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Welcome to our summer 2020 newsletter.

Chairman's Notes

I guess the past 10 weeks are amongst the strangest times any of us can remember. All group activity has come to an end, all courses suspended, exams postponed. New terms have come into every day usage 'social distancing', 'lockdown'. However, the bees have been totally oblivious to the situation. Certainly for me, the record-breaking sunshine in May has led to a very respectable honey crop and it's still coming in.

We've been trying to help our new beekeepers as much as possible during these challenging times. We completed the beginners' course online and those who have had some experience with a live hive have felt able to take bees this year.

Of course we don't really know when we will be able to resume our normal activities. Maybe some small gatherings may be possible enabling socially-distanced apiary visits to take place, but as yet we don't know. Once the schools reopen, we may be able to plan some more training events, and even start to think about winter meetings, but alas it's all too early at the moment. We've managed to keep committee meetings going and we're all getting used to online meetings – a lot to be said for these as they take up less time. And we still seem to get the business done.

Like many others I have had numerous swarm calls and as usual most of them are about bumblebees. I did manage to house a large prime swarm last week. I now insist on a photograph of bees and surroundings before attending a swarm call, it certainly helps with the management of swarming. Sadly most callers are about bumblebees but most seem happy with the advice to leave well alone.

We'll write to all members once activities can resume, in the meantime: stay safe!

John Wilkinson



First Prize in Kelso High School photo competition. 'Still working, but no social distancing' by Elsa Dalziel age 13... see more page 9

Queen rearing in a nutshell

By Kate Atchley

...well the cell cups used in queen rearing do look a wee bit like an acorn...

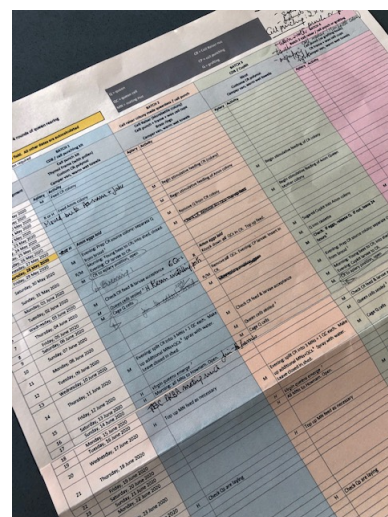
Queen rearing can be a hugely rewarding aspect of beekeeping when successful and the most exasperating when it does not go to plan. I recommend you embark on it willing to learn incrementally from your experience and not be deterred by disappointments. Success generally follows careful application and practice of sound guidance.

There are five basic stages to raising queens, from their inception as eggs to the young queens laying eggs in their own colonies. I will explain each of these, briefly, highlighting the key aspects. These stages involve the raising of queen cells from fertilised worker eggs rather than using swarm or emergency queen cells already drawn by the bees.

1 Planning and creating a timeline

Preparatory reading around the subject is important. The beekeeper needs a sound understanding of what is intended at each stage and how the bees are likely to respond to the interventions. This recently-published BBKA guide is an excellent place to start, with sample timelines to help you: <https://www.bbka.org.uk/shop/queen-rearing>. Another easy read is Ben Harden's *Some Alternative Pathways for the Hesitant Queen*.

Having chosen the methods you wish to use to raise queens, a precise timeline is essential. The timing of queen brood development will become very familiar and this dictates the early stages of your timeline. Justine Swinney and I are currently using the timeline illustrated to raise four batches of native bee queens through May to July.



2 Selecting and presenting larvae of suitable age

Queens develop from fertilised eggs, as do worker bees. The difference lies in how the larvae is fed. Queens are raised in much larger, downward hanging cells and are fed a richer brood food in greater quantities than workers.

Your raising of queens will begin with selecting larvae from a brood frame of the ideal size to be fed generously as a potential queen for the longest possible time – ie larvae within 12–24 hours of hatching from eggs. The photo shows a suitably sized larva to choose: still very small and gently curved but not yet forming a 'C' (labelled 1).



Larvae of different ages: For queen cell raising, the, smallest, 1, is the size we look for (pic Beemaster.com)



Grafting (moving larvae with a brush or special instrument), cell punching (the method we are trialling at the moment), using a Nicot or Cupkit system: these are some of the ways to charge the queen cell cups, arranged on a frame, with suitable larvae.

Grafting larvae from a brood frame with fine paint brush and placing in cell cups



1st cell punching attempt: 6 good queen cells from 10 punched by Justine (100% success) and Kate (43% success). Guess who will do the next batch?

