



The London Beekeepers' Association

LBKA News

July, 2019

Welcome to July's newsletter! In the newsletter this month, more success for our members passing the BBKA Basic Assessment (p9), a call for volunteers for the Lambeth Country Show, and make sure you put **Sunday 18th August** into your diaries for our **Summer Social**. So also come and see our stall at the Lambeth Country show on 20th-21st July.

This month, as well as the usual columns, Geoff tells us about the BBKA Basic Assessment from an assessor's point of view (p13) and we have part 1 of an article from Mark's blog (p17) on bee nutrition and foraging.

From our Chair	1
Announcements	2
July's Committee meeting	5
Last month's Monthly Meeting	6
LBKA at Beckenham Park	8
BBKA 2019 Basic Assessments	9
July in the Apiary	10
Focus on Forage	11
Confessions of an Assessor	13
Positive Thinking	16
Guest Blog	17
Members' marketplace	20
Upcoming events	20
Committee	21

A big thank you to this month's contributors: **Paul Connelly, Richard Glassborow, David Hankins, Geog Hood, Martin Hudson, John Kembury, Martin Kunz, Howard Nichols, Mark Patterson, and Margaret Wilson**. Thanks to **Martin Hudson** for proof-reading it. Would you like to join these esteemed contributors? If so, contact me.

Happy beekeeping.

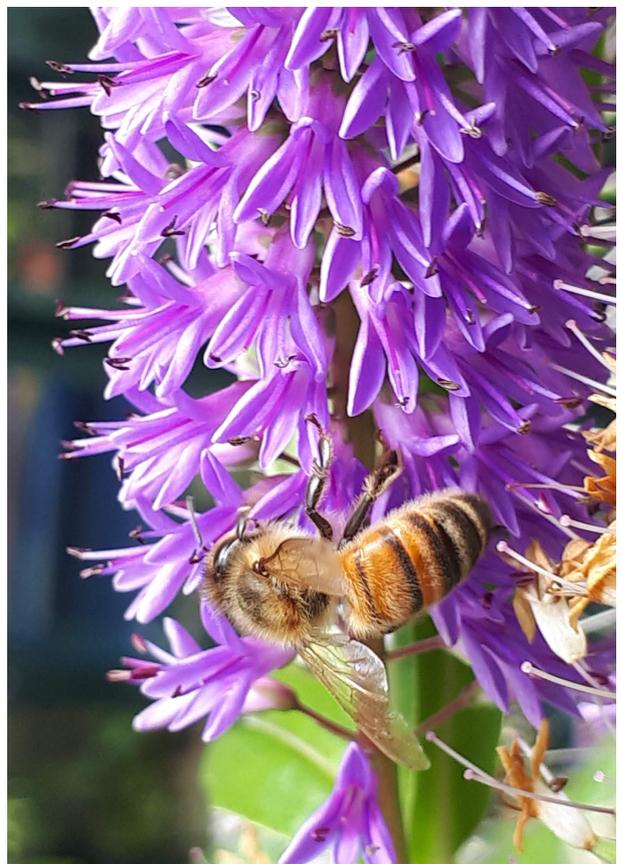
Aidan Slingsby, Editor, services@lbka.org.uk

From our Chair

Richard Glassborow
chair@lbka.org.uk

Amongst the many interesting discussion threads on our Bee Banter and Swarm WhatsApp groups in recent weeks, three touched on areas that showed a degree of controversy: the number of honey bees in London, the locations and circumstances in which some are kept, and the use of queen clipping in swarm prevention and control.

Firstly, I hope we like LBKA to be a place where different views can be shared and that we can behave with respect for all members even where we don't necessarily agree with some of their views. In such a culture, big differences can sometimes have more positive influence on each other than one in which views are irreconcilably polarised and compete to "win".



Honey bee on hebe flowers. Photo: Aidan Slingsby.

Secondly, I suggest that, for all members of a beekeeping persuasion, the above issues have existential potential. With over 5,000 registered colonies, a thought-to-be significant number of unregistered colonies, and, indicatively, a significant number of feral colonies in a heavily populated urban environment with variable availability of forage and habitat, there is clearly potential for something to “go wrong”. The consequences could range anywhere on a spectrum from loss of public interest and support to media and political hysteria and draconian legislation. In some cities beekeeping is banned.

Some aspects of beekeeping in London are a concern but, recognising we are where we are, LBKA tries to adopt a positive strategy to influence change to more balanced, evidence based practices in London. We have a clear “position” promoting better beekeeping, better public understanding of bees, and better environment for bees and Londoners. We do not interpret our data as, “there are too many bees”, we say, “there are not enough flowers” (of the right kind).

By “bees”, we mean all bees, and, when speaking to anyone who will listen – public, schools, corporates, government, etc. – we make it clear that “bees” extends to all pollinators – beetles, butterflies, moths, flies, etc. We promote our “Bees and Flowers go together” message and we argue that an environment good for all these is good for Londoners too. When we take bees into schools we present them as a window onto the natural world.

The objective is to develop an ethos of responsible urban beekeeping and if something unfortunate does happen and the balloon goes up we hope we can demonstrate wider public benefits from urban beekeeping as well as social responsibility and that LBKA will be in a position of influence if it comes to regulation.

Hopefully, this is a context in which we can continue to discuss different practices towards shared goals.

Announcements

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

July Monthly Meeting: Forage (and undesirable nectars)

We’re back to normality on **Sunday 14th July**, with our Monthly Meeting at the usual place (Farley House Junior School, 218 Lambeth Rd, Lambeth, [SE1 7JY](#)) at the usual time (11:00-13:00). We will learn about forage and some of the less desirable nectars that bees



The venue for our monthly meeting – the white door on the left.

choose to collect. Followed by the usual hot drinks, cake and chat.

August’s Monthly meeting will be **a week later than usual** (18th August), will be back at **Walworth Garden**, will be on the subject of **wax processing** and will be followed by our **Summer Social** – see below.

See [our webpage](#) for upcoming meetings and events.

Summer Social

Our **Summer Social** will follow August’s Monthly meeting on **Sunday 18th August**, our social highlight of the year, with excellent food, drink and company. It will be for LBKA members and their friends and family and this year, we will be selling tickets to help pay the event (which will be subsidised by LBKA). So put the date into your diaries and look out for an e-mail about how to get your tickets. We will send this nearer the time.

Our usual caterers not available for this day and we are still searching for a replacement (which is why details are scant at the moment). If anyone has any suggestions of an alternative and good caterer, please contact treasurer@lbka.org.uk.

Natalie’s pub pick

The Pub Social will be heading back south of the river on **Tuesday 30th July**, from 18:30...and back to the [Trinity Arms](#) (45 Trinity Gardens, Brixton, [SW9 8DR](#)), a beautifully refurbished pub on a quiet residential square between Brixton and Clapham North.

Volunteers Needed: Lambeth Country Show on 20th & 21st July

Come and support LBKA at our amazing new stall at the big Lambeth Country Show on Saturday and Sunday 20th & 21st July – Brockwell Park, Lambeth, and while you’re at it, enjoy this amazing Show as well.

The Show is open on both Saturday and Sunday from noon until 8pm. We will be showing our observation

hive, selling members' honey, candle-rolling, and talking to any of the 100,000 punters about our favourite hobby, and the importance of bees in our environment.

LBKA will provide drinks and refreshments (including lunch and snacks from neighbouring stalls) to volunteers while they are on our stall and, provided there are enough helpers, volunteers will be able to take breaks during their sessions. We will issue you with an accredited wristband while you are on duty on our stall.

