



# BEE TALK

Warwick and Leamington Branch of Warwickshire Beekeepers

## IMPORTANCE OF YELLOW LEGS

**D**id you spot the 'deliberate' mistake in the November BeeTalk ??? We all know the huge threat that the Yellow Legged Asian Hornet is likely to present to our bees and other important pollinators. But how good are we at spotting them? The image of an 'Asian Hornet' in November's BeeTalk was NOT a Yellow Legged Hornet! There was a clue in the colour of the legs, which were uniformly brown! Thanks go to the few members who spotted and reported it – beekeeping is all about observation and asking questions!

The confusion is, in part, caused by search engines such as Google, and incorrectly labelled images from unreliable sources on the web. The hornet (for it was clearly was a hornet) was indeed an Asian species. However there are several oriental species in the same Genus – *Vespa*. The problematic one is *V. velutina* (the Yellow-Legged Asian Hornet) and is the one that is being more frequently found in the UK – currently predominantly in the south and near ports of entry – to where it might have been transported accidentally in an overseas cargo shipment or as a stowaway in a holiday caravan. This species is noticeably smaller than our native European hornet (*V. crabro*), and has a matt dark brown, almost black, thorax and an abdomen with only one wide yellow band near the rear end, and of course the famous distinguishing yellow legs. In contrast *V. crabro* (our native European Hornet) has more distinct banding on its abdomen and is a glossy bronze in colour, and brown legs. These features are illustrated above – taken from the BBKA website.

The hornet accidentally depicted in the November Bee Talk was, correctly, one of several other Asian Hornet species. In this case the aptly named 'Giant Asian Hornet' (or even 'Murder Hornet') – *V. mandarinia*. This species lives up to its name – the right photo shows one preying a

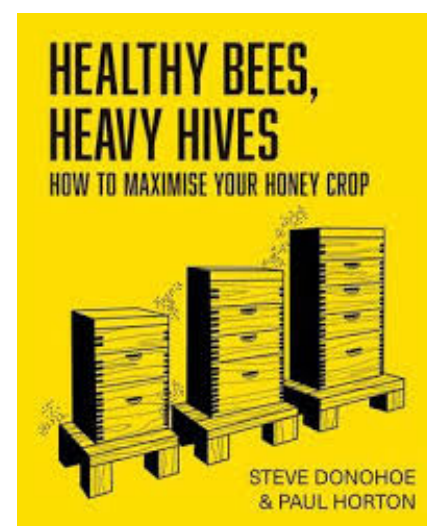
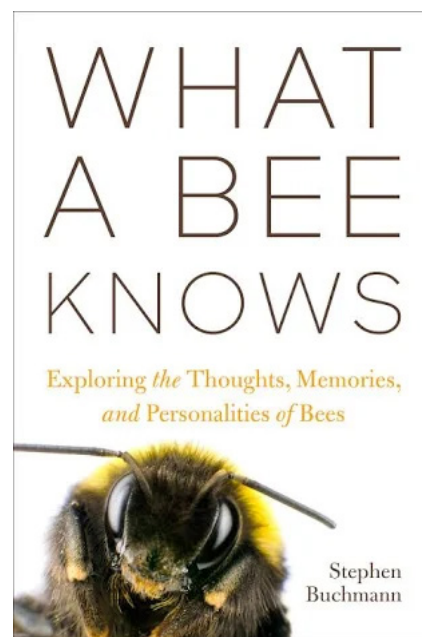


honeybee and gives a sense of scale. It boasts the accolade of being the largest hornet on the planet. It is native to Japan but is also found in several other Asian countries, and there are a handful of records from the USA and Canada. It has not been recorded in mainland Europe or the UK. Let's hope it stays that way!

**Barry Meatyard**



# A VERY MERRY BEE BREAK



**W**inter is here at last! The cold snap heralds important winter beekeeping activities and gives us time to make plans. Most winter colony losses are caused by starvation or varroa. So avoiding this is a goal. The bees should have been fed so that their brood boxes are full of stores. It's too late to give syrup (it may cause dysentery) and probably too early to need fondant. But keep hefting and if a colony is unexpectedly light it's worth giving a bit of fondant. If there is a gap between the fondant and frames, the bees can't cross this in cold weather (and that's why it's called isolation starvation).

You may have checked varroa levels at the end of the summer- but there has been a lot of brood produced since then in this warm autumn. Some colonies are still producing brood. At this time of year, it's best to put in a varroa board for at least a week and see how many mites drop each day. You can treat with oxalic acid- vaping or dribbling. I dribble 5ml per seam of bees, but only when I know they have stopped producing brood.

Put on the protection: woodpeckers and mice will be seeking out our hives, so it's a good idea to get mouse guards and wire or plastic mesh.

