

THE ESSEX BEEKEEPER



"Keep the roofs weighted down and the entrances clear"

Monthly Magazine of the
Essex Beekeepers' Association
www.ebka.org

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

Issue No. 649

January 2019

Divisional Meetings around the County

Meetings in January 2019

3 Jan	Thursday 8.00pm	Romford	AGM - Chadwick Hall, Main Road, Gidea Park RM2 5EL
10 Jan	Thursday 8.00pm	Harlow	AGM - Kings Church, Red Willow, Harlow CM19 5PA
16 Jan	Wed 7.30pm	Dengie 100 & Maldon	tbc
17 Jan	Thursday 7.30pm	Epping Forest	Basic Queen Rearing for All. - Chingford Horticultural Hall E4 6PE
23 Jan	Wed 7.30pm	Southend	Divisional EGM - W I Hall, Bellingham Lane, Rayleigh.

Meetings in February 2019

1 Feb	Friday 7.00pm	Saffron Walden	Divisional AGM & Annual Dinner. Great Dunmow Day Centre, CM6 1EQ
7 Feb	Thursday 8.00pm	Romford	Bee Diseases & Exotic Pests. David Rudland. Chadwick Hall, Main Road, Gidea Park RM2 5EL
20 Feb	Wed 7.30pm	Dengie 100 & Maldon	AGM & Bees and the Law - Chad Colby-Blake. The Oakhouse, High Street, Maldon
21 Feb	Thursday 7.30pm	Epping Forest	Looking Ahead - Practical Planning for the Season. Chingford Horticultural Hall E4 6PE
28 Feb	Thursday 7.30pm	Saffron Walden	Foulbrood, Apiary Hygiene & the role of the NBU - Jonathon Baynes APHA Bee Inspector. Radwinter Village Hall CB10 2SN

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.

David Smye - dsmye@lineone.net

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

Centenary Celebrations at Saffron Walden Division

Vanessa Wilkinson

Saffron Walden Division took time to celebrate their centenary during a Christmas Social and Quiz night held on the 29th November.

The evening was held at The Three Horseshoes pub in Duton Hill.

The quiz included beekeeping related questions, as well as questions about Saffron Walden and general knowledge. There was much laughter and a good time was had by all.

Tony Yeats, Chairman, made a short speech about the history of the division. A special cake in the shape of a WBC Hive was made to mark the occasion. At the end of the evening attendees were gifted cupcakes decorated with bees and flowers.



Tony Yeats with the cake display
Photo by Sally

Volunteer Stewards Required for the 2019 Spring Convention

Detailed planning for the Spring Convention continues. Can you volunteer your time on Friday, Saturday or Sunday 12th, 13th or 14th April at the 2019 Spring Convention as a steward?

You would have three days' free entry to the Convention. You would also have some free time each day depending on your rota and you'd be recompensed to the value of a lunch voucher and £20 each day. Tasks could include activities like stewarding, parking, reception, trade show or lecture buildings.

If you are interested, please contact:

conventionstewards@gmail.com by 15th February 2019

A Future Without Imports

From 8:30am until 5:00pm

At The Eden Project

Callington Cornwall PL24 2SG



B4 are delighted to announce a second Sustainable Beekeeping Conference to be held in the beautiful Core Building at The Eden Project on **Saturday, February 16th 2019.**

Tickets are now on sale through Eventbrite on: www.b4project.co.uk/upcoming-events

Entrance to the conference will cost £18 per person for the early birds, and £22 standard. There is a concession for students. The ticket price includes a choice of Cornish Pasty for lunch (vegan/vegetarian/gluten-free/beef).

Saturday Morning

HONEY BEE GENETICS AND ADAPTATION

Understanding honey bee genetics: a layperson's overview.

The B4 Project invites you to ask questions on this topic. These will be considered by academic staff at Plymouth University and their answers will be put together in presentation form at the Conference.

Please send your questions to andrew@aglbrown.co.uk

Local adaptation in dark European honey bees: preliminary results and a request for help. Using whole genome sequencing to analyse the genetic diversity of the UK honey bee population.

HONEY BEE CONSERVATION AND SUSTAINABLE BEEKEEPING

The need to conserve the Dark European honey bee. Developing sustainable beekeeping in Wales, some results of initial genetic survey. Feral bees and Irish proposals for rewilding native honey bees.

Dr Mairi Knight, Dr Jon Ellis, Victoria Buswell University of Plymouth Molecular Biology Group, **Norman Carreck** Sussex University, **Dr Mark Barnett** Edinburgh University, **Dylan Elen**, Bangor University and **Prof Grace P McCormack**, National University of Ireland Galway.

