BeeZeen – “Lockdown” Summer 2020 😷

Welcome to Westerham Beekeepers' early summer BeeZeen, for a canter around local beekeeping (and some rubbish quips).

It’s been a “swarm-tastic” start to the season. Lockdown and “working from home” has allowed us to see the true real–time swarming adventures of what the bees get up to during the week. Thank goodness the weather has been wonderful.

In this edition, we look at:-

> Why we get caught out by cast swarms
> Honey analysis (which flowers have your bees visited?)
> Varroa resistant bees – found ‘em
> Beekeeper of the Moment (prize winning newish feature)
> Top tips (triple high for the pyrotechnics)

Why we get caught out with cast swarms

These are annoying.

Satisfied to the point of almost smugness, you have carried out an artificial swarm on your “want-away” bees and rehoused them into new hive. Back at the parent colony, queen cells are reduced back to 1 open one. Job done…..

Ughh!? Loud buzzing noise in the garden, bees whirring around spiralling ever higher. Then settling in a tree just out of reach. Expletives pour forth.

<u>What’s going on here?</u>

When bees swarm, they leave a large number of queen cells capable of developing into a replacement queen. Insurance to ensure survival of the colony. This can be 10-15 in number. So after you have initially reduced the queen cells to 1 open one, they have a further & cunning back-up plan for themselves. This involves producing more queen cells from larvae which were originally designed to be workers, as soon as the beekeeper isn’t looking.

The diagram below illustrates what’s going and what to do.

1) Mark the frame with the chosen open queen cell
2) Shake all bees off the other frames to check for further queen cells and take these down (or pop them into nucs with a frame of nurse bees and stores)

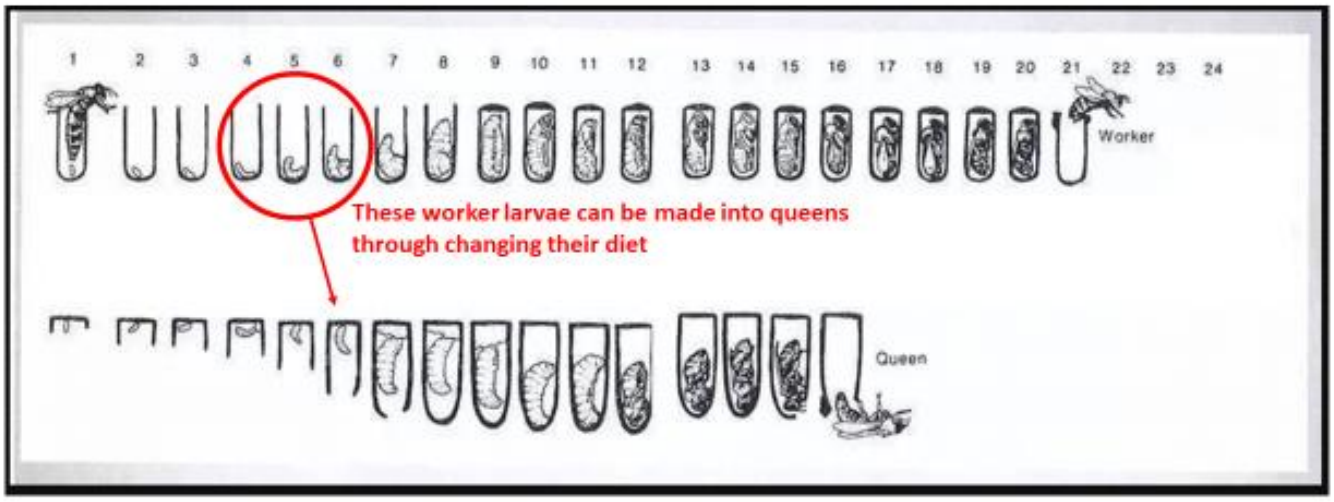
3) In 6+ days time, go back in and check that NO MORE QUEEN CELLS HAVE BEEN MADE

Why 6 days?

Because larvae, designed to become worker bees, can be made into queens. But after 6 days, they can't, as the larvae is destined to be a worker and too late to change.

