Robbing and Drifting

According to David Evans (The Apiarist) '4 out of every 10 workers may well have been reared in another hive'! This seems astonishingly large, but none the less it is well accepted that honey bees migrate between colonies aggressively (robbing) and non-aggressively (drifting). Both forms have the potential to transmit disease. It is worth noting that while drones do not rob, they drift with unrestrained enthusiasm and can therefore still spread disease between colonies. This month's bulletin focuses on robbing and drifting by honey bees. Robbing by other insects doesn't usually cause disease and will not be discussed.

Robbing

Robbing occurs when honey bees use another colony as a source of forage – nectar, honey or sugar syrup. They don't generally rob for pollen, but there are anecdotal reports of bees collecting wax and propolis from other colonies. The robber bees are foragers who communicate the source of easy forage via the round dance if the colony to be robbed is in the same apiary, or waggle dance if further afield.

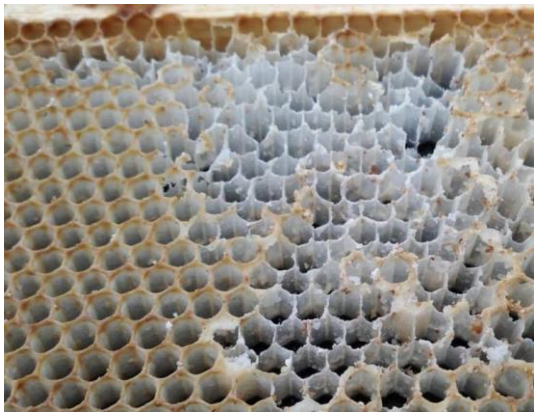
Robbing is less likely to occur when there is a nectar flow on, but at the abrupt end of a flow there will be more brood and bees as the queen will have been stimulated to lay, and so alternative sources of forage are sought. Periods of a dearth of forage (the June gap is a typical example) also promote robbing. Poor practice by the beekeeper such as feeding during the day can also initiate robbing. Weak colonies have fewer guard bees which makes them vulnerable to robber bees.

Recognising Robbing

- More bees at the hive entrance than you might expect.
- Robber bees approach the hive entrance in a zig zag flight pattern. On leaving the hive, because the honey crop is full, they dip down slightly when they take off. They may also crawl up the outside of the hive wall first. Bees with a full honey crop tuck their hind legs in and so bees leaving the hive in this position are robbers (good luck spotting this!).
- You may see fighting at the entrance.

Guard bees fighting off an intruder (Perfect Bee)

- Guard bees have a typical stance on mid and hind legs with forelegs stretched out and antennae forward. Mandibles may be open. Guarding is inversely related to nectar availability – as nectar availability increases the activity of guard bees decreases.
- There may be wax cappings under the mesh floor.
- Capped honey has the capping ripped off and the edges will be untidy.



Irregular cell edges suggestive of robbing (Bee Informed Partnership)

What to do

- Reduce the entrance of the colony being robbed.
- Try plugging the entrance loosely with grass – the bees being robbed will be able to get out but it may deter the robbers.
- Place a glass sheet in front of the colony being robbed. Again, the colony being robbed will find their way around the glass but the robbers will have difficulty entering.
- If all else fails remove the colony being robbed. It is suggested to put a small amount of sugar syrup on the now vacant site. The reason for this is that honeybees work a source of forage until it is done. Once the sugar syrup has been consumed the bees will stop robbing.

How to Prevent Robbing

- Keep strong queen right colonies.
- Weekly inspections should be done quickly – especially during a nectar dearth.
- Don't leave frames outside in the apiary.
- Always keep supers covered with the crown board when inspecting the brood box
- You may read about using cover cloths over the brood frames not being inspected but, unless you have a different one for each colony, these have the potential to spread disease.

- Inspect one colony at a time.
- Don't spill sugar syrup when feeding.
- Feed colonies in the evening. Take very good care when feeding – you are most likely to feed during a dearth of nectar or after the main nectar flow when supers have been removed – i.e. at times when robbing is most likely.
- If you know you have a weak colony move it somewhere else if at all possible.
- If giving wet supers back to the bees to clean after extraction, give them back to the colony they came from.

Drifting

Drifting occurs when returning foragers enter the wrong hive in error. They will have a different colony odour and be challenged by a guard bee but as the forager thinks she is in the right hive she will usually adopt a submissive posture and be allowed in – especially if she is carrying nectar or pollen. When challenged the forager offers food and puts her head down, or rears up on her hind legs, extends her proboscis and strops it against her front legs. There is no aggression and no attempt to sting. Returning drones are accepted into any hive without challenge. Drifting is an innocent mistake but can still spread disease.

How to Prevent Drifting

- Paint the hive entrances different colours (don't use red – it's not on the honey bee colour spectrum).
- Have distinctive landmarks near hives.
- Face the hive entrances in different directions.
- Have at least 1.5m between hives.
- If you are short on space you can use pallets to stack 4 hives with each entrance facing a different direction

Robbing, Drifting and Disease

Colonies with a high varroa infestation can increase the mite population in neighbouring colonies by drifting and robbing. Workers infested with mites from severely affected colonies may drift into neighbouring colonies. Conversely, mite free workers from strong colonies will rob colonies weakened by varroa. It's recommended that when treating for varroa, all colonies in the apiary are treated at the same time as, even if you space your colonies far apart, mite transfer will still occur to some extent. This should probably be extended to neighbouring apiaries treating at the same time as mite transmission can occur between colonies in apiaries 1.5km apart.

Varroa mites (Bee Culture)

American Foulbrood is more likely to be spread by robbing of weak affected colonies and European Foulbrood is said to be more likely to be spread by drifting, although severely affected colonies may be robbed.

Sacbrood is a common viral disease affecting brood which is then unable to shed its final larval skin and forms the classical gondola or Chinese slipper shape. The spread between colonies is mainly by robbing. It can also be spread by drifting, but to a lesser degree.

Sacbrood

The fungal infection chalkbrood is highly infectious and the spores produced can stick to everything (including adult bees and your hive tool). Therefore spread between colonies by robbing and drifting can easily occur.
Maintaining strong healthy colonies will help to prevent spread of disease. Strong colonies will not be robbed and, while you do what you can to mitigate against drifting of foragers, drones will always drift- but if they are not carrying disease then this will not cause a problem.

The Bee Healthy Team
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Email the Bee Health Team. We would love to know about any topics you would like covered in future Bee Healthy bulletins.
You can read previous bulletins and find useful links on the DSBA Bee Healthy web page.
Remember the DSBA Mentoring Team can be contacted via the 'Members Only' section of the website for further advice.