THE LEEDS BEEKEEPERS ASSOCIATION
BRANCH OF THE YBKA
AFFILIATED WITH THE BBKA

"The Leeds Beekeeper"

INDEX

Click on an index entry to jump straight to an article.

The frost cometh

So my first honey stall is complete and was a reasonable success, though people seemed to prefer 'local' honey to heather honey – not that I mind I have a lot more 'local' to sell! Next year I plan to increase my number of hives and thus Winter will be spent knocking up some new boxes and frames ready for the new season.

Just the small matter of a bushel of straw to strip and prep ready for the Skep course – well that gives me something to do after Christmas lunch.....

CHAIRMAN'S NOTES

The bees are well and truly in their winter state mostly clustered in the hive, feeding on the stored honey, only venturing out on cleansing flights on occasional warmer and dry days. Keep an eye on their stores with an occasional heft of the hive. During the early winter the demand for food may be less than in spring when the queen begins to lay again and brood rearing really begins. If for whatever reason the bees need food, then fondant should be used.

Varroa is one of the main topics at this time of the year, so if your levels of varroa are high this is the time to treat with oxalic acid based treatments. I tend to do it after my Christmas dinner it's my Christmas present to my bees plus it's my excuse to get out of the house and away from the work of clearing everything away. Ho Ho Ho.

Our winter talk program has begun, with an excellent opener from Gerry Collins on mini-nucs. Maybe he has inspired you to rear your own queens, or to increase the number of colonies you keep? If so then get your name down on the swarm list for the New Year. Now is the time to start planning for the next

beekeeping year and making sure you have spare hives at the ready!

So all that remains for me to do is wish you all a very Merry Christmas and a happy and prosperous New Year and I hope your bees give you what you want?

Regards Duncan

MEMBERSHIP RENEWAL 2018

As you will be aware, membership subscriptions are due with effect from 1 January 2018. The subscriptions for 2018, following the AGM, are as follows:

Individual membership	£31
Family membership	£36
Associate membership	£12

We use the online system Webcollect for renewals. Payment can be made, through Webcollect, by Paypal or cheque.

Participants on the 2017/18 Winter Course do not need to pay anything as their membership for 2018 is included in their course fee.

Any questions please contact Kylie, the Membership Secretary.

BULK HONEY AVAILABLE

Roll up, roll up! LBKA have approximately 100 lb of Summer honey available to buy in bulk at a cost of £3 per lb, ready to be put into jars. If anyone is interested in this, please speak to Duncan or David in the shop.

BEE WATCH

The honeybee directly contributes £651 million to the UK economy every year with the retail value of what they pollinate valued closer to £1 billion. They pollinate 80% of all crops and therefore the food and farming industry completely rely on their existence. However, since the 1950's honeybee colonies in the UK have fallen by more than 60% and of these survivors, 85% of them are provided by you, the amateur beekeeper.

One of the issues befalling the honeybee is exposure to pesticides and hot on the heels of BeeConnected (www.beeconnected.org.uk) is another system designed to communicate when a farmer is spraying their crops; beeWatch (www.bee.watch). The app should be available in early December and there is a cost for downloading it.

SPRING CONFERENCE

The YBKA Spring conference will be held at Manor acadamey in York on Saturday 24th March 2018. The cost is £20 for the day if you require lunch and £10 if you bring sandwiches. Please see the attached flyer for more details and booking form for those who wish to attend.

BEEKEEPING AT OTLEY SCIENCE FAIR

The 10th Otley Science Fair livened up the Otley Courthouse on Saturday 11th November. Leeds Beekeepers were invited to participate together with a host of other organisations with a scientific interest including the Institute of Physics, Leeds University School of Engineering, Leeds City College Computer Science, Leeds Geological Association, Leeds Museums & Galleries and many others. Marty Jopson, BBC's One Show science expert, was there to encourage audience participation at the various stands.

A few LBKA volunteers namely Andy Gowdy, Aileen Lang, Cath and Malcolm Graham fought amongst the crowds to try and put beekeeping to the forefront of the minds of the youngsters and adults alike.

By far the biggest attraction at the LBKA stand was Andy's microscope with slides of various bee parts, varroa mites and the odd poisoned bee.

A few of the younger attendees tried on the beesuits to 'show granny' or upload to Facebook. The keener ones investigated the structure of the beehive and bee activity within it using our full size beehive with the corner cut away. For many this was the first time they realised that removal of the honey frames was a relatively simple process.

The video clips on the laptop were used to demonstrate bee activity as it wasn't possible to use an observation hive at this time of year.

