The London Beekeepers' Association
LBKA News

April, 2023

We're now having quite warm days during which hives are quite active. We've also had our first swarm reported on Bee Banter!

As the bees wake up, committee members are becoming busy (as bees) with our upcoming events. Our beekeeping course starts next week and we have a range of special monthly meetings coming up. Sunday's Monthly Meeting will be on collecting swarms but do sign up to May's Bee Health Day - EventBrite link in the email. The last winter lecture is this month, courtesy of Barnet and District Beekeeping Association.

This month Mark has provided a detailed analysis of whether honey bees outcompete wild bees. Mark has been influential in informing our position on this so do read his thought-provoking pieces alongside Richard letter to members this month. Thanks also to Howard for his summary (p6) of what we should be doing in the apiary, Mark's focus on forage (p10) and George's photos with commentary. And maybe you're able to help Nic Pursey with his bees.

Thank you to this month's contributors: **Richard Glassborow, George Kozobolis, Howard Nichols, Mark Patterson and Nic Pursey**. Would you like to join these esteemed contributors? If so, contact me. Please help make the newsletter better by providing content – photos, articles, thoughts, reflections, advice, recipes, poetry. . .

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

From our Chair

Richard Glassborow
chair@lbka.org.uk

There have been some very interesting threads about the London Bee Situation on Bee Banter this month. It is particularly interesting to me to see this discussion and the feedback from our members because this is without doubt a very sensitive issue for beekeepers. The LBKA position could so easily be misrepresented or misunderstood as being anti-beekeeping. It is not. Quite the opposite in fact. So I am very reassured to see that members really do get it that our house needs putting in better order with respect to animal welfare (honey bee husbandry), public safety and biodiversity.

Karen Courtman put it very well I thought. "Most beekeepers do care about green issues and do care that out bees are competing against critically endangered pollinators. It matters because lots of London bees are fed a lot of sugar, or rob it from other hives, especially in the City, but wild pollinators don't have that and for moths and butterflies there is even more pressure as

Spotted by George. "A pretty worker, loaded with a massive blob of pollen on its rear legs, seems very busy working on the anthers of another nearby flower. Photo and caption: George Kozobolis.

the food crops for their caterpillar stage are less available."

Many other contributions to the BeeBanter threads corroborate this view that most beekeepers are pro-natural world and did not come into beekeeping to harm it.

To sustain both positions we do have to acknowledge that honey bees, especially managed honey bees, do put pressure on biodiverse ecosystems. It is not just because, as Karen points out, we feed them during lean times but because by their very nature they can outcompete wild bees and other pollinators. They fly further, they are social on a big scale (by wild bee standards), they communicate (can direct a large workforce to sources of forage), when weather conditions are poor they can warm up their foragers to send them out before solitary bees can operate, etc.

All of that is because *Apis mellifera* is what it is. Then all these competitive advantages become amplified when they are managed in ways that encourage those characteristics, and amplified again when colony numbers are pushed higher and higher.

And, of course there is disease. We see in all life how pests and pathogens increase with population density, and the stresses that brings, and with commercial movement of plants and animals. In fact, pests and pathogens seem adept at hitch-hiking on any stuff that is moved about. And we do that a lot.

So, it is really us humans that are responsible, not the bee. And that means we can do something about it.

We could stop beekeeping. But if every LBKA member gave up keeping bees in London it would make no impact on the situation: we are too few to be noticed. But if we address the issues and develop ways we keep our bees that are more compatible with the natural world, we could influence the bee narrative and have a much wider and more beneficial impact on the London bee situation, the London environment and Londoners.

As this debate we are having is beginning to leak out, one thing that does surprise me is how much our story seems to resonate with beekeepers outside London.

Stay well, have a great year.

Announcements

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

April's Monthly Meeting and Pub Social

Richard will lead this month's Monthly Meeting on **Sunday 16th April** at 11:00-13:00 on "Swarm Collection" at **The Foundry**, 17 Oval Way, London SE11 5RR.

Our Pub Social will be on **25th April** at The Sun pub (47 Old Town, Clapham, London, Greater London, SW4 0JL).

May's Monthly Meeting on **14th May** will be at Brockwell Park and will be a special all-day affair focusing on bee health including how to inspect for disease, varroa and apiary hygiene from experts. Very important topics with Varroa as the number-one pest and EFB being so prevalent. Booking is essential. Members will be sent details of how to book.

Winter Lecture: Apitherapy

Wilf (Chair of the Barnet and District Beekeeping Association) has invited us to a talk by Dr Gerry Brierley on "**Apitherapy**" via Zoom on Sunday 30th April at 20:00.

Dr Gerry Brierley an 'Accidental Apitherapist' and beekeeper, who, after an encounter with blood sucking ticks in the Surrey Hills contracted near fatal forms of tick borne infections. Gerry opens up the natural pharmacy at the bottom of your garden to discuss the diversity of premium hive produce for general health and healing. Gerry can uncover the secret medicinal properties of honey, drone larva, pollen, bee bread, royal Jelly and propolis and the honey bee life cycle. Gerry will share her personal survival story along with supporting scientific evidence of how using bee venom has saved her life and many thousands of others, including man's best friend.

Please put in your diaries! Zoom link will be distributed to members via email.

Beekeeping help wanted at Trinity Hospice

Recently, LBKA kindly answered a call for help from Trinity Hospice after the colony sited within the hospice gardens died over winter having been in continuous existence for 10 years. (Huge thanks to Larry at Brockwell Park.)