3 Preparing a colony for cell raising and finishing

The frame of larvae needs quickly to be placed in a colony ripe for drawing out the cells with wax and feeding the larvae large quantities of queen substance. Many young bees of 5–11 days old are needed, along with apparent queenlessness in the colony to prompt the queen-raising reaction. They must be exceedingly well fed and have plenty of pollen and nectar/honey near the cells to be drawn.

This stage involves ‘cell raising’ (the larvae being accepted as queen material) and ‘cell finishing’ (completion of feeding and cell building) which takes nearly 5 days until the queen cells are sealed on day 8–9. Justine and I are using a queenless cell raising/finishing colony for each batch though large queen rearers will often separate the two functions between queenless and queenright colonies and there are methods which involve manipulations to render a queenright colony temporarily queenless for the early stage only.

4 Managing mating nucs for the queen cells

Before considering the mating nucs, remember there will need to be sufficient healthy drones in the vicinity to achieve successful mating. Your queen rearing will need to be timed to allow for this and drone-mother colonies may need extra feeding and support.

A virgin queen will emerge from the cell in which she has developed about 8 days after it is sealed. A couple of days before she emerges, the beekeeper will prepare a mating nuc for her, filled with enough fairly young bees to care for her and draw wax if necessary. Again there are several options: you may use Apideas – well designed small mating nucs – or the slightly larger Lyson MiniPlus nucs which can be run as one or two units. These mating nuc have small frames of unique sizes.



Inserting a queen cell into Apidea filled with bees

The Cheviot Project is building up stock so we also like to use 2-in-1 polystyrene nucs with full-sized national frames, three in each side. Queens mated in these are ready to receive more frames and be built up as full colonies, without having to be removed from the small mating-nuc frames and introduced to a colony (see below).



Checking Apidea: queen laying successfully

Managing the smaller mating nucs is an art in itself and deserves special attention. For our project, we fill them with bees taken from the supers of local colonies. This ensures that unwanted drones are not included and the age of the workers is suitable for the tasks we commit them to.

Generally I leave mating nucs for 2–3 weeks before checking to see if the queen is successfully mated and laying. It is not until some of her brood is sealed that you can tell if she is laying fertilised eggs in a good pattern. The smaller the mating nuc, the faster the mating can be, so a queen in an Apidea might have sealed brood after two weeks while her neighbour in a polynuc might take another week or so. But mating in our quixotic climate is uncertain and hazardous for the young queens taking mating flights. So many virgin queens will fail to mate fully or disappear.

5 Introducing mated queens to colonies

The final hurdle is to establish your mated and laying queen in a colony on full-sized frames. As mentioned already, this is easy when she began her mature life on full frames. Then the colony can simply be built up or united with another queenless unit.

More difficult is introducing a queen from a small mating nuc. This involves placing her and a few accompanying bees in a queen cage and introducing this to queenless bees (be certain of that!). A colony can be very reluctant to accept an incoming queen if they have the means to create a queen of their own kind. So you are best to render them queenless at least 8 days in advance of the introduction and knock down any queen cells they make after 5 days and again before introduction, also ensuring they have no eggs/larvae left from which to make more. The queen cage can be opened, so the bees can eat their way free through fondant, only once the colony is peaceful and seems keen to accept their new queen.

Photos mostly by Justine Swinney. Contact me at bees@kateatchley.co.uk.

Bee Buzzings

By Norman Jarvis as of 29th May 2020

The exceptionally dry spring has provided an abundance of pollen which is ideal for the hive and young bees to grow. However nectar has been in short supply until the recent OSR has fully bloomed. Thank goodness for OSR.

It's a good time to check your tray of clean water covered with small bubble wrap to prevent bees drowning. Beware not to take too much honey off too early; leave some stores to cover the June/July Gap. The easy way to avoid 'Summer Starvation' is to check the brood frames for stores when inspecting at the weekly inspection and/or lift the back of hive to feel the weight. If it is found to be light due to good brood population, then it is essential to leave stores in the supers or feed liquid syrup.

Over the years my experience has found, as Graeme Sharp pointed out, a 'Split' if required, should take place with a strong colony before any queen cell activity is observed. There

should also be ample new-laid eggs to satisfy both brood boxes, capped and uncapped brood, stores and drawn combs present in the hive.

