



The *Apiarist*

... High Weald Beekeepers' Newsletter

Chairman's Chatter

Rather unusually we were obliged to hold the AGM this year over Zoom for which we now have an account. In the circumstances it went well, and fulfilled our obligations, although not as well attended without the draw of our customary Honey Show.

In stark contrast to last year's AGM & Chair's Report, and for reasons too painfully obvious to us all, 2020 has been a very quiet year for the High Weald Beekeepers' Association, and there has not been a great deal to report on.

This Chairman's Chatter is a brief summary of 2020 for the HWBKA and the AGM. Some of you who read the documentation sent out before the AGM can skip most of this as it is the Chair's Report and outcome of the AGM.

After last year's AGM we had our customary very pleasant Christmas Dinner followed by the usual mid-winter beekeepers' dormancy.

In the New Year, on January 23rd, Prof. David Goulson gave us an excellent, if somewhat gloomy talk about the global demise of pollinating insects. Then on February 13th, Malcolm led a very good session intended to prepare those interested in taking the Basic Assessment.

On February 28th Steve Davies, Keith Obbard, Colin Stocks and I spent the day exploring other possible apiary sites in the Crowborough area, more central to our patch.

The SBKA held their AGM on March 7th and Celia Davies gave an excellent talk on bee anatomy

The first Beginners' Course indoor session was held on March 14th led by Malcolm with a good attendance of more than 20.

So far so good!

... but then it soon became quite obvious that due to the burgeoning CV-19 pandemic it would be irresponsible to continue with the course and we decided to cancel/postpone the rest of the courses till 2021.

Some new beekeepers had already arranged to buy bees and have been supported by various members of the association. Some, with that support, have had considerable success in their first year, making increase and getting honey crops. Many held over their course fees with us till next year.

We have a plan to run the course next year which will have to be flexible to contend with further possible lockdowns etc.

We have continued throughout the year to hold HWBKA Committee meetings by Zoom and latterly have held virtual Bee Banters too. Talha Dinc took over from Helen Searle as Events Secretary, and AHAT Coordinator as Helen had busy work commitments. Between the two of them, they very recently organised an excellent talk by Helen Hadley on making various bee related products, again on Zoom.

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FORTHCOMING EVENTS

All "live" events are still cancelled until further notice. We will try and arrange seminars via ZOOM though, so please check our web site now and then, and watch you email in-box.

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

The Apiarist is a quarterly newsletter produced for members of the High Weald Beekeepers' Association.

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We intend to hold more Zoom events in future hosted by members of the association, on baking with honey, mead making and beekeeping in Turkey, Talha's country of origin. Are there any other volunteers out there with a bee-related subject to share? In March Helen and Bob Burgess have a talk lined up by Celia Davies which should be very interesting.

All other events both locally, such as the Bee Market at Heathfield School, and nationally, like the Honey Show, that we would normally attend were also abandoned.

The association continues strongly with 248 members Sept 2020 v 229 last year. Peter Halford compiled some interesting charts showing, for example, where our membership dues go.

Our finances are still very strong with a closing balance at the end of September >£20k, although as Rob points out in his report, this is inflated by course fees held over from last year which we will have to honour next year or refund. The increase in dues agreed at last year's AGM will offset this to some extent.

Both of our apiaries were kept in good fettle throughout the lockdown by Keith and Steve taking turn and turnabout. Slab Castle is going into winter with 9 colonies & gear in good repair.

Horsted Green Apiary lease was signed this year and is up and running with bees thanks to a lot of hard work from Steve and his merry band of helpers.

Quite a lot of new equipment has been bought to support both and we had an extractor very generously donated by Don Bastic.

We are hoping to be able to supply beginners with colonies of bees in future and are actively discouraging beekeepers from buying imported bees, given that SHB is now in Italy where some imports come

from.... not a great idea importing pests and diseases ...that's how we ended up with varroa. You may have read recent articles in our Apiarist Magazine to this effect. If any other members would be willing to supply our beginners, we'd love to hear from you!

Talking of the Apiarist, Paul Lindstrom, our editor, is managing to get out 'Jam packed' editions quarterly, which are very informative, and beautifully presented.

Fortunately, our AHAT coordinator has had little to do this year, with only one Asian Hornet incident this year in Gosport, I believe.

The SBKA has been very quiet with the exception of their AGM.

As regards your committee, there have been changes and there will be further changes. As mentioned earlier, due to work commitments Helen Searle had to relinquish her roles as Events Secretary and AHAT coordinator, and fortunately Talha Dinc has taken over. I thank them both for their valuable contributions.