The bees are now enjoying their new home but their beekeeper needs assistance! An elderly parent and other ongoing commitments means I don't have the time I once had to dedicate to our honey-gathering friends.

I'm looking for someone – preferably with previous experience and/or training – local to SW4 or within easy reach of Trinity Hospice near Clapham Old Town, who would be interested in sharing the duties in maintaining the hive and perhaps even expanding the apiary.

All equipment save personal items are kept on site and

the hospice itself is set in a fantastic garden. If you think you can commit to a couple of visits per month throughout the season, I'd like to hear from you. And of course, with a good summer, you'd have some honey to take home!

Please email nic.pursey@virgin.net in the first instance.

Notice of June 2023 monthly meeting: Improver Course

The monthly meeting on Sunday 11th June will be an "Improver Course" at our Mudchute apiary and will focus on more advanced beekeeping, consisting of some theory, a practical session at the apiary, and then a round up to discuss what we have found in the colonies and what we should do. It is aimed at a level beyond the Basic and approximating to the level of skill and colony understanding required at the BBKA General Husbandry assessment level.

The course will concentrate upon handling skills and reading the colony. It will not cover swarm control, queen rearing or disease inspection. Although these are essential higher level skills they are covered elsewhere in the LBKA beekeeping calendar and education programmes. This will cover both practical and theory but concentrating upon reading the colony and handling skills.

What is an Improver? As beekeepers we should all keep our "L plates" on and learn constantly. I recently heard of a recently deceased beekeeper who started keeping bees at age 19 and even at 91 years of age said "you never stop learning about bees there is always something new to discover". I would imagine he would perceive himself as an improver despite his long experience.

My own definition would be that someone who has taken the BBKA Basic assessment is an Improver from then on.

Further information will be given in next month's newsletter but we will be asking people to register via Eventbright as we will need to limit numbers to 20 people.

Monthly meetings

This year's monthly meeting will be as follows. Note that some of them will be special meetings with practical and/or social aspects. Please put them in your diaries! As ever, see our website for details with upcoming events on our front page, all events on our events page and in the members services part of the website.

- Sunday 16th April: Swarm Collection
- Sunday 14th May: Bee Health Day – please put in your diaries!
- Sunday 11th June: Improver course – please put in your diaries!
- Sunday 9th July: Feeding bees and Spectacular Summer Social – please put in your diaries!
- Sunday 10th September: Monthly meeting: Winter preparation
- Sunday 8th October: Monthly meeting: Natural History of bees

Pollinator Fund Grants – Update

The recent member's survey indicated strong support from members for LBKA to invest resources in creation of forage & habitat for pollinating insects.

Over the last 3 years LBKA has piloted a grant making scheme to support pollinator-friendly planting, creation of habitat for beneficial insects, and the education of visitors to London's open spaces.

While the Pollinator Fund has been moderately successful, we appear to have exhausted the demand for relatively small grants advertised solely through our membership base. Management of the Fund has been undertaken by a panel of Trustees and co-opted LBKA members, and the experience gained has been valuable. However, we do not feel confident in advertising to a wider public audience or significantly increasing the value of individual grants we offer – we would prefer to partner with another organisation with similar charitable objects and greater experience of grant-making, in the hope that combining resources will deliver significantly greater outcomes without further taxing our limited human resources.

To this end we are asking members to introduce LBKA to organisations, (or people who are influential in organisations), that already have a track record in successful grant making and share at least some of LBKA's charitable objects or aspirations. Such organisations may include:

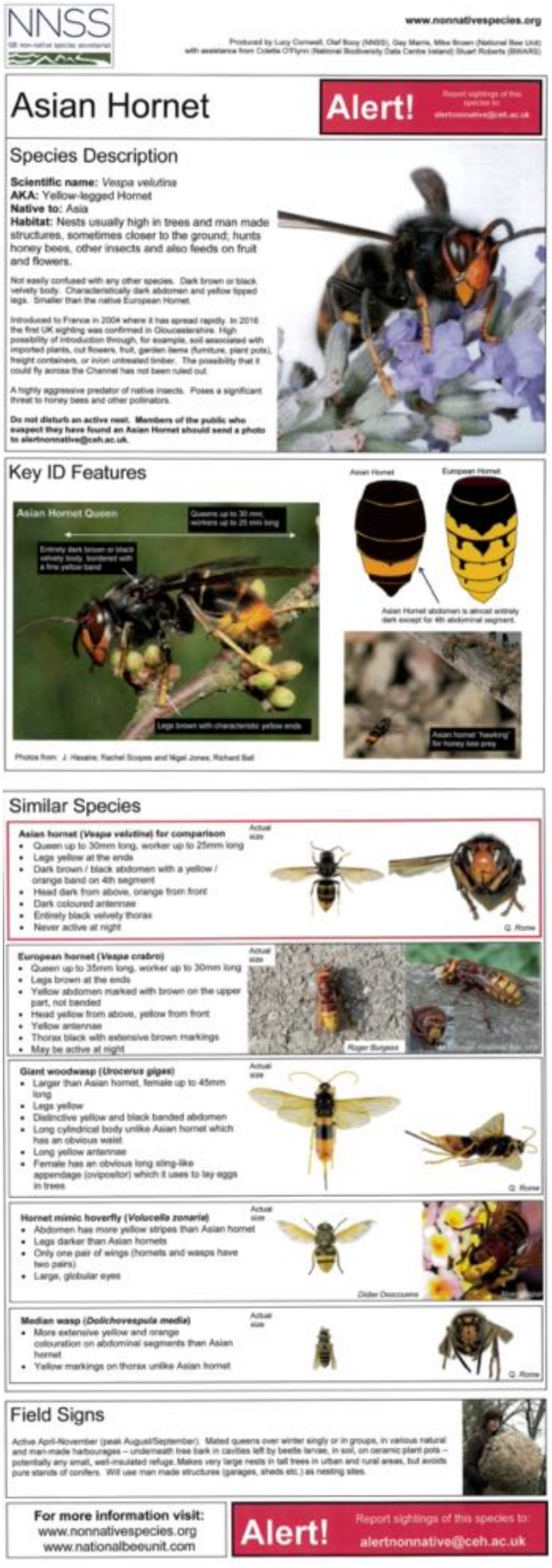
1. charitable organisations owning land in the Greater London area;
2. national conservation charities with a London branch;
3. organisations making grants for heritage/conservation work undertaken in London;

