Medway Beekeepers Association

MBKA

Since 1923

Celebrating over 95 years of support for beekeeping and beekeepers in and around the Medway Towns

WHATSTHEBUZZ

May 2021

Hello to May, to the start of spring, and to you all!

Writing in mid-April, we still have a chilly north wind keeping temperatures lower than we would like to do proper inspections. I lived on the west until a few years ago, and I still haven't got used to this east coast chill. Were it not for the rain, beekeepers in the west would have it all.

There's a lot of beekeeping to do in the coming weeks! On Bob Smith's Introductory Course, I remember being told that swarm control was the central role of the beekeeper. Well, the time for that central role is here – or it would have been be if it weren't for the cold. We have to choose if we'll be using splits with nucs, or a Pagden / vertical split, or a Demaree. Are we going to be proactive or wait till we see swarm cells (reactive)? Available equipment may help us decide that. Some of us are in the Association queen-rearing group. So many options there too. To some extent, we might be able to combine the queen-rearing and swarm control. Have we checked recently for varroa? And maybe a proper spring brood disease inspection has still to be ticked off because of the past weeks of cold air.

Hopefully, on the days when we have been able to look at frames, we'll have seen evidence of the queen laying strongly, drones emerged, and the colony building up well. Queen cells will be appearing. Perhaps an older queen is being superseded, perhaps she has suddenly disappeared, or perhaps the bees are waiting to seal a cell, knowing that, with a virgin queen on the way, they can now swarm with the old queen to a new home. A new queen will only be at the larval stage for five days before the cell is sealed. The beekeeper might miss the preparation and even the swarming itself.

Outside the hive, the forage is so abundant – even if the nectar flow might have been affected by low temperatures. In this locality there is already so much cherry (and blackthorn), hawthorn, and maple, with horse chestnut, sycamore, holly, field bean, raspberry, and the bluebells just around the corner. But in spring, the busiest areas for foraging are water sources, especially damp compost.

In this issue

From our chairman

John Chapman, our chairman, speaks to the members each month, sometimes about the Association, sometimes about the bees. This month, he gives an update on the Association Apiary – the one at Cliffe, not City Way!

WHATSTHEBUZZ Tell us about the new apiary project.

John Chapman The new apiary is out at Cliffe, where there used to be a cricket pavilion. The idea is that we should have a teaching apiary site up there and move the bees from City Way. As we're coming out of lockdown, now is a good time to get the project started again. Mark Ballard suggested to me that we should get work parties organised again. Before the first lockdown we made a request for volunteers. Because of the pandemic, we didn't get beyond that. But now we are asking again for people to volunteer. Even if they offered to help before, we'd like to know if they're still willing to take part. Then Mark and Sonia can work out a rota.

WTB What are the jobs that need doing?

JC Things like decorating the inside of the pavilion; removing old carpeting; clearing away a lot of wood and rubbish from around the place. We want to put in a hedge along the edge of a drainage ditch as a windbreak. So we need to strim and clear that and cover the area with weed depressing fabric. In the autumn, we'll plant bare root bushes etc for bee-friendly plants. There's another area that's rather damp, so we'll plant willow which will help dry the ground.

WTB I've heard that there is a problem with access when the ground is soft.

JC That's true, but we discovered that there are two tracks down to the apiary site. In fact, one does become impassable quite quickly. But the other which is a little further along the road is a better track, although it needs some hardcore laid. We expect that cars will then be able to drive on it easily for most of the year.

WTB Everything costs money, be it hedging, hard core, decorating materials… even getting an uplift of rubbish.

JC We'll have to purchase hardcore, but the tenant farmer has a small digger, and is happy to spread and roll the hardcore. The labour cost for that will be zero. And then we can move in the bees, two years after we first took on this project!

WTB Are you excited about Is the new apiary?

JC Actually I am. We have a vision for the place and there is great potential. There's already a building which can accommodate groups of people, probably around 12 at a time. There is water and power, and toilet facilities. We'll be able to do lots more than we can at present, and can invite groups to visit – something we can't really do now because the space and lack of facilities at City Way preclude these things. There's plenty parking too. All in all it will be a benefit for us. It depends, though, on our being able to finalise arrangements with John Myatt, the current tenant of the land on which he grows soft and top fruit.

WTB When is it going to be ready and functioning?

JC I hope we'll be able to move the bees in a few months. I would like us off City Way by the end of this year.

WTB I guess the bees can be moved before other things are complete?

JC Yes, we just need to clear the area, cut the grass, and remove things that have accumulated over a long time so it's a safe area for people to go. It will be a great asset.

Varroa is once again notifiable – or is it?

The last issue of BBKA News posted a little item about varroa once again becoming notifiable in Scotland. There was little other information. I imagine there was a huge amount of head-scratching across the land.

Well, there was a lot more to know, and the places to find that information were the offices of the regulation-makers in government, and the people most affected by such a ruling: bee farmers.

Or you could do what I did. Go online to Beekeeping Forum, where a well-known bee farmer, 'Into the lions den' aka Murray McGregor, regular posts in the off-season.

Way back in January, Murray wrote that he had *'been told that the bees can only come from countries where varroa is a reportable matter (legal nicety... not the same meaning as notifiable).'*

Essentially, it is a response to a change in the rules internationally which has made varroa reportable. Unless we are able to say that varroa is reportable, then our options for exporting bees are limited.

Murray goes on: *'This is a very minor legislative change. It means nothing, it leads to nothing, it just brings our legislation into line in a way that does not discriminate against ourselves.*

'I have zero concern about it and it will not cause me any administrative burden.

'A reportable' condition does not have any punitive measures attached. It HAS to be in our legislation simply that it is reportable – nothing more.

'Notifiable and Reportable are two entirely different levels of matter.

'It is useful to US in one respect. You can see a more accurate picture of where the verified (within the constraints of what that means) varroa-free areas and refrain from sending bees from infested areas there. We already do that but this will give a semi-official map rather than relying on the word of people who may have another agenda.

