West Suffolk Beekeepers' Association

NEWSLETTER

December 2019

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The opinions expressed in this Newsletter are not necessarily those of the Editor, nor of the Association

Notes from the Editor

Hello and welcome to the December edition of the WSBKA Newsletter. I have had plethora of offered articles this month, some controversial, others less so. Keep them coming. I hope that this will be the start of an interesting forum for your views. I hope that you enjoy it. If you have any suggestions about what might be added to improve it or have contributions to offer, please let me know at least two weeks before the March issue. Some words of advice from experienced beekeepers and stories by new beekeepers are all welcome.

It was the middle of November and my bees had clustered tightly, although only a week before that they had been out foraging. I had cleaned out the old Varroa strips but hadn't taken off the feeders as sugar syrup was still being taken down, but our President since pointed out to me that it is dangerous to leave syrup on this late as the bees may take it down but will not be able to concentrate it, with the consequent risk of fungal growth in the combs. Of course, as a microbiologist I should have realised that - rap over the knuckles!

In the last Bulletin put out by Carol Williamson one of our members commented on the very runny nature of their late season honey. I also experienced this and put it down to the close proximity of my apiary to a field of borage, which is known for producing very liquid, slow to crystallise honey. Most of the people that eat my honey prefer it to be granular and if possible, spreadable. Whether or not, or how fast honey crystallises is a very interesting and complex subject so I thought that I would highlight a few factors that influence the process. It may help less experienced beekeepers to understand some the reasons for its variable consistency and encourage others to read more about this fascinating topic (Crane, E.,1980).

Table 1. Relative Crystallisation Speeds of Different Honeys (see below for comment)

Honey Type	Crystallisation
African Acacia	
Black locust (*Robinia Psuedoacacia*)	
Cranberry	
Litchi	
Longan	**All very slow**
Milk vetch (*Astragalus*)	
Milkweed (*Ascelpa syrica*)	
Sage (*Salvia officianalis*)	
Sidr/Jujube	
Tulip Poplar	
Tupelo	
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Bell Heather (*Calluna cinerea*)	
Blackberry	
Borage (*Borago officianalis*)	
Buckwheat	
Chestnut (*Castania sativa*)	
Citrus	
Fireweed (*Epilobium augustifolium*)	**All slow**
Linden/Lime/Basswood (*Tilia* spp.)	
Maple (*Acre* spp.)	
Hawthorn (*Cretaegus* spp.)	
Nodding Thistle (*Carduus nutans*)	
Rosemary	
Sourwood (*Oxydendrum arboreum*)	
Spanish Lavender (*Lavendua stoecas*)	
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Thyme and Wild Thyme (*Thymus vulgaris* and *serpyllum* respectively)	
Alfalfa (	
Apple, pear, plum, cherry	
Clover (*Trifolium*)	
Cotton	
Dandelion	
Common Lavender*	
Phacelia (lacy or tansy)	
Field bean (*Vicia faba*)	**All Rapid**
Goldenrod (*Solidago*)	
Holly (*Ilex aquifolium*)	
Ivy (*Hedera helix*)	
Mesquite (*Prosopis* spp.)	
Mustard	
Oilseed Rape	
Raspberry	
Star Thistle (*Centaurea solstitialis*)	
Sunflower	

* It is temperature dependent. It tends to crystallise quickly when stored below 21-23o C (70-75o F). If it is stored at higher temperatures like 23-32oC (75-90o F) it usually does not crystallise very quickly.

Honey is a highly concentrated sugar solution containing more than 70 % sugars and ideally less than 20% water. All honey is naturally viscous, a property of a fluid that causes it to flow slowly, the greater the viscosity the slower the flow, when pouring. The viscosity of honey is mainly controlled by its gravity, and the lower the water content, the greater the viscosity. It rises rapidly as the water content falls to 20 per cent or below and the higher the temperature the less viscous (more runny) it is. Thus, presumably the runny nature of some honeys that have not yet started to crystallise is related water content and temperature, amongst many other things.