Drop the right present hints: In matters of computers, beekeeping kit and teenage fashion, a miss is as good as a mile. Reciprocal hinting (known as the Christmas list) prevents disappointment. This year, my hints might include the two books you see on the right.

Then there is the wonderful book by Lars Chittka about the The Mind of a Bee. I am sure my favourite Beekeeping supplier has some fillers like "patented entrances" and new porter bee escapes- if only the rest of the family liked these things my shopping would be so easy...

Finally, why not sign up for one of the W and L training groups for next year. We have a Warwickshire Module 3 study group starting soon. There is a group next year for those wanting to do their basic assessment. Or if you have the Basic already, what about the Honey Bee Health Certificate- the most useful practical assessment there is. We have groups for all of these and there will be cake (though not on the zoom calls)!

Have a lovely December and a very Happy Christmas. If you need help with your bees, or would like to give us ideas and feedback about Bee Talk, contact me or any other member of the committee at ([warleambees@warleambees.org.uk](mailto:warleambees@warleambees.org.uk)).

## BEEKEEPING TASKS THIS MONTH

We have pretty much completed feeding but protection is still throwing up jobs for us to do. December is a month for a little actual beekeeping and a lot of reading about it.

- Keep checking your hives are well fed after the long, warm autumn. Heft often.
- Consider putting on blocks of fondant if your hives feel light. These can be wrapped in cling film or put into takeaway containers and added under the roof and over a cover board hole- but remember that if things get really clod the bees will not be able to cross air gaps. Be careful not to use ekes which offer more air space the bees need to heat up.
- Check your hives have decent ventilation- especially if you get snow, which can block entrances. You may also need to remove dead bees from the entrance.
- Fit woodpecker protection. Yes, they will go for poly hives AND NUCS- remember to put the wire over the unprotected top of polynucs.
- Late November or early December is likely to be the best time to use Oxalic Acid as the colony stops producing brood- it is really revealing to check the mite drop.
- Start to prepare kit for next season. It is a good time to flame broodboxes and repair woodwork when it is cold (and there are no bees about).
- Watch out for a slot on a "Wand L boiler day". Not only can you clean all your old frames in a very short time but other, awkward bits of kit can be done. In half an hour I saw Alan dipped 30 queen excluders. It cleaned them better than I could have done- and it would have taken me all day!

Jane Medwell, WLBK Chair



# MEMBERS' MEETINGS

## MEMBERSHIP SURVEY 2025

At the last branch committee meeting the committee agreed to survey the membership early in 2025 to a) find out what support members wanted for their bee keeping; b) identify their bee keeping education needs; and c) increase the membership engagement in running the branch and branch activities. (The same group of mostly older members are the current mainstays of the branches operation.)

The survey seeks to encourage members to volunteer to help with running of the branch and find out what members value most so that resources can be directed to these activities.

A prize draw for a £25 voucher will hopefully encourage all to complete the survey.

## MEMBERS MEETINGS 2025

Thursday 16<sup>th</sup> January 2025

Thursday 20<sup>th</sup> February 2025 – 92<sup>nd</sup> Annual General Meeting

Thursday 20<sup>th</sup> March 2025

Thursday 17<sup>th</sup> April 2025

Thursday 18<sup>th</sup> September 2025

Thursday 16<sup>th</sup> October 2025

Thursday 20<sup>th</sup> November 2025

Friday 12<sup>th</sup> December 2025 Xmas Party

Thursday 19<sup>th</sup> February 2026 – 93<sup>rd</sup> Annual General Meeting

All the meetings are planned to be held at the Senior Citizens Club in Kenilworth with the exception of the one in January which will be held at the Stoneleigh Village Hall.

## BBKA LECTURE

The next BBKA lecture on the 17<sup>th</sup> December at 7pm will focus on running study groups. David Bonner and Diane Drinkwater will share experiences and tips. Zoom Meeting [link](#) Meeting ID: 828 1368 0012. Passcode: 619367

**M**embers who braved the snow and ice in November met Bee-Keeping

Royalty – no not Charles or Camilla but Michael Badger MBE (right), proud holder of a BBKA 70 years, long service certificate. Michael's bee keeping roots are deep in the Warwickshire soil, having started to learn our craft as a school boy in Kineton, when the County Trainer ran classes at his school. Michael has been Chairman and President of the BBKA, was instrumental in setting up the BBKA HQ in Stoneleigh and the Bee keeping Pavilion at the Great Yorkshire Show, where he was a longstanding steward and show judge. Royalty indeed!