You are advised to travel to the Show by public transport because there will be very limited car parking available in the area. Brixton is the nearest Underground station, about a mile's walk or short bus ride to the Park. Herne Hill National Rail station is the nearest, but the Park is also reachable from North Dulwich or Tulse Hill rail stations. Bus routes 2, 3, 37, 68, 196, 322, 432, 468, 690 all serve the area.

Martin has arranged six four-hour 'sessions' for you to sign up to. They are:

- A Fri 19th 17:00–18.30 Setting up
- B Sat 20th 11:30–15:30 Early Saturday
- C Sat 20th 15:30–20:15 Late Saturday
- D Sun 21st 11:30–15:30 Early Sunday
- E Sun 21st 15:30–19:30 Late Sunday
- F Sun 21st 19:30–21:00 Pack-up

Please e-mail Martin at events@lbka.org.uk and tell him which of these sessions you would be able to cover. He will then send you details of the exact location of our stall, any other information, and confirm the session(s) that you have signed up to. It would help if you could also give him a mobile contact number as well.

Thank you in advance for your offers of help!

Congratulations

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. See Howard's writeup on page 9.

Extractors

We have extractors which can be hired by members. We charge £10 to hire for up to 3 days and we ask for a £20 deposit (which you'll lose if you don't bring the extractor back clean).

St John's Church (W10) looking for a beekeeper

The local vicar at St John's Church (W10) is interested in a beekeeper keeping bees at the Church. Contact services@lbka.org.uk for the contact details.



www.nonnativespecies.org
Produced by Lucy Cornwell, Olaf Booy (NNESS), Gay Marrs, Mike Brown (National Bee Unit) with assistance from Colette O'Flynn (National Biodiversity Data Centre Ireland) Stuart Roberts (BWMNS)

Alert!

Report sightings of this species to: alertnonnative@ceh.ac.uk

Asian Hornet

Species Description

Scientific name: *Vespa velutina*
AKA: Yellow-legged Hornet
Native to: Asia
Habitat: Nests usually high in trees and man made structures, sometimes closer to the ground; hunts honey bees, other insects and also feeds on fruit and flowers.

Not easily confused with any other species. Dark brown or black velvety body. Characteristically dark abdomen and yellow tipped legs. Smaller than the native European Hornet.

Introduced to France in 2004 where it has spread rapidly. In 2016 the first UK sighting was confirmed in Gloucestershire. High possibility of introduction through, for example, soil associated with imported plants, cut flowers, fruit, garden items (furniture, plant pots), freight containers, or in/on untreated timber. The possibility that it could fly across the Channel has not been ruled out.

A highly aggressive predator of native insects. Posses a significant threat to honey bees and other pollinators.

Do not disturb an active nest. Members of the public who suspect they have found an Asian Hornet should send a photo to alertnonnative@ceh.ac.uk.



Key ID Features



Queens up to 30 mm, workers up to 25 mm long

Entirely dark brown or black velvety body, bordered with a fine yellow band

Legs brown with characteristic yellow ends



Asian Hornet abdomen is almost entirely dark except for 4th abdominal segment.



Asian hornet 'hawking' for honey bee prey

Photos from: J. Havaire; Rachel Scopes and Nigel Jones; Richard Ball

Similar Species

Asian hornet (*Vespa velutina*) for comparison

- Queen up to 30mm long, worker up to 25mm long
- Legs yellow at the ends
- Dark brown / black abdomen with a yellow / orange band on 4th segment
- Head dark from above, orange from front
- Dark coloured antennae
- Entirely black velvety thorax
- Never active at night



Q. Rome

European hornet (*Vespa crabro*)

- Queen up to 35mm long, worker up to 30mm long
- Legs brown at the ends
- Yellow abdomen marked with brown on the upper part, not banded
- Head yellow from above, yellow from front
- Yellow antennae
- Thorax black with extensive brown markings
- May be active at night



Roger Burgess; The Chicago; National Bee Unit

Giant woodwasp (*Urocerus gigas*)

- Larger than Asian hornet, female up to 45mm long
- Legs yellow
- Distinctive yellow and black banded abdomen
- Long cylindrical body unlike Asian hornet which has an obvious waist
- Long yellow antennae
- Female has an obvious long sting-like appendage (ovipositor) which it uses to lay eggs in trees



Q. Rome

Hornet mimic hoverfly (*Volucella zonaria*)

- Abdomen has more yellow stripes than Asian hornet
- Legs darker than Asian hornets
- Only one pair of wings (hornets and wasps have two pairs)
- Large, globular eyes



Didier Descouens; Alamy.com

Median wasp (*Dolichovespula media*)

- More extensive yellow and orange colouration on abdominal segments than Asian hornet
- Yellow markings on thorax unlike Asian hornet



Q. Rome

Field Signs

Active April–November (peak August/September). Mated queens over winter singly or in groups, in various natural and man-made harbourages – underneath tree bark in cavities left by beetle larvae, in soil, on ceramic plant pots – potentially any small, well-insulated refuge. Makes very large nests in tall trees in urban and rural areas, but avoids pure stands of conifers. Will use man made structures (garages, sheds etc.) as nesting sites.



For more information visit:
www.nonnativespecies.org
www.nationalbeeunit.com

Alert!

Report sightings of this species to:
alertnonnative@ceh.ac.uk

Asian Hornet Identification leaflet. Source: BBKA website.

3



Spotted by Aidan Slingsby in Eastern Poland, "I didn't recognise what type of hives these are, and there were no beekeepers around to ask. They have one or two entrances, usually adjacent to each other, but in one case, above the other. I asked on the Bee Banter WhatsApp group, where Gustaw identified them as "Warszawski" or "Wielkopolski" hives, old-style Polish hive that are still popular, though Dadant or Langstroth are increasing in popularity. He sent some photos (above), indicating that they often have two side-by-side spaces for colonies, that they are big boxes with two layers of frames. It looks like they aren't expandable by adding new boxes, but maybe they are."

Old announcements from June

Check our [previous newsletters](#) or contact services@lbka.org.uk for more details.

Success in Modules 2 and 3: Congratulations for Frank Ryan (Module 2, Honey Products and Forage) and Robin Yearwood (Module 3, Honeybee Diseases, Pests and Poisoning).

Paid beekeeping opportunity at Ally Pally. Details are up for discussion, but the proposal is that the beekeeper would train on-site staff, so they can manage the bees in the long term. More details from development@lbka.org.uk.

Old announcements from May

Summer Social: will be on Sunday 18th August at Walworth Garden – put this date in your diaries!

"Buzzin project": If you know young people in Hackney, Islington, Tower Hamlets or City of London aged 10-21 years old who are not in full time work or education and/or suffer from mental health problems, and are interested in getting involved with bees, refer them to info@apicultural.co.uk. Mark Patterson is looking for such people to recruit onto a **free** therapeutic beekeeping project he is delivering in Hackney with a local wellbeing charity funded by the Mayor's Office.

Bee-vac: Thanks to **Jon Harris** for his donation of a Bee-vac, which has been added to the list of equipment that LBKA members can hire.

Old announcements from April

BBKA Swarm list. If you'd like to be listed as a swarm collector on [BBKA's swarm list](#), contact services@lbka.org.uk.



Spotted by Martin Kunz: *Seems that Carnabee is the bees needs.*

Helping at LBKA events. LBKA's Events Co-ordinator – Martin Hudson – is always looking for help at our events. If you can offer help with any of these events that we are running, please contact events@lbka.org.uk.

Holland Park apiary. Our Holland Park apiary has finally moved from the roof (on which we weren't allowed to bring many people) to a lovely field (where we can). We can now use it as a teaching apiary!

