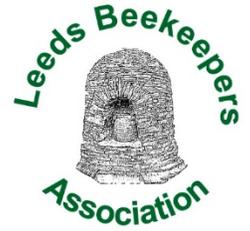




**THE LEEDS BEEKEEPERS ASSOCIATION
BRANCH OF THE YBKA
AFFILIATED WITH THE BBKA**



“The Leeds Beekeeper”

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Can you spot an Asian hornet?

It is most unseasonably warm at the moment and thus my ladies have been out most days, be that on ‘cleansing flights’ or indeed bringing in small quantities of fine white pollen. Additional fondant has been added to both my colonies as clearly they have been over indulging during the festive period.

CHAIRMAN’S NOTES

At this time of the year the bees will still be clustered but the queen may already have started laying. The area of the brood will be small maybe only the size of the palm of your hand but nevertheless there may be brood. This is important for several reasons the bees must now raise the brood nest temperature from 20 °C to 34 °C or very close if the brood is to survive they do this by eating their honey stores to produce energy and vibrating the large flight muscles in the thorax to produce heat. This is the danger time and it is therefore important that they have sufficient stores it is the reason that beekeeper say that the spring feeding is done in autumn., so keep hefting and if you feel your colonies are light put some fondant on.

Early pollen is also important because without it nurse bees cannot produce brood food for young larvae so it is definitely worth planting crocuses snowdrops Hazel or other sources of spring pollen near to the apiary to increase the supply.

January is a very quiet time for the beekeeper so take time to plan for the coming season read those books you received for Christmas and try not to break those New Year's resolutions you made. If you have not already registered with Beebase please make January, the time to do so that would make an excellent New Year's resolution bee base is a source of much valuable information and you will be sent feeding and local disease alerts as they happen.

I would personally like to thank Dave Barrett for his outstanding presentation of his talk 'Preparing Honey for Sale', the afternoon was very rewarding for all the members that attended his talk. The time and effort that he put into this talk must have been tremendous.

Regards Duncan

SMARTPHONE FOR NOSEMA DETECTION



Hive suffering from nosema © D Broberg

samples can be quickly screened in an apiary.

Nosema apis can lead to dysentery among the normally hygienic honeybee, however this silent killer of honeybees can be difficult to diagnose. Typically, accurate diagnosis requires the identification of spores using light microscopy and typically performed once the beekeeper returns home rather than in real time at an apiary. However, researchers from UCLA Samueli School of Engineering, in collaboration with the Department of Biology at Barnard College have developed a smartphone based app which works with a smartphone based fluorescence microscope. This along with an easy sample preparation method which allows spores to be fluorescently tagged in the field means that

“There are many factors affecting rapidly declining bee populations, with parasitic infections playing a significant role. The developed mobile device paves the way to address this emerging problem in an inexpensive manner”, Aydogan Ozcan, Professor of Electrical and Computer Engineering

The preparation method involves the field dissection of a willing volunteer such that the honeybee's gut tissue is removed and the mid-gut dissected. A small amount of stain is then added which binds to the nosema spores. A drop of the solution is then applied to a glass slide and inserted into the mobile phone microscope which will then analyse the sample and report back to the user within 90 seconds. From this the beekeeper can then decide what action they wish to take depending on the level of infection.

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WINTER PROFICIENCY - PREPARING YOUR HONEY FOR SALE

What happens if you take twenty-five beekeepers, some large buckets of honey, an electric drill and a couple of hand blenders – a Winter Masterclass of course. That is precisely what happened on Saturday 26th January as Dave Barrett spent a Saturday afternoon taking attendees through the process of preparing honey for sale from “super to jar”, be that runny, soft set, or for those with an adventurous streak with a bit of ginger or lemon.

The assembled beekeepers covered the full gamut of beekeeping experiences, from those who have yet to experience the joy of bottling their first honey to those who have been jarring honey for more years than they have fingers. The liberal usage of plastic sheeting during the process will hopefully mean that the Wednesday night Zumba class do not become affixed permanently to the floor or indeed ensure we are not blacklisted at the Newman centre.

Runny honey is by far the easiest honey to prepare, once it has been spun from the super, it then merely needs filtering. For some beekeepers their preferred method is a coarse and fine metal sieve. In Dave B's case it is a piece of fine muslin sewn into a piece of material, this is then tied on top of a food grade bucket, the string tightened with a wooden spoon through it and the honey allowed to filter



