



The London Beekeepers' Association

LBKA News

December, 2016

Welcome to the last newsletter of 2016! This month, our Chair Richard uses his monthly piece to give advice to those thinking of starting beekeeping. Mark looks at bees' contribution to the Christmas dinner. We have a new committee and Natalie introduces herself as secretary. We have also now advertised our beekeeping course dates. For our regular features, Geoff writes about what happened last month, Eugene reviews Facebook, Howard tells us what we need to do with our bees. And Emily has been playing with an infrared camera.

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Thanks to this month's contributors: **Natalie Cotton, Eugene Fahy, Geoff Hood, Richard Glassborow, Howard Nichols, Mark Patterson, and Emily Scott.** Thanks to Martin Hudson for his proof-reading.

Please contact me if you would be willing to contribute to next month's newsletter.

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From our Chair

Richard Glassborow
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This is generally regarded as the quiet time of year for beekeepers – unless you have morphed into a honey sales-person, cashing in on the annual frenzy of shoppers looking for that Christmas present that is a little bit different without being too expensive. Natural London honey is perfect and a chance for us beekeepers to compensate for the not inconsiderable cost of annual consumables. But if you thought keeping bees and producing and bottling honey was hard work, do not underestimate how much work is involved in selling (anything).

But other beekeeping related things also happen in the “quiet” season. Under the general heading, “planning”, this is the time of year you contemplate how many colonies you have, how many you hope to get through the winter, how many you want to run during the next season, how you are going to manage them (based on what you have learned last season – excepting that it won't be the same next season) and how much equipment you are going to need, and when, to achieve that. If you are even thinking about any of this you are doing well.

I have been hearing recently from several members who are approaching all this for the first time, our trainee beekeepers who are thinking about getting their first colony. So I thought I would dedicate the main topic of this month's column to them and try to provide a basic framework for unpicking the plethora of decisions that have to be made when starting out as a beekeeper.

But I think we should start by sharing something every beekeeper knows, or should do: there are as many ways of beekeeping as there are beekeepers – and then there is the right way! In other words, the following is a guide, a checklist if you like of the things you will need to consider and probably go on to ask specific questions from an experienced beekeeper you feel you get on with before making your own decisions.

And by the way, plan as much as you like, but with your first colony you are going in at the deep end. But

fear not, the bees, at least, know what they are doing.

Decision one: Do I really want to keep bees? If you have been mentored by us you have seen what is involved, the space (for hives and stored equipment), the time cost, the seasonal commitment, etc. The skill and experience will come but do my circumstances and my lifestyle allow for this?

If you have got this far, I am assuming you have some notion of where you are going to put your first hive – somewhere secure, accessible, safe (for you, the bees and the public). Do make sure you are at least aware that while you plan one hive, in year two that may well be two. Many beekeepers consider it is easier to keep more than one hive in an apiary. But however many you have, you may at some point need space and equipment for double, even if only temporarily. Also, while it may be easy to carry empty boxes into your apiary, how will it be carrying heavy full supers out? But that is thinking ahead of the first step. Decision three: what kind of hive to go for? What is going to work best for the bees and the beekeeper? It is a question that also brings into play where you plan to get your bees from and what their characteristics are (claimed to be). For example, do they build up quickly to form big, prolific colonies?

In my opinion, probably the two most significant hive variables are, size of brood box (i.e. capacity of brood cells) and the prevalence of that type of hive amongst beekeepers in your area. While I would not recommend multiple brood boxes for the beginner, big colonies can be managed in small hives. In simplistic terms, you just keep adding more boxes as the colony expands.

The significance of the second variable may become clear if you imagine you inspect your bees one day in, let's say, mid May and you find everything full: full of brood, full of adults and full of honey; no space anywhere and there's a nectar flow on! Actually you are probably too late, they will almost certainly have switched into swarm mode already. Whether they have or haven't, you need more equipment – immediately. You go online to order more but that is what every other beekeeper is doing and there is a backlog of orders at the suppliers – earliest delivery, two weeks.

In this situation, having the same kit as everybody else is a real advantage. You can beg, borrow or buy what you need from the beekeeping community. There is a good chance someone will have what you need. If you are the odd one out, in future your spare bedroom will be full of spare equipment so you don't repeat the mistake (it probably will end up that way anyway).

