ISSUE
October 2020

The Apiarist

. . . High Weald Beekeepers' Newsletter

In all 17 queen cells in one single patch – from a frame in one of the colonies at the Horsted Green Park Apiary.

Chairman's Chatter

Following the theme of the last Chairman's Chatter – '2020 is certainly turning out to be a year of surprises' – I have had a few more 'never seen before' surprises and no doubt there'll be more to come.

One of the colonies at the new Horsted Green Park didn't really settle after coming down from Slab Castle, wanting to swarm, so was split, which failed, and then was re-united. On 9th September when Steve and I were going through them, on one frame we found a patch ~ 70mm x 30mm with 17 queen cells ... never seen that before! Possibly, the queen died and that was the most recent batch of eggs they could make emergency queen cells from. A bit late in the year ... but we'll see, I suppose.

Being on the BBKA site as a Swarm Collector, not surprisingly I get quite a lot of calls from members of the public about bees and swarms ... most of which prove not to be honeybees.

The other evening, I had a call from an elderly lady who believed she

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ARTICLES

FORTHCOMING EVENTS

All events are still cancelled until further notice.

For Full calendar & details see https://hwbka.org.uk/event/

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had a swarm on the glass roof of her porch and was quite worried about it, so I went to investigate.

There were many hundreds of bees which, from more than a few feet away in failing light, looked for all the world like honeybees but distributed over a large area of the roof and not in a cluster … so that casts doubt immediately.

On closer inspection they were furrier and had more pronounced abdominal banding with extra bands too. So not Apis Melifera.

I wondered if they might be some sort of hover fly. Trying to assure her there was no need for concern (and maybe showing off a little) I picked one up to show her how lovely they were and then another and then … I found they were in fact bees and I can now confirm (as subsequent research informed me) that the sting of Ivy Mining Bee (Colletes hederae) is not much more painful than a nettle and much less than a honey bee.

'Well, never seen … or felt … that before!'

They came into this country in 2001 in through Dorset, are on the rise and come out in large numbers at this time of year to feed on … you guessed it … ivy.

Since then Paul Lindström and Steve Davies have both observed them, and they now appear on the BBKA page (https://www.bbka.org.uk/swarm and https://www.bbka.org.uk/what-bee-is-this) to help members of the public identify swarms. Malcolm has even filmed them having sex (click on the link here).

Ivy Mining Bee (Colletes hederae)

Through the same channel, a couple near Uckfield contacted me having bought a house that had 2 beehives in the garden. They like bees but didn't feel able to take up beekeeping and thought they had found a beekeeper who'd look after them on their behalf, but he moved to France. I went to investigate and found 1 WBC where the front legs had rotted, and it was leaning precariously at 30° to the vertical about to fall over, but with a thriving colony. The other was externally in better condition but only contained wax moth pupae cases and frass. I suggested if they renovate that better hive, I'd move the leaning tower of Pisa bees into it for the winter. They did a good job and I moved the brood box and 2 supers into the renovated WBC intact, as their brood box were in danger of falling apart too. The gap between the brood box and lifts was solid with detritus and I would imagine they hadn't been looked at for at least a decade … and yet there they were happy, successful and gentle as could be … with, judging by the weight, at least 50kg of stores.

'Never seen or done that before!'

Still, bees have managed for 100 million years without our help … it makes me wonder why I fret quite so much over mine. 😊

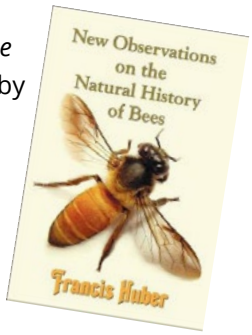
The post-script is that the hive-owners now believe they are well and truly on that slippery slope toward becoming beekeepers

We now hold Committee Meetings via the ubiquitous medium of Zoom – another 'never done before' – and are discussing what to do about the AGM and Honey Show. Although no decision has yet been taken, in the current climate it's probable the Honey Show will have to be cancelled, in which case the AGM will be held via Zoom … yet another you know what! We'll keep you posted.

Peter Coxon

Book review

By Paul Lindström



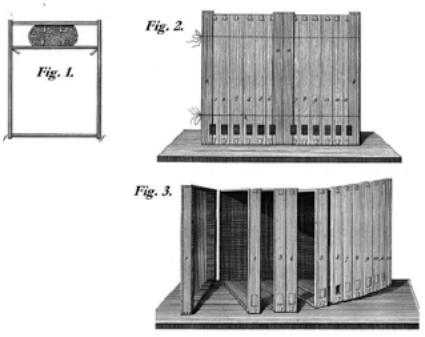
New Observations on the Natural History of Bees by François Huber, 1792.

As you understand this is far from a new book, but still well worth reading.

François Huber was actually blind when he made his research on honey bees, helped by his servant François Burnens. My guess is that Burnens was the one who got stung when managing the observation hive, called a Folio Hive.

The book consists of a collection of letters to his uncle Charles Bonnet, himself a well known scientist. Huber gained world wide reputation thanks to his insightful observations, and corrected several established but ill founded myths about bees. Even Charles Darwin read his book and quoted from it in his famous book *On the Origin of Species.*

François Huber seems to have been a very humble man, and it's a joy to follow his ponderings on what might be the reasons for this or that behaviour of the bees.



The Huber Folio Hive

I got so inspired reading his book that I decided to build an observation hive myself. But I won't use Huber's design of the "Book hive" – it seems a bit difficult to manage, with an obvious risk of crushing bees when you unfold and fold the "pages" (the frames). But there are other designs of observation hives that might be easier to manage. We'll see.

The Ever-Expanding Apiary

By Mark Ballett

Since HWBKA couldn't run the Beginner's Course in the normal way this year because of the Covid-19 lockdown, much of the support from HWBKA was through a WhatsApp group. In the previous issue of The Apiarist you read the first stories, and here Mark Ballett continues to share his experiences as a new beekeeper. Further on you will hear from Sandy Infield as well.

Mark's bees were very helpful in selecting a nice bivouac place when they decided to swarm – easily accessible on the lowest branch.

It isn't only the universe that is expanding, my apiary is too!

Yes, I do feel I have an apiary, rather than just a hive. It's 18th June and I have now made just 10 inspection visits to my bees and my original hive has two almost full supers of Spring Honey. But I also have another hive and two nuc boxes, all possibly with virgin queens and I'm waiting to see what happens next. How did that happen?

I had made preparations for swarming by buying a second hive and nuc box. I thought that would be enough, but, as you will see, I was wrong. At the end of May, I found some charged queen cups and Malcolm came over to help me with a Pagden artificial swarm. (The first time I have been with someone to a hive and I noticed how gentle he was with the bees.) All went well and he decided to leave two queen cells in my second hive but also to put a frame with another queen cell into my nuc. Malcom told me this would prevent disappointment if the queen cell was diseased and the nuc would provide a back-up queen.

