Brighton & Lewes Beekeepers Newsletter

Volume 3 — March 2019

Editor: Norman Dickinson

BRIGHTON AND LEWES DIVISION OF THE SUSSEX BEEKEEPERS ASSOCIATION

www.brightonlewesbeekeepers.co.uk

February B&L meeting — Good Record Keeping with Tom Moore

Report and photos by Norman Dickinson

Brighton and Lewes were pleased to welcome Tom Moore from the Wisborough Green Division of the West Sussex Beekeepers Association who gave a very informative talk on Good Record Keeping, Pros, Cons and Pitfalls where the question was asked Why keep records? As beekeepers we have a legal duty to keep records of all medicines and treatments given to our bees where the records must be kept for at least 5 years. Whilst there is a standard record form available, one does not need to use that so long as we record the suppliers name & address, purchase date, product name, batch number, quantity purchased, date of administration, hive ID, person administering treatment, total quantity used and date & route of disposal (if applicable)

It is useful to have pen and paper to record finding at the apiary where this information can be transposed later into your record sheets, whether this be paper of electronic form.

Ideally, the beekeeper should be keeping records relating to the findings of each individual colony, i.e. queen, brood , stores, temper, health, available space etc. It is also desirable that records relating to the harvesting of honey, extraction, bottling and sales are

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Heather opening the meeting

Propolis Power-Up: How Beekeepers Can Encourage Resin Deposits for Better Hive Health by Andrew Porterfield

Propolis, a mass of plant resins built by honey bees inside their hives, has drawn attention in recent years partly because of its alleged (but as yet unproven) health benefits to humans. But, perhaps more important, it also shows health benefits to bees themselves. Created from resins and other oils and fats collected from trees, propolis helps preserve the structural integrity of a bee hive and protects against wood decay, fungus, and water.

Propolis has also been connected to benefiting honey bee (*Apis mellifera*) immune systems, saving energy that would otherwise have been used to protect against nest-invading beetles like *Aethina tumida* or parasites like the *Varroa destructor* mite, *Nosema* fungus, and viruses. In the past, some beekeepers have tried to keep their hives "clean" of propolis, believing it impeded with honey-making activities. Today, though, scientists and beekeepers have begun looking at encouraging propolis production to help sustain healthy hives.

In a new study published today in the *Journal of Economic Entomology*, three researches—Cynthia Hodges, master beekeeper and co-owner of Hodges Honey Apiaries in Dunwoody, Georgia; Keith Delaplane, Ph.D., entomology professor at the University of Georgia; and Berry Brosi, Ph.D., associate professor of environmental science at Emory University in Atlanta—looked at four different ways to enhance propolis growth in bee

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In this issue:

Forthcoming winter meetings:

- *20th March @ 7:00pm*

Forthcoming summer out-apiary meetings:

- *See rear panel*

In next months edition:

- *Report on March Meeting*
- *Amanda Advises*
- *Asian Hornet Action Team*

Asian Hornet Action Team Report by Manek Dubash

With spring upon us, now is when Asian hornet queens (*Vespa velutina*) will start emerging from hibernation. All it takes is five days at 12 degrees or higher and out they come. And we know from experience that if they're not here already, they will arrive on transporters such as lorries, or can be lofted across the Channel on the wind. We are in the front line.

The first thing a new queen does is hunt for a sugary source of food and some wood she can chew to build an embryonic nest, into which she can lay eggs she fertilised the previous autumn. When those eggs hatch and reach a critical mass, the colony is likely to build a bigger nest up in a tree. Each nest can contain some 6,000 hornets.

We need to hinder their progress by being vigilant, spotting them, and getting the message out there to the general public. DEFRA and the National Bee Unit will do the job of eliminating the nests.

As beekeepers we have a natural motivation to get the ball rolling. We're also likely to be better at spotting *V. velutina* than most people.

So it's action time!