After many years on the committee mostly as Honorary Treasurer Steve Adams has decided to hang up his committee hat and we thank him too for his invaluable contribution.

Also, this should be my last year as

Chair, as our constitution mandates a maximum of 3 years for certain roles including Chair. However, in contravention of the constitution but the light of the current exceptional circumstances, the fact I have had an easy year and the fact that there are no other volunteers for the role, I have said that I'd be willing to remain in role for a further short period of time, certainly to not exceed 1 year, until a new Chair can be found.

This was voted upon in the usual manner at the AGM, along with all the other committee roles with the following outcome (see break out box below) and was adopted unanimously by all present.

Steve Adams was thanked for his very valuable contribution over very many years, mainly as our treasurer.

One very good point raised under AOB, by Amanda Savage (which Amanda has proposed before and we forgot about . . .apologies Amanda) is that in future the we will send out committee meeting agenda's to the wider membership with an invitation to raise any matters, and a summary on the minutes will be circulated via the Apiarist. The intention being to encourage wider participation in the activities of the association.

Peter Coxon



HWBKA Committee Election 2020/21

As specified in the constitution	2020	2021
President (3 years)	Peter Leswell	Peter Leswell
Chair (3 years)	Peter Coxon	Peter Coxon
Vice Chair (3 years)	Vacant	Joanna Gore
Honorary Secretary (3 years)	Fiona Henniker	Fiona Henniker
Honorary Treasure (3 years)	Robert Gore	Robert Gore
News Letter Editor (3 years)	Paul Lindström	Paul Lindström
Apiary Manager	Keith Obbard	Keith Obbard
Other roles		
Membership Secretary	Peter Halford	Peter Halford
Training Manager	Malcolm Wilkie	Malcolm Wilkie
AHAT Coordinator	Talha Dinc	Talha Dinc
Events Secretary	Talha Dinc	Talha Dinc
Assistant Apiary Manger	Steve Davies	Steve Davies
Ordinary members	Helen Searle	Helen Searle
	Steve Adams	Mark Ballett

How did you come to be a beekeeper?

This is a fixed feature in the Apiarist – an interview with members about how they got into beekeeping. Meet Fiona Henniker, Honorary Secretary HWBKA.

Question: Why and when did you get into beekeeping?

Answer: I can't remember what sparked my interest originally, but when a chap re-decorating for us some 3-4 years ago, he told me he was a beekeeper, but had to sell his colonies for some reason. We only have a small garden, so too small to keep bees there. But one of our friends, David, has plenty of space, and kindly offered me to keep bees there. So I got one colony late in the season, September or October. I had bought a couple of books about beekeeping already, and now I started to read those carefully. Through a friend of this friend I heard about HWBKA. But I didn't need to do anything with the bees that Winter.

Q: What type (types) of bee hive do you prefer?

A: I started with a BS National hive with a Jumbo (14x12) brood box, and it works fine for me so I stick with that.

Q: Have you tried other types of hive design? If so, any comments on why you didn't continue with this (those)?

A: My first hive was made of cedar wood, but I have started to use poly hives since.

Q: What's your best memory of bee keeping?

A: Instead of going for a certain memory I would prefer to say what

my greatest joy is with bees. It's in the Spring, after not having seen the bees properly for a long time, when they come out in numbers on a warm sunny day. It's a lovely feeling.

Q: What's your worst memory/incident in beekeeping?

A: It was late in the season of my first proper year as a beekeeper, when the colony had turned very aggressive (described in detail in an article in The Apiarist of April 2019) after having been re-queened. It all started when we realised that we had a drone laying worker-"queen", and had to sort that out. The replacement queen turned out to breed really nasty, aggressive bees. My thick Marigold gloves were covered with stings sticking out from the rubber after one session! It ended well, with a replacement queen that bred calm and gentle bees. But it was a terrifying experience.

Q: Any particular mentor or beekeeper expert you are especially grateful to?

A: No questions about it – Malcolm Wilkie. He held the course I attended my first year, and it was Malcolm who helped me sort out my aggressive colony. I always try to figure out what to do with the bees when something odd happens, but it's such a privilege to be able to check with Malcolm if I have understood the situation cor-



"Still loving my bees" – Fiona Henniker after having been stung by a bee, something that goes with the trade unfortunately.

rectly, and if my plan of action is the right one. Once it has been approved by Malcolm it always works.