If you are able to guide us toward any organisation that might prove a suitable partner for LBKA in creating forage & habitat for pollinating insects in London, please contact treasurer@lbka.org.uk Please note: we are NOT requesting ideas about what type of organisation to approach – rather, we'd like introductions to such organisations/individuals who may already also be looking for partnering opportunities.

Further information about LBKA's Pollinator Fund in its current form is available at https://www.lbka.org.uk/pollinator_fund

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.



Asian Hornet Identification leaflet. Source: BBKA website.

Spotted by George: "Busy time for bees on a Plum Cherry bush (Prunus Cerasifera) hedge in full blossom with lots of leaves by the middle of March!" Photo and caption: George Kozobolis.

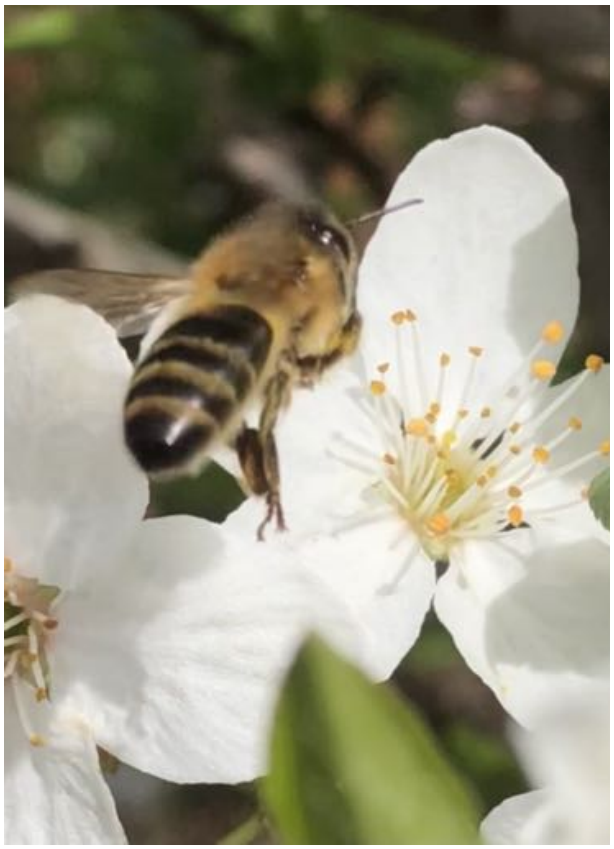
April's Committee meeting

Here, we keep you up to date with what the committee discusses 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.

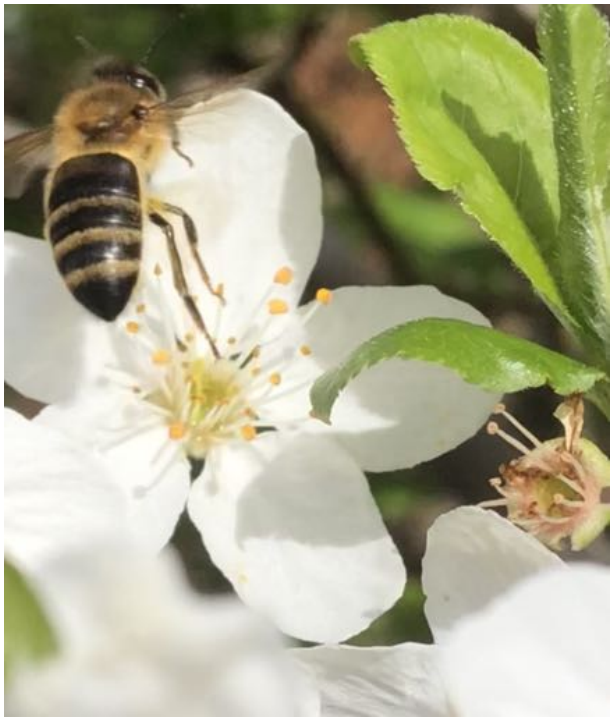
Aidan Slingsby
services@lbka.org.uk

It was quite a full meeting this month because as the season's starting and a lot of events are planned.

In the executive part of the meeting, we continued planning for upcoming events. The **Introductory Courses** will be starting this month. David has been coordinating speakers for the theory sessions and Tristram is helping find demonstrators for the practical sessions. **Bee health day** will be May's monthly meeting (15th May) at Brockwell. We will ask members to book and offer 30 places. **Lambeth Country Show** will be 10th-11th June. The 6m × 3m pitch has been confirmed and Sharon will be coordinating. **Improver beekeeper day** will be June's Monthly Meeting on 11th June and will be at Mudchute Park & Farm because Brockwell will be closed (Lambeth Country Show) and Battersea Children's Zoo has another engagement. Howard will be leading the session on "General Husbandry" level. The **Summer social** will be during August's Monthly Meeting on 13th August and we hope to have it at Roots & Shoots and have it catered for by the Delica Sisters.