Hornet traps

Spotting them is the top priority. Our job is primarily to identify the hornets, so we need to start building traps to capture those queens and their offspring – traps that capture insects without killing them.

This usually consists of one of those 2-litre plastic bottles containing sweet fizzy stuff – emptied – with the top chopped off and inverted, and a piece of hive floor mesh suspended in the bottom so that whatever flies in is trapped not killed. You'll need a piece of Correx or similar to keep the rain out too. There's an excellent set of detailed instructions on the BBKA website: https://www.bbka.org.uk/Pages/FAQs/Category/asian-hornet-faqs.

And to help you along the way, we'll be giving away free sachets of attractant, one per person, then a small contribution for each subsequent sachet. You can use either this as a lure, or sugary stuff such as sweetened apple juice. Come to the meetings and pick them up. We're also looking into other ways in which we can make building traps easier and more convenient, so that everyone puts one up in each apiary.

You've found one? Once trapped, *V. velutina* cannot legally be released, so photograph it and freeze the trap's contents for 12 hours. Use the Asian Hornet app on your phone to send the picture to the non-native species secretariat and National Bee Unit. Please also let me know – my details are below.

Summary

As I remarked in my last column, our task is to act as eyes on the ground, to spread the message about the hornet by encouraging friends, colleagues and the general public to be vigilant, and to inform the authorities of any Asian hornet nests or activity we become aware of.

If you need more information or you identify a hornet, or if you want to join the AHAT, please contact me. My dedicated phone number is 07762 312592, email blbka.ahat@gmail.com.

Let's get trapping!

Following Tom Moore's talk at the February B&L Meeting, Manek gave an overview to the assembled members of what AHAT is, the purpose of AHAT and what the B&L members can do to reduce the likelihood of the Asian hornet establishing themselves in Sussex.

Manek explained that any AH that was either domiciled in Sussex or somehow was transported to Sussex, would now be preparing to forage for sugar sweet substances to enable the queen to make her nest and commence laying AH eggs.

The BBKA and other organisations are keen to receive notification of any found, and one way is to make traps where the AH, if found, can be frozen for 24 hours then forwarded to the relevant organisation for further action. A short video by the National Bee Unit available on youtube https://youtu.be/CR6MUekAjMo was shown to the members which detailed how to construct a suitable AH trap using materials easily available. There is also an NBU Fact Sheet at http://www.nationalbeeunit.com/downloadNews.cfm?id=122

to back the video up.

Materials required to make an Asian Hornet

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kept, with the actual type of information recorded very much being down to the beekeepers preference, bearing in mind that traceability of any honey being sold is available on request.

For beekeeper who also sell / supply bees, the traceability of each colony should be available, i.e. was it a swarm, colony split etc. and when was it sold and to whom.

Another type of record kept could be a general interest type, where the flowering times of bee foraging plants are recorded, when the "June Gap" occurred, if it actually did, plus whatever else may interest you relating to beekeeping (or not!)

The Pros of recordkeeping are compliance with the law, being able to remember what has occurred, to enable one to plan ahead, to make valuable comparisons (between years or colonies) and is essential when taking the BBKA General Husbandry course.

The Cons of recordkeeping are waste of time? And relying on information that is one year behind another year.

The pitfalls of recordkeeping is that they become over complicated, one looses the records, having records in the wrong place, i.e. at location away from any inspection and not available for comparison, and failing to update them immediately.

The bottom line to all of this is good relevant records are essential

Tom responding to questions

Brighton & Lewes Miscellany

Our Secretary Hilary Osman has asked if members would like embroidered name tags for sewing onto bee suits so everyone knows who they are talking too at the summer out-apiary meetings. Please email Hilary (details on back page) with your name if you wish to have one.

