

# The Essex Beekeeper

Issue 679

July 2021

## In this issue

Monthly Magazine of the  
Essex Beekeepers' Association  
[www.ebka.org](http://www.ebka.org)  
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Registered Charity number 1031419



# Bee Buddies

Much of what we do as beekeepers is a little odd. We have our own language, strange pieces of equipment, a need to knock nails into pieces of wood and then we go out during the summer, covered from head to toe, wearing rubber gloves. If we get it wrong, we are painfully reminded by being stung.

How lovely it is to have bee clubs – our local associations where we can meet together, share experiences and knowledge as well as a cup of tea and cake, and speak to other beekeepers. Perhaps you are lucky enough to have a spouse/ partner who shares your love for bees and is happy to roll up their sleeves inside the apiary; I'm not. My husband enjoys cycling, rugby, and fine wine – he also loves honey, but he isn't interested in interacting with the bees. There are times when you need to lift heavy supers, brood boxes, and when it would be great to have someone who is always there when you need them, who understands how the beekeeping world turns round and who you can share a joke with when things go wrong (or right)! Maybe they will look after your bees whilst you are away on holiday, or ill, or just check them for fondant when they are driving past.

Let me introduce to you a remarkable concept – the bee buddy. I have one. He is a little older than me, and a lot wiser. He's been keeping bees for a long time, and so has seen most things before (though Chronic Bee Paralysis Virus did surprise us both when it appeared in one of his hives). He and I have a similar philosophy to our beekeeping. We both use 14 x 12 frames, and he has a forgiving attitude to my habit of trying new things.

Everything is quicker with a bee buddy. An inspection takes half the time, as we work alternate frames whilst we go through the hive, calling out what we see on the frame. One person can be writing notes whilst the other is closing up the hive and getting the next one ready to inspect. We agree apiary visit days and times in our diaries and decide beforehand what we want to do with the hives, so that we know what equipment to take.

He looks after my bees when I'm away on holiday. When the pandemic started, and he was shielding, I looked after his bees. We now travel to the apiary in separate cars and wear our masks whilst we do our inspections. When it comes to the heavy jobs of moving brood boxes or lifting supers, the work is halved.

It isn't all sweetness and light though. We do disagree. In his opinion, my bees are the ones most likely to sting, and if they do make more honey, it's only because they have been robbing the honey from his hives! We often lose hive tools, only to have them "appear" in the pocket of the other beekeeper! Things aren't always easy to arrange – but the advantages far outweigh the disadvan-

tages. If you can work alongside someone routinely – I heartily recommend it.

Julia Young  
Cheshire Beekeepers Association



## Drawing Brood Foundation

*That which is not good for the bee hive cannot be good for the bees (Marcus Aurelius)*

In my callow youth as a beekeeper (mid to late forties), I thought that something was wrong with my bees. They refused to draw foundation as I expected them to. I filled the brood box out with foundation on either side of the brood nest and waited for action. Instead, they chewed holes in it and often never drew out the outer combs even by the end of the summer. I am not sure when the epiphany came - possibly in one of Pete Sutcliffe's tutorials, but I came to realise the fundamental fact that bees only draw foundation when they need it, either to expand the brood nest or to lay down stores. Undrawn comb in a hive is just dead space and vulnerable to vandalism.

There is a little more to it, of course.

A lot of investment is required for a colony to draw comb. Approximately eight times the weight of honey is needed to produce a given weight of wax. Bees will only build comb during a nectar flow. They will not use stored honey to do it - an excellent evolutionary trait for self-preservation but not always appreciated by beekeepers. Lots of bees are needed, typically aged two to three weeks. They must cluster and maintain a temperature of about 35 degrees Celsius. Weak colonies are reluctant to draw foundation. It will not happen at the periphery of a colony unless the box is packed full of bees because it is harder to maintain that temperature further from the brood nest. Even then, they are likely only to draw the inner face.

## Techniques for Drawing Comb

Bees are more inclined to build comb upwards than sideways, and this can be used in early spring or late summer/early autumn to get foundation drawn. Supers must NOT be present.

A brood box full of foundation frames is placed above the brood box of a strong colony and fed syrup. In spring, I put it above a queen excluder to stop the queen from expanding vertically into it. Late in summer, there is no need for one as the nest is contracting by that time. I prefer light syrup which is appropriate for immediate use, but strong syrup seems to work just as well. The bees rapidly build comb in the warmest part of the top box - above the brood nest. Ideally, the chosen hive should be at or near home because regular monitoring is required to rotate the combs once they are drawn. If not, the central combs get filled with sugar solution. Moving drawn comb peripherally and replacing with undrawn combs ensures most, if not all, the foundation gets drawn rapidly.