Saturday Afternoon

In the afternoon of the conference, delegates will be invited to listen to and talk with representatives of honey bee breeding groups, (still in The Core Building.)

Sunday

The following day, Sunday February 17th, will be the first of 7 days when delegates of the conference will be invited to **visit group apiaries** throughout Cornwall, Devon and Somerset – see Eventbrite page through the B4 Website as above for details and booking. Most of these apiaries visits carry a booking fee of £6 per person.

Exhibition at Eden

Included in the price of the ticket is the B4 funded exhibition on the top floor of The Core Building entitled “**Views of Bees’ Views.**”

This will include microscopy of the honey bee, displayed and demonstrated by Kernow Microscopy Society and Plymouth University, and including fantastic images made possible by electron microscopy. There will be art work by the conservation activist and world renowned artist, Kurt Jackson, and the opportunity to enjoy the sounds of the hive.

The exhibition runs from January 26th to March 14th 2019.

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12th, 13th & 14th April 2019

Harper Adams University, Shropshire, TF10 8NB

Join us at the national beekeeping event of the year!

Book in mid-January for the 42nd BBKA Spring Convention and enjoy the excellent facilities and catering available at Harper Adams University

- Lectures, Workshops and Seminars for all levels of beekeeping experience
- Trade Show on Saturday 13th April
- Beekeeping and Not-for-Profit Exhibition
- Excellent facilities and great value catering
- On-site, en-suite accommodation



For further Spring Convention information, FAQs, Tickets (wristbands) and Bookings visit:

www.bbka.org.uk



The national beekeeping event of the year!

20+ lectures over three days for all levels of beekeeping experience.

No need to book. Entry to all lectures included in full Convention wristband ticket price. Lecture topics to include: Asian Hornet, Varroa, Pesticides, Honey Bee Conservation,

Honey Bee genetic analysis, Tropilaelaps, Small Hive Beetle, Beeswax, Beekeeping Year and Swarming, with confirmed speakers:

Dr Kirsten Traynor and Dr Samuel Ramsey (both from USA), Dr Xesus Feas (Spain), Prof Maria Bouga (Greece), Jack Hassett (Eire) plus UK speakers including Nigel Semmence (NBU), Norman Carreck, Enid Brown, John Hendrie, Margaret Thomas, Dr Ben Woodcock & Dr Anna Oliver.

50+ Bookable workshops and seminars covering more practical aspects of beekeeping, related topics and non-beekeeping activities including:

Instrumental Insemination (Michael Collier), **Making Soap and Beauty Products** (Sara Robb), **Grafting** (Marin Anastasov), **Queen Rearing** (Jim Pearson), **Skep Making** (Chris Park), **Bee Health** (Colin Pavey, NBU), **Microscopes** (Alan Potter), **Mead Making** (Dinah Sweet), **Candle Making** (Shirley Bond), **Pollen** (Adam Leitch), **Showing Honey & Wax** (John Goodwin), **Teaching Beekeepers** (Jane Medwell), **Drones** (Lynne Ingram), **Extraction** (Jim & Val Vivian Griffiths), **BBKA Modules** and many more

Research Session on Saturday 13th afternoon, featuring BBKA sponsored studies

Trade Show on Saturday 13th only, with all the leading equipment suppliers.

Separate Trade Show only wristbands available on the day.

Not for Profit Exhibition on Friday and Saturday

Excellent, great value catering

On-site, en-suite accommodation

Please see www.bbka.org.uk for further information and FAQs.

Wristband Tickets, Workshops, Dinners and Accommodation bookings

(on sale January) also via link from BBKA website.

General enquiries: scchair@bbka.org.uk



The Central Association of Bee-Keepers (CABK)

Registered charity No. 278710

We are a registered educational charity whose objectives are to promote and further the craft of beekeeping. By organising lectures and producing publications, the association enables beekeepers, bee scientists and others interested in bees to keep in touch with the latest research and ideas about bees and related topics. Acting as a bridge between the beekeeper and the scientist.

The Central Association of Bee-Keepers (CABK) is a unique organisation. It invites as its speakers those who are acknowledged experts in their fields, both nationally and internationally, and there are more than ten lectures given each year. A Spring Meeting is held in London in March, a Social Evening is held during the National Honey Show, and an annual Autumn Conference is held in Kenilworth in November.

