

Autumn 2017

Furness Flyer



A Newsletter for Furness Beekeeper Members.

Letter from the Secretary

I am very sorry to begin my letter with sadness having to report the very sudden passing of Mike Luke, age 52.

Mike had a fall climbing the stairs at his home because of a heart attack from which he did not recover.

Mike was our Chairman and helped considerably at our events particularly the Dickensian Festival

He did part company from us over what was a minor squabble and I always thought and hoped that he would return sometime.

He will be very much missed.

Our sincere condolences to his wife Alison and his family.

The season is almost over and bees should be tucked up in their hives fed and treated for varroa.

We bulk bought syrup, varroa treatment and candy again.

Members bees guzzled over one and a half tons of syrup bought from the club. Plus all the varroa treatment we bought was sold. Much more than last year.

We do have candy in stock at a very reasonable price if you need it in the winter.

This year the apiary at Gleaston produced a creditable seventy five pounds of honey. Considering that it is a training apiary I think it is a very good result. The honey will be sold and the proceeds will help with the cost of running the apiary

This season saw the apiary at Haverthwaite start to be used on Saturdays .

The people that came thought it was very good.

Having the two apiaries certainly helped take the load off Gleaston and we will continue with the two next season.

No honey from Haverthwaite this season but with careful beekeeping we did fill our three empty hives, which should be good for next year

Our Millom members took our Bee Display to Millom and Broughton Show.

Many thanks for a great display which created lots of interest and perhaps some new members.

We shall have a meeting in December at the apiary to treat the bees with oxalic acid.

If you would like some and to see how to use it, come along.

You will be notified when a date has been fixed.

The AGM is fast approaching and I hope we get a good attendance this year. You should have received a letter giving you the date and time.

If not, please note Friday 13th October, Stating 7.30 at Greenodd Village Hall Followed by our Pie and Pea Supper I hope to see you there.

So I wish you a mild winter and hope to see some of you during the coming months

David Walmsley September 2017.

Beginners Page: AUTUMN AND WINTER MANAGEMENT

Autumn management is in two parts, one for colonies taken to the heather, and one for those kept at home. Even taking bees to the heather is a two-part operation - a hope that there will be some heather honey and that the colonies will return well provided for winter.

The heather honey nectar flow may come at any time between the beginning of August and the first week in September. It may last two or three weeks, it may last two or three days, and sometimes it fails entirely, as for example, 1946 when many colonies died from starvation on the moors. For practical purposes the nectar flow may be regarded as over by September 7th, and nothing is gained by leaving them on the moors after that date.

Even in a good year, two conditions are likely to apply on returning from the heather - much unsealed honey in the brood chamber and a shortage of young bees. These conditions can be alleviated to some extent by feeding sugar, say 8 - 10 lbs of sugar in 4 - 5 pints of water given in a rapid feeder (such as a Miller type feeder). A large quantity of syrup available causes excitement, which raises the temperature and induces wax secretion enabling the bees to seal their stores. It may also spark off a small spate of brood rearing which is all to the good in providing some young bees.

If colonies are not taken to the heather, the summer nectar flow is usually over by the end of July and nothing is

gained by leaving the supers on any longer. In any case, if the bees have access to heather honey, the supers must be removed before the bees start to work it, or difficulties will be encountered when trying to extract the honey. With good weather in August, the bees will gather a good supply of winter stores from a variety of sources, and may only require a little feeding of sugar syrup. In a cool rainy August, brood raising is likely to be much reduced, or may even cease, bringing about a shortage of the young bees so necessary for good wintering. The feeding of thin sugar syrup (1 lb of sugar to 1 pint of water) will encourage the bees to continue brood raising. Two or three pints of syrup, once or twice a week during August and the first week in September should help, to keep things going. About the second week in September, the stores position should be assessed, and any deficiency made good by feeding thick sugar syrup (2 lbs sugar to 1 pint water). The amount of stores can be assessed by taking a standard brood comb to hold 5 lbs of stores. The quantity to be provided should be sufficient to last until the spring nectar flow; 40 lbs should be enough.

