



# Montgomeryshire Beekeepers Association

## The BeeHolder

Summer 2020



### Bees in the time of Covid 19

Are these tech savvy bees exchanging phone numbers?

See article in this issue.

# Editorial

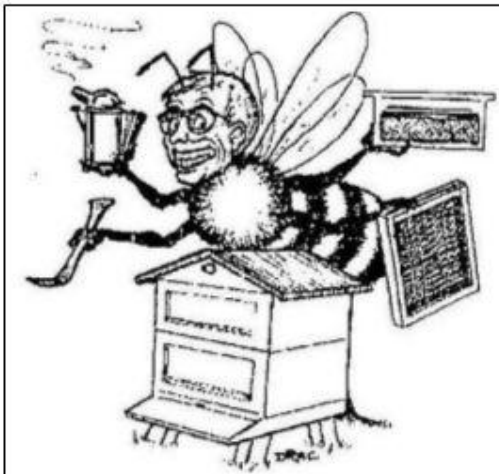
The subtitle for this edition of BeeHolder is “BeeKeeping in the time of Covid”. I doubt that the film rights will sell soon, but the virus has played havoc with the season so far. And before anyone takes umbrage, I realise that the disruption of beekeeping is of little consequence or interest to those amongst of who have been laid low by the virus or even worse, lost loved ones to it. But it seems that Covid is dominating everything we do at the moment, so I have paid it special attention this issue.

My apologies for not getting a Spring issue of BeeHolder out. I have had a heavy workload and hence I have struggled to find time to sit down and work at it. I've adjusted the publishing schedule and will try to get both an Autumn and a Winter issue out.

As always, I have an open request for any stories, pictures or contributions of any kind which you would like to share with the members at large. Contact details see page 19.

## MBKA BeeHolder Publishing schedule

Issue	Issue Date	Copy Deadline
Summer 2020	23 August 2020	
Autumn 2020	23 October 2020	30 September
Winter 2020/21	4 January 2021	21 December



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## We welcome as new members ...

Removed for privacy reasons.

## AGM and meal

For the first time (in my memory at least) the annual meal was combined with the AGM with the idea that each would boost attendance for the other, if you see what I mean. However we reckoned without the impact of storm Dennis, which menaced the event by causing flooding on the roads in mid Wales generally, and Welshpool in particular. Here is Jill's account of the event plus some photos for your albums:



A Welsh pool near Welshpool

What a determined group of people we are in Montgomeryshire BKA! Despite Storm Dennis doing its worst and causing major flooding on many of the roads around Newtown and Welshpool, some members still managed to struggle through the water, or drove miles out of their way to get to the Royal Oak hotel in Welshpool for the AGM and lunch. Sian and Keith ended up driving 100 miles via many diversions from Llanidloes! I know many others tried but were turned away by police as roads were closed.



Between courses

Eleven am, the planned starting time for the AGM, found the Chair, Secretary and Treasurer and their partners sitting in an empty room wondering how they would eat the 41 lunches booked for 12.30! Gradually, to our relief, people arrived with incredible stories of terrible journeys and by 11.40 we had a quorum and were able to hold the AGM.

Pete E was re-elected unopposed as Chair, Jill H as secretary, and Sian J nominated and elected unopposed to replace Gez L as Treasurer. This fits well with her current position as membership secretary. We also welcomed two new members on to the existing committee: Joy S and

Ferol R.

In the end, 32 of us made it for lunch. As everyone who was unable to make it contacted the hotel, the Royal Oak did not charge for the cancelled places. It was lovely to see old friends like Brian and Daphne G who had made it from Shrewsbury. The last time we saw Brian was in the summer of 2019. Then he had two black eyes having recently had a fall, but he and Daphne still gave us an excellent tour of the Shropshire BKA apiary and a scrumptious tea to follow.



An Irishman, a Welshman and a bee go into a bar ...

We sadly said goodbye to Ian H who has retired from beekeeping. Ian has been a treasure in helping maintain the MBKA apiary for many years, most famously as the maker of the portable disinfecting mats and as the shed architect (see pictures on pages 10 & 11). As a parting gift, he has donated two microscopes to the association which will be valuable resource for members to borrow or to be used in formal training sessions.



Cheeeese!

All in all, what started out as a potential disaster, turned into a very pleasant social gathering. The chatter was animated and cheerful - we were kindred spirits who had survived everything that Dennis had thrown at us!

See page ten for the photo of table four.

Also on page eleven is a photo from 2012 which I came across whilst looking for shed pictures.

