February/March 2016

BUZZWORD

Ayr & District Beekeepers Monthly Newsletter

IN THIS ISSUE:-

President's Message

Spring is upon us and we now have to get down to the serious business. Our equipment is well prepared for the challenges ahead, our strategy for the season has been fine tuned and we are all ready to go.

The beginners course is about to get under way and we are looking for a healthy turn out. I always find it very useful and informative to go over the basics again at this time in the season.

We have a busy program ahead and I look forward meeting up with you all again.

Very best wishes.
Alan
Club President

Elephants Do Not Like Bees

Elephants do not like bees. We all know that a swarm of angry bees will find the weak spot in your suit and find their way to soft skin. So it is with the tough hide of an elephant. Bees always find the weak spot and in their case it's the trunk and ears.

Dr Lucy King noted that whilst foraging elephants avoided trees with bee colonies in them. This fact was applied to protect local community's crops from migrating elephants by means of a bee hive fence. Hives are suspended off the ground at 10 metre intervals and

UPCOMING EVENTS:-

Wednesday 30th March
Lifecycle of the Honeybee, Bumblebee and wasp – Jane Sik
Kyle Academy, Ayr
7:30

Wednesday 6th April
Beekeeping Year – Joyce Duncan
Carrick Centre, Maybole 7:30

Wednesday 13th April
Equipment – Julian Stanley
Carrick Centre, Maybole 7:30

Saturday 16th April
First Visit to Apiary – Lindsay Baillie
Carrick Centre, Maybole 7:30

joined with an elaborate series of wires. If an elephant disturbs the fence bee emanate from multiple hives and protect them, seeing off the intruders. Even at night the elephants can sense the bees and give the fence a wide berth, forgoing the crops in the process.

The fences have over an 80% success rate and have been deployed in Sri Lanka, Kenya, Uganda, Tanzania, Mozambique and Botswana.

For further information see http://elephantsandbees.com/

Solar farms to create natural habitats for threatened British species

Threatened wildlife including turtle doves and skylarks could benefit from a scheme which has been launched to create natural habitats at solar farm sites.

The project by wildlife charity RSPB and clean tech company Anesco aims to boost wildlife at the firm's solar farms across England and Wales.

Wild flower meadow areas and seed-rich planting in the "unused" margins of the farms and where tracks go between the panels will help boost insects such as bees and butterflies and provide food and nesting areas for birds, the RSPB said.

The scheme will reinstate habitats which have been lost in the face of agricultural intensification, hitting farmland bird species.

It is hoped that struggling species such as tree sparrows, which have seen numbers fall by 94% in the last 40 years, turtle doves which have seen an 89% reduction in numbers, lapwing (58% fall) and skylarks (51% fall) will be helped by the project.

The project will see the RSPB advising Anesco on providing for "priority" species - those in most need of help - at its existing solar farms, in places ranging from Cornwall to Suffolk, Yorkshire and the Isle of Anglesey, with the advice also helping to form plans at new sites.

Darren Moorcroft, RSPB head of species and habitats conservation, said: "It is an excellent opportunity to develop habitats for nature in need of our help, showcasing how a renewable energy business and wildlife conservation can be delivered in unison; whilst providing clean energy and sustainable development we can still continue to give nature a home."

More at - http://www.theguardian.com/environment/2016/mar/07/solar-farms-to-create-natural-habitats-for-threatened-british-species

The Month Ahead

The weather has been cold but with enough sunny days for the bees to have been out collecting early pollen. Check their food stores – look at fondant on the top of the frames; heft the hive or give a spring stimulating feed (use 1:1 sugar syrup or ambrosia) if you are planning to take bees to oilseed rape (not a lot around here!)

It is a good time to sterilise frames using acetic acid:

"Combs can be sterilised to destroy the spores of chalkbrood, wax moth, and Nosema spp. disease of adult bees by using the evaporation fumes from acetic acid. There is no evidence that this treatment is effective against AFB or EFB. Acetic acid is available from chemical suppliers and online. Begin treatment by stacking the brood and/or super boxes containing combs to be sterilised on solid surface such as a board or solid hive floor. Note that acetic acid is corrosive and will attack metal and concrete. It is also important to block off hive entrances, as acetic acid fumes are heavier than air and will travel from the top to the base of the stack, leaking out of any gaps or holes at the bottom. Place a non-metallic dish (saucer or similar container) on the top of the frames of the top box. Very carefully, put 80% acetic acid into the dish, allowing 120 ml acetic acid/box (e.g. 600 ml would therefore treat 5 boxes). Then, place an empty hive box on the top of the stack. Close off the empty box on the top of the stack with a hive cover. Seal any joints between the boxes with wide adhesive tape to stop fumes escaping. Leave the stack for about one week to ensure sufficient fumigation. When the treatment is complete, the dishes of acid must be removed with caution and boxes should be thoroughly aired (at least two days) before they can be used again. When using this system, you must wear suitable protective clothing, protect your eyes and use rubber gloves. "– from Beebase: Best Practice Guideline No. 3 - Apiary and hive hygiene (updated September 2011).

