



# LUNE VALLEY COMMUNITY BEEKEEPERS

## NEWSLETTER JUNE 2018

### Club News

#### Me and my Bee



The Dukes Theatre staged this highly amusing and thought-provoking play, aimed at young children, about the plight of all bees. Written and performed by the ThisEgg theatre company, this production certainly engaged the attention of the young audience – and the older ones!



In support of the production, the Club staged an exhibition of our work utilising our new exhibition boards, kindly funded by the Earnest Cook Trust, and the ever-popular observation hive. Both attracted a lot of attention.



### Joint action day with Green Lancaster

Around 40 people from a range of environmental groups gathered at Lancaster University's EcoHub for a day of presentations and practical projects. We were invited to give a talk on beekeeping, which Fred gave. From the questions received, it seemed to go down well.

### Beekeeping for beginners



World Bee Day on 20<sup>th</sup> May saw a very pleasant day for our *Introduction to Practical Beekeeping* course, which saw some of those who attended our earlier theoretical course tackle a range of practical tasks, such as building frames, before getting involved with some hive inspections.

### World Bee Day



In celebration of World Bee Day, the Slovakian Government issued a commemorative 2 euro coin.

## Open Day



This year our Open Day will be on Saturday, 14<sup>th</sup> July from 11-00am to 4-00pm, when hopefully our wildflower meadow will be looking its best. We plan to have a number of stalls including:

- Cakes and refreshments
- Barbecue
- Club information etc
- Pollinator patch information
- Club Sales
- Long hive
- Honey Sales
- Wax products
- Observation hive

If you can help us by volunteering to help out with any of these stalls, or for other activities such as car parking, for the day or even a few hours, could you please let me know. Donations of cakes etc would be very welcome.

## Volunteer Web Master

We still need a volunteer to act as Web Master for the Club's web site. The main task is to upload the monthly newsletter to our web site, together with updates to other pages from time to time. Whilst the new Web Master will need to be generally IT literate, specific training for the tasks involved can be provided. If you are interested, please give me a call – 01524 811978.

## Telling the Bees



One beekeeping tradition that still prevails in some parts of the country but is rarely mentioned on courses, is that of "Telling the Bees". Like most traditions, its origins are lost in the mists of time but are thought to be of Norse origin.

On the death of a beekeeper, the tradition requires a close relative to go and tell the bees of the death. They had to talk to each hive and tell them of the loss of life and drape strips of black cloth over the top of the hive.

## Club Meeting Programme 2018 – 2019

<b>Sat</b> <b>7<sup>th</sup> July</b>	<b>National Coronation Meadow Day</b>	
<b>Fri</b> <b>13<sup>th</sup> Jul</b>	<b>Working Party</b> Preparatory work for the Open Day.	<b>Club Apiary 10-00am</b>
<b>Sat</b> <b>14<sup>th</sup> Jul</b>	<b>Apiary Open Day</b>	<b>Club Apiary, 11-00am to 4-00pm</b>
<b>Sun</b> <b>5<sup>th</sup> Aug</b>	<b>Clubs Open Day</b> Members of other clubs in the region will be invited to come and look at our range of alternative hives and join a barbecue.	<b>Club Apiary, 10-00am to 4-00pm</b>
<b>Sun</b> <b>16<sup>th</sup> Sept</b>	<b>Preparing for winter</b> There will be a short, explanatory talk followed by practical inspections.	<b>Club Apiary, 10-00am to 2-00pm</b>
<b>29<sup>nd</sup> Sept</b>	<b>Scything course</b> See notice for details.	<b>Club Apiary, 10-00am to 4-30pm</b>
<b>Wed</b> <b>10<sup>th</sup> Oct</b>	<b>Speaker meeting</b> <b>Topic: Pollinating insects and the effectiveness of pollinator patches</b>	<b>Scarthwaite Hotel, 7-30pm</b>
<b>Wed</b> <b>14<sup>th</sup> Nov</b>	<b>Speaker meeting</b> <b>Topic: conserving bees, breeding our own local stocks and discouraging imports.</b>	<b>Scarthwaite Hotel, 7-30pm</b>
<b>2019</b>		
<b>Wed</b> <b>9<sup>th</sup> Jan</b>	<b>Social Evening</b> Wine and cheese evening and auction of members' surplus equipment.	<b>Scarthwaite Hotel, 7-30pm</b>
<b>Wed</b> <b>13<sup>th</sup> Feb</b>	<b>Speaker meeting</b> <b>Topic: Keeping bees in long hives</b>	<b>Scarthwaite Hotel, 7-30pm</b>

## Honey Wanted

We have had requests to buy local honey from the following people. If you have honey to sell could you please contact them directly.