"Prunus Cerasifera is regarded the ancestor of the domestic plum and is one of the first wild cherries to blossom in the UK. Its flowers are rich in nectar and pollen so it provides a good source of much needed food and nutrients for the rapid increase of brood in bees and other pollinating insects". Photo and caption: George Kozobolis



Plum Cherry (Prunus cerasifera). "A honey bee is just about to land on the pollen grains of a plum cherry flower". Photo and caption: George Kozobolis

"After a perfect precise landing on the pollen loaded anthers she gets down to work". Photo and caption: George Kozobolis

"Seconds later she is off to another flower!" Photo and caption: George Kozobolis

BBKA Basic Assessment sessions are likely to be on May weekends and Howard is managing this.

In the trustees part of the meeting, the trustee were happy with the **accounts**. They are now will the Independent Auditor and need to be submitted to Charity Commission before the end of July. All aspects of **School Food Matters** are in hand, thanks mainly to David. Richard will write a piece of the Newsletter (see page 1) on **LBKA's Character and Direction**. Tristram updated us on the **movement of the Holland Park equipment** to Brockwell. One colony will be given to Trinity Hospice, the other to the Foundry. We also plan stronger branding at Battersea Park Children's zoo Richard has agreed a design for the **Eden apiary** and costings being finalised. Simon suggest we consider becoming a **Buglife Company Member** and we agreed that Simon should follow this up. The **apiary at Walworth Garden** is being discontinued an we have been offered some of the equipment. Mark Patterson is doing a Zoom presentation on **The London Bee Situation** which we hope will make reference to LBKA's efforts in this space.

April in the Apiary

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

Howard Nichols
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It is in April is that colony populations substantially increase and drones start to appear. There should normally be sufficient available forage for the bees to be self-sufficient if the weather holds good. Stores are currently higher than usual in my own hives due to the late nectar surplus in October. The most important job for the beekeeper in April, given the weather, is to ensure that the colony is not starving.

Other actions to be taken this month normally include the following:

Remove mouseguards. Remove mouseguards and replace with a clean, sterilised entrance block.

Mark the queen. If the queen is unmarked then this is an ideal time to find and mark her. The colony is now going to continue to expand in numbers up until July whereupon it will start to contract. Swarm control is considerably easier with a marked queen.

Maintain records. Is the colony continuing to build up? A significant benefit of keeping colony records is that the number of frames of brood is recorded.

Varroa mites. Check mite drop if not already done in March.

1st full inspection. If not done in March then the first full inspection and spring cleaning of the hive should be carried out. The first entry can then be made into the colony records. From then on regular inspections should be made.

When inspecting a colony, 5 questions should always be asked and actions taken if appropriate.

1. Is the queen present and laying? You do not need to find the queen. If there are eggs and these are only 1 egg per cell, or newly hatched larvae, then this is evidence that she was in the hive and laying 3 or 4 days ago.
2. Has the colony enough room? This is a 2-part question, being enough room for the queen to continue to lay eggs and enough room for the colony to store nectar. If not then provide room by adding a super.
3. Are there any queen cells? Queen cups are to be expected and should be ignored unless containing an egg or larva. Queen cells require swarm control action by the beekeeper. If the colony has insufficient space (question 2 above) then swarming becomes more likely as the pheromones do not freely circulate. Add a super if necessary. Some colonies will be more advanced than others and may start swarm preparations in April.
4. Are there signs of disease? This is a comprehensive question but the strategy is best approached by being familiar with healthy brood. Anything that does not fit this description is, prima facie, suspicious. Healthy unsealed brood is pearly white in colour, evenly laid, segmented and lies in a "C" shape in the cell. Healthy sealed brood is light brown in colour, evenly laid and with slightly raised dome cappings.
5. Are there enough stores until the next inspection? The equivalent of 2 full National brood frames is regarded as sufficient at this time of year, even if there is a serious and prolonged downward turn in the weather.

April is the month that the colonies "take off" for the season. I do hope you all have an enjoyable beekeeping season, that your colonies will thrive and that you will achieve your aims.

Do Managed Honey Bees compete with Wild Bees for Floral Resources?

Mark suggested we include this article from his blog. Mark acts as Forage Officer for LBKA and is one of the most knowledgable people about the London Bee Situation and had a strong influence on LBKA's work in this area. It's long, but well worth a read.

Mark Patterson
forage@lbka.org.uk

If you had asked me this question 5 or 6 years ago my answer based on available published materials would have been a 'yes' but...wild bees have a variety of physiological and behavioural adaptations that allow them to compete successfully with other insects and in a healthy environment with diverse and abundant flora, the scale of competition is probably not that severe unless there's an awful lot of hives in the vicinity. I would have also said that the mechanisms by which competition occurs are also not that well understood and more research is needed. My answer was a cautious yes.

Ask me the same question in 2023 and I'm going to say 'Yes without a doubt and the competition is real.'

What's changed my opinion?

Prior to 2017 the published evidence available for Honey Bees posing serious competition to wild bees was limited and is summed up in a 2017 review of 147 available studies. This review concluded that the evidence was inconclusive with highly variable results. 53% of studies reviewed showed that Honey Bees had a negative impact on Wild Bees, 28% showed no impact, others showed the opposite. Not all of these studies looked at resource competition specifically but within those that did the degree or severity of competition varied. At this time the mechanisms of competition were poorly understood and the evidence for population levels of impact was largely absent. Few if any of these studies were able to link causality with a negative correlation.