Thanks to Dave Buckley for the idea of doing this in September after the supers have been removed and varroa treatment is complete. It works really well, and, of course, it is guaranteed to be worker comb as drones are no longer required as winter approaches.

Other techniques for getting drawn comb include a Bailey comb change, shook swarm or housing of a newly captured swarm in a box of foundation frames. All are excellent methods but beyond the scope of this article. For single frames, however, there are a few valuable tips that I did not appreciate in my earlier beekeeping days.

**Old, dark comb needs to be replaced.** Ideally, you should aim to replace the brood comb every 3 years to prevent the build-up of toxins and disease. The cells of the comb get smaller with regular use, which can lead to smaller bees! That is 3- 4 new frames per colony per season on a single brood box. They need to be drawn. This is where having a store of drawn frames early in the season is enormously beneficial. Otherwise, place your frame of foundation adjacent to the brood nest but between drawn combs - not at the end by the box wall where it is likely to stay undrawn (unless it's a polystyrene hive). The bees will be forced to draw the foundation to allow the queen to expand her laying laterally.

When the **queen is laying rapidly**, and there is a good nectar flow at the height of the season, it is safe to insert one or even two frames of foundation WITHIN the brood nest, provided the colony is a strong one. The bees will have a good supply of nectar to draw the comb rapidly and allow the queen to continue laying. This is only wise in strong colonies that are expanding with a good flow of nectar. There is a risk of restricting the queen to one side, as she may be reluctant to cross foundation.

All this needs judicious rearrangement of combs. It always helps to consider, at either end of the season, which combs you wish to replace either because they are old or deformed with holes or poorly constructed. Doing this maximises the potential number of cells for the queen to lay in, and it is known that **queens prefer to lay in newer, fresher comb.**

When **expanding a nucleus colony** into a full-size brood chamber dummy boards are great for gradually expanding the colony. I like to add foundation at either side of the brood nest and confine all the frames with dummy boards. This avoids filling the box with foundation, which tends to get nibbled and also conserves heat. As the comb is drawn, more foundation is added, again confined by dummy boards. The edge of the box can substitute as a dummy board if you are running short. It is simple to make thicker dummy boards out of old frames (DN1 with narrow top bar) lined with thin plywood or hardboard. I like to fill the inside cavity of the frame with insulation - leftover polystyrene sheeting or bubble wrap.

Maybe it is just me, but sometimes you can keep bees for many years without understanding the basic principles - appreciation of 'bee space' is another example. You move on tremendously as a beekeeper when these things start to fit together, and you start thinking like a bee!

*David Fray*  
*Cheshire BKA*

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## Spiced Loukoumades Makes 20 pieces

*These delicious bite-size treats from Greece are similar to doughnuts or churros, but since they are not deep fried, they are much healthier. After being baked they are soaked in a warm honey syrup.*

### Ingredients:

250g strong white flour

5g salt

7g sachet fast-action yeast 175ml water

### For the syrup

250ml water

250g honey

1 cinnamon stick

3 cardamom pods, bruised

1 star anise

A handful of pistachio kernels, to garnish

1. Mix together the flour, salt, yeast and water then knead for at least 10 minutes or until smooth and elastic. Allow the dough to rise for 1 hour or until it has doubled in size.

2. Preheat the oven to 200C/400F/gas mark 6.

3. Once the dough has risen, divide it into 20 small balls and place them spaced apart on a baking sheet lined with a sheet of baking paper (you might need two). Cover them with oiled clingfilm and allow the balls to rise for another 40 minutes. Then bake them in the oven for 10-12 minutes, or until they turn golden brown.

4. Meanwhile, make the syrup by placing the water, honey, cinnamon stick, cardamom pods and star anise into a medium saucepan and heating over a high flame. Boil for at least 5 minutes, then remove from the heat and allow to infuse until needed.

5. When baked, drop the dough balls into the spiced syrup. Serve with a dollop of Greek yoghurt and a final sprinkling of pistachio kernels.

*Recipe from John Whaites Bakes: Recipes for Every Day and Every Mood*

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## Wild Comb



A cautionary tale from one of our more experienced beekeepers.