On the other hand, more granular honey has undergone the process of crystallisation to a greater or lesser degree. A lot of the sugar fraction found in the forage nectar is sucrose, which is hydrolysed by the enzyme invertase, secreted in the honey stomach of honeybees, resulting in a molecule each of fructose (fruit sugar) and glucose (grape sugar) being formed. It is natural for honey to crystallise, since it is a supersaturated solution ie. it contains more sugar than it can actually hold and the ratio of glucose:fructose in this mixture is critical, because glucose (900 g/l) is approximately five times less soluble than fructose >4000 g/l) . Thus, the higher this ratio is, the more likely is the honey to crystallise and the converse true if the ratio is low. To complicate matters further the speed with which honey crystallises is also affected by storage temperature and the presence of catalysts such as seed crystals, pollen grains and pieces of beeswax in the honey. These minute particles serve as nuclei to stimulate crystallisation.

I found a simple and non-quantitative but interesting table, presented in an article by Hamdan (2010; see above in Table 1). It shows rates of crystallisation, roughly graded, for honeys from different plant species. Although most well practised beekeepers know this by experience, it does illustrate why the rate and extent of crystallisation is so varied. However, it is not a very exact science as most honeys have a mixture of nectars foraged from different crops.

As you can see, in honeys produced from for example borage, blackberry and other forages that we might expect to contribute nectar to our Suffolk honeys, are slow to crystallise. Whilst others such as top fruits, dandelion, field beans, many tree nectars and as you know oil seed rape in particular, produce honeys that crystallise rapidly.

Thus, factors affecting honey viscosity and crystallisation are very complex and from year to year many factors interact to influence them, so predicting the end result and whether honey will runny or granular is almost impossible!

I hope that this diatribe is not a case of information overload leading up to Christmas! We wish all of our readers a very '***Merry***' Christmas and Happy New Year.

References

Crane, E. (1980) **A Book of Honey**. Oxford University Press.
Hamden, K. (2010). Crystallization of Honey, ***Bee World***, 87:4, 71-74.

Roger Merry

Chairman's Report

I hope everyone is well and ready for the festive season.

I'm sure like me that everyone was shocked and saddened by the news of the sudden passing of Gordon Chapman-Hatchett. Gordon has been on our Committee as long as I've been a member and has, with his wife Sue, run an expanded members' library. Gordon also collated our annual survey and the sessions he ran presenting this were always entertaining and informative. The Committee and I will miss Gordon's calm, positive and cheerful contributions to our meetings. Our thoughts are with Sue and family at this difficult time.

Hopefully, everyone has finished their winter preparations and is thinking of the season ahead. In December and January the bees are usually brood-less and it is a good time to treat for Varroa with Oxalic Acid, either as a trickle or by vaping. The late summer treatment (August/September) helps to reduce the mites so that the winter bees can develop without being parasitised. The winter treatment further knocks back the mites and gives the bees a good start to their spring build-up. There are now a number of licensed oxalic acid treatments available.

The other key consideration at this time of year is making sure that your bees have a good supply of food in the hive and if needed it is a good idea to top up with fondant. Ivy usually provides my bees with a good supply of honey to overwinter on but this year after a dry summer, whilst there was plenty of Ivy pollen, there was a lot less of its nectar available. Consequently, I've needed to feed my bees, after two years of not needing to. For newer beekeepers the best way to test your hives is to "heft" them. This means lifting one side and feeling the weight. An empty hive is quite light and bees will contribute a kilo or so. Most of the weight is in the form of honey stores. The hive should be difficult to lift. Confident hefting comes with experience. If in any doubt give the bees some fondant and top it up when it has been consumed.

Over the remainder of the winter, other than an occasional check on the bees, you can clean and repair equipment and make up any new stuff. It's a good time to improve your knowledge and in addition to our winter talks there are various conferences you can attend which include:

The **BBKA Spring Convention** 3,4,5 April 2020 with lectures, workshops and trade shows is well worth attending.
Beetradex – 14 March 2020 with a large trade show and lectures
Others to look out for are the **Cambridge BKA** and **Suffolk BKA** conferences – dates yet to be announced and there is a late announcement at the end of this Newsletter.