Conditions in the hall were a little cramped as we jostled for space with our neighbours however by the end of the day we were satisfied that beekeeping had been awakened as a possible future hobby in the minds of several children and their parents, over 8,000 attended the fair throughout the day, quite an achievement for the small town of Otley.

More info: www.otleysciencefestival.co.uk


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EVENING COURSES
6 EVENING CLASSES
6:30PM TILL 8:30PM
WEDNESDAY EVENINGS
LOTS OF HANDS-ON BEEKEEPING
WINTER COURSE
PLENTY OF SEASONAL & PRACTICAL


2004 2014
Otley Science Festival
ideas go
BANG!

BUZZZzzzzzzzz

Bees buzz to enable them to create an electrostatic charge from the resultant vibrations. However, researchers from the University of Stirling have discovered that bees exposed to neonicotinoids struggle to buzz. The bumblebees were separated into two groups, one of which was exposed to the pesticide and the other group wasn't. The control group over time improved their pollen collecting abilities as they gained experience. The group of bees exposed to neonicotinoids did not collect more pollen as they gained experience, collecting between 47 and 56% less pollen over the duration of the experiment compared to the control bees.

Not as much Buzz in the Bee?

> *"Our result is the first to demonstrate quantitative changes in the type of buzzes produced by bees exposed to field-realistic levels of neonicotinoid." Dr Penelope Whitehorn.*

Furthermore, the bees exposed to field-realistic doses of neonicotinoids showed quantitative changes in the types of buzzes they produced. The researchers believe the cognitive ability of the bumblebees is affected by the pesticides and they now plan to investigate the mechanism by which the bees are affected. This research comes after the Environment Secretary Michael Gove gave his support to a European wide ban on neonicotinoids.

https://phys.org/news/2017-11-pesticides-bumblebees.html

MOVE OVER MANUKA

The health benefits of mānuka honey may not be conclusively established, but that hasn't stopped mānuka honey creating a reputation as a wonder product capable of treating a range of ailments. To be labelled as New Zealand mānuka honey, at least 70% of the pollen content should come from *Leptospermum scoparium*. With a hefty price tag upwards of £15 per lb, it is no wonder that UK mānuka honey sales are greater than the total amount of mānuka honey exported from New Zealand as counterfeit honey infiltrates the supply chain.

Well it would seem that there is a new kid on the block; Kanuka (*Kunzea ericoides*), which is much scarcer than mānuka honey (and thus has a price tag to match). As for whether it will be the next medical miracle cure, only time will tell, but with anecdotal evidence of relief from skin diseases such as eczema, psoriasis, dermatitis and rosacea it is sure to be the next target of 'fake honey' makers.

THE HONEY RAINBOW

So last month we looked at different honey types, well this month it seems only right to look at what impact flora has on honey, with what impact the beekeeper has; ginger honey anyone? to follow next month. There are estimated to be several hundred monofloral varieties of honey globally with some connoisseurs suggesting that honey is like fine wine and detecting the subtle differences and peculiar characteristics can be difficult. Now obviously covering every possible honey is beyond this newsletter but if any readers would like to contact us with unusual honeys they have seen or tasted on their travels then we would be happy to hear from them (newsletter@leedsbeekeepers.org.uk).

In order to classify a honey as monofloral then a certain percentage of the pollen within the honey should be from that plant species – this is typically 45%, but for acacia honey is 30% and lavender honey is only 15%. The reason for the differing levels is the relatively low amount of pollen produced by lavender.

Honey made from rhododendrons and other members of the *Ericaceae* family can contain grayanotoxins, sometimes at sufficient levels to cause poisoning in humans. However, this is an issue in countries where rhododendron is the predominant flora for honeybees in a particular area (Japan, Brazil, United States, Nepala and Turkey) and isn't an issue when bees are getting a varied and balanced diet. In Turkey it is known as *deli bal* and is used to treat hypertension, diabetes and some people believes it improves their sexual performance. It has also been used as a weapon of war; Roman soldiers under the command of General Pompey were left tempting chunks of 'mad honey' comb at the side of the road by subjects loyal to King Mithridates leaving the Roman soliders in an intoxicated stupor making them easy pickings for the King's forces.

As has been covered elsewhere in this issue there is of course Manuka (and Ranuka) honey and the associated health benefits associated with these types of honey, so we won't labour the point with respect to these honeys apart from to mention their high viscosity and dark brown colour.