## Forthcoming Events

We usually have various events which will be of interest to members. Some are organised by MBKA, others are external events which we think you might find worthwhile. As you can imagine, this year they have almost all been cancelled due to the virus pandemic.

However, the Welsh BeeKeeping Association has been presenting “webinars” on various topics which allow you to keep up to date with bee developments and learn some key skills. You will need a suitable (reasonably fast) computer/tablet/mobile and a 1Mbs internet connection (4G or WiFi if using a phone). If you don't have the technology to watch live, they are all available for download from the WBKA web site, [www.wbka.com](http://www.wbka.com).

To date they have presented:

### **Varroa control** ~ 6th August 2020

Lynfa Davies NDB on the important topic of Varroa Control.

### **Ways to improve your beekeeping knowledge and skills** ~ 23rd July 2020

Including a look at the system of exams and assessments for beekeepers.

### **Swarming** ~ 9th June 2020

Wally Shaw on swarming and swarm control.

Next up will be:

### **Preparing Bees for the Winter**

WBKA webinar on Aug 27, 2020 at 7:30 PM BST.

Wally Shaw will talk about ensuring that your colonies are ready and well fed before the winter.

Registration for this webinar is open to all beekeepers and, as usual, it will open with a short, general Q&A session. Send your advance questions by email to [l&d@wbka.com](mailto:l&d@wbka.com)

A link to the registration web page was in Jill's email of 18<sup>th</sup> August, or contact a committee member if you are having trouble accessing it.

The WBKA is interested to know how widely these webinars are viewed and so would appreciate you answering a couple of questions when registering for the event.

## Trojan bees spread deadly virus

Social distancing is nothing new to honey bees. When a colony is infected with the deadly Israeli acute paralysis virus (IAPV), bees are less likely to touch or feed their sick nest mates, according to a new study. But the virus appears to have an alarming counterattack: When sick bees try to enter a new colony, they do a better job of getting past the guards than uninfected bees. That has led scientists to speculate that the virus has evolved a way to spread to new hives.

The study opens an important window into a “coevolutionary arms race” between pathogens and social organisms, says Olav Rueppell, an evolutionary biologist at the University of North Carolina, USA, who was not involved in the new research. The findings also highlight the dangers of putting hives too close together.

Honey bees are particularly vulnerable to infectious diseases: They live in crowded conditions, and they touch each other all the time. Moreover, their immune systems are weak compared with other insects. They depend instead on hygienic behaviors, such as grooming or removing sick larvae.

Not much was known about how bees act when infected with viruses, says Adam Dolezal, an insect physiologist at the University of Illinois, Urbana-Champaign (UIUC, also in the USA), who studies IAPV. To find out, he teamed up with UIUC computer scientist Tim Gernat, who had developed an automated system to monitor bee behaviour. The team glued labels onto the backs of about 900 bees in each of three colonies and tracked them with a camera. (See picture on the cover of this issue) The camera took pictures every second, and a computer mapped the location and orientation of every labelled bee.

The researchers trained the computer to identify a behaviour called trophallaxis, in which honey bees feed their fellow workers by regurgitating food from a pouch called a crop. Hungry bees approach other bees until somebody coughs something up.

To find out how they would react to the virus, Dolezal put 90 to 150 labeled bees into each colony after infecting them with IAPV. After 5 days of recording, the team found that healthy bees were avoiding contact with the infected bees. About half as much trophallaxis took place with sick

bees compared with normal workers. But it wasn't for lack of trying: The sick bees moved around the colony more than other bees, probably looking for someone that would feed them, Dolezal says. The findings show how bee behavior in a real colony can suppress an infection, says Christina Grozinger, a behavioural ecologist at Pennsylvania State University, University Park, who was not involved.

So how does the virus successfully spread? Dolezal wondered whether IAPV might have a way to sneak into other colonies, which are guarded by bees that keep out trespassers. Guards use their antennae to detect a collection of chemical signals on the outside of other bees, called cuticular hydrocarbons, that identify them as members of the colony or foreigners.

When Dolezal and colleagues took IAPV infected bees and placed them outside another colony, the guards let about 30% of them enter, compared with about 15% of healthy foreign bees that were allowed in. "It's troubling that this level of virus movement is happening," says Dolezal, whose team reports the results this week in the Proceedings of the National Academy of Sciences.

The researchers aren't sure why IAPV is so successful at deceiving the guards, but it may be because it alters the abundance of various cuticular hydrocarbons, which differed between the sick and healthy groups. For example, they found that IAPV infection resulted in lower levels of octacosane, which has been associated with greater acceptance by other bees. The sick bees were also more submissive when challenged by guards and more likely to offer them food, and those behaviors may also help them spread the disease.

