The London Beekeepers' Association
LBKA News

December, 2019

Welcome to the last newsletter of 2019! This month, our Chair updates us on what the committee is doing and thinking around the numbers of bees in London and about the guidelines that we're putting together. This is followed up by Simon with a piece about bees on roofs (p5). There's also been some varroa treatment activity reported (p7) and we plan more sessions in apiaries to help demonstrate the procedure to members. We also have information about next year's beekeeping courses – do tell your friends about them! Thanks as usual to Howard for writing about what we should be doing in the apiary (p6) and Mark's seasonal piece about Christmas food that bees help make possible.

On behalf of LBKA, we wish you a merry Christmas and we'll see you on 12th January for our first Monthly Meeting of 2020!

A big thank you to this month's contributors: **Richard Glassborow, Geoff Hood, Howard Nichols, Mark Patterson, Simon Saville and Margaret Wilson**. Thanks to **Martin Hudson** for proof-reading it. Would you like to join these esteemed contributors? If so, do contact me.

Happy beekeeping.

Aidan Slingsby, Editor, services@lbka.org.uk

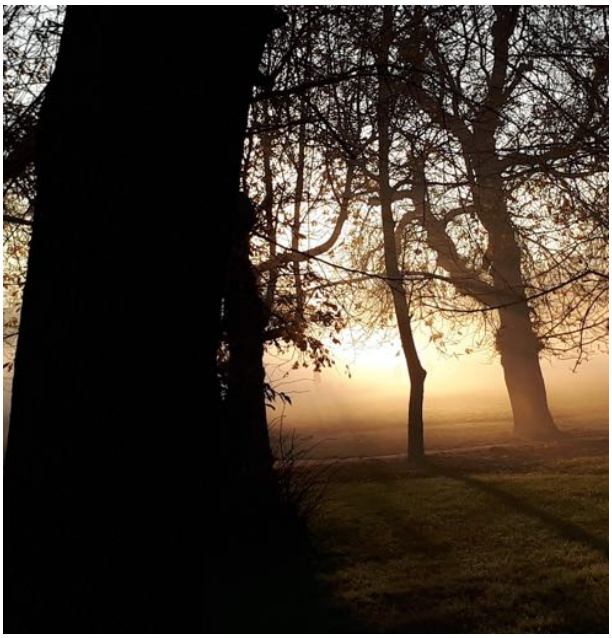
From our Chair

I am pleased to welcome back the LBKA board of trustees, elected at the AGM last month.

We have already held our first trustee meeting and agreed the programme, and draft budget, for the next twelve months. Essentially, the gist of the agenda might be summarised as, no change in direction; better rather than more. That is of course an over-simplification.

An exception is, more emphasis on meeting the demands associated with the current and still growing levels of beekeeping in London.

I am sure many of our members are aware of the data maps we produced two years ago, comparing the distribution of pollinator-friendly forage and registered honey bee colonies in London. Preparation of those maps (or rather the struggle to get the data out of DEFRA and then get permission to use it) began I think about four years ago. The motivation for producing the maps was the need for a more evidence-based understanding of the "bee situation" in London. As we always stress, there are many caveats regarding what the maps do and don't say and, for that reason, we have been cautious about using them publicly so far. But within the limita-



A winter's morning in North London.

tions of the data, it is pretty obvious that there is generally an inverse relationship between forage and honey bee density across London. We express this as, "not enough flowers" in some parts of London, though actually the maps do not address what is "enough".

The maps are proving a very effective tool in making the case for our "Bees and Flowers go together" initiative to try to make London a better place for bees. But, during the course of this year we have realised two things: firstly, by recognising the obvious environmental side of beekeeping (bees and flowers do need each other) and the need for environmental improvements in London, this beekeeping club finds itself, in effect, inadvertently or otherwise, in alignment with a host of other environmental groups and movements. Some members might consider that quite a big step from traditional beekeeping concerns so the Trustees are going to ask for some feedback on this.

The second thing we have realised is that our low key strategy of encouraging more planting rather than more bees is not working or rather has not been to date. The density and distribution of honey bee colonies in London in the maps is based on 2017 data, the total being 5108 registered colonies. We have just learned the number of registered colonies in London is now over 7000. We thought they had trebled in the last 10 years but that figure is quadruple.

Are these numbers a problem? There has been a tendency at times to celebrate large numbers of urban bees as a success story. But there are unintended consequences and the Trustees are arguing some of these need to be addressed

There are three consequences we believe to be of particular concern: disease, swarms, and competition for scarce resources.