Q: If you were to give one single advise to a prospective beekeeper, what would it be?

A: It would be to be prepared to spend some serious money on proper equipment, at least the first few years.

Q: Anything else you would like to add?

A: It would be the word happenstance. I got into beekeeping by chance, but it was a happy happenstance. It drives me crazy sometimes, but I love my bees.

Bees will always be bees – you can't train or manipulate them much. They are not dogs.



A brief summary of the latest HWBKA Committee meeting

The latest Committee meeting was held just before the AGM, and was mostly concerned with preparations for the AGM. But the meeting before that was held 24 September, and the following is a summary of the topics discussed.

A Risk Management Document for general use has been prepared.

A Swarm System is to be handled through WhatsApp. A Sub Committee has been created to plan for the bee course in 2021. There has been no progress with the proposal to establish an apiary in Crowborough. It is thought the Council is not keen. It was decided to arrange some lectures for the membership using

Zoom. We have kindly been given a number of bee-related books belonging to Marianne Beedell, who died last year. We were also given a Honey Extractor by Don Bastic.

The next HWBKA Committee meeting will be on Thursday 18 March – suggestions of issues and projects are welcome!



Management of Varroa destructor

By Paul Lindström

Among all the threats to our honey bees the Varroa destructor is by far the most immediate and acute, but also one we can do something about.

There are several methods available to reduce the number of mites in a colony. I won't describe them all in detail, but mention them so you can read up further on the ones you are not fully familiar with. Malcolm Wilkie has written several articles on the topic as part of his "Topical Tips", available on the HWBKA web site. The latest was on November 2020, ([see link here](#)). And an earlier one was in January 2018, ([see link here](#)).

There is not one single treatment that will fix the problem once and for all, but rather a set of different treatment methods which together make up a Management System for Varroa control. We are not likely to completely eradicate the Varroa destructor, but we need to control the number of Varroa mites in our colonies until the bees hopefully have learned to deal with them by themselves. There are some positive signs of more Varroa resistant strands of honey bees here and there, but we will have to help the bees for now.

There are basically three types of Varroa control methods. The first one is mechanical manipulations without any medication or chemical treatment. The other two consists of some type of chemical treatment, either by more "natural" substances, or different type of chemicals/medications.

Mechanical manipulations

Among the mechanical manipulations commonly used is the Shook Swarm method. It's quite straightforward – you shake the bees into a new, clean hive. The idea is that the bees get a fresh start and you destroy what brood was in the old hive, and with that get rid of the mites in the brood. A detailed description of this can be found on the excellent

web site started by David Cushman, and kindly maintained by his friend Roger Patterson when David died in 2011 ([see link here](#)). Pros: Easy and straight forward, you will have a fresh set of frames after this. Cons: Many of the bees will still have Varroa mites afterwards. The colony needs to be very strong in order to do this, or it might not survive the treatment.

Another mechanical manipulation is Drone Brood Removal. The method is based on on three aspects of the mite's biology. First, mites spend most of their time in capped brood cells. Second, they can be found 5–12 times as often in cells with drone brood as in those with worker brood. Third, mites using worker brood as a host average 1.3–1.4 offspring, while those using drone brood average 2.2–2.6 offspring. So, by removing capped drone brood from an infected colony, you remove a disproportionately large number of mites without affecting the worker population, and you remove those mites with the highest fecundity. As a result, you suppress the growth of the mite population during the brood rearing season. There are many sites which describe how to do this properly. Pros: may reduce the mite population up to 50% at best. No chemicals used. Cons: Doesn't remove or kill the mites on the bees. You will reduce the number of drones available for surrounding colonies, which might lead to poor mating results for the virgin queens in the long term.

Chemical treatment

Since I'm not a chemist or scientist, I can't say for certain which treatments is more "natural" and which are more artificial, like manufactured insecticides. Some substances occur



Female adult varroa destructor on the head of a bee nymph. Photo By Gilles San Martin from Namur, Belgium [CC BY-SA 2.0, via Wikimedia Commons]

naturally in nature and seem to have a repellent effect on the mites, like Thymol (extracted from Thyme) and some other essential oils. There are many "medicines" on the market, but you should stick to those listed and approved by DEFRA ([see latest list here](#)). The National Bee Unit also publish this list with comments regularly, and points out which products has been confirmed to show signs that the Varroa mites starts to be resistant to the product. Among those are Apistan and Bayvarol. The most common active ingredients are actually quite few, mainly Amitraz, Flumethrin, Formic acid, Oxalic acid or Thymol (or a combination of those).

