The Essex Beekeeper

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Furthering the Craft of Reekeeping in Essex
Registered Charity number 103 229



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## **Divisional Meetings**

Members are more than welcome to attend another Division's meetings.

Please contact the Division and talk to the relevant co-ordinator to ensure that there will be room in the hall or apiary since space might be limited because divisions might prefer to allow members to "socially distance" and also to check that the meeting is going ahead.

**EBKA** \_\_\_\_\_\_\_ 2

# **Divisional Meetings**

August 2021	September 2021
5th: Romford: Winter Preparation, Paul Wiltshire by Zoom	2nd: Romford: Glands, pheromones and their influence on how and why the colony behaves as it does. Margaret Thomas NDB. Zoom meeting.
5th: Harlow: tbc	2nd: Harlow: tbc
7th: Saffron Waldon: Apiary Meeting; Apiguard, feeding, securing hives and practical	Saffron Waldon:
14th & 21st Maldon and Danbury: Members only:Apiary Meeting	20th: Maldon and Danbury tbc The Oakhouse, High St, Maldon CM9 5PR 7:30 for 8:00pm
17th Chelmsford: Winter Preparation.Margaretting Village Hall, WantzRd, CM4 0EP	21st: Chelmsford: Honey Show. Margaretting Village Hall, WantzRd, CM4 0EP
Colchester: tbc	Colchester: tbc
29th Braintree: Apiary Meeting, Black Notley, 3:00pm. Contact Henry Swan 07427 652 302	26th Braintree: Apiary meeting at Daws Hall Trust, Henry Rd, Bures CO8 5EX. (Tel Anthony Start on 07769 681 135
Epping Forest: tbc	Epping Forest: tbc
26th Southend: Catch up Meeting Leigh Road Baptist Church, Margue- rite Drive, Leigh-on-Sea, SS9 1NN Contact sarah.southendbka@gmail. com	Southend: tbc

B ----- EBKA

## **Update from the CEC Chair** Jane Ridler



What a short season it seems to have been so far. It is July already, as I write, and our rape seems only just to have finished! The lime trees are now in flower and the blackberries will soon be producing nectar. You'll be reading this in early August, and it will be time to start planning for taking off your honey and starting treatment of your colonies for varroa!

Important items from the July CEC meeting to report to you include some suggestions made by our Treasurer, Pat Allen, and passed by the trustees. You may have read that the BBKA has raised its capitation for members from October 2021. However, it was agreed that the EBKA capitation will be reduced by £2 to offset the BBKA increase for full members, and by £1 for partner members. We currently have high enough levels of funds and hope that this will be well-received by you as members, especially after the difficult times during the pandemic.

The trustees also passed motions to increase both the value of the EBKA prizes awarded to members who excel in the BBKA exams and the contribution of the EBKA to the EARS Research fund for the 4th EARS Project. The first should encourage you all to take the BBKA assessments, although the greatest value in studying for them remains in the increased beekeeping expertise gained. The Miss Avey awards, for distinction in the Basic Assessment and the Ted Hooper awards, for distinction in Module exams, will be increased to £50. Additional awards will be given to those who pass the higher practical assessments of General Husbandry and Advanced Husbandry. £80 for GH and £100 for the very few who reach AH standard.

The 4th EARS projects will again be part funded by EBKA along with the other Beekeeping Associations of the Eastern region. The findings from this one will be of particular value to us as practical hobbyists, in that it is researching the effects of our interference during inspections on varroosis in comparison with the more 'hands off' approach of Darwinian beekeeping. The treatment-free approach to managing Varroa currently comes at a high cost, with the vast majority of colonies likely to perish before tolerance is developed. This studentship will directly tackle Varroosis by providing a better understanding of how certain beekeeping practices interact with Varroa biology to increase the damage caused by the mites. Better understanding of mite biology will lead to interventions that could lessen the impact Varroa have on our honey

### Update from the CEC Chair contd

bee colonies, and help with a lower risk transition to treatment-free mite management.