'Will be important for the likes of Andrew Abrahams wanting to mail out his Colonsay bees to Ireland for example, and of course to us – sending our breeder queens to Piemonte and to our non-UK-mainland clients.

'No cause for any alarm, and we have been kept fully up to date by Luis and his team throughout. That it may be news to individuals is a matter to take up with your associations. It has not been a stealth process.'*

So there you have it. Module 3 candidates, you still have a few days before the exam to guess if your examiner is going to be well-versed on the difference between 'reportable' and 'notifiable'!

***** Luis Molero Lopez, the Lead Bee Inspector from the Scottish Bee Health Inspectorate

Committee vacancy

John Hendrie, our treasurer, is leaving the committee – and England! – so we are looking for someone who is prepared to take on the role of **Treasurer**.

Please contact John Chapman if you are willing to help in this role.

Sonia Belsey has agreed to be our new **Examinations Secretary**. She will cover the administrative or secretarial part of BBKA exams taking place in the Association.

Getting to know you: this month, Mel Henbest

A series in which WHATSTHEBUZZ chats with one of its members about beekeeping and life in general.

WHATSTHEBUZZ Today is 7 April. Have you done your first inspection yet?

Mel Henbest Last Wednesday I went out to the bees. It's always my favourite inspection, the first one of the year, when you can really get inside again and actually look at them and see how they're doing. I'd left supers on a few colonies, and those colonies, three out of twelve, are much stronger than the ones that didn't have supers on. Maybe that's just a coincidence.

WTB Did you always have an interest in nature?

MH I've always been interested in the natural world and in gardening particularly. I did the beginners' beekeeping course in 2001 and got my own bees the following year. I met a lady on the course who lived near me and we decided to keep bees together. We got a nuc from Terry Clare and then colony numbers just multiplied! Sadly my friend got stung and had an anaphylactic reaction, so now she's not able to do the beekeeping side but she helps me out in other ways, like extracting honey.

WTB Was that a blue lights ambulance situation?

MH Yes. The second time it happened, I administered the EpiPen. The hospital staff told her to give up her beekeeping, which was hard because we had an enjoyable and sociable time.

It was good having someone to do inspections with. We could discuss options. Now it's just me talking to myself. Sometimes you've really got to make your mind up and go for it – and see what happens. Thankfully the bees are quite forgiving!

WTB What was Terry Clare like? Did you enjoy his course?

MH Yes, I miss Terry very much. I do hope the association does create some sort of memorial for him. He always had time for you. People said he used to talk a lot – and he did! But he was always ready to help if you ever needed support or advice. I remember a couple of times we called him while we were doing an inspection and he came straight over to help us out. He loved the craft of beekeeping and was concerned for his new recruits, to make sure that they learned things properly.

WTB Is honey one of your reasons for keeping bees?

MH No! I prefer jam if I'm honest. If somebody said to me, do you want to just come in and manage my 500 colonies, but you don't have to touch the honey, that would suit me fine. I used to think it would be really great to be a bee farmer – and then the reality hit home. I'm not averse to hard work but upscaling everything is daunting. Even now, I have stuff everywhere, and that's with just a modest number of colonies.

WTB What is family life for you?

MH We don't have children. Plenty of animals though; cats, guinea pigs, and the bees. Steve is my partner, We've been together for almost 30 years. We met when we were at school and have been together since. He helps me with making up equipment and sometimes comes with me to see the bees.

WTB You work full-time?

MH I'm an environmental health officer working for a local council. I manage a small team, but I also do routine work too, such as checking food hygiene standards, dealing with health and safety accidents and complaints, infectious diseases… I've been quite busy with COVID.

WTB How do you control the size of your beekeeping?

MH I'm getting better. I used to do splits for swarm control and watch my colony numbers increase. I'm better at uniting them now.

WTB What about varroa control?

MH I use MAQS later in the summer and then oxalic acid in the winter. But I'm not good at monitoring for mites. I just don't have time so I just treat them all the same. I feel a bit bad about that.

WTB Did you do BBKA exams and modules?

MH Yes, I've done four or five of them. Pests and diseases (module 3) was my favourite. It was about bacteria and fungi etc so there was a connection with my job.

WTB What do you enjoy most in beekeeping?

MH Going out, seeing the bees on a lovely sunny day, not being under any time pressure, just pottering around the hives and taking my time to go through them. Hopefully they're all in a pleasant mood!

WTB And you're least favourite?

MH Honey. Especially extracting. I've got things down to a tee, covering up surfaces, and just when you think you've finished, the bees stick in a load more. It's heavy, it's sticky, and it leaks everywhere. I know honey production is important but bees matter for the whole ecosystem. I find them fascinating. I love seeing a baby bee emerging.

WTB Recommended reading?

MH *Bees at the Bottom of the Garden* (Alan Campion). It's the book that Terry recommended when we first joined the course, and I always have it in my kit bag with me. Sometimes I have to refresh my memory at the hive when doing artificial swarms!

WTB Tell me about your garden.

MH I don't have bees in the garden any more. I like propagating from seed and I take cuttings and I've tried to improve the range of plants for all seasons in the garden for pollinators. Mainly I have herbaceous perennials but I'm trying to improve the range and extend the season for gardening.

WTB Your message for people starting out in beekeeping?

MH Don't underestimate how long it can take. And think carefully about where you're going to keep your bees. For me, the most important thing is that the bees are healthy and looked after. It is a commitment. My beekeeping isn't perfect, but I treat my bees for mites, I do my best to control swarming, and if I have any suspicion about disease, I report it. If you're going to keep bees, do it properly and invest your time and energy in it.

