

# THE ESSEX BEEKEEPER



Congratulations to **Ted Gradosielski** (Epping Forest Division) being 'clothed' as a Liveryman of the Wax Chandlers Company in December 2017. Pictured with Arthur Davey, Master of the Wax Chandlers Company. See page 9.

Photo by Stanley Liu. Wax Chandlers Company Beadle.

**Monthly Magazine of the Essex Beekeepers' Association**

*Furthering the Craft of Beekeeping in Essex  
Registered Charity number 1031419*

**[www.ebka.org](http://www.ebka.org)**

**Issue No. 638**

**February 2018**

## Divisional Meetings - dates for February & March 2018

1 Feb	Thursday 8.00pm	Romford	<b>New season preparation - Paul Wiltshire</b> at Chadwick Hall, Main Road, Gidea Park RM2 5EL
1 Feb	Thursday 8.00pm	Harlow	<b>Soap making with Sara Robb.</b> Kings Church, Red Willow, Harlow
8 Feb	Thursday 7.30pm	Saffron Walden	<b>The Asian Hornet by Andrew Durham,</b> Cambridgeshire beekeepers - at Swards End Hall, Radwinter Road CB10 2LG
15 Feb	Thursday 7.30pm	Epping Forest	<b>Film Night / Reconvened AGM.</b> Chingford Horticultural Hall
19 Feb	Monday 7.30pm	Chelmsford	<b>Beekeepers Question Time</b> The Link, Rainsford Road, Chelmsford
21 Feb	Wed 7.30pm	Dengie 100 & Maldon	<b>The Importance of Drones - Chad Colby-Blake.</b> The Oakhouse, High Street, Maldon CM9 5PR
24 Feb	Saturday 7.30pm	Braintree	<b>Annual Dinner.</b> Rivenhall Golf Club, Forest Road, Witham CM8 2PS
28 Feb	Wed 7.30pm	Southend	<b>Bob Smith</b> subject tbc. WI Hall, Bellingham Lane, Rayleigh SS6 7ED
1 March	Thursday 8.00pm	Harlow	<b>Alternative bee Hives - Peter Aldridge.</b> Kings Church, Red Willow, Harlow
1 March	Thursday 8.00pm	Romford	<b>Swarm Control.- Norman McDonald.</b> Chadwick Hall, Main Road, Gidea Park RM2 5EL
13 March	Tuesday 7.30pm	Saffron Walden	<b>The History of Beekeeping - Jane Ridler,</b> Swards End Hall, Radwinter Rd CB10 2LG
15 March	Thursday 7.30pm	Epping Forest	<b>Leap into Spring.</b> Chingford Horticultural Hall.
21 March	Wed 7.30pm	Dengie 100 & Maldon	<b>Coping with the Swarm urge - Clive deBruyn</b> The Oakhouse, High Street, Maldon CM9 5PR
28 March	Wed 7.30pm	Southend	<b>Helping the Honeybee - Darren Lerigo.</b> The WI Hall, Bellingham Lane, Rayleigh SS6 7ED

### Don't forget

**As an EBKA member you can attend the meetings of any of the 9 Divisions - but be courteous and let the Secretary/Divisional Contact know that you would like to attend.**

*(if only to ensure there's enough tea).*

# Notice of the 138<sup>th</sup> Annual General Meeting of the Essex Beekeepers' Association (EBKA)

to be held at  
2pm on Saturday 24 March 2018  
at  
Writtle University College CM1 3RP

The agenda for this meeting will be included in the March edition of *The Essex Beekeeper* and will be on the EBKA Website from Friday 23 February. As well as conducting the usual business, there will be two important propositions to consider and review at the meeting.

Details of these propositions will be available for discussion at Divisional meetings prior to the AGM. The propositions will also form part of the AGM papers on the EBKA Website.