Levels of disease and swarms are of course also a function of beekeeping standards as well as high numbers and high density. We don't have records of numbers of swarms (we intend to try to record next year) but well informed anecdotal evidence suggests 2019 saw record levels – up to 20 per day at times. Inevitably, some escape into the wild. That may sound lovely and natural but it is not unreasonable to suspect feral colonies could become reservoirs of pests and diseases, not to mention sources of further swarms. In an increasing number of cases the feral colonies themselves are being reported as a nuisance. Though the public broadly remain very tolerant of bees in their homes and businesses the potential for a change of heart in response to a serious incident, or just through attrition, is very real and we are already seeing some signs of more questioning enquiries, particularly from local governments.

This is not the place to go into the complex subject of the spread of bee diseases, but again numbers and density will have a role as well as beekeeping practices.

Our third main concern goes back to the data maps and the question of whether there is enough forage in some areas for the numbers of registered honey bees. There is as yet no direct research but central London honey yields and studies in other areas suggest it is not universally plentiful. So, increasing the honey bee population in a built environment characterised by uneven forage provision at best, and pervasive habitat loss, is clearly not in the best interests of honey bees. Worse, London is home to about half the 280 species of wild bees, not to mention many other pollinators. Scarce resources and intense competition is not just about honey bees.

At this point it is timely to remind ourselves there are many positives in the millennia-old relationship between humans and honey bees. I am only going to point out one here that I consider particularly relevant to London. Depending on where you get your information, human history is at or about the point where 70% of the global population lives in an urban environment. The potential and actual disconnect from the natural world is massive and the risks to the wellbeing of both humans and planet are obvious. In this context, it may seem a small thing but I think it is relevant and of value that urban beekeepers can present this semi-wild animal to a city-dwelling public and open a window onto wildlife. Not all beekeepers may be consciously aware this is what they are doing but I have never met one who misses a chance to "educate" their family, friends, the public, about their hobby. It is certainly a conscious part of the narrative when we visit schools – and it is both welcome and effective.

But back to the London situation: the Trustees have identified several responses to these concerns, some are still aspirational, some, such as our "Guidelines for Responsible Urban Beekeeping" (GRUB), and the "Bees and Flowers go together" initiative, are being developed. But we are at a point where we need to share these concerns, position, and responses with our membership. We feel doing nothing is not an option, not least because many people are coming to LBKA for advice about keeping bees in London. Most have good intentions but they are based on poor and or misleading information about "bees", and this leads to inappropriate actions and the unintended consequences. If you haven't already, please read Simon Saville's article in this newsletter about the steady flow of enquiries we get from businesses wanting to keep bees. It is very relevant to what I am saying here.

Two-way communication within a voluntary organisation such as ours is always a challenge. We can and will put out papers and links in the platforms we have – the newsletter, the Facebook Forum, BeeBanter and by direct email but it would be helpful to know when you have seen them and where you stand. Just a click and an emoji would help.

The newsletter is open to the public, albeit with a delay, and we want the membership to have the first chance to comment. So, in this edition I have only introduced the London situation and the fact that we believe it

is necessary for LBKA to clarify our position if we are to be effective in representing beekeepers and bees in London. We will repeat the proposition in the forum, by email and through links on BeeBanter but with specific statements for comment.

Please, please comment or at the very least let us know you have read them. We will take that as tacit support. If you can go as far as giving an, "agree in principle", even better. More expansive comment will be very welcome. If you disagree, a reason is probably necessary.

You can of course always respond, comment this or ♡ any article in the News Letter.

I look forward to hearing from you in due course.

Announcements

This is our official place for announcements. If you only read one section of the newsletter, it should be this one!

December Monthly Meeting: Christmas Quiz

December's Monthly meeting has already happened. Only five people made it this month, four of which on a single team, being asked quiz questions by the fifth (Howard)!

Howard will lead **January's** Monthly Meeting, which will be "**all about wax moth**", the two different types, their lifecycles and the damage they can do. This will take place on **12th January** at **11:00** at **Fairley Junior School Hall** (218 Lambeth Rd, Lambeth, SE1 7JY). As usual, there will be tea, coffee and chat afterwards.

Attendance has been low in recent month. If you have any feedback about why this might be and whether we need to consider doing something different, please contact us.

Natalie's pub pick

We'll be having a break from the Pub Social this month, though I suspect many of us will still manage to drink something this month. . .

Introductory Beekeeping Courses and Taster Sessions

Dates for LBKA's renowned whole-weekend Beekeeping Introductory Courses for 2020 have now been confirmed, and these will be held on Saturday and Sunday 18-19 April, and repeated on 2-3 May – both at St Paul's Church Hall in Clapham. These courses will introduce those keen on taking up beekeeping to the highs and lows of the hobby, and include visits to two different hives over the weekend (weather permitting), and the £150 fee will include membership of the Association for a year, copies of presentations, information about equipment, and will include being mentored for the remainder of the season at a more experienced beekeeper's hives, hopefully fairly local to you.

There are a total of 30 places on each Introductory Course weekend, and they always prove very popular, so if you are keen to take up this fascinating hobby, make sure you reserve your place on one of these weekends soon.