Old announcements from March

Members wanting bees If you want bees, please join the LBKA Bee Banter WhatsApp group (join using the [link listed here](#)) or the members-only LBKA-Forum Facebook page (ask services@lbka.org.uk to add you if you don't have access). If you want a swarm, join the LBKA-swarms WhatsApp group (join using the [link listed here](#)).

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.

July's Committee meeting

Here, we keep you up to date with what the committee discuss at our monthly committee meetings (and what keeps us awake at night). Let us know if you can help or have any suggestions that might help.

Aidan Slingsby
services@lbka.org.uk

This meeting was mainly about updates and planning.

There were some updates on our apiaries with our Brockwell apiary having its EFB notice is lifted (good news!) and (incidentally) some changes in who is managing it. There will also be some changes in management at our Mudchute apiary. There were also some updates on reclaiming tax through Gift Aid. There were also updates on some recent events. The Beckenham Flower Show went well. In some ways it is like a smaller version of Lambeth Show, so good preparation for this year's show in a few of weeks. The Mudchute Agricultural Show also went well. Richard additionally ran a stall in an event in Tooting Bec event, at which there was incredible interest shown by the public. It was re-

ported that the volunteers for the shows were extremely good, with Mark McDonnell being highlighted for extra special thanks.

We also did some planning for the Lambeth Country show, with a lot of detail about the logistics of bringing and removing equipment, passes, the fact that the show will be free of single-use plastics (good!) and the volunteer rota. Martin updated us on his list of volunteers for the Lambeth Country Show, suggesting that we could do with some more people and that he would draft a notice for the newsletter. We also bit some planning for our Summer Social, deciding that we use the same caterers as last year (unfortunately, we subsequently found out that they are booked by someone else on that day), that we should go for more main dishes than finger-food, should consider being all vegetarian. We also discussed rather to sell tickets to members to as the cost to LBKA is significant. We agreed to charge for tickets and that we would circulate details to members.

We also discussed the number of swarms in London and the problems this can cause. Congestion and ULEZ charging means that some Central London swarms are going uncollected. As a result, we are investigating whether perhaps swarm collectors can be exempt whilst carrying out this public service. Some disruptive swarms in Central London may give the impression that there needs to be more regulation, and we need to continue to promote the importance of training and swarm control in heavily built-up areas. We also need to continue to persuade London offices against having bees on their roof, supporting education and forage-creation projects instead.

Finally, Tristram updated us on his progress in acquiring new extractors that we can hire to members.

Last month's Monthly Meeting: Bee Health Day

What happened at our meeting last month.

Martin Hudson
LBKA member

The LBKA monthly meeting in June had a different format to usual. Owing to the importance of understanding the condition colonies and diseases that might affect them, this took the form of two half-day sessions, highlighting the importance of beekeepers knowing about



Tristram – Walworth Garden's beekeeper – showing how to do a disease inspection. Photos: Paul Connelly.



Investigating brood that doesn't look right. Photo: Paul Connelly.



A possible case of 'sac brood', where the larva is watery. Photo: Paul Connelly.

and keeping in control of diseases in their honey-bee colonies.

As usual, the event was held at the lovely Walworth Community Garden in Kennington, and participants were split into three groups which rotated between three separate topics

Varroa. Vlad Zamfir led the group in the garden examining the ubiquitous Varroa mite, and ways to control it in our colonies. Despite frequent interruptions (Walworth is on the flight path of the approach to Heathrow), Vlad was able to emphasise the dangers of this mite to bees' health. They are the vector of many viruses and conditions, putting honey-bee colonies at risk. He also touched on, and was able to show examples of the invasive Asian Hornet, smaller but more deadly to bees than our native European Hornet.

Brood disease. Richard Glassborow was joined in the classroom by the two recently appointed Seasonal Bee Inspectors in London – Tom Bickerdike and Julie Parker – and we were very grateful for their involvement in the day. Richard gave a PowerPoint presentation of the other diseases, pests and conditions suffered by bees in the UK, and the SBI's brought real examples of diseased brood frames infected by AFB and EFB – so that we could see and experience what it actually looks like. Hygiene and biosecurity were tight, with everyone entering the room leaving their belongings outside and wearing disposable plastic aprons and gloves to be incinerated afterwards.



Photo: Paul Connelly.

Full Brood Disease Inspection. Finally, the third group got suited up and Tristram Sutton took them into the Walworth Apiary to demonstrate how a Dis-



ease Inspection should be carried out – specifically and particularly twice a year.

We had some really positive feedback from members and the SBIs told us later that it had been very well organised, and – with more than 50 members attending, they had been very impressed with the level of interest from our members. We were lucky that the weather stayed fair for us – maybe next year we just need to close down Heathrow for the day!

We would like to thank to Tristram, Vlad, Richard, to the two Bee Inspectors – Tom Bickerdike and Julie Parker – and to Ollie from Walworth Garden, for their time and commitment to making it such a successful day.

LBKA at Beckenham Park

The Beckenham Palace Flower Show was on the afternoon of 30th June. LBKA had a stall to promote the association's message that "bees and flowers go together" and to raise the profile of pollinators and LBKA.

John Kembery
LBKA member

What a great location, great weather and great teamwork. This is the second year this event has been organised. Essentially a flower competition and fun dog event with community stalls and music.

Our first challenge was after getting the gazebo up keeping it there! It was a scene from Monty Python, the wind was up and we returned to find Mary clinging to the structure to prevent it being blown away. With ex-



BBKA Basic Assessment. Photo: Howard Nichols.

tra pegs and weights in place, and the occasional hands on, kept us in place. The bees happily were oblivious to our efforts to keep them safe and shaded. The wide age range meant the questions kept coming, but Tristan kept all comers entertained.

Had we had any honey to sell, we would have made a killing. It was not to be. Lesson learned, let's take some next year, and come a volunteer at one of our many events.

BBKA 2019 Basic Assessments

Howard helped prepare 9 LBKA members for their BBKA Basic Assessments.

Howard Nichols
education@lbka.org.uk

This year a total of 9 LBKA candidates took part in

the BBKA Basic Assessments. The assessments took place over 3 days at 2 different apiaries during May and June. The process started back in November with LBKA members expressing an interest being given electronic course notes for light winter reading. These notes cover the syllabus from beginning to end. No formal study is required, just a reading of the course notes over the winter months. In March and April we then had 3 x 2 hour revision sessions at Walworth Garden Farm and went through the syllabus line by line. Those candidates who wished for some practical instruction were also catered for.

The first session was on Sunday, 2nd June and hosted by Vlad at Mudchute apiary. The weather was good, no rain and warm sunshine. 3 candidates were assessed, each candidate arriving 1 hour before the allotted time so ensuring the assessor would not be kept waiting if anyone was delayed. The first day commenced at 10.00am and finished about 3.00pm. It was repeated the following Sunday at the Eden apiary in Clapham when a further 3 candidates took the assessment. The assessor was Ireneusz Gajowniczek from Twickenham who assessed a total of 7 candidates over these 2 days.

On Saturday 15th June the final 2 candidates were assessed by Pat Allen from Upminster at our Eden apiary in Clapham.

On behalf of LBKA, I would like to thank both of our assessors who travelled to our apiaries and freely gave of their time and expertise so that all candidates could be assessed. It is greatly appreciated by all of us.

What happens at the assessment?

