CENTRAL COAST BEEKEEPERS NEWSLETTER

September 2021

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NEXT MEETING SEPTEMBER 25TH 2021

Sept 25th In-Person Club Meeting

We will be having an in-person meeting at a private residence in Seal Rock near the Brian Booth/Ona State Park on **Saturday September 25 at 3:00PM. This is the same location as our meeting this past June.** The meeting will be held in well ventilated open areas, so masks are optional. As this is a private residence, we are requesting that all attendees must be vaccinated for Covid-19. ***Detailed directions will be sent to those who RSVP via email. Please respond using the club's email address to confirm attendance.***

Topics:
1) Feeding strategies for fall – this will be a roundtable discussion with examples of feeding systems that members have had success with.
2) Honey tasting - bring a small sample of your 2021 honey for a fun tasting! (You provide the honey, we will provide small plastic spoons for tasting.)

PRESIDENT'S MESSAGE

By Stu Willason

With the exception of very little rain this summer, beekeepers along the coast have had a much better beekeeping environment than most of the hot and smoky interior regions of the state. However even here, there still seems to be that late summer nectar dearth. So, over the next couple of months you need to check the honey stores in you hives to make sure they will have enough food for the winter. You may also need to feed your bees like we did last year and what we will be doing again this year. Our September 25th meeting will be a great opportunity to get more in-person information on feeding strategies.

Like always, the September issue of ***The Beeline***, the monthly newsletter by the Oregon State Beekeepers Association (OSBA), has some great articles and insights. You can download the PDF file here september-2021-bee-line-reduced.pdf (orsba.org). One article written by Ken Ograin – ***Keeping Bees in September*** is very relevant for both new beekeepers and experienced beekeepers. Even those of us who have been keeping bees for a while sometimes get lazy and neglect the most important time of the year to ensure bee colony survival. Ken's article outlines potential fall issues and offers solutions.

Also in the September issue is a tentative schedule for the 2021 Fall Conference of the Oregon State Beekeepers Association. This year the conference will be held in Florence at the Events Center October 22-24. It will be a live, in-person event as well as an on-line event via zoom. There are a lot of interesting speakers in the line-up and the conference is in our backyard so you should plan to attend. Here is a link to the registration form: 2021-Conference-Registration-Form.pdf (orsba.org).

Each year OSBA conducts an auction at the annual fall conference to support honey bee research. Individuals from clubs like ours, as well as the general public, donate items to be auctioned off at the conference. So far this year Max and Darren from our club donated a complete Warre hive (built by Darren) to be auctioned at the October event. So, if you have anything you'd like to donate, you can contact me 435-729-0575 or correspond directly with Charlie Vanden Heuvel of OSBA – his letter describing donations is reprinted below.

We look forward to seeing everyone on September 25th!

Donations for auction at 2021 OSBA Fall Meeting in Florence

Email from Charlie Vanden Heuvel:

Reaching out to each of you in hopes you will communicate with your members to donate items for the OSBA 2021 Conference Auction.

The auction proceeds are 100% dedicated to bee research!

It is easy to think about some bee dollies, a jar of honey, or some such. These are great!

But what about a couple night stay at your vacation house?

Maybe you know someone in the rafting business willing to provide a gift certificate

Are you a fisherman? How about providing a day on the water?

Guided tour of your apiary?

This does not have to come from members or even beekeepers. Reach out to your friends who may be willing or know someone willing to “save the bees”.

It was not long ago Oregon State University did not have an entomologist dedicated to bee research. I call it the void years. No bee research. No bee education. We are all struggling with Varroa. But there will be other stressors.

Send items information to Charlie Vanden Heuvel, Charlie.bgbees@gmail.com

Let’s make this great.

Thanks

Charlie Vanden Heuvel

charlie.bgbees@gmail.com

What Blooms in Late Summer?

As Stu mentioned above, this time of year presents a challenge due to a dearth of nectar. My mint plants (and oregano, a member of the mint family) still have plenty of flowers and lots of pollinator activity. Here's a few suggestions to keep the bees happy for a few more weeks.

Heather, in particular, Calluna Vulgaris (calluna: from the Latin, to cleanse, it was used to make brroms: vularis: common)

Goldenrod

Nepeta (catnip, catmint)

Heather and goldenrod are both good for forage too, in case you have or live near people who have cattle.

Rusty from the Honey Bee Suite has the following suggestions.

The mint family of plants (Lamiaceae) is a large and diverse group that is a favorite among beekeepers. Many members of the family are extremely attractive to pollinators, and if you choose your plants carefully, you can feed your bees and harvest a crop of culinary herbs as well. Plants in the mint family include oregano, marjoram, basil, sage, rosemary, peppermint, spearmint, catnip, thyme, lavender, and horehound.