A selection of lectures given to the association are published and distributed free to members. These lecture booklets, of which approximately 240 have now been produced, are offered for sale to other beekeepers and additional copies may be purchased by members at a reduced rate. They are considered essential reading for those taking the BBKA examinations or the National Diploma in Beekeeping, and are available by post or from our stands at the BBKA Spring Convention (April) and the National Honey Show (October).

History

The Central Association of Bee-Keepers dates in its present form from 1945, but can trace its origins back to the foundation of the British Beekeepers Association in 1874, which followed suggestions for the formation of a “central” or “national” beekeeping association in the previous year.

At the first meeting Sir John Lubbock, (later Lord Avebury, author of *Ants, bees and wasps: a record of observations on the habits of the social Hymenoptera*) was elected President, and among other well known names of those present were T.W. Cowan, Rev W.C. Cotton, W.B. Carr, W. Abbott and F. Cheshire. The BBKA originally consisted only of individual members, and one of its functions from the outset was to organise lectures by prominent beekeepers and scientists, which were then published and distributed to members.

The first lecture, in 1879, was given by F.R. Cheshire, on "*The cause of abdominal distension in the hive bee in winter*". In time, many local beekeeping associations were formed, became affiliated to the BBKA and sent delegates to general meetings.

In 1945, the BBKA was reorganised into its present form as an umbrella organisation for its (mainly English) affiliated beekeeping associations. The remaining individual members then formed themselves into a Specialist Member Association of the BBKA called "The Central Association of the British Beekeepers Association", later shortened to its present name. The Patron of the CABK has for many years been the Master of the Worshipful Company of Wax Chandlers.

The objects of the CABK are to "*promote and further the craft of beekeeping*". At first lectures were held in London and at various other locations, but perhaps influenced by the successful XIVth International Apicultural Congress held at Royal Leamington Spa in 1951, more recently the programme has settled down to a Spring Meeting in central London, an autumn weekend residential conference, now in its 34th year, and occasional sponsored lectures elsewhere.

Publications

Over the last six decades, most of the prominent beekeepers and bee scientists working in Britain have lectured, often several times, to the Association. Approximately 240 published versions of CABK lectures in booklet form have now been produced, and three collected volumes of lectures, "*Honeybee Biology*" (1982), "*Keeping Bees*" (1993), both edited by Prof. John Free, and "*Aspects of Sociality in Insects*", edited by Norman Carreck and Tony Johnson have also been published.

Most members of the CABK are also members of their county or district beekeeping associations. The role of the CABK is complementary to the local associations.

Single membership: £15, Dual membership: £18, Corporate membership: £20. Membership runs for a year from January 1st. Subscriptions paid by new members on or after the first day of October cover the period to 31st December the following year.

Next event: 23 February 2019 - 10.00am - 4.30pm

Roots and Shoots, *Walnut Tree Walk, Kennington London, SE11 6DN*

More details at: <https://www.cabk.org.uk/events/spring-meeting-2019>

Sustainable Bees and Queens

East Anglian venue by BIBBA

17 Feb 2019 @ 10:00 am - 4:00 pm

£10

There is growing concern amongst beekeepers of all abilities and experience about the ever-increasing importation of bees and queens. This is on several grounds, including the possibilities of introducing pests, diseases and pathogens, aggression in subsequent generations and the unsuitability to our fickle climate.

Defra has recently conducted a Queen Replacement Survey that shows the majority of beekeepers prefer home-reared queens but need help to produce them. In addition, many BKAs are unable to produce enough bees for their beginners and queens to head them.

In response to the obvious need the Bee Improvement and Bee Breeders Association (BIBBA) are staging a series of one day regional events during the 2018/19 winter. These are to help and encourage everyone from the small-scale beekeeper upwards and BKAs to produce bees and queens from local stock, by using simple techniques that may be little more than a variation of what many beekeepers already do and at little or no cost.

Topics will include:-

- Why raise queens?
- Addressing perceived problems in producing queens in the U.K.
- Overwintering bees and queens.
- Demystifying queen rearing.
- Simple queen rearing methods.
- Simple and efficient ways to produce nuclei.
- Suggested methods for BKAs to supply bees and queens to members/ beginners.
- Methods for small and larger quantities.

- Benefits of teaching apiaries.
- Queen rearing facility in teaching apiaries.
- Queen rearing as a collective exercise.
- Producing bees and queens, yet still getting a good honey crop.
- Including queen rearing and bee improvement in BKA teaching programmes.
- Reducing winter losses.
- Other events that provide relevant tuition.

It will be helpful to beekeepers of all abilities from beginners to the most experienced, as well as BKA officials, beekeeping teachers, apiary managers, and demonstrators.

