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**Available from March**

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MARCH 2016

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# THE ESSEX BEEKEEPER



Badgers running amok and causing devastation in Paul's Apiary

Photograph by Paul Abbott - Southend Division

## Monthly Magazine of the Essex Beekeepers' Association

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*Furthering the Craft of Beekeeping in Essex*

**No. 614**

[www.essexbeekeepers.com](http://www.essexbeekeepers.com)

**February  
2016**

## EBKA Divisional Meetings

### Diary dates for February & March 2016

5 Feb	Friday 7.30pm	Romford	Tba - Chadwick Hall, Main Road, Gidea Park, RM2 5EL
15 Feb	Monday 7.30pm	Chelmsford	Tba - The Link, Rainsford Road, Chelmsford CM1 2 XB
17 Feb	Wednesday 7.30pm	Dengie 100 & Maldon	'Let's get ready for Spring' - Eric Beaumont - The Oak House, High Street, Maldon CM9 5PF
18 Feb	Thursday 7.30pm	Epping Forest	Tba - Chingford Horticultural Hall
22 Feb	Monday 7.30pm	Saffron Walden	'Preparing Perfect Honey', Jim Mcneill at Foakes Hall, Great Dunmow CM6 1DG
24 Feb	Wednesday 7.30pm	Southend	'Pollen - super food for bees'. Talk by Bob Smith NDB. Rayleigh W I Hall, Bellingham Lane, Rayleigh SS6 7ED
25 Feb	Thursday 7.30pm	Colchester	'Anaphylactic Shock' - talk by Barbara Sharp. Langham Community Centre, Church Road, Langham, Colchester
27 Feb	Saturday 7.30pm	Braintree	Annual Dinner - Constitutional Club, Braintree CM7 1TY
4 Mar	Friday 7.30pm	Romford	Tba - Chadwick Hall, Main Road, Gidea Park, RM2 5EL
13 Mar	Sunday	Epping Forest	Bee Improvement Day with Roger Patterson.
16 Mar	Wednesday 7.30pm	Dengie 100 & Maldon	Tba - The Oak House, High Street, Maldon CM9 5PF
17 Mar	Thursday 7.30pm	Epping Forest	Swarm Management - Chingford Horticultural Hall
19 Mar	Saturday 2.00pm	County Event	Annual General Meeting - Writtle University Room E06. Chelmsford CM1 3RP <b>NB. REVISED DATE</b>
23 Mar	Wednesday 7.30pm	Southend	tba Rayleigh W I Hall, Bellingham Lane, Rayleigh SS6 7ED
23 Mar	Wednesday	Saffron Walden	'Improve Your Beekeeping No 1' - The season's first hive inspection. 36 Walden Road, Swards End CB10 2LF

**Note to Secretaries:** Please inform the Editor of the details of your Divisional Monthly Meeting so that it can be included in these listings  
**Deadline: 4th of the preceding month**

## Who's who and how to contact them

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Honey was useful in many ways and not just as a as a foodstuff. It could be used to dress wounds because of its antiseptic properties and was said to speed up the healing process and helped reduce scaring. It was routinely used in the treatment of wounds until penicillin became more widely available. Honey is still used today in the treatment of burns and is also a component in some medications for the treatment of ulcers.



Photograph - reproduced from Toque Magazine

With a hive ready for bees and basic equipment costing about £7 10s, and a colony of honey bees costing between £2 and £4, you could start beekeeping for about £10. If you opted to build your own hives, you could obtain a pound's worth of timber and plans without a permit. One elderly beekeeper remembers the advice his father gave him: "Measure twice, cut once, my boy, it saves timber and heartache."

As part of the war effort, everyone was encouraged to grow their own produce, and it was quite common to see two or three beehives in a garden or on the allotments. The bees helped to pollinate the crops and the honey boosted the meagre sugar ration.

During the war, the average price for honey was 2/6s. From the 9 June 1947, the price of home produced honey became decontrolled and it could be sold freely at whatever price the beekeeper could obtain, usually 4/6 to 5/- per lb., which must have been a great boost to those who had struggled through the war to keep their bees going.