On the day I was expecting the queen(s) to hatch I went and put my iPhone on the crown board and managed to record piping and quacking. I also tried it on the queen excluder, but it worked much better on the crown board. Then I had two days of 'orientation flights' where the bees flew around my garden and then returned to the hive. It was as if they were playing with me – 'will we swarm, or won't we?' On the third day they answered their own question and I found them swarmed peacefully to my medlar tree. They were so quiet I almost didn't notice them. So docile and seemingly content that Malcom has named the queen Medlar Calm. Did both queens survive and the firstborn abscond with a load of bees, leaving the other one alive? Or, did she kill her before leaving? Would it be queenright, or queenless? Time would tell.

The bees were extremely accommodating in their choice of swarm site, so it was easy for me to collect the swarm, but there was no room left in my apiary. Malcolm was away, so Rob stepped in and lent me one of his nucs and some frames and I rehoused them. My first swarm. It felt good, like I had passed through some beekeeping initiation rite, and it was easier than I thought it would be. I can recommend a skep, as it seemed ideal for the job.

So, there I am with a laying queen, Black Beauty, and possibly three virgin queens, but I'm worried that only one of the queens survived and swarmed away, leaving the hive queen-less and now full of laying worker bees. Well, on 24th June, Malcolm came over to take a peek and I was anxious about what he would find. Would he take one look at them and tell me to throw them into the hedge, like he did with Richard?

Fortunately, we didn't start with the parent hive. Our very small back-up queen colony was the first one we looked at and it had eggs! This was great news, because just after we put the frames in the nuc Malcolm had suggested I put some grass in the entrance, but he didn't specify for how long and it was five days before I queried this. He had meant just overnight, so they would settle in, and now feared they would all be dead, but they survived and, just perhaps, that helped in some way.

We then went to my parent hive. The bees were very calm, which Malcolm said was a good sign, as they wouldn't be like that if they didn't have a queen. But beside the open queen cell we found a sealed queen cell. So, the other queen hadn't made it after all. But why no angry bees? I tentatively broke open the queen cell to find a dead worker bee. Malcom says it is a classic scenario to find a queen cell resealed with a worker inside (she had been too greedy feeding on the royal jelly). The queen cell contained a worker head-up (a dead queen pupa would be head-down). So, what was going on? Did

Mark Ballett doing his first honey extraction (renting one of the three HWBKA extractors), and got 22lbs worth of honey – not bad.

the second queen survive, or not?

Then we turned over the frame and we saw the queen! What a relief. I think I'll call her Phoenix. As soon as we saw her we decided to retreat and closed everything up again as delicately as possible so as not to crush her. She now needs to be left alone for a further two weeks. Incredibly, I now had four queened colonies.

Cut comb honey in dedicated tray.

I'm hoping to re-house my very active swarm in something roomier, before they are off again, and I think Richard may take my smaller nuc colony. That will leave me with three colonies in three hives. Two more than I thought I'd have just TEN WEEKS ago when I got my first bees. Tomorrow, I am going to extract my first super of honey too (I got 22lbs!). Incredible.

Malcolm says that some people think that beekeeping is a bit like keeping goldfish. Well, if you have read this far, you'll know it isn't. In fact, it isn't like anything else.

All this has been fascinating and I think I am learning a lot but, as I tell my friends, 'I might sound like I know a lot about bees, but believe me, I know very little, because there is an awful lot to know.' For me, the most amazing discovery was the day I went to my hive and found it full of grey stuff that I assumed must be the start of American Foulbrood, or something equally nasty, but then noticed that my bees were bringing grey stuff back rather than yellow pollen. I had no idea that pollen came in different colours. This then started a long debate with Malcolm about where grey pollen comes from. Some of the online pollen colour guides say Hazel or Elm, but Malcolm thought it might be Blackberry and, in the end, we concluded he was right. For that reason alone, my new top tip pollen colour recognition source of choice is here https://en.wikipedia.org/wiki/List_of_pollen_sources It confirms blackberry, but could also be raspberry, or plum.

When I asked Malcolm how many hives you needed to stay on top of your ever-expanding bees, he said six! In a way, that doesn't surprise me, after what I have already been through. So, I currently have four, just two to go.

Book review(s)

By Paul Lindström

The Observations Hive by Karl Showler, 1978.

I was so inspired when reading François Huber's book (see page 2) that I decided to try and build an observation hive myself. This was the first book I read on the topic (the book is available to borrow from the HWBKA library). While interesting and informative I didn't find a design here I felt was a 100% right for me. For example I wasn't convinced placing the bees in a demijohn (see picture).

Instead I turned to a book published recently, *The Observation Hive Handbook: Studying Honey Bees at Home* by Frank Linton, 2017. This was just what I needed – lots of practical information and examples of different designs for different types of hives and uses.

It was also nice to see that François Huber was credited and quoted when it comes to observation hives.

The design I probably will go for would be a "flat hive", with perhaps 2x4 standard frames mounted 2 side by side 4 frames high. This will be one of my bee related projects this winter, and hopefully I can come back with a report next spring on how the bees took to this hive (or not). We know they are not too fussy about where to build a nest, so it might work. Hopefully they will cooperate as they normally do.

Why Workers Don't Let Emergent Queens Fight

By Mark Ballett

I'm not sure where I first heard the term "piping" applied to bees. Most probably Malcolm mentioned it, as most of what I know about bees comes from him.

With his help, in early June, we did an artificial swarm leaving two queen cells, side-by-side, to ripen. On the 12th June, the day before they were due to hatch, I put my iPhone on the crown board for five minutes to see if I could hear any of this "piping". Incredibly, I recorded this – https://soundcloud.com/user-406523076/queen-piping-from-crown-board-new-hive-2-12th-june-2020

So, there we had what I thought was "piping" – the first thing on the tape – and "quacking", which comes later, apparently in response to the "piping". But what was it all about? I had it in my mind it was the first queen out "piping" trying to track down any other queen so she could kill her and dominate the hive, and it was the queen still to emerge that was "quacking," stupidly giving her position away.

As it turned out, this didn't happen and the first queen swarmed with all the young bees – I had no idea until recently that it was mostly bees that had never flown before that swarmed, did you? Fortunately, I managed to collect the swarm as they landed very conveniently on the short medlar tree in our front garden.

Just four days later, on the 16th June, the BBC had a story about all this that helped me get the terminology correct and also understand a little more about what was going on – https://www.bbc.co.uk/news/science-environment-53029218

So, it seems that "quacking" and "tooting" are collectively known as "piping" and that virgin queens that have not hatched out communicate with a "quacking" from their queen cells. On my recording, you can hear "tooting" at 14 seconds and "quacking" at 34 seconds and several other times. "Tooting" is a series of eight short notes that follow a longer note, a bit like a slow motion hunting horn. "Quacking" sounds like swans' wings flapping as they fly.

Queens free in the colony make a "tooting" sound, to announce to the worker bees that they are present, and "quacking" queens are then purposefully kept captive by the workers until the first queen has swarmed.

This seems to match my very limited experience of beekeeping, because in both Richard's and my cases this year, when two queen cells were kept after an artificial swarm, the first queen leaving her cell was the one that swarmed first.

In early July, The Apiarist blog, which I think is excellent, had this article about the same thing – https://www.theapiarist.org/if-it-quacks-like-a-duck/ This confirmed much of what the BBC article had to say and, in the author's inimitable way, also added a few interesting facts.