Alternatively, if the queen has stopped laying eggs and charged queen cells are present, then action must be taken to avoid the hive swarming. This is called an 'artificial Swarm' where the queen must be removed and established in another empty brood box, with no brood or eggs. She must be supplied with some stores and some bees from her previous hive and placed on the original site, adding the queen excluder and any supers. Foraging bees from her previous hive will collect pollen or nectar and return to the new brood box on the site they originally came from.

This is beekeeping with nature, which changes every year, so no set rules or dates on the calendar can be followed.

Let me know of any particularly requests for further episodes.

Love your bees!

Bees to the Heather



Heather honey is sometimes described as the 'king of honeys'. It's a bit of an acquired taste for many and in years gone by it was often simply used as a winter feed for the bees.

For a number of years Borders Beekeepers have been granted access to a wonderful heather site at Greenlawdean, by kind permission of the landowner, Mr Peter Leggate. There are stands there and it provides great access for the bees on the heather.

We have again been given permission to use the site this year.

Access can be a bit tricky and really requires a four-wheeled-drive vehicle. Each year in mid-July, I organise a small working party to clear the site and check and repair stands. I'll do the same again this year.

There isn't a limitless capacity and most members who take hives will take two or three. It's best to take a hive which has a new queen and is brimming with bees. It can get quite cold on the moors in August and so insulating the hive is quite important. Tony Harris also advises leaving them with a super frame of honey to prevent starvation.

Timing is important and can be difficult. In some years the heather comes really early and doesn't last long. It tends to do best with a long wet spring, followed by a very hot summer and it may be that with our very dry spring, 2020 turns out not to be a good heather year. Plan to get your hives in place by late July if possible; the glorious 12th (August) is said to be the last day that the bees will produce anything but in my experience it's too late by then. I leave my hives there until the first week in September, with maybe one check in between taking them up and bringing them back home. I've usually managed a super of honey from each hive I've taken up there, but I've known others to do much better.

If you are interested in taking hives up this year and are willing to help with the preparation please email me and we'll arrange a time to go up and work to get things ready – at a suitable social distance of course.

John Wilkinson (johnrobertwilkinson@gmail.com)

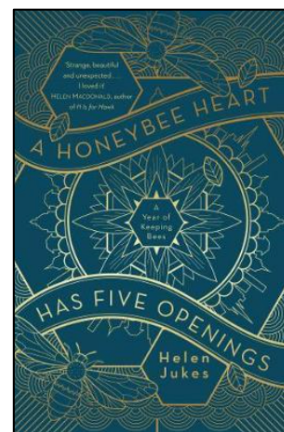
Book and Film Reviews

A Honeybee Heart Has Five Openings (a year of keeping bees)

by Helen Jukes

A book for would-be beekeeping novices and old-timer beekeepers alike.

A young woman recently moved to Oxford from London, where she'd enjoyed many apiary visits and bee-related conversations with a beekeeping friend, finds herself in a suburban house with a slightly overgrown back garden and the seed of an idea – to have her own hive of bees – is sown. She embarks on endless research, to relieve the stress of a busy office job, and discovers many interesting facts (hence the title) about bees and beekeeping across centuries and continents. Eventually, having had to endure hours of bee talk, a group of loving friends club together and pay for a colony of bees which she is to collect when she is ready and the time is right. So now she has to decide in what kind of hive to house her bees. And of course the whole process shapes her own life, opens up new perspectives for her, and debates what it means to be human in our modern world. This book reminded me so much of the years leading up to the delivery of my first hive of bees and the serendipitous things that arrive out of bee conversations: her friends' thoughtful gift; my being given the bare bones of a long abandoned apiary. Her writing has a similar strange, haunting beauty as Helen Macdonald's *H is for Hawk*. With its deft and beautiful prose this is classic modern nature writing weaving together science, observation and personal response: it is a gently powerful book.

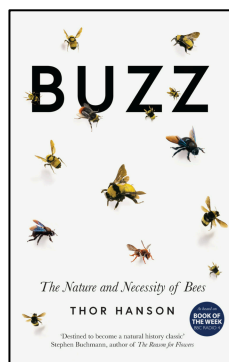


By Joanna Payne

Buzz

by Thor Hanson

Book Subject: The Nature and Necessity of Bees



Natural and cultural history of bees by a biologist who has a gift for writing lyrically yet factually.