Members of this family are distinguished by square stems and leaves in opposite pairs. The flowers are often small in whorled, spike-like clusters, but some species, like Monarda, have large flowers that attract hummingbirds. Many are aromatic and a number of species have colorful or variegated foliage, such as Solenostemon (coleus) and some Salvia.

In all, there are roughly 7000 species in the family divided into 236 genera. In the chart below, I've selected 15 genera that are readily available, easy to grow, attractive to pollinators, and widely recognized. The growth habits and flowering times are approximations and quite variable. The individual species and your local growing conditions will influence the growth habit, the flowering time, the amount of nectar produced, and whether the plants will overwinter.

Here in western Washington, I use oregano as “bait” for photographing a large variety of bees. For sheer number of bees, agastache has been the clear winner.

Genus	Example	Growth Habit	Flowering
Agastache	Korean mint	erect & bushy	mid-summer to autumn
Ajuga	bugleweed	clump-forming to spreading	spring to early summer
Lavandula	lavender	shrub-like	summer
Marrubium	horehound	spreading	summer
Melissa	lemon balm	upright to bushy	summer
Mentha	peppermint	low spreading to erect	summer
Monarda	bee balm	clump-forming & tall	mid-summer to autumn
Nepeta	catmint	erect & branched	summer to autumn
Ocimum	basil	erect & bushy	late summer
Origanum	oregano	spreading to upright	summer
Perovskia	Russian sage	upright to sub-shrub	late summer to early autumn
Rosemarinus	rosemary	shrub	mid-spring to early summer
Salvia	sage	various (900 species)	late summer
Satureja	savory	creeping to upright	summer
Thymus	thyme	mounding to spreading	summer

Rusty
HoneyBeeSuite

Bee flight suffers under temperature extremes

Rising temperatures could help some northern-latitude bees fly better, but more frequent extreme weather events could push them past their limits.

Bees' flight performance affects their ability to pollinate plants -- a crucial service for many of our crops. Now, researchers from Imperial College London have measured the relationship between bumblebee flight performance and surrounding temperature.

Measuring the motivation of bumblebees to fly and their flight endurance, the team found performance rose rapidly from the lower tested limit of 12°C and peaked between 25-27°C. Beyond this, however, they found performance started to decline.

Their results indicate that whilst bumblebees found in more northern latitudes may see benefits to flight performance under future climate warming, populations in southern latitudes, where temperatures above 27°C are more readily exceeded, may be adversely affected. The results are published today in Functional Ecology.

First author Daniel Kenna, from the Department of Life Sciences (Silwood Park) at Imperial, said: "Climate change is often thought of as being negative for bumblebee species, but depending on where in the world they are, our work suggests it is possible bumblebees will see benefits to aspects of an important behaviour.

"However, more extreme weather events, such as cold snaps and the unprecedented heatwaves experienced in recent years, could consistently push temperatures beyond the comfortable flight range for certain species of bumblebees.

"These risks are particularly pertinent for 'fixed colony' pollinators like bumblebees, which cannot shift their position within a season if conditions become unfavourable, and potentially provide a further explanation as to why losses have been observed at species' southern range limits."

Like most flying insects, air temperature influences bees' body temperature, and body temperature influences flight activity. Too cold and their flight muscles can't function fast enough to support flight; too warm and they could overheat.

To measure how flight is determined by air temperature, the team temporarily attached bumblebees to 'flight mills', which allowed them to fly in circles like a carousel, capturing the distance and speed of flight. They tested bees ranging in body size at temperatures from 12-30°C and used their results to construct a thermal performance curve (TPC).

This TPC predicts that whilst bumblebees can fly around 3km at their thermal optimum, this average flight distance could be reduced to under 1km when temperatures rise to 35°C, and could plummet to just a few hundred metres at a chilly 10°C.

At temperatures of 15°C and below, the team observed that bees were demotivated to fly and frequently would not fly past 100m. Moreover, it was only the bigger sized bees that successfully flew at these low temperatures, suggesting smaller individuals dislike cold days but may benefit more from climate warming.

Lead researcher Dr Richard Gill, from the Department of Life Sciences (Silwood Park) at Imperial, said: "While we still need to understand how these findings translate to factors like foraging return to colonies and pollination provision, as well as applicability to other bumblebee species, the results can help us understand how smaller versus larger flying insects will respond to future climate change.

"It's not just pollination: how different flying insects respond to warming temperatures could also affect the spread of insect-borne diseases and agricultural pest outbreaks that threaten food systems. Applying our experimental setup and findings to other species can help us to understand future insect trends important for managing service delivery or pest control methods."

The team are looking to expand this research to understand how climate warming and extreme weather events can influence the impacts of other stressors, such as pesticide exposure. They are also looking at how the impacts of warming can affect pollination delivery across different types of landscapes.