National hives are almost certainly the most common in London though you do have a choice between the Standard National and the bigger, 14×12, which is equivalent to a brood box plus a half (or a super) again. Both have strengths and weaknesses but the balance does also depend on the bees. In your first year, starting with a nucleus hive of bees, growing out of the

space and swarming is less likely to be an issue. A standard brood box and two supers is probably going to be sufficient. As you get to know your bees and their requirements, assuming you get them to year two, you can decide whether to increase the brood box to 14×12 or rely on extra supers to manage space requirements.

Having sort of developed some idea of what kind of hive you are going to get, let's now look at four other variables that are inter-related: suppliers, quality, budget and whether you want to buy them ready made or flat packed for self assembly. The last of these depends entirely on whether you are willing and able to build your own. It can be a pain or a pleasure depending on who you are. Quality has two elements, the type of material, polystyrene, pine or cedar, and how well made they are. If you are a new urban beekeeper I would not start with polystyrene for the simple reason that it could, depending on your circumstances, be difficult to clean (large tank of washing soda or bleach is kept where?). Timber hives can be effectively and quickly sterilised with a blowtorch. Cedar lasts outside better than pine, especially if untreated or unpainted. Painting can look pretty but it is one more thing to do and, if you use multiple colours, contributes another variable to consider when manipulating equipment and bees (do workers get confused if the colour of their front door suddenly changes?)

Prices vary from supplier to supplier, and so can quality. I have seen some very low cost hives that are frankly, shoddy, and I wouldn't waste my time on them. Beware of buying cheap, you may end up buying often and spend more money, time and effort in the long run.

Because beekeeping requires you to buy some of the same equipment year after year, you tend to end up with overlaps in orders. This is particularly true of frames or frame parts. For this reason it is worth trying to find a supplier you are going to stay with so that you have a reasonable chance of reorders being compatible with stock still held. As well as quality and price, order response and delivery time will be an important consideration (unless you are extraordinarily well organised and your bees are uncharacteristically predictable). Asking around and not overcommitting on first order is a good way to go. That said, there are new suppliers coming in all the time and someone has to find out what they are like. Maybe not a new beekeeper?

Lastly, the other main purchase is going to be your bees. Again, asking fellow members is going to be the best way to find a reliable supplier. I am definitely not the best to ask as I have never bought bees! I was given my first nucleus colony and have subsequently supplemented with swarms, wild and artificial and splits. They are consequently of a truly local mongrel pedigree! But, after a bit of selection, they are calm, productive, healthy and generally not particularly swarmy. There is much to be said for local, well-adapted bees. They are worth considering and it is worth asking around

(and on Facebook) to see if any local, reliable beekeepers are considering selling colonies or splits in the spring.

It is not possible here to provide detail on how to set up as a new urban beekeeper but I hope this has provided some guidance as to the kind of questions you need to be asking. For detail, you can't do much better than putting your membership of the LBKA to use and asking as many fellow members how, what, where questions. The monthly meetings, second Sunday of every month, are a good place to start. And please let me know if you get the same answer more than once!

Announcements

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

Next Monthly Meeting

The newsletter was not ready in time to announce this month's Monthly Meeting, but members will have received an email about it.

January's Monthly Meeting will be on **Sunday 8th January** and will be about how to treat honey, with a demonstration of a warming cabinet and a description of the main elements of the Honey Regulations 2015. It will be in at the usual place and time of **Fairley House Junior School** (220 Lambeth Rd, SE1 7JY) at 11:00.

New committee

As a result of last month's AGM, we have a new committee.

New committee member **Natalie Cotton** has taken over the role of secretary from Emma, but Emma remains on the committee. **Elliot Hodges** has also joined the committee. Otherwise, the committee remains the same as last year. See the back page for the full list.

We had our first committee meeting a few weeks ago and have started planning association activities for the coming year.

Upcoming monthly meetings

Howard has designed an exciting programme of monthly meetings for us, with some old favourites and some entirely new topics, with some hands-on meetings. If there's anything else you'd like to see, just let us know.