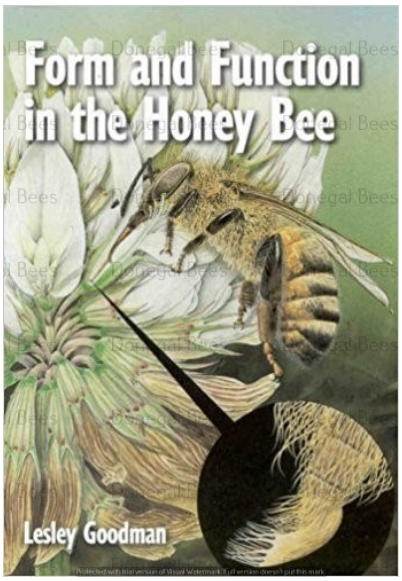
Amanda Millar, President and Grassroots Apiary Manager, needs to arrange a pruning session at Grassroots on Sunday, 31st March between 2:30pm and 3:30pm. Please let Amanda know if you wish to participate just in case we have awful weather and she needs to cancel. Please bring pruners, secateurs to help pruning of the hedges and shears or strimmer's for the grass. If it is bee flying weather it would be advisable to bring a veil or bee suit with you.

Improve your beekeeping; Achieving the Basic assessment is the first essential stage to becoming a competent beekeeper. If you would be interested in doing it this summer please let Amanda Millar know, so we can organise some training. Amanda's contact details can be found on the back page of the newsletter under Education.

Our librarian, Dominic Zambito has a suggestion for a new title to be added to our library, please feel free to contact him with your thoughts.

The book is titled Form and Function in the Honey Bee by Lesley Goodman.

The book focuses on detailed descriptions of bee body parts and how they work, but the title is woefully inadequate to describe the magnificent photographs, drawings, and paintings that adorn this book's pages. It might have been titled 'Elegance, Beauty, and Reverence', because this is an astoundingly beautiful and evocative work of art as much as a scientific discourse about bee anatomy. Goodman's ambitious dream was to write a book about bee anatomy that would be accessible to beekeepers, inexpensive, and comprehensive. She has left us with a sumptuous visual legacy that weaves the microscopic photographs of Keith Pell with the opulent paintings and labelled diagrams of Michael J. Roberts to make bee form and function easily approachable and deeply moving for any reader. (Mark L Winston, Professor of Biological Sciences, Simon Fraser University,



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hives. The team found that three surface modifications—plastic trap material on the hive wall interior, parallel saw cuts on hive wall interior, and brush-roughened wall interiors—were all equally capable of resulting in increased propolis production, compared to a fourth method, a control, in which the hive wall interiors we left unmodified.

The researchers divided 20 colonies into five apiary sites and randomly applied one of the three texture treatments or control to each colony. Bees in the colonies foraged for propolis resins from plants common to the Appalachian Piedmont in the southeastern U.S., including conifers, oaks, pecan, red maple, yellow poplar, and urban ornamental plants. The researchers then measured extensiveness and depth of propolis deposits in the hives over time.

Their results showed that any hive interior treatment significantly increased propolis deposition compared to a non-treatment control. Sampling over time showed propolis hoarding and accumulation, as well. None of the texture treatments showed significantly different results from each other.

While all treatments resulted in more propolis deposition, the researchers point to the roughened interior of the hive walls as the best method for encouraging deposition. In fact, leaving lumber naturally rough, with no planning or sanding, would provide a simple and effective surface for boosting propolis, they write.

"We come down in favor of roughened or un-planed wood," says Delaplane, "because, unlike the plastic trap, it will not subtract from the bee space engineered around the walls and combs. What you see in our pictures is the work of a steel brush. Naturally un-planed wood would be much rougher and, I would expect, even better at stimulating propolis deposition."

Other researchers have shown that propolis development has a strong effect on the members of the bee hive. These other investigations have shown that interior walls painted with propolis extract resulted in colonies with lower bacterial loads and with worker bees that expressed lower levels of immune gene expression. Sustained activation of immune genes comes at an energy cost, which can result in a reduction in brood numbers and pose a threat to overall colony health. Further studies have shown that reduced immune activation (and therefore less energy spent on fighting infection) comes from reduced pathogen loads in high-propolis colonies and not from immune suppression by propolis.