The BBKA, Italian imports and Small Hive Beetle

Anne Rowberry, BBKA Chair, has written to all member BKAs to ask them to contact their members to invite them to sign a petition to stop the planned imports of bee packages from South Italy through Northern Ireland. This refers to the much publicised plan of Patrick Murfet of Bee Equipment, Canterbury, which still stands despite much adverse publicity. (There's no such thing as bad publicity!)

The concern about these imports is where they are coming from: an area where an outbreak of small hive beetle (SHB) originated. It is an extremely unpleasant pest. Lots of beekeepers in America have to live with it. Some of them can be heard on YouTube talking about it. 'Horrible, horrible.'

It occurred to me that Anne's message might have had more reach if it were a little more colourful. Because the damage done by SHB is indeed terrible – and it is marvellous too! This is what happens:

A new beetle emerges from the soil and immediately finds a male and mates. Then she flies to a new home, lured by honey bees odours and pheromones. She finds hidden places in combs, cells and crevices, and lays about a dozen eggs. In her lifetime, she will lay 1000 eggs, or maybe much more.

The bees do not welcome her and will trap her in a corner. However, by gently stroking the bees mandibles with her antennae, the bees will feed her – by trophallaxis.

Meanwhile, the eggs begin to hatch and the larvae tunnel through comb in search of food. Having eaten, naturally enough, they defecate, and their faeces are laden with a yeast called Kodamaea ohmeri. As the yeast spores germinate, they coat the honey with a slimy mantle. The comb weakens. The honey spills out and ferments.

After 13 days in the hive, the larvae climb down out of the hive and find soft, moist soil to bury themselves in while they pupate. The can travel up to 200 metres to find suitable ground. [That's very worrying if you're trying to contain an outbreak.]

There's one more grim aspect to this grisly tale. And it concerns not the beetles but the yeast, K. ohmeri. It turns out that this yeast, when growing on top of pollen, produces an odour which mimics honey bee alarm pheromone. And that is a huge 'Welcome' sign to young beetles looking for a home.

This is a brief summary of a marvellous, and fully scientifically referenced, story told by Rusty Burlew.

If you would like to sign the BBKA petition, please do so here.

The spoken word

An excerpt from a lecture or interview.

In this interview with Randy Oliver of Scientific Beekeeping we hear about his research on oxalic acid for bees, selective bee breeding, unpublished research, and so much more. In the excerpt below, Randy has been asked about beekeepers who are completely treatment-free, and adopt the attitude if they live, they live if they die, they die.

Randy Oliver
scientificbeekeeping.com

'Would they do the same thing to their children and their pets? Forget going to the vet; don't take your kids to doctor, see how that works for you?

'Here's what I what I feel. Honey bees are a managed livestock. And when you manage and take an animal under your care, you have an ethical responsibility to care for that animal. If you know that most colonies right now will die this ugly death from deformed wing virus if you don't treat them, I think it's unethical to not treat them. As Tom Seeley says, if they're going to die, euthanize them, so they don't suffer, and before they spread that parasite, that virus, and those mites to all the other colonies around.

'When you're a beekeeper you have responsibility to the beekeeping community. And when a colony gets high mite levels, those bees and mites drift to all the other hives around carrying that virus and as the viruses are evolving to become more and more virulent, this is a problem. So you have the responsibility not only to your bees ethically but also to the other beekeepers around and to the native pollinators. When those bees with high virus levels go out and land on a flower they leave behind those viruses and those viruses go to the other native pollinators.

This may or may not cause problems for them. We're learning about that. I've got no problem if you want to be a treatment-free beekeeper, but before your colony collapses, please euthanize it, kill it, shake them all into soapy water, use dry ice, do *something* to kill that colony.

I'm a large scale treatment-free beekeeper myself. Out of my 1500 hives, I am treatment-free for the first 250; they don't get my first mite wash, and the rest get treated with an organic miticide. Then I have those colonies prove themselves. So after next mite wash, we go from 250 maybe down to a lower number. Actually this year, the numbers have been much, much higher.

I have a quite a few treatment-free colonies in my operation. But there's no reason to let the rest of them suffer and die because those bees are valuable to me. Next spring, you only have to punish the queen; you're only going to punish the genetics. There's no reason to punish all of your bees for being susceptible to deformed wing virus and the Varroa mite, you only have to punish the genetics of those bees. So treat those bees, keep them alive. And the next year only breed from those colonies that did not require treatment.

Now the thing is, if you go out and you buy a package of bees from a commercial Queen producer, you know that those bees were not bred for mite resistance. There's very few queen producers who breed for mite resistance. So you're taking these poor bees that were never bred to live in the wild and with Varroa and you're expecting a miracle to happen on your property.

On the other hand, if you pick up a wild swarm, or you have bees from somebody who has not been treating successfully, then, by all means, do that, but monitor those hives for Varroa. And if it gets to the point where the colony is about to collapse from deformed wing virus, then have the decency to the bees and to the beekeepers around to euthanize that colony and start all over again; or, alternatively, treat them and then just re-queen them the next spring. That makes a whole lot more sense to me.

WORDS: hygroscopic and hydroscopic

Anyone who's had any kind of encounter with the BBKA Module 2 exam knows that honey is *hygroscopic.* That means that it can **ad**sorb or **ab**sorb moisture from the air. The material doing the ad- or ab-sorbing becomes changed in the process. That's why it's important to store honey in fullish honey buckets so that the amount of moisture-containing air in contact with the surface of the honey is kept to a minimum. **Ad**sorbing means that moisture adheres to the surface of a material; **ab**sorbing means that moisture permeates or is dissolved by a material.

First things first. Let's look at where these words came from.

'Hygroscope' comes from the Greek *hygros*, wet, and *scopeo*, look at, inspect.

'Hydroscope' is based on the Greek *hydor*, water, and *scopeo.*

A ***hygro****scope* was an 18th century device for measuring moisture in air (humidity). Hygroscopes used materials that changed when they absorbed moisture, and the degree of this change was used to measure the humidity. These materials are the connection to the present-day meaning of hygroscopic, a material which draws in water. The 'scopic' part of the word is now redundant.