The CEC Governance sub-committee, with additional thanks to Keith Lomax, of Southend Division, have been working on insurance issues. An important outcome for general members - if you have any of your hives on Divisional apiaries, you absolutely mustn't fail in making your BDI payment on every hive!

Regretfully, on the advice of the Honey Show sub-committee, the 2021 County Honey Show has been cancelled. The size and complexity of the event was agreed to be too risky to be undertaken with the current question marks over Covid 19. However, smaller Divisional Honey Shows should be easier to manage and are encouraged. Extra vigilance in writing risk assessments (and sticking to them) is needed. This also goes for all meetings over the summer, especially given the demographic of EBKA members. Please err on the side of Covid caution when attending all EBKA meetings.

Some good news.... Professor Giles Budge, of Newcastle University, who incidentally is leading the new EARS project, is to present to us the **Ted Hooper Lecture**, via Zoom, taking place around the time that the Annual Conference would have taken place. Also, the **National Honey Show will run again this year, from 21st to 23rd October.** There are specific classes for Essex, including novice classes, so here is a good opportunity to try out showing your honey and other hive products – and baking.

Our Bee Health Officer, Dave Garratt, will be organising along with Divisional reps, a questionnaire to identify experience of bee disease in Essex and to use this to produce a risk assessment and inform training.

Last, but by no means least, I'd like to refer you to the last Essex Beekeeper. Dee has made an excellent start, but a close look shows there were no main articles from EBKA members. Please can you consider writing something! You don't have to be a literary expert and hopefully, there will be events of various kinds over the summer that can be shared with the whole County.

Regards

Jane Ridler Chair, CEC EBKA

## Let's talk about Nosema

So, what's the problem? *Nosema* is a fungal disease that develops in bees' gut causing the bee to become unhealthy and not do its job effectively and die. This shows itself to the beekeeper as a slowly developing or even dwindling colony but with no apparent cause.

If you have access to a microscope you can test for it but otherwise you are just guessing. It is passed from bee to bee by the faeco-oral route (you know the one: scratches bum, picks teeth...), so the cure is to replace the comb with a Bailey comb change/shook swarm. This removes excess poop so will reduce the cycle of infection and let the colony improve.

So, let's dig a little deeper. Beekeepers would say that if there is a lot of poop at the entrance it is a strong sign of *Nosema*. Dysentery can be associated with *Nosema* but not a cause. If you see it then it would be no bad thing to test them for it. *Nosema apis* used to be the most common variant but now *Nosema ceranae* has moved across from *Apis ceranae* and is now the most common. Both *Nosema apis* and *Nosema ceranae* can be present in a colony at the same time.

Nosema takes time to replicate in the gut until it becomes a debilitating problem for the bee, at which point there may be many millions of spores in the bee. To check for Nosema you need to look at the contents of the gut under a microscope. At a 400x magnification the spores show up, looking like tiny grains of rice. You will also likely see plenty of pollen grains as well (which are a lot larger).

In practice the way to test is to get a sample of foraging bees; 30 is recommended, though the more you have the more confident you can be of the result.

So why 30 bees?

Let's say 1 in 20 of the bees have Nosema, i.e.5% So a random bee would have a 95% chance of not having Nosema. Picking 2 bees would have a 0.95 x 0.95 (0.905) chance of neither of them having Nosema; 3 bees would have 0.95 x 0.95x0.95 - 86% chance, so 30 bees would have a 0.95\*0.95\*....\*0.95, that's 0.9530 = 21% chance of not showing Nosema.

Because a single infected bee will have so many *Nosema* spores, taking a sample from mixing 30 bees together will show the spores if they exist. The sample will be 96% likely to show spores if 1 in 10 of the bees are infected, 79% likely for 1 in 20 of the bees.