Michael's talk – *Sustainable Beekeeping* – provided an eclectic account of beekeeping and honey harvesting but came with one overarching message. Beekeeping was primarily about supporting and protecting pollinators and pollination rather than taking a large crop of honey. As such, Michael stressed the importance of planting wildflowers and creating 'bee super-highways', especially in cities, so that bees had access to abundant, varied and changing forage throughout the season. Everything bee keeping could be looked at through the lens of sustainability. Most of Michael's points aligned with the WLBKA ethos: breeding locally adapted queens rather than importation, which risked bringing in disease; paying attention to cleanliness to avoid disease; ensuring, by good records, selective breeding and bee keeping practices that your bees were calm so they were easy to handle and did not cause problems for neighbours. To this end, Michael introduced the group to his practice of using the 'Chippendale method' at inspections. Surely not stripped for action? No. This is the use of a clean, wet, linen tea towel, one for each hive, to stop the entrance so bees cannot leave or return during an inspection. All hives must be prepared at the same time – returning bees rest on the hive face and those inside have moisture from the towel. Calm bees are always welcome, but you may need to be further convinced that 'Chippendale method' is the answer... or for cooler summer inspections!

**January Member's Meeting: Thursday 16<sup>th</sup> January, 7.30 pm**

IMPORTANT \*\* TEMPORARY CHANGE OF VENUE TO STONELEIGH VILLAGE HALL, CV8 3DG \*\*

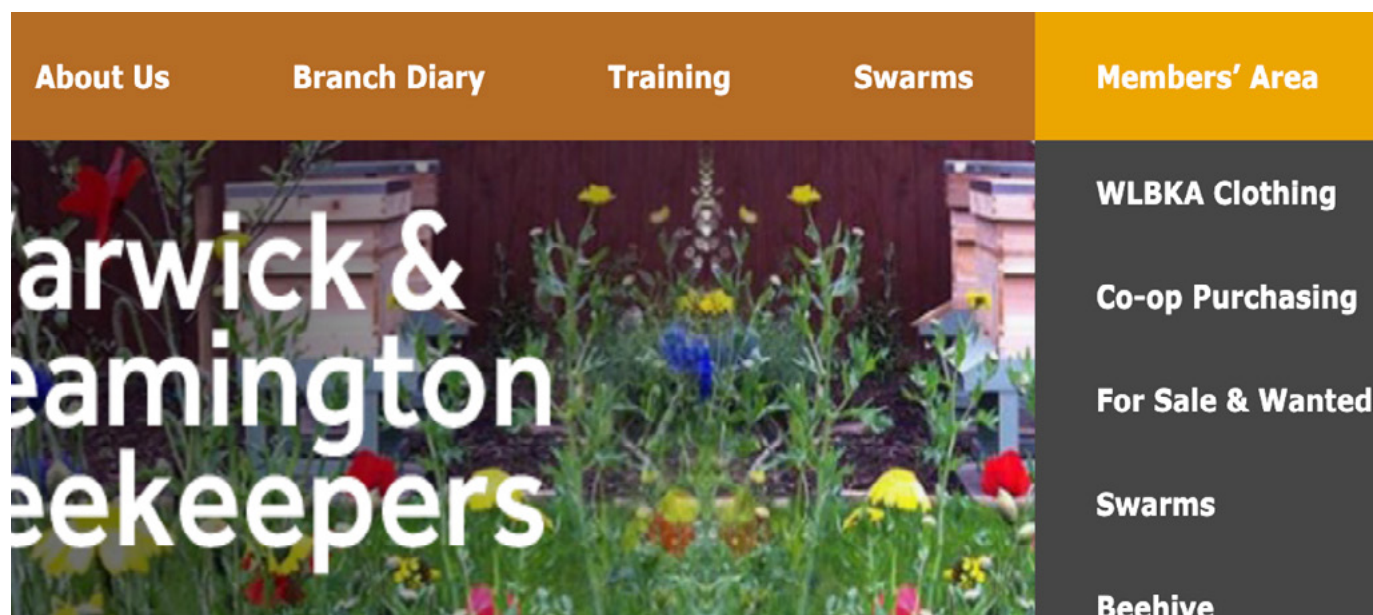
Member, Ian Jaime from Warwickshire Lavender Farm will talk about the highs and lows of setting up the lavender farm, producing lavender oil for cosmetics and, of course bees love of lavender nectar. There will be cake at Stoneleigh Village Hall.

**Judith Masson, Meetings Secretary**





# NEWS FROM THE CO-OP



**B**y the time you read this, the way you order goods from the branch co-op will have changed. No longer do you have to contend with a set of Google forms to order Ambrosia, wax, jars etc, but you simply visit our new online store (you'll find the link in the members' area of the branch website as shown in the image above), add your requirements to your basket, pay using a debit or credit card and then follow the instructions.