Propolis is a pliable, resinous mixture that honey bees (Apis mellifera) create by mixing a variety of plant resins, saliva, and beeswax and which they apply to interior surfaces of their hives, namely at points of comb attachment and to seal up cracks and crevices on the interior side of hive walls. Greater propolis production is connected with improved hive health, and a new study finds a few simple methods beekeepers can employ to stimulate increased propolis production. (Photo credit: Flickr/Ontario Beekeepers' Association Tech

"I don't know of any beekeepers deliberately encouraging their bees to collect propolis," says Delaplane, adding that many keepers in the past have tried to clear propolis from their hives. "But today we know that this bias is misdirected. I believe encouraging propolis deposition is one more thing beekeepers can

Only in the USA? fully drawn plastic honey comb super frames

I came across this American website selling a product called PermaComb. According to the manufacturers, PermaComb is a fully-drawn plastic comb that single handily will increase your honey output, protect your hive, and is ready to use right out of the box. Avoid the cost in materials and having to clean, build/rebuild frames and install foundation. Further details can be found at https://permacomb.com/products/permacomb-plastic-comb

Editor

Deathly Scent

Chemical odours trigger honeybees to remove their dead

A dozen years ago beekeepers started reporting that frightening numbers of their honeybees (Apis mellifera) were mysteriously dying. Scientists have since discovered multiple reasons, but "diseases are by far the main cause of problems with honeybee health right now," says Leonard Foster, professor of biochemistry and molecular biology at the University of British Columbia. The insects are afflicted by scourges ranging from varroosis (caused by mites) to the bacterial disease's American foulbrood. Now a new study reveals how the smell of dead honeybees could be used to help identify and breed healthier colonies.

Scientists have long known honeybees remove dead or diseased individuals from among their young, or 'brood', to restrict the spread of pathogens through a colony. British Columbia researcher and study lead author Alison McAfee, along with Foster and other colleagues, wanted to better understand why some colonies are more fastidious about this cleaning than others are. They selected t wo chemicals naturally produced by honeybees, oleic acid and beta-ocimene, whose odours they thought might act as cleaning signals. Many insects release oleic acid at death, and honeybee larvae release beta-ocimene to signal their need for food. Young honeybees emit both compounds when they die.

The researchers performed a series of tests to determine if these odours were connected to hygienic behaviour. In one experiment, they added oleic acid and beta-ocimene to live brood developing in comb cells, in an attempt to trick worker bees into thinking the brood was dead. The workers removed more brood members from cells doused with a blend of both chemicals, compared with insects exposed to only one of the odours or to a control chemical, the team reported in April in Scientific Reports. The researchers think that beta-ocimene alerted workers to attend to the brood and that oleic acid triggered hem to remove the 'dead'.

The team also found a link between the odours and the genetics that drive honeybees' hygienic behaviour. Because some bees appear to respond more strongly to 'death' smells by clearing, these findings may help scientists develop a better way to breed more hygienic bees. "The fact that they have a mechanism by which the bees can identify these smells – and they actually get a plausible mechanism with their genetics – is really exciting' says Jay Evans, a research scientist at the U.S. Department of Agriculture, who was not involved in the study. "if validated, there could be a way to measure the trait, so that beekeepers could select a bee breed that's hygienic based on genetics."

Addendum

Francis Rasnik at the University of Sussex, has been working on this very subject: 'Breeding hygienic honey bees, and the effect of hygiene on bee pests and diseases', details of which can be found at http://www.sussex.ac.uk/lasi/sussexplan/hygienicbees .