If your interest is more to learn about the honeybee and its importance in the world of pollination, rather than the practicalities of beekeeping itself, we will also be running four half-day "A taste of the world of the Honey Bee" sessions with 20 places each, also at St Paul's and involving a visit to a hive, two on Saturday 30th May, and two on Sunday 5th July.

Possible Beekeeping opportunity at the Science Museum

The Science Museum has been in touch with LBKA because they want to start a "Bee Club" and keep bees on the roof of the Museum. Simon has taken them through the LBKA "Bees and Flowers go together" storyline, and shared our guidelines for Responsible Urban Beekeeping and for Keeping Bees at a Place of Work.

They have now issued an Invitation to Quote to LBKA for the provision of 2 hives on their roof, plus the services of a beekeeper for a year. After some discussion, the Committee has opted to offer this opportunity to experienced members (BBKA Bee Basic Assessment qualifies as a minimum). If you are interested, please get in touch with Simon Saville ASAP at development@lbka.org.uk and 07572 612722. Note the deadline for the quote is Monday 20th December.

Microscopy Course

There are still places left on our microscopy course (free to members). This will be held at Walworth Garden Farm at 18:30 to 20:30 on three Tuesdays on 14th, 21st and 28th January. If interested please email education@lbka.org.uk as soon as possible. The course is open to all lbka members regardless of beekeeping experience.

BBKA Module 1 preparation

We are running a course to help members prepare for the BBKA Module 1 examination which covers Honey

Bee Management and a natural progression from the Basic syllabus.

These will be held at at Walworth Garden Farm at 18:30 to 20:30 on three Tuesdays on 4th, 11th and 18th February.

Material has already been sent to those who have expressed their willingness to take this valuable examination. If anyone else wishes to join will they please let Howard know as soon as possible on education@lbka.org.uk, as it requires some reading which will be sent to you.

Old announcements from November

Check our previous newsletters or contact services@lbka.org.uk for more details.

2020 dates for volunteers' diaries: beekeeping courses and taster sessions will be held over the weekends of 18-19 April and 2-3 May, and on 30th May and 5th July in Clapham, and the Lambeth Country Show ? LBKA?s main publicity effort of the year - will take place on 18-19 July 2020 in Brockwell Park, Lambeth.

Membership renewals: our membership year has ended, so you will need to renew your membership if you wish to continue being a member of LBKA. Contact Aidan at services@lbka.org.uk if you need help rejoining.

Register your bees: please remember to update your apiary records on BeeBase; here's why.

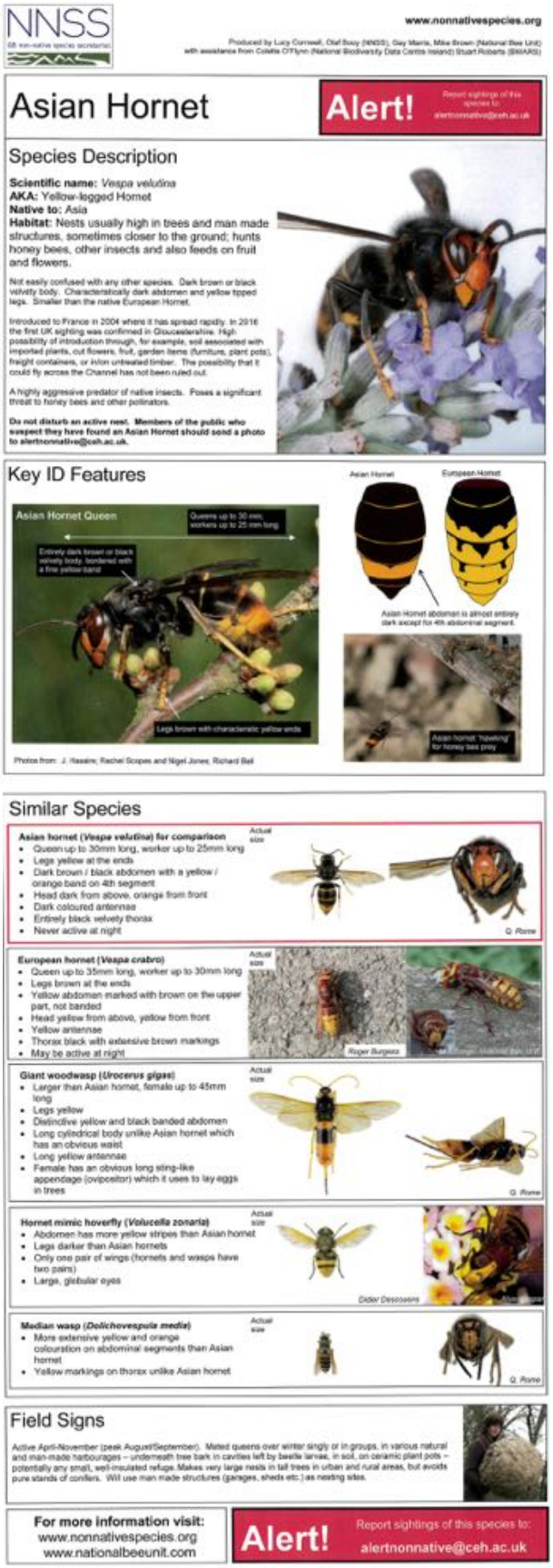
Register for BBKA Basic Assessment preparation: we encourage members to do the BBKA Basic Assessment. It is fairly straightforward (see syllabus). We will help you prepare by running a revision course in the spring, likely to last for 3 evenings (2 hours per evening). If you have been managing bees for at least 12 months and wish to take this assessment please confirm by email to education@lbka.org.uk, no obligation.