- Philippa Hughes, philippa\_hughes@btinternet.com, Kirkby Lonsdale area
- Grace Hepwood, GHEPWOOD@AOL.COM, Halton area

## A buzz in the tale

Two beekeepers walking through a wood saw a vicious looking swarm heading straight for them. The first beekeeper immediately opened his bag, pulled out a pair of trainers and started putting them on. The second beekeepers looked at him and said "You're crazy! You'll never be able to out run that swarm!" "I don't have to" the first beekeeper replied, "I only have to out run you!" *Courtesy of The Apiarist, Harrogate & Ripon Beekeepers Association.*

## Hornet Traps



Earlier in the year, following the discovery of yet another Asian Hornet, there was a great deal of comment in the beekeeping journals about the advantages of erecting hornet traps in apiaries, with the most favoured method being the homemade bottle trap. This produced a flurry of comments from environmentalists who agreed that these types of trap were both cheap and effective but, in addition to catching hornets, Asian and European, caught wasps, honey bees and many other types of pollinator. It was argued that this type of trap caused more damage to pollinators than the hornets could ever do! So, if you feel you have a need to trap hornets, consider obtaining one of the purpose built devices that should only kill hornets and not your bees.

## From our correspondent in Nagaland, North East India!



To bottle your honey – first find an empty whiskey bottle!

## The Native Black Bee



The native British Black Bee was said to be extinct in England by about 1920 due to the ravages of the so-called Isle of Wight Disease. It was also said that only through importations from Europe could bees be kept going in England. However, writing 40 or so years later, Beowulf Cooper in his book 'The Honeybees of the British Isles' describes many types of local British bee. A second demise of the local British bee was announced following the arrival of the varroa mite (ironically through imported bees), which has been a scourge of our bees since the 1990's. We are said once more to be dependent on imports. As before, however, experience suggests the contrary. I know of beekeepers in several areas who have bees in their hives that show characteristics indicative of the native bee.

All of these bees started as hybrids of imported and local bees. However, as any gardener knows, hybrids do not breed 'true'. Some of the offspring tend in their characteristics towards one of the pure breeds, some tend to the other, while some remain mixed. Over time, the amount of mixing tends to lessen and the amount of purity tends to increase. Eventually some of the offspring have characters near to one or other of the original pure lines. All of this happens naturally and produces the near native bees described above. There are two important influences that pull in different directions in this process.

The first is the notoriously variable British weather. Continental weather, by contrast, is far more predictable. The bees that are imported into the UK often come from Southern Europe or the Balkans. These bees have little or no idea how to react to British weather. Without constant input from beekeepers, they can struggle to survive from one year to the next. By contrast, bees with a high proportion of local blood do rather well in our changeable weather, gathering honey and pollinating plants even in poor weather, something that imported bees cannot do. They can also reproduce (swarm) and mate in weather that would inhibit imported bees. Over time, British weather thus selects in favour of British bees. For this reason, if all imports of bees were stopped, it would not be long before all our bees had a high degree of local blood in them.

The second influence lies in those who have found a lucrative market in persuading beekeepers to buy imported bees. It is true that these bees do very well in their home countries. But in the UK the weather is against them. In a season when the weather is poor, such bees need constant feeding if they are not to starve. Moreover, when these bees mate with local bees, the first or second cross is often a very poor performer and can be rather aggressive. The 'answer' that is promoted by the importers is to buy regular replacements of newly imported bees, creating a self-fulfilling and, for the importers, profitable circle.

Why should we care? The holy grail of current beekeeping is to find bees that are varroa resistant. There are now, in several areas of Southern England and parts of Wales, bees that can cope with varroa without constant beekeeper input or medication. Wherever one finds such bees, one generally finds nearby colonies of wild bees. Wild bees have never been treated by beekeepers. They have been through selection both by the weather and by the varroa mite. They have to cope or they die. Imported bees are neither weather-proof nor varroa resistant. The varroa resistance shown by wild bees is a highly valuable resource if we are to achieve more widespread varroa resistance in our kept bees. However, it is severely diluted if non-resistant imported bees are constantly placed in their vicinity.

It is often said that agriculture relies on imports to have enough bees for crop pollination. This surely is an admission of failure on the part of beekeepers. Better by far to address the cause of the problem. Importing unsuitable bees only makes things worse.

## **City upbringing, without pets, boosts vulnerability to mental illness**

Growing up in a rural environment with exposure to animals helps lower later risk of mental illness. New research shows the 'hygiene hypothesis' boosts the immune system and could help stave off psychiatric disorders too.

Beekeeping can be dirty work. Moving hives, working colonies exposes us to dust and microbes in the environment. New research shows that we might want to get our children involved from an early age. This early exposure could help prevent later mental illness.



Researchers showed men raised as children in Germany in a rural environment, surrounded by animals and bacteria-laden dust, grow up to have more stress-resilient immune systems and might be at lower risk of mental illness than pet-free city dwellers, according to a study published in *Proceedings of the National Academy of Sciences* (PNAS).