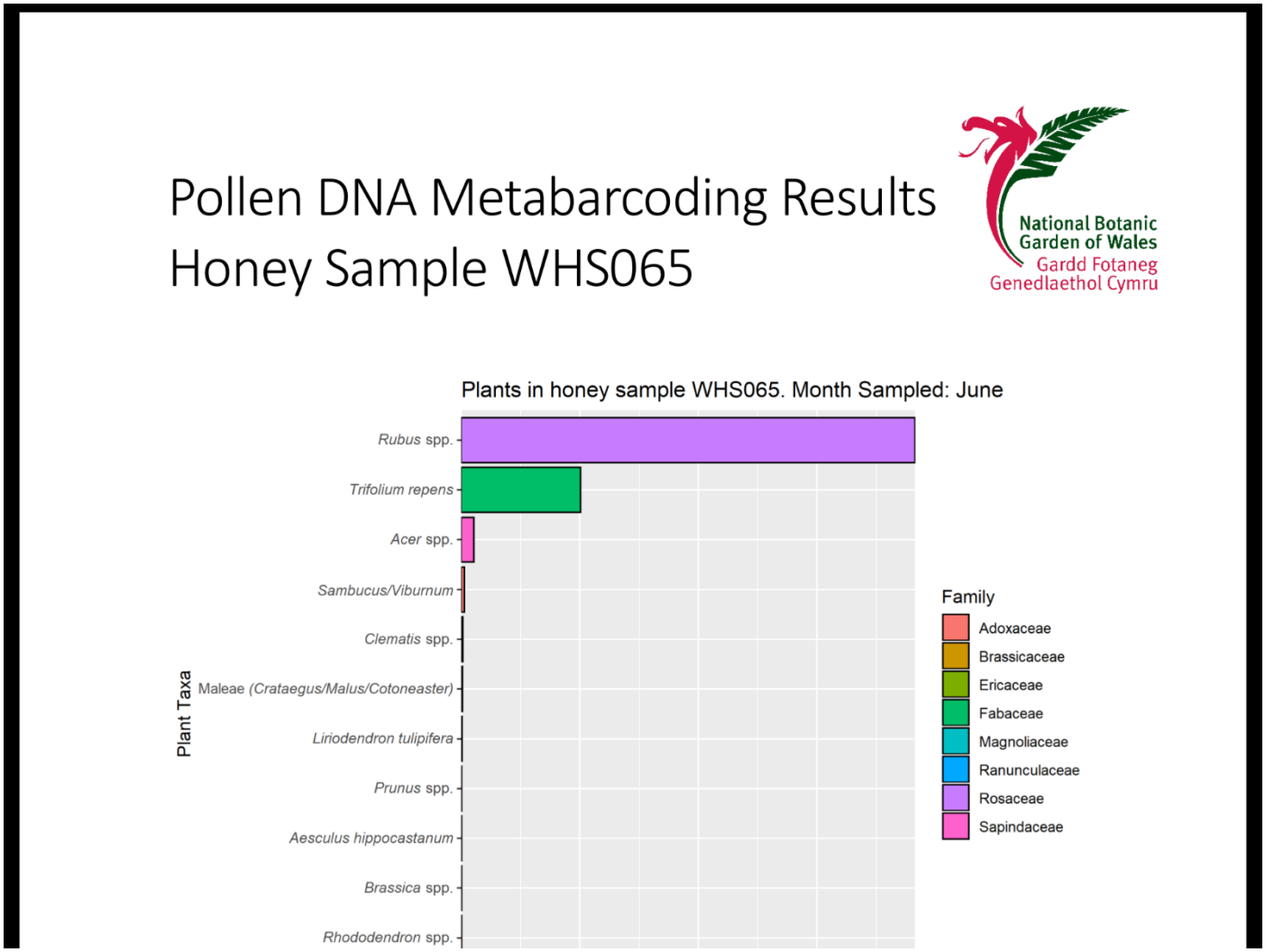
How can bees change the destiny of a larvae?

Worker larvae can become queens from being fed an extra rich diet of royal jelly, which changes their physiological development. Clever. But annoying to the beekeeper.



Honey analysis of pollen (melissopalynology) - which flowers did your bees visit?

Last summer, the National Botanic Garden of Wales offered free analysis of pollen in honey samples. A few Westerham members took advantage of this and here is the analysis from Topsy's bees of where they were foraging last June.



Much despised by gardeners for their deep roots and thorny protection, brambles (*Rubus spp*) are a core part of our bees' summer diet, providing both nectar and pollen. The honey tends to be a light yellow and dominated by fructose sugars, so is super sweet and crystallises very slowly. It'll be in full flower soon.

White clover (*Trifolium repens*) was next, often found in large grassy areas. Then odds n sods.