Since then there has been a wealth of new studies published which demonstrate concerning levels of competition between Honey Bees and Wild Bees. This growing body of evidence has broadened understanding of the competition mechanisms and how exactly Honey Bees can impact Wild Bees. Many of these studies have gone on to quantify the levels of impact and have demonstrated that competition from Honey Bees can have population level effects on wild bees.

Managed Honey Bees are ravenously hungry organisms

We need to clarify that when we talk about Honey Bee competition we are referring to managed hive bees, not wild honey bees nesting in a tree cavity. Researcher Torben Schiffer from University of Wurzberg who recently gave a lecture on the subject makes some interesting comparisons which I'll describe below.

A wild native Dark European Honey Bee Apis *melifera melifera* is a frugal and efficient organism. Their tree cavity domiciles are thermally efficient, they are frugal with food stores and their impact on the environment is minimal. They can survive winter into spring on as little as 9 pounds of honey stores. It's generally recommended that hived bees require 30-40 pounds of honey stores to survive winter and even then many beekeepers have to feed fondant. A wild native type colony will consume 0.2%- 0.4% of the floral resources within a 1km radius of the hive leaving 99.6% of the floral resources for other pollinators.

Managed Honey Bees are a totally different animal. Firstly in the last 150 years we've forced them to live in cavernous square boxes made largely from thin wood and since Varroa we've given them open mesh floors making them draughtier. These wooden hives are great for preventing the urge to swarm and making excessive amounts of honey but the poorly insulated houses causes the bees to consume far more resources to maintain the atmosphere inside their nest. The bees are also compelled to fill the large volume boxes with honey and this leads them to consume more resources than the native ecotype bees living in their natural tree cavities. We've also changed the genetics of the bees we keep for honey production by importing and cross breeding with other subspecies from warmer climates. This results in hybrid vigour and colonies which make a bigger and more profitable honey crop but consuming more resources in the process. When selecting lines to breed from Beekeepers overwhelmingly select for larger colonies which produce more honey. A modern Managed colony in a large hive box or even a national double brood box set up will consume up to 20 times the floral resources of a native ecotype colony residing in a tree cavity. Each managed colony consumes between 2.6% - 4.5% of the floral resources within 1km radius of the hive. 22 colonies per km^2 in an intensive landscape would consume 99% of the floral resources leaving little for other pollinators.

In nature or even in the old days of keeping native honey bees in straw skeps the impact of a dozen colonies perkm^2 was the equivalent of one large modern colony. Add to this that we have far fewer floral resources than we did 100 years ago and its very easy to see how large numbers of modern managed Honey Bee hives can swallow up available floral resources making life challenging for wild bees.

Competition mechanisms

Recent studies have shed light on the mechanisms of honey bee competition and how it effects wild bees.

When Honey Bees forage they spill out of the hive and disperse across the landscape in search of floral resources. At first they will exhaust the forage nearest the hive before dispersing further outwards. When this is depleted they will disperse further out again, and again and again and can easily reach a 3km radius of the hive in summer. They can forage as far afield as 12 km according to research by University of Sussex. As they disperse outwards they create a halo effect around the hive/apiary. Nearer the apiary floral resources are depleted quicker and visited more regularly so they are repeatedly depleted as the plants recharge the nectar supply. Further away from the hive the visitation rates or density of foragers visiting flowers tends to reduce.

Numerous studies have shown that within the halo area of a hive or apiary flowers contain fewer pollen grains than those on the same types of flowers further away from the hives. It's also been shown that these plants nearer the hives contain less nectar because they get visited by the honey bees more frequently. So even if you're a long tongued bee with physiological adaptations evolved to be better adapted to a particular bloom the sheer number of Honey Bees visiting a patch of flowers can deplete the nectar you're competing for.

Numerous recent studies have demonstrated that within the halo area of a hive/apiary the abundance of wild bees is reduced. Two studies published autumn 2019 studying bees in urban Paris and in southern France both reported that wild bee abundance was halved within 600 meter radius (halo area) of honey bee apiaries and that larger apiaries resulted in the same effect but over a larger halo/radius. The southern France study also demonstrated that the foraging success of wild bees was halved in proximity to honey bee apiaries which lead to a decrease in reproductive success and a gradual decline in species abundance over successive years. This study was one of the first to successfully link causality with correlation something many previous studies had failed to demonstrate. The study found that pollen and nectar was substantially reduced within the halo area of the apiary and that wild bee foraging success was significantly reduced, fewer nests were provisioned and this resulted in a reduction in the population the following year. It's worth noting that the study also found that within the halo area Honey Bees foraging success was also reduced which highlights competition between hives and raises welfare concerns.

It's worth noting that the southern France study was undertaken in pristine rural florally rich habitat where there was a seasonal super abundance of forage, yet despite the healthy environment the presence of 15-30 Honey Bee hives per km^2 had a significant impact on wild bee survival and reproductive success. This makes me question my previous thoughts that 'in florally diverse and abundant environment the scale of competition is probably not that severe.'

A research paper published February 2020 in the royal society has highlighted that the huge increase in honey bees in the Mediterranean basin is reducing wild bee abundance and diversity and is contributing to wild bee declines, exaggerating declines caused by climate chance and habitat loss.