A ***hydro****scope* was an early device for studying objects underwater. It's difficult to see what the adjective *hydroscopic* could be used for: objects able to be studied by a hydroscope? It's more likely that it simply came about by being used where *hygroscope* was meant.

So, it's okay to say that honey is *hygroscopic*, but, it's plain wrong to say that it is *hydroscopic* – despite the word's connection with water. In fact *hydroscopic* is a misspelling. It's likely that if you come across it, it has been mistaken it for *hygroscopic*.

As every home-brewer/mead-maker knows, there are devices called **hydrometers**. These are used to measure the density of a liquid by floating in the liquid with a sealed glass tube. They are usually calibrated to a scale such as SG (specific gravity / relative density).

Instruments for measuring humidity called **hygrometers** also exist, and have a history going back to Leonardo.

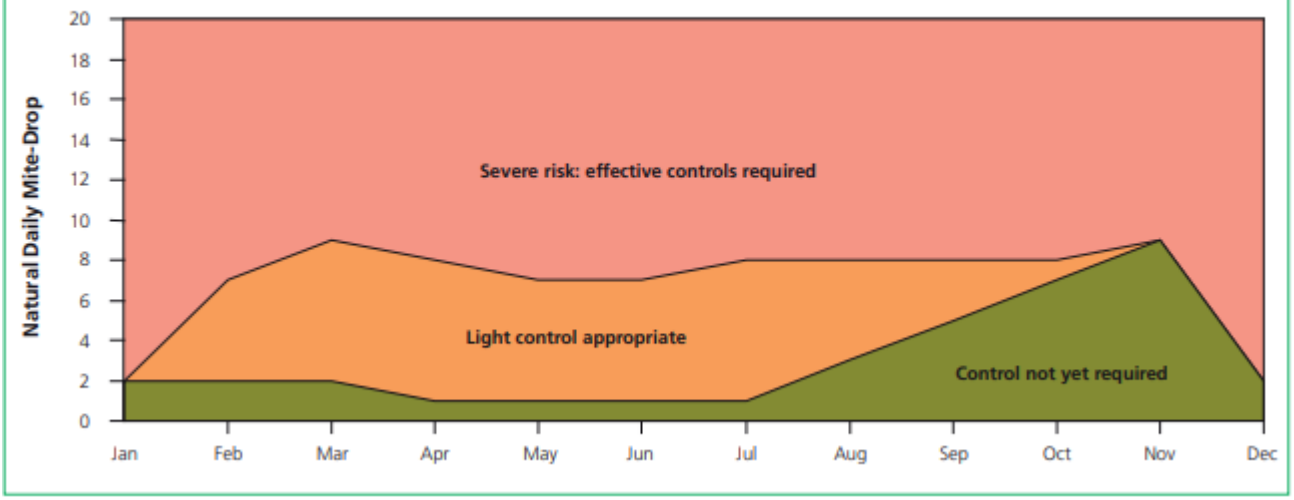
DMD calculated; now what?

You've done your varroa monitoring. With a sugar roll, or a liquid wash, or simply by counting the mites that fall on the board bellow the mesh screen floor, you now have an idea of either the number of mites in the hive, or the daily mite drop (DMD) on to the board.

What are you going to do with that information? How are the numbers to be translated into action: to treat with a miticide, or not? The numbers might be infinitely variable – but there's nothing nuanced about treatment. You do or you don't. There are no weak or strong doses, tailored to the severity of the infestation. You have to treat, or leave.

The booklet published by the NBU, Managing Varroa (2020), has a graph on p33 which has some answers.

Figure 54: Using mite drop monitoring to decide appropriate level of controls to employ



[The NBU have included an option – the orange area – for 'Light control'. They describe this as *'using biotechnical methods or varroacides that have relatively low efficacy'*.]

The upper line on the graph shows the threshold for treating effectively, ie with a miticide. For most of the year, a DMD **above** 7-9, ie in double figures, indicates a 'severe risk'. This graph is undoubtedly clear, though a scan across the many sources on the web discussing mite levels indicates no consensus about precise numbers. For an indication of the difficulty of assessing mites populations, see here.

Because natural mite drops can vary so widely in the mite populations they indicate, another method is to treat with oxalic acid and then measure the mite fall over the following 24 hours. This is the approach used by mitecalculator.com. The method is this:

With a sticky board in place, perform an oxalic acid vaporisation treatment. 24 hours later, count the mites on the board and enter the results in the online calculator.

Playing with options and sliders on this calculator, and bearing in mind that the calculator uses the mite drop 24 hours after an oxalic acid treatment, I got the following results:

capped brood	# bees in colony	# of mites on board after oxalic vap.	est. mite load before treatment, including sealed cells	mite load after treatment
none	10,000	20	1.05%	0.10%
2 brood boxes	40,000	100	2.18%	1.00%
swarm season	50,000	300	6.53%	3.00%

These are just a few sample results. There are hundreds of possible permutations!

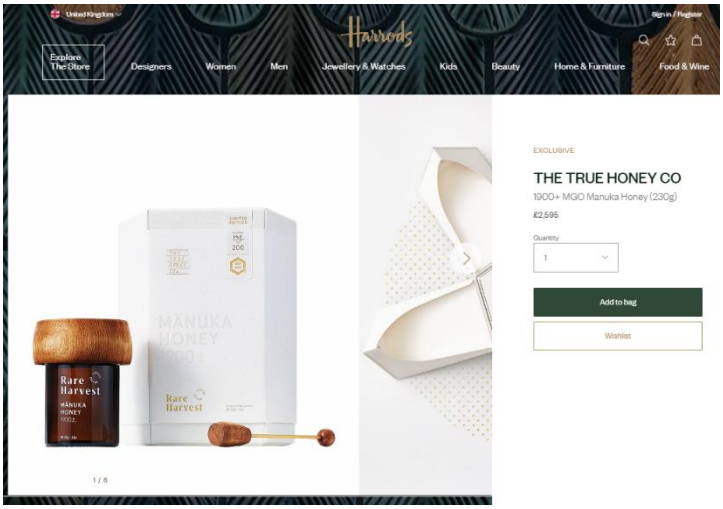
What does DMD tell you about the number of mites in a colony? Some reckon that it is 1% of the mite population, which means that a DMD of 10 would indicate 1000 mites in a colony, the figure the NBU suggest is the threshold for starting treatment.

