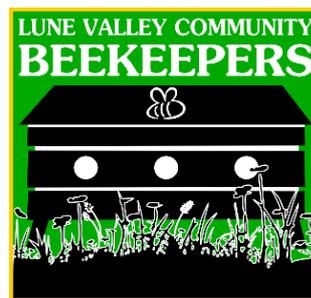


# LUNE VALLEY COMMUNITY BEEKEEPERS



## NEWSLETTER APRIL 2018

### Club News

#### New members

We are delighted to welcome new members Dennis Atkinson, Geoffrey Beckett, Melanie Fryer, John Wakeford and Tsiry Wilkinson.

#### Last meeting

We had an excellent turnout for our last meeting, especially from new members, when we looked into the sources of bees and how to move and re-hive them.

#### Newsletter exchange

At the beginning of the year we joined the Newsletter Exchange Scheme. The way it works is that we send copies of our newsletter into the exchange and in return we get copies of the newsletters from all the other scheme members. Any information of interest can then be shared. So far, we have received newsletters from Cheshire BKA, Devon BKA, Essex BKA, Harrogate & Ripon BKA, Manchester & District BKA, Reigate Beekeepers, Somerton & District BKA, Taunton & District BKA, Warwickshire BKA and West Sussex BKA.

#### Research project

For the last few years we have been actively promoting the creation of pollinator patches as a means of improving the environment for pollinators. We now have the possibility of a project with Lancaster University, starting in the summer, to assess the impact of the patches on pollinators. If anyone is interested in getting involved with this project, please let me know.

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

## Our next Club Meetings

After the unusually cold weather of late February and early March we hope that April will be much warmer and allow our bees to get out and forage, but hopefully not to swarm yet! It promises to be a busy month for beekeepers too!

### Thursday, 5<sup>th</sup> April Apiary working party

We are hoping for a small number of volunteers to help prepare the ground for two new pollinator patches and to sow the seed.

### Club Apiary, 10-00am



### Sunday, 8<sup>th</sup> April Apiary working party Club Apiary, 10-00am

We plan to erect six or so swarm boxes around the apiary in advance of the swarming season. So, if you are good at balancing on ladders or simply steadying them at the bottom, you will be more than welcome.

### Sunday, 22<sup>nd</sup> April Spring inspection of Apiary Club Apiary, 10-30am

This will be the first inspection of the season for all the hives at the apiary. You will need to provide your own protective clothing but if you have not yet got a bee suit, let me know and we shall do our best to provide one for you.



## Beetradex 2018

I braved the weather and went to Beetradex. Actually, all the roads were perfectly clear all the way to Kenilworth, where I stayed the night before. Overnight there was 3-4 inches of snow, but apart from getting off the hotel car park, this did not cause any problems. I had been told by the organisers that they had sold over 6000 tickets in advance of the event but the numbers there when I was seemed to be only a few hundred. A number of the trade exhibitors had had to cancel, due to the weather, and the organisers decided to cancel the free lecture programme. BIBBA also cancelled their planned AGM. The fewer numbers made shopping a lot easier but the event definitely lacked the buzz of previous events.

## High Time to Stop Managing the Bees



Prof. Dr. Peter Neumann is the Vinetum professor of the Institute of Bee Health. His research and teaching covers all aspects of bee health with focus on behavioural, evolutionary and molecular ecology of honey bees and their pathogens.

Since 2015 Peter has been Chair of the research consortium "European honey bees surviving *Varroa destructor* by means of natural selection" that is comprised of eight research institutes from Belgium, France, Germany, Norway, Sweden, Switzerland and The

Netherlands.

He has 20 colonies of bees that have not been treated for varroa for many years. They are healthy and vibrant and reproduce by swarming.

Peter is to be one of the prominent speakers at the *Learning from the Bees Conference* which will take place in the Netherlands from 31<sup>st</sup> August to 2<sup>nd</sup> September this year. His presentation will be based on his latest research paper, *The Darwin Cure for Apiculture*, which was published internationally in December 2016. Here is a pre-synopsis.