It covers bee hunting in early rock art, the evolution of bees from wasps, and the modern-day Hadza tribe in Tanzania whose calorific intake is 15% honey with daily honey-hunting. He visits current researchers into bee loss, for their perspective. I also enjoyed his snippets on how he and his young son have an ongoing project of hunting (locating not killing!) bumblebees in their garden, and their attempts to build attractive homes for them, with lovely observations. There are some colour close-ups of different bees and interesting illustrations. This book was on Radio 4 as their *Book of The Week*, which is how I heard about it.

By Christina Auchinachie

Film: Honeyland (2019)

A woman, who is a keeper of wild bees, lives in a remote deserted village in North Macedonia and looks after her bedridden 85-year-old mother. It shows how she carefully harvests only a proportion of the honey and sells it in Skopje, 4 hours' walk away, thus providing her income. It then follows the consequences of a nomadic family moving into the village... The filming and scenery is amazing. Very poignant.

By Christina Auchinachie

For Sale/Wanted

For Sale

WBC hive for sale (cedar), brood box, three lifts, floor, stand, two supers, crown board, wire queen excluder and roof. £150. *Contact* John Wilkinson on 07980129996 or johnrobertwilkinson@gmail.com

Wanted

2 National hives plus 6 supers to expand my apiary. Also a 2nd hand medium sized beekeepers suit. *Contact* Edward Withers on 0773 166 5978 or edwardwithers58@gmail.com

Offer

Land for bees near Galashiels – a farm outside Galashiels is offering space for bees. *Contact* James Frere-Scott on 07786 543451

Wanted

A Smith hive – or Smith hive parts. *Contact* Alison Ramcharran on 07768 266339 or alisonmgrant@mac.com

Beekeeper Biography

It's All About the Bees by Heather Taylor

Who I am

I am a member of the committee for the Borders Beekeepers Association and I'm proud to say this statement out loud.

My approach to beekeeping

I think I can call myself a beekeeper, although the bees have been around a lot longer than I have and they managed fine before me, but I like to think that I help the ones in my care. Beekeeping is a way of life not a hobby and I think that there are different types of beekeepers that take these terms to both extremes. After a few years of playing about I'm now gaining a more naturalistic approach to bees.

What started it all off?

I initially got into beekeeping by accident – I'd moved back to the Borders after 15 years away and it was the first house I've lived in where I had my own garden surrounded by arable farmland. I'd decided to take my first steps into gardening, and I noticed a poster for a lecture in Kelso Town Hall from the Kelso Horticultural Society about planting bee-friendly plants in your garden. I was intrigued. I went and listened with intent about flowers that are useful to all pollinators, what works best, where to plant them and the colours to expect – so far so good – and then the real talk started...

It began with the plants

Norman Jarvis gave a talk on bees, how important they are to us all and how different plants will help them survive by giving year-round forage: that was me hooked. He talked so passionately and inspiringly about the little creatures that I went to buy various suggested pollinator plants and began to fill my garden with cottage-style bee-friendly plants. Fortunately most wildflowers, what some call weeds, are great for pollinators so my lazy and uneducated approach to gardening actually works to my advantage. I'm a firm believer that plants find their own home, if they thrive well somewhere then leave them be. I'm lucky to have a cottage garden, but any garden will have bee forage if you look properly. I was thinking of Norman's words whilst getting some plants in the ground and seemingly I'd been talking to friends and family of the fascination of these creatures too. My brother even called me a crazy bee lady!

But it's all about the bees

Eventually having talked enough about bees to everyone and their dog I pushed myself to go to my first Borders Beekeepers' meeting. I was welcomed with open arms, then I started to hear



about what bees do, what roles they have to play, bee biology, bee habitats. I learnt so much that before you knew it I'd gone and completed the beginners' course and lo and behold I had a certificate to say that I was officially a Borders Beekeeper! In November 2009 I still didn't have any bees though. Fortunately I'd been on a few apiary visits and had handled bees so I knew I wasn't scared of them. I waited until the following July when I was finally given the opportunity for my own queen and bees and I've never looked back. The night I went to collect my first hive from Coldstream I was just like a kid. Excited but also nervous and so worried they would disappear, or I would kill them. But it all went well and before the year was out I had 2 hives of bees – I was evidently hooked!