IAPV isn't the only problem these Trojan bees can bring. The new arrivals can also carry the varroa mite. The mite feeds on bees' fat reserves and can also carry IAPV and other deadly viruses. If IAPV helps these other pathogens spread, that could be a big problem for commercial beekeepers who pack colonies together for efficiency. "There's very little you can do if you suspect a virus infection," Dolezal says.

And when it's easy for pathogens to spread to new hosts, Rueppell warns, they are much more likely to evolve to wreak new kinds of havoc.

Erik Stokstad, Science Magazine

## Book Review : What the Bee Knows

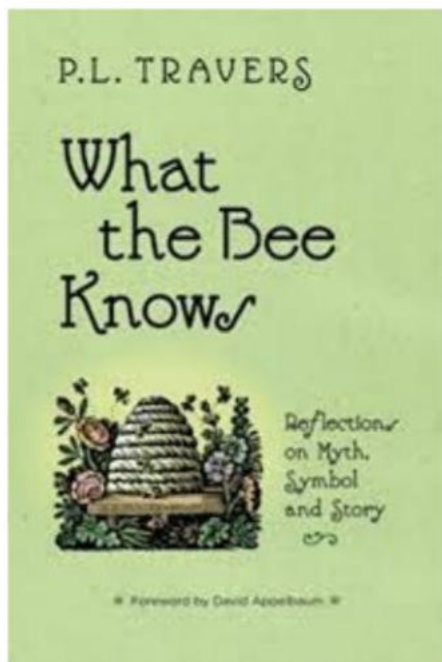
All that talking to the bees over the years had to amount to something. PL Travers is almost certainly better known for writing Mary Poppins, which equally is probably better known as the film with Julie Andrews, dancing penguins and Dick Van Dyke's 'cockerney' accent.

Although "What the bee knows" is but a single chapter (of many), this book is a collection of literary, and somewhat spiritual, essays most of which were written for and published in Parabola, The Magazine of Myth and Tradition, founded in the 1970's by a friend of the author, D.M. Dooling.

The focus of the magazine was (and still is) mythology and spirituality. Most of the writings compiled in What the Bee Knows were composed during the "crone" stage of PL Travers' life. She was 77 years old in 1976 when she wrote The World of the Hero for the inaugural issue of Parabola.

In these writings, Pamela L. Travers explores mythical themes with poetical virtuosity and occasionally opens up and recollects events from her childhood, something that she was extremely reluctant to do in the earlier stages of her life.

The back of the book describes it as "a honeycomb of essays pointing to the truth-of-things handed down in the great popular stories of cultures around the world". And that is a good summary. Honeycomb, I like that.



**A brief apology** : due to an update to my word processing software, I have had difficulty formatting images and comments in this issue. I feel I may have to revert to the previous version! Chris



Table Four at the annual meal



Shy and retiring as ever, Ian is behind the camera for the great shed erection of 2015  
The BeeHolder



A blast from the past - does anybody recognise any of these from the class of 2012?



Ian's ingenious portable biosecurity mat unveiled

## China has bee issues during Coronavirus

In February, China's top beekeeping body, the Apicultural Science Association of China, mourned the death of a beekeeper who reportedly killed himself after all of his bees died of starvation in the southern Yunnan province. Local travel restrictions had made it impossible to buy feed for the colony or relocate it to an area where the bees could feed naturally.

To control the spread of the coronavirus, regions across China had imposed strict restrictions on the movement of vehicles and people, including sealing off roads and implementing approval systems for interregional transportation. Some "hardcore" containment measures also included shutting down public spaces and barring residents from leaving their homes, sometimes literally.

But the epidemic prevention measures also stopped many beekeepers — including the late Liu Decheng — from moving their colonies to new nectar sources to keep them nourished, according to the apicultural association.

"The bees are chasing flowers and honey," Wang Jianmei, the association's deputy general secretary, told Sixth Tone. "Many flowers in Yunnan are gone now, so he (Liu) had to move the bees to other areas — otherwise they were going to starve."

With the flowers near his colony not yielding sufficient nectar and many of his bees poisoned with pesticide, Liu was unable to keep his 100 or so beehives nourished after attempts to buy feed and relocate them were thwarted by local virus containment measures, Wang said.

Liu has two children and is the primary breadwinner for his family of six in Xichang, a rural area of the southwestern Sichuan province. After his death, some of his fellow beekeepers launched fundraising campaigns to help provide for his family, according to Wang.

China's central government has implored local authorities not to impose extreme controls on transportation channels in the name of epidemic containment. Since February 15<sup>th</sup>, bees and other "life necessities" including feed ingredients, poultry, livestock, and aquatic products have been eligible for a special green transport channel, according to an official guideline.