Numerous studies have demonstrated that Honey Bees have a negative impact on native pollinators where Honey Bees have established outside of their native range. Most of these Studies come from North America and Australia and suggest that where Honey Bees are not native they have a bigger competitive impact on native bees. See the works of Kit Prendergast.

Honey Bee communication gives them a competitive advantage over wild bees

Different Bee species range greatly in size from just a 2 millimetres in length (Perdita minima) to 2.5 inches in length (Wallace's Giant Leafcutter Megachile pluto). It's been well documented and understood for many years that larger bodied bees are capable of flying greater distances to forage than those of smaller species. There are various matrices that allow for the calculation of bee foraging distance from the nest based on body size and wing morphology.

So for example a small bee like the 7mm long Chelostoma campanularum or Bellflower Scissor Bee only flies to forage within a radius of around 50 meters from its nest site whilst a large Bumblebee is capable of foraging well over 2.8 kilometres from its nest. Some experimental studies have shown that when solitary bees are forced to fly further afield to forage the resulting energy and time expenditure results in a significant decrease in brood being provisioned and therefore reproductive success. Breeding success can be reduced by a third. So if your a small solitary bee and your forced to fly further afield to forage because a beekeeper placed a Honey Bee hive close to your nest and those bees are going to deplete the food within a few hundred meters radius of your nest your basically screwed.

Several studies have demonstrated that the Honey Bees highly social structure and advanced communication abilities give them a big advantage over other Bees. Communication allows Honey Bees to share information on forage location, abundance and quality with their nest mates and then exploit a floral resource until it's depleted.

A 2022 study demonstrated that sociality enables Honey Bees to fly much further than other bees of a similar size or even larger than they are. The ability to share information on food resources is thought to cause increased exploitation competition near the hive/apiary

due to foraging nest mates competing with one another, which in turn promotes foraging at greater distances as the bees attempt to avoid a "halo" of low food availability in the vicinity of the nest.

The researchers also noted that colony size reflected the range at which the colonies foragers travelled. Larger colonies foraged further from the nest than smaller colonies and Honey bee colonies also foraged much further afield in food limited environments and or to exploit particularly rewarding forage sources. The fact that smaller solitary bees forage at significantly shorter distances than Honey Bees means they are particularly vulnerable to competition from Honey bees and habitat fragmentation, possibly more so if they are a monolectic or narrowly oligiolectic species.

These revelations go a long way to understanding the mechanics of competition between Honey Bees and wild bees and backs up findings from previous published works.

If we look at the recent French studies which demonstrated 50% reduction in wild bees in proximity to managed apiaries and we apply what we now know about Honey Bee foraging tactics it becomes easy to appreciate how lots of hives in any given area, no matter how florally abundant can result in negative impacts on wild bees.

Over hiving of Honey Bees in Cities

Several recent studies have highlighted how the explosion in urban beekeeping in European cities is quickly becoming unsustainable with numbers of hives outstripping the available forage and having potentially serious impacts on wild bees.

Evidence from Brussels, several Swiss cities, London and Berlin show there are more hives than the habitat can support. A Berlin study appeared to show that high honey bee abundance reduced the number of wild bees and bee conservationists are deeply concerned by the 16 hives perkm^2 average present in Berlin in summer as migratory beekeepers move colonies into the city to take advantage of the Linden bloom.

Phil Stephenson's 2019 paper established that the landscape carrying capacity of European cities like London is 7.5 hives per km^2 and demonstrated that parts of Greater London far exceed this, demonstrating how unsustainable urban beekeeping has become in the capital. According to the National Bee Unit data there is one area of London with almost 400 hives per km^2 and several areas close to the city centre exceeding 50 hives per km^2!

The before mentioned Paris study found wild bee abundance was reduced by half within 600m radius of urban apiaries.

A 2022 study revealed increases in hives numbers across Swiss cities from an average 6.48 hives per km^2 in 2012 to an average 8.1 hives per km^2 in 2018 and observed that available resources are insufficient to maintain present densities of beehives, which currently are unsustainable.

A 2022 review of recent research looking at Honey Bee competition on wild bees summarised that 'the Literature supports significant evidence for competition from managed bees.'

A February published study from Montreal Canada demonstrated that a 10 fold increase in Honey Bee hive numbers between 2013 and 2020 resulted in significant depletion in pollen availability in the cities Clover crop and a significant decline in wild bee abundance echoing studies in European cities.

My conclusions

Having studied the findings of recent research on the subject and heard explanations from a number of experts (some of whom carried out the work) I'm now convinced that managed Honey Bees are contributing to wild bee declines.

This is a tough pill to swallow for beekeepers particularly commercial bee farmers who rely on placing large numbers of hives in florally abundant areas to make a honey crop amidst a hostile commercial market undermined by cheap foreign imports and adulterated product.

Many Beekeepers question the evidence pointing out that prior to 1900 there were significantly more hives than today and that most of the studies were conducted abroad.

Firstly the managed bees we keep today are a completely different animal than those we kept 100+ years ago and as pointed out earlier are larger, consume more resources and have an impact up to 20 times greater than the native wild Honey Bee kept in days gone by. Secondly we've lost 98% of the flower rich meadows and half of our hedgerows since the 1950s. The UK sits in the bottom 10% of most biodiversity/nature depraved nations in the world and is ranked least biodiverse nation in the G8. Studies conducted in continental Europe where floral resources are far more abundant than in the UK demonstrated serious levels of competition and impact on wild bees. If these studies demonstrated concerning levels of harm in environments healthier than the UK then its reasonable to assume the impacts here are just if not more serious. Note that in the Study by Gruter et all referenced earlier it was stated that the evidence was that Honey Bees foraged further afield and applied greater competitive pressure on wild bees in environments which were food limited.

