

Swansea & District Beekeepers Newsletter Gwenynwyr Abertawe a'r Cylch

A Note From the Editor.

Despite the Covid 19 lockdown, beekeeping goes on and we must endeavour to keep our colonies healthy and in good condition.

The government's advice is that you should continue to work and care for your 'animals' (which includes bees) in the normal manner, as far as possible, and not take measures that compromise their welfare.

Maintain social distancing and maintain good biosecurity in the apiary. Do not share hive tools, equipment, hand held devices or clothing and remember to wash your hands thoroughly afterwards.

Our Society's forthcoming events, like the rest of the National Agenda, will be affected for the foreseeable future, therefore meetings, classes, shows and other events have been put on hold or cancelled until further notice

Hopefully the situation will improve by the time the next Newsletter is sent out. Meanwhile, continue to follow the Government guidelines.

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Editor: D. Salkilld

Drones and Drones.

It's unfortunate that modern technology uses the word 'Drone' for those flying robots used as children's toys, photographic platforms and parcel delivery systems. It makes it a little confusing for me as I précis the articles printed in the Daily Telegraph and the Daily Mail, both on 17th Feb. These articles discussed advances in navigation of these modern machines based on research done at University of Sheffield, using honeybees. These clever insects, with a brain the size of a pinhead, have the ability to fly over five miles and remember the location of their hive.

Professor James Marshall, explained that many tasks for drones are challenging, such as deliveries or search and rescue, which involve navigation in complex environments such as multi-story car parks where use of GPS is denied. Also GPS systems are somewhat less effective in urban locations because of all the scatter.

By contrast the honeybee navigates round any obstruction and Dr. Joe Woodgate, a member of Professor Marshall's team, observed how honeybees navigate and 'reverse-engineered' the rudiments of the bees brain to manufacture a computer chip. These chips now help drones to avoid obstacles.

The honeybees complex navigational skills were observed using various techniques involving the use of radar transponders to track them in flight. Also some honeybees were put in a virtual reality chamber to study how their brains work during navigation. These observations assisted in the design of the chip.

Bumblebees and Pesticides.

In the Daily Telegraph on 4th March, an article appeared discussing how pesticides make young bumblebees lose their navigational skills, needed to forage for food. A team at Imperial College London, led by Dr. Richard Gill, used miniature CAT scanning equipment at the Natural History Museum to examine the effects of pesticides on bees at 3 and 12 days after they emerged from their pupae stage.

The scans showed significant damage to the development part of that brain which governs learning. The team believes this harms the insects' ability to collect pollen and nectar, partly accounting for the steep population decline in recent years.

It seems the case that young bees are fed on pesticide contaminated food which causes parts of the brain to grow less, leading to adult bees to have smaller and functionally impaired brains.

My thanks to those who send me cuttings from the newspapers. D. S.

“When Bees Were Bees” by Tom Davies

More on the last issue's subject on queen marking by Mr. J. A. Green, of Grand Junction, Colorado, in “Gleanings in Bee Culture” – May 1930.

Mr Green had been marking with a quick drying pyroxyline lacquer called Duco, a deep red, in 1928 and it occurred to him that if a different colour was used each year, it would give the age of the queens at first sight, so in 1929 he marked his new queens with Chinese yellow lacquer.

Marking the queens was usually done with a light spot on the thorax, but Mr. Green altered this method by marking not only on the thorax, but also on a wing, making the queen stand out even more on inspections. Also he clipped their wings.

Mr. Green described his procedures in detail for anyone that wished to follow them – when the queen was spotted, pick her up with the right hand, having a pair of scissors ready, plus a vial of lacquer, transfer her to the thumb and finger of the left hand.

