

Brighton & Lewes Beekeepers Newsletter



November 2017

Editor: Norman Dickinson

BRIGHTON AND LEWES DIVISION OF THE SUSSEX BEEKEEPERS ASSOCIATION
www.brightonlewesbeekeepers.co.uk

Next winter meeting

Wednesday 15th November - Mead making with Steve Gibson

First winter meetings, 27th September and 18th October

The subject of our first meeting of the winter season in September was The Bee Inspector Calls, given by David Rudland, who was also accompanied by his wife Celia. David, an ex Seasonal Bee Inspector treated us to a brief insight of the role of the Bee Inspectorate, which was originally set up during the Second World War monitoring sugar usage which was available to beekeepers to feed the bees, noting that the sugar was specially stained, but this did not stop people using it in tea or coffee! It was also responsible, from about 1942, to monitor foul broods, and over time, the bee inspectorate has been associated with and been part of various government departments. David proceeded to give an overview of the Bee Inspectors role, where one of the fundamental requirements is to give an inspection service to the beekeeping community and most beekeepers will at some point receive a visit, especially if there are foul broods in the area. A key point made by David was the importance for keeping good records for any treatment given to bees, because if there were any problem with ones honey and you could not produce a record of what was given and it was proven that unlicensed treatments was given to the bees, you could leave yourself open to possible prosecution. David further explained their role for containing and destroying hives, if applicable, when foul brood has been detected and he emphasised the need to ensure adequate insurance was had by over specifying the number of hives you have or anticipate to have in the year. He also stressed that the inspector is the beekeepers friend and that one should not dread the phone call when received as generally a visit only occurs if foul brood is detected in the area. If EFB is found then some treatment may be possible whereas AFB would require the hive and bees to be destroyed. Throughout his talk, David made mention of the NBU several times and stressed the importance for all beekeepers to register, as registration guarantees notification if disease is found local to your apiary.

The subject of our second winter meeting held in October was the Asian Hornet, given by Dr John Feltwell who immediately passed around a dead Asian Hornet in a sample vial. John explained that he first become interested in the Asian Hornet when a neighbour of his in the South of France alerted him to a patch of honey he had thrown away which was covered in the hornets. The characteristics of the Hornet were described, noting the yellow legs, black thorax and black wings which differentiate it from the European Hornet which is larger than the Asian and there are just ten sub-species of Asian Hornet in the world. John then went on to compare the Asian with the native European hornet such as is found in Sussex. The mated Asian Hornet females at the beginning of the year tend to build a first nest in brambles, then build a larger second nest high up in trees which are masked by the leaves and go on to produce multitudes of queens.

The Asian Hornet first made it's appearance in France in 2004, almost certainly via pot plants imported from China and have now spread into Italy, Belgium, Spain and beyond. Within England, the NBU have drawn up contingency plans to deal with the likely introduction to the UK and have bee hives at ports etc. which are used as monitoring stations. So far in the UK we have instances of finds in Gloucestershire last year and Devon this year with the likelihood of other locations this year. John often uses his moth light to capture the European Hornet, and wonders if the same is possible with the Asian cousin.

One statistic that John gave was that in Normandy, the authorities in one year killed 900 Asian Hornet nests and each nest has the potential to raise 6,000 queens. Each Asian Hornet has been credited with killing 50 honey bees a day. In Brittany last year 800-1000 nests were destroyed. This demonstrates the potential scale of the problem ahead of us.

Do Lime Trees Kill Bees? From an article in Bee Culture

Public interest in bees is intense. There's rarely a week that goes by without a story in the press about populations plummeting. Although most of these stories focus on chemical pesticides, other factors may also be affecting bee survival. At Kew, we've been studying bees for years, and investigating how the plants they visit for nectar and pollen may play a part in their survival. Nectar and pollen are the main sources of protein, sugars and fats for bees, but these rewards that plants offer in return for the bee's pollination service may contain other plant chemicals, some of which may be bioactive or toxic. We are particularly interested in these substances because while some may harm bees, others may be beneficial.