Consumption of stores during the winter months is small and 15 - 16 lbs might be sufficient to last from October to March, after then the consumption rises rapidly as brood raising begins in earnest. Bees cannot duster on stores, they need some empty comb

which is available when all the brood has emerged. This will be in the lower part of the hive, and with a well provisioned hive and a strong colony, the bees are likely to be in contact with the floor with a consequent risk of chilling and interference with ventilation, and is one of the causes of dysentery. It can be avoided by putting an empty super

beneath the brood chamber or one having empty combs can be used. Entrances can be left fully open, but mice must be excluded. A strip of perforated zinc or galvanised metal with a bee way of 5/16th in. may be pinned along the front of the hive. Alternatively, a strip of queen excluder can be used.

William Dodd

FBKA AGM 2017

This year's AGM will be held on Friday 13th October at
Greenodd Village Hall

The meeting will start at 7.30pm and will be followed by a pie and pea supper.

Would you like to see your story in our newsletter?

Have you seen a story that would interest our members?

Perhaps you're an artist or photographer and would like to share your bee/honey related work?

Have you read a beekeeping book that you would like to review for us?

If YES, than contact us at Mail:
info@furnessbeekeepers.co.uk



The Divisive Diet of Honeybees: Why Some Will Never Be Royals

When a female honeybee hatches, her future holds one of two possible paths within the hive's caste system. She will become either a worker bee or a queen bee. And her fate is determined in part by the food she eats as a larva.

Larvae that are fed mostly a bitter type of pollen combined with honey, a mixture called "bee bread," grow up to be worker bees. They are generally sterile and destined for a life of house-keeping tasks. Future queens, on the other hand, grow up on royal jelly — a goopy, yellowish substance rich in proteins, sugars and fatty acids that is secreted from the glands of worker bees. The queen's sole task in life is to make more bees. She also lives a longer life and has a stinger she can use more than once without dying.

So what is it about the two different diets that determines the caste of bees? It's a question that bee researchers have puzzled over for a long time. A study published Thursday in the journal *PLOS Genetics* suggests that the plant-heavy diet of a future worker bee helps prevent it from becoming a queen.

One difference between bee bread and royal jelly is that the former has a higher concentration of tiny pieces of plant genetic material called microRNAs. These molecules are known to influence the expression of genes. "Plant microRNAs play important roles for the plant development and

physiology," says Chen-Yu Zhang, a biochemist at Nanjing University in China and an author on the new study. "One set of the microRNA we tested is also important to the plant to make their flower bigger, more colorful."

And their past research also showed that differences in the plant RNA content of foods changed gene expression in honeybees and fruit flies. So they wondered: Could plant microRNAs influence development in honeybee larvae?

To answer the question, they created a synthetic bee bread in the lab, adding microRNAs to it that they extracted from pollen in flowering plants. Larvae that ate this synthetic bee bread weighed less, were shorter and had smaller ovaries compared with those that didn't eat it. In other words, they were more like worker bees.

And the larvae that were not fed bee bread (with the added microRNAs) grew up to be more queenlike. They had bigger bodies and larger ovaries.

"Plant microRNAs really mediate the honeybee caste formation," says Zhang. The molecules seem to slow the growth of the bee larvae, keeping their ovaries so small that they are sterile.

Gene Robinson, director of a genomic biology institute at the University of Illinois Urbana-Champaign, says this

Honeybee (Apis mellifera) workers tending larvae on brood comb. The larvae that will grow up to be workers have a plant-based diet of a mix of honey and pollen.



new study is exciting. It raises the possibility of a new component of honeybees' diets that might be influencing their social fate.

"As we've gone into the genomic era in the past 25 years, the interest increasingly is understanding the molecular basis for these nutritional effects," he says. But "exactly how are the substances in the bees' diets engaging with internal systems, molecular pathways, to actually flip the switch?"