The BBKA Basic is both a practical and oral assessment and lasts about 1 hour 15 minutes. Each candidate is asked to assemble a frame, light the smoker (including observing health and safety issues) then open a colony and demonstrate to the examiner that he or she can control the bees whilst, at the same time, answering a few straightforward questions about the colony contents. After going through the brood frames, collecting a sample of bees in a matchbox and shaking some bees off the frames the candidate then reassembles the hive and goes on to the 2nd part of the assessment. This is answering a series of straightforward questions about beekeeping, swarm control, bee biology and bee diseases. The syllabus is quite broad in its range but not particularly deep. The full syllabus is available for download on the BBKA website and within the education section. Both the BBKA and LBKA actively encourages its members to take this assessment as it is recognised as a substantial step forward in beekeeping education. Many public bodies also now require the beekeeper to have this certificate before they are allowed to keep bees on the establishment's land.

How did our candidates do?

As stated above a total of 9 LBKA members took the assessment. One candidate has still not completed the paperwork and so her result is not known. Out of the remaining 8 candidates all 8 were successful. Furthermore, 7 out of these 8 passed with Credit.

A major reason for this success rate is undoubtedly due to the commitment of all candidates. Another significant reason is the LBKA mentoring programme. Each year more experienced members freely give of their time to teach new members the craft of beekeeping. The newer member (mentee) assists the more experienced beekeeper (mentor) and so starts to learn a variety of skills during the course of a beekeeping season. This provides a solid foundation to the newer beekeeper. LBKA would like to thank all its mentors for participating in this invaluable service.

Finally, anyone who has managed bees for a minimum period of 12 months (including involvement as a mentee) and wishes to undertake this assessment in 2020 can register with LBKA from the autumn. Further details of the 2020 assessments will be given in each of the autumn LBKA newsletters.

The successful candidates in the order they took the

assessment are **Andrew Slade, Alison Kings, Adela Vavrecka, Annie McGeoch, Kathy Jo Stevenson, Raphael Larizza, Jeremy Rosie and Rosemary Danielian**. Well done all!

July in the Apiary

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

Howard Nichols
education@lbka.org.uk

July beekeeping work has 2 distinct parts. These are dealing with the early July nectar flow then, at the end of the month, removal of honey.

During May and June the bees utilise this period to build up their numbers and to swarm. There is now a lot less inclination to swarm and the bees direct their attention towards capturing the flowing nectar from the summer flowers. When they do this then supers can quickly fill and it is important that the beekeeper has sufficient frames and supers in advance of the flow. There will not be time to buy extra supers and to make up frames. Nor can the beekeeper extract the honey and return the super to the same colony as the honey is unlikely to be ripened until after the flow ceases.

Nectar flow

Exact timing of the nectar flow depends upon weather and locality but is usually mid June and early July in London.

How do I know when it has started?

The coming and going at the colony entrance becomes a lot more purposeful when the nectar flow starts, bees leave the hive entrance in a determined and focussed way. They have the appearance of knowing exactly what they are doing and where they are going. As the nectar flow progresses then, of course, the supers also become heavier but, by this time, the flow is well underway.

Adding supers.

Regular inspections are still needed but the beekeeper's attention should now be directed towards checking there is enough room in the supers. A cursory glance in the top super should be sufficient. When the frames in the top super are covered with bees then it is time to add another. Many beekeepers move the frames around a little by putting a few combs of honey and

nectar into the newly added top super as this encourages bees to continue onwards and upwards. The nectar flow can also be used to draw out new combs from foundation.

Removing honey from the hive

A comb of honey should only be removed when it is at least 75% sealed by the bees. This is to avoid fermentation of the final product. There are several methods of clearing bees from the supers. These can be grouped into physical methods (bee escapes, etc), chemical methods (repellents available for purchase from bee equipment suppliers) and mechanical methods (blowers which blow the bees off the frames). Some beekeepers have concerns relating to the use of chemicals and mechanical methods are more akin to commercial beekeeping, not hobbyists. It is only the physical methods detailed here.

The 2 most common physical methods are Porter bee escapes and shaking the bees off the frames.

Porter bee escapes

Most of us use Porter bee escapes incorporated into a clearing board. This works well provided they are used properly and the metal spring escapes are clean, not stuck with propolis. After about 48 hours most of the bees have gone down through the one-way valve and there are relatively few bees in the super. Better to use a crownboard with 2 bee escapes. If 1 malfunctions then the other is still in use.

Make sure there is plenty of space for the bees below the supers. If necessary then insert another empty super with frames below to house the bees. Ensure the bees cannot come back up into the supers being cleared. Ill fitting, non bee spaced equipment or defective Porter bee escapes are the usual reasons for failure.

Shake and brush

Another method is shaking the individual frames to remove as many bees as possible then brushing off the remainder. An extra super is needed to hold the shaken frames and this should be placed on the upturned hive roof and covered with a sheet or large cloth.

This method causes a certain amount of disturbance to the bees and may not be suitable for a hive in close proximity to people. Its advantage is that it is quick and only involves 1 visit to the apiary.

Other action to be taken this month

Once the nectar flow starts then most colonies abandon the idea of swarming as it is now not in their interests to do so. There is still a small risk of swarming and

this is increased if the bees do not have enough room to store nectar. Another reason to ensure that enough supers are on the hive.

The nectar flow is a golden opportunity to undertake a brood disease inspection. As the bees are so busy with the nectar they have little time to remove dead larvae until it ceases. Leaving the brood disease inspection until autumn may leave insufficient time to take corrective action. Optimum times for a specific brood disease inspection are early spring and in summer whilst the nectar flow is in progress.

Reduce colony entrances when the nectar flow ceases to minimise robbing.

Plan your varroa treatment for next month. Decide your strategy and buy any supplies you will need.

Reserve your use of an extractor next month if you usually hire LBKA equipment.

Focus on Forage

Mark tells us what's in flower at this time of year. This article is from a couple of years ago that we also printed last year.

Mark Patterson
forage@lbka.org.uk

As we pass from June into July, all our hopes for a decent harvest now rely upon the **Lime** trees. Limes are blooming. There are 3 species of limes native to the UK: Large Leaved Lime (*Tilia platyphyllos*), Small Leaved Lime (*Tilia cordata*) and a naturally occurring hybrid of the before mentioned two (*Tilia × europaea*). The small leaved Lime is common throughout England but in the south west it is largely replaced by the large leaved lime which thrives better on the lime-rich soils.

Be aware of the Silver Lime (*Tilia tormentosa*) which is an exotic introduction and flowers a bit later than our native limes. Its nectar is toxic to bees and when there is a dearth in forage the bees may mistakenly collect its nectar and in the process become intoxicated before falling comatose beneath the tree.

Limes are capable of producing copious volumes of nectar but only if the weather conditions are just right. High soil moisture content from spring rains followed by very warm sultry weather is needed to trigger a good Lime flow.

Lime honey is highly sought after as it has a minty aftertaste and tangy tone to it. It's also high in fructose sugars and low in glucose meaning it stays liquid for a long time and resists crystallisation prolonging its shelf



Privet

life and makes an attractive looking jar of honey for the sales stall.

We are fortunate in urban areas to have an abundance of lime trees growing in our parks and street sides. In London limes represent our biggest potential for a bumper honey crop but as mentioned earlier this only becomes a reality when the weather conditions come together at the right time. During a strong lime flow a healthy colony of honey bees can fill a super in a matter of days so it's important you have spare boxes at the ready.

Other plants which are important for our bees this month include **bramble** which should now be in peak flower. Like lime nectar, bramble is mostly fructose which leads to a light fruity honey which seldom crystallises. I am lucky that all my apiaries are bordering over ground railway lines which have an abundance of bramble growing along the sidings.