Whilst it is often considered as a weed in the UK, in parts of Argentina, Australia, Italy and North America thistles are found in sufficient density to allow monofloral honey to be produced. Thistles are of course part of the daisy family Asteraceae. In Italy, thistle honey is called *Miele de Cardo* and is produced mainly in Sicily and Sardinia. However, it should really be called thistles honey as there are often several closely related thistles which flower at the same time which make up the honey and thus it can be difficult to get pure monofloral thistle honey. Canada Thistle (Cirsium arvense) has a much longer flowering period (May to October) but due to the light nature of its

Purple Milk Thistle - Galacites Tomentosa

seeds it is often seen as a weed in the area, popping up on farmed land and thus it is difficult to find it in significant concentrations to make monofloral honey. Thistle honey is light amber in colour with a fruity-floral aroma.

Mint is cultivated for its essential oil which is used in items such as chewing gum and dental products, meaning it is possible in certain areas to find vast swaths of land dedicated to the crop enabling a monofloral honey to be produced. Thyme is a member of the mint family, its honey is light amber and produced between mid-June and mid-July. It is grown for its essential oil in France, Spain and Switzerland, meaning the honey can be produced as a by-product. The Italian islands of Corsica and Sardinia produce their own unique version of thyme honey from caraway thyme.

"The honei which commeth of Thyme, is held to be the best and most profitable: in color like gold, in taste right pleasant..." Pliny the Elder, Roman author

A sure sign that bees are working chestnut is the appearance of dark red or orange pollen within the hive. Sweet chestnut is responsible for most of the honey (and obviously good pollination means plenty of fruits to be harvested ready for roasting at Christmas). Chestnut honey is dark in colour, rich in pollen and contains tannins, which may give it a slightly bitter taste. Due to the high fructose content it is resistant to crystallisation.

Borage flowers for around 8 weeks and produces a honey which has a distinctive taste and a pale colour (as well as yielding plenty of pollen) It is a classic example of a mutually beneficial relationship, with the farmer enjoying increased borage oil yields and the beekeeper reaping a good harvest of borage honey. This is a particular speciality of Eastern England.

English Lavender © David Beaulieu

Oil seed rape honey is a well-known early season honey, prone to crystallisation in the super. This is due to the resultant honey been high in glucose and thus more prone to crystallisation. As more wind pollinated oil seed rape varieties are developed the role of the bee in this crop is diminished. However, this is a good base honey which can be mixed with other later season offerings to produce a more floral finished product (and something less likely to crystallise) or indeed be used for creamed honey. For those fancying a visit oil seed rape, see Dave Barrett's excellent OSR guide from earlier this year.

Heather honey attracts a premium simply due to the narrow window of collection – around four weeks in August and the additional effort the beekeeper has to go to, to produce it. Hives are moved to a friendly farmer's field around the glorious twelfth, ideally downhill of the heather to allow the bees

to fly uphill empty and back home fully laden. The smell when you take the crown board off a hive working heather is almost intoxicating. Heather honey produced from ling heather is thixotropic and thus needs pressing from the comb (rather than spinning). This results in small air bubbles becoming trapped within the dark amber gelatinous structure of the honey, giving heather honey its distinctive appearance. This gel like structure also makes it more difficult for the bees to evaporate the water from the nectar and subsequently heather can legally be sold with a higher moisture content than regular honey.

Lavender produces a low amount of pollen and as a result to be classed as lavender honey only 15-20% of the total pollen content must be from lavender. It has a delicate floral scent and for those who like to make beeswax soaps or candles, what could be better than a bit of lavender? But beware, some places do sell lavender infused honey..... which is not the same as lavender honey and next month we will be looking at various honey infusions and secondary ingredients that can be added to honey to get alternative flavours.

HONEY WITH A HINT OF FUNGICIDE?

Bee Vectoring Technology (BVT) have come up with a novel way of protecting strawberry plants which cannot be sprayed with traditional pesticides due to their organic status. When the bumblebees exit their hives to begin their days work of pollinating the strawberry plants they must wade through a little footbath of fungus. The fungus coats their feet and is then deposited onto the plant by the bee, protecting it from botrytis. One bumblebee hive of around 300 bees can come into contact with approximately ten million strawberry flowers during pollination.

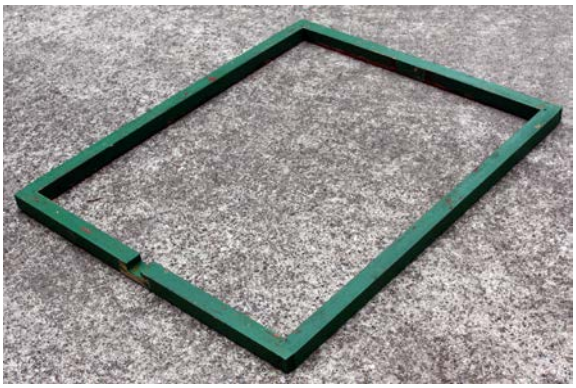
Ling Heather (Calluna vulgaris)

Now when returning home from a long days pollination and entering the hive it isn't clear whether the bumblebee wipes its feet before padding around home, but BVT are confident that the fungus is harmless to both bees and humans.