I have recently been co-opted to be the Suffolk representative at the BBKA Annual Delegates meeting in January. At this meeting representatives from all affiliated associations meet to elect the BBKA trustees and to discuss propositions from the associations for adoption as policy of the executive (i.e. the trustees). An example of this was a previous proposal that the BBKA adopt a policy that discourages the importation of queens and bees, in the interests of biosecurity. This year there are 15 proposals to consider.

Wishing everyone a happy festive season and New Year and I look forward to seeing you at our next meeting on Thursday 9 January (see below).

Kevin Thorn

WSBKA Annual Survey Forms – a reminder

As Kevin has said above, our librarian and compiler of the annual survey statistical data Gordon Chapman-Hatchett, has passed away suddenly. In fact, I was just about to remind you about your data as I heard of his passing. You will remember him as a very warm and gentle character, always with a smile on his face. He worked hard on the WSBKA Committee for the last few years and was due to present his data at the next meeting in January.

I have put this reminder early in the Newsletter in case you get bored and miss it! A copy of the WSBKA Annual Survey Form for 2019/2020 is attached at the bottom of this Newsletter and I am pleading with members to make sure that they fill it in and return it to Carol ASAP, as the accuracy of the statistical data that will be produced depends heavily on the numbers of sets of data that she receives. If you can get the data to her as you read this Newsletter (assuming that you do read it!) you will not forget and it will give us plenty of time to get the analysis done, which is time consuming and deserves our full support. I have filled mine in as I promised readers at this time last year, having forgot for the previous seasons! Incidentally is there a mathematician amongst you who will volunteer to analyse the data? It will already be entered on spread sheets ready for analysis and can either be presented by the volunteer or by a member of the Committee.

Arthur Bailey

Mr Arthur Bailey, whom some of our older members may remember has passed away. Ken James remembers helping him when he could no longer work the bees himself, lifting etc., before he finally gave them up, reluctantly. Funeral details will be in the paper.

Next Monthly Meeting

The re-arranged January meeting on Thursday January 9th will include a talk on 'Pollen in Honey – The Value of Microscopy'.

Recent Meeting Reports

September 2019

The use of electronics hardware to examine colony function

Barry Crabtree, the Editor of the Ipswich Beekeepers Association, is an electronics engineer who has brought his expertise to beekeeping. He kept his light under a bushel as it later emerged that he has a PhD in remote sensing. Barry presented a talk on how he is progressing. With the aid of some very sophisticated hard and software he has been tracking forager bees on their expeditions during pollen collection and nectar flows and is hoping in the future to be able to identify where bees are foraging by their pollen colour.

With the aid of sophisticated overlaying techniques he produced some very artistic pictures of bees leaving and entering the hive. He has also attempted to use differences in the intensity and wavelength of buzzing to predict the onset of the swarming phenomenon and other processes.

It was interesting to see what techniques are becoming available for tracking bee events and indeed are being use in a current research programme at Leicester University. We hope that in future we may be updated by Barry on how successful he has been in his endeavors.

Roger Merry

October 2019
Disease and pest control - European Foul Brood and Varroa

Young researcher Dr Kirsty Stainton of FERA Science Ltd. brought us up-to-date with an enlightening talk on two of the most serious problems from which our bees suffer. What was particularly useful was her concentration on advice for their control.

European Foul Brood (EFB) is a disease caused by the bacterium *Melissococcus plutonius*. Kirsty showed example of typical symptoms in bad cases. Actually 15% of colonies nationwide carry the bacteria but show no symptoms. Transmission is by adult bees and introduced in infected honey. Complete control is still out of reach after 100 years of searching, but currently the shook swarm technique is practiced with some success, although complete control is only assured by burning infected material.

Varroa mites are the most serious pest to ever reach these shores, arriving as I vividly remember in 1992. Initially colonies were nearly all wiped out because there were no known control measures. Soon the use of Bayvarol appeared to give almost complete control. The Eureka moment was short-lived because by the early years of the new millennium mites had become resistant. Kirsty listed and described the relative efficacy of current methods, physical and chemical – and their limitations. My hopeful view is that bees are slowly, slowly beginning to learn how to live with Varroa mites. Time will tell.