Our wonderful stockholders, Clive Joyce and Steve Cox will, as always, be working tirelessly to ensure that your orders are met. We're incredibly grateful to them for their dedication to the task

of sourcing and supplying the essentials of beekeeping to branch members. Their efforts are of immense help to honeybees and to the craft of beekeeping.

Huge thanks are also due to the team supporting Clive and Steve – Alan Deeley, Val Dillon, Steve and Amanda Ghent, Mike Townsend and Jane Brown.

Please do what you can to help this service run smoothly. Please be patient if we encounter gremlins as we introduce the new system and do remember to collect your orders promptly – we have limited space and an accumulation of goods that have been ordered but not collected presents significant problems.

## BOTTLING FOR WLBK MEMBERS

**A** couple of months ago, we reported that we had acquired a Honey Bottling Machine which, once programmed, automatically fills a jar with the correct weight of honey.

So how do we get this facility out to members?

- We will set a honey bottling day on the same basis as we do for frame cleaning, i.e. members will have to book a slot.
- The machine will be tested beforehand by volunteer member supervisors.
- The length of time it typically takes to jar a bucket of honey in the various sizes of commonly used jars will enable the length of time to be booked to be calculated

- A suitable kitchen will be booked. The kitchen at Kenilworth Senior Citizens Club is suitable and there is plenty of room for members to watch and chat if they come early for their session. Other venues can be considered.
- There will be no charge for this facility.
- Members turn up with their honey (preferably warm) and jars and bottle their honey (noting the first jar will have a mixture with the previous person's honey).
- Such an arrangement is likely to produce a greater use of this kit and benefit the most members.
- Members willing to be trained as supervisors should contact [warleambees@warleambees.org.uk](mailto:warleambees@warleambees.org.uk)

# TRAIN WITH WLBK

In the October edition of Bee Talk I mused that bees know how to train their beekeepers by giving them new problems

to solve on an annual basis.

Despite our best endeavours there's always something that the bees find to test us. And that was certainly the case in the early part of this year's season! One way of rehearsing the tricks of the trade is to engage with the BBKA's education programme of Modules (examined by written assessment) and Assessments (assessed practically). Most of us have probably got to the stage in life where taking exams are not exactly high on the agenda, but within the beekeeping community they have two functions. Firstly they serve to enhance and consolidate our knowledge of the biology of bees in order to maintain healthy and productive colonies. Secondly, within our Branch and wider County study groups, they can widen our horizons by providing opportunities to meet and interact with beekeepers across the County, and beyond.

Turn to the next page (page 6) for the training opportunities available next year.

I help run the County's Microscopy Group that meets at BBKA HQ at Stoneleigh for practical sessions every two months, with an evening Zoom meeting every alternate month. The Group is an opportunity to explore the biology and anatomy of bees at close quarters and also to explore the fascinating structure of pollen grains – collected from flowers, bees or from honey. For the first time this year a number of the group entered slides of pollen and bee parts in the National Honey Show microscopy section with some success! But taking part has been a useful learning experience! Pollen grains are used in forensic investigations of crime scenes and for testing honey authenticity so are fascinating (and often beautiful) structures.

We have been fortunate to have been able to get a few different pollen grains 3D printed – as shown in the image above. No previous experience of microscopes is needed so if you are interested in joining the group please get in touch.

**Barry Meatyard**



## HEATHER YIELD

So, after this year's trip to the heather, documented over the past few months in Bee Talk, how successful was it? Well, the yield in terms of quantity at 15lbs/hive from my hives did not match that of last year (25lbs/ hive) which by previous standards was pretty good. Admittedly, I brought mine back a week early, and the weather over the four weeks they were up there was very poor. The quality was different this year as well. Clearly, the bees had been foraging on something else as the colour was lighter and the consistency not as thick but definitely still heather-ish and absolutely gorgeous. Was it all worth it? ..... Oh yes. It is always something of an adventure and the challenges are all part of it.

**Bernard Brown**

## DALEHOUSE SAGA

The latest completion date for the A46 Stoneleigh Roundabout roadworks is mid-2025 – some 8 years after we vacated the site! Whilst we have agreed a new licence to re-occupy the site, this cannot be enacted until after completion. In anticipation of our return, we have been working on the reinstatement works, and have gained support from the HS2 contractor, Balfour Beatty, who have offered to plant hedging, provide stoned walkways and hive stations. We are seeking consents from the contractor and Warwickshire County Council to have this work executed over Christmas and the New Year. We also have plans to relocate or replace an ageing shed and to install electricity and water, for which we are actively seeking sponsors.

# MEMBERSHIP RENEWAL 2025

This is a gentle reminder that your membership for 2025 is due now please.

Membership runs from January 1st to December 31st.