Old announcements from October

LBKA wins award for its championing of bees: delighted to have won a DEFRA Bees Needs Champions Award as part of the Year of Green Action.

Thanks for bee suit donations: We thank Partizan and adam&eveDDB for donating 5 beesuits to us.

Mark McDonnell has joined the committee: We welcome Mark McDonnell, our newest committee member, who has taken on the role of Resources Officer (resources@lbka.org.uk) responsible for managing our equipment).



Asian Hornet Identification leaflet. Source: BBKA website.

Old announcements from September

Research on beekeeping practice: contact Tom Moody (tom.moody@chch.ox.ac.uk) if you'd like to take part in his research.

Old announcements from August

BBKA exam success. Frank Ryan passed the BBKA Module 2 examination and Robin Yearwood passed the BBKA Module 3 examination. Mark Patterson passed the BBKA General Husbandry. Well done all!

Old announcements from July

Congratulations to **Andrew Slade, Alison Kings, Adela Vavrecka, Annie McGeoch, Kathy Jo Stevenson, Raphael Larizza, Jeremy Rosie and Rosemary Danielian** for passing their BBKA Basic Assessment.

Do you have any announcements?

If you've any announcements for the next issue of LBKA News, please send to Aidan at services@lbka.org.uk.

More bees on roofs?

Does London need more bees of roofs?

Simon Saville
development@lbka.org.uk

Interest from companies in London wanting to keep bees on the roof of their offices shows no sign of abating. In the last couple of months alone we have had discussions with University College London (Astor Building in Charlotte Street), Facebook (offices in Fitzrovia and King's Cross), Red Carnation Hotels (central London), Science Museum, and Warner Brothers / Aramark (Holborn)

Usually this is part of a Corporate Social Responsibility agenda and has bottom-up support from staff. Clearly, people are fascinated by bees, and they often want to "do something to help the bees in London".

We are not in the business of telling companies what to do – or not do – so our aim is to make sure that their decisions are informed by data and by the experience of others in London.

Our first message is that honeybees are doing well in much of London – the number of registered colonies has tripled in recent years. However, in parts of London there are more than 50 registered colonies per km^2, some in built environments where availability of local forage and the risks of disease spreading are concerns for bee welfare.

Wild bees, on the other hand, are struggling (like many other invertebrates), largely due to a lack of suitable habitat. We have data to show a high concentration of registered hives in central London, but a relative lack of good quality forage for bees. We encapsulate this in the phrase "bees and flowers go together".

Despite good work by many boroughs to manage London's parks for wildlife, green space in London is being lost at a rate of $2\frac{1}{2}$ Hyde Parks per year. So the best way that companies in London can help wildlife is to create more "good quality" green spaces. This could be revised planting plans around their offices, a green roof, or supporting local projects that are developing green spaces. The people we have spoken to are surprised by how much pollen and nectar a honeybee colony needs to survive through the year. If you've been on one of the excellent LBKA courses, you know that this is 50kg pollen and 150-300kg nectar (a bath tub full) – without producing any excess honey.

Our second message is that, if they do keep bees, they should follow our Guidelines for Responsible Urban Beekeeping and for Keeping Bees at a Place of Work. Among other things, these say that there should be a team of at least three people, led by a qualified beekeeper, and that they should: keep nice bees, practice swarm control, and carry out integrated pest and disease management. With a high density of colonies in central London, disease management is especially important. We point out the need for contingency planning should they suffer an outbreak of foul brood: incinerating frames in a fire pit is not possible on a roof, for example!

In light of this information, some companies have decided not to keep bees, but to explore other ways of helping wildlife. We are able to point them to information on our website and to hand out our excellent leaflets. All our discussions have been friendly and constructive, and we are building up a good network of contacts in companies that are interested in helping wildlife in London.

Although this work does not involve keeping bees, it fits squarely with LBKA's mission: better beekeeping; better public understanding of bees; and a better environment for bees and Londoners.

