

Swansea & District Beekeepers Newsletter Gwenynwyr Abertawe a'r Cylch



A Feral Bee Nest in the Soffit of Rod's Bungalow.

My thanks to Rod Sewter for the photo.

Rod writes, "The bees had actually been in the soffit for two or three years, first one side (which I blocked off when they died) then the other side (I should have blocked that as well, of course).

Unfortunately they died out after last winter's cold weather; I have no idea why. Without dismantling the soffit it was almost impossible to hive them and, as they were doing no harm, I thought it best just to leave them.

Following their demise this spring, I decided to dismantle the soffit with the intention of blocking it up to prevent others returning in the future.

I was just amazed to see the incredible work they had done in a space of about 50cm x 30cm x 15cm. I have now removed the combs and filtered off the honey, which is quite dark (2 jars in total). The comb I have melted down as far as possible in a solar wax extractor of my own design. I will bring a jar of the honey for our club show.

Issue No. 124 November ~ December 2018

Editor: D. Salkilld

“More About Bees” by Tom Davies

Mid October already, and I am in the middle of clearing up the garden, and getting the autumn digging done.

2018 has been a very unusual season as far as vegetables have gone, with potatoes not very good, masses of runner beans, but had to be used up quickly as the hot, dry weather was causing them to go to seed very quickly.

Beetroot, my favourite crop, has done very well and I have managed to pickle a few jars for over the winter, while on the wild side there have been some lovely blackberries about, and I have some in the freezer along with quite a few blackcurrants.

My Bee Garden is still going strong, in sunny spells it's attracting plenty of bumblebees, also butterflies and some honeybees. I haven't seen honeybees all year, only in the last couple of weeks, but at least there are still some around.

While at the Gower Show, I asked around to find out how honey yields have gone, and it appeared to be fairly good. It's nice to have a good honey year, to have poor years continually can be very miserable, and will put people off from keeping bees. When I started off I had a few good weather seasons to begin with and was able to get on alright.

Best wishes for Christmas and the New Year, Tom.

75th Anniversary Summer School (Continued from the last newsletter)

Before continuing the report on the lecture by Prof. Seeley, “The Bee colony as a Honey Factory”, let me first remind readers that he mentioned a number activities and ways that bees communicate, including the waggle dance and shaking, sleeping (hardly an activity), trembling and beeping.

We'll pick up on the **tremble**, which was first seen and recorded by Karl von Frisch, the Austrian scientist, some seventy years ago whilst studying bee dances. He was later awarded the Nobel Prize for his work in this field; however, he did not establish why the tremble dance occurred and it remained a mystery until recent years.

Whilst studying the behaviour of foragers and receivers, Prof. Seeley had the advantage of video recordings so that he could slow down or revisit anything he had seen. He noted that when the balance of work got out of synchronisation, and there were not enough receivers to unload the nectar, foragers waiting to be unloaded would tremble on the comb until they were seen to.

Coming back to the waggle dance, he also noted that as well as direction, distance and a sample of what to look for, the intensity of the dance, i.e. the time it was danced, indicated the quality of forage. The longer the worker danced, the better the quality.

That leaves us with the beep signals. It is important to note that in the darkness of the hive, bees bump into each other regularly, so if one bee wants to make a point, it puts its head against the other bee and shakes the comb violently, making a beep sound in the process. This is not a loud sound and has only been picked up with sound equipment located in the near vicinity. Workers who want to stop foragers dancing because of an imbalance in supply or demand will do this. However, the bee being beeped doesn't always get the message first time and often has to be beeped several times before it stops dancing.

On Saturday morning, **Irene Power** gave a talk entitled “Efficient Beekeeping”. She had some good tips for beekeepers but I noted the following and will be using them in future.

She changes foundation when it has been used for three years. To help her know how old the foundation is, Irene writes the date on the top bar when she puts new foundation into a frame.

If, like me, you find it difficult to lift a full super of honey, her suggestion is to use dummy boards in the supers and only have the number of frames that you can comfortably lift. Remember, a full super can weigh over 20kg (40 lb).

She recommends that we all keep a stock list / inventory of our beekeeping equipment, particularly items such as frames and foundation. This can be useful when suppliers hold winter sales, as you will know exactly what you have and what needs replacement. For me personally, the most pertinent suggestion was to note the location of the items on that list. I'm always wondering where I left some of the items, particularly those used annually to prepare things for the Gower Show.