But the policy came too late for Liu. The 45-year-old was declared dead by local police in Yimen County on February 13<sup>th</sup>. According to a leaked

photo purportedly of Liu's death certificate, his body was found at an apiary. A team has been assembled to investigate the beekeeper's death, a spokesman surnamed Bai said.

China has over 9 million managed bee colonies, making it the world's largest beekeeping industry. In 2018, the country exported 542,500 tons of honey. (That would be over 60kg per colony? Ed)

According to Wang, even after the green channel policy came into effect, some villages and townships were still taking hardline positions on people's movements, presenting potential headaches for beekeepers attempting to carry on an already-precarious tradition.

Zhang Ming, a beekeeper in Xiangxi Tujia and Miao Autonomous Prefecture in the central Hunan province, said that because of the epidemic, he is now keeping his bees mainly in one place, even though this may affect the quality of their honey.

Beekeeping in China has never been harder.

## **Chronic Bee Paralysis**

I realise that this issue is in danger of becoming a doom laden chronicle of all things bad in the world of bees, but yes, just when you thought it had all happened, here comes another virus! For those with a scientific bent, there is a comprehensive article on the Nature website, see the following link:

<https://www.nature.com/articles/s41467-020-15919-0>

Or if you don't do internet, contact Chris. Or if you don't do in depth science, here is a quick summary.

Chronic bee paralysis is a well-defined viral disease of honey bees with a global distribution that until recently caused rare but severe harm, including colony loss. Evidence indicates a recent increase in virus incidence in several countries. Using government honey bee health inspection records from England and Wales the team determined that the number of chronic bee paralysis cases increased exponentially between 2007 and 2017, demonstrating that it is an emergent disease. The disease appears to spread locally within each year, but not necessarily from year to year. Risk factors would appear to be proximity of hives and importing bees, either from within or outside the country.

But if you want more detail and graphs, I highly recommend the web site!

## Good News I - Rare Blue Bee

Some good news to cheer us all up. It has been almost a decade since this ultra-rare species of bee was last spotted in the Florida wilderness—but conservationists are now rejoicing after it was rediscovered this spring.

First described in 2011, scientists weren't sure the blue calamintha bee still existed. The species had only been recorded in four locations totaling just 16 square miles of pine scrub habitat at Central Florida's Lake Wales Ridge.



Blue bee - just its head, really

Those apprehensions changed to delight in March when a Florida Museum of Natural History researcher rediscovered the metallic navy insects—a first step to conserving this understudied and imperilled species.

Chase Kimmel, a postdoctoral researcher, and his adviser, Jaret Daniels, director of the museum's McGuire Center for Lepidoptera and Biodiversity, are working on a two-year research project to determine the blue calamintha bee's current population status and distribution, as well as nesting and feeding habits. (*So lucky they found one, then. Ed*)

Florida's State Wildlife Action Plan lists the bee, *Osmia calaminthae*, as a species of greatest conservation need, and this project could help determine whether it qualifies for protection under the Endangered Species Act. A US Fish and Wildlife Service State Wildlife Grant administered by the Florida Fish and Wildlife Conservation Commission is funding the project.

The bee is thought to live only in the Lake Wales Ridge region, a globally recognized biodiversity hotspot and one of the nation's fastest-disappearing ecosystems, according to a 2015 U.S. Fish and Wildlife Service report. As a pollinator, it depends on another threatened species, a blooming plant known as Ashe's calamint.

"This is a highly specialized and localized bee," Daniels said (*absolutely unafraid to state the obvious. Ed*).

## Good News II - Bee Music

Some more good news to cheer us up further - and this is more home grown than exotic blue US bees!

Although many young people may be a-buzz about whatever pop musicians are on the weekly top 40 charts, this beekeeper has made a name for himself by using his electronic music to raise awareness about dwindling honeybee populations.

Not only that, all of his electronic music is made using sounds that he has recorded from within his very own hives.



Bioni Samp with his bee organ? guitar?

For the last 20 years, mysterious London-based beekeeper and musician Bioni Samp has been using his own equipment to research and record the various sounds of his honeybee hives.

Bioni then mixes the sounds to make experimental music that is entirely played by his bees.

In addition to only identifying himself by his Bioni alias, he has played shows around the world all while keeping his face hidden by an antique beekeeper's suit.

Bioni hopes that his music will help young people to think about their impact on struggling pollinator populations - and considering his social media followings on YouTube, Spotify, and Bandcamp, his mission is being fairly successful.