### High Time to Stop Managing the Bees

#### ***The BBKA View of Bee Health***

Here are some words from the bee health page of the BBKA's website followed by an extract from the BBKA's teaching syllabus:

*You must be able to manage varroa in your bees, if you want to be a beekeeper. Keeping bees is like keeping other animals. You are responsible for their well-being and must be aware of how to keep them healthy.*



*The Assessors will examine the Candidates' method of queen rearing. This does not need to include grafting techniques but will demonstrate that the candidate is selecting the material for breeding and not rely on the use of naturally occurring swarm cells.*

The first statement makes it very clear that bees cannot control varroa on their own: the beekeeper must do it. The second statement makes it very clear that one should not leave the choice of the next generation of queens to the bees: the beekeeper must do it.

## ***The Scientists' View of Bee Health***

Here is an alternative view to the above.

- Treating against Varroa destructor not only prevents host-parasite co-evolution, but may also add to the exposure to pesticides thereby possibly compromising colony health.
- Recent evidence suggests substantial local adaptations of honey bees enhancing colony survival.
- Breeding for V. destructor-resistance over more than 20 years has still not resulted in survival of untreated colonies, but natural selection has delivered [it] multiple times, thereby suggesting that breeders should choose traits favoured by natural selection. This suggests fundamental conceptual flaws in both commercial honey bee queen rearing and breeding.
- Since the fitness of a honey bee colony clearly is the number of surviving swarms as well as the number of successfully mating drones (all other traits are only tokens of fitness), the selection by beekeepers for low swarming tendency of colonies and removal of drone brood, mainly to combat V. destructor, remain probably the key factors in limiting natural selection [for varroa resistance].

These words sound like the urgings of those natural beekeepers who allow their colonies to reproduce by swarming and claim to have bees that are naturally varroa resistant without treatment. But they are not, they are the words of eminent biologists taken from an open access paper just published in the journal Evolutionary Applications. The paper draws conclusions based on work by researchers around the world.

It is difficult to imagine a clearer or more robust support of the tenets of natural beekeeping. Yet, conventional beekeeping organisations such as the BBKA insist that only by constant beekeeper interference can bees be kept healthy. This paper makes it abundantly clear that the reality is exactly the converse:

***Beekeeping interference with natural selection in combination with globalisation of apiculture may now have reached a level where ill effects are inevitable at the colony level.***

For the sake of the bees, we call upon the BBKA and similar organisations to take heed of the science and to accept that the path to long term health cannot involve constant beekeeper interference and the use of chemical treatments. What the bees need is to be left in peace, to mate as they will and to be winnowed by that most exquisite and time proven of mechanisms: natural selection.

## **Bee Breeding and Importation – A Broken Relationship**



Together with their environment, bees represent a single sphere of unity, held together by thousands of dependent mutual relationships. It includes relationships: to pollen, between the individuals in the colony, to local hives, to their comb, to the bacteria in the comb, propolis, local plants, the queen, the local climate, and for managed hives, the beekeeper. When bees get sick, it is a sign of a broken relationship creating imbalance or disunity.

Humans on the other hand are masters of disunity and independence, or so we think. If the fields are overworked, we 'fix' it with chemical fertiliser. If the mono crops create an imbalance of pests, we 'solve' it with pesticides. If a plant is not productive enough, we genetically modify it. For humans, independence is seen as strength, and dependence a weakness. For bees, isolation from the hive leads to death, strength comes from connection and dependence. Dependence requires both sides of a relationship to work.

I would like to highlight one relationship between the bees and the beekeeper which I think has been broken for over a hundred years, and it strikes at the heart of this unity – queen breeding and the changes to bee genetics caused by bee importation. Bees used to be local to their region, in Britain there was the British dark bee, but in truth, there were many more closely-related strains each with their own subtle genetic expressions, and each locally adapted over time. There were the North Lincolnshire (Boston) bees and the North Yorkshire high moor (Cleveland) bees, for example. In Britain for almost 2000 years, bees either slowly evolved within their sphere of unity or naturally devolved if the relationships broke down.