Many beekeepers do not have an academic or science background and find the published works difficult to read and understand. Many simply state they don't make sense and refute them. There's a need for improvement in how we convey these findings in laymen's terms particularly to hobbyist beekeepers so they can

understand the importance of such research and its implications for beekeeping.

It's not the Honey Bees fault we are in the situation were in, and we must not 'bash' Honey Bees, it's a manmade problem. We've changed the landscape, reduced the floral resources, meddled with the Bees biology, morphology and behaviours through breeding programs and forced them to live in thermally inefficient resource costly manmade boxes.

What can beekeepers do to reduce their impact on wild bees?

- Keep fewer colonies. The threshold for impact being noticed is 3.5 managed colonies per km^2.
- Keep smaller colonies. Smaller colonies create less competition and consume fewer resources.
- Keep native eco-type bees, don't import foreign strains.
- House your bees in more thermally efficient hives by either cladding wooden hives in cork or using poly hives which are 76% more thermally efficient.
- Ditch open mesh floors. Draughty hives increase resource consumption.
- Don't place apiaries within 2.2 km of nature reserves and areas of importance for wild pollinators.
- Keep your bees healthy to avoid pathogen spill over which is an additional problem to floral resource competition.

Flowering currant.

Marsh marigold.

Focus on Forage

Mark tells us what's in flower at this time of year. This article is reprinted from last year.

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As we enter April many of our true heralds of spring have begun to flower. Among them the pretty pink **Cuckoo Flower** *Cardamine pratensis*. This dainty little pink flower is a true sign that spring 'proper' has arrived. It's an important nectar plant for many pollinators and the main food plant for the larva of the **Orange Tip Butterfly** – a species sadly in decline.

Deadnettle, **Dandelions**, **Coltsfoot**, **Primulas**, **Wood Anenemones**, **Green Alkanet**, **Comfrey** and **Lungwort** are at last now coming in bloom 2-3 weeks later than last year. The latter 2 in particular are popular with the **Hairy Footed Flower Bee**. Another flower I'm noticing lots of **small solitary bees** on at the moment, is **Lesser Celendine**. This plant is unusual in the buttercup family (*Ranunculaceae*) as it is one of the few buttercups that is attractive to bees. Most other Ranunculus have nectar which contains the toxin protoanemonin which bees cannot digest and can lead to poisoning. Lesser Celandine, however, is popular with many of our early solitary bees and occasionally Honey bees. Many of the **Micro Andrena** solitary bees feed on the golden yellow flowers which form vast carpets among cemetery, churchyards and beneath

Pulmonaria.

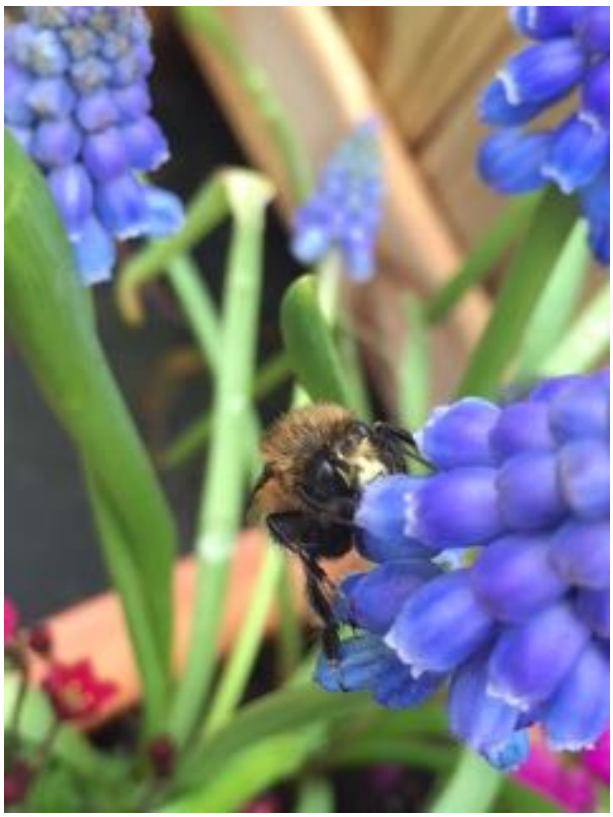
Celandine.

hedgerows. Another member of the buttercup family which bees may visit at this time of year is the **Marsh Marigold**.

Most of the **tulips**, **crocus** and **Winter Aconite** have now long gone over but there are still **Daffodils** in flower (though they are of little use to our bees), **alliums**, **wild garlic** and **Muscari** (Grape Hyacinth) in bloom.

This time last year, across much of southern England, **bluebells** were making an appearance. They are later this year and so far I've only seen signs of the fresh green leaves, but no flowers yet. In another few weeks, they should be out putting on a gorgeous display of blue. Blue bells may be visited by Honey bees and can produce a honey crop but they are also popular with some of the longer tongued solitary bees. Most Bluebells in London will be the invasive Spanish bluebell, but a few locations still hold stands of the native species.

During the last few days **Flowering Currant** have started to bloom. This plant is a reliable indicator that spring proper has arrived and for me a timely reminder to undertake first proper inspections. I'm writing this 24 hours after doing full inspections on several colonies where I have had to add supers because the brood bodies are full of sealed brood and honey. If a flow starts



Muscari.

Tulips.

now and the colony runs out of room they could begin swarm preparations.