Put all the bees in a Ziploc plastic bag7 with 0.1ml water per bee (that's just over half a teaspoon per 30 bees). Fully crush the bees and mix well until you

#### Let's talk about Nosema contd

get a yellowy/greeny/greyish mush. Take a drop and put it on a microscope slide, add cover slip and take a look.

Tell-tale rice grain shapes show you that your bees have Nosema. You can now be happy you've found out what was slowing up the colony and deal with it. There are no available treatments for Nosema. Fumidil B used to be a treatment until 2011 when it was stopped. So good husbandry (regular comb changes) is the nopw recommended practice to limit *Nosema*. Check out <u>Beebase</u> for more information:

Barry Crabtree, Ipswich and East Suffolk BKA

## Honey Buckets - Food Grade Quality

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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.

Many thanks, Dee Inkersole: editor@ebka.org

## Romford Division EBKA – Beginners Beekeeping 2021

Along with many other beekeeping groups, we had to cancel our Beginners Beekeeping Course in 2020, and at first it was not certain that we would be able to run one in 2021. However, Covid-19 restrictions eased a bit and we redesigned the course to conform to the 'rules'. This meant running the theory sessions via Zoom, and delaying the start of the practical sessions until we were allowed to meet outside in sufficient numbers.



A rare sunny evening allowing a thorough inspection of the colonies.



We were not helped by the extremely unreliable weather throughout early spring and all the way through the course, plus the loss in winter of two teaching colonies. In order to have enough for the course we had to buy three colonies in spring. We were able to inspect the bees every week, so that was good even though some planned procedures were not possible, but the bees have had a bad year and have not developed as we would normally expect them to. To make matters worse, it has been a very swarmy year which has also prevented development of strong colonies. I think we shall find, come the end of August, that the honey yield this year is very low and colonies will have struggled

### Romford Division EBKA - Beginners Beekeeping 2021 contd

to build up the strength we would wish them to have for winter.

In spite of all the snags though, attendance and enthusiasm at the course have been good and I hope the students enjoyed their experience.

The photos, taken by Sue Richardson, are of students and tutors at the hives and, despite the uncertain weather, you can see that the wild flowers in our Teaching Apiary 'meadow' have done well. Sadly I was not very good at learning 'names to faces' for all the students, but, as you can see, most of the time they were hidden behind veils and/or face masks! Can they even recognise themselves in the photos?

I would like to thank all the tutors – Dawn Doyland, Norman McDonald, Jim McNeill, Terry Watson and Paul Wiltshire, and our Healthy & Safety Officer, Sue Richardson, for making it possible for our Division to run this Beginners Beekeeping Course in the most challenging beekeeping year I have ever experienced.

Pat Allen, Romford BKA

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**ЕВКА** 

## **BeePlus: A Beekeeping Manager App**

## A review of the BeePlus App for iPhone

Having set up an out apiary some distance from home in the summer of 2019 we realised that keeping the hive records under the roof was the best solution – that way we were less likely to arrive at the apiary without the records. With only one colony in the out apiary that worked reasonably well, but there were still times when we wished the records were at home rather than under the hive roof—particularly when planning what equipment we needed to take with us.

A couple of months ago I decided to investigate whether there was a suitable app for my iPhone which I could use to keep simple records of the out apiary inspections so that the data was to hand at any time.

I decided to try the BeePlus app which looked as if it would provide all of the

APIARIES

EQUIPMENT

TIMELINE

FINANCES

FIND

PESTS

(i)

DATA

record keeping functions that might be useful. It came with a one off purchase price of £4.99.

At that cost it was worth a try and I decided to give the BeePlus app a good try out, share my experience of the app and allow members to make up their own minds about whether to give it a shot.