Michael Webb  
Secretary EBKA  
12 January 2018

## ***New Beekeeping Courses for 2018:***

***TOP BAR HIVES.*** *Make your own from wattle and daub and learn how they are used in Africa.*

***Natural Sustainable Beekeeping.*** *(To be held at Writtle University).  
Explore and compare conventional UK methods with natural alternatives*

*In aid of Bees Abroad*



# DATES FOR YOUR DIARY

## **EBKA Annual General Meeting**

is to be held at 2pm on  
Saturday **24 March** at  
Writtle University College  
Essex CM1 3RP

## **The Ted Hooper Memorial Lecture**

is to be held at 2pm on  
Sunday **22 April**  
at the Lecture Theatre,  
Writtle University College

## **EBKA Bee Health Day**

is to be held on  
Thursday **21 June**  
at Langham Community  
Centre, Colchester

## **Essex Honey Show**

is to be held on  
Saturday **1 September**  
at Orsett Show Ground

## **Annual Conference**

is to be held on  
Saturday **3 November**  
at the Chelmsford City  
Racecourse

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# World Bee Day



A resolution declaring **May 20<sup>th</sup> as World Bee Day** was adopted at the plenary session of the United Nations General Assembly on 20<sup>th</sup> December, 2017.

On 17<sup>th</sup> November, 2017 the resolution was unanimously adopted at the Economic and Financial Committee of the United Nations General Assembly, with co-sponsorship of 115 countries, including the USA, Canada, China, Russian Federation, India, Brazil, Argentina, Australia, as well as all Member States of the European Union.

Bees and other pollinators are extremely important when it comes to ensuring the global safety of the food supply chain. Every third spoonful of food depends on pollination. By pollinating crops, bees also provide a significant source of jobs and income for farmers, which is particularly important for developing countries. An international study of IPBES estimates that the annual global food production which depends on pollination is worth between USD \$235 and \$577 billion. In addition, bees also have an important role in nature conservation. Studies of UN Agencies and the International Union for Conservation of Nature show that bee populations and the populations of other pollinators have significantly decreased, making them more and more endangered.

The Republic of Slovenia, on the initiative of the Slovenian Beekeepers' Association, initiated procedures in the Food and Agriculture Organization of the United Nations in 2015 to declare World Bee Day, and that resolution, which emphasises the importance of bees and other pollinators, has now been adopted.

*From Lune Valley Community BK via eBees*

# Varroa Mites choose who to Suck



The Varroa mite's lifecycle consists of two phases:-

1. A reproductive phase that takes place within a sealed brood-comb cell, where the mites lay eggs on a developing bee larva.
2. Where they feed on adult bees, called the phoretic phase.

A study, published in the June 2016 issue of *Scientific Reports* shows that the mites clearly prefer to infest adult bees at mid-age, or during the nurse phase of a bee's lifecycle when they take care of larvae, rather than during the younger (newly-emerged) or older (forager) phases of an adult bee.

The study also found that the physiological type of a host bee had significant effects on the mite's reproductive fitness and later success. Mites chose bees in the nurse phase of their life cycle – the nutritional prime of bee life - over their older and younger counterparts at significantly higher rates. Also, those which fed on nurse bees had the highest reproductive success rates and the lowest infertility rates.

Previous studies have shown that the mites choose their reproductive hosts, but this study showed that they can go one step further - they correctly pick the most nutritious bees from which to suck haemolymph.

## A VISIT TO CHAIN BRIDGE HONEY FARM.

On a number of occasions, and again in August last year, we visited the Chain Bridge Honey Farm, at Berwick upon Tweed, which is run by Willie Robson and family, who have a visitor centre, beekeeping museum and an extensive collection of heavy vehicles. In the 1950's Willie's father became the beekeeping advisor for the Scottish Borders. He got to know Willie Smith from Innerleithen, near Peebles, an eminent beekeeper and producer of heather honey, who designed the Smith Hive, which they use today, and is sold by Thornes. Willie and family have continued the family tradition and now run in the region of 1,600 hives, all over the Borders.