The new study also looked at how these microRNAs could be affecting the bees' development. Their findings suggest that one of the microRNAs targets a specific gene called *amTOR*, which has been shown to influence the development of queen bees. They also suspect that other plant microRNAs and RNAs also influence bee development.

A big question about the new study is whether these small microRNA molecules can survive in the larvae's digestive tracts long enough to alter gene

expression. The researchers' previous work suggests they can, but some researchers have expressed doubt over their claims.

However, Zhang and his colleagues stress that RNAs are probably not the only factor determining a bee's fate. The nutritional content of royal jelly, for example, may also play a role in helping honeybee larvae become queens. And *p-coumaric acid*, another plant-based compound present in honey, also seems to change gene expression to nudge bee larvae toward developing into worker bees.

Robinson says future research on this topic should delve further into understanding how these plant microRNAs "take the long and winding road" to being eaten by bee larvae and then influencing gene expression in them. "That's an amazing journey," he says. "And so we need to understand that whole process."

Courtney Columbus www.npr.com

Young beekeepers - the new generation bringing back British bees



shire-based honey company that buys up the majority of the UK's honey output, has created an apprenticeship scheme, Bee A Beekeeper, to teach 20 would-be bee farmers the tricks of the trade.

It follows the success of Rowse's pilot scheme, launched two years ago,

A third of the food on your plate relies on bee pollination, from vegetables such as carrots and cucumbers, to the grains used to feed the animals we eat.

But the changing weather in the UK, alongside increased land use, imported pests and the chemicals used in farming, have decimated the population of British honey bees.

A century ago, there were 1m hives in the UK. Today, there are fewer than 300,000, and wild honey bees have almost disappeared from the UK.

It is the 638 commercial bee farmers, alongside a small cohort of amateur beekeepers, that are keeping British honey bees alive - but the industry is under threat.

The average age of a bee farmer today is 66 years old and the number of commercial beehives in the UK is declining fast.

To inject some young blood into the industry, Rowse Honey, the Oxford-

which invited 10 young people to become bee farming apprentices.

Hannah Reeves, 23, has been part of the initiative since June 2013, and has been apprenticed to the London Honey Company, based in Bermondsey.

"I've always been interested in insects," said Ms Reeves. "I would constantly pick up bumblebees in the garden when I was young."

Ms Reeves' first brush with beekeeping happened when she was 16, when she discovered a swarm outside her local train station in Hertfordshire.

"A swarm happens in summer when half a colony will leave the hive with the queen bee to find a new home," she explained. "It was hanging on a branch while scouts looked for a new home, so I sawed off the branch and put it in the boot of my dad's car."

Ms Reeves and her father, who was learning beekeeping himself, had sourced a hive for the homeless swarm, and the bees thrived.

"There are no wild bees left; they depend on people to help them, and feed them and keep on top of disease," she said.

During the course of her three-year apprenticeship, Ms Reeves has learned the basic skills required to look after hives, from plant identification to rearing queen bees, and the business knowhow needed to turn beekeeping into a honey-making venture.

"You don't need any experience at all, as long as you're not allergic to bees and you don't mind physical work," she said.

According to Ian Ainsworth, managing director for Rowse Honey, apprentices like Ms Reeves are crucial for the survival of the UK agricultural economy.

"Bees not only produce honey, they are very important for the pollination of crops, especially fruits," he said. "We are a net importer of honey in the UK; we make just 6,000 tonnes and import 30,000."

Experts estimate that the country needs to increase its bee farmer count by a minimum of 33pc - to a total of 848 farmers - over the next decade or face lower availability of produce and potentially higher food prices.

With 26, Scotland has the highest bee farmer count per square mile in the UK.



On average, just 10 commercial bee farmers operate per county. Yorkshire is England's bee-farming capital with 26 bee farmers, Hampshire and Essex have 15 each, while Cornwall has 14.

Rowse is spending a "six-figure" sum on the new scheme, covering training costs while the honey company pays each apprentice a wage.