BeePlus Beekeeping Manager is a Hive Tool and Apiary Tracker available on the AppStore. It has been out for over four years and there are nearly 200 ratings and reviews, mostly very positive. BeePlus claims to offer the following functions:

Quick and detailed hive inspection records

- Photos for a visual record too
- Easily review your data
- Track what needs doing with the calendar and to do items
- QR scanner and exporter for quick hive identification
- Maps and forage areas
- Share data between iOS devices and your beekeeping buddies
- Notebook for general notes
- Equipment inventory and hive component records
- Track finances in and out
- Queen histories to track progeny
- Export data for printing or archival
- No subscriptions, no in app purchases and no limits on the number of hives you can track

### BeePlus: A Beekeeping Manager App cont

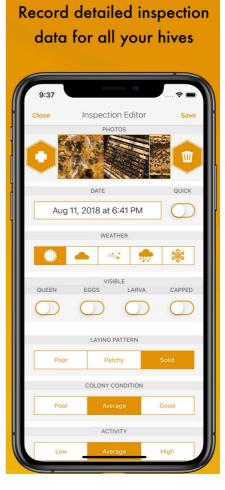
This list shows that you get much more than just a hive inspection record tool.

You could use it to keep records of your equipment and its costs and keep tabs on honey harvests and health data.

It's early days yet but with a couple of inspections under our belts in two apiaries this is what we find. As with any management software tool there is a bit of setting up to do before you can start recoarding hive inspection data. It is quite easy to add a new apiary and populate it with your colonies. Each colony gets a unique identifier and you can record the address and exact location which then appears in a map. At each hive inspection you create a new inspection for the colony. The date and time are recorded automatically and you then record the weather - sun, cloud, wind, rain or ice (should you be inspecting?) Then you note whether you saw the queen, eggs, larva and capped brood and you assess the laying pattern, colony condition, colony activity and temperament. There are fields to record the number of frames of honey (stores). brood, open comb (space for laying) and foundation (or empty frames if you are working foundationless).

With a double brood colony, you can

only record the total number of frames – it's not possible to record each brood box separately. You can record the number and type of queen cells – swarm, supersedure or emergency. There's space to note the number of supers added or removed and free text boxes to note any disease problems (a useful link to pictures of brood diseases is there at the touch of the screen) or treatments given. Finally, you can record your mite count and any feed given as well as any other points you wish to note. Once you save the data a summary box appears where the key hive indicators appear with colour codes – green OK, amber middling and red Poor which gives a good at a



### BeePlus: A Beekeeping Manager App cont

glance indication of the colony status. You are also able to add photos to your inspection records. This works fine directly from the phone camera but I have not found a way to select a picture from previous photos stored on the phone. I suspect this is a bug that requires fixing. Pictures might be a good way to record unusual things in the colony— perhaps quicker than writing notes?

How does it work in practice? Well I have found that my phone screen works even when I am wearing my blue nitrile gloves so it's quite easy to record the inspection data on site. I have not found the screen getting dirty which might be a concern. After a few inspections I find I have become much faster at recording what I have seen during the inspection. I haven't yet ditched my paper records – so I am double recording for now until I feel confident to go 100% digital.



John Eden, Manchester BKA

If any EBKA members have used this software (or other similar software), your experiences of its use would be interesting so please send your comments to editor@ebka.org.

Thanks, Ed.

One member, Michel Hickey, sent a link to an article he had found interesting. It's about the curious genetics of the African Lowland bee, *Apis mellifera* scutella. I haven't included the whole of the article because it's a bit technical but here's the <u>link</u> for those of you who might be interested.

If anyone else finds something of interest please consider sending the editor the link for inclusion in a future edition.

## **Dutch Pollinator Strategy — The Guardian**

A "bee hotel" in a city park.



The structures have helped urban bee populations to thrive. Photo: Sjoerd van der Hucht/Alamy "Bee population steady in Dutch cities thanks to pollinator strategy". So reads an article in The Guardian dated 27 April 2021. Reporter Anne Pinto- Rodrigues writes about a scheme involving "bee hotels" and "bee stops" reaping rewards after a census reveals positive results. More than 11,000 people from across the Netherlands participated in a

bee—counting exercise as part of a National Bee Census. The native wild bee population in the Netherlands has been in decline since the 1940's. Pressure on farmers for increased output has meant a loss of wild flower meadows. The Netherlands is the world's second largest exporter of agricultural products, after the US.