For example, the nectar of monkshood (*Aconitum*) contains toxic alkaloids. We've shown that these toxins deter the buff-tailed bumblebee from robbing nectar from the flowers without pollinating, but the garden bumblebee, a legitimate pollinator, can tolerate higher concentrations of these substances and continues to visit and pollinate. Similarly, toxins in the nectar of *Rhododendron* species can deter or even kill honeybees, while bumblebees, who may be the preferred pollinators of rhododendrons, are not affected.

Toxins in nectar can therefore help plants to filter out [bees](#) and other pollinators that don't do a good job in pollinating their flowers, and restrict visits to genuine pollinators. But there is one story about bee poisonings that we've known for years but it's still not easy to explain...

Every year, we're contacted by concerned people who have seen dead or dying bees under some of our flowering lime (linden) [trees](#), particularly under *Tilia tomentosa* (silver lime). This mysterious sight has been

reported for many years, across many countries, and regularly makes the news. Understandably, we wanted to find out more.

The earliest proposed explanations pointed the finger of blame at nectar toxins. However, more recent research suggests there is nothing in the nectar that is poisoning the bees, so something else must be going on.

Some studies have shown caffeine to be present in nectar, and while in itself it may not be poisoning the bees, we think it may be affecting their judgement. Two earlier studies have shown that caffeine can enhance the memory of bees for floral traits such as odours that are associated with food. Bees may be tricked into overvaluing a caffeinated food source, and will keep returning to it even if it is inferior to other food sources, or completely depleted. Lime trees are noted for their far reaching, sweet scent. Maybe this odour together with caffeine in the flowers could result in a fatal attraction of the bees to the point where they run out of energy and starve?

Even though dying bees under lime trees have been observed for over a hundred years, we still don't fully understand this phenomenon. More work needs to be done to better understand the chemistry of nectar, pollen and odour, and its effects on bees. At Kew, we are working to address these questions. City trees provide us with important health benefits, such as filtering polluted air with their leaves. Some city trees are also abundant [nectar](#) and pollen sources for pollinators, a role that is often overlooked. To help maintain abundant and healthy pollinators, we need to better understand the positive and negative effects of the different, often non-native, trees we are planting in our cities.



A buff-tailed bumblebee collecting nectar and pollen on a silver lime flower. Credit: Koch, H



Bumblebees and honeybees found dead under a silver lime tree at Kew on a single day in August

Thanks to Amanda Millar for suggesting this article

Amanda advises

The varroa 'bomb' has struck again, in about the second week of October. In August my mite levels were generally low and I got most of them down to single figures after a dusting. I usually check again mid October, but was a week later than planned as I hurt my back lifting a too heavy super. I dusted on 20th October and was horrified, but not surprised, to have drops of between 19 and 550, so whenever weather permits, I shall be dusting. In 2012 all those which dropped more than 300 after a dusting at the end of October, died. The weather was poor that year though, so they were probably more susceptible. It will be interesting to see if the two this year dropping 400 and 550 die over winter. I hope not as they were promising new colonies this year.

By now I have put mouse guards on the few colonies which do not have 5.5mm height entrances. I usually remove the entrance block so that they have plenty of holes available to prevent dead bees blocking the access. We still need to check regularly that the entrances are clear, and look in to ensure the floor is clear too otherwise any icing sugar dusting will not work. Insulation is on most of them and the wire netting against woodpeckers will go on soon. My out apiary hives are securely strapped.

October 16th and Storm Ophelia brought a red sun and dark, orange skies caused by Saharan dust and smoke from forest fires in Southern Europe. I was out near my bees and saw them rush home with traffic jams at the entrances; before long they were all quiet and indoors. They were a bit subdued next morning too as the light levels were still low. I write this with Storm Brian battering the garden, bright sun alternates with squalls of rain. In the sun there are lots of bees out collecting water (see photo) and several Red Admirals sunning themselves in spite of the wind.