- 8th January: Treatment of honey: demonstration of a warming cabinet and the main elements of Honey Regulations 2015.
- 12th February: Pollen identification: a practical session with microscopes and camera.
- 12th March: Swarm control and swarm collection
- 9th April: Microscopy/Nosema testing: practical session using microscopes.
- 14th May: Bee Health Day: full day
- 11th June: Making up nuclei
- 9th July: Biology of the honey bee
- 13th August: Honey labelling regulations and Summer Social: Walworth Garden Farm.
- 10th September: Preparation of bees for winter (subject to change)
- 8th October: Fumigation of equipment and hygiene matters
- 12th November: Properties of beeswax, wax extraction and rendering
- 10th December: Christmas quiz and social

These are also listed on our webpage: <http://lbka.org.uk/events.html>.

LBKA membership

The final email reminder went out to members whose membership has lapsed. If you want to continue being a member, you'll need to rejoin. If you need any help, just email Aidan on services@lbka.org.uk.

For those of you are that are members, don't forget that you can log onto the **members' area** at http://lbka.org.uk/members_area.html. There are various things you can see there, including details of other members if you and they have 'opted-in'.

We currently have 190 members.

Education matters

We still have 2 places left on the microscopy course in January. This is not limited to experienced beekeepers. It is equally accessible and enjoyable for new beekeepers.

Anyone who has kept or will have kept bees for 1 year by this time please consider registering for the BBKA Basic Assessment. At this stage it only requires you to send Howard (education@lbka.org.uk) your email address and he will send you electronic course notes for your perusal and winter reading. No further action is required at this stage.

Courses

We've just announced our beekeeping course dates for 2017!

Introduction to Beekeeping. This is our flagship full beekeeping weekend course which includes mentoring for the rest of the season and LBKA membership. This is for people who think they might like to keep

bess. We're running this course twice, on 22nd–23rd April and 6th–7th May. It costs £150. Places sell out quickly!

A Taste of Beekeeping. We will run a half-day course on 21 May. This is intended for those who are just interested in learning more about beekeeping. Those that want to keep bees should do our 2-day course. It costs £50.

To register your place on these courses, or get more information, go to <http://www.lbka.org.uk/courses.html>.

Surrey Bee Day

The Surrey Beekeepers Association are organising **Surrey Bee Day** at **Cobham Village Hall**, Lushington Drive, Cobham KT11 2LU, **10:00-17:00** on **Saturday 18th February**.

Speakers include **Tony Harris** ("Botany for Beekeepers"), **George Clouston** (Arnia, "Hive Monitoring, Benefits for Beekeepers and Bees") and **Mike & Julie Axford** ("Branding Your Product"). Research from **Elli Leadbeater's** team at RHUL includes **Callum Martin** ("Are commercial bumblebees needed for strawberry pollination in the UK?"), **Emily Bailes** ("Flower margins on farmland, a beneficial resource or a hotbed of disease?") and **Fabio Manfredini** ("Understanding the dance language of honeybees").

Tickets are £24 including lunch. **Please reserve a place** by emailing Sandra Rickwood on rickwoodsba@gmail.com, telephone Joan Johnson on 01932 873275 or post to Sandra Rickwood, 19 Kenwood Drive, Walton-on-Thames, Surrey. KT12 5AU. Cheques should be made payable to "Surrey Beekeepers Association" or to account number and sort code 00009321 and 40-52-40, with "SBD12" as the reference.

Old announcements from November

Check previous newsletters at <http://lbka.org.uk/newsletters.html> or contact services@lbka.org.uk for more details.

BBKA General Husbandry Assessment Preparation Training: BBKA are offering training to support people who plan to take the General Husbandry Assessment in the near future. For more information, contact Marin at manastassov@aol.com.

Awards: LBKA members including Geoff Hood, Sara Ward and John Chapple (former Chair) were amongst those that won prizes at the National Honey Show – <http://www.honeyshow.co.uk/files/2016/national-honey-show-results-2016.pdf>.

Old announcements from October

In the **London Honey Show**, congratulations to members Jo Hemesley, Martin Hudson, Nicki Marani, Paul Vagg and Vlad Zemfir for winning prizes.

Asian Hornet found in UK: See <http://www.nonnativespecies.org/alerts/index.cfm?id=4> and http://www.bbka.org.uk/news_and_events/press_office/press_releases.php for updates.