"We hope that each apprentice will eventually manage 100 hives, each producing 25 to 30 kilos of honey," said Mr Ainsworth. "That's 250 tonnes of honey, which is a small amount but it's a start."

Ms Reeves hopes to set up her own honey business supplying Rowse with British honey, once she has finished her training.

"It's a really tough time to be a bee," she said. "Defra and the Government recently caved and lifted a ban on neonicotinoids around the country, which will have a detrimental effect on bees and lots of other insects. Bee

Continued on p10

Rare bees spotted in West Lothian

Endangered dark native honey bees have been found in West Lothian.

West Lothian Council's Pest Control team found the nest of the rare honey bees, which are the native bee of Scotland, at a callout in Winchburgh recently.

The resident reported two wasp nests, and on inspection, one of the nests was actually a honey bee nest. A specialist beekeeper was contacted to remove the swarm, who identified the bees as very rare dark native honey bees, which are normally only found in remote parts of the UK.

Dark native honey bees were nearly wiped out by disease at the end of the 19th century, with the majority of bees now in the UK originally imported from Europe. The dark bees are larger, darker and have thicker, longer hair than the more common European



honey bees, and are better suited to survive in the UK climate.

West Lothian Council's Pest Control supervisor, Craig Seath, said: "It's very unusual to find dark native honey bees in West Lothian or across central Scotland. They are an endangered species so every effort must be made to protect them.

"The destruction of their nest would have also resulted in a large fine for anyone involved.

From www.dailyrecord.co.uk

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farmers will soon be the only reason we have any honey bees left."

"Bee farmers play a key part in the rural economy and are essential workers in the food chain," The Bee Farmer Association's Margaret Ginman said of the scheme. "Managed bees are the only sure way to ensure targeted pollination of crops. Much of what we eat

depends on pollination and this won't be possible if we don't nurture our precious bee count and inspire young people into the industry."

Those interested in a career in bee farming can apply for the Rowse Bee a Beefarmer apprenticeship scheme at rowsehoney.co.uk/beeabeefarmer

Rebecca Burn-Callander
www.telegraph.co.uk

The Internet of Bees is Here

A new project is aiming to bring bees online by putting them in tiny “backpacks” so that scientists can track the threatened insect’s behaviour and help its survival.

Bees in Manchester initially will be connected to the internet using technology from Cisco to help researchers track their migration, pollination and movement, and eventually, across the UK.

Sensors in hives located at a new 70,000 sq ft tech accelerator hub in the northern city called Mi-Idea, will measure the bee environment such as temperature, while the bees themselves will be tagged with RFID chips that look like tiny backpacks.

All the information will be collected and made available to track online giving insight on their habitats, with the bees even providing “status updates”

(albeit automated) on their whereabouts.

Cisco is working on the project with the Manchester Science Partnership (MSP) and the hub is already home to six startups: Hark, an IoT data company, video platform Wattl, location data analytics startup PlaceDashboard, Steamaco, an energy technology company, IOT platform KMS and software firm Malinko.

“Innovation is fundamental to the future of any digital economy, but it cannot prosper in isolation. Mi-IDEA is a hive of co-innovation, fostering collaboration between industry, government and academia; we’re excited for what it will bring to Manchester and look forward to seeing the startups at the centre flourish as we expand our relationship with MSP in this new venture,” said chief executive of Cisco in the UK and Ireland Scot Gardner.

Lynsey Barber www.cityam.com



The Syrian refugee on a mission to save Britain's bees

When Dr Ryad Alsous walks past his bee hives close to the Standedge Tunnel, he sees more than just a plentiful supply of honey, much more. To him, those 10 wooden hives represent hope for the future and proof that second chances sometimes come in the most unlikely of places.



Back in his home country of Syria, Dr Alsous was a respected academic at the University of Damascus where students knew him as the professor of bees. He had spent years researching the chemical properties of honey and was about to embark on another ground breaking project when civil war broke out in 2011. "Everything was destroyed," he said. "I had 200 hives but they were just one of the many casualties of the violence. The militia became increasingly threatening. It was either kill or be killed. I knew I had to leave while my hands were still clean."