For example Oxalic acid can either be applied by trickling or spraying the solution onto the brood, or by vaporising the Oxalic acid crystals (called sublimation – the solid crystals are heated up and turned into gas). This is normally done when the colony is more or less broodless, typically mid-to late December.

It's of course important to follow the instructions carefully what ever product you use. For some treatment you can't have the honey supers in, or it will contaminate the honey. Some treatment is said to risk that the queen goes off laying (or might even die). If you vaporise the hive using Oxalic acid you have to use a good quality gas mask with the right

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type of filters, as well as using rubber gloves and goggles. Oxalic acid in gas form is very aggressive.

So, to summarise some pros and cons using chemicals: While Oxalic acid strangely enough isn't harmful to the honeybees, but lethal to the Varroa mites, this only applies if you use the correct amount of Oxalic acid, either trickled or sprayed onto the brood, or sublimated as gas vaporising the bees. Too high concentrations or amount will harm the bees. And without proper gas mask and protection the Oxalic acid vapour will harm you. Some products can be used with supers on, while with others the supers can't be on, or the chemicals will be transferred to the honey. Sublimation with Oxalic acid kills most of the mites attached to the body of the bees (these are called the phoretic mites), but doesn't penetrate a capped cell. Trickling or spraying a solution containing Oxalic acid onto open brood will be more effective for this, but on the other hand this can't (or shouldn't) be done during the Winter. One way to make the sublimation more effective is to vaporise the colony three times in a 5-day interval, to cover almost a whole brood cycle. Also – you shouldn't do sublimation in temperatures below 4°C, as the bees are very likely to cluster tight together at very low temperatures, and the Oxalic acid vapour only reaches the outer layer of bees effectively.

LASI (Laboratory of Apiculture and Social Insects) offer a short and concise text on the best way to use Oxalic acid via sublimation – you will find the PDF [here](#).

Choose the right gas mask and filters

Where ever you buy your gas mask from make sure it complies at least to Class FFP2 in the European standard EN 149. It means the mask (with the correct filter/filters) remove at least 94% of the particles or chemicals. A class FFP1 mask (and filters) will only remove up to 80% of



This is called a Full-mask, and will protect both your eyes and your lungs.



This is a Half-mask, and you need to wear goggles as well to protect your eyes.

the particles, while a class FFP3 mask will remove 99% of the particles.

Make sure the filters are meant to neutralise acid vapours, since the most common filters supplied for gas masks are intended to filter out dust and other fine particles, not acid gas.

You should also wear goggles, or the fumes might irritate or damage your eyes. So, while sublimation with Oxalic acid is quite safe and simple in regard to the bees, you need to buy fairly expensive equipment in order to make the treatment safe for yourself.

Combine methods

As you can see one method might not have full effect over time, so you will probably need to combine the different methods described here to achieve maximum effect.

Keep good records on what you have done and when, to see what method gives a good result. If you use what is classed as medicine it's mandatory to keep written records of those, and also to dispose of the medicine in the way described for that product.



Book review

By Paul Lindström

At The Hive Entrance by Heinrich Storch, 1951.

This book was written in 1951, but in German, and it took until 1985 before it was translated to English by a F. Celis and published by European Apicultural Editions.

It's not a thick book, less than 70 pages long, but it's a book to read slowly, and try and practice the advice given. It's all about what is mentioned in the very first lines of the book: "How to know what happens inside the hive by observation on the outside".

The book is organised very systematically starting with Winter, and then goes through the beekeeping season ending with Winter preparations. The text is in two columns, the first column is "Observations", and then follows the column "Explanation". Very straightforward and pedagogical. I love professor Storch's slightly dry and pedantic tone. For example; chapter B starts with instructions to first jump to page 60, and soon after you are told to read the text under the section for November, before actually continuing to read chapter B. He tries to describe how the bees sound in the different situations, and you repeatedly find yourself saying "oh yes, I have actually heard them make that sound".

My favourite story is probably when he repeatedly forced a newly mated queen to go back into her new hive, until she gave up the idea of swarming. He simply picked her up on the landing board, and put her back. In order to do this you need to give yourself plenty of time to spend at the hive entrance. If you manage to do so, you will probably find that it's quite relaxing and de-stressing. I strongly recommend you to get hold of this book.



