Brighton & Lewes Beekeepers Newsletter

Volume 12 – December 2019

Editor: Norman Dickinson

BRIGHTON AND LEWES DIVISION OF THE SUSSEX BEEKEEPERS ASSOCIATION

www.brightonlewesbeekeepers.co.uk

Winter Meeting held on 20th November

For our final meeting of the year, Brighton & Lewes were pleased to welcome Christine Stevens from West Sussex to give a talk "From Hive to Honey Jar", where we had an almost record number of 47 attendees.

Christine opened by explaining that she and her husband both kept bees which was run as a business selling honey into many outlets, including the Goodwood Estate. Unfortunately, they had to give up beekeeping as both became allergic to the bee sting.

The key requirement for processing ones honey is cleanliness. Consideration needs to be given to where it is processes and the need to keep bees, wasps and other insects out. It is also imperative that pets and other animals are kept out, the last thing that you need is to find pet hairs in your honey!

Important also to wear clothing that will not shed fibres and ideally some form of cotton overall / apron to keep sticky honey of your cloths.

Organise the layout of your work area logically so the work flow is from left to right (or right to left if left handed) and decide utensils and equipment you will need. Uncapping knife and capping container is essential.

No matter how careful one is, you will always drip honey either onto the floor or worktop. Keep a damp cloth on the floor which can be manipulated using your foot to wipe any honey drips.

Before commencing, check that your honey extractor and honey buckets clean and dry. We harvest capped honey with an ideal water content of 17.5 to 18.5% so we don't want to introduce additional water.

Jars must be sterilised with used jars ideally put through the dishwasher. Never re-use old lids.

Keep a good record of your harvest. Information to be recorded includes hive ID's, harvest date, condition and aroma, honey bucket ID, date extracted, date it was jarred and date and to whom it was sold (if possible).

Christine also explained how she produced creamed honey using a seed honey.

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Forthcoming winter meetings:

- *See rear panel*

In next months edition:

- *Amanda Advises*
- *Asian Hornet Action Team*
- *Contributions from our members*

Asian Hornet Action Team Report by Manek Dubash

As you can probably imagine, there's no news regarding Asian hornets (Vespa velutina) this month – any queens that have made it to the mainland will be tucked up in hibernation somewhere they are unlikely to be disturbed.

When they emerge in the spring to found their primary nests, we need to be ready for them. So our job over the winter is to develop workable plans to hinder their progress.

Asian hornet conference
To that end, the BBKA has set up an Asian hornet conference on 8 February 2020 at Stoneleigh Park in order to do just that. Both I and our Membership Secretary / Treasurer Pat Clowser will be going – and if you are interested, contact the BBKA for details and/or to put your name on the list of attendees. Hope to see you there.

So that's it for 2019 – here's hoping for a V. velutina-free year. Enjoy your seasonal celebrations!

Insect declines and why they matter Report by Professor Dave Goulson, FRES

Executive summary

In the last fifty years, we have reduced the abundance of wildlife on Earth dramatically. Many species that were once common are now scarce. Much attention focusses on declines of large, charismatic animals, but recent evidence suggests that abundance of insects may have fallen by 50% or more since 1970. This is troubling, because insects are vitally important, as food, pollinators and recyclers amongst other things. Perhaps more frightening, most of us have not noticed that anything has changed. Even those of us who can remember the 1970s, and who are interested in nature, can't accurately remember how many butterflies or bumblebees there were when we were children.

The bulk of all animal life, whether measured by biomass, numerical abundance or numbers of species, is comprised of invertebrates such as insects, spiders, worms and so on. These innumerable little creatures are far more important for the functioning of ecosystems than the large animals that tend to attract most of our attention. Insects are food for numerous larger animals including birds, bats, reptiles, amphibians and fish, and they perform vital roles such as pollination of crops and wildflowers, pest control and nutrient recycling.

There have been several recent scientific reports describing the rapid decline of insects at a global scale, and these should be a cause of the gravest concern (summarised in Sanchez-Bayo & Wyckhuys 2019). These studies suggest that, in some places, insects may be in a state of catastrophic population collapse. We do not know for sure whether similar reductions in overall insect abundance have happened in the UK. The best UK data are for butterflies and moths which are broadly in decline, particularly in farmland and in the south. UK bees and hoverflies have also shown marked range contractions. The causes of insect declines are much debated, but almost certainly include habitat loss, chronic exposure to mixtures of pesticides, and climate change. The consequences are clear; if insect declines are not halted, terrestrial and freshwater ecosystems will collapse, with profound consequences for human wellbeing.