Registered membership for up to 3 colonies is £43.50. To include £2.00 Bee Disease insurance.

If you have more colonies the following applies:

- 1 - 2 more colonies - an additional £1.20
- 3 - 7 more colonies - an additional £4.70
- 8 - 12 more colonies - an additional £7.75
- 13 - 17 more colonies - an additional £9.50

- 18 - 22 more colonies - an additional £11.10
- 23 - 27 more colonies - an additional £13.60
- 28 - 32 more colonies - an additional £16.10
- 33 - 36 more colonies - an additional £18.10

Partner membership is £26.50

Junior membership is £16

Local membership is £10

**Liz Gurney**  
Membership Secretary

# WLBK TRAINING COURSES 2025

**B**elow are training opportunities available to WLBK members next year:

## TOWARDS THE BASIC

If you have a year or more of beekeeping experience by next summer, why not take your Basic Assessment- your beekeeping "driving license"? This practical assessment involves going through a hive, discussing your beekeeping and making a frame. To support members we are running a blended training course of zoom calls and a training day. This will boost your confidence and put you in touch with other beekeepers doing the same thing. The sessions will be:

Zoom 2<sup>nd</sup> April 7.00-8.00pm

Day workshop 12<sup>th</sup> April 2025 Eathorpe Village Hall, 9.30am - 4.30pm

Zoom 24<sup>th</sup> April 7.00 -8.00pm

There is a charge of £5 for refreshments.

This course is intended for those who have entered for the Basic Assessment next year. So please do this by contacting [examsec@wbka.org.uk](mailto:examsec@wbka.org.uk) and you will get sent a personalised link.

## HONEY BEE HEALTH CERTIFICATE

If you have your Basic Assessment, why not take the Honey Bee Health Certificate? This is a totally practical assessment which really gets you to understand hygiene, disease and pests- it is very useful to your beekeeping. To prepare you and give you confidence, we will be having a training programme. This involves a number of zoom study calls and a day workshop:

Zoom 20<sup>th</sup> March 7.00-8.30

Zoom 27<sup>th</sup> March 7.00-8.30

13<sup>th</sup> April- whole day workshop at Eathorpe Village Hall and apiary

(weather permitting) 9.30 - 4.30

Zoom call 24<sup>th</sup> April 8.30-9.30.

There is a charge of £5, which will include the cost of refreshments at the day workshop.

These sessions are for members who have enrolled in the Honey Bee Health Certificate. To do this, please email [examsec@wbka.org.uk](mailto:examsec@wbka.org.uk) and you will be sent a personal link to enrol in and pay for the assessment. The assessment will be arranged at a time to suit you during the summer.

## MODULE STUDY GROUPS

If you are interested in taking the BBKA Module 3, Honey Bee Health- you can join our Module Study Group and do the exam in March 2025. To enrol for the exam please email

[examsec@wbka.org.uk](mailto:examsec@wbka.org.uk). To join the study group, please email David Bonner: [Dave@bonner.me.uk](mailto:Dave@bonner.me.uk)

This study group is for those taking the Module in March 2025. You can also study using the growing range of module materials, including study group materials on [BBKA Learning Online](#).

## MICROSCOPY GROUP

WBKA has a successful microscopy group. It meets at Eathorpe Village Hall on Saturday mornings (10-13.00) every other month and also has zoom calls on the second Thursday of the month. To find out more, email Barry Meatyard [barry.meatyard@gmail.com](mailto:barry.meatyard@gmail.com). The dates for 2025 are:

Meetings (Eathorpe Village Hall): 4<sup>th</sup> Jan, 8<sup>th</sup> March, 3<sup>rd</sup> May, 5<sup>th</sup> July, 6<sup>th</sup> September, 1<sup>st</sup> November

Zoom calls (7.30-9.00): 13<sup>th</sup> Feb, 10<sup>th</sup> April, 12<sup>th</sup> June, 14<sup>th</sup> August, 9<sup>th</sup> October, 11<sup>th</sup> December

Jane Medwell

# BEES ON THE ARCHERS

**I**t was reassuring to read Bernard's report of the interest taken in his conversation with the Archers' editorial team after the Asian Hornet featured on the programme and to know the programme still has agricultural relevance.

It is a few years ago when I was surprised to get a call from the BBC sound recordist for the Archers wanting to refresh their recording of bees for use on the programme. She was in luck as I had that morning received a call from a school in Leamington reporting a swarm snuggled under a picnic bench in the playground.