Your First Year As A Bee Keeper – What To Expect

By Mark Ballett

If my first year (2020) as a bee keeper is anything to go by, this is what you have to look forward to.

Key – **Preparation**

Summer Madness

Winding down

March – Getting Started: Bought first hive and ordered five frames of bees. I also started reading a lot of bee books to try and educate myself.

Take away – prepare by reading widely.

April – Bees Arrived: Started feeding to build my colony and weekly inspections. Soon realised I'd need another hive, so ordered second Hive and poly nuc.

Take away – you will need more than one hive to be ready for the swarming season. A poly nuc, at least, is a good idea, but probably best to have a second hive as well. Beware, lead times for equipment are long at this time of year. So, order early.

May – Action Time: Added Super to start collecting honey. Later, found charged queen cells, so had to split colony to prevent swarm. This left me with two hives and a nuc with bees, only one of which had a mated queen.

Take away – vigilance is important so as not to miss a charged cell, then you'll need help to deal with it. So, take your time over inspections and make sure you can contact your mentor quickly.

June – Expanding Apiary: The new hive swarmed, as two charged queen cells had been left in it and the first queen out swarmed. I collected this swarm from my medlar tree and put them in a borrowed nuc. So, now I had four colonies. Later, found that my first three queens were laying eggs, so the two new queens had been mated and the old queen was still laying. Transferred swam into borrowed hive and later saw eggs

there too. Harvested 22lbs of Spring honey from my first hive.

Take away – things can get complicated and busy pretty fast and you'll need help. Swarm collection is just like it says in the books and it's easier than you might think. Watch carefully for egg laying as life can get very messy if a new queen isn't mated. Your first honey harvest is a wonderful thing. Buy a refractometer to measure water content of the honey.

July – Harvest Continues: First sting! And harvested 30lbs of Summer honey from same two supers – refilled in just 33 days! Gave my fourth colony to Richard and transferred swarm into another new hive.

Take away – I had to borrow equipment to get through all this and other bee keepers were very kind and supportive. In the end though, I ended up with three National hives and two poly nucs. 12x14s seem preferred frame size.

August – Easing Off: Second sting. Feeding sugar syrup to build colonies for the winter and switched to fortnightly inspections. Varroa count and treatment done. Swapped gloves.

Take away – while blue nitrile gloves are recommended, I decided to switch to more protective washing-up gloves, as I was fed up with getting stung and I think it made me less confident with inspections. Colonies need a lot of stores to see them through the winter and you need to make sure they have them.

September – Winter Stores: Stopped feeding and weighed hives for winter stores.

Take away – it's easy to weigh a hive and instructive too, as the weight increases with feeding. If you want to make sure they have adequate stores for the winter you need to do this.

October – Winter Protection: Added membrane to waterproof hives,




Mark Ballett, relatively new beekeeper and new member of the HWBKA Committee

some insulation boards, and mouse guards.

Take away – doing this made me wonder if I should have bought poly hives which provide greater insulation. My next hive will be a poly hive.

November – Watching Brief: Fed Fondant. Varroa count and treatment.

Take away – The more you control varroa during the winter the better start you get in the spring. Oxalic treatments in November often needed for older colonies than mine. It can be a bit worrying to see so little activity at the hive.

December–Feb.: I still have all this to come, but everything I read tells that it's time to renovate and maintain kit and to get ready for the new bee keeping year ahead. 

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.

DIY: Economy Uncapping Tray

By Peter Coxon

We recently performed the Association honey extraction at my house with the assistance of Keith Obbard, Malcolm Wilkie, Paul Lindstrom, Steve Davies, and Talha Dinc ... and much appreciation is due to all. It is a valuable revenue stream for the association.

Steve arrived well-armed ... would we expect anything less? And although I have never owned an uncapping tray, never felt the need for one (when a cheap baking tray will do) and am too mean to buy one anyway, I did experience some uncapping tray envy when Steve got out his very nice Man Lake uncapping tray, but am still too tight to buy one.

Looking at how his was made I had an idea to make my own as described below.