Knowing the percentage of mites related to the population of the colony is easy if you monitor by sampling. A cupful is about 300 bees. If you find 3 mites in the sample, you have 1% of (phoretic) mites in the colony What percentage of mites in the colony population indicates that treatment is required? Anything from 1-4%, depending on your source!

The Honey Bee Health Coalition has published a booklet, TOOLS FOR VARROA MANAGEMENT: A GUIDE TO EFFECTIVE VARROA SAMPLING & CONTROL. The table on page 9 shows how to interpret the results of monitoring using sampling methods (a cup of 300 bees in sugar or a liquid). In general, if the mite population is above 2 or 3%, treatment is required promptly.

Who would have thought it?

From the Harrods website:



'*This is a remarkable miracle of nature that may never happen again.*

'Harvested and hand-bottled into just 200 jars, the MGO 1900+ Manuka Honey from The True Honey Co is the rarest of its kind and is exclusive to Harrods. It's the result of just the right combination of sunshine, warmth, gentle breeze and rainfall: four conditions that are essential for the flowering of New Zealand's native Manuka bush. 2017 was the year that made this superior potent nectar possible. Boasting a smooth, buttery consistency and delightfully sweet taste, this refined, singular harvest has been left unaltered to ensure it delivers all the widely recognised health benefits afforded by its natural methylglyoxal content – going straight from the hives to your home.'

Just in case you can't see the price in the screenshot above, it's **£2595 for a half-pound jar**.

The Beekeeper's Checklist: a pot-luck series on almost any beekeeping topic

Sometimes you don't need to read an article. Glancing down a list of bullet points is all that's needed to bring things back to mind. This month's topic:

Demaree – a manipulation for many requirements

What is now called the Demaree method was first published by George Demaree (1832–1915) in an article in the American Bee Journal in 1892.

It was conceived as a means of pre-emptive or proactive swarm prevention, keeping all boxes on a single hive, and without increasing colony numbers. One writer has described it as essentially splitting the colony with a queen excluder, so as to ease congestion in the brood nest.

But it can be so much more. Sometimes you just want to buy more thinking time. You suspect that something needs to be done, but you're not sure how you want to do it, nor to commit yourself to a particular route just yet.

So although the Demaree is principally about not losing swarms, it can also be used to for other goals, including: to raise queens, to increase colony numbers, to NOT increase colony numbers (!), to replace comb, to produce comb honey, and to run a double queen colony.

The starting position is likely to be that you proactively (pre-emptively) want to prevent swarming. The setting is that there are no queen cells yet, but the colony has at least 7 frames of brood, plenty of drones, full of bees, and there is a nectar flow.

The basic principle of swarm prevention is

to separate one of

1. the queen
2. the brood and nurse bees
3. the flying bees

from two of the others.

For the Demaree method, we remove *the brood and nurse bees* from the brood box, and place them at the top of the hive, with a queen excluder on the original brood box and at least two supers above that. The bottom box will contain *the queen* on a frame of brood, but no queen cells, and, as the location of that box doesn't change, *the flying bee*s will be there too. The nurse bees will stay with or be drawn to the brood in the upper box. The easing of congestion in the colony will reduce the swarming urge.

Despite this, the bees in the upper box may draw queen cells and these will have to be removed to prevent swarming. Over the next 24 days, the brood in the upper box will all emerge. The upper box can then be removed.

It's a moot point whether any queen cells that are drawn in the upper box are *emergency* or *supersedure* cells. Because *some* queen pheromone will drift up from the bottom box, the bees may not see their situation as an emergency; the cells may be supersedure cells: larger and more fully drawn than emergency cells sometimes appear.

If your goal is simply swarm prevention, open the box again on day 7, to remove all queen cells till they no longer have young larvae from which to make a new queen.

The actual steps of the method are well described by Emyr Jenkins on Beekeeping Forum:

- Find the queen, and remove her with the frame of brood she's on.
- Place in a new brood box filled with drawn comb and foundation (as much drawn as you can spare).
- Place the queen on her frame in the middle of the combs; you can put another frame of brood in as well, preferably with emerging brood.
- Take the original brood box with the rest of the brood in and put to one side for a moment.
- Put the box with the queen in its place; this now becomes the bottom box.
- Put queen excluder on and then the supers (preferably two or more).
- OPTIONAL VARIATION Put on **either** another queen excluder and then a 10mm thick eke with a one inch entrance **or** a Demaree board (same thing really) above the supers and below the upper brood box. (See image and text below for details on building this.) This part is *not optional* if the goal is to raise queens.
- Lastly place the brood box containing brood only on top of the stack; cover it with a crownboard and roof.
- Continue adding supers if there is a flow on; these can be placed on top of the top brood box, retaining two or three between the brood boxes. If you don't add supers, the bees will fill the vacated brood frames in the top box.

If you cannot find the queen

- Take each frame of brood out of the brood box, shake off all the bees, and put them (apart from one or two) into a new brood box which will become the top brood box. Rebuild the hive as above, and enough nurse bees will migrate to the top box through the queen excluder leaving the queen in the bottom on her frame or two of brood and drawn comb/foundation.

Demaree for swarm control

- Go in to the top box around day 7 and take down any queen cells they have made. From this point on the bees no longer have the material to make queen cells.
- Carry on regular inspections of the bottom box. Each time remove a frame or two of capped brood from this (queenright) box and put in the top box, replacing them with frames from the top box where the brood has all emerged. Keep doing this until 'swarming fever' has passed. This is called 'rolling' the Demaree.