Then, from the mid nineteenth century, bees started experiencing rapid changes to their genetics. Bee breeders mixed races from other continents (the Buckfast Bee being a classic example) and, worse, brought an uncontrolled flood of imported bees from the continent. In 2014, over 12,000 queens, nucleus, packages and colonies were imported into the UK.

Many of these bees come from southern Europe which has a climate very different from our own. It is little wonder that these bees struggle here. The mating of imported races with local bees, particularly those with strong native bee genetics, creates highly aggressive 2nd generation bees.

Today, through breeding and importation, we are deciding what is desirable and what is not. This is often driven by simple metrics like honey yield or temperament and, more often than not, time and cost considerations. If the imported bees are not self-sufficient for winter, we fix that with sugar. If they get ill we give them antibiotics, which also kills the good bacteria. If they swarm too much we cull the queen cells. If we want more bees we artificially split hives or inseminate queens. Gone are the mutual balanced relationships that bees seek and need. Now we have a mess of genetics, propped up by clumsy (temporary) fixes. We do not allow broken relationships to break down and devolve – we fix and manipulate.

The way out of this mess is not to breed native dark bees, however well intentioned. That is yet another fix and uses the same mentality that created this problem. We need to pause, and let bees find their balance in the landscape we have today and restore our relationship with the environment. None of us, neither bees nor humans, can thrive in a toxic world.

The task of the enlightened beekeeper is to become part of the bees' sphere of unity. This requires a different mindset. Are you strengthening the unity of the hive or breaking it? In truth we are not independent from our environment, but through stronger dependent relationships we could become stronger. The bees show us this.

## Lune Valley Community Beekeepers' perspective

Almost all the honey bees within the UK are maintained in managed colonies. That is to say, they live in man-made bee hives, in densities far higher than would exist naturally and often in locations where they depend on gardens, parks and cultivated crops rather than natural sources for forage. Most are also subjected to frequent interventions and manipulations.

There is, however, a growing body of evidence to suggest that many of the misfortunes that currently affect honey bees are a consequence of over intervention and excessive manipulation.

Most of our members do not treat their bees with chemicals. Some, including myself, have not done so for more than 10 years, without any noticeable losses. Whether or not there are any genuinely wild honey bee colonies in our area is not known, but there certainly has been a noticeable increase in the number of feral colonies, suggesting that the bees are capable of surviving without treatments.

We recommend members to adopt a minimal intervention strategy wherever practical. This is based around three inspections per season, the first in Spring to check the general well-being of the colony and extract honey, the second in the "June Gap" and a final inspection in the late Autumn.

This approach presumes that you plan to let your bees swarm naturally and then collect the swarms. For beekeepers living in urban environments, this may not always be a responsible approach and may well annoy neighbours.

We also recommend members not to engage in manipulations, such as re-arranging frames that are being used, and let the bees sort themselves out. With the growing use of long hives, especially those with deep frames, these practices make little sense.

## Acquiring Bees

This club has always been strongly opposed to the importation of bees from abroad with the inherent risk of bringing in diseases, pests and parasite. Whilst the ideal solution would be to always buy from a local source, this is not always possible. The next best thing is to buy from a reputable breeder whose stock comes from a part of the country with a micro-climate reasonably close to our own. One such breeder is Package Bees UK based at Hill House, Birchover, Nr. Matlock, Derbyshire DE4 2BN, who offer locally bred bees as packages or nucs on a variety of different frame sizes. Their contact details are: tel: 01629 650457, email: james@packagebeesuk.com, <http://www.packagebeesuk.com> Mention that you are a club member to receive a 5% discount.

## Colony losses

Early indications from around the country suggest that winter losses have been higher than usual, although no clear reasons for this have yet emerged. Now would be a good time to ensure that your colonies have ample stores to see them through until the Spring nectar flow starts.

## The “weapon of mass destruction” that is killing honey bees



These are new close-up images of one of the mites responsible for killing billions of honey bees around the world. The magnified photographs of the pinhead-sized mite, aptly named *Varroa destructor*, were captured by Dr. Jonathan Salvage of the University of Brighton (UK), using a state-of-the-art scanning electron microscope (SEM). Dr. Salvage, a Research Fellow in the University’s School of Pharmacy and Biomolecular Sciences, has been working with Adam Leitch, a Master Beekeeper, on both a study of plant pollen that honey bees pollinate and aspects of honey bee pest anatomy, Dr. Salvage said: “The mite, with its ice-axe-like weapon of attack, the palptarsi claws, is a major threat to honey bees globally. It is involved in the mass destruction and deaths of billions of bees, which, in turn, threatens crop pollination and food production.”

