards and make the entrance defensible.
 Close off any cracks and eliminate any possible enticements as covered earlier
- Massive Attacks: Two Tactics

Be sure to put on a full bee suit!

- Bed Sheet
 - □ Employ an old white bed sheet. Wet it down and drape it over the full stack of boxes
 - This disorients the bees as they cannot see ways to attack
- Setup a sprinkler over the hive(s) being robbed
 - □ This mock rain event will thwart bees trying to fly in the vicinity and break up the event



Relocate?

- □ Consider spreading hives apart from each other
 - Hives can be spaced farther apart to make them less of a target
- Close down and relocate
 - Any hives that have small colonies or are in vicinity of bigger hives
 - A large colony sitting next to a small colony is a form of enticement sometimes
 - Hives in risk should be given protection for defense, and you should also truly consider moving them away from potential threats
 - Move Nuc boxes, boxes with small to moderate colony sizes, or small singlechamber boxes to another location or even across the property



Robbing Signs

□ Shredded Comb

- When bees rob honeycomb, especially capped honey...
 - They tear at the cappings, leaving flakes and debris everywhere. They ravage the comb

Off Season Robbing

- Another form of robbing: Colonies robbed after winter losses
 - A hive that dies in winter is going to be a source of early season forage for opportunistic foragers. Bees will smell the hive, test it, and if they find it open, they will raid it of its stores.



Robbing Signs (cont.)

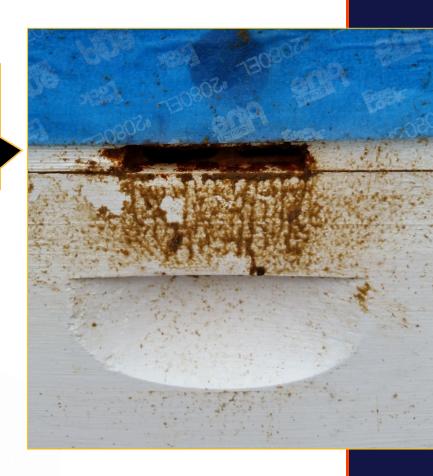
Often a sign that is discovered post a robbing event

□ Robbing Stains

- Bees tracking through opened honey during robbing pursuits will track honey all the way out
 - They often leave telltale 'robbing tracks' on the entrance – especially if a colony has an upper entrance

□ Exodus: Fleeing an opened box

• Bees will often scurry up and out of honeycombs when you take off the inner cover; this is a sign of robbers fleeing the scene





Old School Wisdom

□ It is said that....Flush bees do not rob

- When hives are well provisioned, and have large caches of reserves, they are less apt to go on a robbing spree
- When there is a scarcity and hives are in need, they will work harder at foraging
- Keep your colonies flush in summer and well provisioned
 - Especially if there is a dearth in your area



Robbing Risk

□ New Beekeepers; Do not Fret

- If you have two hives in the yard, it is not likely to result in a robbing event
 - Risk of Bullies: It is also not that common for neighborhood hives to come in and raid colonies unless there are weaknesses that can be exploited
- Robbing risk goes up with more hives in proximity to each other
 - When there are many hives in contact with each other, and there are mix of colonies in different stages of development – it ups the risk of robbing



Robbing Summation

- □ Strong health colonies protect themselves
- Smaller, or weak colonies, should be guarded
 - Take protective measures to protect smaller developing colonies
- Watch for events and act as directed
 - Maybe not so pragmatic
 - This is a hard thing to say as we do not watch our bees 24x7. More akin to if you witness something have a plan ready and take appropriate action



Closing Comments

Customary Close

- Where we stand, where we are going...
 - This lesson covered the basics of Robbing Events
 - Our next lessons set the stage for some fall activities:
 - Being on watch for Mite infestations in Fall
 - Propping up any weak hives
 - And understanding why we would collapse hive to small footprints for winter



Q&A

What Questions did we not anticipate?

- If you have feedback, you can leave a constructive comment; but be nice.
- You could also send an email to <u>comments@managedmentoring.com</u>
 - Please refer to this video in the subject so we know what the reference is.