Demaree for raising queens

- Put on a Demaree board above the supers and below the upper brood box (right). This is easy to make, or you can use queen excluder and above that a 10mm thick eke with a one inch entrance.
- If you want to make up some nucs then go into the top box three or four days after the Demaree and take down any sealed queen cells (if present; these will be from older larvae so not so good).
- On day 7, find open but ready to seal queen cells and select those you want to keep.
- After day eight, when the queen cells are sealed, make up the splits. Either split the whole box into two or three nucs; or take two or three frames out to make one nuc and carry on with the Demaree; or harvest the queen cells to put into mini nucs.

Demaree board. This is simple to make: think of a crownboard with a 3x4 inch hole cut out the middle or to the back of the board opposite the entrance with a piece of plastic or galvanised queen excluder fixed over it; there must be a bee space rim (8mm) underneath as normal then another 10mm rim on top with a 25mm wide entrance gap. This becomes the 'floor' of the top box.

Demaree to run a two queen colony

With two queens in the hive, it is possible to create a huge foraging force. The supers between the brood boxes must have queen excluders above and below them to prevent both queens laying in them. For comb honey, particularly in sections, a strong foraging force is

needed and a colony like this can provide that. When the time comes to restore the colony to one queen, just remove one queen. No uniting process is needed.

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Swarm collecting

Sonia Belsey, who organising the Association swarm collecting rota, writes about the nitty gritty of responding to a call and how best to collect up the bees.

The season of swarms is nearly upon us and we should all be familiar with methods of collecting them. Most of us have probably come across a swarm, whether bees from the wild, or other beekeepers' – or even our own! Swarming is the bees' way of reproducing and creating new colonies. No two swarms are the same and the bees definitely haven't read the books as regards to choosing a convenient place for the beekeeper! Or perhaps they have?!

It's best not to collect swarms on your own if you're new to beekeeping. It can be tricky and is not made any easier by fascinated bystanders watching and asking questions!

The most important thing is to have your equipment ready especially on a nice warm day. There's sure to be a swarm somewhere. If you're lucky the bees have settled on a low tree branch. Firstly make sure you have what you need: skep / box / nuc, large sheet, a stone, string, smoker, hive tool, smoker fuel, matches, protective clothing, queen cage, secateurs / loppers, and branch saw.

Then spread the sheet on the ground below the swarm. If the owner is nearby, ask about cutting the branch the cluster has settled on. Take care the branch doesn't crash to the ground! If you can't cut the branch, position your box below the swarm and shake the bees into the box. If all goes well, most of the bees should now be in the box. Turn the box upside down, and prop the edge and inch or so above the ground.

Look at the entrance to the box for bees fanning – their way of dispersing pheromone to guide other bees inside, and a likely indication that the queen is already inside the box.

Now find something else to do for the next few hours! It's important to wait till evening before moving the box. Leave the box propped on the sheet to give the bees time to cluster inside, but more importantly to let the scout bees return. If you take the swarm away at this stage, it's likely that the remaining bees will form a small cluster on the same sight.

When the time comes to remove the box, tie up the sheet around the box making it bee-tight. You don't want any bee backseat drivers!

Now to 'hive the swarm'. The bees have to be transferred from the box to a proper hive. (This doesn't apply if, as some people do, you collected the swarm in a nuc.)

The simplest way to move the bees into their new home is to shake them directly into a new brood box. When replacing the frames, gently 'float' them down on to the bees.

Or, much more dramatically, you can watch the bees march into their new hive. This way you have a good chance of spotting the queen – and marking and clipping her there and then if you wish. The method is to place a board leading up to the entrance of the hive, drape the sheet over it, and shake the bees out onto this ramp. (Let the sides of the sheet hang down over the edges.) The bees will naturally move upwards and into the hive. It looks magical watching them all follow each other en masse into their new residence.

It's important that you hive them on foundation, not comb, and don't feed them for a few days (if at all) so that they consume the honey they brought with them. This will reduce the spread of disease.

The colony will, of course, be broodless for a few days, till the comb is drawn sufficiently for the queen to lay. This is an opportunity to treat very effectively with oxalic acid.

Sounds simple, right? The only thing is that for every 'perfect' swarm there's a dozen that aren't that simple. They land in bushes, on the slide in the park, on a bike or car, in a postbox… They seem to enjoy making it challenging for us beekeepers! Remember the bees will always naturally move upwards so try placing the box above the swarm and use some smoke to gently encourage them up and into the box. If you're stumped and can't think of what to do you can always 'phone a (beekeeper) friend' who may be able to give you advice or come and help you!

Sonia Belsey

Being controversial

– with the usual warning about the opinions expressed anywhere in this newsletter not representing MBKA, BBKA etc! 😉

Warm way or cold way?

Do you have a preference for aligning the frames in your hives with the sides of the box ('cold way') or with the front and back ('warm way')?

Unusually in beekeeping, there's probably near total agreement that whatever you choose, it makes no difference to the bees. Indeed, judging by this photo (right), it seems the bees can't make up their minds on this matter at all!

Photo: masterbk, beekeepingforum.co.uk

But it can make a difference to the beekeeper. You might want to stand so that you are facing the frames. So, if you stand at the back of the hive, your frames will be lie from side to side, facing the front and back walls of the hive.

Recently, a beekeeper suggested to me that there are three ways in which our manipulations might be aided by choosing 'warm way' over 'cold way'. These are 1) getting combs of mostly pollen, 2) getting combs of mostly honey, and 3) getting drawn comb.

There are times when you want a frame mostly of pollen (queen-rearing protein), or of honey (for nucs and splits). This is more likely to be available if the frames are parallel with the front of the hive (warm way). Pollen will be at the front of the brood nest, honey behind. The idea is that warm way combs are more likely to be predominately pollen or honey stores; cold way tends to have a bit of everything on most frames.