After being reassured that a BBC sound recording team heading up the path were not an unfavourable presence she sought the opportunity for the whole school to witness the collection, donning

a bee suit herself and assembling the whole school to witness the event from hastily assembled exercise benches behind the hall windows. We headed out to the bees but in close proximity I could see the classic movement of bees on the outside of the swarm telling me they were going to move on and flying off over my shoulder before their movement could be captured by the BBC sound recordist. A swarm was reported shortly afterwards landing on a parking ticket machine in central Leamington!

Resorting to one of my hives and the BBC poking their mic inside the nest gave the recordist the buzz of Warwick and Leamington bees they wanted for the Archers programmes.

Mike Townsend



# THE LATEST YLH BUZZ

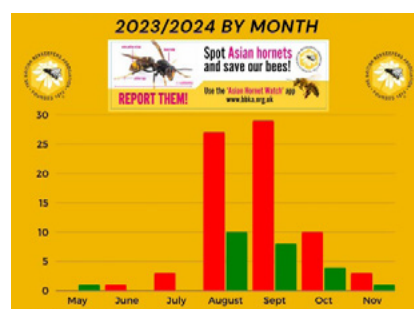
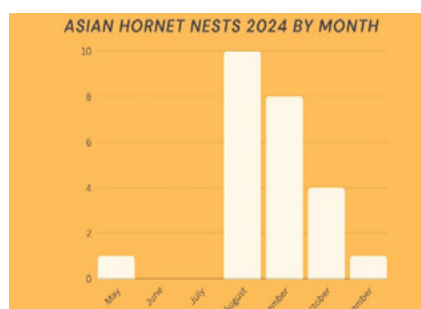
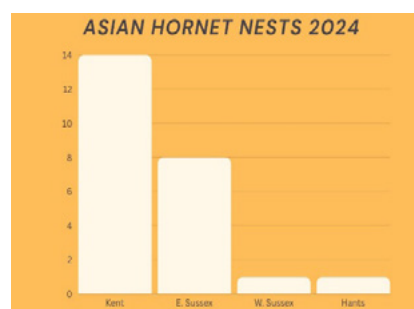
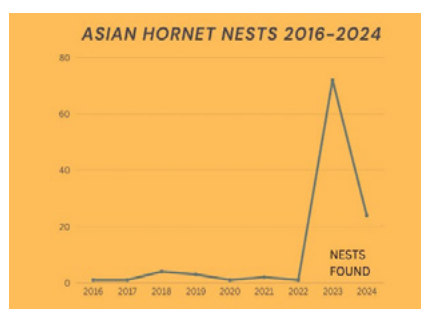
**A** further 5 yellow legged hornet (YLH) nests have been detected and destroyed since last month's report totalling 24 for the year. 2 of these recent ones were located in Kent and the other three in East Sussex. Given that the conventional wisdom is that the Yellow Legged worker and drone hornets die out in November, the National Bee Unit is discontinuing its surveillance by the time this article hits the streets but do keep a lookout for hibernating Queens. Our worst fears of an acceleration over 2023 of the spread of YLH were, thankfully, not realised this year. Just how things panned out is amply illustrated in the following graphs.

With the leaves off the trees YLH nests should be more visible but they can be confused with squirrels' dreys or bunches of mistletoe. Below left is what a YLH nest looks like. Not the other two, which are a squirrel's drey and mistletoe.



Talking of mistletoe, Christmas is coming so why not ask Santa for a Yellow Legged Hornet Trap? Various designs are available but do make sure that they feature provision for the escape of by-catch, entrances 7-8mm wide (or capable of being reduced to this size) and that anti-drowning devices such as the attractant being retained beneath an insect proof grid or presented on a sponge are included in the design.

So, our worst fears of an acceleration of the spread of YLH over 2023 were, thankfully, not realised this year. Just how things panned out is amply summarised in the following graphs.



**Bernard Brown**  
AHAT Controller, Warwickshire Beekeepers' Association

# WLBK OBSERVATION HIVES

**A**s a reminder to the public of the importance of bees in our environment and in line with meeting the Warwickshire Beekeeping Association charitable objectives we have several hives around our patch for public view.



The most significant of these is the one on the first floor of the Market Place Museum in Warwick. Yes, even in this central built up location you can see the bees above your head in the height of the summer leaving and returning to the hive. Even better, visitors on the first floor are able to see them entering into the hive itself through the clear perspex tube to the outside of the building.

This hive has been in place for over 80 years and for the last decade, or is it two decades (too afraid to ask), has been maintained by Mike Townsend with a number of our members help. In managing the hive Mike has established a wonderful working relationship with the museum staff such that they now have sufficient experience to ensure he is informed of changes in behaviour to ensure the bees are in the best of health. On my visits to the first floor, it is often grandparents showing the grandchildren the bees and observing "they were here when I was your age"

Another observation hive is in the Glasshouse in Jephson Gardens, Leamington Spa (image top left). This hive is relatively new and the approach has been slightly different to the Market Place Museum hive. Yes, we have managed to engage with the gardener who attended one of our taster days to get an understanding of beekeeping. However, we must manage the bees around the constant Glasshouse closures for events, mostly weddings. In addition, we have experienced difficulties overwintering bees in situ and as a result the plan is for them to be present from April/May through to October.