Around water and damp ground **Himalayan Balsam** is now flowering and will continue to do so right up until late August. Balsam is loved by many Beekeepers for its flowers providing forage in bulk at a time when there is often little else around. It's a contentious plant though, being a non-native plant and highly invasive. It's listed under schedule 9 of the Wildlife and Countryside Act 1981 as illegal to plant, knowingly aiding it, or allowing it to spread. The penalty if found guilty can exceed a £5000 fine and a criminal record. So please beware of those beekeepers on Internet forums advocating its spread as a plant good for bees! Far better plants suited



Bird's Foot Trefoil

to damp ground include Water Mint, Purple Loosestrife and Hemp Agrimony which are all loved by bees.

Other good sources of forage joining the summer flow this month include **Tree of Heaven** (*Ailanthus altissima*), **Indian Chestnut** (*Aesculus indica*), **Chinese Privet tree** (*Ligustrum sinense*) and **Indian bean tree** (*Catalpa Bignoniodes*). All are abundant in urban parks and provide pollen and nectar after all our native trees have ceased flowering. Last year one of our members in north London had their honey analysed by a forensics lab and most of the pollen was from Tree of Heaven.

In urban areas shrubs including **Choisya**, **Cotoneaster**, **Privet**, **Philadelphus**, **Escalonia**, **Abelia**, **Santolina** and **Hebe** will continue to attract bees.

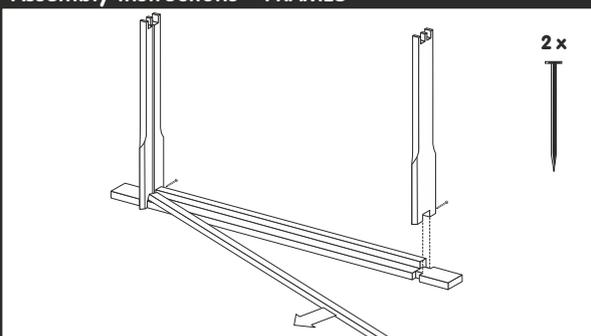
Elder is just coming to an end along with **Dog Rose** meaning few native shrubs continue to flower into July.

As July progresses our bees become more and more reliant on ground level flora for their forage. Wildflowers like **Bugloss**, **Birds Foot Trefoil**, **Vetches**, **Knapweeds**, **Thistle**, **wild Thyme**, **wild Marjoram**, **Scabious**, **Teasel** and **Umbellifers**. Plants which many of us associate as 'weeds' and try our best to eradicate are often plants important to bees in high summer – among them **Ragwort**.

July and August are the months of the year when most Beekeepers remove their honey harvest but it is also the time of year when our honey bees are flying the furthest to find profitable flower patches. Research undertaken at Sussex University has shown that during July and August Honey Bees are regularly flying as far as 12 km away to forage and their decoded waggle dances indicated that the bees were making a bee line for nearby towns and villages where they can find abundant blooms in our domestic gardens.

We can all help make life a little easier for the bees in late summer by making better plant selections in our gardens. You can find planting suggestions on

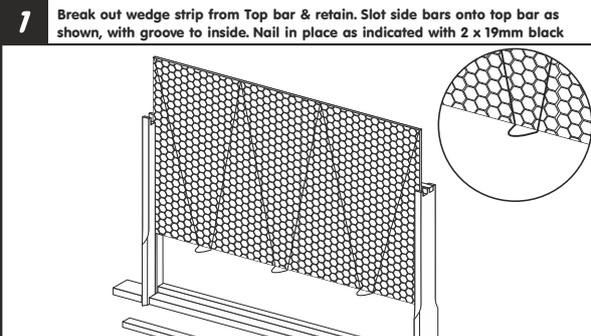
Assembly Instructions - FRAMES



1 Break out wedge strip from Top bar & retain. Slot side bars onto top bar as shown, with groove to inside. Nail in place as indicated with 2 x 19mm black



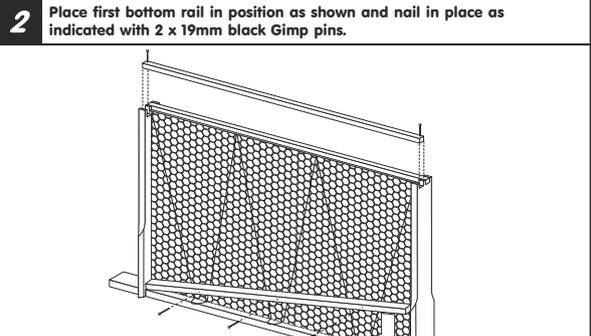
MAISEMORE APIARIES LTD



2 Place first bottom rail in position as shown and nail in place as indicated with 2 x 19mm black Gimp pins.



3 Bend over wire loops at right angles
Carefully slide wax insert into side grooves until wire loops rest on Top



4 Press wedge strip (from step 1) between side rails, down onto wire loops as shown and nail into rear of top rail with 3 x 19mm black Gimp pins as shown. Fit second bottom rail and nail in place as indicated with 2 x 19mm

Maisemore's guide to frame-making is the right way for doing it.

my website <http://www.apicultural.co.uk/> along with some good suggestions for plants suitable for balconies and window boxes.

those who intend to take the Basic next year. It's quite easy to pass with just basic skills and a bit of common sense, but make sure you read about swarm control and notifiable diseases.

Confessions of an Assessor

Geoff gives us some confessions of an assessor for the BBKA Basic Assessment panel. Is this possible to do without scaring beekeepers taking the BBKA Basic Assessment? Just as well that these are now all done for this year – see p9. If you're interested next year, please ask Howard at education@lbka.org.uk who will run revision sessions and set up the assessments.

Geoff Hood
LBKA member

We are coming to the end of the Basic Assessment season and it is just a few weeks before I finish mine with the assessment of three terrified beekeepers in Ealing BKA. It has been a ' year for both the bees and the level of beekeepers I have had to assess for the Basic. I therefore decided to list a few of the things I see to help

Frames

Let's start with making a Brood frame, I am looking for 11 nails¹. Youtube has got a lot to answer because people think it's always correct. The Thornes Youtube video is not a method BBKA suggest using because putting in both bottom bars then trying to slide in a sheet of brood wax into the slot between those two bars is almost impossible on a hot June day. The Thornes video method gets especially difficult when the wax foundation has been in your rucksack or car for an hour or two. Their second mistake is to suggest nailing through the **wide** part of the wedge that is retaining the wax. Those following the video will sometimes get hammer marks in the wax and nails poking through the top of the top bar. I always run my gloved hand over that to check.

The easier method to make a frame is described by Maisemore's guide (see image) or as appears on the bigger boxes of frame nails that Thornes sells. Make up the frame with one top bar, so that you form a ledge to slide the wax in, fix the wedge to hold the wax and nails straight down in the **narrow** side of the

¹don't bring your electric nail gun, as most hives are not linked to the national grid



Incorrect use of J-tool to lift frames. Do not lift by the lug.

wedge (there are various tweaks but you will pass with 11 nails following Maisemore’s method). In hot weather take two pieces of wax foundation, place them between two sheets of cardboard, then place in the fridge until ready to go to the assessment, so that it’s more likely to be flat.

Protection

Make sure everything is done up! And that your ankles are protected. We do check! Don’t wear flip flops even if it is too hot for wellies.

Gloves, Marigold, gauntlet latex, disposable latex or vinyl are fine. Whether you can wear leather gloves will depend on the apiary’s protocol, check before turning up in leather gloves. I suspect you will be asked to wear XL disposable gloves over them. While I was at BBKA’s Stoneleigh apiary in May on an assessors’ refresher course, they asked a Basic Candidate to either leave or remove his leather gloves and go bare-handed.

Also a nice **clean** bee suit, and an unpropolised hive tool. Make sure you wash it in the soda bucket even if it is new or clean. Wipe smoker bellows. It is not your hive, so impress me with your hygiene regime.