Dr Alsous' daughter Razan had already fled the chaos of home. She had arrived in Huddersfield with her husband and three children with nothing but the contents of a small suitcase in 2012 and it was she who encouraged her parents to follow. "She told us it was a friendly place and the people had been good to her. We couldn't stay in Syria, so my wife and I came here."

By the time the couple landed in England, Razan was just setting up the Yorkshire Dama Cheese company, which has since won a host of awards. It wasn't long before Dr Alsous was showing similar resilience and as his thoughts returned to his bees he put a call out on Facebook.

"I tried to see if any beekeepers here had any work going. Some needed labour, but they thought I was over-qualified. I was thinking I might have to try another route when a lady from Manchester got in touch and offered me one of her hives. Next I built another two out of recycled wood and split the swarm. Bees are good for the soul and I knew that other people could benefit too."

Approaching the Canal and River Trust, which agreed to give him a plot of land close to the Standedge Tunnel visitor centre, Dr Alsous yesterday launched the Buzz Project aimed at helping his fellow refugees and the

long term unemployed find a sense of purpose through bee-keeping.

The 64 year old said: "I know how hard it can be when you are displaced. You carry with you an emotional tensions and the experiences and memories of what went before can make you feel isolated.

"I also know that many in this situation have had high level careers and so have an enormous amount to offer and contribute. I hope that the Buzz Project can be that first step. Looking after bees is real skill, but it's a responsibility which I hope will get the volunteers back into the community."

The project, which is being managed

by Sanctuary Kirklees, should also result in a decent supply of honey and an unrivalled resource of royal jelly. "People are amazed when I tell them that 90 per cent of the honey which is sold in supermarkets comes from the US, China or Spain. I think we can do better than that."

While it is early days for the Buzz Project, Dr Alsous also hopes to continue his academic research at Huddersfield University. He adds: "Helping the bees of Britain will be my way of saying thank you to a country which has given my family so much."

Sarah Freeman www.yorkshirepost.co.uk



Pregnant Woman Poses for Maternity Shoot with 20000 Bees on her Baby Bump



As far as maternity photo-shoots go, Beyonce reigns supreme with her impeccably art directed, goddess-like images - but it looks like there might

be a new Queen Bey in town.

Emily Mueller, 33, a beekeeper from Ohio, U.S., had a unique photoshoot to celebrate her fourth child that involved 20,000 live honeybees swarming around her baby bump.

Mueller, who runs Mueller Honey Bee Removal with her husband, Ryan, 37, says that insects have been a huge part of her life and that she has always felt comfortable with bees.

So, when the opportunity arose, she decided to incorporate them into her maternity photoshoot.

Getting the help of photographer Kendrah Damis, Mueller put a loose hive to creative use and strategically planned to have all the bees safely and calmly settle on her bump.

To do so, the mum-to-be took the queen bee out of the hive and held her

in a cage in her hand. Soon enough, the bees came flying out too and settled right on Mueller's body to capture the perfect photograph.

Sharing the images on Facebook, Damis wrote, "Ever have a once in a lifetime experience?? Well that is what I got when I was hired to do maternity photos for Emily Mueller."

The post has since been shared almost 10,000 times and received more than 5,000 likes.

Understandably, the shoot has been met with mixed reactions and while some were just plain confused by the concept, others were concerned for the unborn baby's safety.

"What the F, my skin is crawling," one person wrote.

Another added, "That many bee stings could make her go in to anaphylactic shock and cold harm her and especially the baby. Why even the take the risk?"

Others jumped to Mueller's defence though, declaring the idea behind the shoot as 'awesome' while others reassured that it was completely safe.

"I am a beekeeper. One of the questions I had for my OB w last pregnancy was if there was any contraindication to caring for them while pregnant. She looked perplexed, but said no," someone wrote.



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