December in the Apiary

Where we should be with our colonies at this time of year.

Howard Nichols
education@lbka.org.uk

December is a quiet time for beekeepers, but an eye must still be kept on the apiary. Most items detailed in the November newsletter still apply but are not repeated here.

Varroa treatment

Varroa treatment with Api-Bioxal (Oxalic Acid) is the main task. Oxalic acid only deals with mites on the adult bees and so must be applied when the colony is broodless or virtually broodless. Late December or early January is the usual time for treatment. I expect to treat about Mid December. Also, research shows that if treatment is left to mid January or beyond then the rate of colony build up going into early Spring is unduly set back. Although it is referred to as a "soft varroacide" this is a little misleading. It is a strong chemical and manufacturer's instructions should always be followed. Misapplication can be harmful to the bees and/or beekeeper so please carefully dispose of unused contents after use. Finally, we should treat all colonies in the apiary at the same time.

Woodpeckers

Woodpeckers may be a problem. It is the green woodpecker, Picus viridis, which is the main culprit. As the ground becomes harder due to the cold they find it more difficult to dig for insects and can turn their attention to a beehive. There are at least 3 options available to the beekeeper if the woodpecker becomes a pest.

- Surround the hive with chicken wire, making sure that the bird cannot get a grip on the wood of the hive through the wire. Usual option.
- Cover the hive with a large bin liner, polythene bag or sacking but ensuring the bees can come and go. This may interfere with colony ventilation.
- Keep the hive in the type of cage that fruit growers use on allotments, ensuring the holes in the netting are sufficient for the bees to easily pass through. This is a rather excessive approach but the apiary surround is occasionally altered this way.

Mouseguards

Check behind the mouseguards for a build up of dead bees, etc.

Water

Ensure there is a water supply close to the colony. Bees become immobilised and die when the body temperature falls to or below 7°C. They will make quick flights at outside temperatures below 7°C for toilet purposes or to bring in water. They do this by warming their bodies up beforehand then making a dash for it and returning to the hive before they cool down. This is a hazardous occupation for a bee and the nearer the water supply the better.

Moving the colony

If it is essential to move the colony less than 3 miles then winter is the preferred time. It is better to do this when the weather is forecast to remain cold for at least a week.

Education

Winter is a good time to read your bee books. Even better is to download the Basic syllabus from the BBKA website with a view to taking the exam next summer. Winter reading is a useful beekeeping bridge between seasons.

Keep an eye on the apiary

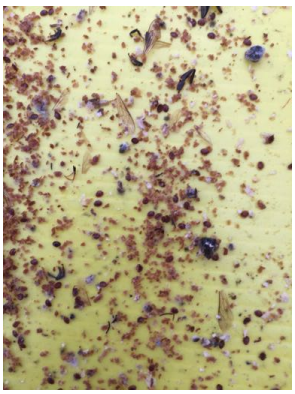
Check that nothing is amiss, roofs in situ, etc.

Review the year

What have I got right? What mistakes have I made? How will I approach my beekeeping next spring in the light of this review?

Keep in touch

Finally, keep in touch with other LBKA members. We continue our monthly meetings on the 2nd Sunday of each month and all are welcome. We now have monthly social meetings which are held in a different pub each month around the London area and details are on our website. You can also join our WhatsApp Bee Banter group or our Facebook page. The latter is moderated with a light touch only so please do remember to be respectful to all other users. We post and share our failures as well as successes. Many members find this both a useful beekeeping resource and social outlet.




Left: Geoff estimates a 200-300 mite drop after winter treatment, even though the hive was treated in summer. Right: natural drop from one of Mark's hive. It was treated in summer and this is the natural drop before oxalic acid treatment.

Varroa Treatment Banter

What members are asking and doing about varroa treatment on the "Bee Banter" Whatsapp group.

Aidan Slingsby
service@lbka.org.uk

Late December and early January is the time when beekeepers do their winter oxalic acid-based treatments for varroa. At this time of year, bees are more likely to be broodless, and this is a necessary condition for the effectiveness of the treatment. We recommend that everyone treats their bees with oxalic acid at this time of year, unless you have very small colonies.

A few years ago, ApiBioxal entered the market as approved treatment against varroa, so it is now illegal to do this treatment with unapproved treatments, which included generic oxalic acid crystals. Oxalic acid is a dangerous substance that must only be handled with the necessarily protective clothing and equipment.

Oxalic acid can be applied in one or two ways: **trickled** along the seams (spaces between framres) or **through sublimation** in which the crystals are heat-vaporised underneath (with gas or electricity) the hive so that the fumes fill the hive. The latter method is considered to be the more effective, but it is more dangerous for the beekeeper. In both cases, it is necessary to wear projective gloves, but sublimation necessitates wearing the the correct type of mask.