A National Pollinator Strategy was brought in in 2018, recognising the crucial role played by wild bees in the pollination of food crops. The strategy includes 70 initiatives aimed at creating more nesting sites for bees and strengthening their food supply.

This has resulted in a number of bee hotels, bee stops and a "honey highway" having been put in place. They are just a number of techniques the Dutch are credited with in keeping their urban bee population steady in recent years. Volunteers were provided with a list depicting the most common bees spent 30 minutes recording various bees visiting their gardens. On Sunday, 18 April 2021 more than 200,000 bees and hoverflies had been counted. Vincent Kalkman, entomologist at Naturalis, one of the companies behind the censusstated: "An average of 18 to 20 bees and hoverflies were recorded in each garden during the count. These numbers have remained steady over the years, indicating that there is no strong decline in urban gardens".

The aim is to collect five years' of data before drawing definite

### **Dutch Pollinator Strategy contd**

conclusions on bee population trends. The honey bee (Apis mellifera) was spotted the most (55,000 observations), followed by the mason bee (Osmia bicornis) and the bumblebee (Bombus terrestris) coming in second and third with 13,000 and 12,800 records respectively. Discussing the census, Kalkman stated that although the bee census was about gathering data, it was also important to draw people's attention to different types of bees visiting their gardens and to educate.

More than a quarter of the bees recorded were honey bees and there was concern that they might be competing for food with wild bees: "The increase in the number of beekeepers in cities could result in increased competition for food between honeybees and wild bees" according to Kalkman. "We need to work with beekeepers to increase food sources (flowers) for all bees" he added.

One of the cities in the Netherlands, Amsterdam, has been working on various bee friendly initiatives, by replacing grass in public spaces with native flowering plants as well as stopping the use of chemical weed killers on public lands. It certainly seems to be working as a survey revealed that there was a 45% increase in the number of solitary bee species in the city in 2015, compared to 2000. Another novel idea is the creation of 316 "bee stops" across the city of Utrecht, whereby the roofs of bus stops are covered with native plants to attract bees and absorb dust particles and rainwater.

Very inventive I'd say and a scheme that is obviously beneficial for the bees, so long may it continue.

With thanks to Sam Ruth, Derbyshire BKA Newsletter

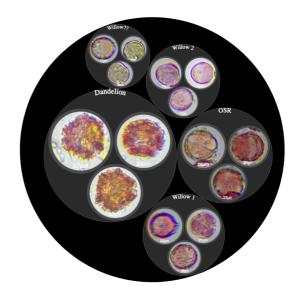
## Sleuthing...



"Once you eliminate the impossible, whatever remains, no matter how improbable, must be the truth." - Sherlock Homes

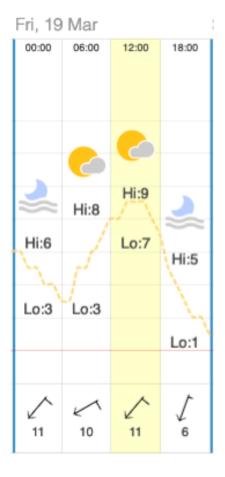
It's got to be one of the saddest sights for a beekeeper - piles of dead bees outside the hive. Even sadder is when you see all those bees have full pollen baskets. This was the sight seen by a Suffolk beekeeper when they went to look at their hive recently.

So what's killed the bees? Poisoning? Have crops been sprayed? Have verges been sprayed? What's going on? A sample of bees were dispatched to the regional bee inspector. Meanwhile lets take a look at the pollen the bees were bringing in to see if that gives any clues. From a sample of pollen baskets from four of the bees, the pollen was all the same, almost spherical and just under 20µm in diameter.



The closest looking samples seemed to be willow. It was clearly not oilseed rape, nor was it dandelion. That pretty much rules out verge or crop spraying, so what is it that is killing the bees?