The study, co-authored by researchers from the University of Ulm in Germany and the University of Colorado Boulder, adds to mounting evidence supporting the "hygiene hypothesis," which posits that overly sterile environments can breed health problems.

The research also suggests that raising kids around pets might be good for mental health - for reasons people might not expect.

"It has already been very well documented that exposure to pets and rural environments during development is beneficial in terms of reducing risk of asthma and allergies later in life," said co-author Christopher Lowry, a professor of integrative physiology at CU Boulder. "This study moves the conversation forward by showing for the first time in humans that these same exposures are likely to be important for mental health." For the study, led by University of Ulm Professor Stefan Reber, the scientists recruited 40 healthy German men between 20 and 40 years old. Half had grown up on a farm with farm animals. Half had grown up in a large city without pets.

On test day, all were asked to give a speech in front of a group of stone-faced observers and then asked to solve a difficult math problem while being timed. Blood and saliva were taken five minutes before and five, 15, 60, 90 and 120 minutes after the test.

Those who grew up in cities had significantly higher levels of immune system components called peripheral blood mononuclear cells (PBMCs) after the stressful experience. They also showed prolonged elevation of the inflammatory compound interleukin 6 and muted activation of the anti-inflammatory compound interleukin 10.

"People who grew up in an urban environment had a much-exaggerated induction of the inflammatory immune response to the stressor, and it persisted throughout the two-hour period," Lowry said.

Surprisingly, while their bodies launched a hair-trigger response to the stress, the former city kids reported feeling less stressed than their rural counterparts did. "This exaggerated inflammatory response is like a sleeping giant that they are completely unaware of," Lowry said.

Previous studies have shown that those with an exaggerated inflammatory response are more likely to develop depression and post-traumatic stress disorder (PTSD) later in life. Research has also shown that our immunoregulatory response to stress develops in early life and is shaped largely by our microbial environment. More than 50 percent of the world's population now lives in urban areas, meaning humans are exposed to far fewer microorganisms than they evolved with, the authors note.

"If you are not exposed to these types of organisms, then your immune system doesn't develop a balance between inflammatory and anti-inflammatory forces, and you can develop a chronic, low-grade inflammation and exaggerated immune reactivity that makes you vulnerable to allergy, autoimmune disease and, we propose, psychiatric disorders," Lowry said.

Reber said he hopes to expand the study to larger samples, women and new locations, and try to parse out how much of the benefit is coming from exposure to animals and how much is coming from rural living.

For now, the authors advise eating foods rich in healthy bacteria, or probiotics, spending time in nature and getting a furred pet. At ABJ, it sounds like a great opportunity to get your children and grandchildren involved in keeping bees.

"A lot of research still needs to be done. But it looks as if spending as much time as possible, preferably during upbringing, in environments offering a wide range of microbial exposures has many beneficial effects," Reber said.

Read the abstract or paper at: <https://doi.org/10.1073/pnas.1719866115>

## Droughts bring fewer flowers for bees





Bees could be at risk from climate change because more frequent droughts could cause plants to produce fewer flowers, new research shows.

Droughts are expected to become more common and more intense in many parts of the world, and researchers studied the impact on flowering plants using a field experiment. They found that drought roughly halved the overall number of flowers. This means less food for bees and other pollinators, which visit flowers for the nectar and pollen that they provide. The research was carried out by the University of Exeter in collaboration with the University of Manchester and the Centre for Ecology and Hydrology.

"The plants we examined responded to drought in various ways, from producing fewer flowers to producing flowers that contained no nectar," said lead researcher Ben Phillips, of the Environment and Sustainability Institute on the University of Exeter's Penryn Campus in Cornwall. "But overall there was a very clear reduction in the number of flowers that were available - and obviously this means less food for flower-visiting insects such as bees."

Bees are already under pressure from a variety of threats including habitat loss, the use of particular pesticides, and the spread of diseases and alien species.

"Not only are these insects vital as pollinators of crops and wild plants, but they also provide food for many birds and mammals," said joint lead researcher Dr Ros Shaw, also of the University of Exeter.

The study took place in Wiltshire on chalk grassland, which is an important habitat for UK pollinator species. The plant species studied included meadow vetchling (*Lathyrus pratensis*), common sainfoin (*Onobrych viciifolia*) and selfheal (*Prunella vulgaris*).



**The experimental design using shelters that simulate drought.**

"Previous studies of the impacts of drought on flowers and bees have looked at individual species, often in the laboratory, but we used an experiment with rain shelters to examine the effects on real communities of plant species living in chalk grassland," said Dr Ellen Fry from the University of Manchester, who set up the experiment.

"The level of drought that we looked at was calculated to be a rare event, but with climate change such droughts are expected to become much more common."