Chemical free beekeeping

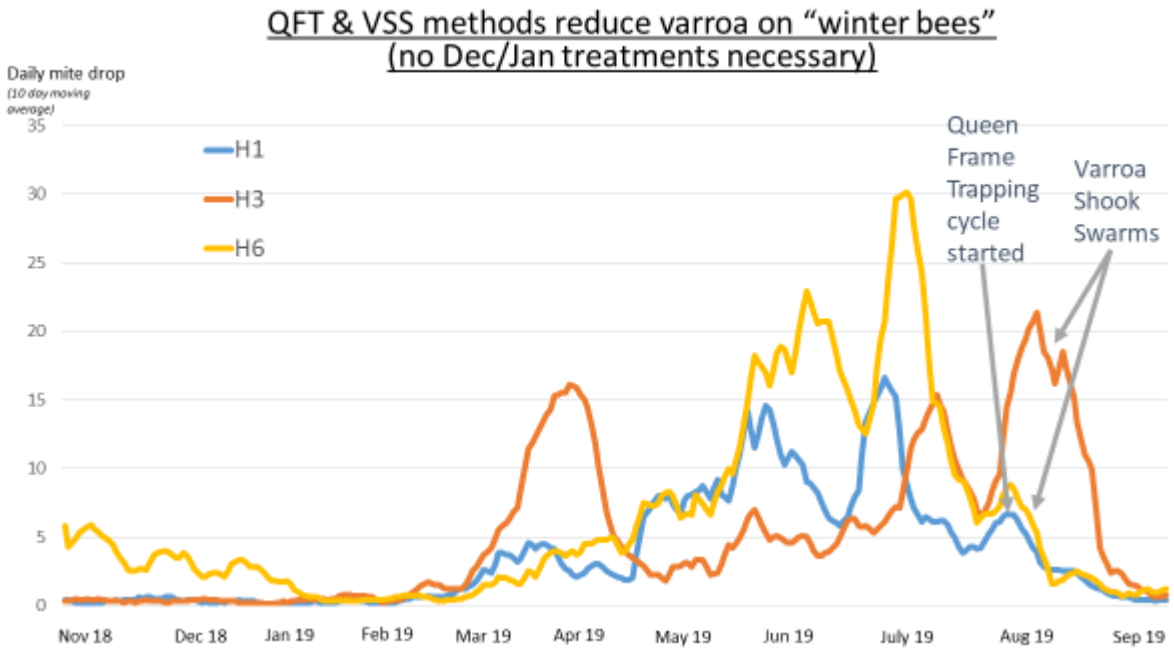
Growing numbers of Westerham Beekeepers are using chemical free methods to reduce varroa. We are probably the leading Beekeeping Association in England for that.

The key time to reduce mite numbers is ahead of the winter bees being laid, which starts from July / August. These winter bees need to last 6 months for the colony to survive winter. Yep, you heard the word "Winter" before the end of May!! The bees start their winter prep early.

We have used Queen Frame Traps (July start) and Varroa Shook Swarms (August start) to reduce mites which are very effective. These methods replace both the summer and winter chemical treatments on the bees.

More details on our website: https://westerham.kbka.org.uk/treatment-free-methods/

The first graph shows the daily mite drop reduction when these techniques are deployed.



Last winter, some colonies were allowed though winter WITHOUT ANY VARROA REDUCTION FROM THE BEEKEEPER. It is the only way to find if your bees are adapting with varroa. Results below…… which amazed us.

Westerham colonies over-wintering 2019/20
without beekeeper intervention to reduce varroa

(no chemical treatment or biotechnical techniques eg; queen frame traps)

Beekeeper	Colonies over-wintered	Queen sources	How long bred from these bees?	Original source of bees
K	8 /10	Own stock	3 years	Training Apiary + local
T	1 /1	Own stock	3 years	Local beek
J	3 /3	Own stock	4 years	Training Apiary
A	2 /2	Own stock	4 years	Swarm
M	4 /5	Own stock	4 years	Training Apiary
AR	4 /5	Own stock	5 years	Local beek
S	9 /9	Own stock	6 years	Local swarm
TA	2 /2	Own stock	10+ years	Training Apiary
Total	33 /37			