In a recent news sheet, Willie talks about ongoing viruses to be found in honey bee colonies, but is of the opinion *deformed wing virus* seems to be the main cause of his colony losses. He has given his consent for his article to be reproduced below:

*“The Varroa mite, which is present in most colonies in the UK and world-wide, feeds on the haemolymph of the honey bee, thus providing the transmission route for this virus, eventually leading to colony loss. Our present policy of allowing our bees to take care of the Varroa mite themselves will not work, even in the longer term. Previously, our indigenous honey bees have managed to cope with most diseases by natural selection but in this case they won't. We must continue to treat them and try to eliminate as far as possible the Varroa mite.*

*We also have problems with queens not lasting any length of time, sometimes a few months only, whereas in the past they could have lasted for 4 years. We think the drones may be becoming sterile because of the stress of the Varroa mite or associated viruses (most likely) or the presence within the hive of chemicals associated with the treatment of Varroa (likely). In future we must treat the bees organically, using oxalic acid, and try to get young queens into the hives every year.*

*For the second year running we have experienced very poor weather in May which makes queen rearing and the provision of new colonies very difficult. The bees have however, got a good amount of honey thus far, because the oilseed rape yields at low temperatures and the bees will work at low temperatures.”*

It is hoped this message from a major beekeeper is of interest.

Ted Pope - Harrogate & Ripon BKA - via eBees.



## Save the Bee

In recent years 'save the bees' slogans have been appearing in many places.

This photograph shows a fine example of street art on a wall in London, and there are many others.

But let's also focus on the message which is

so important. Every day we hear more concern about our environment - recent German study findings that pollinating insects have declined by 75% over 30 years, and the supposed Albert Einstein quote -

*"If the bee disappeared off the face of the Earth, man would only have four years left to live"*

- may yet be true.

From Reigate *BeeNews* via ebees

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## THE WORSHIPFUL COMPANY OF WAX CHANDLERS

### **The Worshipful Company of Wax Chandlers**

is one of the City of London livery companies. The business of a wax chandler was the preparation, making and sale of beeswax products. In 1371, the company gained ordinances that gave it control over the trade of wax chandlers in the city.

The company has re-established its links with the modern wax industry and continues to promote excellence and integrity in the trade through its links with the National Honey Show, the British Beekeepers' Association and the Central Association of Bee-Keepers. The company is crucial to the future of the bee farming industry in the United Kingdom through its support of the Rowse/Bee Farmers' Association Apprenticeship Scheme and its support for Bees In Business.

*Arthur Davey*

Master, Wax Chandlers' Company

Beeswax is a small but important part of the wax industry in the United Kingdom. In years gone by, beeswax was a more important and expensive product of the hive than honey. Beeswax candles gave light to the world on dark nights, burnt with the cleanest flames, the brightest light and the most pleasant smell. They were the ones used by royalty, noblemen and for the veneration of God.

This unique combination of acids, esters and hydrocarbons has resulted in a remarkable material that is difficult to replicate and which is still relevant today. Uses are found in the study of medicine, technology in the aerospace business and the automotive, energy and food-packing industries, art, jewellery making and much more.

*Ged Marshall*

Chairman, Bee Farmers' Association

## Watch Out for Wax Moths

The following article was first published in the August 1944 edition of *Country Life* magazine, and is written in an amusing style. However, it is a timely reminder for modern beekeepers at this time of year when we should be checking for any sign of this pest, especially amongst any stored comb.



*"It is amusing to watch the game. The moth settles for a second on the alighting board, and is immediately chivvied off by a sentry. She then flutters about the face of the hive and settles on it at a distance of about nine or ten inches from the entrance. A bee sentry has been watching her fluttering and alighting and pursues her up the face of the hive. The moth flutters quickly down again to the entrance and slips in. She has led the sentry from her post !*

*Of course, once inside the hive, the moth must work with extraordinary rapidity. She makes straight for a far corner of the hive to find an unwatched nook. She is exceedingly nimble on her feet, although comparatively slow in the air. If the bees occupy the whole of the hive, the moth is doomed, but from what I have seen from her strategy, she does not try to enter a strong and busy habitation.*

*Once tucked away in the corner in a less frequented hive unmolested, she lays her eggs, and a few weeks later the dreadful grub appears. This terrible marauder has developed a technique in self defence, which no doubt renders life supportable and perhaps enjoyable, even in a hive of bees which, of course, is his natural home.*