You will be asked to open the hive, say what you see, and then do a disease inspection. That means at this stage there is no need to open a super and check the super comb. I am looking at where you put the roof and where you put the supers. Where brood frames are in the “warm way” (frames parallel to the entrance), if you put the roof and supers behind the hive, you cannot inspect the brood as the supers are in the way. Where frames are in the “cold way”, putting the roof and super to the side gives you a 50% chance you cannot inspect, as the dummy board will be on the side by the supers. If you do find yourself in that situation, move them rather than lean over all the frames to work from the other side.

Hive Tools – either J-tool or Scraper-tool – are acceptable. But what is not acceptable is levering frames

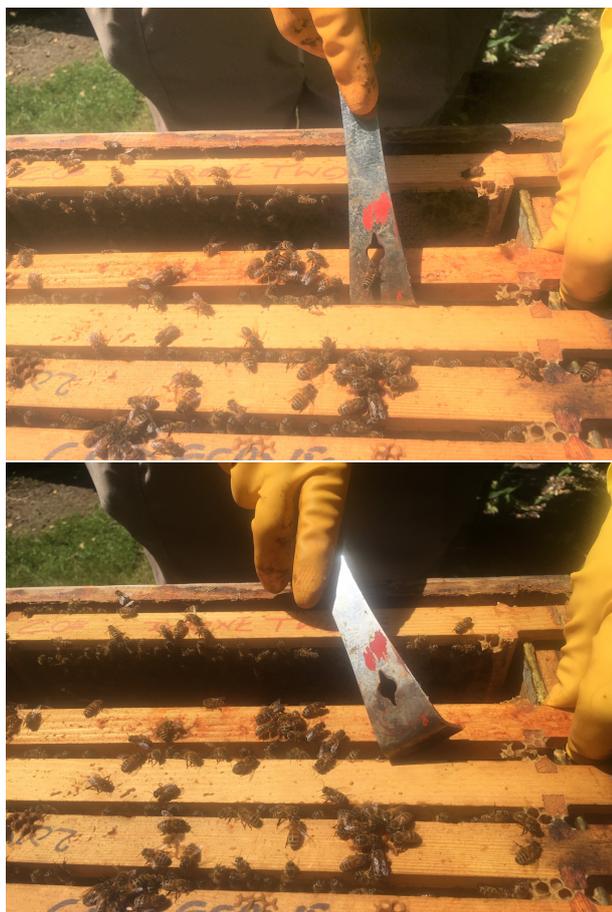


Correct ways to lift frames with a J-tool – insert into the beespace by the hive wall or within the frame.

apart or upwards on the frame ledge with either of the hive tools under the lug ends. To lever frames apart, use either tool the proper way. The J-tool has an extended piece at the square end that you place in between the frame tops and lever them apart (holding the lug so the frame doesn’t spring open and jar the bees). The short end of the scraper tool is used similarly. To lift the frame you can use the tools on the top bar, though I won’t penalise you lifting a frame with a J-tool so long as it is in the beespace between frame and brood wall.

During inspection close up the frames as you go and keep the frames tight (less build of wax and side bar, beespace maintained, move frames back in groups (less likely to kill bees). Find out how to shake bees off a crown board or Queen excluder without bees going everywhere.

If the assessor says you should re-assemble the hive, then don’t argue with the assessor by saying you haven’t finished yet. Remember, it is not your hive. Normally the inspection will stop when halfway through the hive because the assessor has done all he/she wants to ask you to do. Re-assemble the hive carefully and smoke under the last super to lift off the roof as that will have bees hanging down into the roof. It is at this stage you check the super has sufficient space, rather than when opening up).



Lifting frames and separating frames with the scraper tool.

Other errors seen this year

- Too much smoke (even I was coughing, and the bees probably got lung cancer)
- Waving hands over brood frames tops (attracting guard bees).
- Not checking for queen on queen excluder
- Placing the queen excluder on top of open supers or flat on the ground (an un-spotted emergency queen could go into super or get lost in grass)
- Supers placed direct on ground (minor risk of rare contamination with *Infant botulism* from the soil)
- Half brood placed direct on supers
- First brood frames placed flat on the ground
- Breaking lugs with J-tool
- Forgetting to put the queen excluder back or upside down (common mistake)
- Not removing first frame to give room
- Rolling bees taking frames out
- Starting by removing the middle brood frames
- Forgetting to put the first brood frame back when reassembling
- ... so many...

Swarm control

If asked about swarm control, explain either Pagden or "take away nuc" (remove queen and two frames of brood to a new location). Other valid techniques

such as Demaree or Snelgrove take too long to explain and are prone to errors due to forgetting the procedure.

The "take away nuc" must have enough bees to cover either two or three frames that you use, so remember that you shake in more bees if the take away nuc stays in the apiary, because the foragers return to their home site.

The Pagden is the gold standard and is in many books. Supers can be put on either hive, but BBKA expect the supers to be placed on the queenright hive on the old site, saying that putting them on the new hive either encourages silent robbing or results in more emergency queen cells as it has too many stores. It is best to put a queen excluder under the queenright brood box for seven days. If you don't mention this, the assessor will likely ask how you prevent the queen from leaving if the swarm impulse is high.

Remember to mention Queen cells. Last weekend, the candidates had all their Pagden explanations right, but none of them mentioned checking and removing all queen cells except the one/two open queen cells in the queen cell side.

Disease

For disease, just get the information from the NBU site and learn it. That's all.

If you get asked what would you do if you found EFB then the answer is not "I would phone the chairman". I am sure Richard would like to know if you have a disease but the correct answer is to impose a voluntary standstill on the apiary, reassemble the hive, reduce the entrance to stop robbing, wash your hive tool and smoker in soda bucket, place glove and hive tool under the roof, place the smoker under the hive, phone the Regional bee Inspector, (ask their name) then go home and wash your suit. Nothing else should leave the apiary until the Bee inspector says so.

No one seems to remember the full notifiable diseases and pest. These are EFB, AFB, Small Hive Beetle and *Tropilaelaps* (as specified in the Bee Act 1980) and Asian hornet (as specified in the EU regulation 1141/2014 to the NNSS and NBU, Non Native Species Secretariat). If you have bees in both London and Hertfordshire, these are in different Regions of the NBU will have different Regional bee inspectors).

So what percentage of the beekeepers have I recommended to pass the Basic Assessment? The answer is all but one. The one who didn't pass made most of the mistakes I mentioned here, He also dropped the frame with the queen on and then stood on the marked queen as we tried to find her. I knew it was going to be a problem assessment when he turned up in a dirty bee suit, propolised leather gloves and without a hive tool.

Positive Thinking

This month's edition (issue 23) of BBKA's "Positive thinking" newsletter. Find out the latest news in BBKA's world.

Margaret Wilson
BBKA Chair

Shows Volunteers

Early this year, a group of dedicated people gathered together to plan a show for the public, this was to take place at Chatsworth Hall the show was the RHS Show and the BBKA attends this jointly with Derbyshire Beekeepers.

The people gathered together form our Shows Committee led by Clive Joyce and his wife Eileen. It is Clive who does the negotiating and arranging with the officials and liaising with Derbyshire Beekeepers so that jointly we give the best show possible for the public. All the equipment has to be transported to the show site, it has to be built up and ready for the press day prior to the opening, this is hard work but they do this without complaint or thought of reward.

There have been many meetings at BBKA headquarters and joining them are Claire Hartry from BBKA office and several trustees who also offer their time to support plus they attend the show and cover some of the many tasks so that the public have an enjoyable experience.