Prof. Ratnieks talk on 'Improving Bee Forage' covered a wide span of interest. Among the facts he mentioned was that 1.6 million tons of honey per year is produced worldwide. That's a lot of honey and I, for one, wonder where it all goes.

Foraging distance in summer, he said, was usually within a 5 km radius, giving an area of 20 square km. In winter this reduces to 2 km but rises in spring to 3 km. Another fact given was that 90% of pollen gathered in the autumn is from ivy.

In talking of bees' forage, Prof. Ratnieks said that trees are by far the major source. Regarding flowers, their preference was for the native wild flowers such as clover, dandelions, asters, etc., not the exotic flowers often seen in our gardens. If you intend planting flowers for bees, make sure they fall into these categories.

Prof. Tom Seeley then talked about his observations of 'Bees in the Arnot Forest'. Back in 1978, in pre-varroa days, he had studied feral colonies of honeybees in a forest environment. In 2002, he returned to Arnot Forest to study the effect of varroa on feral colonies and see what, if any, changes had occurred since his 1978 study.

A check in the forest showed that there were 8 colonies in holes in the trees and, using bait hives, he caught another 11 colonies as they swarmed. All of these 11 colonies had varroa. Tom estimated that the colonies had a life of about 5 years and would then die out, to be replaced later by a swarm from another colony.

During the lecture, I was sitting next to an old friend, Peter Tomkins, who had been the beekeeper at Rothamsted Agricultural Research Station for many years. From meticulous record keeping, he was able to tell me that the average life of a colony, in his experience, was 4.8 years.

Prof. Seeley talked about weak colonies riddled with varroa, collapsing and decamping to other colonies, taking the mites with them. His somewhat controversial advice, aimed at keeping other colonies healthy, was to cull collapsing colonies (those about to crash in his own words) with warm soapy water at night.

In his talk "Honey Bee Thoughts", **Prof. Pickard** pointed out the remarkable fact that honeybees have a spatial understanding, particularly when building comb in total darkness, parallel and started at exactly the right distance from each other. Little is known about this but he wondered if the Earth's magnetism might have some effects.

When bees were first sent into space on an Apollo mission, he answered a phone call in Cardiff, from an American radio station asking if he was the "Bee Man" and enquired his thoughts on how well the bees would fly in space. Prof. Pickard told them he doubted that they would fly at all. Up on the spacecraft, the bees were kept in a transparent tube and simply clung to the sides. To get them active, the tube was shaken by one of the astronauts and the bees refused to fly. They just floated with their wings firmly by their sides like mummies, as Prof. Pickard had foretold.

He was able to predict this behaviour because of his observations: that bees have sensory 'hairs', which allow them to tell the direction of the gravitational pull, sensed by bees each time before they take off. So with zero gravity in space they simply didn't fly.

The final lecture of the weekend was given by **Prof. Seeley**, entitled “The Bee Hive as an Information Centre”. You will remember from the last newsletter that his team marked the bees in the experiment so that each could be individually recognised. His specially designed, glass sided observation hive had only one layer of frames but was the capacity of a Langstroth brood chamber, arranged in a large square shape which could easily be videoed. At the entrance, bees were directed to one side of the frames where their activities were video recorded and later analysed / studied in the laboratory.

The trials were set up in a location where there are no other bees and no natural forage, so the colony had to forage on the syrup provided. Sometimes it took the bees a day or so to find the syrup. At the syrup sources, visiting bees were recorded. In one experiment, two syrups of different strength were used. The findings were that with a large or rich source, many foragers were allocated whilst at a small or poor source, fewer were allocated. Another finding was that only two thirds of the foragers did a waggle dance.

As we know, the dance is coded with direction, distance etc. but also profitability / desirability, indicated by the time the dancer continues her dance. The longer she dances, the more followers she recruits. If several bees are dancing at the same time for different syrup locations, unemployed foragers choose at random which dance to follow. If a patch of forage becomes unprofitable, the dance drops off.