See also *Lassi Bees* (Honeybees bred for disease resistance using hygienic behaviour based on scientific research): http://www.lasiqueenbees.com/

And *Bee Informed* at https://beeinformed.org/2011/07/25/hygienic-behavior/

Reproduced from Scientific American, June 2018.

Article submitted by Gerald Legg

Culprit found for honeybee deaths in California almond groves

It's about time for the annual mass migration of honeybees to California, and new research is helping lower the chances the pollinators and their offspring will die while they're visiting the West Coast.

Each winter, professional beekeepers from around the nation stack hive upon hive on trucks destined for the Golden State, where February coaxes forward the sweet-smelling, pink and white blossoms of the Central Valley's almond trees.

Almond growers rent upwards of 1.5 million colonies of honeybees a year, at a cost of around $300 million. Without the bees, there would be no almonds, and there are nowhere near enough native bees to take up the task of pollinating the trees responsible for more than 80 percent of the world's almonds. The trouble was, bees and larvae were dying while in California, and nobody was sure exactly why. The problem started in adults only, and beekeepers were most worried about loss of queens.

Then in 2014, about 80,000 colonies -- about 5 percent of bees brought in for pollination -- experienced adult bee deaths or a dead and deformed brood. Some entire colonies died.

With support from the Almond Board of California, an industry service agency, bee expert Reed Johnson of The Ohio State University took up the task of figuring out what was happening. Results from his earlier research had shown that some insecticides thought safe for bees were impacting larvae. Building on that, Johnson undertook a new study, newly published in the journal *Insects*, that details how combinations of insecticides and fungicides typically deemed individually "safe" for honeybees turn into lethal cocktails when mixed.

Johnson, an associate professor of entomology, and his study co-authors were able to identify the chemicals commonly used in the almond groves during bloom because of California's robust and

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detailed system for tracking pesticide applications. Then, in a laboratory in Ohio, they tested combinations of these chemicals on honeybees and larvae.
In the most extreme cases, combinations decreased the survival of larvae by more than 60 percent when compared to a control group of larvae unexposed to fungicides and insecticides.
"Fungicides, often needed for crop protection, are routinely used during almond bloom, but in many cases growers were also adding insecticides to the mix. Our research shows that some combinations are deadly to the bees, and the simplest thing is to just take the insecticide out of the equation during almond bloom," he said.
"It just doesn't make any sense to use an insecticide when you have 80 percent of the nation's honeybees sitting there exposed to it."
The recommendation is already catching on and has been promoted through a wide array of presentations by almond industry leaders, beekeepers and other experts and has been included in the Almond Board's honeybee management practices. Many almond growers are rethinking their previous practices and are backing off insecticide use during almond bloom, Johnson said.
That's good news for bees, and doesn't appear to be harming the crops either, he said, because there are better opportunities to control problematic insects when almonds are not in bloom.
"I was surprised -- even the experts in California were surprised -- that they were using insecticides during pollination," Johnson said.
While these products were considered "bee-safe," that was based on tests with adult bees that hadn't looked into the impact they had on larvae.
"I think it was a situation where it wasn't disallowed. The products were thought to be bee-safe and you've got to spray a fungicide during bloom anyway, so why not put an insecticide in the tank, too?"
Insecticides are fairly inexpensive, but the process of spraying is labor-intensive, so growers choosing to double up may have been looking to maximize their investment, he said.
"The thing is, growers were using these insecticides to control a damaging insect -- the peach twig borer -- during this period, but they have other opportunities to do that before the bees enter the almond orchards or after they are gone," Johnson said.
This research could open the door to more study of fungicide and pesticide use on other bee-dependent crops, including pumpkins and cucumbers, Johnson said.

ScienceDaily, 4th February 2019

Article sent in by Amanda Millar

Sussex Beekeepers Association 2019 Annual General Meeting

The Sussex Beekeepers Association 2019 Annual General Meeting will be held on Saturday, 2nd March at the Peredur Centre, West Hoathly Road, East Grinstead, RH19 4NF.