Production line in full swing

through – preferably warm so it flows better. The honey is then allowed to settle to allow any ‘scum’ to rise to the top (this is the white foamy bit which looks unattractive but is perfectly edible and the beekeepers treat). Dave uses a small scraper to remove the ‘scum’ from the top of the honey, Duncan uses a piece of Clingfilm carefully applied to the honey surface, to which the ‘scum’ adheres and can be subsequently removed. At this stage the honey can then be jarred ready for sale or left for a later date – however by filtering initially the beekeeper knows that if they jar it at a later date it can be warmed and is ready to go – there are also no foreign bodies within the honey which may promote crystallisation. When warming honey, a temperature between 35 -43°C is ideal (95 – 110 °F) – this can be achieved in a honey warming cabinet (or in some cases a very low oven). They key is to not overheat the honey as this will degrade the enzymes within the honey and raise the HMF levels. *It is important to note that you should check your honey to make sure the moisture content is below 20% for ‘normal’ honey that is to be sold (23% for heather honey).*



Warming cabinet designs



Warming cabinet designs

honey, but if you have never made soft set honey where do you get your seed honey from? (very much a chicken and egg problem). The answer is either you find a friendly beekeeper who will exchange one of your tasty jars of runny honey for one of their jars of soft set or you allow your honey to crystallise and then grind up the honey to a fine crystal with a pestle and mortar.

As indicated earlier, brassica honey wants to crystallise so if we use a seed honey (5-10% by weight) with a small desirable crystal shape, we can template the bulk honey it is added to, to crystallise in the same form. By such a process we can create a soft-set honey which is 'butter soft' and with a good mouth feel. In contrast a large coarse crystal will be unpleasant to eat and in some cases will need a pneumatic drill to extract from the jar! Once the honey has crystallised the honey needs warming, not to the point of liquefying but sufficient to allow the crystallised honey to be stirred with a paddle and thus creamed into a smooth spreadable form. Once this has been achieved the honey needs leaving to allow air bubbles to settle before decanting into jars can take place.

Now into the more "exotic" honey preparations, honey with ginger? Or perhaps lemon? Ginger in syrup can be purchased from your favourite local supermarket, drain off the syrup (perhaps retain for some later ice cream making?), place the ginger in a food processor with a small amount of honey and blend to a paste, this can then be incorporated into the bulk honey – as a guide 1 jar of ginger per 10lbs of honey, but obviously this can be adjusted to taste. *When using 'wet' ingredients ensure that the moisture content of the honey is not now in excess of 20% as fermentation can occur and also consider whether a use by or best before date is most appropriate and the duration.*

However, if lemon honey is what your porridge is missing then you are going to have to invest in a bottle of lemon essence – again experimentation will determine how intense you want your citrus hit to be.

Nuts, honey with nuts..... well this couldn't be much simpler; take nuts, wash nuts (to remove dust), dry nuts, fill jar with nuts, and runny honey to the brim and seal.

And the final stop on Dave B's honey preparation course was honey with mustard. This was a somewhat fiddly process which involves the pre-soaking (and hopeful overnight swelling of mustard seeds) and their subsequent incorporation with salt, garlic, vinegar and honey. One liberal blending later and you should have a suitable honey and mustard dressing ideal for a salad.

Obviously in the case of both peanuts and mustard, they are both among the fourteen notifiable allergens and thus will need to be clearly labelled on your packaging if you are wishing to sell them.

By this point you may be wondering why we are going to all this "faff", well for those who like to sell their honey, we are adding value, or perhaps you want to offer a gift range with 3 different honeys in pretty packaging (see Dave for wrapping tips!) and thus runny, set and ginger could be coming to your village fete this year?

It was clear to those present, the amount of work Dave B had put in, in advance of this course leading to the creation of an informative and interactive course.

SPRING CONFERENCE

The YBKA Spring conference will be held at Manor academy in York on Saturday 6th April 2019. 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.

HELP REQUIRED

Hi, I am currently studying at Leeds Beckett University and I am doing a project for my fashion course heavily influenced on bees and bee keeping. I was wondering if you could possibly share any information on the protective clothing used when handling bees or if you had any pictures of the bees or the protective clothing used. This would really help my project out as I need to gather photographs on bees and the uniform used and I am struggling due to it being so cold as the bees are not out yet. Thank you in advance.

Best wishes, Charley

If you believe you can help Charley, please contact the newsletter (newsletter@leedsbeekeepers.org.uk) and we will put you in touch.

A QUEEN EXCLUDER – MORE THAN JUST EXCLUDING THE QUEEN?

At this time of year, I dare say your queen excluders are now in the shed, scrubbed and gleaming ready for the new season. A queen excluder has precisely spaced gaps to allow workers to pass through, but prevent the queen. Thus it is primarily used between the brood and super boxes to prevent the queen from entering the honey supers and laying eggs – no one wants larvae in their honey. However, a queen excluder can actually be a versatile piece of equipment.....

- When the beekeeper is trying to unite two colonies via the newspaper method, placing a queen excluder on top of the newspaper during uniting will prevent the paper blowing away.
- A queen excluder can be placed beneath a brood box after a shook swarm to prevent a queen absconding. However, this should not be left in place long term as it will both prevent drones accessing the colony and also pollen will tend to be knocked off the legs of workers as they navigate through the excluder.
- Used when sieving a colony to find a queen – however this is a traumatic procedure and thus only use if the queen is to be culled.
- When a colony is undergoing a Bailey comb change, a queen excluder can be used to ensure the queen is maintained in the top brood box.