Whether a similar approach could be adopted on crops pollinated by honeybees to negate the use of neonicotinoid type pesticides remains to be seen, however whether consumers will be tolerant of a side order of fungus in their honey remains to be seen.....

http://www.bbc.co.uk/news/av/business-41921047/ceo-secrets-using-bees-to-protect-crops

IMIRIE SHIM



Imrie shim

With the dark nights upon us you may be looking for a little project to see you through the winter, well the Imirie shim could be just that project? Designed by American beekeeper George Imirie, the idea of the shim is to reduce congestion within the hive by providing a second entrance directly into the super area. Constructed of ¾" (19 mm) timber, with a small entrance in one side, the shim is decided to fit between two supers. As the introduction of such a shim will affect the bee space within the super, it should only be used on supers with fully drawn out foundation otherwise the bees are sure to build plenty of burr comb..... If the bees still insist on building burr comb in the shim they may be trying to tell you something....?

A NEW WEAPON AGAINST AFB?

American Foul Brood

The old dreaded matchstick rope test, or perhaps a distinctive smell in the air? Either way it is something no beekeeper wants to detect; AFB and it means the bee inspector cometh, probably with a can of petrol.....

Well help may be at hand following research currently been undertaken by researchers at University of Nevada. American Foul Brood is caused by the bacteria *Paenibacillus larvae* which can remain in a dormant state for 70 years. The spores are highly resistant to high temperatures, dry conditions and harsh chemicals and only begin to germinate once in the gut of bee larva.

Researchers thus looked to find a mechanism to block the germination of the bacterial spores. This germination takes place when specific agonists bind to receptor molecules in the cell membrane of the spore. Stimulation of this receptor leads to germination, one way to prevent germination is to use a molecule that fits in the receptor but doesn't cause the stimulation, known as an antagonist. Another approach is to use a molecule to change the shape of the receptor so the agonist no longer fits. This new research has shown that two such antagonists are phenol and indole.

In particular 5-chloroindole was found to be an effective antagonist whilst being non-toxic to the bee larva. The researchers still have much to do in order to be able to effectively deliver 5-chloroindole to the bee larva but longer term a viable alternative to a box of matches could be on the horizon.

KILLER BEES TO SAVE THE WORLD?

Africanized Honeybee

Cast your mind back to 1958, when the first episode of Blue Peter was broadcast, UK parking meters were introduced and South Pacific was the biggest film of the year. Meanwhile in Brazil, a group of experimental African Killer bees escaped from a lab; the program had been trying to create a hybrid bee with a mix of desirable traits from European and African bees. Fast forward to 1994 when a group of these Africanized escaped bees found themselves on a ship bound for Puerto Rico. Within thirty years these bees had come to dominate the island, and where scientists had failed in the lab, the Africanized Puerto Rican bees now possessed the gentle yet hardy desired characteristics.

In order to understand the reason behind the bee's gentle nature, the genome of 30 gentle Puerto Rican bees, 30 Africanized bees from Mexico and 30 European honey bees from central Illinois were compared. They found that generally the genome resembled that of their African ancestors apart from in specific regions under "positive selection" suggesting that an environmental pressure is favouring the European genome in these areas. For example, if we have two Puerto Rican bees, one is aggressive having inherited that trait from its African ancestor, the other is placid having inherited that trait from a European ancestor. The aggressive bee is more likely to find itself in conflict with the islanders and thus is less likely to survive to pass on its genetics to the next generation. Thus the environment is providing positive selection to the genome.

Of particular interest is that the Africanized Puerto Rican bees show a high resistance to the varroa mite. When they are infected by the mite, they begin to aggressively groom themselves to remove the mites as soon as they appear. This is in contrast to European Honey bees who show little response when exposed to varroa.

http://peakoil.com/enviroment/puerto-ricos-gentle-killer-bees-could-prevent-the-bee-apocalypse

APIARY SITE

I keep my bees in the Baildon/Esholt area and I know of another location close by which would be a great place for some hives. I think it would be great, maybe even close enough to the moors for a little Heather. I have more than enough space for more hives than I really want on my site so I can't explore this. Are there any LBKA members who would be interested?