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## Ted Hooper Memorial Lecture

The inaugural **Ted Hooper Memorial Lecture** is to take place at 2pm on **Sunday 17th April 2016** at **The Coach House, Marks Hall, Coggeshall CO6 1TG.**

This is a very special event held to remember Ted Hooper MBE and will include presentations from key speakers - Clive de Bruyn NBD and Margaret Thomas NBD. It is our intention that this new lecture series in Ted's name is for all beekeepers – both new and seasoned alike.

Ted Hooper was a renowned and highly respected Essex beekeeper who died in March 2010 at the age of 91 years. During his lifetime, he was President of the British Beekeepers' Association (BBKA) and President of the EBKA between 1983 and 1999. He was awarded an MBE in recognition of his services to beekeeping.

Ted wrote the '*Guide to Bees and Honey*', which is considered to be the bible for beekeepers, sold more than 100,000 copies and has been translated into more than 12 languages since its publication in 1976. The newly published edition of the book by Ted Hooper, edited by Clive and Margaret will be a must for every bookshelf. Signed copies will be available to purchase on the day.

This is an important event in the beekeeping year and you should consider joining us at this interesting venue. Set in the majestic site of Marks Hall Estate, you will have the opportunity to catch up with old friends and enjoy the presentations by experienced beekeepers.

*The ticket price, including refreshments, is £8.*

*Tickets are only available to purchase in advance.*

*Go to the Booking page on the EBKA Website and book your place now either online or by requesting a paper form.*

Ian Nichols  
Chairman EBKA

## EBKA 136th Annual General Meeting

to be held on

**Saturday 19 March 2016 at 2pm**

**Room E06, Writtle College, Lordship Lane, Chelmsford. CM1 3RP**

PLEASE NOTE CHANGE OF DATE - Agenda in next month's issue

Epping Forest BKA in conjunction with the Bee Improvement and Bee Breeders' Association (BIBBA) present a one-day event -

## ***'Bee Improvement for All'***

The aim of this workshop is to enable beekeepers of all abilities to assess colonies and improve their bees using simple techniques not often found in books.

Roger Patterson is an engaging communicator and a beekeeper of wide experience, who promotes the BIBBA principle of the improvement of local bees.

**Sunday, 13 March 2016**

**9 am - 4.30 pm**

**Copped Hall, Upshire Road, Epping CM16 5HS**

Further information and tickets at £10/adult and £5/child from Robin Harman at: [secretary@eppingforestbeekeepers.co.uk](mailto:secretary@eppingforestbeekeepers.co.uk)

**Payment** to HSBC Account name EBKA, Sort code 40-20-37 Account 21116681. Please include bank reference 'BIFA' followed by your surname, e.g. BIFA HARMAN.

Refreshments provided, but please bring your own lunch.

Parking is plentiful and free.

Further information at [bibba.com](http://bibba.com) and [coppedhalltrust.org.uk](http://coppedhalltrust.org.uk)

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The aggressive honey bees also had more robust immune responses than their gentler counterparts, the team found. *"We challenged them with pesticides and found that the aggressive bees were more resistant to pesticide. That's surprising considering what we know from vertebrates, where stress in early life leads to a diminishment of resilience. With the bees, we saw an increase in resilience."* This finding also suggests that the effects of the social environment on young bees could extend beyond brain function and behavior.

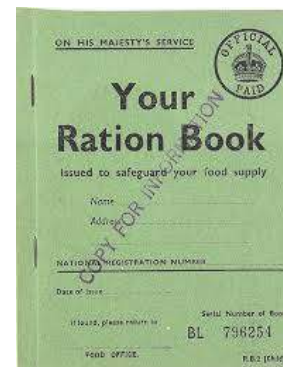
The researchers don't yet know how the social information is being transmitted to the larvae. They tested whether the bees differed in size, which would suggest that they had been fed differently, but found no size differences between aggressive and gentle bees. *"Adult honey bees are well known for their sociality, their communication skills and their ability to adjust their behavior in response to the needs of the hive. In mammals, including humans, the effects of early life social interactions often persist throughout adulthood despite additional social experiences. A similar pattern in honey bees has broad implications for our understanding of social behaviour within the hive and in comparison with other species."*

Written by Diana Yates

[29th October 2015]

## **Beekeeping History Keeping bees in WWII**

Joy Simpson - Swindon BKA via eBees



Due to sugar rationing in World War II, honey was in great demand by local authorities and a special allowance of some sugar per hive was allowed to beekeepers to keep supplies available. In 1943, the Ministry of Food announced that beekeepers qualified for supplies of sugar not exceeding 10lbs a colony to keep their beehives going through the winter and 5lbs for spring feeding.