Following the formal business of the AGM, Paul Vagg will give a talk titled "Beekeeping and Disability—From Hobbyist Beekeeping to Social Enterprise".

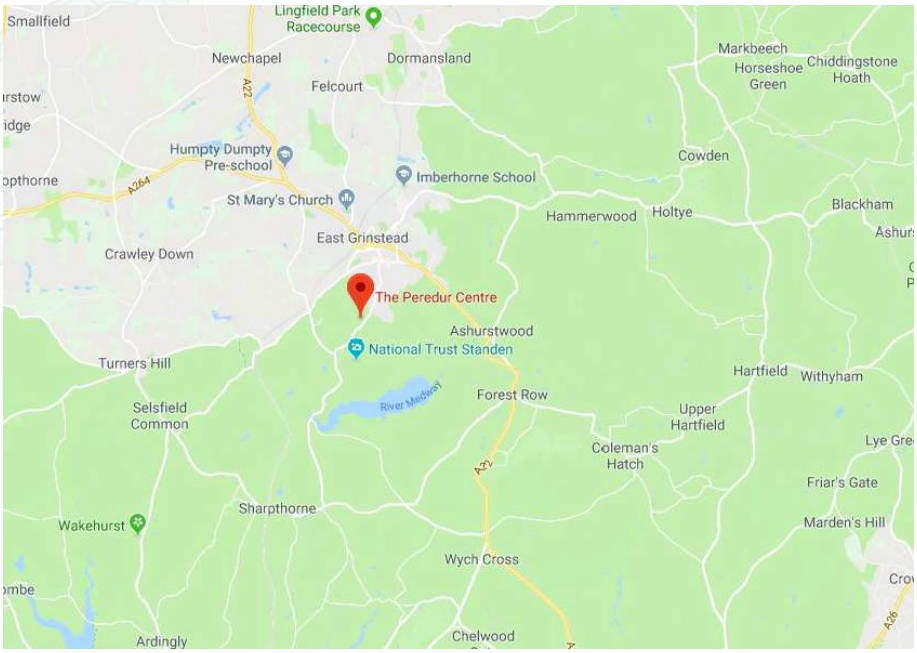
He will talk about his experience of challenging the idea that physical disabilities would prevent him becoming a beekeeper, and his creation of an organisation to help others with physical and learning disabilities access the wonderful world of beekeeping.

Paul is a multi award-winning apiculturist, author and speaker, based in London, and is the Holder of a British Small Business Award 2016 and 2017, and Best London Honey 2016, where he is highly regarded among both his peers and client base.

There will be a number of trade stands on the day, more details yet to follow. There will also be a range of light refreshments available.
Doors will open at 1:30pm for the trade stands with the AGM commencing 2:00pm.