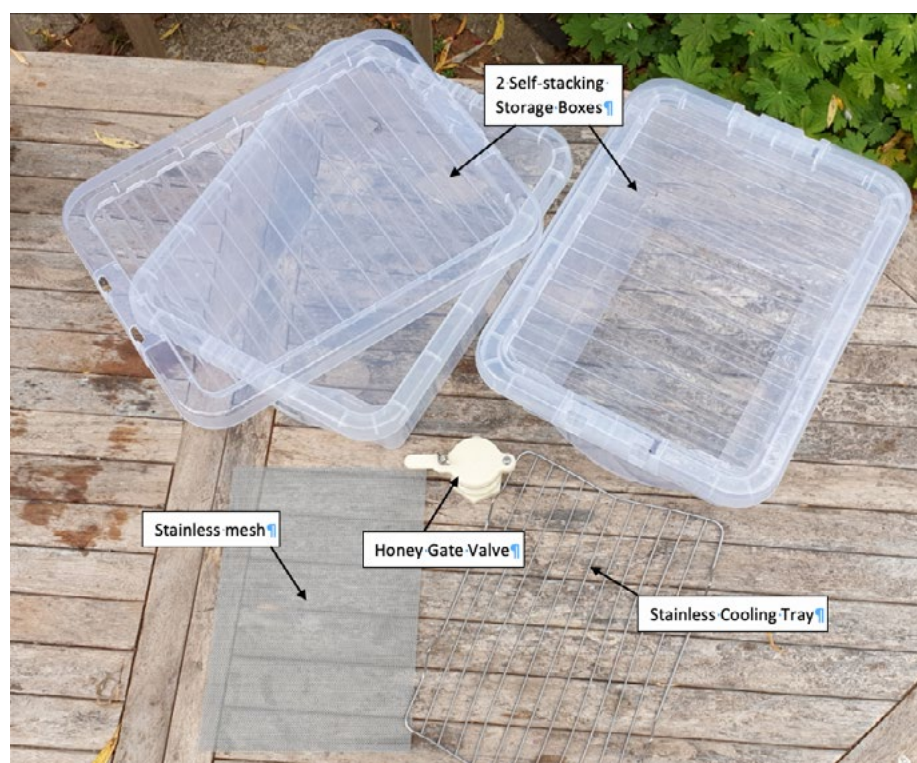


Voilà – a reasonably cheap uncapping tray.

Ingredients:

1. two self-stacking storage boxes preferably slightly bigger than a super frame (available any DIY store ~£4.00 each, Amazon etc)
2. one honey gate valve (optional) (any of the bee equipment suppliers and Amazon ...of course £3.60)
3. one stainless steel cooling tray – sized to suit box (cooking shops ... but easier to get the right size on ... guess where Amazon ~£9.00)
4. One piece of stainless mesh – size to suit box 210mm x300mm in this case ~0.4mm pitch (Amazon ...yet again ~£9.00 for 6 sheets (I have 5 spares if anyone should anyone want one 😊)

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This is what you need.

Recipe:

1. If using a honey valve, make hole near the bottom of one of the boxes to take the valve – typically 45mm diameter using a hole saw or craft knife, but note it will need to be a good fit otherwise it will leak. Probably not really necessary. I also added some small stainless brackets to mine to better support the top box and at the same height as the top of the valve nut, but these are not really essential either.



2. Cut the base out of the second box but leaving an adequate lip to support the cooling tray and stainless mesh.



3. Insert the cooling tray and stainless mesh.



4. And finally – place this box on the first. Place full super frames on top and get uncapping ... simple! 🐝

The fifth episode in a multipart series called "Three Bees" Into the light

By Laurel Lindström

The hive was stuffy and busy. When Burly squeezed himself into wakefulness he was beset with a curious sense of annoyance. Little snuffling sounds told him that his brothers Curly and Twirly were still asleep, but why this sense of irritability? Food? Maybe a sip or two of some uncapped honey would sort out his temper.

He meandered his way, lazy and slow, watching as his many sisters moved rapidly across the comb, nimble and focused to disgorge their nectar and unload collections of pollen and propolis they had already collected. By carefully controlling its water content, they would turn the nectar into honey. Burly knew that, still unaccountably cross as he muscled his rough way past his sisters to sip. Being nearly six weeks old, he now understood how it was that the different parts of the hive could have honey that tasted different. The knowledge didn't sweeten his mood.

When he was newly born, he remembered being told the colony's honey tasted vaguely of daffodils and crocuses. That's what the nursing bee who had made him and his brothers her special project, had said. He remembered it tasted of chilly mornings and sunlight slowly seeping, soft and lazy into the hive. His favourite nanny also told him: "we gathered this in the Spring, early in the season when it was really a bit too cold and windy to go out. Stores were running low so we needed to take a bit of a risk. Not much was out except a few daffodils and crocuses, and the occasional primrose. But we can't reach primrose nectar because our tongues aren't long enough. We leave the primroses to the hairy footed flower bee: their tongues are way longer than ours." Burly hadn't entirely followed her but he got the

bit about daffodils and crocuses being risky.