Check hives for varroa and treat if count is high - In April, multiply your daily mite drop by 100 - you are aiming to keep your mite population below 1000.

Probably, the easiest treatment if your count is high, is MAQS but, unless your colony is very strong, it is probably best to half the recommended dose to avoid queen problems.

On a reasonable day, remove mouse guards and change the floor for a clean one. Later in April a good day will allow one to do one's first inspection. The first priority is to check that the colony is

QUESTION OF THE MONTH:

Give 3 methods by which Black Queen Cell virus can be spread?

LAST MONTH WE ASKED

What do you call both a honeybee and bumble bee virgin queen?

The Answer – A Gyne

queen right and that the queen is laying well and is not a drone layer. Then, while the colony is not too busy, check for disease. Look on the Beebase site for guidance.

It is also a good time to remove some old frames from the outer edges of the brood box and replace them with new frames – alternatively go the whole hog and do a Bailey comb change – again consult Beebase.

Very busy Scottish Bees?

A research team from Jiangxi Agricultural University in Nanchang, China have found that bees work harder on the day before rain – they forage for later and longer.

Poor Scottish bees!

Source: http://onlinelibrary.wiley.com/doi/10.1111/1744-7917.12298/abstract

Decline of bees poses potential risks to major crops, says UN

Populations of bees, butterflies and other species important for agricultural pollination are declining, posing potential risks to major world crops, a UN body on biodiversity said Friday.

"Many wild bees and butterflies have been declining in abundance, occurrence and diversity at local and regional scales in Northwest Europe and North America," said an assessment by the Intergovernmental Science-Policy Platform on Biodiversity and Ecosystem Services (IPBES).

The report by the IPBES, which was established under UN auspices in 2012 to assess the state of ecosystems and biodiversity, stopped short of declaring a full-scale threat to food supplies.

But it stressed the importance of protecting pollinators to ensure stable fruit and vegetable output, amid concern over the challenge of feeding the world's growing population in coming decades.

In addition, more than three-quarters of the "leading types of global food crops" rely to some extent on animal pollination for yield and quality.

"Pollinator-dependent species encompass many fruit, vegetable, seed, nut and oil crops, which supply major proportions of micro Possible policy options include better protection of natural environments and ecosystems, limiting the scope of intensive agriculture, and finding alternatives to pesticides, the IPBES said.

Greater attention to controlling pathogens among species and better regulation of managed populations of bees and other pollinators could also help, it added.
nutrients, vitamins, and minerals in the human diet," the IPBES said.

Pesticides toxic to bees still being used in Scotland

Toxic pesticides blamed for harming bees are still being used across large swathes of farmland in Scotland, according to the latest government monitoring.

Farmers have treated potatoes, wheat, barley and oats on more than 22,000 hectares of land with the three most dangerous nicotine-based chemicals known as neonicotinoids.

The revelation has prompted wildlife groups to step up their campaign for Scottish ministers to ban the pesticides permanently to protect bees. But farmers say this could be "premature and damaging".

The European Union (EU) restricted the use of three neonicotinoids in December 2013, and is now considering whether to end or extend the restrictions. They were clothianidin, imidacloprid and thiamethoxam.

But the restrictions do not prevent the three chemicals from being used on crops that don't attract bees and other pollinators. In Scotland, this has allowed their continued use on potatoes, wheat, barley and oats.

The latest figures from the Scottish Government's Science and Advice for Scottish Agriculture show that the three pesticides were applied to crops covering 22,442 hectares of farmland in 2014. That included 11,477 hectares of winter wheat, 5,910 hectares of winter barley, 4,379 hectares of potatoes and 676 hectares of spring oats.

The National Farmers Union in Scotland stressed that sound science had to be the main driver in the decision-making process. "Calls for blanket bans in the absence of scientific evidence are both premature and damaging," said the union's deputy director, Andrew Bauer.

"The European Union, who lead on such matters, view the use of some neonicotinoid products on certain crops as safe and their continued responsible use in Scottish agriculture is both legitimate and necessary."

The Scottish Government's scientific advisor, Professor Louise Heathwaite, has advised that neonicotinoids could cause "harmful sub-lethal effects to honeybees". But she thought there was not enough evidence on whether they affected the health of honeybee colonies.

According to a government spokeswoman, Heathwaite believed that "in general land-use change and intensification, and the resulting loss of floral resources, are likely to be critical factors affecting pollinator decline."