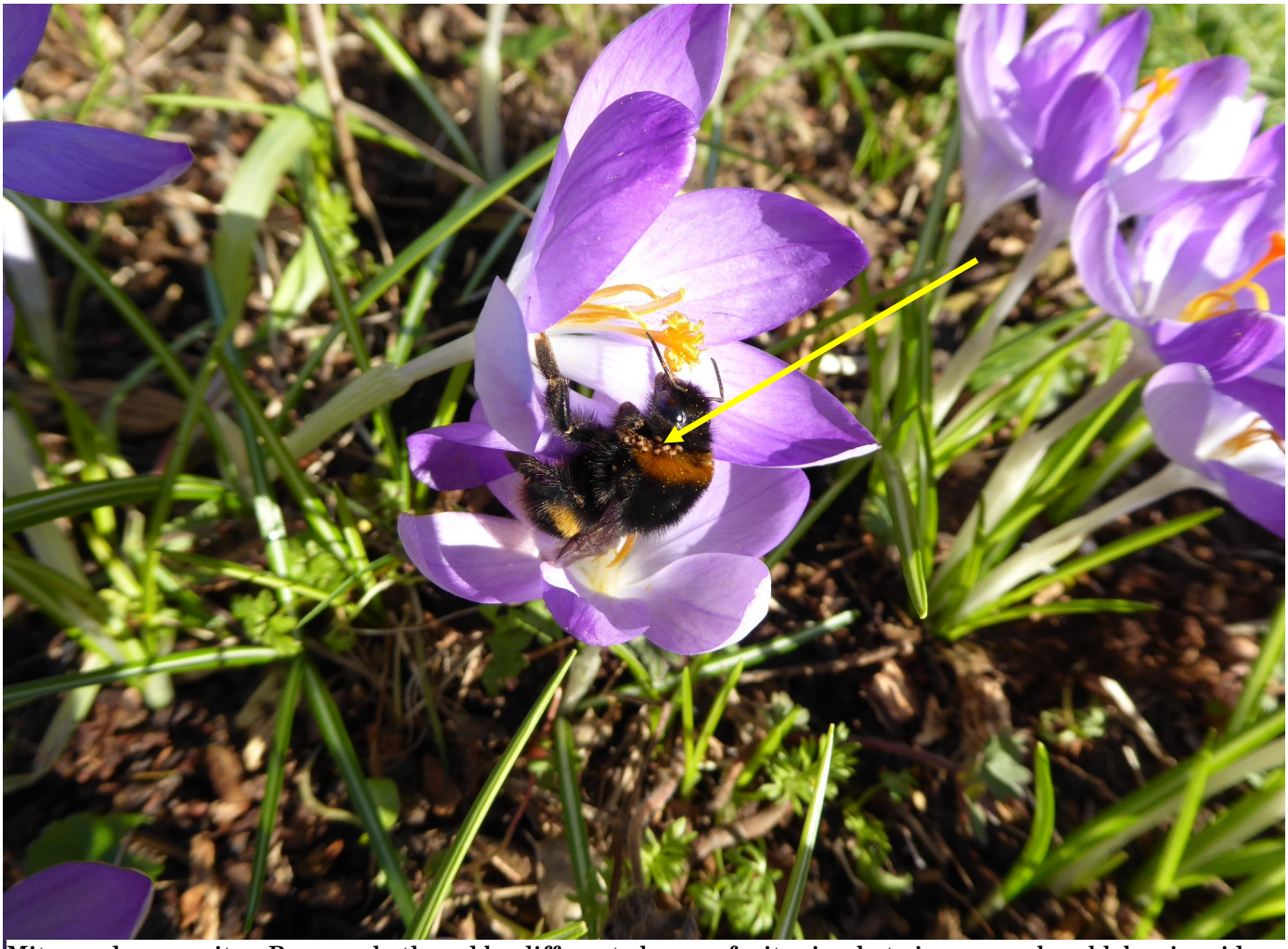
Parking is available on site.

Booking is available on Eventbrite https://sussexbkaagm2019.eventbrite.co.uk



Some bee pictures with mites from Amanda

Spotted this on a dead bee in February, photo is of a worker bee with a varroa mite fixed between the abdominal plates on the left hand side, where recent research indicates they are commonly found.
Often incorrectly called phoretic, this mite is anything but harmless as it is feeding on the fat body located in that area of the abdomen. As this is the common feeding position they are not often seen, only when they are numerous are they are seen on the backs of the bees, by which time the colony has a serious infestation.



Mites and more mites: Bees are bothered by different classes of mites in photo is a queen bumblebee in mid February with lots of mites around her neck. These are true phoretic mites (not feeding or harming, although probably an inconvenience to the queen) just hitching a ride until she establishes a nest and they will then hop off and feed on the debris in the nest.

Photo corner

Sweet mercy Candles are lit on honey jars to mark the day of Haralampi, patron saint of beekeepers, at the Church of the Blessed Virgin in Blagoevgrad, Bulgaria

Pat Clowser sent in this picture of candles lit on honey jars to mark the day of the Haralampi, patron saint of beekeepers, at the Church of the Blessed Virgin in Blagoevgrad, Bulgaria.