Gathering information

I've attended most beekeeping meetings and lectures and played an active part in the association ever since I first joined. I've also learnt so much from talking to the more mature beekeepers there. I realised very quickly that if you ask 4 beekeepers a question then you seem to get 4 different replies! I enjoyed the common interests, but I really enjoyed asking folk questions and picking the older generation's brains on my bee issues. I was fortunate to live near to a very experienced beekeeper and I'm sure that he kept a close eye on my bees too – sadly he passed away but I wrote down many things he told me in my bee diary and therefore his tips will not be forgotten! I've read many articles, books and watched videos galore on beekeeping, but the best way to learn is just by doing it. I've made many mistakes and some years I've ended up with no bees, but the hives have been cleaned for re-use and I've caught swarms so have never really been that long without any bees at all.

Warré Hive

The out-apiary where my hives are located is idyllic – there is a small pond nearby, a burn and plenty of trees to shelter the hives, it is my wee bee haven. I visit my bees most days and they know all about me; I talk to them and they listen. If I'm working my bees, I'm always calm, and they seem to reciprocate: on occasion they tell me I shouldn't be there or that I need to keep a distance, but we definitely have a connection. At the moment I only have one populated hive. It's a Warré Hive, more of an observation hive but also a more natural way for the bees to live. This hive acts like a hollow tree trunk, so you add the boxes underneath rather than on top. It has Perspex windows on the side so you can see the bees without disturbing them. Again, I heard a wonderful talk from a fellow beekeeper about his Warré hives. My enthusiasm led to me being gifted a secondhand Warré for Christmas and there've been bees in it for several years now. This hive has always been my strongest ever colony, so I take it that they like the more natural approach; less hands on for me as well. I love showing people the Warré hive as it can be very safe for folk who are scared of bees when they realise there are so many of them. I now treat this as my 'bee teaching' to others, I feel that I am doing a sales pitch for the bees when I show a new person what a hive looks like inside. I love to share my passion with others and might even have converted some to actual beekeepers but at least I have definitely encouraged people to grow more plants for these little ladies to forage on!

It's all about the bees...

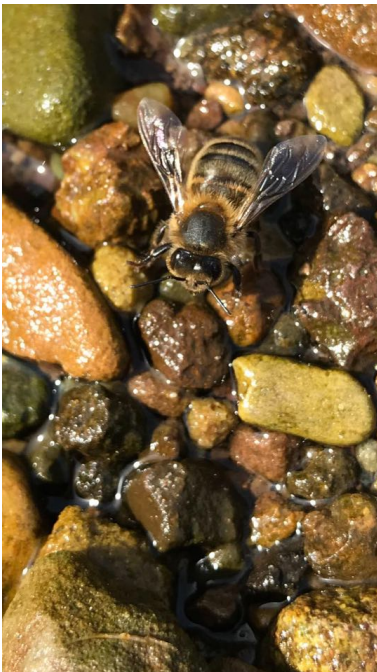
School News

The study of beekeeping has gained a tremendous momentum in Scottish schools. With more than 20 high schools involved, there are now hundreds of youngsters involved in learning about honey bees. This progress has only been possible because of innovative teachers working in partnership with local voluntary beekeeping associations like ours. The Scottish Qualification Authority has also expressed interest in developing a higher level qualification for Scottish schools.

Covid-19 has had a significant effect on the teaching and learning experience for everyone. Teachers have tried their very best to provide continuity of learning. Some have purchased video cameras and have set about learning how to produce online video lessons. At

Kelso High School, this has involved several online workshops and also a photograph competition very kindly judged by our chairman John Wilkinson (see pics and winners below). For many students this has seemed like a very positive experience (and distraction), even becoming a family affair with extended learning going on in home apiaries. This week I was delighted to hear from a 13-year-old who had questions about a nuc they had created with their parents. Also another student is working at home to produce a bait hive. While hearing about home learning experiences such as these is pleasing, there is an equal feeling of concern about some students who have been unable to access the same learning opportunities. For me, this is a reminder of why subjects like beekeeping need to be embedded in the school curriculum, providing learning experiences for all.

By Ray Baxter



Above left: Second Prize 'Pollen collection in Grenoble, lockdown in France' by Lucy Campbell age 12

Above right: Third Prize by Jamie-Louise Bridger age 13

Left: Fourth Prize 'Thirsty work' Elsa Dalziel

Your newsletter editors Joanna Payne and Kate Atchley would love to hear from you with photos or stories, poems or musings, requests for articles or announcements; we hope to prepare the next issue in the autumn.

Please contact Joanna (jp@thepayneclinic.co.uk).

We look forward to hearing from you!