It is the task of Gordon Robbins to organise the volunteers schedule and Andrew Caine has the task of building and maintaining the wonderful bee friendly garden, many of the public were taking photographs and writing down the names of the plants on show, no doubt off to the floral marquee to buy the same plant for their own gardens.

As well as helping to set up, Brian Donnelly also kindly provided the bees for the demonstrations, I do hope they survived the cold on Saturday. Liz and Steve Bates organised and set up the Microscopy demonstration, that seemed to be a very popular item and was well attended.

Eileen Joyce usually looks after the candle-rolling corner and this year Sara Barnes stood toe to toe to help the many visitors roll their own candles. Eileen also makes sure that there is food and water available for the volunteers.

The Show allows us to answer enquiries from members of the public who have an interest in bees and certainly this year I answered many questions from teachers who were thinking of getting bees into their own schools.

I would like to thank the whole committee and the several trustees and certainly Sara Barnes, wife of a trustee, who attended and worked tirelessly to make visiting the Bee Marquee an excellent experience.

New Experience

At this same show, we went to try the virtual experience, this is something that was at the show last year and some of us had looked before. You wear a pair of goggles and it is as though you are there as a bee in the film, it lasts a couple of minutes and there was certainly a queue to try it.

This is something we had been asked to look at by the Spring Convention as a possible purchase so we duly went along and several of the Shows Committee and some trustees tried it for themselves. It is an interesting experience, but the development cost seems to be rather high and we may not be able to own the system ourselves, also there may be ongoing costs each time we use it and would we be able to manage the technology ourselves all questions to be asked and answered. There is another side to consider as well, when would the BBKA use it, two national shows where non beekeepers could experience the wonders of a Honey Bee, also at the spring convention, but the audience would already be beekeepers, would they want that? Just those three events would hardly justify the expense, it would be good for schools or local shows, we could loan it out as we do the Hive Alive experience but would there be the need for it, would it enhance our beekeeping learning. All things that need to be debated and decided, I doubt it will be this financial year even if we decide to go ahead. I will keep you up to date with any developments.

Fund Raising

For the past few months we have been without a Fund Raising Manager however Claire Hartry who was assistant to the previous fund raising manager has followed up on those existing contacts and has made many new ones, so much so that when we looked at the performance to date, she has done really well. She has been proactive in attending functions to 'sell the BBKA' to many organisations and to the public as well spending several days at Chatsworth helping the shows committee talking to the public and of course listening to their comments and opinions. Claire had little experience in fund raising and obtaining grants but she is very willing to learn and we hope that in the future we may be able to provide that type of training to her. She loves what she is doing and that is always a good thing, so thank you for all your efforts Claire, carry on the good work.

Making a difference

I would also like to mention another member of staff who is making a difference, this is Sarah Laidler who,

for the first time since I became a trustee, has managed to organise the accounts so that each budget holder can see exactly what they have earned and what they have spent, item by item and on their own report. This has taken quite a lot of time organising the codes into a sensible order so the computer programme can show these easily each period end. We have recently been given the first set of accounts with all this detail and it is great. It helps us to make sure that spending is in line with budgets and income is also monitored as well. I have to say that those accounts look good, the income has topped one million (just about) the trouble is the expenses are also up, in line with general costs which we have no control over but even so, we do look to be well on target but of course there are quite a few months to go yet so we still have to be very prudent.

Management

Managing the office is Leigh Sidaway, who very seldom gets a mention, she is the one that holds everything together and gives support where it is needed in the office, she is also the one who arranges builders, quotations, surveys, plans and designs as well as what I would call her 'day-job'. She has a team of six in the office and recently it was shown to the trustees that they respect her very much and enjoy the working conditions she creates in the office and the friendship of their fellow workers. I have to say that whenever I visit the office the atmosphere is great, everyone gets on with each other and they all pull together and support each other when rushed work or phone calls demand it.

Great Yorkshire Show

One of the major shows in the north of England is the Great Yorkshire Show and this year both the President and I as Chair of the BBKA have been asked to judge the bees at the Honey Show section. If you have never been to this show, it really is a great day out. The first time I ever went I was amazed at the size of the cabbages in the vegetable section, they were at least 1m x 1m across and would have fed an army of people, it was not just the vegetable entries though, the wax on display was wonderful and the honey section was brimming. I am led to believe that there are over 800 entries to the honey show this year, that is a lot of exhibits and I am looking forward to seeing it all, after we have done our tasks of course.

Small Hive Beetle

The Italian Authorities have notified the Commission the NBU that there is a reoccurrence of the small hive beetle in Sicily and ask those purchasing bees to check the source carefully when buying replacement queens or colonies and to monitor any new colonies for disease or pests. It only takes one beetle to be brought over and before you know it they are all over the UK so please



A Honey Bee forages on Oxeye Daisy in the shadow of the London Shard

be careful and if possible buy local bees from your own association.

Guest Blog: The Need for Adequate Forage and Nutrition for Honey Bees, part one.

This month, our guest blog post is from Mark's "[Agricultural](#)" blog. This is part 1, of his [blog post](#) about honey bee nutrition.

Mark Patterson
forage@lbka.org.uk

For many years there has been growing concern about the increasing numbers of managed honey bees in Greater London versus ever diminishing floral resources that honey bees and other pollinators rely upon.

Whilst the city may appear green much of the greenery is green desert for pollinators offering no pollen or nectar to support their populations. But before I get onto habitat for bees lets first take a look at the nutritional and caloric requirements of a typical honey bee colony.

Carbohydrate

Firstly bees whether they be bumblebees, solitary or solitary social bees are rely on plants for food. They need energy rich carbohydrate food to fuel their metabolism and power flight. Unlike most other insects bees are actually more like endotherms and generate their own body heat through consuming calories and vibrating their thoracic muscles to increase their body temperature. This consumes a lot of energy.

Bees meet their caloric requirements in the form of nectar which is fuel for their metabolism but in the honey bee its also the raw building materials for their nest as they use it to fuel the wax glands in the abdomen which they use to build the wax comb. Honey Bees also store nectar as honey to see the colony through the winter when there is a shortage of blooms to feed upon.

Nectar is mostly water and sugars (fructose, glucose and sucrose plus other forms of sugars in various concentrations)Nectar also contains trace elements and micronutrients (that sugar syrup dose not contain).

A honey Bee colony is a large super organism and has a very large caloric requirement. In summer a full strength Honey Bee hive contains around 50-60,000 workers and needs to consume around 1800 calories per day – the same as an adult human. In winter their mass and caloric intake reduces enormously and is more like that of a cat or small dog.

On an annual basis a typical colony collects 300-500 lbs of nectar just to rear its worker force which is an annual turnover of 200,000 worker bees (standifer 2008). That’s a couple of bath tubs of nectar just to rear the colony’s worker force. Wild bees dont live in huge colonies and their energy requirements are substantially less. A paper published by Cane et al in 2016 established that the forage needs of a single honey bee hive between June and August could provision the nests and progeny of 100,000 leafcutter or mason bees. Honey bee hoover up enormous nectar and pollen resources from the surrounding environment to meet their energy and nutritional demands.