Tony Robinson found this photo on the American website Reddit

Bee Markets

Sussex Beekeepers Association Bee Market 2019

The annual Sussex Beekeepers Association Bee Market will be taking place on Saturday, 18th May at the Heathfield Community College in Heathfield. Details are currently being finalised, however as in previous years there will be workshops, trade stands, lectures, refreshments and free parking in addition to the main event, which is the auction of bees (hopefully) and bee related items.

If you have any bee related item that you no longer need, then why not make a little extra cash and put it up for auction. Details for this will be announced shortly.

West Sussex Beekeepers Association Bee Market 2019

The West Sussex Beekeepers' Association is again organising a Bee Market and Auction for the benefit of its members and non-members with beekeepers attending to buy and sell from a very wide area. The event will again take place at Chichester College's Brinsbury Campus in Pulborough, West Sussex on Saturday 27th April 2019. Auction details, Guidance Notes and the Entry Form are available to download from the WSBKA website www.westsussexbeekeepers.org.uk/auction.html .

The Auction catalogue will be published online after 22nd April.

University Of Plymouth Beekeepers Survey 2019

A Ph student at the University of Plymouth has requested help from beekeepers in the form of a survey so that she can get some basic information about our colonies.

To assist in this survey please follow the link and complete the form so that some basic information about your colonies can be obtained. The actual survey should be out by the end of March and the information required will then be emailed out to you.

As part of the survey will involve genetic mapping, a bee collection kit will be issued in order to take samples of bees for genetic testing.

As always, any survey involving bees is probably of benefit to all beekeepers and I would urge you to follow the link and complete the form, I have.

https://goo.gl/forms/UzjzQS3GCoIoxLCz2

B&L Divisional Diary 2018 / 2019

Indoor meetings:

Meetings are held on the 3rd Wednesday of the month, October to March at Cliffe church hall, Lewes, unless otherwise stated. Members are invited at 7.00pm to assist with setting out chairs etc. ready for a 7.15pm start. Non-members are always welcome.

Winter programme:

20th March 2019 - Small Scale Queen Rearing in my Backyard. Speaker: Mike Cullen, Master Beekeeper.

Outdoor meetings:

Meetings are held on Saturdays or Sundays as noted below, between April and September. Unless otherwise stated all meetings will start at 1:30pm and are subject to weather permitting. Location maps are on the website in the member's section.

Summer programme:

Sun 31st March: Grassroots - Working party.

Sun 7th April: Barcombe - Spring cleaning in the apiary.

Sat 13th April: Hove - Setting up an apiary.

Sun 28th April Cooksbridge - Building supers & frames.

Sat 11th May: Barcombe - Swarm control.

Sun 19th May: Newick - Queen rearing.

Sat 1st June: Hove - What do I see in my hive?

Sun 23rd June: Grassroots - Supering

Dates for your diary:

2nd March: SBKA AGM and Spring Meeting, Peredur Centre, East Grinstead, RH19 4NF

12th April to 14th April: BBKA Spring Convention, Harper Adams University, TF10 8NB.

27th April: WSBKA Annual Bee Market and Auction, Brinsbury College, Pulborough.

18th May: SBKA Annual Bee Market in Heathfield.

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National Honey Show Representative:
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The Brighton and Lewes Division of the SBKA cannot accept any responsibility for loss, injury or damage sustained by persons in consequence of their participation in activities arranged.

Contributions to your newsletter

Contributions for the newsletter, including photos can be sent, preferably by email, to the editor. Please refer to panel above for details. Please limit to a maximum of 900 words. Copy to be sent no later than the 12th of the month preceding the month of publication. Photos etc. for the website should be emailed to our Gerald Legg

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QR Link to B&L Web