Other important sources of forage this month are the willows. The catkins of willow bear copious amounts of

Peach blossom in Fulham palace walled garden.

The pollinator friendly window box we took to Ascot a few years ago.

sulphur-yellow pollen. If your honey bees are returning to the hive dusted in yellow they will most likely have been visiting willow. It's not just honey bees that visit willow. Many bumblebees and Andrena bees will also collect willow pollen, and seem to time their emergence with Willow catkins. Unlike the earlier flowering catkins of **Alder** and **Hazel** willow will also produce nectar. Other trees coming into bloom right now include **Field Maple**, **Sycamore**, **Poplar** and **Ash**. April is when we normally expect to see **Cherry Laurel** blooming in abundance but across much of the country this evergreen shrub is delayed flowering due to the recent cold. On the 4th April I saw the first inflorescence about to burst into flower. Many of the small solitary Andrena bees rely on this shrub for pollen and nectar.

As we progress through April we should expect to see the first **Horse Chestnut** blossom. Chestnut produces very distinctive dark brick red pollen which honey bees will collect with enthusiasm. Chestnuts are one of the best examples of how plants communicate with their pollinators; the individual blooms of the flower stalk change colour as they are fertilised to inform the bees that they need not bother to visit that particular bloom. Other trees coming into bloom will include Cherry, Plum and Apple. Currently the Blackthorn is putting on a good show of blooms and on warm days the bees may bring in a crop from this nectar source. At one of my apiaries my bees have access to about 45 hectares of mostly **Blackthorn** scrub and they bring back copious amounts of the brown coloured pollen and can fill a super with honey in little over a week.

One of the larger gardens where I keep my Honey Bees includes a 34 tree fruit orchard. So far the **nectarines**, **peaches** and **Mirabel DeNancy plum** are the only trees to have flowered. The **pears** should begin to bloom shortly followed by the **apples**, **Victoria Plum** and **Greengage**. Worryingly the half dozen Crab Apples planted around the edge of the garden to cross pollinate our cultivated apples have already bloomed which begs the question what will our apples pollinate with this year? The varieties planted were supposed to flower in unison providing cross pollination and better fruit set with the heritage apple varieties which unlike many modern cultivars do not self-pollinate.

On the outer edges of the city **Oil Seed Rape** will be starting to come into bloom and will flower well into mid-May. Beekeepers either love it or hate it for it can produce an abundance of honey but the grainy texture and trend to crystallise rock hard in the comb are drawbacks. Our member Geoffrey Hood produced a lot of Rape honey in 2015 and when I find time I intend to use it as seed honey to try and make Creamed Honey. If I'm successful you can expect a write up about that.

Jobs to do in the garden

From now on, weeding will become a regular chore in the garden. For the past 3 weeks I have been meticulously pulling out the seedlings of **Germander Speedwell**, the first shoots of **Bindweed** and **Common Cleavers** which every year threaten to take over my garden. Keeping them in check requires constant attention. Weeding is a garden chore I like the least – if only it could all be about planting flowers!

Prune back damaged branches on shrubs and fruit trees. Storm Katie has battered quite a few trees on my allotment which will now need pruning. Remove dead or damaged tissues cutting to the branch bark ridge.

Plant out summer flowering bulbs once threat of frost has gone.

Upcoming events

See our website for an up-to-date version

Sunday 16th April: Monthly meeting: Swarm Collection

11:00-13:00 at The Foundry, 17 Oval Way, London SE11 5RR

Swarm collection. Meetings are for members only, but you're welcome to come as a guest to find out more about our association.

Tuesday 25th April: Pub social

18:30-22:30 at The Sun, 47 Old Town, Clapham, London, Greater London, SW4 0JL

Our monthly trip to the pub will be to The Sun.

Sunday, 30th April: Talk: Apitherapy by Dr Gerry Brierley

20:00 at Via zoom - link will be distributed to members via email

Wilfred (chair of the Barnet and District Beekeeping Association) has invited LBKA members to a talk by Dr Gerry Brierley. Dr Gerry Brierley an 'Accidental Apitherapist' and beekeeper, who, after an encounter with blood sucking ticks in the Surrey Hills contracted near fatal forms of tick borne infections. Gerry opens up the natural pharmacy at the bottom of your garden to discuss the diversity of premium hive produce for general health and healing. Gerry can uncover the secret medicinal properties of honey, drone larva, pollen, bee bread, royal Jelly and propolis and the honey bee life cycle. Gerry will share her personal survival story along with supporting scientific evidence of how using bee venom has saved her life and many thousands of others, including man's best friend.

Sunday 14th May: Monthly meeting: Bee Health Day

10:30 for 11:00-16:00 at Brockwell Park Community Greenhouses, Brockwell Park, London, SE24 9BJ.

A special all-day event at Brockwell Park (Community Greenhouses) focusing on bee health including how to inspect for disease, varroa and apiary hygiene from experts.

Very important topics with Varroa as the number-one pest and EFB being so prevalent. Booking is essential. Members will be sent details of how to book.

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:** Simon Saville, admin@lbka.org.uk
- **Education:** Howard Nichols education@lbka.org.uk
- **Membership:** Aidan Slingsby, services@lbka.org.uk
- **Events:** Annie McGeoch, events@lbka.org.uk
- **Apiaries:** Tristram Sutton, apiaries@lbka.org.uk
- **Mentoring:** Elliot Hodges, mentor@lbka.org.uk
- **Resources:** Will Fry, resources@lbka.org.uk
- Stuart Kennon, stuart.kennon@lbka.org.uk

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