Apparently, "tooting" comes about when the queen presses her thorax tight down against the comb and vibrates her strong thoracic wing muscles. Her wings remain closed. The comb acts as a sounding board, amplifying the sound in the hive. It is usually recorded at around 400 Hz and consists of one or more 1 second long pulses, followed by a number of much shorter pulses. In previous studies the frequency of "tooting" had been shown to be age-related. It starts at ~350 Hz and rises in frequency to around 500 Hz as the virgin queen matures over several days.

The duck-like "quacking" is probably also made by queens vibrating their flight muscles while pressed

Empty queen cell – no piping or quacking here anymore.

up against the comb. The reason for this is straightforward, the queens that are "quacking" are still within the closed queen cell.

"Quacking" is a lower frequency sound (is this because of the confines of the queen cell, the way the sound is produced, or the 'maturity' of the queen's musculature?) but has also been shown to increase in frequency – from ~200 Hz to ~350 Hz – the longer the queen remains within the cell.

These timings and the behaviour(s) they are associated with suggest they are a colony-level communication strategy to reduce competition between queens. The newly emerged virgin queen "toots" (pipes) to inform the workers that there is a 'free' queen in the colony. The workers respond by holding back emergence of other mature queens. By controlling and coordinating a succession of queen emergences, a strong colony has the opportunity to generate one, two or more cast swarms whilst sufficient workers remain in the hive. It presumably helps ensure the casts are of a sufficient size to give them the best chance of survival.

So, next time you carry out an artificial swarm, and leave more than one queen cell, expect the first queen out to swarm, rather than a sororicidal regicide.

Chronic bee paralysis an emerging threat

By Paul Lindström

CBPV (Chronic Bee Paralysis Virus) seems to be on the rise, and we should learn to identify the symptoms and take appropriate actions.

Much of the content in this article is based on a couple of articles and research papers written by Professor David Evans, virologist at University of St. Andrews, and editor of the blog The Apiarist. But we have had fairly recent cases of CBPV in HWBKA, but as you will see it can be managed and doesn't need to be as catastrophic as one might fear.

You can find a good and basic description of CBPV on BeeBase here, but I have also read the paper named *Chronic bee paralysis as a serious emerging threat to honey bees*, of which David Evan's is one of the initiators and authors. I must admit that this scientific article is a bit over my competence level, but as I understand it the number of cases in England and Wales has definitely increased in the last 10 years, but the factors behind this are still not entirely clear. But once again – the risk of getting CBPV increases if importing queens or bees from abroad.

David Evan's article *Aristotle's hairless black thieves* also deals with the topic, and this is a more accessible text than the full scientific report mentioned above. David starts the article by describing that CBPV was described already by Aristotle over 2300 years ago when he studied hives on the Greek island Lesbos. He called the poor infected bees "the small, black, hairless thieves".

From Evan's article we can read that "The names given to the symptomatic bees or the disease include little blacks or black robbers in the UK, mal nero in Italy, maladie noire in France or schwarzsucht (black addiction) in Germany. Sensibly, the Americans termed the disease hairless black syndrome. All describe the characteristic appearance of individual diseased bees."

To see an infected colony is distressing, as our chairman Peter Coxon reported in his chairman's chatter in the June 2019 issue of The Apiarist. From that article: "It's a miserable business where one finds large quantities of dead, dying and very weak bees immediately in front of the landing board and with no immediately apparent cause. This can be mistaken for poisoning but in that case the bees would be spread over a much larger area, meters rather than 0.5 meters.".

Peter had unfortunately seen this before, since his first ever colony came down with the disease. While the bee inspector on this occasion suggested to Peter that he should put them down, Peter found some advice in the book *"Beekeeping for Dummies". It said* "Find the Queen, dump all the bees 50 m away and only the strong uninfected ones will make it back. This will reduce the viral load and they may pull through". And it worked. On the next outbreak, in 2019, Peter modified his action to the following". . . I improved my hygiene and gave them more space in the shape of 3 empty supers. I removed the dead bees in front of the hive and scorched the earth. I also kept the ground cleared so I could easily see if the condition was deteriorating or not and, thankfully, they have pulled through and are now a large successful colony".

The same year as Peter had his second case of CBPV, 2019, Steve Davies, our Assistant Apiary Manager, also encountered CBPV, and helped a fellow beekeeper to successfully deal with it. So there is hope if we discover CBPV in our apiary – we don't need to despair completely. But since it's on the rise we should be alert and take proper action immediately.

Book review

By Paul Lindström

The Hive and the Honey-Bee by Rev. Lorenzo Lorraine Langstroth, 1853.

I unfortunately have to start by proclaiming that this was a book I didn't enjoy very much. The language is very dated, at best, and full of religious references that is a bit tiring. And at its worst it even contains outright racist comments. How about the following (on what smells or odours bees like or doesn't like): "...those who belong to the family of the 'great unwashed', will find to their cost that bees are decided foes to all of their tribe". Earlier in the text he makes it clear he means Arabs.

I know we shouldn't judge people according to today's habits and standards, but realise what is politically correct changes a lot over time. But together with repeatedly advertising his hive design in almost every chapter this put me off quite a bit.

Having said this, no one can take away from him the fact that his hive design must be one of, if not the most, successful designs, still used all over the world. And there is a lot of observation on bees that is still valid, although I think some of the advice is outdated today, for example the advice to spray the bees with a solution of water and sugar syrup to distract them.

So while of historic interest, I think this book can be left until you have run out of newer and more relevant bee books to read.

Imported bees

Readers are reminded of the BBKA's position of discouraging the importation of queen bees and colonies from outside the UK. . . .Prospective purchasers should satisfy themselves both of the origin of bees offered for sale and the regulations on bee importations pertinent to their location.

Our apiary at "Slab Castle" contains examples of several type of hive designs. In the background Keith Obbard, Apiary Manager, and Steve Davies, Assistant Apiary Manager conducting an inspection. In the foreground to the right (the light green hive) a Beehaus hive.

Our apiary at Slab Castle

By Paul Lindström

HWBKA's primary apiary is located between Crowborough and Groombridge. It's sometimes referred to as "Slab Castle". I visited it earlier this summer and also learned about its nickname.

Normally most of the practical "hands-on" sessions of the Beginners Course take place here, but due to Covid this couldn't be done this year. The colonies are of course not only here for educational reasons – we also harvest and sell honey as a welcome contribution to the income for our association (this year to a value of nearly GBP 800!).

When I visited I looked around to find the castle, but in vain. I asked Steve and Keith where the castle had been, and Keith knew the history behind the name very well. This is what he told me: "It is an interesting point (to me anyway) that field names are almost the only remaining oral knowledge that has survived into the 21st Century in Britain.

All farmers have always had names for their fields – how else would you give someone instructions to go and do a particular job somewhere? But this is probably not generally known, and the field names are handed down from farmer to farmer through the generations, but are rarely, if ever written down on official papers. Hence I would call it an oral tradition.

Down the hill from the Association apiary is the hamlet of Motts Mill.

In the past the hamlet of about 12 dwellings had a Mill (now Mill Cottage), a Laundry (now Laundry Cottages), a seed merchant, (long gone), a Non-Conformist Chapel, (replaced within living memory with a house), and an off-license called Adams Castle (now a cottage of the same name).

