

Swarm Management

Petersfield (Nov 2022)



Supporting Slides



Swarming – Role of Nurse Bees

- ❖ G. Ferdinand Gerstung (d.1925): excess of nurse bees leading to surplus of royal jelly → production of QCs
 - ❖ Snelgrove agreed with Gerstung with some reservations
 - ❖ Brother Adam: Gerstung's theory "...only satisfactory explanation of triggering of swarm impulse...". Bro. Adam regarded Lack of Room, Insufficient Ventilation and Congestion in the Brood Chamber as secondary influences.
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Swarming – Taming the behaviour

- ❖ From the above, the ingredients for managing swarm behaviour boil down to –
 - ❖ managing space effectively
 - ❖ physically splitting the colony
 - ❖ interfering with the queen

❖ So ...

Prevention – Before Trigger Event

- ❖ During Colony build-up (9/10 national frames)
 - ❖ Split colony into two
 - ❖ Use modified Artificial Swarm methods
 - ❖ Benefits
 - ❖ Seamless management
 - ❖ Yields stock of new queens
 - ❖ Similar to shook swarm
 - ❖ Helps with disease control
 - ❖ Invigorates colony
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Prevention – Two Nucs

- ❖ Give each a QC (preferably open)
- ❖ Place away from parent
- ❖ Leave to emerge and mate

Prevention – June

- ❖ After Spring flow
 - ❖ Strong Colonies – remove brood frames
 - ❖ Use to balance colonies to, say 7 frames
 - ❖ Or use to reinforce nucs

Management – Swarm Preparations in Hand

- ❖ The unthinkable happens –
 - ❖ Artificial Swarm
 - ❖ TIP - Bee farmer approach
 - ❖ Use bait hives at each apiary
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Management – Swarm Preparations in Hand

- ❖ Two options open
 - ❖ 1. Convince colony that it has swarmed
 - ❖ Artificial Swarm, e.g. Pagden Method
 - ❖ 2. Remove viable queen
 - ❖ Queen clipping
 - ❖ Out apiary – simple approach
 - ❖ Bee farmer approach
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Viabile Queen

- ❖ **Queen Clipping** – in this case you are allowing that the colony may swarm. The queen is unable to fly and will land on the ground not far from the entrance. Unable to complete the swarming, nearly all the bees will return to the hive. BUT if you don't visit in a timely manner to spot what has happened:
 - ❖ You may lose queen
 - ❖ Must reduce QCs in the parent colony to one else may throw casts
 - ❖ **Simple approach** – place queen in Nuc box with two frames of brood (minus any QC s) and food frame, fill with foundation. Move away from parent hive. Knock down all but one QC in parent hive. Replace removed frames with foundation and close up. (Can end up with lots of smaller colonies!)
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Viabile Queen – pt2

- ❖ **Bee farmer approach** – place queen in Nuc box on single frame of brood (minus all QCs). Close up and place next to parent hive. Knock down ALL QCs in parent. At next inspection (seven days) knock down all QCs in the parent hive. Then take the queen on frame from Nuc and place in the middle of brood in the parent colony – use plenty of smoke first to disorientate the colony. Shake in rest of bees from Nuc. Take away Nuc. Close up hive and leave

Bait Hives

- ❖ Best some distance away from the main hives. Place several feet off ground
 - ❖ Don't fill with frames (unless going on holiday)
 - ❖ Have at least one frame of old comb (but no food!)
 - ❖ Scouts going in and out suggest swarming in prep – your bees or someone else's!
 - ❖ When many bees flying in and out, fill box with foundation.
 - ❖ Treat as you would a collected swarm – don't feed for 48 hours
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Artificial Swarm – Pagden Method

- ❖ Second complete hive with frames of foundation. Extra Queen Excluder
 - ❖ Old colony moved aside (3 feet and slightly behind) and replaced with new hive (QX on floor).
 - ❖ Queen placed on frame of sealed brood in new hive, any QCs on that frame are knocked down. Any supers are placed on new hive and hive closed up.
 - ❖ Old hive inspected and one QC left, rest are knocked down.
 - ❖ Next action depends....
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Artificial Swarm – Pagden Method Pt 2

- ❖ If the QC is SEALED then old hive should be closed up and moved to its new site.
 - ❖ If the QC is OPEN then close up the hive and wait until next inspection (seven days) at which point, move it to its new permanent position. This will re-inforce the new hive colony with flyers.
 - ❖ At next inspection remove QX from underneath brood box of the new hive (on old stand)
 - ❖ This should stop the swarming behaviour and create two strong colonies for you.
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Artificial Swarm - Demarre Method – pt1

- ❖ NEEDS: Second brood box with complete set of frames and foundation. A second QX and a splitter board. Extra super maybe needed.
 - ❖ Old brood box moved to one side and replaced with new brood box of foundation (less one frame) with QX on floor.
 - ❖ Queen placed on frame of sealed brood in new brood box (any QCs on that frame are knocked down.) Supers are next placed above QX over new brood box.
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Artificial Swarm - Demarre Method – pt2

- ❖ Splitter board placed on top of supers
- ❖ Cull all but one QC in old brood box before placing on top of splitter board.
- ❖ Close up hive

Splitter Boards

- ❖ Plethora of choices – some examples are:
 - ❖ Simple – a modified crown board where feeder holes are covered and an entrance is cut in the side baton
 - ❖ Snelgrove – probably the most elegant
 - ❖ Horsley – Yorkshire design
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Picking the RIGHT QC

- ❖ An open QC for preference. This will have been raised from an egg and usually produces better queens than QCs raised from larvae,
- ❖ If no open QC, then choose one that is not in too exposed a position, and not one of a tight clump.
- ❖ Choose one that “looks good” – well shaped and no sign of damage.