Mr. Leitch, a member of the Reigate Beekeepers Association, said it was originally thought that blood loss was responsible for the death of parasitised bees: “But scientists later discovered that these bee mites carry and transmit deadly viruses to bees whilst feeding. “The large red spikes on the claws pierce the body of a victim bee so that the mite can hold on tightly. The mite then feeds on adult bees and larvae using its mouthparts, coloured yellow in Picture 2, like a harpoon to penetrate and secure itself onto the host bee.”

The University has been studying pollen types and morphology associated with honeybees and honey production, to contribute to beekeeper training and education, which Mr Leitch delivers to beekeeping societies. The mite images will be contributing to the teaching material to furnish amateur beekeepers with the skills to manage mite populations.

There are miticides and non-chemical methods to help combat the mites for beekeepers. Researchers, meanwhile, are studying how ribonucleic acid interference might knock out genes in the mite, and there is also research under way into breeding defensive changes in honey bees.

Dr. Salvage said the £500,000 SEM facility, which provides electron microscopy imaging and analysis, is “proving an invaluable resource for teaching and research which external commercial clients are now benefiting from”.

For more information, contact: [KnowledgeExchange@brighton.ac.uk](mailto:KnowledgeExchange@brighton.ac.uk)

## Why bees soared and slime flopped as inspirations for systems engineering

*Honey bees prove an inspiration to system engineers, helping them better route internet traffic*

Bees? Great. Ants? Hit or miss. Slime mould amoebas? Fail. Though nature offers excellent design inspirations in some information technology systems, in other systems, it can bomb.

Known for his work on The Honey Bee Algorithm, which tamed web traffic instabilities on servers by

mimicking the behaviour of bee colonies, systems researcher Craig Tovey has seen plenty of nature-inspired technological feats, but also foibles. He shared them in a talk on Sunday, February 18, at the annual meeting of the American Association for the Advancement of Science in Austin, Texas.



In 2016, the bee-inspired algorithm garnered Tovey and his collaborators a Golden Goose Award, which commends curiosity-driven research as it blossoms to palpably benefit society. The Honey Bee Algorithm, for example, significantly reduced web hosting costs. "We lucked out with the bees and web hosting," said Tovey, who hopes that along with practical takeaways on naturally inspired technology, his audience will also share in his own awe and affection for nature's solutions.

### **When algorithms are eternal**

"When you study swarming bees, you discover truths that are lasting. The algorithms that guide them evolved over millions of years and will hopefully still be there for millions of years to come," said Tovey, a co-director of Georgia Tech's Centre for Biologically Inspired Design. "Compare that with when you design a new microcircuit. Three years later it's gone, forever lost; replaced by new designs." Whether mimicking nature is prudent in a particular engineering job depends a lot on the problem to be solved. Often, it's just better to use something off the shelf or adapt it. "When the real-life problem is static and well-defined with predictable data, then the nature-inspired methods are usually much weaker, much worse than classical optimization methods," Tovey said.

### **When boring is better**

The "Traveling Salesman Problem" is a typical example. A researcher tries to compute the best pathways a proverbial salesperson should travel, and in which order, to visit hundreds, thousands, or tens of thousands of proverbial cities on a map. The goal is to travel the shortest possible total distance.

"Nature-inspired approaches will find good solutions for 100 or so cities, but not optimal ones," said Tovey, who is also a professor and Stewart Faculty Fellow in Georgia Tech's Stewart School of Industrial and Systems Engineering. "By contrast, the top researchers can solve 20,000 or 50,000 locations optimally with a classical algorithm, and do it really quickly."

### ***When ants miss and hit***

"People have imitated ants to find the optimal pathways through a static system, and when you compare that method with classical optimization methods, then the classical methods are about 10 billion times better."