The good news is that it is not too late; few insects have gone extinct so far, and populations can rapidly recover.

We urgently need to stop all routine and unnecessary use of pesticides and start to build a nature recovery network by creating more and better connected, insect friendly habitat in our gardens, towns, cities and countryside.

Only by working together can we address the causes of insect decline, halt and reverse them, and secure a sustainable future for insect life and for ourselves.

This report summarises some of the best available evidence of insect declines and proposes a comprehensive series of actions that can be taken at all levels of society to recover their diversity and abundance.

I have only included the Executive Summary here, the full 48 page report can be found at

https://www.northwaleswildlifetrust.org.uk/sites/default/files/2019-11/Insect%20declines_Report_for%20download.pdf

Ed.

"Every space in Britain must be used to help wildlife"
Sir David Attenborough

Amanda advises...

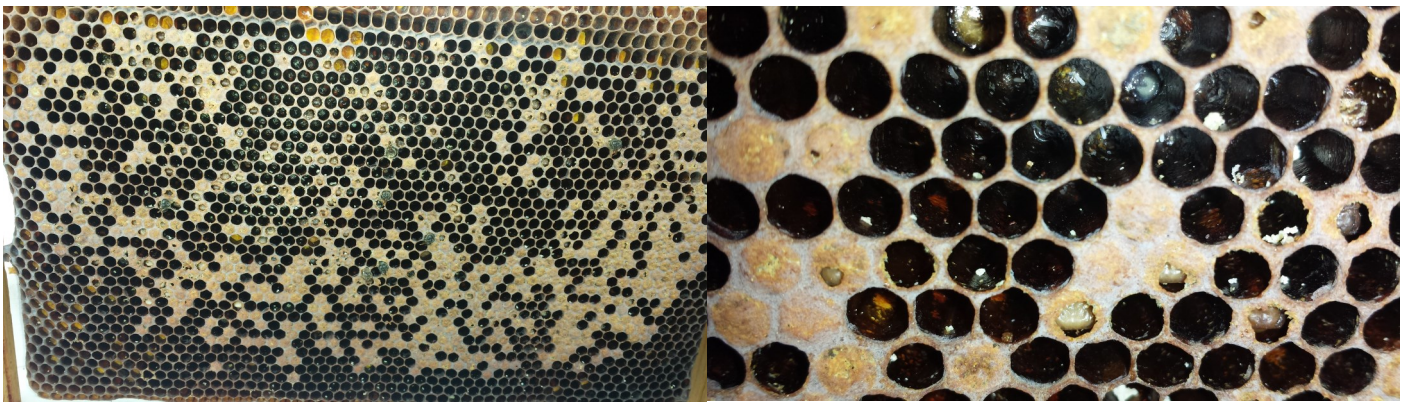
As I mentioned last month there is not much we can do with the bees this month either, apart from checking they have not been blown over and the entrances are clear, and making sure your equipment is all clean for next year. I am still seeing wasps which seem to fly in colder weather than bees. My bees are still flying when it is warm and dry but there is almost no forage for them to visit so it will mainly be to collect water to dilute their stores in order to consume them. If you left them with sufficient honey and/or syrup then they should not need any supplementary food until the New Year.

One thing we do need to monitor, however, is that perennial problem of varroa. I managed to treat all those of mine dropping more than 1 a day with Oxalic acid vapour 2 or 3 times at 5 day intervals before I went on holiday for a fortnight in November which interrupted the treatment. Although I do not regret starting it in October when I did, as I have been able to remove several thousand mites, it looks as though I shall have to do another full brood cycle of treatment again to be sure I have got most of them. I did start a couple of days ago; it took all morning but it transpired my battery was low on Volts and the OA did not vapourise properly and the drop afterwards was no different to the background drop so I have to start all over again on the next dry day, whenever that may be!

Last week (mid November) I had to cut out a colony in a roof of a building being renovated and disturbed by the builders. I was surprised to see that there was no brood at all. I have also heard from a couple of other people finding a colony without brood. I do not normally disturb my colonies at this time so don't know if mine have brood but it seems a bit early to have stopped laying, unless there is a problem with the queen or disease. I have also heard several people lose colonies to Parasitic Mite Syndrome already. As they were relatively free of mites in the summer this is almost certainly due to a varroa 'bomb'. It is surprising how quickly a colony can be killed by a huge influx of varroa. I hope you are monitoring yours and will treat soon if required or they may not make it over winter. One autumn a few years ago I monitored my varroa drop diligently and every colony which dropped over a certain number of mites after a single dusting in late October had died by early spring the following year, which is why I start early now. I believe the severity of the winter will affect the actual critical number of mites but the principle remains; high mites = high mortality.