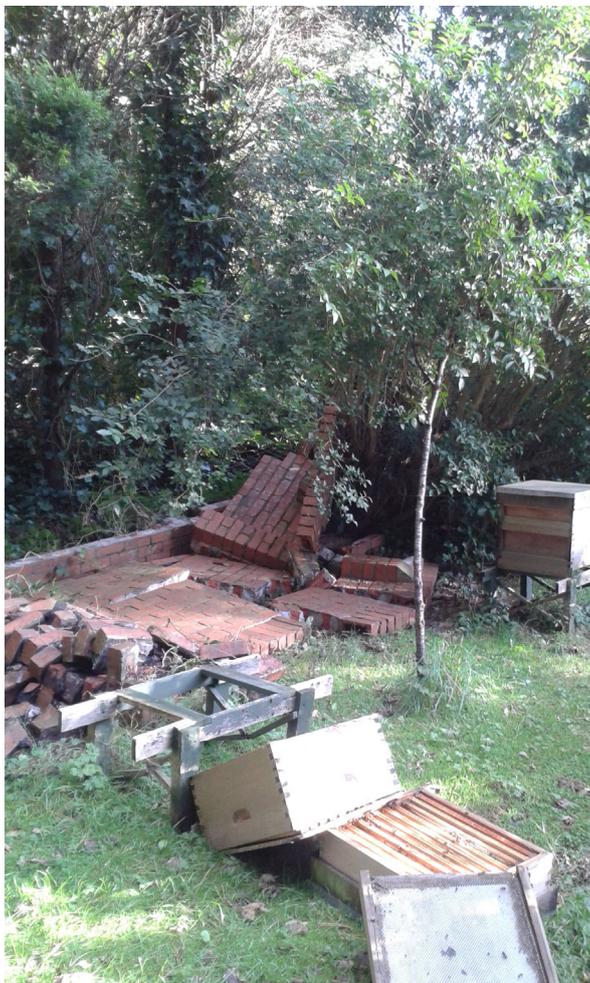
Clip one of the wings and put a spot of colour on both the thorax and the remaining wing, but also make sure the lacquer is light only on the thorax as too heavy an application would cause it to run down into the joining of the thorax and the abdomen, causing discomfort to the queen.

I think that if I were going to try to follow this system, I would first try it out on a good many drones first!

More next time, Tom.

A Slight Mishap. By David Salkilld.

In the torrential rain and gales last December, a six foot brick wall in our garden blew down onto one of our Langstroth hives and sent it flying, leaving the brood chamber and super upside down. Luckily, two other hives nearby were missed. One was just a little further away from the wall so was not touched when it fell and the other hive was saved by a large privet bush which took the brunt, as shown below.



After the storm photo by David Salkilld

By the time we found it, the hive had probably been upside down for a day or so, but we don't know exactly for how long. Anyway, protective equipment was put on and the situation assessed. The bees had clustered and, strangely for an upside down hive, seemed to be doing their normal thing. So I picked it up, righted it and put it back together. It sounds easy but the brood chamber was full of winter stores and must have weighed somewhere in the range of 25 kilos, it was heavy! Luckily the excluder helped to keep the brood frames intact and the nest together. The super was lighter to handle but the frames wanted to fall out, gravity was on their side, and the roof was undamaged. Somehow I managed to get the hive back together, though the bees were naturally a little agitated.

As I put the hive back on its stand, it quickly became apparent that the stand had been damaged when the wall hit it. It was somewhat rickety, so I supported it with a rope tied to a stake as a short-term measure until I could get another stand in.

A small prayer that the queen wasn't damaged seemed to work and the colony was flying normally the next day.

With experience, a lot of information can be gathered by watching the activity at the hive entrance, how the bees behave, how they fly, what they are bringing in etc. etc. Once you get to know what is normal, any variation becomes obvious. On checking the hive the next day, all activity seemed to be back to normal.

Regarding the wall, the neighbours were good. They reacted quickly to get it rebuilt (it was their wall) but the builders were not keen to work in the proximity of honeybees. The solution was to move the three colonies away during the rebuild and so they were taken to our son's house for a 'holiday' on the other side of Swansea. During the move, the mesh floor was found to be broken and needed to be replaced. The bees were still rather touchy at that time but have since settled down.

Four months on and I can report that all three colonies are flying nicely, raising brood, are good tempered and appear to be enjoying life in their new location. We're not certain how long they will be there but I'll update you in a future newsletter. D. S.

And Now for Some Beekeeping Advice!

Yes, it's swarm season again. Martin has already put information on the website about swarms seen in SA1, SA2 and SA5, so be prepared for action in your colonies.

As has been said many times before, a beekeeper's main aim is to get a crop of honey from the bees. The bees' main aim is to reproduce!

So expect them to follow their nature but be aware that you can reduce the tendency by giving them plenty of work to do and plenty of space to do it in, namely by putting new foundation in the brood chamber and adding a super.