WAX AND CANDLE DAY

A wax and candle day “From Comb to Candles and More” is to be held in the Hives and Honey & YBKA Normanby Pavilion at the Great Yorkshire Showground over the weekend of 4th and 5th May. This is a one-day course organised in conjunction with Harrogate BKA so you can book for either Saturday or Sunday. Tutors are John Chandler, Janice Fulton, Shirley and Richard Bond and Sarah Haynes. [See the attached flyer for details](#) – all bookings can be made via the [YBKA website](#).

Booking is now open (the cost is £40). There will be 20 places available for each day. Until the end of February, the places will be restricted to 10 places per day from each of HRBKA and YBKA. Booking will be on a first come first served basis. On 1st March any remaining places will be open to anyone, including people from associations further afield.

To rear one worker bee requires 100 mg honey and 135 mg pollen

THE DEED

Bees mate on the wing, one of the reasons for this is because the queen is related to all of the drones within her hive and thus to prevent inbreeding she wants to mate with drones from other colonies to increase genetic variation. A virgin queen will begin her first mating flights when she is between six and ten days old. In contrast a drone will be around twelve days old before they take part in mating flights. The queen's initial flights are only around 5 minutes in length – it



A drone fulfils his destiny

is believed these are merely orientation flights to enable the queen to find her way back to her nest post copulation. Gradually these flight lengths will increase to around 15 – 30 minutes long, typically in mid-afternoon. The queen may repeat this process for several days in her quest for drones. Drones will begin leaving the nest around 1pm with the peak drone flying time lasting between 2 and 5 pm. Each drone mating flight will last about 25 minutes with a 'refuelling stop' between each one.

In order for successful mating to occur both queens and drones need to fly to the same place and thus mating will occur at drone congregation areas (DCA) These occur about 9–25 m in the air and around 15,000 drones will be present at any one time. Young queens flying through DCAs will attract a large number of drones which will follow her in a drone comet. Drones are attracted by the pheromones released by the queen and will try to locate her via their large eyes. The queen flies fast, making it difficult for a drone to successfully catch her. When a drone is ready to copulate he must fly above the queen and touch his thorax to her abdomen. He then uses his first four legs to grasp her abdomen from the side and his last two legs to grip her from below.

The drone then adjusts his position to align the tip of his abdomen with that of the queen. The queen opens her abdomen ready to receive the drone's endophallus. The drone will contract his abdominal muscles resulting in nearly all his haemolymph being forced into his inverted endophallus, which forces the endophallus out of the drone and into the queen. This rush of blood leads to paralysis of the drone who begins to fall backward however he is anchored by his horned appendage. The queen begins to contract her sting chamber and other muscles in her reproductive tract to enable the transfer of sperm without any help from her paralysed partner into her oviducts. At this point, the firmer structure of the endophallus begins to peel away from the drone, thus the drone falls to the ground to die while leaving a part of his endophallus in the queen. Mating complete!

MEMBERSHIP RENEWAL 2019

As you will be aware, membership subscriptions were due with effect from 1 January 2019. The subscriptions for 2019, 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 2018/19 Winter Course do not need to pay anything as their membership for 2019 is included in their course fee.

As part of this process we are updating our GDPR policy and members will need to accept this as part of their renewal. Additionally, now we are a charity in our own right, we are also asking members to complete a new gift aid form.

Any questions or issues, please contact Kylie (membership@leedsbeekeepers.org.uk)

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!

Poly Hives appear to be strong, well-insulated and good value. Can anyone advise what the disadvantages are over a Cedar Hive? Are they easily damaged while separating boxes or removing Propolis?

Poly hives are excellent for keeping honey bees in. Depending on the manufacturer there are good ones and not so good ones. the best ones I have found are Abelo/Lyson ones. They are 160g L⁻¹ which are much denser than rivals, they have plastic reinforced top and bottom where the hive tool goes and come pre-painted. I find prizing them apart doesn't damage them. Though they do need a good brick on them in the windy weather. However, if you are not careful they can be damaged with a hive tool but this also applies to cedar hives. The only down side in my opinion is that they are not easy to recycle however good quality ones should last at least twenty years.

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! For large orders, please contact the shop in advance (shop@leedsbeekeepers.org.uk)

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

CURRENT SHOP PRICE LIST

To view current shop prices please [click here](#)

FORTHCOMING EVENTS

January 2019

Saturday 12th - Apiary Day – 10.00 a.m. – 12.00 noon

Wednesday 30th – Winter Talk – Asian Hornet

February

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

Wednesday 27th – LBKA Winter Meeting Gadgets with Andy Gowdy