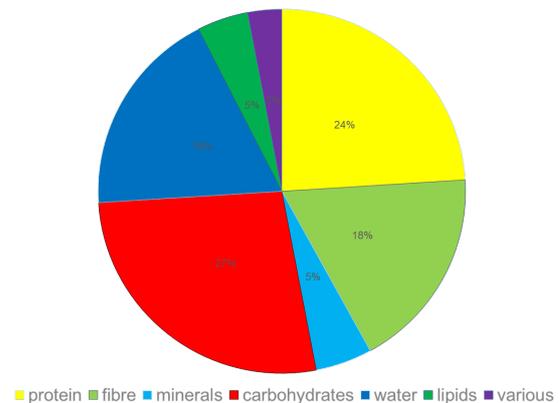
Factor in the volumes of nectar required to produce new wax combs (up to 8 litres per lb of wax), enough nectar to produce enough honey to see them through winter (40 lbs of honey which might require up to 6 × the volume of nectar when you factor in the energy needed to fuel the metabolic process of turning nectar into honey plus the nectar to honey itself) and then produce a honey crop for its master a typical colony can easily hoover up over 100 gallons of nectar per year.

London has around 5,500 registered bee colonies, factoring in all the ones that are not registered (there’s quite a few) and going by a conservative estimate of 6,600 colonies, If all the honey bee colonies in London were gathering this volume of nectar then each year they would gather enough nectar to fill the Olympic



Each year London’s estimated 6,500 honey bee colonies gather enough nectar to fill the Olympic pool in Stratford.

Composition of a typical pollen



Composition of a typical pollen.

Pool at Stratford...That’s a mind boggling amount of nectar!

Nutrition

Bees get the bulk of their nutrition from Pollen. Pollen is their main source of vitamins and minerals, Protein, Fats, Amino Acids, Starch, Ash and Lipids. These are all essential for body growth and repair.

Whilst much of the pollen is used to feed the brood, either directly or by nurse bees consuming the pollen and then converting it into vitagellin rich brood food, some of it is also consumed by the adult bees themselves to maintain body function and cell repair.

If we think of a bees diet as a sandwich then the nectar as the white bread and the pollen is the nutritious sandwich filling. Its the sandwich meat, pickle, lettuce, cheese, tomato, the butter etc.

A typical colony will require 50-100 lbs of pollen annually and this is difficult for the beekeeper to visualise and comprehend because unlike nectar which is stored as honey, sometimes many supers high, we only ever see a frame or so of pollen inside the hive at any one time as it is being continually consumed by the bees as fast as they can bring it in.

Foraging strategy

When bees are foraging for pollen and nectar they employ 'optimal foraging strategy.' This basically means they set out to gain the maximum reward for the least amount of effort.

When foraging for nectar honey bees gauge the quality of the reward. They can assess the types of sugar present in a nectar source by its taste and also the sugar concentration in the nectar. The higher the sugar content the greater the reward. They also factor in handling cost. Handling cost is the amount of time and effort required to extract all of the nectar, due to differences in flower morphology some plants have a lower handling cost than others and may be more attractive. Lastly they also factor in abundance and availability. Generally speaking a plant that is very abundant and available to the bees (some flowers close at night and only open again after prolonged exposure to the sun) will be more attractive to forage on than something not as abundant and less available. For this reason, trees are an attractive forage source for honey bees as they need to collect huge volumes of nectar to fuel the hive's activities. Trees contain many times more blooms and forage than the equivalent area of ground space the tree occupies could produce as they are a 3 dimensional resource. To make matters more complicated still many plants produce distasteful chemicals if their nectary is depleted quickly by a single bee drinking the nectar- this is an evolutionary strategy to discourage the bee from depleting the nectar reward which would deter other flower visitors and is aimed at maximising the plant's chances of successfully being pollinated. Plants which use this strategy may be less desirable to honey bees even if their nectar sugar concentration is high and they are otherwise attractive.

When foraging for pollen, since bees are unable to assess the quality of the pollen reward, this factor is not included in their foraging calculations. They therefore forage for pollen on a much broader range of plants. Furthermore, whilst they collect the bulk of the year's nectar foraged during a few narrow windows of opportunity such as the spring tree flow or late summer heather and ivy flows, they are collecting pollen almost all year round.

Flaws in schemes monitoring pollen found in honey as an indicator of which species are most important in bee nutrition arise because very little of the pollen collected by honey bees actually makes it into the honey. Nectar foragers offload their crop contents to house bees upon returning to the hive and little of the pollen they consume along with the nectar makes it into the cells as the bees filter pollen grains from the nectar in their crops using their proventriculus organ. Nectar tends to be moved around within the hive and each time it's moved in a bees crop their proventriculus removes more of the pollen grains. Only those most abundant pollen types or the smallest grains make it to the finished honey crop giving misleading results. Furthermore again much of



White Deadnettle, a valuable source of pollen flowering through most of the year.

the early season honey collected is consumed in the production of the brood that will later go on to collect the main summer honey crop. Vital early nutritional sources will be missing or under represented in summer honey samples submitted for analysis.

Pollen foragers on the other hand offload the pollen they've collected themselves direct into storage cells near to the brood nest where it's needed. The best way to assess nutritional importance of forage sources for bees is to fix a pollen trap to the hive and collect pollen samples at bi-weekly intervals throughout the course of the year. This will provide an accurate indication of pollen collected all year round and nutritional intake/values. Again, pollen availability and variety is far more crucial to honey bees than nectar, as it's where the bulk of the colony's nutrition is derived from.

The nutritional breakdown of each plant's pollen varies and so to guarantee a well balanced diet the bees will forage on a much wider variety of pollen sources than they do when they are foraging for nectar. Many ground level plants including wild flower meadows are vital sources of pollen for bees at crucial times of the year like late summer and early autumn when they are feeding the more resource demanding winter bee brood, which have substantially larger fat bodies and require greater nutrition than their shorter lived summer sisters. In spring bees will favour the pollen of willow, whose pollen is particularly high in protein and fats which stimulate queens back into laying.

Some species of bee have very fussy and restricted diets. Unlike Honey Bees, they are not generalist – they will feed on just anything that happens to be abundant. Some species are what we call 'oligolectic' meaning they feed on a narrow range of species often in the same family or taxonomic genus. Other are 'monolecitic' meaning they will only collect pollen from a single species – an example is the Yellow Loosestribe bee (*Macropis europeaus*). Honey Bees and most other bees are polylectic meaning they will forage on a wide variety of plants. Presumably oligolectic and monolecitic species are able to forage sufficiently and meet all

their nutritional needs on the limited specialized blooms they collect from.

In the final part next month, Mark will tell us about London forage.

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 14th July: Monthly meeting: Foraging including undesirable nectars

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

New topic, where we will learn about some of the less desirable nectars that bees choose to forage. 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.

Saturday 20th - Sunday 21st July: Lambeth Country Show

All day at Brockwell Park, Norwood Rd, London, SE24 9BJ

Come at see our stall at the Lambeth Country Show,

show is one of the biggest free family festivals in the UK

Tuesday 30th July: Pub social

18:30-22:30 at The Trinity Arms, 45 Trinity Gardens, Brixton, SW9 8DR.

Our monthly trip to the pub will be heading back south of the river to the Trinity Arms, a beautifully refurbished pub on a quiet residential square between Brixton and Clapham North. Catch up with all the latest news over a pint in a nice food-serving pub. We'll be in the garden (or upstairs if the weather is poor) to escape the pub quiz.

Sunday 18th August: Monthly meeting: Wax processing and Summer Social

11:00-16:00 at Walworth Garden (206 Manor Pl, Braganza St, SE17 3BN)

Wax processing followed by the spectacular Summer Social. Meetings are for members only, but you're welcome to come as a guest to find out more about our association. The social is for members only and will be selling tickets.

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
- **Resources:** Tristram Sutton, resources@lbka.org.uk
- **Development:** Simon Saville, development@lbka.org.uk
- **Mentoring:** Elliot Hodges, mentor@lbka.org.uk
- **Events:** Martin Hudson, events@lbka.org.uk

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