But life is fickle, which can make it a great teacher in science and engineering. "Every living creature is very good at solving a number of different problems, otherwise it would have gone extinct," Tovey said. Toss unpredictability into an engineering problem, and natural algorithms that direct the movements of ants or bees can be better equipped to cope than classical solutions. "In the Traveling Salesman Problem, the cities don't move around. But when you're chasing a moving target, and your data isn't perfectly complete, then you can have great success by imitating insect swarms. You can get real-time control on data that's quite literally on the fly," Tovey said.

### ***When bees know best***

That counts for a lot in a pinch. When a hurricane looms, people check their weather apps much more frequently as the tempest encroaches. When markets tank, people sell off stocks, and data surges in and out of financial servers. "If the patterns of user demand on the web never changed, and the requests to a server always stayed the same, all would be well without imitating honeybees," Tovey said. "But that notion is ridiculous, as we all know." "Bees have evolved to deal with flower patches that have changing characteristics. A patch that is great to visit at 10 o'clock in the morning may have its flowers closed up at one o'clock in the afternoon, or it may be raining."

Algorithms steering bee behaviour make the insect swarms adjust to supply and demand fluxes similar to those that confront a web server. The honeybees handed Tovey and his fellow researchers valuable insights for their web hosting algorithm.

### ***When slime flops but amazes***

Though classic algorithms beat nature in simple situations, watching natural algorithms in even the simplest organisms can be awe-inspiring. Take slime mould, a non-cellular organism related to amoebas. "If you put down lumps of food near it, the slime mould will extend to reach the lumps and connect them with each other." The mould makes very efficient connections that adapt well to differing constellations of food dabs.

"Some researchers placed food sources in spots corresponding to the locations of cities in Japan that were connected by rail lines, and sure enough, the slime mould eventually settled on a configuration connecting the spots that nearly perfectly matched the rail network that actually connected the cities," Tovey said.

Again here, classic algorithms do the job better, but still, that slime is just amazing. For all his awe of bees, Tovey has had to avoid making their acquaintance in person and leave the bee-handling to his collaborators. "I and my whole family are all extremely allergic to bee stings," Tovey said. "We keep EpiPens around the house."

## **BSBI New Year Plant Hunt 2018 reveals hundreds of wildflowers in bloom.**

Every year for the last seven years, members of the Botanical Society of Britain and Ireland have taken part in a four-day survey to see what plants were flowering in their areas. This year's survey took place from 30<sup>th</sup> December 2017 to 2<sup>nd</sup> January 2018.

The survey resulted in a total of 9,907 records of plants in bloom across Britain and Ireland. These included 532 different species, compared to 492 last year and 611 in 2016.

More than 1,000 people participated in the survey covering areas ranging from Caithness to Guernsey, from Donegal to Norfolk, from west Cork to the Kent coast. Surveys were also carried out in urban areas including London, Edinburgh, Leicester, Cambridge, Cardiff, Dublin and Bristol.

As expected, the milder south and west of Britain and Ireland had the highest numbers of species in flower with 114 at Phillack in Cornwall, a similar number to 2017 but nowhere near the 2016 top total of 162 recorded in Berkshire.