Philip Draycott

Offered Articles

Going to the heather, July 2019

Plate 1 Dunwich Heath and the heather

My early beekeeping years, 1974-99, were spent in Cheshire. From there, on half a dozen occasions I took up to four Jumbo-Langstroth hives to the heather moors above Llangollen. The yield was variable but the delight of the vistas and of watching the bees fly over the sea of purple is never to be forgotten.

My beekeeping resumed in Suffolk in 2002 using National hives. Soon the lure of the heather caused me to view the extensive sandy heathlands of coastal Suffolk, known since medieval times as the Sanderlings. They are part of the Suffolk Coast and Heaths AONB. Westleton Heath (Plate 1, thanks to trover.com), a National Nature Reserve, and the nearby Dunwich Heath (National Trust; NT) support several hundred acres of heather. Minsmere (RSPB) abuts to the south.

In about 2005 I wrote to the NT seeking permission to place two hives in August ready for the flowering of the ling heather. ‘Sorry, no, it might upset the nesting birds’. So, what to do? I drove around the area looking for a secluded niche (my hives would be unattended for 4-6 weeks and shielding from passers-by and potential bee-rustlers was important). The site I found on Westleton Heath has proved safe for the several years that I have visited.

I usually start with a recce in mid-July. In drought years eg. 2018 the heather on the sandy soil is more brown than purple. This year for the first time I teamed up with my beekeeping neighbour, Steve Galpin, whose apiary in Drinkstone we visited on the WSBKA annual safari. Perhaps surprisingly in a dry summer, the bell heather (flowers July-mid-August) was bright purple and the paler ling heather (flowers in August) showed some colour.

We each took a hive in Steve’s pick-up - vastly easier than harnessing my wife to my two-person hive carrier and squeezing the two hives into the boot of our car. Now, the heather experts advise preparing colonies specially for the heather by using young queens and boosting bee numbers by amalgamation. Neither of us did this and my thin unwired foundation in the two supers had only been slightly drawn before the journey.

We left the hives for five weeks. My colony yielded 12 x 1 lb jars of honey (which gained a modest prize at the WSBKA Autumn show at Pakenham) and 12 good quality cut-comb slices. By most yardsticks this was a disappointing yield, but it has been a dry year (there is no visible water for the bees within hundreds of yards!) and my colony was only of average strength.

Plate 2 Heather Press

Extracting heather honey for the jar is both character-forming and fraught with matrimonial hazard. Because ling heather honey is thixotropic it cannot be centrifuged unless agitated in the comb with a special instrument, which I’ve never attempted. I use Thorne’s ‘Budget heather press’ and a right mess ensues. The texture is jelly-like with bubbles. The flavour is unique and stronger than mixed-floral honey. It is said to command a premium price but when I advertised a bigger crop three years ago as “Heather Honey for Connoisseurs” @ £6 per lb (cf. my then price of £4 for standard honey) in my roadside sales box, there was little interest.

But hey-ho: it’s a fun trip to the Sanderlings. Drop off the hives and proceed to Dunwich beach café for an ice cream. There is little left of the drowned medieval port and bishopric but at least we still have a Bishop of Dunwich! Spend the rest of the day at Minsmere. Have luncheon or stay the night at the Westleton Crown - if it’s good enough for Kate & Wills it’s good enough for me!

Giles Youngs, Drinkstone.

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Ed. I also love Dunwich Heath and the Sanderlings, and after a walk along the beach and back across the heath with the dog often have fish and chips at the beach café or lunch at the Ship Inn. On a recent trip to Dunwich I spotted a Dartford Warbler, a species which is not common across the UK, but resident at Dunwich. David Bradley on Sciencebase.com wrote 'Incidentally, the name of this bird has a rather uncomfortable etymology. Back in less enlightened times ornithologists generally studied new bird species by shooting them and then examining and reporting on them, rather than netting them, ringing them, and setting them free. Two specimens of what eventually became known as *Sylvia undata* were shot in April 1773 on Bexley Heath near Dartford in Kent. They were examined and described by Welsh naturalist Thomas Pennant.

Wax in the Hedge

Plate 4 Wax in the Hedge

This is a short story from one of our new members. It's nice to have something offered by an inexperienced member. It may encourage other new members to talk about their first steps in beekeeping.