Conclusion. The Anniversary Summer School was a wonderful event. It had good speakers, interesting subjects and great workshops with a lot of new and interesting thoughts for beekeepers. My only winge is that some lectures and workshops ran concurrently, so we had to choose which to attend, but they were all of a very high standard, so sadly, some interesting subjects and workshops were missed.

In closing, I would recommend that you take the chance to attend any of these conferences. As well as the lectures and workshops, they give an opportunity to meet and chat with beekeepers from all over the country and from further afield. At coffee breaks, meal times and over a drink in the evenings, you meet like-minded people and, not surprisingly, get a new slant on your own beekeeping methods and problems. There are many such events run in UK each year, do think seriously about going along to some of them.

D.S.



Egyptian Bee Keeping

Wild honey collecting was certainly carried out long before the Neolithic period and is depicted in cave paintings in various parts of the world. The origins of beekeeping remain a mystery but somewhere along the way people started managing bee colonies and the first illustrations of these are from tomb paintings in ancient Egypt.

Few illustrations of beekeeping are known, there are three in Thebes and one is in Abu Gurob. The earliest of these paintings date from 2,400 BC and another, showing virtually the same pattern of beekeeping, is dated about 1,000 years later.

Of these, the best-known illustration (above) is from the tomb of Rekhmire, situated on the West Bank at Luxor, Upper Egypt, dating from about 1450 BC. Rekhmire was Prime Minister during the reign of the pharaoh Tuthmosis III, and his tomb was covered with many, many paintings showing different aspects of his life and work.

This particular painting depicts the whole honey process, starting with the hives, through extracting the honey and following the honey into lidded storage containers. It even shows a bee and a smoker! It is suggested that the bee is shown to give meaning to the whole scene.

Let's start with the hives. These are cylinders, made of baked mud, stacked one on the other, and depicted in different tomb paintings. These tomb paintings show different numbers in the stack but indicate how the hives were kept. One end is shown domed but must have an entrance for bees (the entrance is not shown). The other end would have had a plug, which could be opened for access by the beekeeper to remove honeycomb. In these hives, comb is built in discs across the hive, not down its length.

Brood comb is at the bees' entrance end with honey storage behind it. This allows careful removal of honeycomb without disturbing the brood or the flying bees. Incidentally, this same system of beekeeping was used in Egypt and many parts of the world until recently and is most probably still used there today.

In the wall-painting, one beekeeper is seen removing a comb while another holds a smoker above him. The comb removed from the hive can be seen stacked in dishes. It is then transferred to storage jars which are sealed. Some of the honey is put into lidded containers, seen at the left hand side of the picture, which are then sealed with mud. You will notice that there are three sizes of storage jar and flatter, lidded containers. In one commentary, it is suggested that these were for different grades of honey, but that is speculation.

It is interesting that the tomb painting does not show any protective clothing being worn. North African bees are *Apis mellifera lamarckii*, a small bee with black and yellow bands which, according to Eva Crane, 'stings readily'. It is interesting to note that 20th century photographs show Egyptians wearing veils whilst working with clay pipe hives.

If you are interested in further study, I would recommend a couple of searches on the internet. Look up "Rekhmire Tomb Art" and "Egyptian Beekeeping". The drawing on pages 6 & 7 is taken from information I picked up some years ago at the Egyptian Museum at Swansea University. Reference has also been made to Eva Crane's books, '*Bees and Beekeeping*', 1990 and '*The World History of Beekeeping and Honey Hunting*', 1999.

Forthcoming Events

November

Tuesday 13th The Society Honey Show at The New Lodge Social Club, Gorseinon. 7.00 p.m. This year, categories have been added for wax and candles. Information & entry details have been sent out by email.

December

Saturday 1st Christmas Dinner at the Rake & Riddle. From 6.30 p.m. onwards. The cost per person will be £26.00. Gerti will have booking forms available at the Society Honey Show. See below for menu.

January 2019

Tuesday 8th Talk "Preparing for Spring" by Ade Bowen at The New Lodge Social Club, Gorseinon, 7.00 p.m.

February

Tuesday 12th The Society's A.G.M. at the New Lodge Social Club, Gorseinon, 7.00 p.m.

March

Tuesday 12th Talk "The Bumbles of Honeywood". Sue Poole talking about her books. The New Lodge Social Club, Gorseinon, 7.00 p.m.