For sublimation, the mask should offer "P3" protection and contains a filter that filters out organic vapour/particulates. Something like this is suitable, but if in doubt, ask the supplier whether it's suitable for vaporising oxalic acid. Normal dust masks are not

Geoff in his mask

Geoff measuring out the ApiBioxal (approved oxalic acid treatment) crystals in the sublimator. This is heated by passing an electric current through from a car battery.

The sublimator gets hot!

Sublimation in action.

suitable. It should not be possible to smell through the filter.

Geoff Hood posted some pictures from his treatment.

LBKA has been using the teaching apiaries to demonstrate the three different ways of applying oxalic acid (trickled, gas sublimation and electric sublimation) as part of an integrated veroa management strategy. Richard demonstrated the trickle method and between us we demonstrated the vaporisation method using electric and gas sources of heat.

There has been interesting discussion with members who attended gave no unanimous preference but Tristram summarise his own scorecard on the different methods:

	Cost	Open hive	Ease	Health	Effective
Trickle					
Vapour (elec)					
Vapour (gas)					

LBKA plans to treat the Mudshute apiary early in the new year so there will be another opportunity for members to see the different methods in practice. In the following year, we plan to make greater use of our teaching apiaries and would welcome suggestions from members. What procedures would you like to see demonstrated and discussed at our teaching apiaries?

There have been various offers on the Bee Banter Whatsapp group to demonstrate how to use oxalic acid sublimation for treating varroa. Do take advantage of these opportunities. We highly recommend that you first do it with someone who knows what they are doing.

If in doubt, use the safer trickle-method as this is safer and requires less equipment. As Natalie quipped, "all I want for Christmas is adequate lung function".

The Bees that make Christmas

As Christmas approaches and people across the world busy themselves with buying presents, and preparing for the all-important Christmas day feast, let's take a look at some of the food that bees help make possible. If it looks familiar, that's because we've reprinted it a few times.

Mark Patterson
forage@lbka.org.uk

The Christmas Wreath

Christmas wreaths predate Christmas and Christianity by several thousand years. Originally ancient Britons and other northern Europeans would have made loose hanging wreaths (basically just a bundle of greenery tied at the top and hung from the walls of their home) as a means to ward off winter spirits. It is only later with the rise of the Christian churches that wreaths adopted a circular shape mirroring the crown of Christ. Our ancestors believed that evergreen plants were magical because unlike other plants they didn't die back and shed their leaves in winter. Additionally many evergreen plants like **holly** produce long lasting berries which were a symbol of life and fertility. Plants like **ivy** whose berries persist long into winter as well as being evergreen climb and entwine representing matrimony and togetherness. Strongly scented sprigs of conifer would have hidden the foul odours of winter (no fridges back then, so perishable foods would not last long even when dried and salted and would produce a pungent smell)

Key items used in wreaths include holly (*Ilex aquifolium*) which is pollinated by honeybees as well as Andrena mining bees whose short tongues are well equipped to manipulate the strongly scented but visually insignificant flowers. Ivy flowers are pollinated by a wide variety of insects and are a valued autumn forage source, but it has its own special pollinator, the Ivy Mining Bee (*Colletes hedera*) which only collects pollen from ivy and times its emergence to the opening of the ivy flowers.

Christmas candles

Candles bring warmth and festivity to the home at Christmas. It's not just the wax used to make candles which comes from bees, Christmas candles are often scented with festive spices such as **vanilla**, **frankincense** and **myrrh**. Vanilla comes from the pod of a tropical climbing orchid and is pollinated by stingless Meliponini bees whilst frankincense and myrrh are both derived from the resin of exotic trees native to the horn of Africa. These trees are insect pollinated and visited by bees.

Turkey

You may be surprised to learn that turkeys need the assistance of bees to even exist. turkeys in the wild are omnivores feeding on a variety of seeds, fruits and invertebrates which exist in a natural food web reliant on bees and other insect pollinators to assist plants at the base of the food chains.

Domestic turkeys live on large farms and are fed on a ration of poultry pellets made up predominantly of **maize**, **wheat** and other **cereals**. These pellet foods also contain significant quantities of soya and or field peas as a source of protein. These are both legumes highly reliant on Megachile and Osmia bees for pollination. In addition free range turkeys will graze and forage on fields of flowering crops and among orchard fruit trees where they can peck at fallen apples. These crops are heavily reliant on honeybees, Andrena and Osmia bees for pollination.

The Stuffing

No turkey would be complete without stuffing.

Stuffing typically contains **onions**, **herbs** and **spices** all pollinated by bees.

The Onion Yellow Faced Bee (*Hylaeus punctulatissimus*) collects its pollen exclusively from onions. Still common in parts of continental Europe this species is sadly thought to now be extinct in the UK. London appeared to be the species' last stronghold in the UK prior to its extinction and the last specimen was seen foraging on cultivated onions in a Chelsea garden in 1827. In the US a small mining bee called *Andrena prunorum* is one of the most efficient pollinators of commercially farmed onions.