Andrew Fieldhouse

If anyone is interested please contact newsletter@leedsbeekeepers.org.uk and we will put you in touch with Andrew – please note the landlord is not wanting any rent for this site.

ASK THE BEEKEEPER

Have you got a burning beekeeping question that you want an answer to? Then please send it to editor@leedsbeekeeper.org.uk and we will do our best to find you an answer!

This month's question was received from Megan – "There seems to be contradictory reports; where do bees prefer living city or rural areas?"

Interesting question.

But, as in so many things with beekeeping, there's no clear answer one way or another. That's why ,I guess, there are " contradictory reports".

If we can agree that the bees are both healthy and pretty strong before we go onto examining if they "would do better in the city or the countryside?".

The countryside might sound attractive. After all most of us would prefer to live there? Sadly though the countryside isn't the same now as it once was. We have lost 97% of our wildflower meadows since WW2. The hedgerows have been grubbed up to create larger fields. And those large fields are, in annual rotation of course, sown with huge acreages of the same crop. Yes that might be oil seed rape or field beans which supply both pollen and nectar. Equally though it could be fields of wheat or corn = bee deserts. Where there are large crops that supply forage, we know that a diet of pollen from single sources does not provide the correct nutritionally balanced diet for developing brood. Their health suffers a little. There are trees though. These (sycamore, sweet and horse chestnut, lime etc.) each have vast amounts of flowers that supply both nectar and pollen. And if you're lucky enough to have access to raspberries, they too supply large amounts of forage.

So, perhaps the City would be better? We read of huge honey harvests in London, Paris etc. What about Leeds? Well, like many other large cities, we boast large numbers of trees. And a good number of parks. And there are road verges and roundabouts (if ONLY we could persuade LCC to let the weeds bloom instead if mowing them to within an inch of their lives). And we have not only the Leeds / Liverpool canal, but the river Wharf. Both have embankments sporting that wonderful bee plant, Himalayan Water Balsam.

What about the supply of bees / beekeepers. Beekeeping has proven to be popular in recent years. Urban beekeeping has grown, with small apiaries in householder's gardens, or on allotments. One of my apiaries is on a farm in Garforth. There are though, plenty of other beekeepers in and around Garforth. Too many? Do these bees "out compete" each other which results in much reduced crops for both Bee and Beekeeper alike? I think that this is the case. Perhaps that's true of where you are?

As an aside, we are advised to "quarantine" swarms from unknown sources. One beekeeper established such a site. Good practice you'll doubtless agree. The site was indeed quite separate from his own apiaries - well beyond flying distances. Sadly though, his "quarantine site" was just a few hundred yards from another beekeeper's apiary! Bees / apiaries are EVERYWHERE!

So perhaps the city would house fewer bees than in the suburbs and this might result in higher yields? But ARE there fewer colonies? To my knowledge we have bees on the rooves of The Queen's Hotel; the White Rose Centre; The St John's Centre; Leeds University; Leeds Building Society on the Headrow; Leeds City Colleges on Park Lane, and I think that there are bees now on The Merrion Centre and the new Victoria Centre? Close to the city centre, but well within the bees flying distance of 2 miles from the city centre, there are two apiaries on the banks of the Wharf around Skelton Grange and at the other side of the city apiaries in Kirkstall.

The true answer though is fairly straightforward. There needs to be a good supply of forage (both nectar and pollen) AND not an oversupply of competing colonies. So some cities will do better than some urban and some countryside apiaries. In other areas, the answer will be just the opposite. It just depends. And THAT'S why the answers are contradictory.

I've missed my vocation. I've waffled on at some length but without answering the question.....

Dave Barrett

MERRY CHRISTMAS

TO ALL OUR READERS

12OZ HEXAGONAL JARS

Hopefully your bees have been busy and you now have lots of honey and not enough jars to put it in.... fear not LBKA have the answer! 12oz (340 g) hexagonal jars with lids are available in the shop at a bargain price of 23p each, they come loose so you can buy as many as you require. Please bring a cardboard box to carry them home in. If you require a large quantity, please email Duncan thebeeman@hotmail.co.uk or ring him on 07855 308143

Got an article for the next edition? Please email to editor@leedsbeekeeper.org.uk by 31st December.

FORTHCOMING EVENTS

December

Wednesday 6th – Winter Course

Saturday 9th - Apiary Day – 10.00 a.m. – 12.00 noon

Wednesday 13th – LBKA Christmas Meal

January 2018

Saturday 13th - Apiary Day – 10.00 a.m. – 12.00 noon

Wednesday 31st – Cooking with Honey – Members share samples and recipes.