Finding a permanent home. Finding a permanent home is still high on the committee's agenda. If you can help and/or help provide legal advice, please contact services@lbka.org.uk.

Soap and wax produce courses: see <http://www.honeybeebeautiful.co.uk/store/c7/COURSES.html>.

Old announcements from September

Bees: For anyone with bees to sell, http://lbka.org.uk/swarm_list.html has a list of members looking for bees.

Thanks: A big thank you to our mentors: **Ann Eatwell, Richard Glassborow, Petros Hahladakis, Jon Harris, Cerys Harrow, Howard Nichols, Ted Parks, Mark Patterson, Emily Scott, Aidan Slingsby, Paul Vagg, Roger Wharf, Angela Woods** and **Vlad Zemfir**.

Billy Ashton: We are sad to report that Billy Ashton died very suddenly in mid-July.

Do you have any announcements?

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

Hello from Natalie

Our new Secretary – Natalie Cotton – introduces herself.

Natalie Cotton
admin@lbka.org.uk

I began keeping bees in my tiny garden in Queens Road Peckham eighteen months ago. It's been quite the learning curve, and throughout that time I've been both grateful for and impressed by the support provided by the LBKA. I realised early on that beekeeping was not a subject where you can ever say you've learnt everything,

so having more experienced beekeepers and a supportive Association seemed key to being a successful and safe hobby beekeeper.

I wanted to do my part to help the LBKA, so stood for the Committee this year. I volunteered for the role of Secretary as my experience in different types of business and charity is far more extensive than my present beekeeping experience, so I felt that was where I could be of most use!

My interest in bees stems from my beliefs in the importance of the natural world and in us adopting more sustainable environmental practices. As I've worked in communications and marketing for various organisations who have influence on London's built environment, I hope to be able to support the Committee in educating developers and government as to how they can help our pollinators. In my role as secretary, I also answer enquiries from the public and business, so am enjoying being able to encourage people to learn more about beekeeping and the importance of forage.

I look forward to meeting more of you at the monthly meetings and events throughout the year.

Out and About

As we are now we're a charity, we expect to be doing more outreach activities. Here, we summary what LBKA members have been doing in this regard. Please let us know if you want to get involved in some of these activities on behalf of LBKA. We can give advice, let you know about opportunities, perhaps some training and may even be able lend you props.

We can only report things if we know about them, so please send your activities to services@lbka.org.uk.

Mark Patterson and Tristram Sutton talked to city architects and urban designers at Ferrels in Paddington. Their presentation on bees needs aims to encourage urban landscape designers and architects to build a city environment with consideration to pollinators. Influencing the right people is so important if we want to make progress on improving the London environment for bees.

Richard and Mark attended a primary school's Christmas fair in Kingston, selling honey and doing a lot of outreach and education activities with visitors. Mark took along his virtual reality 360° in hive experience. This is a VR filmed inside a hive in Hoxton, managed by Mark for the Golden Company. When played in a handheld player or smart phone with a Google Cardboard Headset, the user gets a bee's-eye view of life in the hive. It's an emergence experience which can be



Mark Patterson talking to city architects and urban designers at Ferrels in Paddington.

used anywhere. You can purchase the Golden Company branded headsets from their stall at borough market for £14. They are a great outreach tool if your planning to give talks or visit a school.

You can watch the video at <https://youtu.be/0t1NrhRn30s>.

Last month's Monthly Meeting: Winter varroa treatment

What happened last month.

*Geoffrye Hood
LBKA (& BDBKA) member*

The November monthly meeting returned to Fairley House school after the previous monthly meeting's luxurious surroundings at the Lancaster Hotel. It was apparent that the school entrance doors had been replaced with brand new doors. This caused some confusion early on because as the new doors were self-closing... they of course closed. It took some time to notice the late-comers waiting outside, unable to come in.

Richard Glassborow opened the meeting and explained that it is recommended to use oxalic acid to treat for varroa when the nest is broodless in December and early January. This helps give your bees a clean start for spring build up. He explained that pre-prepared oxalic

liquids such as Trickle-2 supplied by Thorne and previously sold to members at November monthly meetings was no longer legal to be used on honeybees. It was explained that this also applies to other oxalic liquid treatment provided by other retail suppliers and also to homemade oxalic concoctions that have often been applied in the past.