*Bees fly at him in a paroxysm of rage whenever they see him. But he has an armour-plated head impervious to stings, and the rest of his repulsive body he covers with a thick layer of web which apparently he spins like a spider. Thus armed, he attacks wax and brood and young bees and honey, growing to a length of an inch or more and getting fatter and fatter, and even boring holes in the side of the hive.*

*Can any existence be more fantastic and full of adventure than that of the wax moth? She cannot change her mind and lay her eggs in someone's quiet clothes cupboard. No! She must find wax for her prospective children and must wander around looking for a bee-hive, and even then she must find one that is not over-populated; otherwise she will be slain as soon as she gets indoors !*

The photograph tells the grisly tale.

Photo by Sue  
Keystone - Guildford  
BKA



*I suppose in wild life, where the bees live in trunks and holes in rocks, her life is no easier. The mystery to me is how the young grub covers its fat little body in time to protect itself, for bees never hesitate when they see one of these crawling horrors; they pounce and try to sting. What a life! To pass the greater part of one's existence loosely surrounded by twenty or thirty thousand remorseless enemies.*

*Even the last metamorphosis of the creature must be fraught with danger. Presumably the grub eventually spins its web around itself and becomes a moth, like a respectable silkworm. But even then it has to leave the hive, a difficult and dangerous exit."*

*courtesy of Guildford BKA - via eBees*

## Nosema - the silent killer

Nosema is a disease caused by a microsporidian parasite; a spore forming fungus. It invades the gut of the adult bees, reducing their ability to digest pollen and shortening their lives quite considerably. The digestion system breaks down and the bees are thought to die of starvation. Larvae do not get infected with Nosema but there have been cases where Nosema has been detected in pupae however, in general it is a disease of the adult bee.

### **The impact on the adult bees is:**

- Worker bees cannot produce brood food therefore, cannot be effective nurse bees. They become foragers early and die early.
- Queen bees stop laying eggs and die within weeks.
- Drones have reduced fertility, are weaker, their semen becomes infected with spores and they have a reduced lifespan. They are unlikely to catch a virgin Queen to mate with her.

### The impact on the colony:

- Colony does not expand in the springtime.
- Dwindling numbers of bees.
- Neglected brood.
- Staining on the outside of the hive and inside on the comb (*Nosema apis* only).
- Secondary diseases appear, especially Chalk Brood and AFB.
- Colony dies

It is now obvious that any colony infected with *Nosema* is not going to thrive and therefore, it is important that beekeepers:

- Check colonies for this disease,
- Know how to treat infected colonies
- Adapt their beekeeping practices to minimise the risk of getting the disease or spreading the disease amongst their colonies.

Colonies are most at risk when the bees are unable to fly – so over the winter and during prolonged spells of bad weather. Once bees are able to fly then they can go on clearing flights, thus removing spores from the colony.

The disease is spread within the hive from adult to adult. A single infected bee can produce 200 million spores. The biggest cause of infection is from spores in faeces. House bees get infected while cleaning the hive. These contaminate other adult bees and further contaminate the combs.

The disease is spread from colony to colony by bees and the beekeeper. The bees by drifting and the beekeeper by moving contaminated combs, uniting weak, diseased colonies with stronger colonies, poor apiary hygiene – dirty equipment, dead colonies not cleared away, and cleaned, etc., poor personal hygiene - not cleaning gloves, hive tools, bee suits, etc.

We must understand that there are two types of *Nosema* – ***Nosema apis*** and ***Nosema ceranae***. Whilst these are both spore forming fungal diseases, they have quite different characteristics. In both cases the spores can remain, viable for about 12 months - see comparative table on next page.

## What should Beekeepers do?

In mid to late April every colony should be tested for the presence of *Nosema*. This involves taking a sample of 30 adult bees and checking under a microscope at 400x. If it is not possible to sample every colony, then as a minimum, every colony that is not thriving should be tested. It would be good practice for each association to organise *Nosema* Clinics for their members every year and even better practice for the members of the associations to take advantage of them.