However, their basic instincts can't be suppressed and they may decide to swarm anyway. My own first indicator is an extra build-up of drone cells in the brood chamber. There will always be some drone cells in the colony, it's their way of spreading their genes as the drones go out to mate with virgin queens from other colonies, but when I see more than usual, I know that they are in swarm mode.

Beginners will ask the question, how many is that? I really can't give numbers, it's just a matter of experience and judgement which will come in time.

At this time of year it is advisable to check for queen cells each week and if you find open queen cells with a larvae on royal jelly, the colony has decided to swarm. At this time there are options, firstly to split the hive if you want to increase your stocks, or to make an artificial swarm in which you simulate a natural swarm.

However, if you have a very strong colony which you suspect will swarm but hasn't yet begun building queen cells, you can often prevent swarming by doing a **Bailey Frame Change**. This option entails putting another brood chamber, fitted out with foundation, above the existing brood chamber with a feeder on top. The feed allows the bees to quickly draw out new cells. When the frames are drawn, an excluder is put between the two chambers and the queen moved up into the new one. At this time a second entrance for the upper chamber is put at the back of the hive, leaving the original entrance open at the bottom. Flying bees from the top box will go back into the bottom box whilst nurse bees will have the freedom to go through the excluder to tend new brood laid above.

After three weeks the old brood chamber is removed and an excluder and super are put on the hive. This manipulation *almost* replicates a natural swarm and the colony remains at full strength for the main honey flow. There are many variations to this basic theme but remember that if this move is done early in the season, they may decide to swarm later, but that is rare.

Collecting Swarms. As I said at the beginning of the article, it's swarm season and you may want to collect swarms available in your area. If so, look out for emails from Martin and perhaps register on the swarming app, "BeeSwarm.uk" which was mentioned in the last newsletter. Although some swarms have occurred, there is still time for you to prepare as the main swarm season is usually in May and June.

If you are aiming to collect swarms, get your equipment sorted out so that you will be ready when they turn up. I had a cardboard box in which I was able to put a brood frame cornerwise. It took a long time to find the exact sized box but it was well worth it as, inevitably, the queen would be on the frame and it was easy to transfer her into a pre-prepared hive. The rest of the colony would then follow with no trouble.

If a swarm has recently emerged it is likely to be placid but, even so, wear full protective equipment when collecting it. If it has been out of the hive for more than a few days, it will likely be less placid so caution is called for. Often you don't know how long a swarm has been out when you go to collect it.

If a swarm is too high in a tree or far out of reach, don't risk your own health by attempting to catch it. When working from a ladder, always have someone at the bottom holding the ladder and, if possible, tie it off at the top. Remember that a swarm can weigh over 2 kilos and the sudden weight can unbalance you if you are overstretching from the top of a ladder.

From a bee health standpoint, keep any swarms away from your main apiary until they have produced brood and been checked to make sure they are disease free. Good luck with your swarm collecting.

D. S.

“More About Bees” by Tom Davies

With the corona virus wreaking havoc the world over, I hope that beekeeping will not suffer in the way other enterprises have.

On a more cheerful note, I have been taking advantage of a nice spell of weather, such as a good spell of tidying the surrounds of my veg patch, together with a raising of some plants for the bee garden.

Together with my dahlias and Michaelmas daisies, I will have some agastaches, rudbeckias, dwarf French beans and marigolds for the bee garden. With reasonable weather I should have a fair display this year.

Despite the chilly wind, there are plenty of bumbles flying, lots of dandelions about and other flowers to attract them.

No sign of either honeybees or wasps, perhaps the long periods of wet and quite cold weather over the winter has reduced their numbers, perhaps a spell of warm sunshine will bring them out.

Over the next fortnight, I will be sowing some beetroot and beans in the kitchen garden, this year as well I am going to put in some sprouting forms of broccoli, I have little seedlings of these coming along in the greenhouse and they should be ready to plant out by the end of April, so with a bit of luck, they could be suitable for use by mid July. They go well with a hefty cheese and onion, something to brighten up the year!

More next time, Tom.

Contact Numbers

Chairman: Paul Lyons

sd_bks@btinternet.com

Secretary: Contact

sdbks.secretary@gmail.com

Treasurer: John Gale

07855 451 781

The next newsletter is due out on 1st July. Please let me have your articles / items by **20th June**. Thanks.