## Siting an Apiary

One of the first things to think about as a novice beekeeper (or even an experienced one), is where to site your apiary. We hope to pass on a good basic understanding of the variables to consider as the correct siting of your apiary can be one of - if not the - most critical variable for your future success as a beekeeper.

**The Bees** : Most beekeepers want to have their bees close-by at home so they can watch them. We think this is a great idea for a novice as it allows frequent observation opportunities as you learn about your bees. 'Home' can mean your garden, an orchard or an adjacent field.

Here are some rules of thumb to consider for your apiary site at home:

- Early morning sunshine will warm the hive and get your bees 'up and out' making the most of a long foraging day
- Bees don't like vibration so for example, a strimmer, or the constant 'drip drip' of rainwater from the branch of a tree above the hive
- Having said the above, open woodland is OK - just not dense woodland - and make sure you have cleared any branches immediately above the hive
- Your bees should be sheltered from prevailing winds - if the back of the hive is against a tall hedge that's great (leave enough room to work behind the hive of course!)
- If there is no restriction, bees will fly out of the hive at 'human head height' for some distance. If this is going to be an issue (e.g. garden pathway) then erect a screen, fence panel to force the bees to fly higher
- Consider the security of your apiary - we live in an age where a hive full of bees and honey is a VERY valuable commodity.
- Bees and wooden hives don't like the damp so long grass in a boggy corner of your wild garden is not suitable
- Give yourself space to work behind and to the side of the hive on a level footing
- It goes without saying that the hive itself should be level
- Make preparation for ground anchor points - these can be used over winter to secure your hive as protection against high winds with ratchet straps. In less windy spots, a heavy stone a-top the hive will suffice.

**Pet and other animals** : Dogs seem to be most vulnerable simply because they like to sniff the hive entrance. Anecdotally, it only takes one sting and most dogs learn but generally speaking use your common sense and keep dogs away from the hive (e.g. fencing) and certainly keep them indoors when you are inspecting a hive.

Badgers have been known to tip a hive over for honey – again a sturdy fence will stop this. Oh, and bees and chickens seem to rub along together nicely.

**Neighbours** : Avoid any potential nuisance to your neighbours. Frustratingly this can curtail some of the best-made plans, but staying on good terms by making some compromise will save you a lot of heartache. Legally, we all have the right to enjoy our outside space without nuisance or noise. A couple of jars of honey each year can help neighbours to be more understanding if you do get into a fix with a swarm!

**Out apiaries** : An ‘out apiary’ is a term given to any apiary that is not at your home such as farms, nature reserves, nurseries, allotments, commercial orchards or woodland. Again, the same general common sense applies to your out apiary site, in addition to the extra thoughts below – although many Allotment Authorities will have a written agreement that you need to adhere to.

- Avoid possible flooding - chat to the landowner
- Is the ground damp?
- If the land has livestock present you will need stock proof fencing – there is a cost involved
- What is the foot and vehicular access like? You will need good access by vehicle or barrow, but remember that if it is easy access for you it is also easy for a potential bee thief.
- Hide hives behind something like a hedge and don't paint them bright colours – this deters curious passers-by.
- In case of emergency or query, it is a good idea to leave your contact details pinned on a gate or on the roof of a hive where it is easily seen.
- Avoid bees flying across public rights of way and bridleways

**Summary:** MBKA are here to help so please make sure you have a conversation with your mentor or discuss with a more experienced member during your ‘Beginner Training’.

## Apiary Report

Rachel has led a team of three (Jill, Liz and Anne), meeting at the apiary each week and trying to keep social distancing as much as possible! We have 8 good colonies at the moment (as at mid May). Sadly, 3 did not make it through winter but we were donated 2 strong colonies. We've made one split which (fingers crossed) is looking successful so far, with more planned. Thanks also to Mal for strimming the grass so we can get to the shed and hives. Also Mark Swain has done a super job of cleaning and painting all the spare supers and brood boxes.

If you want to get involved with helping out at the apiary, do get in touch with a committee member!

**bee informed, bee up to date, bee entertained**

*it must be*

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*<http://www.northernbeebooks.co.uk/>*



## BBwear offer

BBwear still offers our members 20% off all garments in their clothing range and 50% off BB10 and BB11 Gloves and Spats. Free gloves are NOT included with the full suits when purchased with association discount.

To see the range of products, their web site is <http://www.bbwear.co.uk/>.



A full spectrum of bee suits is available from BBwear

# The MBKA Committee

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Please feel free to contact any member of the committee with any questions, or if you can volunteer time to help with any aspect of the association.

*“Give the BeeHiveMan a Buzz!”*

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