There has been a lot in the news this past few weeks, much of it depressing. Recent research shows neonicotinoids have been found in 75% of the world's honey. Researchers in China have determined the components of the female Asian hornet sex pheromone and tested its attraction to male hornets seeking a mate. It could soon be available as a lure to warn of colonising hornets and act as a control strategy.

On 19th October the news was full of research from Germany, that overall total flying insect biomass has reduced 76% over the last 27 years. They found

that in mid summer the decline was nearly 82%. This exceeds the estimated decline of vertebrate abundance in the last 42 years of 58%. Worse still was that this data was collected from nature reserves and protected areas. Dave Goulson was involved and has in past talks suggested this was happening, many of us have noticed this for a while but I have particularly with my involvement with bat rescue and the numbers of starving bats I have received in recent years.



It is not just the vulnerable species such as butterflies, wild bees and moths; the declines have been across the board. They believe from their recordings of landscape change and climate change around the study sites that these are not the major factors in this massive decline, however, untested factors such as agricultural intensification eg pesticides, fertilisers, increased tillage, prolonged droughts, which have been factors in the decline in biodiversity of plants, birds etc, may be possible factors. Dave Goulson in British Wildlife magazine, suggests that at this rate of decline there will be precious few insects left in a couple of decades and given their vital role in pollination, recycling and in the food chain, the environment may descend into chaos; 'ecological Armageddon' is probably not an overstatement. If only those responsible knew or cared more about the environment!

In October my bees made use of some Asters and Sedum which have done well this year and I shall divide them and will prepare a late summer flowering bed for next year for them, with Rudbeckia, Echinops and Alliums. Some Hollyhock and Echinacea seedlings are just up. I have also bought some wild flower seed to sow now and plant out as plug plants in my wild meadow (ex-lawn) next year: Red clover, Yellow Rattle, Ladies Bedstraw and Campanula among others. I need something to look forward to at the beginning of Winter! See you at the Convention?

Large Feral Colony by Bob Curtis

Ian White and I collected this colony in Hangleton on 17th Oct, it could not be called a swarm as it was spread over at least five combs. The original swarm had arrived in May and we were told had caused much excitement in the area, then disappeared, only to be discovered later in the hedge. The hedge is next to a well used footpath and road, but the colony was on the garden side of the hedge and they were flying into the garden. The colony was perhaps a foot from passersby hidden in the foliage of the hedge. There appears to have been no problems from stings or stropby bees and when we collected them they were very calm. The colony must have weighed over 20lbs. So it shows that calm bees can live very close to humans without a problem. The only reason we collected the colony, was that it was unlikely to survive winter in that location.



Ian collecting feral swarm

Photos by Bob Curtis

Two articles from the New Scientist submitted by Gerald Legg

Bees seem to grasp the numerical concept of zero – the first invertebrate we have found that can do so. When the insects were encouraged to fly towards a platform carrying fewer shapes than another one, they apparently recognised ‘no shapes’ as a smaller numerical value than ‘some shapes’.

Zero is not an easy concept to comprehend, even for us. Young children learn the number zero later than other numbers., and often have trouble deciding whether it is less than or more than 1. Apart from us, some other animals grasp the concept of zero, though. Chimpanzees and monkeys, for instance, have been able to consider zero as a quantity when taught – and a grey parrot called Alex learned the concept. With their tiny brains, bees may seem an unlikely candidate to join the zero club. But they have surprisingly well-developed number skills: a previous study found that they can count to 4. To see whether honeybees are able to understand zero, Scarlett Howard at RMIT University in Melbourne and her colleagues first trained bees to differentiate between two numbers. The team set up two platforms, each with between one and four shapes on it. On one platform, bees were given a sweet sucrose solution, and on the other a nasty tasting quinine solution. The researchers trained the bees to associate a platform that had fewer shapes on it with the sweet reward, until they made the right choice 80 per cent of the time. Next, the bees went through a test phase involving neither rewards nor punishments. They were given a choice between

two or three shapes on one platform and ‘zero’ shapes on the other. The bees picked zero most of the time.