Richard then went on to explain that the only oxalic treatment that is approved by the veterinary medicine Directorate currently is Apibioxal. The new treatment comes in a 35g packet of oxalic dihydrate powder which must be mixed with syrup to make a liquid that is used to treat the honeybees. It makes enough to treat at least 10 hives.

Trickle method

The method of mixing was discussed and explained. You first put 500g of white sugar in a container and add 500ml of hot water (not boiling) and agitate until the sugar is dissolved. This makes approximately 600ml of syrup. You then take 500ml of the syrup and add the 35g of oxalic in the packet and mix. Richard then explained that oxalic acid is quite corrosive so you must take precautions to protect your eyes, skin and lungs. This included wearing safety glasses, disposable vinyl or washing up gloves and a dust mask to prevent inhalation of crystals while mixing the Apibioxal with syrup.

The method and timing of applying Apibioxal was then discussed. Richard explained that for best results, the hive must be broodless and that this is more likely to occur in December or early January. A member asked what the efficiency was at killing varroa. After discussion it appeared to be 97% whereas Apiguard can be much lower if the weather is cold.

Richard then demonstrated on a dummy hive how to apply 5ml of prepared Apibioxal per seam of bees by using a plastic syringe. He pointed out that the maximum dose is 50ml per hive. A member asked how to treat brood and a half. It was agreed that the method was the same as a single box without taking off the super. The varroa drop needs to be monitored using an open mesh floor with monitoring board inserted. You must also keep records of treatment administered such as Apibioxal and Apiguard for inspection by the Seasonal Bee inspector. The Government's Veterinary Medicines Directorate requires records for all treatments added to a hive need to be kept for five years.

It was then explained that packet of Apibioxal and syringes would be one sale after the meeting but as the packets of Apibioxal and syringes on sale treats 10 hives, it would be best – if you had only one or two hives – to buddy up with another beekeeper, either at this meeting or through the LBKA member pages.



Geoff demonstrating application of bioxal by sublimation.

Sublimation method

Richard then invited Geoff Hood to show an alternative method of administering Apibioxal. Geoff's method is by sublimating the powdered Apibioxal and this required a special heater to heat the Apibioxal quickly to a high temperature. The oxalic dihydrate crystals in the Apibioxal then sublimates. Sublimation is when the solid crystal turn from solid to gas without going liquid. The oxalic gas as it cools then condenses not to a liquid but a very fine crystal in suspension in air.

The equipment used was shown which was, the sublimator (called a varrox), a bucket of water, wire wool, a one gram measuring spoon, heat baffle board, an Organic gas mask (you can use a high quality paint spray mask or disposable FFP3 Asbestos Mask if you'll be using for less than 40mins), goggles, old rags and cloths. He said that he also needed a 45amp car battery to power the sublimator but that the car battery was too heavy to carry to the meeting.

Geoff then proceeded to put on the Organic Gas mask to show how it fitted and how difficult it was to use talk while wearing it. At this point the meeting descended into laughter because Geoff talking through the mask sounded like he was talking as if he was underwater.

Having dispensed with a mask Geoff explained that you charge a bowl of of the sublimator wearing mask, gloves and goggles with 2.3g of apiboxal using the measuring spoon provided. Then you place the charged sublimator in the entrance of a solid floor hive so the bowl is in the middle of the hive and seal the entrance and feed holes with rags. If you have an open mesh floor hive you seal the hive entrance first, put in the monitoring board (with heat baffle board if it is Correx plastic monitoring board), place the sublimator in the rear of the

monitoring board so the bowl is in the middle of the hive. You then seal it in and seal any feed holes with rags.

The sublimator was now ready to use. Put your mask and goggles on, connect your sublimator to the car battery, and retire downwind (a must if your hive sealing is poor). After about a minute a white oxalic cloud drifts out of any leaks. You wait three minutes and disconnect the battery, you then wait 15 minutes until the gas has condensed then remove the sublimator and place it in a bucket of water to cool, you then clean any residue from the sublimator bowl? and then on to the next hive.