April

Tuesday 9th Talk "The Evolution of a Beekeeper", by Peter Tomkins.

Society Christmas Dinner Menu Choices

The Rake & Riddle's Christmas menu:

Starters:

Charcuterie Platter;
Mushroom soufflés with crème fraiche;
Smoked salmon with prawns, horseradish cream and a lime vinaigrette;
Parsnip and Parmesan soup. (v)

Main Course:

Turkey Breast stuffed with Pork, Sage and Onion Sausage meat and cranberries wrapped in Bacon with traditional Turkey gravy;
Rump of Welsh Beef and Yorkshire Pudding with a wild mushroom, smoked bacon and Madeira jus;
Honey roast salmon with cranberry, orange and ginger sauce;
Sweet Potato, chestnut and Stilton Wellington. (v)

All served with Roast Potatoes, Honey Roast Parsnips and a selection of seasonal vegetables.

Desserts:

Lemon and Raspberry Posset Cheesecake with home made shortbread;
Traditional Christmas Pudding, with brandy sauce;
Homemade chocolate brownie and strawberry skewer with Belgian chocolate sauce;
Crème brulee with almond snap biscuits.

Gerti will have booking forms available at the Society Honey Show on Tuesday 13th Nov. or it can be downloaded from the [Rake & Riddle website](#)

French Ban on Neonicotinoids.

Reported in the Daily Telegraph on 1st September, France has taken the step of imposing a ban on five neonicotinoids, which researchers believe are killing a wide range of insects. This move has been welcomed by environmentalists and beekeepers but farmers warn that the ban could leave their crops vulnerable to harmful insects.

The pesticides include: *clothianidin*, *imidacloprid*, *thiamethoxam*, *thiacloprid* and *acetamiprid*. The first three of these will be banned in the E.U. from 19th December this year.

The French ban includes use in greenhouses as well as outdoor use. Britain is following the E.U. ruling on the ban of the first three.

Asian Hornets.

There are reports (Daily Mail 4th Oct.) that nests of our native European hornets are being destroyed because they are being mistaken for Asian hornets. Steve Hussey, a spokesman for the Devon Wildlife Trust, said that every exterminated nest the trust had investigated contained only the native European hornet. He added that people destroyed the nests believing them to be Asian hornets.

Glyphosate Weed Killers.

On 25th Sept. the Daily Telegraph ran an article on research by the University of Texas, published in the journal *Proceedings of the National Academy of Science*, suggesting that weed killers containing the active ingredient glyphosate may be contributing to the decline of honeybees. These herbicides are used in weed killers such as Roundup and are widely used by gardeners, and in agriculture, to control weeds.

In the study, bees exposed to glyphosate at rates known to occur in crop fields were found to have significantly reduced levels of healthy gut bacteria, which are critical to their well-being.

A spokesman for the manufacturers stated that independent research, over 40 years, shows that glyphosate poses no unreasonable risk for humans, animals or the environment.

Contact Numbers

Chairman: David O'Carroll dsocarroll@yahoo.co.uk

Secretary: Post vacant sdbks.secretary@gmail.com

Treasurer: John Gale **07855 451 781**

“When Bees Were Bees” by Tom Davies

I have always thought that the practice of putting bees into greenhouses for pollination purposes, was done from the sixties and seventies, but in the issue of “Gleanings in Bee Culture” for June 1930, I found a mention of a development of a self-pollinating cucumber.

It was developed by the New York Agricultural Experiment Station, and it caused concern because a good many beekeepers were breeding bees for pollination purposes in greenhouses, and could harm their livelihoods.

Last year in the garden I tried a variety of self-pollinating runner bean called “Moonlight”, and I was hoping that they would attract bumblebees just like ordinary runners, but the weather turned out very poor for them, the flowers seemed not very attractive to bees.

However, this year was entirely different, and they attracted bees by the hundreds, even when I was picking beans for the house, I didn't see any pollen on them, the flowers seemed to be producing nectar in quantity, judging by the will the bees were working with.

This last season has shown that self-pollinating plants can be beneficial to bees in general, not a danger to the environment.

More next time, Tom.

Ed. After the Gower Show, Tom gave us some of his runner beans and they were delicious. Next year will find me growing “Moonlight”, it's a great variety.

The deadline for articles / items for the next issue is **15th December.**