During 2023 a effort to improve the display by referencing other pollinators was attempted with the local Bee Friendly Group but the stance of the Warwick District Council Green Space Team was we should make no changes. The static display adjacent to the



observation hive has been unaltered since the Glasshouse opened in 2000. Pity!

We have two other sites where the public can see the bees at work, one is in the Elizabethan Garden at Kenilworth Castle and the other is at East Lodge in Jephson Gardens (image top right).

The Elizabethan Gardens apiary consists of two skep hives and two WBCs. This apiary was set up in response to an approach from English Heritage and was established post pandemic by Clive Joyce and a team of local beekeepers. Having established the presence in the Elizabethan Gardens we are now planning for its future management. If you would like to be involved, especially if you are in the Kenilworth area, please contact Clive [clive.joyce@bbka.org.uk](mailto:clive.joyce@bbka.org.uk).

The other site is in the garden to the rear of East Lodge at the Willes Road entrance to Jephson Gardens, Leamington Spa. We are in the lucky position of having one of our members, Steve Williams, who has taken on the management of this hive. This year was his first full year with the experience of carrying out full inspections under the watchful eye of the curious public leaning over the garden wall from the public footpath. Warwick District Council Green Space Team are keen that we have hive(s) in this garden as the plantings were planned to be bee friendly. Permanent information boards adjacent to the hive provide basic life cycle information.

Although we initially place two WBC on the plinth we have had come down to one hive following vandalism. As the current hive with its anti-vandalism measures (internal hive straps and concrete blocks) has proved effective Steve has suggested we place a more modern hive alongside to illustrate how beekeeping has changed. Clearly the anti-vandalism aspect will need to be considered. In addition, we are also considering adding hive monitoring equipment to the WBC. The modern hive and the monitoring equipment will both be funded by the Leamington Town Grant made many years ago and as a result are not a cost to the branch

If all goes to plan the hive monitoring information will be made available to members and the public on the branch website.

**Chris Cox**  
WLBK Secretary





# THRIVING HIVE – THE RESULTS



**S**everal members, alongside beekeepers from across the County, took part in the Thriving Hive research carried out by the Centre for Agroecology, Water and Resilience at Coventry University into the effect of air pollution on honeybee health and productivity.

We were recruited to host an air sensor and provide honey bees and hive product samples for analysis of the particulates absorbed. We were asked to collect 10 nurse bees, 10 foragers, a piece of wax, 5 pollen cells and some honey.

The results have now been published and make interesting reading. In total, particles from 14 contaminants were identified. These included eight plastics, amongst them polyester, cellophane, silicon polymers and nylon, as well as contaminants thought to emanate from smoker fuels. Most surprising were particulates from car tyres in both forager and nurse bees which were the most common of all the contaminants found. Forager bees carried more particles than nurse bees. This is unsurprising as the forager bees are active outside the hive but what is interesting is that those particles made their way into the hive and onto the nurse bees, suggesting that foragers bring particles back to the hive.

Perhaps more surprising was a trend towards higher number of particles on bees from apiaries in farmed landscapes (improved grassland and, arable and horticulture), compared to bees from urban, suburban, and broadleaved woodland. Sites with very low levels of airborne particulates were all in urban and suburban areas. Birmingham City centre had the cleanest air. On the other hand agricultural landscapes in rural areas had the poorest air quality, with the majority of sites exceeding UK Air Quality Standards.

The results from my apiary in rural South Warwickshire reflected precisely this trend.

One conclusion from this research is that it would seem sensible for beekeepers to avoid areas of intensive agriculture when placing hives because agricultural operations produce high level of particulates. Agricultural areas also have very low abundance of forage available for bees. Consequently, Beekeepers in these areas can also expect lower honey yields, findings which are backed up by research elsewhere emphasising the point which underlines that agricultural habitats are a poor environment for bees. At the same time, urban areas have been shown to provide good habitat, with cleaner air and more plentiful forage.

An associated study revealed that the facet lenses in bees' compound eyes were significantly smaller in bees sampled in areas of high air particulate concentration compared with those sampled in areas of low particulate concentration. This adversely affects their fine-grained vision and vision in low light conditions.

The main conclusion therefore is that quality of air is an important consideration for beekeepers. This is not because there are acute toxic effects, but because it contributes to the multiple stressors that lead to sub-lethal effects on honeybee health that can lead to chronic sub-optimal health, susceptibility to disease and low productivity.