If you're going to place a swarm into a full sized hive, make sure you put all 11 frames in, because if you don't the bees may well build you some nice wild comb. This was the result of their efforts after only 24 hours. Swarms are hard wired to build new comb, even if it is hanging from the crown board.

*Thanks to Pauline & Jeffrey Wilson, Somerset Beekeepers*

## Venom kills cancer cells

Venom from honeybees has been found to kill aggressive and hard-to-treat breast cancer cells rapidly, according to potentially ground-breaking new Australian research.

Published in the journal *Nature Precision Oncology*, the research was conducted at Perth's Harry Perkins Institute of Medical Research by





Dr Ciara Duffy as part of her PhD. Dr Duffy hopes the discovery could lead to the development of a treatment for triple-negative breast cancer, which accounts for 10 to 15 per cent of all breast cancers and for which there are currently no clinically effective targeted therapies. She said the honeybee venom had proven extremely potent, “We found that the venom from honeybees is remarkably effective in killing some of these really aggressive breast cancer cells at concentrations which aren’t as damaging to normal cells.” The research showed a specific concentration of the venom killed 100 per cent of triple-negative breast cancer and HER2-enriched breast cancer cells within 60 minutes, while having minimal effects on normal cells.

She said a component of the venom called melittin had the killing effect. The researchers reproduced the melittin synthetically and found it mirrored the majority of the anti-cancer effects of the honeybee venom. “What melittin does is enter the surface, or plasma membrane, and form holes or pores causing the cell to die,”

Dr Duffy also examined the effect of melittin used in combination with existing chemotherapy drugs such as docetaxel. She found the holes in breast cancer membranes caused by the melittin allowed the chemotherapy to enter the cell.

*Katie Tobin - Melbourne correspondent from Somerset Beekeepers*

**Articles appearing in The Essex Beekeeper are not necessarily the views of either Essex Beekeepers’ Association or its Editor.**

To ensure inclusion within the diary of county-wide events would divisions provide the editor with details of local meetings by the 4th of the previous month.

Dee Inkersole: [editor@ebka.org](mailto:editor@ebka.org)

# Ley Lines & Geopathic Stress Lines

Are they one and the same thing asks **Roger Patterson of Bee Improvement Magazine.**

Apparently bees placed on them are less prone to varroa infestation. He keeps divining rods in his car for when he collects swarms or sees colonies that have selected their own nest site.

Since 2009 he has checked every place he knows where a swarm has settled and everywhere a wild colony has set up home. They are all in a place where at least three energy lines cross, usually more. In July 2011 he was called out to a swarm that had clustered on the lawn of a large house. It was where at least 8 energy lines crossed. The queen had a damaged wing, so couldn't fly and he wondered where the swarm had come from. He noticed a large oak tree about 100 yards away on one of the energy lines that went through the swarm. The tree had bees in it. Apparently oak trees grow on ley lines too. He assumes they had gone along the ground until they found crossing energy lines. He has come across similar situations several times. In February 2013 he was asked by an entomologist to look at a "wild colony in a tree". When he got there it was in the branches of a tree that had blown down some time earlier and the bees had built their nest in the open, "I found it was immediately over where at least 13 energy lines crossed".

He's checked several hundred sites and hasn't had one negative so far. He has spoken to beekeepers who say they always have swarms settle in the same places. He places all his bait hives where three or more energy lines cross and is very successful in attracting swarms.

*Alison Clewes Somerset Beekeepers*

## Meetings in June and July 2021

Members are more than welcome to attend another Division's Zoom meeting. Just contact the Division and talk to the relevant co-ordinator. Please note that all of these meetings are subject to Government COVID-19 rules that may be in place. Please check with the Division, too, to ensure that the event is running.

### July 2021

- 01** | **Romford Division -**  
**Bees for Development**  
20:00 – 22:00  
*Zoom meeting*
- Harlow Division**  
TBC  
20:00 - 22:00
- 20** | **Chelmsford Division -**  
**Table Top Sale**  
**19:30 – 21:00**  
*Please contact Jon Beasley:*  
*courses@*  
*chelmsfordbeekeepers.com*

### August 2021

- 05** | **Romford Division -**  
**Winter Preparation with**  
**Paul Wiltshire**  
20:00 – 22:00  
*Zoom meeting*
- Harlow Division**  
TBC  
20:00 - 22:00
- 20** | **Chelmsford Division -**  
**Winter Preparation**  
19:30 - 21:00

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