My father told me that the 'old boys' used to buy their beers from the off-licence, and walk up the hill to the triangular field where we have our apiary, and sit in a shed, to chew the fat and watch the sun go down.

The shed was constructed from what we used to call 'slab-wood'. This is the half round outside sections of a tree trunk with the bark still on that are left over when squaring it up for planking, and was often used for rough farm buildings.

Thus, the slab-wood shed where the old boys enjoyed their drink purchased from Adams Castle became known as The Slab Castle. The name transferred to the field itself, and has remained so for three generations to my knowledge, and maybe longer, who knows?

The beekeepers using the Slab Castle are carrying on an oral tradition, which until now, they were totally ignorant of! Great isn't it?"

I think this is a great story too, and let us keep the history of the name alive. If you haven't been to our apiary yet I strongly suggest you contact Keith or Steve and visit.

The apiary has a section under cover, which makes it easier to have lessons in practical beekeeping a bit more independant on the weather.

How did you come to be a beekeeper?

This is now a fixed feature in the Apiarist – an interview with members about how they got into beekeeping. Meet Keith Obbard, our Apiary Manager.

Keith demonstrating a frame from one of the "Top Bar" hives in our apiary at "Slab Castle".

Some time in the last century, probably about 1975, I was helping my parents to run our family farm and we had a young couple working for us who asked if they could keep some bees on the farm. Occasionally I would go and watch them while they opened up the hives, and I was hooked.

After a couple of years they decided to go to Germany to gain more experience of organic farming and asked me if I would like to look after their bees while they were away, which I did. When they came back I had already purchased a couple of hives of my own and so when they moved to the West Country for good, taking their bees with them, I found myself to be an established beekeeper.

I joined the Crowborough and Uckfield Beekeepers Association, and at that time the chairman was a retired old boy called Mr Chatfield, who along with the secretary Mr Harper were the local bee keeping gurus, I believe having just received the mantle from Mr H J Wadey a renowned beekeeper and former editor of Beecraft.

Mr Chatfield was the primary influence on my own beekeeping and he kept his bees in all National shallow boxes. Having kept bees for many, many years I presumed that he had decided upon this type of hive for very good reason, so I emulated him, and began to do the same. No point in reinventing the wheel.

One of the great benefits in keeping bees in double brood boxes is that when the queen cells are formed they will almost always be built at the bottom of the frames of the top brood box, so if you are short of time or don't feel like looking through the whole brood nest a very simple swarming check can be done by splitting the brood boxes apart, shuffling the top box back, and tipping the top part of the hive forward to create a gap wide enough to view the underside of the frames.

If there are any queen cells in the hive they will be here, if there are none here there are unlikely to be anywhere else. It takes about 5 minutes and your swarming check is done, you can move on to the next hive.

However, as a beginner I was keen to look through the boxes to learn as much as I could, so I would often spend a lot of time looking through all the frames of the brood nest. This could be 22 frames or even 33 if the Queen was on 3 shallow boxes.

Mr Chatfield didn't use Queen excluders, by the way, just a square of plastic to stop the Queen going up. It is actually quite effective but it was something that I soon altered in my own beekeeping plan.

Keith (at the centre of the picture) organised this year's honey extraction for our apiaries at Peter's house. Other volounteers were Peter Coxon and Steve Davies (to the left of Keith) Malcolm Wilkie and Talha Dinc (to the right of Keith), and Fiona Henniker (not in the photo).

After having a hive with three or four supers of honey slide into a heap of jumbled frames and boxes on more than one occasion when using this tipping technique, and getting fed up with looking for a queen on 22 or even 33 frames I decided to dispense with the all-shallow style of hive.

By this point in time I had seen a number of different hive types and spoken to other beekeepers in the club and at the Sussex Bee Market (where Mr Chatfield was the auctioneer and I was one of his assistants) I decided to use a bigger brood box.

The standard national just wasn't big enough and the national deep was not readily available so I decided upon a modified commercial hive often called the 16 x 10 for its frame size. It makes almost as large a brood nest as the national deep but the frames are easier to handle in my opinion and the bees readily draw them out to the full depth which they are often reluctant to do with the national deep.

I call the modified commercial my Tardis Hives because they're the same size as a national on the outside but they're much bigger on the inside.

Of course being the same size as a national they were completely compatible with all my supers, floors, queen excluders and roofs .

I have kept bees in Langstroth, Smith, Dadant, Omlet, Top-bar and

. . .continues on next page

WBC hives in the association apiary so that beginners could see the different characteristics, also two or three types of observation hives and we even had some bees in a lawn-mower, but that will have to be a story for another time.

I paint all my hives with Sadolin, and many of the boxes I have date from the period when I kitted myself out in the late 1970s and early 80s so they've been going for 40 years and are still in use, although Steve will tell you they're rather tatty at the edges.

Over the years there have been many ups and downs and we've seen good years and bad. Amongst the highlights were the years when oil seed rape was first introduced to the UK and my neighbours used to grow a lot of field beans too. Some years when we had a good flow from the May blossom I remember using a step ladder to put the 5th and 6th supers on the hives.

Probably the worst experience we had was the bees getting EFB and having to dig a pit and destroy dozens and dozens of frames of brood when we shook swarmed the entire apiary. That was a hard lesson to learn.

I have had many enjoyable hours looking through the bees on my own, as I find it a wonderful relaxation from the strains and stresses of life, and when teaching others I enjoy being able to pass on my knowledge and experience to people who are eager to learn.

Like any practical craft, beekeeping is best learned by doing it. Preferably with some guidance from an expert, but for those who are keen to learn and are observant the bees themselves are the best teachers. Don't believe everything you read in the books but check it out for yourself.

Having kept bees for well over 40 years they don't often surprise me, although there are still new things to learn.

I will finish with Winnie the Pooh's apt comment "You never can tell with bees".

Manage your expectations

– you can do everything right but still things don't go to plan!

By Sandy Infield

Even taking the roof off had made me anxious – it was stuck fast and I rocked the whole hive trying to loosen and lift it. Normally hive inspections had filled me with a wonderful calm but today, opening the new hive looking for a new laying queen felt wrong, sticky and awkward.

It is not surprising that I felt a bit uncertain; I had made many mistakes getting here.

There are three of us "Lock-down new beekeepers"; Richard, Mark and me. Almost as soon as I had successfully put my new nuc into their permanent hive I had felt close to Mark and Richard, we were going through very similar things and all of it alone apart from the WhatsApp group created to support us. I had realized that I was the last to join – both Mark and Richard were about three weeks ahead of me.

As I watched my little colony grow Mark and Richard were spotting queen cups, putting on supers and preparing for swarms and splits. At first I was pleased not to be dealing with all these complications but as time passed I became impatient, I wanted to be learning all these things, doing real beekeeping manoeuvres, like a toddler trying to keep up with my big brothers. Probably that's how I made my first big mistake.