I couldn't have put it better myself!!

**Ivan A Perry**

*For more about the project and to read the final project report, visit [this link](#).*

# GUARD BEES



**C**ontinuing our series on the polyethism of bees' life cycle it is the guard bees which come under scrutiny this month. Guard bees are the frontline defence of any bee colony. They assess every visitor approaching the hive or nest. Guard bees serve as the vigilant sentinels of their hive. Theirs is literally a life-or-death role crucial for the protection of the colony. Stationed at the hive entrance, they scrutinise each incoming bee, using a combination of scent and visual cues to distinguish friend and foe.

Their heightened sensitivity to pheromones and a keen awareness of the hive's unique odour fingerprint are crucial to their effectiveness. In the face of threats, they exhibit remarkable responsiveness and communication skills. They rapidly assess the danger and release alarm pheromones to alert their fellow bees. This triggers a coordinated defence mechanism, mobilising other bees to the entrance to bolster the hive's security. They attack with repeated stings that can dispatch smaller insects and cause enough discomfort to drive away larger mammals. Another weapon in their armoury is to "ball" i.e. cook their hapless victim.

However, it is not just the entrance of the hive where guard bees are active.

While most beekeepers are comfortable dealing with a swarm of thousands, a lone bee that's got your number can be frightening. Having marked you for sacrifice, a solo worker who behaves like a thing possessed, a heat-seeking missile can be very intimidating.

The swarm is docile because it's homeless. Since it hasn't yet selected new lodgings, it has nothing to defend: no address, no possessions, no kids. It doesn't even have honey stores. Since there's nothing to steal, you don't seem like much of a threat. You can cut the swarm out of a tree, carry it around on a branch, or drop it in a cardboard box without so much as a veil (not recommended).

The single worker who tags you is likely to be a guard bee on a mission to protect her home, her queen, her food stores, and the all-important brood nest. Intent on getting her retaliation in first, these bees are unusual because something that's not bothering the rest of the colony sets them off. You can mow among many hives—tens of thousands of bees—and one individual will decide you're a problem. These bees can be selective about who they take exception to with one beekeeper being ignored while another hapless one being repeatedly targeted.

There is almost nothing you can do once these loners have locked onto you. They head-butt, circle, and dive-bomb, sting if they get the chance and can follow you for hundreds of yards. Attempts to swat them just makes them angrier. Taking shelter in a car or shed results in a stand-off to see who gives up first. It is little comfort that the protagonist will probably return to the hive at dusk. One solution is to whisk her out of the air with an insect net. Flip the net over so she can't get out and lay it in a nice shady spot where she can cool her heels. Once she has calmed down let her go. She may look embarrassed but is unharmed by her captivity. But who carries an insect nest in their beekeeping kit? Keeping your beesuit on, checking it is properly done up and walking calmly away is the received advice but be prepared for what could be a long walk!!

Next month we focus on nurse bees.

**Bernard Brown**

*Based on and with the permission of the Honey Bee Suite*



# HINTS AND TIPS: AUTUMN RECIPES

Here's a great idea for those of us who are asked what we would like for Christmas and .....really just don't know!

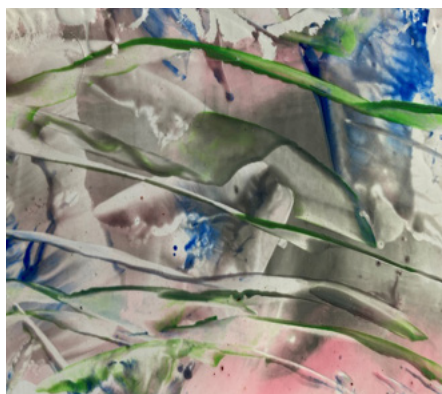
## ENCAUSTIC ART

Encaustic is a traditional painting technique and was used in the past to create murals, pictures and wall hangings. Many of the images and objects that were made using the encaustic painting technique are over 1000 years old and can still be viewed in the ruins of Pompey and Herculaneum in Italy. The principle is to burn in or fuse wax using a hot painting iron and bees wax is an ideal wax to use. I have made my pictures shown here into make great greetings cards.

We, as a Branch did consider running a workshop on Encaustic Art but the nature of the method does not really lend itself to heating up wax as a group activity. It is one of those crafts that requires experimenting, trying out and discovering so that eventually you find 'your style'.

There are lots of U tube videos available to illustrate the tools required and techniques.

Have fun! If you need any help or further info get in touch.



Now it is your chance! If you have any hints or tips that you would like to share, please send them to [h.essex211@gmail.com](mailto:h.essex211@gmail.com)

**Helen Essex**



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