When it was thought that most of the sugar wasn't actually being fed to the bees because crops of honey were so small, someone had the bright idea of colouring the sugar green to prevent it getting onto the black market. This was soon abandoned when the bees started to produce green honey!

## Will your bees be wimps or warriors?

**Scientific Reports** October 2015 - Reported by Ipswich & East Suffolk BKA via eBees

Even as larvae, honey bees are tuned in to the social culture of their colony and become more or less aggressive depending on who raises them, researches report in the journal *Scientific Reports*.

"We are interested in the general issue of how social information gets under the skin, and we decided to take a chance and ask about very young bees that are weeks away from adulthood," said **Carl R. Woese Institute for Genomic Biology Director, Professor Gene Robinson**, who led the research with **postdoctoral researcher Clare Rittschof** and **Pennsylvania State University Professor Christina Grozinger**.

"In a previous study, we cross-fostered adult bees from gentle colonies into more aggressive colonies and vice versa, and then we measured their brain gene expression. We found that the bees had a complex pattern of gene expression, partly influenced by their own personal genetic identity and partly influenced by the environment of the colony they were living in. This led us to wonder when they become so sensitive to their social environment."

In the new study, they again cross-fostered bees, but this time as larvae, in order to manipulate the bees' early life experiences. The larvae were from a variety of queens, with sister larvae divided between high and low - aggression colonies.

The larvae were removed from their foster hives and put into a neutral laboratory environment one day before they emerged as adults. The researchers tested their aggressiveness by exposing them to an intruder bee. They were surprised to see that the bees retained the social information they had acquired as larvae. Those raised in aggressive colonies were 10 to 15 per cent more aggressive than those raised in the gentler colonies.

"Even sisters born of the same queen but reared in different colonies differed in aggression, demonstrating the potency of this environmental effect." The finding was surprising in part because bee larvae undergo metamorphosis, which radically changes the structure of their bodies and brains. "It's hard to imagine what elements of the brain are influenced during the larval period that then survive the massive reorganization of the brain to bias behavior in this way."

## Essex **Bee**Keepers **A**ssociation

Presents a

### Bee Health & Disease Recognition Day

at Great Easton Village Hall, Great Easton,  
Dunmow, Essex. CM6 2HD

on

**Thursday 16th June 2016**

10am to 4pm

Reception at 9.30am



*Suitable for Beekeepers of all levels of experience*

Come and meet your Eastern Regional Bee Inspector Keith Morgan and local Seasonal Bee Inspectors

This relaxed and friendly day will include a mixture of presentations, Useful Tips & Hints with Discussions, Apiary Hygiene, Varroa, Comb Recognition .....



All Photographs - Paul Abbott

Plus a practical session in the apiary observing how inspectors check for disease



### **IMPORTANT**

- You will need to bring a packed Lunch
- CLEAN Protective Beekeeping Clothing
- Tea & Coffee will be provided

**Pre Booking of Places is Essential**  
as limited number available.

Contact; Jim McNeill on 01708 765898  
jimandliz44@aol.co.uk

## The WBC Roofs – Coda

After my article appeared in the December *Essex Beekeeper* - 'Good Customer Service - an appreciation' (pages 4/5) it was not long before the emails came in. So, thanks to Keith, Bridget and Peter I found good homes for all six of the WBC roofs that needed repair. Their contributions allowed me to offer Caddon Hives a £40 "Christmas Box" as an appreciation of excellent customer service.

I emailed Pete at **Caddon Hives** and got this response:

*Hello Ian, That's very kind and honest of you. Instead of passing this to me, can you pass to a charity, or your local church. Pete*

So "Bees for Development" will be £40 better off and every one is happy !!!

**Ian Grant** - Chelmsford Division



## Electrostatic bees!

Andrew Heath - Warwickshire BKA via eBees

In the 1930's Robert Watson-Watt led a team of scientists that produced the first usable radar system that could detect aircraft, which helped win the Battle of Britain. The excitement that must have been felt when they saw the first images must have been incredible.