One new beekeeper sent me a photo in November of a colony which had just died, for a diagnosis and it is an excellent photo (which he has given me permission to use) showing a classic case of Parasitic Mite Syndrome. There is very patchy brood with perforated cappings, dead bees partly emerging from cells with their proboscis protruding. Although there are eggs visible in some cells and a few very small larvae, most of the cells seem to have dead pupae of various stages. In the close-up you can see many of the empty cells have white varroa guanine crystals in (varroa droppings). Fortunately, I could not see signs of other diseases which may also be present in these circumstances eg chalkbrood, sacbrood or foulbrood, but there could be viruses and other diseases lurking in spots of dysentery. By the time the colony reaches this stage it is beyond recovery.

So on that unhappy note I shall wish you a merry monitoring and may all your bees be Happy this Christmas.



Amanda sent these photos of Parasitic Mite Syndrome, the right photo being a close up of the frame. Photos curtesy Tim Moulds

Tesco pulls honey off shelves amid purity concerns submitted by Tony Robinson

Tesco has temporarily withdrawn pots of its own-brand honey amid concerns that it contains adulterated ingredients.
It comes after tests conducted by Richmond council in London indicated that "Tesco Set Honey 454g" contains syrups made from sugar.
The Food Standards Agency (FSA) said it was "[looking] into these reports" to see if further action was necessary.
The supermarket chain denied there were any problems with the product and insisted it was "100% pure".
Concerns were raised over the honey, which costs £1.35 per jar, by Richmond council in south-west London, which conducted tests after it was alerted by a member of the public.
"The findings of the analysis is that there is likely to be adulteration with non-natural products," a council spokeswoman told the Sunday Times.
The council contacted the FSA, which confirmed it was looking into the matter, but has denied it called for Tesco to withdraw the product.
"We are continuing to look into these reports to determine whether further action is required," the FSA said in a statement.
"Honey is a natural but complex product and there are a number of different tests which may be used to determine authenticity."
Nevertheless, the retailer said it has temporarily taken the honey off the shelves for further examination, but insists the product is "100% pure, natural and can be directly traced back to the beekeeper".
"We carry out regular tests to ensure our honey meets this standard and is fully compliant with all legal requirements," Tesco said in a statement.
"However, as a precautionary measure, we have temporarily withdrawn the product to conduct further tests."
Chris Elliott, professor of food safety at Queen's University Belfast, who led a review of food systems following the 2013 horsemeat scandal, said it was a "bold" statement from Tesco.
"They are claiming they are 100% sure it is pure honey. If they are correct then the testing method is wrong. If it proves to be adulterated then Tesco doesn't have the control over their supply chain they claim," he said.
The method used by Richmond council was nuclear magnetic resonance (NMR), which he said was a relatively new technique that can be used to determine the sources of sugars.
Tesco's decision to withdraw the product was a "prudent" step, Professor Elliott added.
"There's no food safety issue here but consumers must trust our retailers to take every precaution that they are not selling us adulterated food," he said.

BBKA Basic Assessment by Steve Gibson

I began beekeeping in the summer of 2016 purely by a chance conversation with a friend.

I brew mead as a hobby and I knew a friend who kept bees and he said he would drop me some hive parts round to get me going. This he did the following weekend along with a Paynes catalogue and a lot of assorted frames and boxes (which I was informed by my mentor later were all firewood).

After a quick google search I discovered Brighton and Lewes beekeepers and they had a meeting the following Sunday. After some trepidation on my part (what if the sting me!!) I went along to Heather's for my very first close look at bees... I was hooked!

After attending a few more meetings with B&L I received a call from Heather informing me that there a swarm in Uckfield that was mine to collect but I've no hive or apiary to house it!

I'll leave you a hive with some frames out at Barcombe apiary" was her reply, so I collected my first swarm (luckily on the ground) and successfully hived the swarm.

1 year later having Heather as my mentor and learning lots (who knew females could be grumpy for so many different reasons!) and attending summer meetings and winter lectures as well as the Sussex bee convention, I felt confident enough to move the hives to a farm near where I live.

By this time I had several placid colonies and if you think the first year is hard, try the second without wanting to keep yelling for hellllllp! But I managed to keep the colonies alive.

2018 saw me deciding to take the basic assessment, as I felt confident enough and with encouragement from several members and committee, I booked the assessment.