There was a short Q&A where Geoff answered questions and the meeting finished with the sale of Apibioxal and usual chats, networking and tea.

Annual General Meeting

28 members attended our Annual General Meeting last month. The Chairman reported about our state and activities over the last year, we held elections for a new committee, certificates were given out and there was some discussion about what we should do in the coming year.

Reports

Our chairman, Richard, gave a review of the past year. A few highlights follow.

Charity. We are now a charity. Thanks were conveyed to Tristram Sutton for his part in this achievement. The objects of our charity remain the same: promoting the craft of beekeeping, including education of its members and interested members of the general public.

Fundraising. Thanks to Mark, we have been successful at fundraising and we now have a range of corporate partners that support our projects and give us cash donations, tools and volunteers for projects. We are building up a track record of fundraising and action/projects that this money supports. Since we are looking for a new home that track record will be very valuable

Training. 60 people passed through two introduction to beekeeping courses this year and 51 people took up mentoring. 15 members took their Basic BBKA exam and passed this year. Thanks went to Howard for his work in giving people the support needed to pass

Leaflets. Our new leaflets are so successful we have been approached by other organisations who would like to use them!

Forage creation. We have organised four planting events in the last year, planting more than 2500 plants. We've also sold lots of seed packets this year, all more forage for bees once grown. In the last three years we've spent £22,500 on plants for forage schemes. This has led to 6,500 new individual plants in London

Elections

The list of candidates for officers and committee members had been submitted ahead of the AGM. The names of candidates for Trustees, Officers and Committee members was read out at the meeting and all were elected, unopposed, by the members present. There were no votes against and no abstentions.

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. However, one important task is needed and that is the application of Oxalic Acid some time in December.

Varroa treatment. Varroa treatment with 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. Mid to late December is the usual time for treatment. Mid January is regarded as leaving it very late and not recommended as the queen will be laying by that time. Also, administration does set the colony back a little and it needs time to recover before spring gets under way. Although referred to as a "soft varroacide" this is a little misleading. Misapplication can be harmful to the bees and/or beekeeper. This year we are unable to use the pre made up solutions. Instead, we must make up our own. It is a strong chemical and manufacturer's instructions should be followed explicitly and all safety precautions strictly adhered to. This is for beekeepers' safety (do not inhale the powder) as well as the safety of the bees. Please carefully dispose of unused contents after use.

Woodpeckers. Woodpeckers may start to be a problem, although this is usually January and February. 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.

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 7C. They will make quick flights at outside temperatures below 7C 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. 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 Assessment syllabus from the BBKA website with a view to taking the exam next Spring. 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? Rather than just let the bees react and me follow I do try to formulate a beekeeping plan for the following year. I know quite a few members did not harvest any honey this year so the plan could even be as simple as producing some honey. This may require some additional equipment and this is the cheapest time to buy.

The Bees that make Christmas

As Christmas approaches and people across the world busies itself with buying presents and preparations for the all-important Christmas day feast, let's take a look at some of the bees which make it all possible.

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 warn 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 and 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 punctulatisimus*) 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 has 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 Bumble Bee (*Bombus affinis*) 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.

Facebook (In)digest(ion)

Some of the highlights – and possibly lowlights – from LBKA's public facing Facebook page.

*Eugene Fahy
LBKA Member*

Perhaps in keeping with the level of activity in our apiaries, this has also been a comparatively quiet month on the Facebook group. Karin Alton of LASI reported that brood levels at the LASI apiaries were very low, averaging about 200 cells, so now would be a good time for oxalic acid treatment.

Reflecting the season, there were a number of Christmas themed postings, Angela Wood mentioned Bill Turnbull's Radio 4 Christmas appeal for the charity Bees for Development, Norman Carreck suggested "The behaviour and social life of honeybees", which has just been reprinted, as a Christmas present for beekeepers. He also posted a link to the latest edition of Bee World, a special issue devoted to bee breeding (<http://www.tandfonline.com/toc/tbee20/93/2?nav=tocList>).

A number of postings requesting information on introductory courses brought a reminder that registration for the LBKA courses opens soon. There were also a posts attempting to contact sellers of beeswax and

local London honey, the replies included one from the London Bee Collective (<http://www.bee-collective.co.uk/>).