## Sleuthing..contd



The bee inspector suggested it might be due to chilling. The bees just got too cold out foraging and couldn't make it back before they seized up and died.

The weather for that day did indeed show a drop in the afternoon temperature from a high of 9°C down to 2°C by 9pm.

So that's most likely the cause.

A cold snap caught the bees out.

Barry Crabtree, Ipswich and East Suffolk BKA

## RNA gets the green light

GreenLight's [an American company] varroa treatment works differently to those in use currently. "We are targeting a protein that's necessary for the normal functions of varroa," says Masucci. "Without it, their physiology is disrupted, and so this treatment is highly detrimental to the mites."

A small amount of RNA, applied with gloves rather than a hazmat suit used when applying chemical approaches to pest control, is all that's needed to induce the effect. Mites have a receptor in their gut that allows them to import the double-stranded RNA into the cell, where it activates its normal cellular mechanisms. "We are zeroing in on a different stage of their life cycle than current products," he says, "and what's novel about this approach is that we are targeting reproductive mites; we deliver it in sugar syrup, which the bees use as they would nectar." Bees place this syrup containing the RNA into cells right before pupation, where the mites get exposed.

The RNA in the syrup, which quickly degrades, measurably improves hive health. Masucci says that early studies show an extra frame's worth of bees per hive, or about a 20 percent bump in production plus a 10 percent increase in hive survival rate compared to conventional treatments. "It's a small bump," he says, "but it's meaningful." Hart, the Georgian bee farmer, has participated in a GreenLight trial of the new RNA solution. Compared to oxalic acid and amitraz strips, he says, the RNA-treated hives seem much healthier. "It helped bring down mites," he says, and after 35 years of keeping bees, his conclusion: Bees were more active, their hair was glossier and fluffier, and "even the sound a hive of bees makes when you open the top—the hum" was promising.

Changes in the beekeeping industry in recent years led Hart to transition from 100 percent honey production to renting out many of his almost 4,000 hives as pollinators, trucking them around the country for blueberries, squash, cucumbers, watermelon, almonds, strawberries, pumpkins, apples. This spring, 6 semis—each loaded with 480 hives—headed to California. He also sells hives to commercial and hobbyist

### RNA gets the green light contd

beekeepers. Hart believes that GreenLight's product promises a clear benefit. This year, mainly due to the varroa mite, he lost more than 300 hives.

The cost of replacement hives ranges from \$225 to \$250, and although Hart splits his hives to lessen the blow, it does end up diminishing production. "We get paid on hive strength," he says, "so another two frames [per hive] could mean another \$15, \$20 in my pocket." A vital part of plant health as well as a business, honeybees are an indicator of ecosystem health. "You can sit a hive of bees in one location, collect the pollen, and it will tell you the health of the environment within a mile of that hive," says Hart. "You can see what's growing from the pollen. If a bee can survive there, the environment is pretty good." GreenLight's RNA-based solution, which targets just the mite, could go a long way toward helping beekeepers manage the varroa mite while promoting sustainable farming. "You take care of the bees," says Hart, "and they'll take care of you."

### and finally ....

You've made it to the end of this month's magazine!

If your thirst for bee-based knowledge is still not fully quenched, you might like to have a look at the following websites which have loads of interesting information:

**BBKA** Exams

BIBBA Webinars on YouTube – hours of fun!

<u>BuzzAboutBees:</u> for begginners or interested children. Information about other types of bees. Fab photos too.

### **EBKA Trustees**

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#### Scotland

13th Aug - 3pm - 5pm & 14th Aug -10am - 12pm

#### Windsor

11th September - 10am - 1pm

#### Stockbridge

25th September - 10am - 1pm

#### Devon

2nd October - 10am - 1pm

#### Rand

9th October - 10am - 4pm

All our usual bargains will be available including; Second quality hive parts & frames beekeeping equipment & accessories

to be held in line with current government guidelines