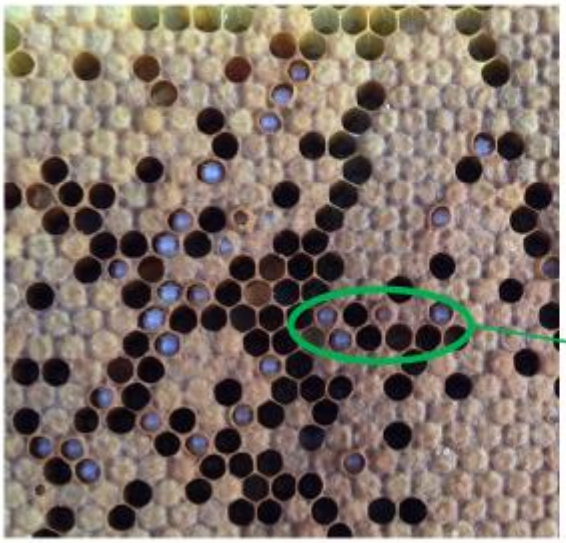
- Local queens
- Locally adapted bees
- Locally co-adapted mites?

Westerham Beekeepers

Our analysis showed that only 2 of the winter losses were from varroa. We have to conclude that background adaption between our bees and mites has/is occurring. We now can be more confident about breeding hygienic bees.

Hygienic behaviour: During inspections, a key trait to look for is “uncapping” of worker cells, where bees open cells to stop varroa breeding (pic below). Eyes peeled!

Hygienic behaviour – uncapping infested cells



- Uncapping cells changes the temperature and humidity in the cell
  - inhibits the maturation of the mite
  - stops reproduction

“Pale-eyed” stage of pupae development

Ref: Panziera 2017

Beekeeper of the Moment

This BeeZeen feature highlights some of the activities of our members. There's prizes to win!

This edition's prize is dominated by heroic efforts with swarms…….

An "Honourable Mention" goes to David Garwood, a first season Westerham Beekeeper dealing with an active swarm season in his garden apiary, whilst trying to calm family and neighbours. During the melee, David recounted:

" to reassure my neighbour, after I'd captured them (swarm of bees threatening to kill the neighbours), I took off my veil and acted 'a bit nonch' and got stung on the head (my neighbour didn't notice)……. I cried later!"

True bravery – hats (?) off to David.

Drumroll……

The Summer BeeZeen "Beekeeper of the Moment" goes to……. John Metcalfe.

This is John's first full season and already his "treatment free" apiary is looking over populated with boxes and nucs!

His bees have been active in the swarm department from late April onwards. On one red letter swarmy day in May, which caught the judges' attention, the timetable was something like this:

1100 Colony swarmed up the cherry tree

1130 Fetched ladder & capture box. Suiting up when…..

1200 Colony returned to hive. Phew!

1451 Same colony swarms up apple tree.

1515 Stung on chin getting them down (veil too close to face)

1900 Neck went Mr Blobby - ouch

Congratulations to John – a much sought after German Plunger (queen marker cage) is winging its way to you.

Top tips (a pyrotechnics special)

<u>Smoker salute</u>

There are a few things in beekeeping that can get you locked up – here's another. The "Smoker Salute" - keeps the smoke out of your eyes whilst you rev up the furnace and get the smoker going. By all means, shout out something controversial at the same time.

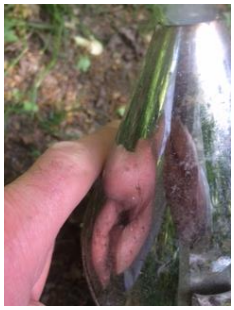
Loo role burn up

Another one for the pyrotechnics who enjoy the fires more than the bees. Stuff the used loo role with twiggy bits and stand it up in the smoker. The oxygen between the twigs keeps them burning brightly and the smoker rarely goes out. More of a "bottom", than a top tip. *(Ed: Get your coat)*

(Credit to Jacky, our Training Apiary Manager for this one)

Calming a sting

Having flicked out a sting, hold the smoker nozzle onto the sting area. The heat denatures the proteins in the venom and reduces the impact (*credit to Topsy*). Then smoke the area of the sting to mask alarm pheromones. This works for hands, but don't do it if stung around the face……..



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Keep safe everyone

Do ask for help if needed

And join us on the:-

- Westerham Training Apiary facebook site and follow the action:

  https://www.facebook.com/groups/688146028031698/

- Westerham Beeks WhatsApp group (email: Kim Macleod: k.bash@virginmedia.com)
- Or fortnightly Sunday live Webex meetings (next 31st May)

Steve Riley 👮🏻

Education Officer

Westerham Beekeepers