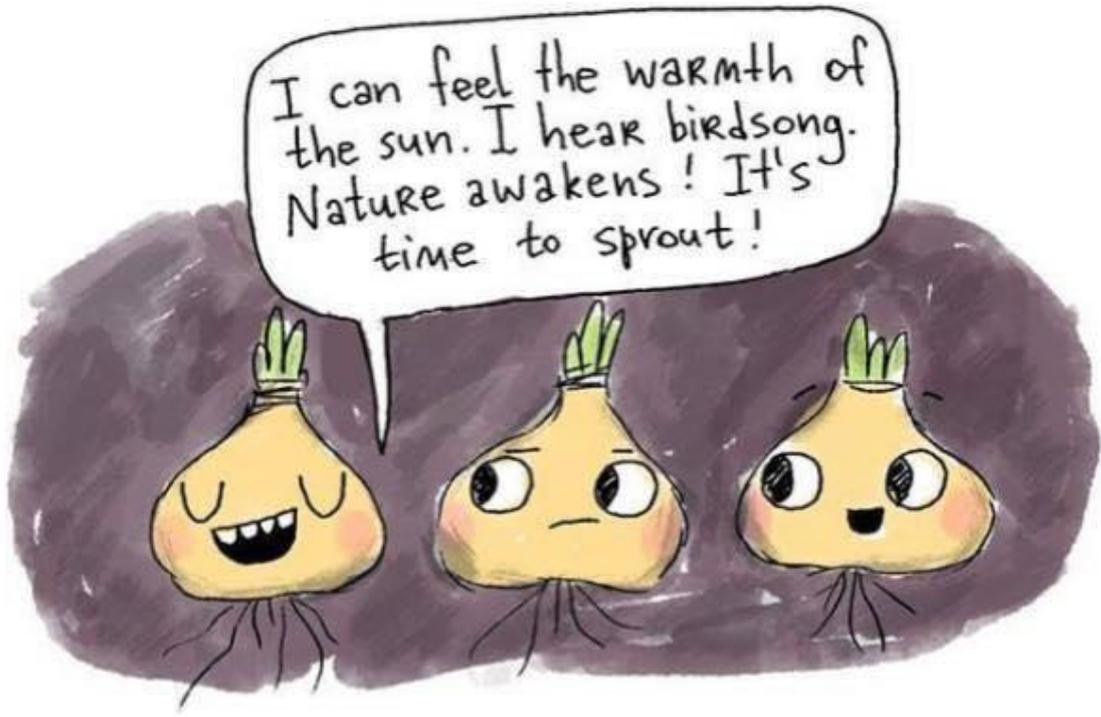
BSBI's Head of Science, Dr Kevin Walker, has analysed this year's results and compared them with those from previous years. He said "People found significantly fewer species in bloom this year and during the 2017 Plant Hunt, probably due to colder conditions in the months preceding New Year. This contrasts with the much milder winters of 2014-6. Interestingly, this difference was much less marked for non-native species".

The main findings were:

- 39% of the records submitted were of species that might reasonably be expected to flower at New Year including typical 'All Year Rounders' such as Shepherd's-purse as well as 'Winter Specialists' such as Winter Heliotrope.
- The top five species were Daisy, Groundsel, Dandelion, Annual Meadow-grass, and Gorse – almost identical to previous years and all (native) plants one would expect to be flowering at this time of year.
- 38% of the records were of species which normally flower after midsummer and had managed to carry on flowering including 'Autumn Stragglers' such as Yarrow, Ragwort and Hogweed.
- Only 14% were 'Springtime Specialists' like Primrose and Lesser Celandine, so there is no indication of an early spring. This proportion is similar to previous years.

46% of species recorded were non-natives. This includes plants from warmer climates that have escaped from gardens or cultivation, become naturalised in the wild and were able to extend their flowering into the winter months.

As in previous years, urban areas tended to have more non-native species in flower than rural areas, as there are more sheltered and undisturbed places with warm microclimates where alien plants can thrive.



## Club Meeting Programme 2018 – 2019

<b>Thurs</b> <b>5<sup>th</sup> April</b>	<b>Apiary working party</b> To prepare the ground for new pollinator patches and sow the seed.	<b>Club Apiary, 10-00am</b>
<b>Sun</b> <b>8<sup>th</sup> April</b>	<b>Apiary working party</b> To erect swarm boxes in advance of the swarming season.	<b>Club Apiary, 10-00am</b>
<b>Sun</b> <b>22<sup>nd</sup> Apr</b>	<b>Spring inspection of Apiary</b> This will be the first inspection of the season for all the hives at the apiary.	<b>Club Apiary, 10-30am</b>
<b>Sat</b> <b>12<sup>th</sup> May</b>	<b>"Me and My Bee"</b> We will be having an information stand in the foyer before and after performances.	<b>Dukes Theatre, Lancaster</b>
<b>Sun</b> <b>20<sup>th</sup> May</b>	<b>World Bee Day</b>	
<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, 10-00am to 4-00pm</b>
<b>Sun</b> <b>4-00pm</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</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>

## Other Events

### 13<sup>th</sup>-15<sup>th</sup> April 2018, BBKA Spring Convention

Harper Adams University, Newport, Shropshire, TF10 8NB

The annual BBKA Spring Convention provides an impressive range of workshops, courses and lectures spread over three days. A large trade show takes place on the Saturday.