Move forward to the summer of 2015 and we find a scientist sat in a field using radar to track bumble bees from their nest to forage. I could feel the excitement that must have existed in the back of that Land Rover as the tiny dot moved over their screen showing the bee, that was carrying a small electronic device attached to its thorax, had left the colony and was on the move.

'Bees in Space' was one of the fantastic presentations and films that those who spent a weekend at the **Central Association of Beekeepers' Conference** in Kenilworth enjoyed mid November.

Did you know that it is possible to measure the electrical activity from the nervous system at the base of a sensory hair on a bee? Can you imagine

need food, all this stored protein is converted into brood food. With their protein reserves depleted, our winter bees become foragers, the aging process starts and they die. What goes wrong? Disease is the biggest problem. Varroa has been shown to change the physiology of the winter bees so that they do not store adequate protein, but the main effect of all adult bee diseases is to shorten the life of the infected bee. Varroa, Deformed Wing Virus (DWV) and Nosema, our three main culprits, can have a devastating effect on the colony, killing many of the winter bees before the spring bees can build up sufficient numbers to take over.

The winter bees must be protected by ensuring that they do not suffer from high levels of Varroa during their development. This means treating early, as soon as the honey crop can be removed in August; if Varroa numbers have not been controlled by husbandry means during the active season. It may present particular problems for those taking bees to the heather, as any treatment applied after the return of these colonies will be too late to be effective. They need to go on their travels with low Varroa counts.

Controlling Varroa to keep it below the 1,000 mites/colony level will also control the viruses, particularly DWV. Nosema has to be monitored and controlled during the spring/summer by testing the colonies and getting them onto new comb if necessary. There is no chemical treatment available. Progress can be made by breeding from colonies not showing the disease and removing those queens which are susceptible. Finally, and very importantly, colonies need good supplies of pollen during the later part of the summer so should be sited where sources are available. (The use of pollen supplements or substitutes is debatable.)

There is of course, no excuse for colonies dying of starvation and every effort should be made to supplement stores if necessary in September.

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## **A Winter's Tale**

**Celia Davis - Warwickshire BKA  
and Ipswich & East Suffolk BKA via eBees**

In the middle of the Winter we tend to forget about the bees in our hives. But those bees are the most important group of bees that will ever live in your apiary, and on them depends the very existence of the colonies and the success, or otherwise, of your beekeeping during the next Summer.

In the late Summer and Autumn the queen continues to lay, although at a reduced rate. The bees that develop from these eggs will have a lower metabolic rate and little work to do as there are fewer larvae to feed and the available forage is meagre. As a result of this they remain 'young' and do not follow the normal pattern of development and aging which we see throughout the Summer.

During the Summer, approximately three week old bees graduate from in-hive duties to foraging and, as a result, age and die in about a further two to three weeks. The aging process in a bee switches when that bee becomes a forager. At that point in its life, a number of changes take place. Its protein levels drop, its Juvenile Hormone (JH) levels rise and it is then on the slippery slope to death.

Our winter bees do not make this transition at three weeks, but continue in their physiologically young state until the Spring, when they kick-start the massive colony growth which precedes the swarming season. So, how do they prepare for this lifestyle?

All newly-hatched workers eat nectar/honey and large quantities of bee bread, which is stored fermented pollen. The honey provides the carbohydrate in their diet, and the pollen contains large amounts of protein plus some fat, minerals and vitamins, which is used to manufacture brood food in the mandibular and hypopharyngeal glands of these young bees so that they can feed larvae. Young winter bees also consume large quantities of bee bread but they do not use it immediately. Instead, much of it is stored in their fat bodies. Important substances, including enzymes and other proteins are spread throughout the body of the bee, principally in the roof and on the floor of the abdomen, where they appear as masses of white cells. Well fed, winter bees have abundant fat bodies.

One of the principal stored proteins is vitellogenin (see last month's issue for a definition of vitellogenin), and quantities of this are also stored in the hypopharyngeal glands, which remain plump. In the Spring, as new larvae

the tedium of getting that sensor in place? Some of us now know! That process shows us that bees can detect the small electrical fields which exist on key areas of a flower and the flower electric fields can be shown using electrostatic paint, the stuff they spray on modern cars.