In a second experiment, other bees were trained in the same way, but this time they had to choose to land on a platform with either zero or between one and six objects. They consistently chose zero, but were less accurate and took more time when the other option was one rather than six objects.

This may be an important observation: the numerical distance between the two quantities on offer seemed to affect how challenging the bees found the problem. This seems to suggest that the bees conceive zero as a number, close in value to 1, and not simply some non-numeric quality. Howard shared the findings at the Behaviour conference in Estoril, Portugal, last week. Such experiments suggest that bees’ comprehension of zero is similar to that of humans and some primates, she said. But it’s unclear why they have this ability. “We still have some things to figure out about why they can do this”, said Howard.

Few attempts have been made to test whether animals other than primates can recognise zero as a number, says Susan Healy at the University of St Andrews, UK. “The notion that an invertebrate did it would overturn the books quite a lot,” she said.

From the article “Bees Understand the Concept of Zero”
by Sam Wong
New Scientist 12th August 2017

The evidence has been mounting for years that the world's most widely used pesticides, neonicotinoids, harm bees and other pollinating insects. Now it seems the problem isn't limited to Europe and North America, where the alarm was first sounded. It is everywhere.

Alex Aebi at the University of Neuchâtel, Switzerland, and his team asked people they knew to bring back honey when they travelled. They got 198 samples from every continent except Antarctica, and tested for pesticides. Three-quarters of the samples contained at least one of the five neonicotinoids, in 48 per cent of the contaminated samples, the pesticides were above the minimum dose known to cause 'marked detrimental effects' in pollinators.

"Finding neonicotinoids in honey is perhaps not surprising," says Christopher Connoly at the University of Dundee, UK. "But to find neactive

levels in so many samples at many global sites is shocking."

Bees eat honey to survive winter, so the results imply chronic pesticide exposure. "Recent scientific evidence showed an increased sensitivity to neonicotinoids after frequent or long-term exposure," says Aebi.

In 2013, the European Union temporarily banned the use of neocolonialist on crops that attract bees. Next month, [November 2017] the European Food Safety Authority will decide if a total ban is warranted.

From the article “Neonicotinoids found in honey from every continent”
New Scientist 14th October 2017

Photo Corner



Bees collecting water and feeding on Sedum

Photos by Amanda Millar



More photos of the swarm collection in Hangleton, this time by the resident of the property

Photos by Pippa Crowter

SBKA Annual Convention Reminder

Sussex Beekeepers'
Association

Annual Convention



The 2017 Annual Convention will take place at Uckfield Civic Centre on

THE

- 9.00 am Registration and Coffee
- 9.30 am Dr John Feltwell Dealing with the Asian Hornet
- 10.50 am Roger Patterson My Simple Approach to Bee Improvement
- 11.50 am Mike Williams The Bee Sting and its effect on Humans
- 2.00 pm Nikki Gammans Gardening for Bees and other Pollinators
- 3.20 pm Bob Smith Managing the Workers

THE COST

The cost of attending the convention is £25 including a buffet lunch.

There is a free parking zone for convention ticket holders in the adjacent public car park.

Please book by telephoning the Treasurer on 01424 83302 or emailing info@sbkaconvention.org.uk.

Jim Ryan Wax Days

Wisborough Green Division - West Sussex Beekeepers' Association

Demonstration: "Making good use of your beeswax"

Friday 9th, Saturday 10th and Sunday 11th February 2018. 10.00am start, approx 4.30-5.00pm finish.

Venue: Hampers Green Centre, Petworth, West Sussex, GU28 9NL.