The findings suggest that chalk grasslands may support lower pollinator populations in the future, but the scientists warn that the results are likely to be broadly applicable to other regions and habitats. The research was part of the Wessex Biodiversity and Ecosystem Service Sustainability project and was funded by the Natural Environment Research Council. The paper, published in the journal ***Global Change Biology***, is entitled: "Drought reduces floral resources for pollinators."

<http://dx.doi.org/10.1111/gcb.14130>

## What gives bees their sweet tooth?



Scientists have discovered bees linger on a flower, emptying it of nectar, because they have sugar-sensing taste neurons which work together to prolong the pleasure of the sweetness.

Newcastle University researchers report that the bees' taste neurons found on their proboscis - their mouthparts - fire intense signals for up to 10 seconds - much longer than the taste neurons found in other insects. Bees visit flowers to obtain nectar, which they eat to feed their colony and to fuel their flight. Bees can taste sugars on their proboscis and when in contact with food, taste neurons on the proboscis are activated signaling the presence of food.

Publishing in *Current Biology*, the researchers report that the neurons that specifically respond to sugar exhibit a very intense activation, which persists up to 10 seconds. While these neurons exhibit intense activity, the bee will remain feeding at the same sugar source. Only when this activity declines, does the bee remove its proboscis to enable it to try a further feeding point.

Author Geraldine Wright, Professor of Insect Neuroethology, explains: "We demonstrate in bees that, like in humans, the first taste of something sweet such as a lollipop is incredibly intense but then becomes less interesting. This is so our sensory neurons don't get overloaded and burn out. "What we've found in bees is that the initial intense sweetness of sugar can last up to 10 seconds - so they will stay on the same sugar source. This makes sense if you think a worker bee is not just collecting for its own use but is storing it for others in the hive. It also means the bee will find a flower and drink all the nectar before other bees can intervene and take it."

### ***Discovery of Two Neurons***

The team found that the bee has two taste neurons within each 'taste bud' which interact to enable this persistent, intense sugar neuron activity. Lead author, Newcastle University PhD student Ashwin Miriyala said: "Other insects have one type of taste neuron that is activated by sugars. We have discovered, however, that bees have two different types of sugar-activated neurons.

"The first neuron exhibits intense activity when in contact with sugar. The second neuron intermittently inhibits the activity of the first neuron for short durations of time. This inhibition allows the first neuron a sort of 'resting period', so it can recover and maintain its intense activity for longer periods of time. "Our data show that the interaction between these two sugar neurons is a result of electrical connections between them. This is the first evidence for this kind of connection in any insect taste neuron."

The work was funded by the Leverhulme Trust and the BBSRC and following these findings, the Newcastle University team intend to carry out further research investigating how the bee's sense of sweet taste might be interrupted by pesticides.

REFERENCE: Burst firing in bee gustatory neurons prevents adaptation. Ashwin Miriyala, Sébastien Kessler, F. Claire Rind and Geraldine A. Wright. ***Current Biology***

**Fred Ayres, Editor & Chairman, June 2018**

# The Lune Valley Long Hive

## An innovative but simple long hive



**Only £295**

**Only obtainable from Lune Valley Community Beekeepers**

### Essential features:

- Designed by bee-centric beekeepers for bee-centric beekeepers
- Comfortably houses one colony of bees without the needs for additional supers or brood boxes
- Can be used with 14 x 12 frames (recommended), standard brood frames or top bars
- Has a removable floor tray which can act as a biological sump or a debris board for varroa counts
- Has 2" thick wooden walls which provide five times more insulation than a standard hive
- Roof space is ventilated and has space for a jumbo feeder
- Has a metal roof
- Is manufactured locally, especially for LVCB
- Is constructed from pine wood to reduce the cost but will need an external preservative
- Despite its high specification, it is economically priced whilst offering exceptional value for money.

# **Open Courses Programme 2018**

**It would be very helpful if members could print off the following notices and put them on local notice boards.**



**LUNE VALLEY COMMUNITY BEEKEEPERS**

# **BEEKEEPING OPEN DAY**

**Saturday, 14th July 2018**

**11-00am to 4-00pm**

**Free admittance and car parking**

**The Apiary, Nazareth, House, Ashton Road, Lancaster, LA1 5AQ**



**Lune Valley Community Beekeepers**

# **LEARN TO SCYTHER**



**Scything course by Steve Tomlin**

**All equipment provided**

**The Apiary, Nazareth House, Ashton Road, Lancaster LA1 5AQ**

**Saturday 29th September**

**BOOKING ESSENTIAL AS PLACES ARE LIMITED TO EIGHT**

**For further information:**

visit [www.lunevalleybeekeepers.co.uk](http://www.lunevalleybeekeepers.co.uk)

or email: [fred@lunevalleybeekeepers.co.uk](mailto:fred@lunevalleybeekeepers.co.uk)