I printed off the assessment syllabus from the BBKA website and Amanda emailed me a reading list including Beekeeping for dummies (uk edition), beekeeping study notes for basic certificate J. D. Yates and the Haynes bee manual.
I got a date for my assessment for the end of august , so for the month leading up to the date saw me hitting the books on a Sunday morning. I would make a pot of coffee, set the timer on my phone for 1 hour (about the time the assessment takes) and lit my smoker which needed to be kept going for the hour. I would physically write the answers to some of the questions I'd likely be asked.

The week before my assessment I went to grassroots so Amanda could clear up any mistakes or pick up on anything I had overlooked.

The morning of the assessment dawned partly cloudy, and i met my assessor at her apiary at hurst green. She asked me how long I'd been beekeeping for and how many colonies I had.

I opened my bee box (toolbox as my hives aren't at home) and explained all the tools and equipment I had, the differences in hive tools, queen

(Continued on page 5)

(Continued from page 4)

cage, queen marker pen, drawing pins, cocktail sticks (to check brood for efb and checking random brood for varroa mite) and the mix of my washing soda solution and why cleanliness was important.
My assessor asked me to light my smoker and asked me to explain my choice of fuels and possible alternatives. Next I was asked to say what I was observing throughout the inspection (from first look at the front of the hive to watch the bees coming and going, their temperament and were they bringing in pollen?). I named all the parts of the hive, why I was doing what I was doing and how things might be done differently. We didn't see the queen but as I was able to show the assessor a day old egg so knew there was a queen in the on that day.

I then put the hive back together and was asked about various pests and diseases, how to identify and treat if possible. What were the notifiable diseases and who I had to notify.

All seemed pretty informal and no where near as stressful as I had imagined. A few weeks later I received a message from Hilary informing me that I had passed with a credit (me??) and a few weeks later I was presented my certificate at one of the winter meetings.

Would I recommend taking the basic assessment? Yes

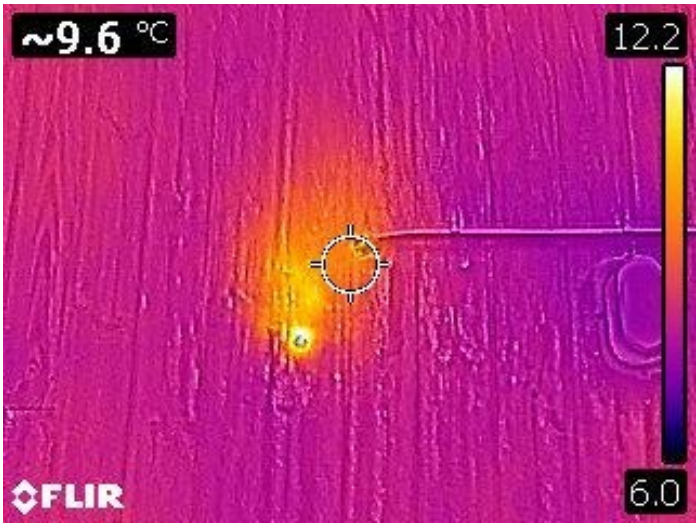
The only advice I can give is read as much as you can, learn from the members and the different methods of completing a task. I am a very different beekeeper now than I was 2 years ago.

Always remember the 6 P's. Prior Preparation and Planning Prevents Poor Performance.

Male honeybees inject queens with blinding toxins during sex Report by University of California and submitted by Dominic Zambito