Peter Charlton shared a video announcing that the Aldi grocery chain has gone fully organic and has banned pesticides. Geordy Mark shared a link to the results of FoE's Great British Bee Count 2016, commenting that as the results could not be independently verified, they were unlikely to be useful to researchers.

Markus Lay from Germany asked the group if there is an English equivalent of "Drohenschlacht" which describes the event "when worker bees kick out the drones in late summer". Despite some amusing comments, the most concise suggestion of "drone eviction" came from Jon Harris.

Gary Fawsett posted a link to a podcast with Joe Lewis, who writes for the American Bee Journal, on queen rearing, splitting colonies and creating nucs. The US honeybee census shows annual losses of 36% of bees but on the other hand, there has been an annual colony increase of 40% due to the work of beekeepers. Joe talks about the Beekeeping 357 method; three essentials (control varroa, re-queen, feed if necessary), keep five hives (minimum) and make seven nucs. There is also a link to a queen rearing calendar wheel at http://susquehannabeekeepers.com/pdfs/Queen_Rearing_Calendar_Wheel.pdf

Adventures in Beeland: Getting our bees winter-ready

Another guest post from Emily's excellent blog – <http://adventuresinbeeland.com/>.

*Emily Scott
LBKA member*

Last week Emma and I met up to check on our two hives. It was a warm day for November and we wanted to make sure our larger colony was set up well for winter, with not too much empty space which the bees might struggle to heat.

Here's Emma glowing as she lights up the smoker. Particularly toasty feet – she had two pairs of socks on!

We had been considering removing the super and overwintering the bees on a single brood box, but we found they were covering several frames in the super and appeared to be using the honey. So instead we made up



Emma with FLIR camera.

some insulated frames to place either end of the super, which should help keep them cosy. They also have plenty of silver foil thermal insulation sheets in the top of the hive (the kind you buy in rolls to help insulate lofts and walls).



Below is a FLIR thermal camera image of our polystyrene nuc. Inside the bees are doing great, they are covering all the frames and were bringing back two colours of pollen, dark and light yellow. I expect one is ivy but am unsure what the other might be.



I am skeptical about how exact that 11.4°C reading is, as I would expect the colony to have brood, with frames

containing brood kept nearer 34-35°C by the bees. I also took a photo of a empty hive and found the camera read a similar temperature of around 9°C! Philip over at the Mud Songs beekeeping blog has a useful post on Beekeeping With a "Flir One for Android", with links to tutorials in the comments. I wish I had more time to investigate the software, but everyday life with Tommy is pretty full-on.

Look how much extra comb the nucleus bees have been busy building along the top of the glass. We have left them some fondant in the feeder hole.



Mouseguards are on now. The next thing to do will be oxalic acid treatment in December. Now that the law has changed, this should be done with Api-Bioxal. Annoying as it is a bit more expensive and doesn't come ready-mixed.

Best of luck to everyone over-wintering your bees.

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.

Giovanni Zintu: I'm looking for a honey frame display case or box if anybody has one to borrow, rent or sell if at a good price. This is to be used for a display at a market stall. I'm looking for a size that will fit either a super or brood frame. Or does anyone have a suggestion on where to obtain one apart from buying from Thorne?

Meetal Patel: Looking for bulk quantities of (preferably unjarred) honey from in/around the London area.

This will be used for either onward jarring or to use to brew as part of my honey beer project, where my own hives are no longer sufficient. Happy to answer questions if it helps! Contact meetal_patel@hotmail.com.

Upcoming events

Sunday 8th January: Monthly meeting: Treating honey

11:00-13:00 at Fairley House Junior School, 220 Lambeth Rd, London SE1 7JY

How to treat honey, with a demonstration of a warming cabinet and a description of the main elements of the Honey Regulations 2015. 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
- **Forage:** Mark Patterson, forage@lbka.org.uk
- **Events:** Emily Abbott, events@lbka.org.uk
- **Mentoring:** Tristram Sutton, mentoring@lbka.org.uk
- **Vlad:** Vlad Zamfir, vlad.zamfir@lbka.org.uk
- **Emma:** Emma Nye, emma.nye@lbka.org.uk
- **Elliot:** Elliot Hodges, elliott.hodges@lbka.org.uk

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