Roast Carrot and Parsnips

As root crops, these vegetables don't require pollination for us to enjoy the vegetable itself but pollination by bees is required for the seed growers to produce seed each year to provide to the growers. Parsnips are pollinated by many small solitary bees from Andrena, Colletes, Hylaeus, Nomada and Lassioglossum species. Hoverflies and pollinating beetles also play a significant role in pollinating these vegetables. Larger pollinators like honeybees and bumblebees are poor pollinators of these crops. Carrots such as parsnip are visited by a variety of small solitary bees but also have their own special pollinator: the Carrot Mining Bee (*Andrena nitidiuscula*) which is solely reliant on carrot for pollen to feed its offspring.

The Roast Potato

The humble **spud** has been a winter staple in the UK since the late 1600s when the Spanish brought it to Europe from the Andes. It is the world's fourth most eaten foodstuff. Potatoes roasted in goose fat have become a Christmas tradition. The part of the plant we eat is the tuberous root and not a pollinated fruit as with other Solanum crops but bees are necessary to breed new varieties of potato. Potatoes belong to the Solanum family and have flowers bearing cylindrical pollen-holding apparatus which very few bees can access. In order for the flowers to shed their pollen they must be sonically vibrated at a specific frequency. Bumblebees and a select few solitary bees have evolved the ability to do just this by revving their flight muscle to vibrate their bodies.

In the Americas, solitary *Anthophorula* and *Exomalopsis* bees work alongside native bumblebees to pollinate wild Potato whilst elsewhere in the world commercially-reared Buff Tailed bumblebees are used to pollinate breeder plants.

Cherries

Cherries are an important ingredient in the traditional Christmas pudding and pollinated by a variety of bees including Andrena Mining bees, bumblebees and Mason Bees. The Red Mason Bee (*Osmia rufra*) is particularly important in the pollination of UK cherries. Honeybees are often used commercially to pollinate cherries but are not very efficient at pollinating early flowering varieties which often bloom when the temperatures are too cool for honeybees to venture far from their hives.

Christmas nut mix

Brazil nuts are pollinated by colourful Orchid Bees of the *Euglossini* genus. The females of these bees pollinate a variety of tropical plants as they collect pollen to feed their offspring. The males pollinate orchid flowers which they visit to collect scented secretions which they use to attract the females, hence their common name Orchid Bees. Only Euglossini and larger Carpenter bees of the *Xylocopa* species can access the flowers of Brazil nut trees as a robust body is needed to force entry into the tightly lipped flowers.

Almonds are pollinated by honeybees, bumblebees and Osmia Bees such as *Osmia cornuta*. Almonds are the single biggest export of the US state of California which grows over 90% of the world's crop, around 810,000 acres in vast orchards in the Central Valley. Each year 81 billion honeybees from 1.6 million hives pollinate over 2.5 Trillion Almond blooms in what is the largest insect migration on the planet. Beekeepers truck these bees from all across the United States on 6000 lorries.

Apples and Oranges

Ancient Britons gave sacrifices of apples and oranges around the time of the winter solstice. The ripe fruit were the colour of the sun and a symbol of the return

of spring and warmer weather which brought relief to the cold northern winters. It is traditional to hang dried apple and orange slices in the home around Christmas and they are used in mulled wine. Whilst honeybees are used to pollinate commercial apples by far the most efficient pollinator of apple trees is the Orchard Mason Bee (*Osmia lignaria*) which is so much more efficient at pollinating Apples that just 300 female bees can perform the pollination role of 90,000 honeybees.

Oranges are pollinated by a variety of bees and commercially are reliant largely on honey bees and bumblebees. Whilst some varieties of citrus are self-fertile and capable of pollinating themselves without bees, fruit set and yields are greatly improved by the presence of bees.

Christmas Sprouts

Leafy vegetables in the cabbage family which include Collard Greens, cauliflower, sprouts and broccoli feature heavily in Christmas feasts and are pollinated by a variety of insects including bees, beetles, hoverflies and lepidoptera. Though the parts of the plant we eat are not reliant on pollination, bees are required to produce seed from which the crop is grown. In the UK farmers often rely on managed honeybees for pollination but there are a number of solitary bees which are also efficient pollinators. Recent research suggests that wild bees and not honeybees are actually our most important pollinators of these crops.

Roast Chestnuts

The smell of chestnuts roasting on an open fire is a sure sign that winter and Christmas have arrived. Chestnuts can be boiled or roasted and are often used in stuffing mixtures. Many British bees visit the flowers which communicate to the bees by means of a visual colour change to the petals to inform the bees when the individual blooms have been pollinated and the nectar exhausted.