On a warm afternoon, my bees quite calm and not very bothered to have me poking about in the hive I spotted a queen cup, and another, and finally three proper queen cells one with a small fat larva in it. This was it – the moment I had waited for, I should split the hive. I called Malcolm our beekeeping Guru and he said OK – perhaps I was a bit early but I could separate the frames with queen cells into a new hive and he would check in with me in a few days. When I checked after a few days and reported that there were only three queen cells Malcolm was worried. But since I had started the process of splitting the hive he said I should do it and choose the biggest cell for a new hive with stores and a couple of frames of brood – essentially the Pagden split. The other two queen cells went into a nuc, also with a couple of frames of brood and stores, my insurance policy against losing the new queen hopefully hatching soon in the new hive.

It was hot, very hot. My hives get hot all morning only dipping into shade by about 1pm. The bees in the nuc were going crazy; I could hear them bashing the sides and felt their distress. Could I open them to get some air? Malcolm had warned to keep them locked in for a for at least 24 hours – it had only been 12 hours but they sounded so traumatized and the temperature was rising. The nuc perhaps should have been in a cool shady spot but they had been placed in a sunny spot and I had to make a decision. So I opened up the entrance. The nuc emptied of bees and then worse – there were soon a handful of wasps diving in and out of the entrance.

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Sandy, one of our new beekeepers, had to make some tough descisions about one of her recently split colonies. But with the help of Malcolm Wilkie she managed to insert a section of comb with brood and eggs into the now queenless colony.

I guess it was inevitable; the nuc didn't survive even though I took it to Malcolm's garden to escape the wasps. Perhaps it was the trauma of the wasps or lack of bees or even the journey but when Malcolm checked, the queen cells had been torn out. Malcolm had a spare small queen which he placed into the nuc. Unfortunately the workers had turned to laying workers and they killed his new queen. All that could be done was to take them home and throw them in the hedge.

So today I'm waiting for Malcolm to visit. At a distance he will probably tell me that the new hive which I have just inspected all sticky and awkward has lost its queen. I couldn't see her and the only frame of brood I did see seemed to be mostly drone cells.

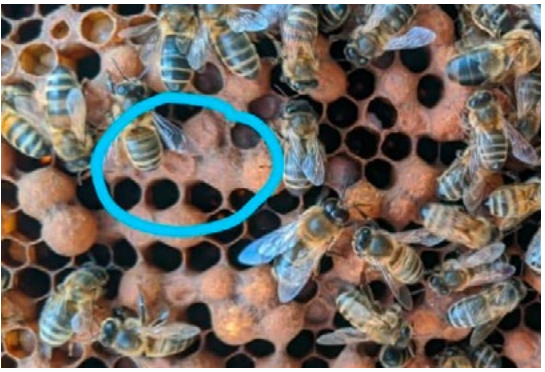
Post Script

Malcolm came, he found a new queen and he also confirmed that she was laying mainly drone brood. Most of the cells looked lumpy – an indication that the queen was laying mainly unfertilised eggs. We agreed that the workers had not started to lay even though they had sensed something was wrong because they had tried to turn unfertilised eggs into queens.

What to do? Malcolm laid out my options:

Option 1
Throw colony in hedge
No risk but end of this colony

Option 2
Buy New Queen
1. It's quite expensive to buy a new queen



Suspicious looking brood.

2. New queen may not be accepted by colony
3. New queen, if accepted, would be laying soon and colony growing before winter. High risk and probably a waste of money

Option 3
Take a frame of fertile eggs/brood. If the Queen was a complete drone layer at least that would give the bees a chance. If she was partially mated, the bees would make queen cells from the few fertile eggs she was laying
1. Weaken first hive by taking eggs/brood (but Malcolm got round this problem)
2. New eggs/brood might not be turned into queen cell
3. New eggs/brood could carry disease (unlikely)
4. If colony makes a queen cell, will it hatch (possibly a rushed Queen cell)?
5. Bees in this colony are getting older, not many nurse bees to rear young queen
6. If hatched, will new queen get out and mate?
7. If mated, will new queen return back and start laying?
8. It is late in the year, new queen will have to lay fast for colony to grow enough to survive winter
9. Colony could survive winter but be too small to be viable.
10. As there has only been drone brood, there could be a big build up of varroa and it is inadvisable to treat a colony with a virgin in it.

Advantages
1. No financial cost
2. Keeping the genetic line, first queen 'Amber Stripe' is calm and lays well
3. Potential for learning as a bee-keeper
4. The 'give it your best shot' emotion

After much thought and discussion, I chose the third option, we would take eggs from my first hive and put them in the queenless hive.

What I had decided on is an operation which needs some experience and skills, so Malcolm helped me.

Disc with eggs succesfully operated into a frame of the now queenless colony.

1. We took the poor doomed infertile queen from the second hive and destroyed her.
2. Taking a frame from her hive we carefully cut out a disc about the size of a coaster from the middle of the frame.
3. Setting this fame to the side we opened the first hive, carefully caught 'Amber Stripe', the queen, and put her into a queen clip
4. We removed a frame from the Amber Stripe hive that had plenty of eggs and brood.
5. Using the disc cut out of the frame from the queenless hive as a template we cut a disc from the Amber Stripe frame; it must have lots of eggs and brood.
6. Now taking the disc with fertilized eggs and brood we placed it into the hole in the unfertilized frame, sticking it in with bits of wax.
7. Now we closed both hives, putting the fertilized frame with its disc shaped hole back in the brood box and carefully watched Amber Stripe return down into the frames.
8. The second frame with its disc of fertilized eggs/brood was carefully lowered into the queenless hive.

So now I wait. I think I am learning that beekeeping is a glorious muddle of science, work, intuition and just plain luck so here's hoping this little hives are lucky and grow well enough to survive.

I have learned so much this last four months, much of it technical. But what has surprised me most is that I have learned to take my time, consider what I am doing carefully, be patient and above all manage my expectations!

When The Inspector Calls

By Jo Fuller

25 June 2020 was a hot one. 36 degrees! I should have been cooling down with my feet in the paddling pool but instead I was with the bee inspector for 6 hours in the midday sun in my apiary.

I probably should have been hurrying him up, desperate to get out of my bee suit but instead I was hanging off every word he said and fascinated with watching him work.

Since shadowing Sam Bowles when I first started 2 years ago and then listening and watching Malcolm Wilkie on the beginners course, I've realised not only do I have a bit of an unhealthy love for beekeeping but I also have an obsession for watching beekeepers work. Sitting back and watching is just as fascinating and you learn so much from taking a step back, watching and listening. It's also not very often that as a beekeeper you get a chance to take a step back and just watch, especially with your own bees. Every inspection is with intention, looking for something, it's close work and concentration is needed. You see the beauty of the bees but sometimes this is overlooked with searching for queen cells in the height of swarming season, or working with a time restraint. On this day I had 6 fascinating hours of watching Stewart Westsmith and soaking in his knowledge.

Stewart came to inspect my apiary as I had noticed one of my colonies behaving oddly. I had started to suspect it could have been the beginning of chronic bee paralysis virus (CPBV). A call to Stewart along with sending him the videos and he offered to come over. My apiary had grown over the COVID lockdown from 4 to 15 colonies so I jumped at the chance of a full qualified inspection.