I am a new beekeeper and had only just completed the course and taken on a colony of bees for two weeks when I was asked to take a swarm. This was my first (and so far, only) swarm collection, so I was rather nervous as you can all imagine, if you relate to your own past experiences.

It started with a call from Carol to stand in for another member who was supposed to be collecting a swarm from Lakenheath (where I live), just before dusk, so I wasn't given much warning! It was fairly urgent due to the dire weather, having been raining hard for a few days. It seemed an odd time to swarm.

When I got to the site I found that it was not a swarm as such but a very cold and unhappy colony comprising about four small combs in a privet (I think) hedge, which suggests that it may have been there for a while. The bees were of course tightly packed to try and maintain the temperature. I doubt they would have survived much longer.

It was getting dark so I really had to get on with it. I felt that I had to at least try as if had I left them, they probably wouldn't survive with the rain again pouring down. Luckily I remembered my training and read up before I went, making sure that I had all the kit on arrival!

I put a big sheet down underneath the swarm as I wanted to try and rescue it intact. However, as soon as I touched the branch the combs became detached (see Plate 4), which unfortunately is the only picture that I got, but it does show the remnants of wax in the twigs.

I therefore did what I felt was best and put it all in the bottom of a nucleus (the one that a gifted swarm from Jane Corcoran had arrived and I should already have given back!), in the hope that it would have a queen. A couple of the combs stayed joined together and I'm pretty sure she hid between them. All of the remaining bees on the sheet were tipped in and any left on the branch I brushed in. I then closed the nucleus and checked it after 30min (now using a torch!) and as far as I could tell they were all still in the nucleus. On Jane's advice I returned before sunrise, i.e. 4.30am and took the nucleus home.

I did put some fondant in just in case they needed a boost. Another member Bob (Robert Brittain) picked it up the next day and took it to his apiary and decanted them into a hive with frames. He told me that they seemed to be doing well! Unfortunately, only being in the third week of being a bee keeper I didn't have enough equipment to make a go of them myself,
Incidentally, the week before I had been called out to what turned out be a bumble bees' nest in a bird box. **Ed.** Possibly a Tree Bumble Bee's nest? I relocated that to my garden in Lakenheath from Ely.

A members point of view on the subject Asian hornet traps and their potential by-catch

I read with interest the comments made about the Asian hornet monitoring traps in the October WSBKA Bulletin and their apparent failure to catch anything. The fact that the traps are not catching these predators suggests that they are working as designed. They are Asian hornet monitoring traps and should not catch non-target species. If they don't catch Asian hornets it's because there are none around to catch. I was appalled at the number of wasps caught with the ApiShield trap. If every beekeeper were to catch this many non-target species it would undoubtedly have a significant detrimental impact on insect ecology and their activities. A recent study published in the Proceedings of the Royal Society B. (rhttps://doi.org/10.1098/rspb.2019.1676) showed that some wasps are successful predators of crop pests. True, this study was carried out abroad but the study does point out that wasps all over the world do the same sort of job.

In an article on the Natural History Museum website entitled "What do wasps do", Emily Osterloff said, "Without wasps, the world could be over-run with spiders and insects. Each summer, social wasps in the UK capture an estimated 14 million kilograms of insect prey, such as caterpillars and greenfly. Perhaps we should be calling them a gardener's friend". Why do some Beekeepers view them as the arch enemy? Whilst I accept that they are a pest, surely deterring them is better than wholesale destruction. I worry that undervaluing the role of wasps in the ecosystem, will lead to the unnecessary culling of wasps, which in turn will be detrimental to our gardens, the wider ecosystem and to agriculture. We want our farmers to use less pesticides not more, don't we?