All of this came out of a question I asked concerning how to get drawn comb quickly and efficiently. The answer I got was very appealing. During colony build-up, one can sometimes get comb drawn quickly in what my friend called a 'hot slot' between the nest and the honey.

This made sense, even if I suspected that the bees might not act predictably in the end. So I thought I'd test the idea out on beekeepingforum.co.uk, where everyone is either in total agreement (for instance never ventilate the top of a hive with matchsticks), or, more usually, tells each other that they are talking nonsense.

I got the 'nonsense' response to my post, except that it came in the form of 'I beg to differ…' and gave no reasons. If I were crushable, I might have walked away there and then. I asked again, politely suggesting that some hint of the background thinking would be helpful.

Emyr Jenkins's subsequent reply was a model of lucidity and clear thinking. In a nutshell, cold way / warm way never makes any difference to the beekeeper or the bees. Here is what he wrote:

'I regularly get frames full of pollen on cold way setup, same with honey – it's only near the brood nest that they tend to store it fore and aft, or at the end of the season when they're arranging winter stores (when only a fool would start taking it away) so I think your beekeeper isn't completely right, and anyhow, by the time the colony is strong enough for you to be able to rob it of anything most frames will have brood.

'As for the 'sweet spot' for comb drawing, try thinking in three dimensions – every hive (cold or warm way) has a 'middle' which could be warmer and more conducive to comb drawing just as each and every frame will have an area which is nearest the sides thus colder.'

It's nice when you angst about something and then discover that whatever you do, the bees will be fine.

Talks and courses

MBKA Queen-rearing group

Jen Ferry talks about a new group for members interested in exploring queen rearing.

WHATSTHEBUZZ Where did the idea to form a queen-rearing group come from?

Jen Ferry I've already raised queens on several occasions, both by larval transfer and by splits, but I've also bought in queens too. But current thinking, provoked partly by a couple of our Zoom talks over winter, has made me think more seriously about the importation of stock. The groundswell against importing bees, not least because of the movement of disease. We're trying to tread lightly and work with nature. This means

using local – and better suited – queens. These are some of the reasons that were nudging me to be more active in raising my own queens.

But I also knew from conversations I've had with various people that there was a hesitancy and a little bit of fear to dip their toe in the water and do this. I've been lucky enough to travel and do some courses: a course with Terry Claire, a weekend with Duncan Simmons, and a weekend with Mark Mazurek in Porto. These were good experiences. I wanted to say to others, have a play, and see where you get to.

WTB So, we now have a queen-rearing group in the association. How's it going?

JF We have about ten in the group. It's a self-support group and we can manage on Zoom. We interact well so that everybody gets to say what their preferred methods are, ask questions, listen to other people's opinions. I would think by the time we're finished, we'll have nine or ten people who will be pretty confident about raising queens.

It's a slightly different group within the Association, self-selected people, some of whom have not come forward in my time in the Association. It's quite nice to integrate and meet up with them.

WTB The weather is warming up now and the group is going to have to start getting on with it. Presumably you're hoping that everyone's experiences will be shared in the group.

JF I can't see the group getting together soon, physically, but I think we can overcome that. We can all take pictures of what we're doing and share them.

If people gain some confidence, they'll go out into the field and make their own decisions – and mistakes and successes – and they'll be able to bring those back to the group.

WTB It sounds like an easy-going relaxed group.

JF Yeah. And we've made it clear that there are no experts in the group.

The other thing I would say is that for anybody who's been beekeeping a few years, it's a nice challenge. It's something new to expand your beekeeping. It's quite fun and adds a bit more interest; a pleasant adjunct to weekly inspections.

* * *

Zoom talks elsewhere

Here at MBKA, we ran a Winter series of 10 talks on Zoom. Concerned that our members might start to feel Zoom fatigue, we decided to stay with our original plan. Our series was intended for *winter,* so we would not extend these talks into spring.

Other BKAs did not start their zoom series so early and so have talks running at present. Cambridge BKA, in particular, has a glittering line-up of fortnightly talks (Goulson, Pickard, Seeley…), and they are available to the public. The first is **tomorrow**, 7.00pm, by the challenging, charming, and funny Dave Goulson! (All his books are highly recommended.) Register on the home page of their website.

- Wednesday 21 April 2021, 7.00pm. The Garden Jungle: how to save our insects – a talk by Dave Goulson
- Wednesday 5 May 2021, 7.00pm. The Magic and Mystery of Drone Congregation Areas – with Stephen Fleming
- Wednesday 19 May 2021, 7.00pm. Wonderful Things about Bees – a talk by Professor Robert Pickard

Have you ever noticed that Robert Pickard's talks have rather prosaic titles? For some, this is a classic case of underselling, by a speaker whose talks never fail to delight, surprise and illuminate.

What's in your bucket?

Are you curious about what others have in their bee bags? Derek Forbes lays bare what's in his.

I went to the shed today to get my beekeeping gear out. At first I thought Customs and Excise had been in there looking for a crack cocaine factory. Then I remembered why I shut the door and ran away last year!

I should have sorted out the shed. I decided to sort out something else – meantime.

I tipped out the bucket I keep all my beekeeping tools in and made two piles.

First, the pile of things I **don't** need to any longer (right): A pair of leather gloves, barely used since I bought them in 1996. Mouse guards. Plastic frame spacers. A spare pair of rubber gloves. A piece of copper tube I use once a year as a smoker de-coking tool. A hive tool which I use for breaking off frame lugs. A knife for cutting out old comb, but never used. And finally a hand axe which I used once to remove overhanging branches.