I have always been very fortunate to have had support from both Sam and Malcolm. They've both been amazing mentors and instilled in me the importance of looking for disease and spotting it from the outset. Also coming from a farming background I know how important it is to have healthy livestock. Initially upon spotting the odd behaviour I noticed it was very subtle and I kept a close eye on it over the following week and a half. Once I decided I wasn't happy and suspected the beginning of CBPV I sent a video to Malcolm. Now this is where the importance of the association is paramount in a beekeepers journey. Someone in the association has always seen something that you're concerned about and if they haven't then they know someone that has, or someone is always there to just talk something through. 8pm that evening I was having a long conversation with Peter Coxon on the telephone discussing his experience of CBPV.

I've heard many times that as a bee keeper you never stop learning and everyone has their own way of doing things. Stewart arrived and was fascinated with my tool bag, looking through to see what I had hidden in there. He was very interested in everything and when coming across my queen marking paint kit from Thornes (which looks like nail varnish) wanted me to demonstrate my method of marking. He asked about my choice of tools, my stash of lavender and about the paper I use to start my smoker. He showed me his new queen clipping scissors and queen cage and demonstrated how they would work. We also discussed favourite tools and the Beehaus hives of which I have 3. Stewart hadn't worked with these before so was keen to learn about them and during the day asked many questions about their workings for different scenarios.

When Stewart works he chats too and talks about what he's doing and

Jo is a third year beekeeper and took quick action when she suspected CBPV (Chronic Bee Paralysis Virus) in one of her hives.

what he's learnt from others, such as stopping and watching the bees. He was right, we tend to dive straight in and miss the obvious signs the bees are showing us. Sometimes the bees are telling us where the queen is before we've lifted a frame out, you just have to stop, watch and listen. Sometimes the bees will stand on the top of the frame the queen is on and fan, fanning the pheromones around. If bees are looking out from between the frames then they're looking for the queen, so you know she's not on those ones. Stewart and I used the bees behaviour on every inspection and everytime the queen was found on the frame with fanning bees. On one occasion we lost the queen on a frame whilst getting the queen marking equipment prepared. We hunted for her for a few minutes on this frame until we reminded ourselves to stand back and observe their behaviour. We watched what direction the bees were facing, which way the majority of them were walking and they led us to the queen. Such a simple technique but easy to overlook when going bee blind with searching.

I marked 2 new queens in front of Stewart. I use a crown of thorns, Thornes marking paint and the stem of a blade of grass. Stewart asked me to talk him through it and I explained I like how I'm in control of the amount of paint I use, in control of exactly where it goes on the thorax and there's no mess. Stewart com-

Bee inspector Stewart Westsmith checking Jo's bees. Fortunately it turned out NOT to be CBPV after all.

mented that he was impressed and liked how neat it was. Phew – I could now breathe!

There were many things I learned that day and could talk about them for hours! A few of Stewart's ways of doing things included shaking bees directly onto the top of the frames and not into the brood box to avoid crushing, don't choose thick queen cells as it suggests the queen is low down – we dissected a thick queen cell from one of my hives and it was dry inside with the queen away from the royal jelly. We chatted about the beefarmers he's worked with and how I'd love to work with one to gain experience of how they do things. Also how one lone beefarmer he knows works on a constant 10 day cycle around his farm to coincide with queen cells and how commercial farmers always come prepared with a plan for every colony. Stewart certainly had stories to tell of places he'd visited!

I had initially been a little nervous of Stewart coming in case I was doing something wrong, or I hadn't picked up a disease but this quickly disappeared. He complimented me on my lovely strong colonies and gave them a clean bill of health, commenting that it's very unusual for such clean bees and for such an increase in barely 3 years.

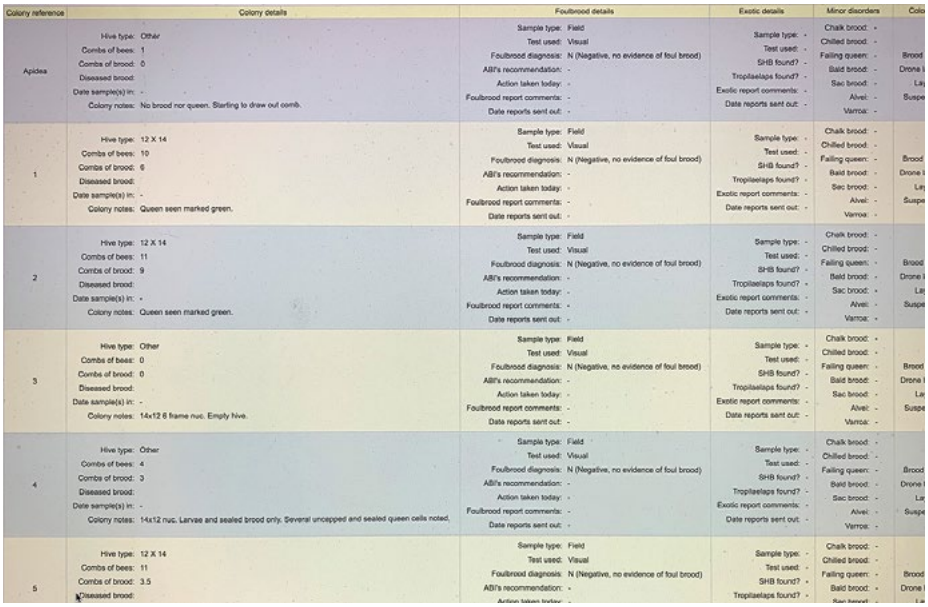
We chatted about my quiet prolific bees I had first acquired from Sam, the swarms that had arrived in the apiary one day, how we both won't tolerate grumpy bees and are quick to dispose of a queen causing this, how the support of the association and having people like Sam and Malcolm to learn from and to call to discuss complications is invaluable. If something doesn't go to plan then it hasn't gone wrong, it's been a lesson to learn from. I apologised for dragging him out to see the bees given my initial concern, which was thankfully wrong, but his response and advice was to always get the bee inspector out if you're concerned about any type of disease or have suspicions of one.

We gave ourselves one half an hour tea break in our 6 hours in the full sun. During this half an hour I learnt in future to bring frozen drinks like Stewart and to bring cake. I had come completely unprepared for me and had a warm bottle of water from the car and ended up eating Stewarts apple pies!

We didn't just eat apple pies during this time, we also looked at the mapping system on his computer to show where the local apiaries were. This showed very few which Stewart said was a great position to be in, I had a wide area around me with no other apiaries.

He was pleased I had called him out as this now showed Crowborough to be a very clean area. Few local official inspections had ever taken place and their data of the area had been limited. We spoke about me being able to control the local drones in the area, this progressed to queen rearing, making nucs, honey farms, moving forward from where I'm currently at and my options to move on to the next stage. We also discussed how EFB is on the increase, how it is high in London and the outer areas and the importance of everyone registering on BeeBase and to keep their records updated so they can monitor what colonies are where.

So having the bee inspector come to visit is like having your own personal intensive bee course on your own bees. They're very friendly, chatty and have a passion for what they do so will spend hours talking bees and in my eyes that's amazing. If you are lucky enough to experience it then one tip – remember to bring cake so you don't end up eating all of the inspector's apple pies like me!