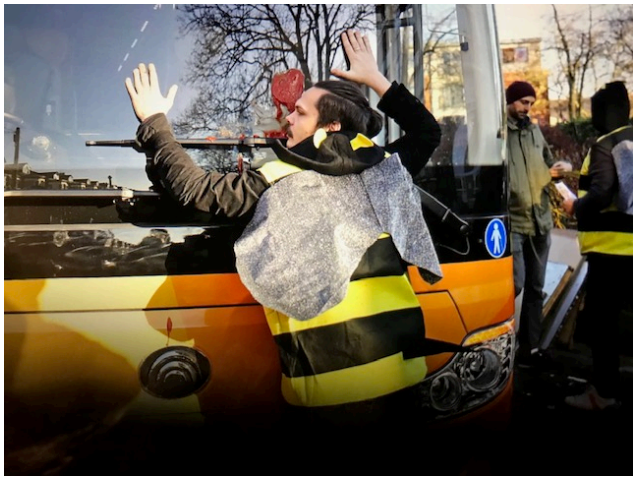
The traps that we constructed and demonstrated are a combination of two designs, that of last year's model and the new model. Older designs did not take into account the ***non-target species*** (NTS) and some relied on the beekeeper to release any NTS that they trapped and others just killed everything that went into the trap. The hybrid model will hopefully be a better option. Firstly, it should only let Asian hornets in, while keeping native hornets out and then letting NTS out. This is accomplished by having a 7.5mm entrance hole for Asian hornets only. European hornets need a 9mm hole and should not be able to get in. The escape holes are 5.5mm and will let almost everything else out.

The Bulletin article read like an advertisement for ApiShield, and the tone of the article seemed almost gleeful on discovering hundreds of dead wasps in the trap. It's difficult to tell from the picture, but what else suffered the same fate. The comment at the end of the article **"Of course some folk will say that we shouldn't trap these beneficial insects**" is a huge understatement! If you want to catch wasps don't waste your time making an Asian Hornet Monitoring Trap, just hang up a plastic bottle of apple juice, that will get the job done.

Let's not forget that wasps are pollinators as well as thieves of your honey and the point of monitoring for Asian hornets is to protect **ALL** pollinators. Each Asian Hornet is looking to kill 50 pollinators a day! If there were for example 200 hornets in a nest, that equates to 10,000 pollinators a day, which if multiplied X nests - pollinator armageddon is coming, so keep your ApiShield traps ready!

Michael Street

STOP PRESS: Did you see the honeybee stuck on the Lib/Dem's bus?



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Advertisements

FOR SALE Suffolk honey, 2019 crop, in 30lb buckets. We have a little more than we can eat!!! Contact Philip Draycott or Roger Merry, emails and phone numbers at the top of the Newsletter

Educational

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Kevin has organised a regional event on Bee Improvement and Queen Rearing for BIBBA at Lawshall – See below, free to attend.

Eastern Region Bee Improvement Groups

An opportunity to meet beekeepers from around the region to discuss Bee Improvement and queen rearing.

This will be of interest to all beekeepers who would like to raise their own queens and improve their bees.

Date: Sunday 16 February; 10AM to 4.30PM

Venue: Lawshall Village Hall, The Glebe, Lawshall, Harrow Green, IP29 4PE

Presentations on:

Starting and Organising a Bee Improvement Group - Equipment needed, raising finance, running a group.

Selecting Stock for propagation - natural and beekeeper selection.

The importance of Drones - selecting and positioning.

Starter colonies, set up and maintenance

Support colonies - you need bees to make bees - some management techniques.

Using incubators

Queen Introduction - mated and virgin.

Setting up mating nuclei, 3 frame and mini nuclei. How to run for multiple rounds.

In the afternoon there will be time for breakout groups to share best practice of their own activities and some time for planning next steps.

Tickets are free and are available through Eventbrite.

https://bibba.com/event-list/

Kevin Thorn BIBBA trustee and group coordinator

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WSBKA Survey for 2019 (01/01/19 - 31/12/19)

1,Total number of colonies on 1 January 2019

2,Type of Winter feed and date

3,Type of Winter Varroa treatment and date

4,Type of Spring feed and date

5,Date when bees started foraging in Spring (seen collecting pollen)

6,Date when queen cells first seen and actions taken

7,Date of first swarm seen

8,Date of first extraction

9,Date when last frames taken for extraction

10,Yield from all colonies - please specify kg or lb

11,Type of Autumn feed given and date

12,Total number of colonies at 31 December 2019

13,No of colonies lost and reasons

14,No of colonies gained and reasons

15,Types and numbers of hives

Comments :

For WSBKA use only - No information will be passed on to any other body