Admittance for non BBKA members is £28 for the full three days or £5 for the trade show only. The full programme can be downloaded from:

[www.bbka.org.uk/news\\_and\\_events/spring\\_convention.php](http://www.bbka.org.uk/news_and_events/spring_convention.php)

### 14<sup>th</sup> April, Furness Beekeepers 30<sup>th</sup> Spring Convention

The Malt Kiln, Bardsea, Nr Ulverston

There will be two principal speakers, Dr Julia Pigott and Peter Sutcliffe, covering "The honey bee colony as a superorganism", "Bees' wax and new comb", "Myths of modern beekeeping" and "Hive management".

[www.furnessbeekeepers.co.uk](http://www.furnessbeekeepers.co.uk)

### 28<sup>th</sup> April Northern Bee Auction

Houghton Village Hall, Cumbria, CA3 0NW

Open **9.00am** & Auction Commencing **10.30am**

This annual event offers a range of both bees and second-hand equipment.

<http://beeauctions.co.uk>

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



# The Lune Valley Long Hive

## An innovative but simple long hive



### **Innovative but simple**

After experimenting with various long hive designs over a number of years, we have developed the Lune Valley Long Hive – an innovative but simple long hive based on the original Layens Hive.

### **Long hives**

In the wild, honey bees seek out hollows in trees or cracks in cliffs to build their nests. Any dry cavity of not less than 1.5 cubic feet which has an entrance that can be defended and is preferably 10ft or more above ground will do. If the cavity is in the trunk of a tree the bees will build a long vertical nest whereas, in the bough of a tree or crack in a cliff, they will build a horizontal nest. The reality is, provided it meets their basic requirements of being sufficiently large, dry and defensible, honey bees will adapt to their surroundings and build a nest that suits.

Whilst conventional hives are designed to house vertical nests, long hives have many advantages that should not be overlooked. These include:

- having the entire hive at a convenient working height – a considerable advantage for shorter people and those in wheelchairs
- lifting is limited to individual frames
- there is no need for additional brood boxes, supers etc.
- much greater insulation
- the hive can be used for conventional frames or top bars.

All the manipulations that can be carried out in a vertical hive can be achieved in a long hive, although the methodology is different. The only disadvantage of a long hive is that once set up, it cannot be easily moved.

## Insulation

A natural bee nest in a hollow tree is insulated by 3" to 6" of wood resulting in very low heat transfer through the wood. This means that the bees do not need to expend great amounts of energy in keeping their nest warm in winter and cool in summer.

Conventional hives have wooden walls of around 0.5" thickness resulting in high levels of heat transfer, in and out. The Lune Valley Long Hive has a double wooden wall of 2" thickness which improves insulation by five times, significantly reducing the bees' workload and more closely replicating the natural state.

To avoid possible over-heating, ventilation slots are built into the roof.



## Biological sumps

In the wild many bees nest in hollow tree trunks. Over time, the bottom of the hollow gets filled with wood shavings, wax droppings, dead bees etc which then acquires a population of organisms. Whilst the benefit of the wood shavings in helping the bees to control moisture levels is well documented, new research is beginning to show that the organisms and micro-organisms in the debris create a beneficial symbiotic relationship with the bee colony. The Lune Valley Long Hive has a fitted drawer which can serve either as a sump or to measure varroa drop.



## 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 softwood to reduce the cost but will need an external preservative
- Despite its high specification, it is economically priced whilst offering exceptional value for money.



# Only £275

**Only obtainable from Lune Valley Community Beekeepers.**

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

# **Open Courses Programme 2018**

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

# BEEKEEPING

**A practical introduction for beginners**



**Sunday, 20<sup>th</sup> May 2018**

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

**BOOKING ESSENTIAL AS PLACES ARE LIMITED**

**For further information:**

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

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

**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)

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