Burly remembered the conversation and pondered the fate of his nurse. She had of course died from overwork, like so many of her sisters. Curly had told him that she would, so she must have. Curly was always right. Curly told him he had been watching the nursing bees and all the others. He told Burly and Twirly that they shouldn't expect to see too much of their nurses any more. Curly told them the nurses were moving on to other duties in the hive. Depending on how old they were the girls would be nurses, cleaners, undertakers, workers, assassins, chemists, guards, scouts and advisers. They might also be builders, engineers and royal attendants looking after Mother.

Curly observed all this as he and Twirly moved together about the hive, vaguely following Burly who always seemed to know where all the tastiest honey was stored. Curly had to go slowly with Twirly whose nerves and weaker legs made it impossible for him to cope with the colony's chaos on his own. Their favourite flavour so far was the honey made from lupin nectar, but that was already nearly fully capped. They were looking forward to making do with rose, which was just coming onstream when they came across Burly sulking, his belly full, his antennae being cleaned by a diligent sister. "And don't ask me what the matter is" he snarled at his brothers. It's the weather I think, I don't know, I'm restless and feeling stifled in here, it's so hot and clammy and sticky. I need to get out."

Twirly stared at him in horror, the signals reaching his brain from his



Photo by Paul Lindström

enormous eyes a tangled mass of confusing terror, his antennae almost rigid with terror. "No..." he croaked, shaking and running a foreleg across his back to check that his wings were still in place. "No, you cannot even be thinking such a dreadful thing, it's madness, utter madness, we belong here, we've got important work to do, they told us, the sisters told us, important work. Important work!" He kept on repeating the phrase in a low mumble, his mandibles working, big eyes glancing to and fro between Curly and Burly, looking for reassurance.

But it was no good. They were ignoring him. Again. He was alone in his festering fear. Again. And they were still ignoring him. Twirly steadied himself chewing on a bit of old wax he liked to keep handy in his leg hairs. He told himself over and over that he was alright, it was just a little shock, I'm alright, I'm alright. and then tired of being ignored, Twirly drew closer to hear what Curly and Burly were saying. He eavesdropped news that put him back into a state of terror: "... we have to go out because we've got work to do on the outside". Burly was nodding slowly as Curly said this in patient and gentle tones. As he heard it, Burly's mood started to soften only to harden once

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more when Curly answered his next question. "I don't know. That's the thing with this. I really don't know what the work is, or how we do it. No one will tell me and none of the other drones know either." Curly bit at his hard edged lip and pulled on his antennae, his brain running in overdrive as he pondered the question. But Curly's limited answer was enough for Burly. Burly shoved past his brothers, energised "I'll go and find out for myself" he snarled over his shoulder and disappeared into the throng.

Curly and Twirly didn't see him again that afternoon, but as twilight was settling they saw him arrive home wobbling and unbalanced, exhausted and dazed as he collapsed onto the landing board. "I did it" he said, "I went out into the light and flew and flew and flew until it seemed I was on the other side of the world." Curly rubbed at the bee's grubby head and dew dropped eyes anxious concern twittering in his antennae. "What happened?" he said with some urgency, "what was it? What was the work out in the light?" "That's the thing" Burly replied in an uncharacteristically small voice. "I don't know. I still don't know what it is or how to do it. And I've been flying all day." His voice was weak and thin and tears were creeping into his sleepy eyes. "All I know is that I had to keep flying on and on, until I knew I just had to come back again, but it took a long time because it was so very far." His voice was almost inaudible and his eyes were dimming. Curly and Twirly looked askance at one another. They looked at Burly. "Tomorrow I'll have another go" he whispered and fell asleep slumped where he stood.
ZZZZZZZZZZZZZZZZZZ



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](#).



Book review

By Mark Ballett

Following the Wild Bees by Thomas D. Seeley, 2016.

In the short time I have been a bee keeper I have been surprised by many things: temporal polyethism; the myriad colours pollen comes in; and that a worker bee flies 500 miles in a lifetime, amongst many others. However, the fact that people go 'Bee Hunting' still managed to surprise me and I only found out because my son, Peter, and his partner, Theodora, bought me this book for Xmas.

Using old honeycomb filled with sugar syrup to attract foraging bees to your 'bee box', you then mark and trail the bees back to their homes, in stages. Whilst you may often end up in someone's apiary, the Holy Grail of the bee hunter is to find a wild bee colony in a holey tree.