Here's what's I will take with me (right): Smoker and fuel. Secateurs. Hive tool. Duck tape. It's useful a lot for all sorts of jobs from closing holes in crown boards, sealing gaps in boxes and all manner of emergency jobs. Plastic spacers used by tradesmen to pack window frames etc to get them level. No matter how carefully I set up a hive, it still rocks or tilts a bit. These spacers make it nice and steady. Notebook and pencil. I like to read what was happening this time last year. Strips of foam to block entrances. Finally, a bee brush. It's not essential but I'm surprised how often I use it.

Derek Forbes

Beekeeping news

Oxalic acid exemption in the US

Have you come across this rather startling news item?

On February 23, 2021, a new regulation from EPA (Environmental protection Agency, USA) appeared in the Federal Register. It simply states, 'Residues of oxalic acid in or on honey and honeycomb are exempted from the requirement of a tolerance when oxalic acid is used as a miticide in honeybee hives.'

The notice from the Federal register continues: 'Oxalic acid is ubiquitous in the environment being found naturally in many plants and vegetables, as well as in honey. Available studies and literature indicate that residues in or on

honey from the proposed use will be insignificant and indistinguishable from background levels of oxalic acid, and due to the lack of toxicity, exposure is not expected to pose a risk.'

Apparently, the bee-keeping community in the US went wild with excitement. Now they could use a miticide all-year round, and for which varroa mites were unlikely to develop resistance. They could even use this treatment when honey supers were on the hive.

Megan Milbrath, writing in ABJ, tried to calm things down and bring people back to the real world. She wrote: 'The short answer is that this ruling does not change the way you use oxalic acid (OA) in your hives—it does not mean you can use OA with honey supers on.'

And although it is true that at present it seems unlikely that mites will be able to develop resistance to oxalic acid, it is safer and wiser to stick with standard practice of rotating mite treatments. She wrote: 'Using only multiple applications of a single pesticide like oxalic acid over and over is how pests develop resistance.'

So why did Megan Milbrath write as she did, that you cannot use oxalic acid with supers on the hive?

My feeling is that she is being a bit disingenuous. What she was really saying is that until the labelling for the registered miticide (ApiBioxal is the only registered oxalic acid product in the US) is changed to reflect this exemption, then it is illegal to use it in a manner which diverges from the label.

Registering a medical product is extremely time-consuming and expensive. However, it is highly likely that the oxalic acid label will be changed, although not in time for this summer.

Randy Oliver rarely emails his subscribers, simply because they know where to find his writings. However, on this occasion he emailed the news to his huge following all over the world. He wrote that this 'is great news – that EPA is in the process of amending the label for application even if honey supers are on!'

But he too took time to reinforce the message that it only applies to registered products (ie ApiBioxal), that it does not apply till the label is changed, and that all beekeepers should practice rotating their miticide treatments.

He also took the opportunity to address miticide 'scofflaws' – people who say they are using generic oxalic acid in their hives because they are using it as a wood bleach / cleaner. Referring to beekeeper attitudes to farmers and *their* use of pesticides, he said: *'Please keep this in mind. If we beekeepers feel that we can be pesticide scofflaws, how could we then demand that farmers follow the label to protect our bees? The EPA is well aware of this dichotomy. That's why I'm trying to work with USDA and EPA to add the extended-release application method to the label, and for our industry to register an inexpensive source of OA for us to use. If our industry were willing to put the effort and money into it, it would be a win all around -- effective, safe, and non-contaminating varroa control, inexpensive and legal. I suggest that we put pressure on AHPA and ABF to do so.'*

Where America goes, does not Europe follow a little later?

Handy Hints

A practical diagnosis for Chronic bee paralysis virus (CBPV)

Recently I read about a Seasonal Bee Inspector (SBI) who suspected CBPV in a weak hive. The diagnostic tool he used was the smoker. When he smoked the top bars, most of the bees disappeared below – as you would expect. But some remained 'up top' and sort of shivered. It turned out these bees did have CBPV.

Winter study group

Although it seems a long time away, those who are interested in continuing with BBKA modules – or simply studying without the exam conclusion – are invited to apply their minds to which module they would like to study next.

Please send your suggestions to me (Sonia). The next committee meeting isn't for a few weeks yet, but I'd like to hear from you, even if it's just to say which modules you **don't** want to do.

You can find the details on the BBKA site. The subjects for each module are (there is no module 4!):

- Module 1 – Honey Bee Management
- Module 2 – Honey Bee Products and Forage
- Module 3 – Honey Bee Pests, Diseases and Poisoning
- Module 5 – Honey Bee Biology
- Module 6 – Honey Bee Behaviour
- Module 7 – Selection & Breeding of Honey Bees
- Module 8 – Honey Bee Management, Health and History

Sonia Belsey, Exams Secretary

Recent research

Earlier this year we heard a fascinating talk from Stephen Martin on the research which he and his colleagues were doing on colonies developing resistance to varroa. They found that colonies with a high 'recapping' rate (where worker bees open and reseal a capped cell containing a pupa) had developed some genetic resistance to varroa through this form of varroa sensitive hygiene.

A recent study, 'Exploring Two Honey Bee Traits for Improving Resistance Against Varroa destructor: Development and Genetic Evaluation' found that this trait, along with 'solidness' of brood (a high percentage of capped brood in a specific area), was not noticeably repeatable or heritable, nor did it show an association with varroa infestation levels.

Perhaps this study does present a challenge to the Stephen Martin's research, or, as the authors say, perhaps it may turn out not to be significant as only 12 colonies were observed in the study.

Bob Smith

Comments

To post a comment, please email the MBKA Newsletter.

From Derek Forbes: Page 13 quiz answers. No. 5: a micron is 0.001 mm (not 0.0001). Well that's all I can find to criticise. An excellent read. Well done Mate.

Spot on Derek! I lost my bearings – and my decimal places. WTB

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Please send items for the newsletter by 18th of each month for inclusion in the next issue. And if you'd like to comment on anything in or about this issue, please call or email me.

Archie McLellan, newsletter compiler