But why would you do this? Why did Colin Butler carry out research on Honey Bees and their Queens in the 1950's? To further our knowledge and understanding of these amazing insects. We now know that Queen Mandibular Pheromone is key to maintaining a stable colony and without this pheromone a colony rapidly starts to build queen cells and behaves in a totally different way to a queen right colony.

Up to date research however clever, is providing us with new information that will become relevant to us as practical beekeepers in the not so distant future. We were also treated to some fantastic footage from films made in the 1950's that showed the Butler experiments and in a presentation given by Raquel de Sousa, saw some of the same research methods and techniques being used to study honey bees and their nutritional preferences today.

So for those many who weren't there, you missed a treat, a look into exciting areas of research, presented in a completely accessible manner that can excite you even further about the amazing world of our bees. Don't miss it.

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## My Trip to the Heather

### Martin Glean - Epping Forest Division

As a new, very inexperienced bee-keeper I didn't know if it was a great idea or a very bad idea to take my 2, relatively new colonies, 280 miles up the A1 to the North Yorkshire Moors in August of last year. I thought the only way to know if it was possible was to try it, so I set off with 2 hives and a dog.

With one escapee honey bee at Peterborough Services, I arrived safely at my destination. I installed my hives near a dry stone wall, in the middle of the purple heather with the help of an experienced moorland bee-keeper called Philip. The hives were sheltered yet in the midst of the heather landscape, surrounded by food! I was told they needed very little intervention whilst they were up there, so I thought I would follow that advice.



I drove up a couple of weeks later to add a super to each colony and inspected them 3 times in 7 weeks. On my first inspection, there were some dead bees outside both of the hives, I was quite worried, so I came back to check the outside of the hives a couple of days later to make sure it was a one off - I concluded they must have been the bees that died en-route in the car, that the other bees had thrown out.

I didn't extract any honey until I returned to London at the end of September. In total, I harvested 30lbs of honey. The one big lesson I learnt was to take the hives up with clean frames, so I could separate the Essex and the heather honey. I pressed all the honey and put it into jars - despite my honey being mixed, the heather honey sank to the bottom, separating itself naturally.



In conclusion - it was a truly worthwhile, exciting experience!! I would recommend it to anyone.

*Stones are used to secure the roofs on the hives from sheep who could chew through the ties or rub up against the hives.*

*When the sheep rub vigorously, theoretically the stones are meant to fall from the hives first deterring the sheep from knocking the whole thing over.*

## “Super bees” mystery solved!

The mystery of the apparently Varroa-resistant honey bees in a UK apiary has been solved, and the answer has been a real surprise. Over the past few years there have been dramatic headlines about what seem to have been Varroa-resistant honey bees in the apiary of a beekeeper in Swindon, England.

Ron Hoskin's bees have been dubbed “super bees” and it was thought that their hygienic behaviour was the reason for their success. However, new research presented by Catherine Thompson of Salford University at the UK National Honey Show and now published in *The ISME Journal* has revealed the reasons for Hoskin's bees' success. A non-lethal form of Deformed Wing Virus (DWV) is prevalent amongst his bees and is acting to exclude the more lethal form. DWV is now well-known as a killer of honey bees and its virulence seems at least in part to have been caused by Varroa which, because it injects the virus straight into the bees' bloodstream, has spread the virus with disastrous effects. Honey bees have long had DWV but, pre-Varroa, spread by sex and other methods had not enabled it to spread so quickly and thoroughly throughout a colony. For reasons that are not yet understood, Hoskin's bees have been subject to a relatively benign version of DWV -Type B. In contrast DWV Type A is lethal. Type B has become dominant in Hoskin's apiary and kept Type A out - or at least to very low levels. It is even thought that Varroa spreading Type B have in effect inoculated the bees against Type A!

Unfortunately, simply moving Hoskin's bees to another apiary where DWV Type A is dominant is likely to be futile. The colony is likely to be swamped by the lethal Type A and face the disease threat common to most colonies. Nonetheless, it is hoped that this exciting new finding may eventually help in some way to produce a break-through in helping honeybees.

*From the Vita website (courtesy of Ipswich & East Suffolk BKA via ebees)*