Colony reference	Colony details	Foulbrood details	Exotic details	Minor disorders
Apidea	Hive type: Other Combs of bees: 1 Combs of brood: 0 Diseased brood: Date sample(s) in: - Colony notes: No brood nor queen. Starting to draw out comb.	Sample type: Field Test used: Visual Foulbrood diagnosis: N (Negative, no evidence of foul brood) AB!'s recommendation: - Action taken today: - Foulbrood report comments: - Date reports sent out: -	Sample type: - Test used: - SHB found? - Tropilaelaps found? - Exotic report comments: - Date reports sent out: -	Chalk brood: - Chilled brood: - Failing queen: - Bald brood: - Sac brood: - Alvei: - Varroa: -
1	Hive type: 12 X 14 Combs of bees: 10 Combs of brood: 6 Diseased brood: Date sample(s) in: - Colony notes: Queen seen marked green.	Sample type: Field Test used: Visual Foulbrood diagnosis: N (Negative, no evidence of foul brood) AB!'s recommendation: - Action taken today: - Foulbrood report comments: - Date reports sent out: -	Sample type: - Test used: - SHB found? - Tropilaelaps found? - Exotic report comments: - Date reports sent out: -	Chalk brood: - Chilled brood: - Failing queen: - Bald brood: - Sac brood: - Alvei: - Varroa: -
2	Hive type: 12 X 14 Combs of bees: 11 Combs of brood: 9 Diseased brood: Date sample(s) in: - Colony notes: Queen seen marked green.	Sample type: Field Test used: Visual Foulbrood diagnosis: N (Negative, no evidence of foul brood) AB!'s recommendation: - Action taken today: - Foulbrood report comments: - Date reports sent out: -	Sample type: - Test used: - SHB found? - Tropilaelaps found? - Exotic report comments: - Date reports sent out: -	Chalk brood: - Chilled brood: - Failing queen: - Bald brood: - Sac brood: - Alvei: - Varroa: -
3	Hive type: Other Combs of bees: 0 Combs of brood: 0 Diseased brood: Date sample(s) in: - Colony notes: 14x12 6 frame nuc. Empty hive.	Sample type: Field Test used: Visual Foulbrood diagnosis: N (Negative, no evidence of foul brood) AB!'s recommendation: - Action taken today: - Foulbrood report comments: - Date reports sent out: -	Sample type: - Test used: - SHB found? - Tropilaelaps found? - Exotic report comments: - Date reports sent out: -	Chalk brood: - Chilled brood: - Failing queen: - Bald brood: - Sac brood: - Alvei: - Varroa: -
4	Hive type: Other Combs of bees: 4 Combs of brood: 3 Diseased brood: Date sample(s) in: - Colony notes: 14x12 nuc. Larvae and sealed brood only. Several uncapped and sealed queen cells noted.	Sample type: Field Test used: Visual Foulbrood diagnosis: N (Negative, no evidence of foul brood) AB!'s recommendation: - Action taken today: - Foulbrood report comments: - Date reports sent out: -	Sample type: - Test used: - SHB found? - Tropilaelaps found? - Exotic report comments: - Date reports sent out: -	Chalk brood: - Chilled brood: - Failing queen: - Bald brood: - Sac brood: - Alvei: - Varroa: -
5	Hive type: 12 X 14 Combs of bees: 11 Combs of brood: 3.5 Diseased brood:	Sample type: Field Test used: Visual Foulbrood diagnosis: N (Negative, no evidence of foul brood) AB!'s recommendation: -	Sample type: - Test used: - SHB found? - Tropilaelaps found? -	Chalk brood: - Chilled brood: - Failing queen: - Bald brood: -

There is quite a lot of information to digest in the reports from a bee inspector.

DIY: Eke/Clearer Boards

By Steve Davies (alias The DIY Slave)

An eke is basically a large picture frame with a variety of uses. Simple to build and so versatile, you don't even need to buy timber as these can be made from anything left over; I am still using up bits of an old Ikea bookcase I saved!

Hopefully, this article will guide you through making a basic eke then developing it into a clearer board.

The measurements used are for National hives but can be easily adjusted for any other type of hive.

Materials:

Approximately 1.8 meters of 50-80mm wood
46mm x 46mm plywood (5.5mm thick)
Approximately 1.8 meters of 20mm x 5mm stripwood
Panel pins
Wood glue

Method:

To build the sides, I generally use 20mm thick timber approximately 75mm in depth. Measurements aren't critical but it is advisable to use the same thickness as the hive. 75mm depth gives the bees room to cluster after exiting and, conveniently, will accept most feeders.

The overall size will be 46cm x 46cm and I tend to cut all four sides the same length but overlap them on one side (the exact length depends on the thickness of the timber I'm using). Sand down all cut edges.
Don't join them together just yet but it is advisable to compare with a super or crownboard to confirm it's the right size!

Next, cut a piece of 5.5mm plywood 46cm x 46cm and sand down all edges.

Assembly:
I use a belt clamp and this is my method:
• part fit two, 50mm panel pins or lost-head nails to one side of each length and put in place ready for assembly. Lay each length in position and along one short edge (other side of the nails). Connect all four sides together and clamp together. Drive home the nails and check the eke is square.

There are other clamps available that will do the job but, if you haven't got any, then assemble one side at a time without driving the nails fully home. Once complete, check for square then drive the nails home. A simple clamp can be made with any strong cord or rope but cannot be relied on to be square.

If you only want to make an eke, ensure it is square and wait until the glue has fully cured. Then drive in a third nail between the pairs of nails for added security. Fill in any obvious holes and paint/stain if required.

For a clearer board, as soon as you have put together the sides (two nails per side), run a thick bead of wood glue around the top edge. Put the 46mm x 46mm plywood on top then secure with 25mm panel pins. I put one pin in opposite corners first to align the sides and plywood before driving home the remaining pins (five per side, 16 in total). At this point, you can add a third 50mm nail to the sides.

Find the centre point of the plywood and then drill a large hole. Dave Cushman's web site states " a central 33mm hole in it" but "I wonder if the size of this hole is significant"? See also http://www.dave-cushman.net/bee/clearerboards.html

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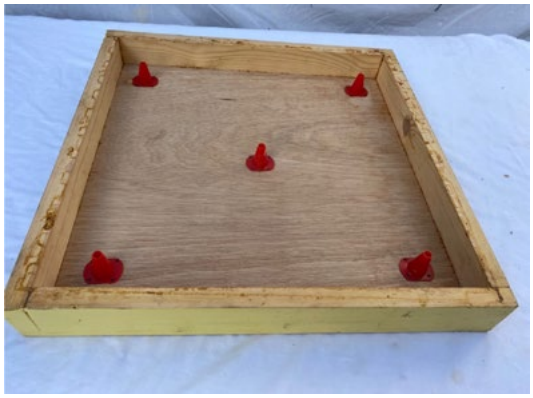
Next, pin the 20mm x 5mm stripwood around the upper edge. Do not glue this as you may curse yourself in years to come when you try to renovate the edge! Dave Cushman's web site has found that 25mm x 25mm edging stops the bees going up any brace comb and encourages them to go in one direction – down and out. I haven't tried this myself as I'm happy the way things work but you never know what will happen in the future.

The only thing left is to decide which clearer method you want as they are too numerous to mention.