	<b><i>Nosema apis</i></b>	<b><i>Nosema ceranae</i></b>
<b>Causes Dysentery</b>	Yes, spots of faecal waste may be on the outside and inside of the hive.	No. No spotting occurs
<b>Temperature sensitivity</b>	Breed best at 34°C (brood nest temperature). Above 37°C the spores can no longer develop. Spores killed at 60°C. Can survive sub-zero temperatures. In the lab spores survive years in frozen combs.	Breed best at 34°C (brood nest temperature). Spores can survive and develop at temperatures above 60°C. Spores killed by 24 hours of frost temperatures.
<b>Time when the disease is most evident</b>	Spring.	From spring through to late autumn.
<b>Age of ideal adult host</b>	Longer living winter bee. Reproduces less in the short-lived summer bee.	Can reproduce well in both summer and winter bees.
<b>Killed by</b>	Scorching. 80% acetic acid fumigation.	80% acetic acid fumigation. Deep freeze combs for 24 hours.
<b>Bees get better</b>	Sometimes in the spring, when the bees are able to fly and go on clearing flights. The winter bees have died, so the reproduction rate is reduced. Temperatures are rising so spores adversely affected	Less likely to get better without beekeeper intervention. This is due to the spores reproducing well in all ages of adult bees and able to survive higher temperatures.

## Appropriate apiary and personal hygiene

Gentle manipulation and use of smoke to clear the bees; Nosema is a disease of the gut of the adult bee and one of the ways that beekeepers spread this disease is by squashing bees when manipulating their colonies. That yellowy, gooey stuff that comes out of a squashed bee is its gut. House bees are programmed to clean it up and if the now dead bee was infected with Nosema, then this is transmitted to the house bees. Next time you open your hives, look around the edges of the crown boards, supers, queen excluders and brood boxes. How many squashed bees do you see? This is caused by lack of smoke to clear the bees and poor manipulation when putting the hive back together.

Changing comb on a regular basis; Dirty comb harbours the pathogens of all kinds of diseases. My view is that any comb that has been routinely used for brood rearing should be changed every 12 months. Twelve months of use in a brood nest leaves the comb filthy dirty and full of pathogens. No comb in the brood box should be more than two years old.

### How do you treat a colony that has Nosema?

There are no medicines, no silver bullets. You have to get the bees onto a set of new foundation. Colonies with Nosema are weak and unlikely to survive a shook swarm. If you have clean, fumigated drawn comb, that will help this process.

To move the bees onto fresh comb or foundation you need to carry out a **Bailey Disease Comb Change**. This is quite different from the manipulation which is called a Bailey Comb Change, which is when a strong colony is given a full box of foundation to draw out. Mix the two up and you will have a dead colony. I will describe the Bailey Disease Comb Change in the next issue.

### Acknowledgements:

National Bee Unit – Beebase Fact sheets.

Morse & Flottum – *Honey Bee Pests, Predators and Diseases*.

Wolfgang Ritter - *Practical Beekeeping: Beekeeping with the 'new' parasite*. [Beeware.org.au](http://Beeware.org.au) – Nosema.

**Dave Bonner** - Master Beekeeper (Warwickshire BKA) - via ebees.

## ***Who's who and how to contact them***

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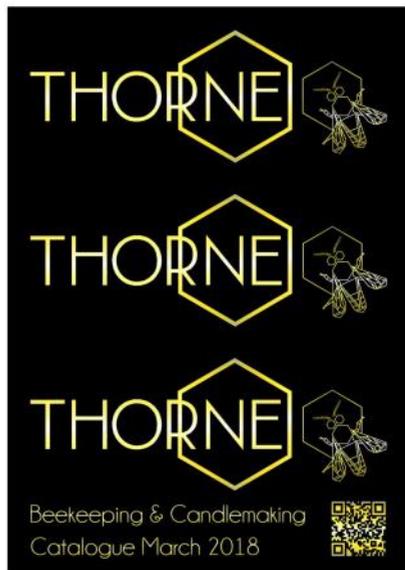
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