The all-day event (10.00am-4.00pm) costs £10/head (around 30% of the price of one queen and 5-10% of a nuc!).

Refreshments will be provided, but please provide your own lunch.

Booking must be made in advance

Venue:

Lawshall Village Hall

Harrow Green, Lawshall

Suffolk IP29 4PE (*just south of Bury St. Edmunds*)

More news needed!

The editor needs more of your local news and articles so that all Essex members are kept informed and up-to-date with what's happening around the County.

I rely heavily upon the *ebees* network with other editors to bring you current news and articles that are topical and interesting, but with most Divisions producing a monthly Newsletter, there **MUST** be accounts of talks by speakers and snippets of news about people, bees, unusual happenings, etc. that can be shared with us all.

I look forward to an avalanche of copy.

David Smye - dsmye@lineone.net



Diet Changes Honeybee Larvae from Queens into Workers

Fred Ayres - Lune Valley Community Beekeepers - via ebees

Scientists at Queen Mary University of London and the Australian National University have unravelled how changes in nutrition in the early development of honeybees can result in vastly different adult characteristics.

Queen and worker honeybees are almost genetically identical but receive different diets as larvae. The researchers have found that specific protein patterns on their genome play an important role in determining which they develop into. These proteins, known as histones, act as switches that control how the larvae develop and diet determines which switches are activated.

They found that the worker developmental pathway is actively switched on from a default queen developmental programme. This change is caused by epigenetics - a dynamic set of instructions that exist 'on top' of the genetic information. Epigenetic modifications encode and direct the programme of events that leads to differential gene expression and worker or queen developmental outcome. The study, published in *Genome Research*, describes the first genome wide map of histone patterns in the honeybee and the first between any organism of the same sex that differs in reproductive division of labour.

Lead author Dr Paul Hurd, of Queen Mary University of London, said: *"The ability of an individual larva to become a worker or a queen is due to the way genes are switched on or off in response to the specific diet; this determines such differing outcomes from the same genome. We show that queens and workers have specific histone patterns even though their DNA is the same. These proteins control both structural and functional aspects of the organism's genetic material and have the capacity to determine which part of the genome, and when, has to be activated to respond to both internal and external stimuli."*

Co-author Professor Ryszard Maleszka, from the Australian National University, added: *"The extent of histone modifications uncovered by this study was remarkable and exceeded our expectations. We were able to identify where the important differences are in the genomes of workers and queens."*

Epigenetic information can be altered by environmental factors, including diet. In the case of the honeybee, the queen larvae are fed a diet of royal jelly, a

potent substance capable of changing developmental instructions.

Dr. Hurd said: *"Think of the genome as the instruction book of everything that is possible, but the epigenetics is the way in which those instructions are read. Epigenetics is about interpretation and of course there are many different ways to interpret these instructions and when and in response to what."*

The authors found that some of the most important epigenetic differences are in regions of the honeybee genome that are not part of genes. For the first time, these caste-specific regulatory DNA regions that are so important in making a queen or a worker, have been identified.

Professor Maleszka said: *"Our findings are important because a high level of similarity of epigenetic tool kits between honeybees and mammals makes this familiar insect an invaluable system to investigate the sophistications of epigenetic regulation that cannot be addressed in humans or other mammals."*

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Insulated Hives

Dr Fred Ayres - Lune Valley Community Beekeepers

Wild and feral bees often nest in hollow trees, which usually provide between 3” and 6” (7cm -15cm) of insulation. The question is often asked “*Is this of benefit to the bees and if so, should we insulate our hives?*”



The main benefit of insulation is that it restricts and reduces the flow of heat through the hive walls, protecting the ambient temperature inside the hive from rapid fluctuations such as cooling in winter or heating in summer.

The actual temperature inside the hive, which should not be confused with the temperature of the bee cluster, is dependent on the outside ambient air temperature and the flow of air into and out of the hive.

In hives with wide entrances and/or mesh floors, the flow of air through the hive ensures that the hive’s internal temperature closely follows the external air temperature. The rate at which it does so will depend on the rate of air flow. In these circumstances’ insulation offers little benefit. In hives with solid floors or mesh floors that can be closed and entrances that can be reduced, insulation can be beneficial in that it can significantly reduce the rate at which the internal hive temperature equalises with the external temperature. But does this matter?

A rapid rise in temperature can sometimes reach the point where wax comb begins to soften and collapse before the bees have time to bring the hive temperature down. There have been several cases reported of this during the season. Equally, a rapid reduction in temperature can result in a winter cluster being isolated from its vital food supply and subsequently starving to death.

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