Cranberry

No turkey dinner is complete without cranberry sauce. Several species of wild bee are commercially important in the production of cranberries which are mostly grown in the northern USA and Canada. This fruit requires 'buzz pollination' which only a select few bees are capable of achieving. Among them The Rusty Patch Bumblebee (*Bombus afinis*) and the solitary bee (*Megachile addenda*) but it is the Cranberry Melitta bee (*Melitta Americana*) which is most important in the production of commercial Cranberries. The Cranberry Melitta feeds its offspring exclusively on cranberry pollen and is often the most numerous wild bee on large cranberry farms. Unlike the honeybees which are shipped in to pollinate cranberry fields these bees are flower-faithful and therefore are far more efficient at pollinating the cranberries. The honey bee is incapable of buzz pollination and inefficient at pollinating cranberries. When introduced to fields to pollinate cranberries the crop must be saturated with hives to make up for the inefficient pollination which can then push out the more efficient wild bees.

Positive Thinking

This month's edition of BBKA's "Positive thinking" newsletter. Find out the latest news in BBKA's world.

Margaret Wilson
BBKA Chair

December is here and we will soon have the darkest day, then start to move towards spring again, something to look forward to.

At Headquarters, it is a busy time getting everything ready for the official transfer from Charity to the CIO. Bank accounts, stationery, leases and contracts all need to be changed and of course on top of that there is the preparation for the ADM on the 11th January 2020. The office staff do all the preparations, printing and organising and all before the Christmas break as well.

In the period just after Christmas the builders will start the alterations at the office to put in new toilet facilities, although this is part of the Presidents Project for the Education Centre and apiary garden, it has also been needed as the current drainage system is sometimes rather putrid and the staff have certainly suffered from that on occasions. With any luck they will have working toilets for the first Exec Meetings on the 17th and 18th January 2020. The Garden project will be underway as well in February (weather permitting) so with luck by Spring there will be something to show.

With regards to the ADM, there are no contentious items in the propositions so I am hoping that means that we are managing to keep up with the members requirements, we certainly do try.

Our Insurance brokers will also be there to offer guidance on cover both through the BBKA and on individual insurance for your equipment so if you have any questions, ask your delegate to approach them and get an answer.

This ADM will be Margaret Murdin's final duty as President, she has faithfully served 8 years and has been instrumental with many of the changes for the better within the BBKA. It has sometimes been a rocky road and I have had the privilege of travelling part of that with her. Margaret will still be involved with the exam board, but she will be able to take a well-earned rest

from duties for the BBKA and perhaps have some time for her own family, garden and bees.

I hope you will all join me in wishing her nothing but the best in future years and hope she does keep in touch, her knowledge of the BBKA is fantastic and I am sure that she will allow us to call on her should the need arise.

There are no major activities to report this month so please have a lovely Christmas with love and laughter all around you.

Members' marketplace

This section is for members offering beekeeping items or services to members or requesting items. Items could include nucs, wax and honey. Email services@lbka.org.uk to add something here.

Emily Abbott: I run Hive & Keeper Ltd a company that sells single apiary/harvest honeys from small scale beekeepers around the country. Jars are labelled with the honey's main flavour, the name of the beekeeper and where the apiary is. Hive & Keeper currently works with about 30 keepers and your honey would be enjoyed by people across the country. Let me know if you have honey you want to sell, but don't want to jar and sell it yourself. We buy 30lb buckets (a minimum of 3). Check out http://www.hiveandkeeper.com/ or email emily@hiveandkeeper.com.

Upcoming events

Sunday 12th January: Monthly meeting: All about Wax Moth

11:00-13:00 at Fairley House Junior School, 218 Lambeth Rd, Lambeth, London, SE1 7JY

This month will be "All about Wax Moth" - the two different types, their lifecycles, the damage they can do, and a whole lot of other things. Followed by the usual hot drinks, cake and chat. Meetings are for members only, but you're welcome to come as a guest to find out more about our association.

Committee

Please do not hesitate to get in touch with a member of the committee if you have any questions, requests, suggestions. We are:

- **Chair:** Richard Glassborow, chair@lbka.org.uk
- **Treasurer:** David Hankins, treasurer@lbka.org.uk
- **Secretary:** Natalie Cotton, admin@lbka.org.uk
- **Education:** Howard Nichols education@lbka.org.uk
- **Membership:** Aidan Slingsby, services@lbka.org.uk
- **Apiaries:** Tristram Sutton, apiaries@lbka.org.uk
- **Development:** Simon Saville, development@lbka.org.uk
- **Mentoring:** Elliot Hodges, mentor@lbka.org.uk
- **Events:** Martin Hudson, events@lbka.org.uk
- **Resources:** Mark McDonnell, resources@lbka.org.uk

Our website is http://www.lbka.org.uk/ and the pictures are in the same order as the names above.