They say love is blind, but if you're a queen honeybee it could mean true loss of sight.
New research finds male honeybees inject toxins during sex that cause temporary
blindness. All sexual activity occurs during a brief early period in a honeybee's life,
during which males die and queens can live for many years without ever mating again.
UC Riverside's Boris Baer, a professor of entomology, said males develop visionimpairing
toxins to maximize the one fleeting opportunity they may ever get to father
offspring.
"The male bees want to ensure their genes are among those that get passed on by
discouraging the queen from mating with additional males," said Baer, senior author of
the study that discovered these blinding findings published today in the journal *eLife*.
"She can't fly if she can't see properly."
The toxins identified by the team are proteins contained in male bees' seminal fluid,
which is a substance that helps maintain sperm. Earlier work by Baer's team also
discovered honeybee seminal fluid toxins that kill the sperm of rivals. All honeybees
make these proteins, though some may make more of it than others.
Baer first became interested in bees' seminal fluid years ago as a doctoral student.
During early projects, he noticed that if bumblebee queens were injected only with the
fluid and not the sperm during insemination, the queens stopped mating and became
increasingly aggressive toward males. He wanted to understand why.
Roughly 10 years ago, Baer and his international team began analyzing which proteins
could be found in honeybees' fluids.
"We found at least 300 of these 'James Bonds,' little secret agents with specific
missions," he said.
The team was not entirely surprised to find a protein that attacks the sperm of other
males, as this behavior can be found in other insects. But they were surprised to find
the protein that impacts genes responsible for vision in the queen's brains.
To test whether the protein had this effect, Baer's team presented inseminated queens
with a flickering light, and measured her response to it via tiny electrodes in her brain.
The vision and corresponding flight-impairing effects kick in within hours, but Baer
notes that it is likely reversible in the long term because queens do tend to fly
successfully later in life when they establish new colonies.
Studying the seminal fluid proteins required an interdisciplinary team of entomologists,
biologists, biochemists, and more to identify them and examine their effects on the
queens.
This team included Baer's wife and co-author, Barbara Baer-Imhoof, a UC Riverside
pollination specialist. As part of this project, Baer-Imhoof conducted experiments in
which she installed tiny tags on queen bees' backs read by scanners at the hive
entrances.
"The tags were similar to those at the self-checkout counter in grocery stores," Baer-
Imhoof said. The experiment showed queens had difficulties finding their way back to
their colonies if they had been inseminated.
A molecular understanding of honeybee mating habits could eventually be used to
improve breeding programs and help insects that pollinate many of the foods we eat.
"More than a third of what we eat depends on bee pollination, and we've taken bees'
services for granted for a very long time," Baer said. "However, bees have experienced
massive die-offs in the last two decades. Anything we can do to help improve their
numbers will benefit humans, too."

Photo Corner

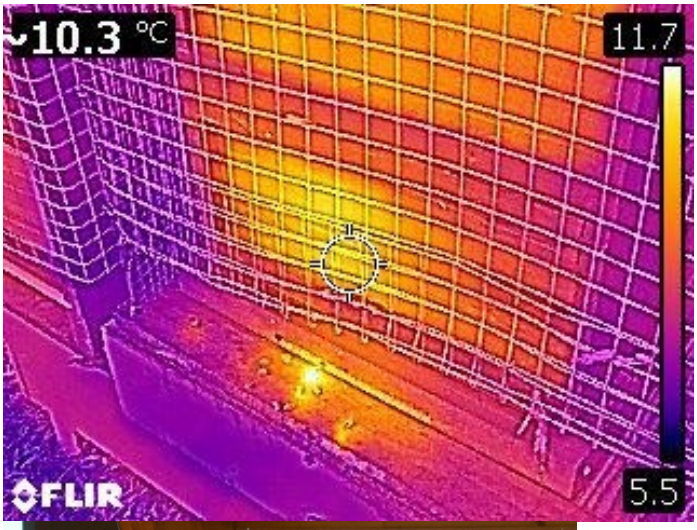


Tony Robinson has sent in some of infra-red photos.

Top Left: Feral colony living in barn wall.

Bottom Left: View of the cluster looking through the mesh floor.

Bottom Right: View of a cluster to the left of the hive. You can just see the outline of the frames running left to right.



Left: Christine Stevens talking on "From Hive to Honey Jar"

Right: Shirley Light receiving her BBKA Assessment certificate from Heather McNiven. Congratulations to Shirley

B&L Divisional Diary 2019 / 2020

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:

15th January 2020: Spring Preparation with Christine Stevens.

19th February: AGM + Honey & Mead Show + Mini-Auction.

18th March: Swarming—Prevention and Control with Amanda Millar.

Dates for your diary:

25th April 2020: Bee Disease Day, Ringmer

West Sussex BKA Annual Convention – Saturday 29th February 2020

Lodge Hill Centre, Watersfield, Pulborough, West Sussex, RH20 1LZ

Not to be missed!

We again have a renowned group of speakers and an impressive mix of lectures and seminars with something for everyone. Our main speakers are **Marin Anastasov NDB, Professor Robert Pickard** and **Dr Anna Oliver.**

A simple lunch will be included and there will be many opportunities to catch up with fellow beekeepers from around the county and beyond. As always, Paynes Southdown Bee Farms will bring a range of equipment and books to the Convention for you to purchase.

We have already had a lot of interest in the event and encourage your members to book early to ensure that they secure a place on their preferred seminars.

Full details are now on the website with speakers' profiles and a Booking Form to download: www.westsussexbeekeepers.org.uk/convention.html

www.westsussexbeekeepers.org.uk

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National Honey Show Representative:
Norman Dickinson

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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Seasonal Bee Inspector:	**Diane Steele**	**Mobile: 07775 119452**	**email: diane.steele@apha.gsi.gov.uk**

QR Link to B&L Website

grassroots grants
Managed by the Community Development Foundation
Funded by the Office of the Third Sector

The co-operative membership Community Fund