The bees are marked with coloured paint on their abdomens and then the direction of their return flight is



recorded, as is the time it takes them to return for more syrup, which, of course, they are programmed to do. With this information you can estimate the distance and direction of the bees' homes.

By moving the box along the bee line, with some bees held captive on this short journey - no more than 100m, or so, at a time - it is possible to get very close, as each time you move some captive bees, they reorientate themselves, so they can come back to the new location of the syrup.

You may need to change tactics towards the end of your search, as wild colonies are normally well hidden. Interestingly, Seeley notes that, from his experience, it takes between 58 mins and three years! to locate the bees at the final location.

You can also use triangulation techniques. By releasing bees from different locations that establish intersecting bee lines you can fix the position of the a colony, a process called cross-lining.

Of course, Bee Hunting is best between April and July in the UK, when the nectar is flowing.

All very interesting stuff, if you like bees, and navigation, as I do.



Photo: Peter Coxon

This photo has actually nothing to do with the articles above. We have just put it here to fill out space. But she is very cute, and you might recognise her from several of Pete Coxon's presentations.

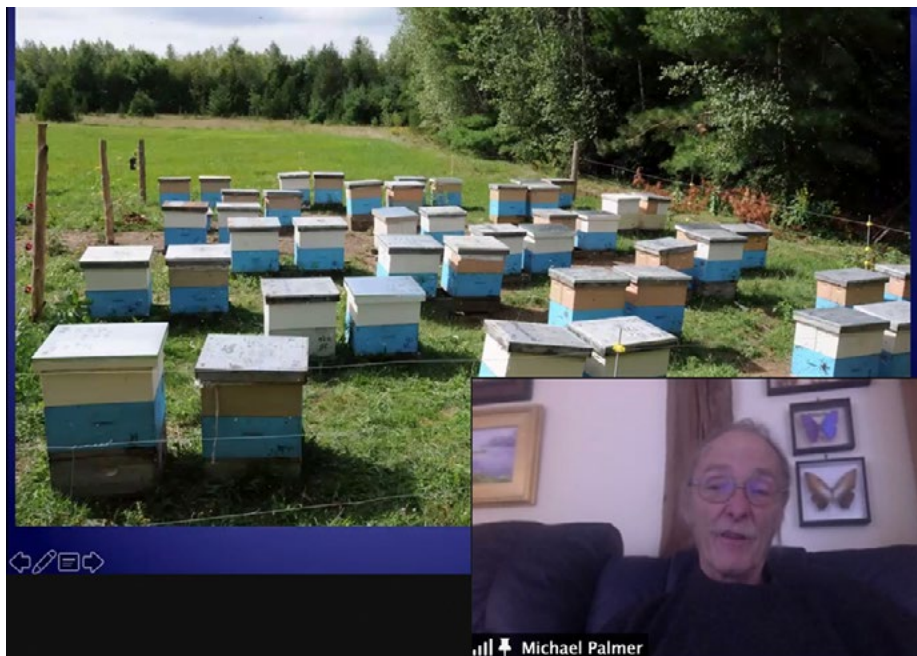
- We wish a happier New Year, better than 2020.

Online lectures

By Paul Lindström

In these times of covid it's quite comforting to be able to attend some lectures, albeit they are conducted online. There are a lot to find on YouTube of course, but I recently came across an UK web site which announce many seminars conducted by the beekeeping associations in the UK. The site is called "Beekeeping. events" and can be found [here](#). If you sign up you will be notified when new events are placed online, or scheduled. There are many events coming up in 2021, and quite a lot of them looks really interesting to me.

I attended one event recently which I found interesting, even if it was a bit over my competence level. But for experienced beekeepers with many colonies it should be useful. The lecturer was Michael Palmer from St Albans, Vermont, in the far North of the US. He and his team typically raise about 330 new



Michael Palmer on "Sustainable Beekeeping."

colonies every year, and manage about 1000 colonies in all, so you see it's on quite a big scale. His topic was "The Sustainable Apiary", which sounded good to me. It was arranged by Cambridgeshire Beekeepers Association, and was part of their series on Sustainable Beekeeping. He

basically makes sure the colonies are strong enough to survive the severe winters in Vermont, and re-queen or merge colonies if there is any doubt. He doesn't use queen excluders at all, which I found interesting. All in all a good, well worth watching. You will find it on YouTube for free [here](#). 