Source - http://www.heraldscotland.com/news/environment/14259159.Pesticides_toxic_to_bees_still_being_used_in_Scotland/

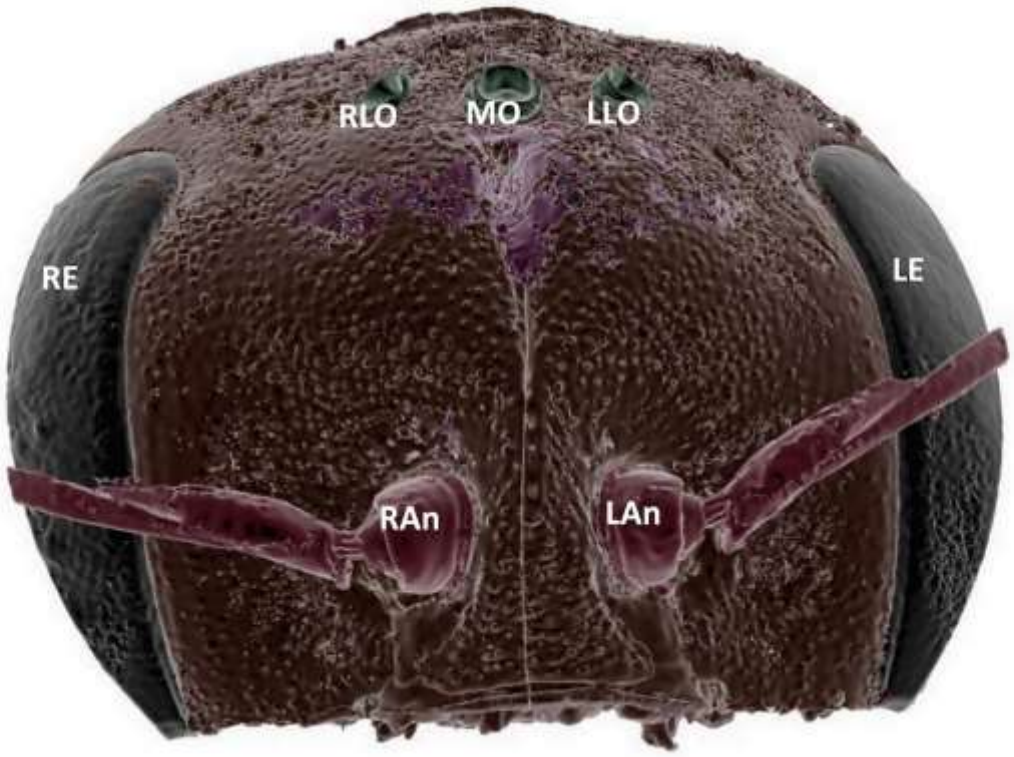
This Is What a CT Scan of a Bumblebee's Brain Looks Like

Researchers have used new micro-computed tomography (micro-CT) scanning techniques to imagea bumblebee's (*Bombus terrestris*) dinky brain in unprecedented detail.

The pictures and findings, published on Wednesday in a study in *Scientific Reports*, will allow researchers from Imperial College London to learn more about the bee's cerebral processing power and help them get to the bottom of why its brain malfunctions in certain situations.

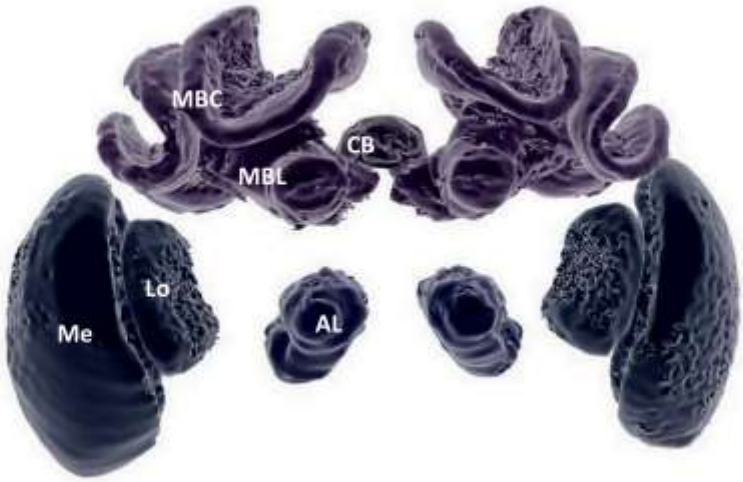
"What's novel about this research is how we're able to explore such a miniature brain," said

Richard Gill, paper co-author and a lecturer in the division of ecology and evolution at Imperial College London. “We can keep the brain in its normal stereo geometry, and we can keep going back to the images and samples as much as we like. It’s a non-destructive method as we don’t have to take the bee’s brain apart.”



The paper explains that CT scanning—which uses X-rays to provide hundreds of image slices of an object—has long been used to explore how the “volume, shape, and density of particular human brain regions.” However, there are a dearth of studies like this when it comes to the bee’s pea-sized brain.

Why? Up until now, researchers haven’t been able to deal effectively with some of the logistical issues presented by a bee brain; the teeny composite structures are pretty hard to manipulate, prepare, and observe in high-res.



Some Jokes to lighten the mood

Why did the bees do a round dance?

Because they thought the line dance was a square dance!

Picture of the Month

A honeybee (Apis mellifera), robbing nectar from a hole in the side of the flower.