Cost: £10. Payment in cash only on the day. Non-beekeepers welcome.

Booking essential. See below.

Most beekeepers accumulate beeswax, either from cappings or melted combs, which could be sold or exchanged for foundation, but many only have a small amount, so they just store it in the shed and don't know what to do with it. This event will demonstrate making products that can be simply made with quite small quantities of beeswax. These can be used by you and your family or will make useful and unusual presents. The good thing is you know what the ingredients are.

The demonstrator will be Jim Ryan from Thurles, Co Tipperary. This is a return visit, as he was last here in February 2015. Jim is a very good and amusing demonstrator with a great way of showing you how easy beeswax products are to make, using minimal equipment that is in most kitchens.

There will be about 5 items made, which may be slightly different on each day. Jim will begin by cleaning wax, then making such things as furniture polish, furniture cream, lip balm, skin cream, moisture bars, soap, etc. If time permits he will also look at using honey in recipes – honey lip balm, honey soap, etc.

There may also be some alternative recipes that do not contain nut oils. He does tend to make it up as he goes along! Each day will be similar, so there is no need to attend them all.

Judging by the previous events we are expecting this to be popular and as places are limited you will need to book early. If you leave it late, spaces may be taken.

This is a rare opportunity to see a top demonstrator, so don't miss it.

Booking by email only using the booking form to: Lisa Baker lisabaker079@gmail.com stating which day you would like, with second and third choices. Lisa will then email a confirmation.

For further details see the booking form or email Roger Patterson roger-patterson@btconnect.com.

A booking form is attached to the Newsletter covering email - Ed

Apiary Site Offer

The offer of an apiary site just outside Lindfield, West Sussex has been passed to B&L. This is a 27 acre area consisting of partly wooded and landscaped garden. The owner has expressed an interest in helping to increase the bee population and would like to have beehives in their garden. In consideration of the size of the available space, it may be possible for 2 or 3 beekeepers to keep hives there, depending on how many hives each beekeeper would like to place.

If any member wishes to take up this offer, they should contact the B&L Secretary Hilary Osman. Contact details can be found on the back page of this newsletter.

In Next Months Edition

We will be reporting on the 86th National Honey Show which was held at Sandown Park Racecourse in Esher on the 26th to 28th October 2017, and will include a number of photographs of the entries.

Also included will be the regular articles Amanda Advises, Winter Meeting report and contributions from B&L Members together with an expanded Photo Corner covering the Honey Show.

Divisional Diary 2017/8

Indoor Meetings: 7:15 for 7:30pm on the 3rd Wednesday of the month, October to March at Cliffe church hall, Lewes, unless otherwise stated. Members are invited to arrive early and assist in putting out chairs. Non-members are always welcome.

Summer Programme

Our summer programme of out apiary meetings will resume in the Spring of 2018

Winter Programme

Indoor meetings

~~Wed 27th September: The Inspector Calls with David Rudland~~

~~Wed 18th October: The Asian Hornet with John Feltwell~~

Wed 15th November: Mead Making with Steve Gibson

Wed 17th Jan 2018: AGM followed by a quiz with Amanda and the B&L Annual Honey Show

Wed 21st Feb: The Effect of Bee Stings on Humans with Mike Williams

Wed 21st March: Skep Beekeeping with Chris Parks

For your diary

~~Sat 5th August - Rottingdean Fair.~~

~~Sun 3rd Sept - Social BBQ at Heather McNiven's.~~

26th to 28th Oct - 86th National Honey Show, Sandown Park Racecourse, KT10 9AJ.

Sat 25th November - Sussex Beekeepers' Association Annual Convention, Uckfield Civic Centre.

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.

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Contributions to your newsletter

Contributions, including photos, to the newsletter (max 900 words) can be sent, preferably by email, to the editor see panel above for details. Photos etc. for the website should be emailed to our webmaster, see panel above.

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