I have tried three types, Round, Rhomboid and Canadian.



Please don't think they are in order of preference, they all work. The Rhomboid is best placed diagonally to allow the bees room to exit. It is surprising how many bees will be clustered under the clearer board but it shows they work 😊

Once the supers have been removed, leave the clearer boards in place as this will give the bees some extra space. When the extracted supers are returned to the hive, put the clearer board on top of the supers and you will automatically have a large number of bees moving down to clean out any remaining honey! 🐝

Photo by Paul Lindström

The forth story in a multipart series called "Three Bees"

When Mother Leaves Home

By Laurel Lindström

It was hot and stuffy and Burly was squashing Curly uncomfortably into the side of the frame. Soft spring light washed gently over Curly's enormous eyes and Twirly was twitching slowly coming out of sleep. He was anxious that Curly would be cross at the fidgety disturbance and at the squashing, but Curly's mind was elsewhere. He shoved as best he could at his brother and Burly snored softly, slightly shifting his large body to get away from the fidgeting and the pushing.

Curly wasn't particularly cross, but as the growing sunlight washed warmth and morning throughout the hive he had a curious sense of something changing. The girls were everywhere awake and all their senses were probing the air, trying to understand what it was that was different today. It was more than the sense of spring and the rising warmth, it was more than the newly ambered light rising up through the grid that formed the base of the hive. On this very particular morning there was none of the early morning muttering about inadequately sealed gaps, none of the urgent movement towards the sharded light piercing through unsealed spaces. No brow-furrowed bee engineers were assessing how much propolis would be needed to seal the breaches, or where the bees should source it, who should do the work nor even how long it would take. Instead there was just this curious electric energy and a charged, murmuring anxiety spreading from frame to frame throughout the hive.

Listening absentmindedly to Burly's snoring rhythm, Curly pondered awhile. The honey stores were proceeding nicely he had observed. Curly had learned from his many sisters that their primary function, and the function that killed them in the end, was foraging to bring back the raw materials for the colony's survival. They had clearly been busy and the colony was thriving, crowded even. He had noted yesterday that Mother had been extremely lively with her egg laying and that her fastidious retinue were especially busy keeping her fed and watered. They had been cleaning her more urgently as she moved from cell to cell, each time leaving behind a tiny egg that would soon grow into a grub and eventually into a new bee. She had even laid eggs in several overly large cells, cells which Curly thought were mistakes made by younger bees not used to drawing out comb for honey stores and raising brood.

Curly had also noticed that her retinue seemed bigger yesterday. Shoving Burly awake and telling Twirly to keep close because something was up, Curly headed off to where he had last seen the colony's Queen. "What's happening" piped Twirly, his eyes gleaming and his wonky frame moving awkwardly to keep up with his brother. He looked over his shoulder to check that Burly was coming too, as yawning and trying his best to get his antennae up and alert Burly mumbled something about breakfast. There would be no breakfast yet. The whole hive was in a buzzing uproar, bees moving fast and apparently at random across the frames and with no clear goal. To Burly it looked like chaos and he wondered fleetingly if the hornets were back. But this wasn't like the hornet attack. There was no organisation, no sense that anyone had any idea where they were going or why, just high energy agitation. He

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pushed a leg around his little brother, shielding him from the seething crowd, helping him along as Curly shoved his way through.

Curly was taken aback to see Mother moving with considerable purpose towards the hive's entrance. She never moved that fast and her wings were twitching. All around and behind her a turmoil of bees was clearly gathering itself into a tangled group, anxious to keep as close to the Queen as possible. And all the time the noise, the rising drone of thousands and thousands of wings limbering up for sudden action. As one, Curly watched them surge towards the exit, a turbulent mass of black and yellow, wings glittering, eyes gleaming, antennae outstretched. Like lava they passed out of the hive flying fast, straight and bouncing high into the bright morning light. The day was fully broken, leaving amber streaked mists hovering in the air. It embraced the rising cloud of bees, darting randomly back and forth rising higher and higher into the light. All tried to keep within range of their Queen as she spanned the golden air across random directions. They knew they had to protect and follow her but had no idea where it was she was going, only that they must come too.

Scout bees were dispatched and Curly heard that one scout had said something about a tree hollow some distance to the south. Another worker bee returning from an early morning excursion said they needed to get those new queens going. One of the younger nursery bees was crying because she couldn't remember the precise combination of honey and royal jelly she should be giving the grubs in the giant cells. It was all a muddle and as half the hive hovered high in the shimmering light, Curly wondered what would become of them all without their Mother. Burly didn't much care because he was hungry, but once Curly explained that without Mother there could be no more egg laying and no more new bees to feed them and tell them stories, Burly's antennae drooped. He put a forlorn arm around Twirly who was had started snivelling, whimpering, sad and forlorn. As Burly hugged him closer Twirly pondered once again their imminent death.

A short while later a forager returned with the news that the queen and her now quite enormous entourage had settled high amongst the cooling air of a nearby oaktree and that one of her scouts had found a new home. "But why did she leave?" Curly asked. "Why did they desert us?" The worker bee did not know, but she had heard stories. "What stories?" Burly wanted to know. "I'm not sure, just stories, stories about how Mothers always want to leave home eventually", the forager returned. "Maybe she just wanted more space. Maybe she'd had enough of all the egg-laying and being fed, all the grooming and fuss."

Burly was tucking into breakfast but managed to remind Curly that "we don't need to worry … the girls will have it under control, you know that, you know they always do, whatever it is. It'll be fine." And Curly, sighing, had to agree. After all there was plenty of food and far fewer bees to eat it now. The hive wasn't so stuffy and hot and they didn't need to push through the crowds to get around. The sun was shining and winter was a part of some remote story he had heard once when passing the Queen as she told her latest retinue a bedtime story. Whatever winter was, Curly decided they didn't need to worry. Far better to enjoy a late breakfast and then a peaceful midmorning nap with his brothers, somewhere out of the way and quiet.
zzzzzzzzzzzzzz

The "Three Bees" stories was originally written as a bonus for supporters of Laurel's upcoming book "The Draftsman", to be published by Unbound. You can read more about the book here.

Irish Bee Conservation Project volunteers positioning a bee lodge box on a tree on the banks of the River Bride in County Waterford. Within two days a swarm of native bees had inhabited this lodge.

Native Bee Conservation

In the July issue of The Apiarist, Professor David Evans makes a very strong case for banning the importation of bees. Scientific studies have shown that in Ireland there is a significant population of genetically pure Apis Mellifera Mellifera. In Ireland it's often called the "Black Irish Bee", but of course it's the original Dark European Honey Bee, found throughout the British Isles. This bee became established in The British Isles before the land bridge with Europe was flooded over 9,000 years ago. It is well-adapted to our climate and environment. Imported bees do not have this resilience, and hybridisation is showing signs of weakening the gene pool.

The Irish Bee Conservation Project has begun a programme aimed at supporting the native bees by providing bee lodge boxes. The idea is to increase the population of native bees, initially in the river valleys of the south east of Ireland, where the population is strongest. It is hoped that the bees will propagate from these areas, breeding with hybrids and imported bees and increasing the genetic resilience of the greater population.