Story Source: Materials provided by **Imperial College London**. Original written by Hayley Dunning. Note: Content may be edited for style and length.

Healthy sugar origin in stingless bee honey revealed

The mystery of what creates the rare, healthy sugar found in stingless bee honey, has been solved by researchers at The University of Queensland, in collaboration with Queensland Health Forensic and Scientific Services.

The team found that the sugar trehalulose -- which is not found in other honey or as a major component in other food -- is produced in the gut of the bees.

UQ organic chemist and research leader, Dr Natasha Hungerford said the origin of this rare sugar had been a puzzle since the discovery of high levels of sugar trehalulose in stingless bee honey.

"We did not know if the trehalulose was coming from an external source -- perhaps from native flora," Dr Hungerford said.

"It could have been something in the resin from trees that stingless bees collect and take home to their nest -- because unlike European honey bees, which store their honey in honeycomb made only from beeswax, stingless bees store their honey in small pots made from a mix of beeswax and tree resins."

Stingless bees are found throughout tropical and subtropical parts of the world.

The larger, European honey bees (Apis mellifera) produce significantly more honey, and are the world's major honey production species.

However, stingless bee honey which is highly prized as a specialty food, is noted in Indigenous cultures for its medicinal properties and attracts a high price.

"Trehalulose is more slowly digested and there is not the sudden spike in blood glucose that you get from other sugars," Dr Hungerford said.

She said the UQ team was keen to determine if the trehalulose content in stingless bee honey could be increased, potentially making stingless bee honey more valuable.

"We fed confined colonies of the Australian stingless bee Tetragonula carbonaria the most common sugars found in flower nectar -- sucrose, glucose and fructose.

"What we found is that stingless bees have a unique capacity to convert sucrose to trehalulose and produce honey rich in trehalulose in their gut."

Native plants such as Grevillea and Banksia are believed to have nectar high in sucrose, and it is believed bees feeding from these plants will naturally produce honey rich in trehalulose.

The team also found that stingless bees fed a solution containing table sugar could convert it into a 'honey' containing high levels of trehalulose.

"But the 'honey' they produce from table sugar does not meet the requirements of real stingless bee honey which is made from nectar," Dr Hungerford said.

"The honey we produced in the lab is in fact fake honey, and we were able to distinguish it from natural honey by isotopic testing.

"This trehalulose-rich syrup that was produced might be considered a potential secondary product of stingless bees, but it is not honey.

"It is also not good for the health of the hive to feed the bees only table sugar.

"Honey contains a complex range of phytochemicals from nectar, making it vitally important for brood rearing and the expansion of the colony population."

The UQ team will now work to identify different horticultural crops that have nectar high in sucrose.

"We want to investigate the nectar sugars present in crops such as macadamia, lychee and avocado, and whether stingless bee pollination of these crops could result in a high level of trehalulose in their honey," Dr Hungerford said.

Story Source:

Materials provided by **University of Queensland**. Note: Content may be edited for style and length.

You say Manuka, I say Manuka

by Eva Corlett in Wellington The Guardian

Long before the name Mānuka became synonymous with a booming honey industry, celebrity endorsements and protracted global disputes, it was known in Māori legend. After Tāne Mahuta, the god of forests, separated his parents from their locked embrace, he set out to cloak Papatūānuku (his earth mother) in trees. One of these trees, born from his union with Tawake-Toro, was the Mānuka, with its dense, spiky foliage, delicate white flowers and unique pollen.

Mānuka is considered a taonga, or treasure, of which Māori are considered the kaitiaki (guardians). The legend, and the Māori relationship to Mānuka, has become an important tool in a global battle to protect Aotearoa New Zealand's Mānuka honey brand, the most bitter part of which is between New Zealand and Australia.

Australia and New Zealand at loggerheads over manuka honey trademark

The lucrative honey is produced from bees feeding on the pollen of the Leptospermum scoparium plant, native to both Australia and New Zealand,

and is famed for its anti-bacterial properties. In New Zealand, it is called Mānuka, in Australia, it is more commonly known as Tea Tree, but the word Manuka (without a macron, which is used to indicate a long vowel) has been in common use in Tasmania for at least 100 years.

Both countries make the honey, both label it Mānuka, or variations thereof, and both have multimillion-dollar export industries relying on that brand.

Some New Zealand batches with a particularly high UMF (unique Mānuka factor) rating fetch NZ$2,000-$5,000 a jar at luxury stores like Harrods in London. Its value and the global demand has led to a spate of crimes in New Zealand, with reports of hive thefts, covert poisonings and fights between beekeepers over land use.

Australian apiarists are worried they will no longer be able to produce very lucrative Manuka honey. Photograph: Gregory Plesse/AFP/Getty Images

A fight over who can claim the name Mānuka has also now been rumbling for years between Australia and New Zealand, with the latest face-off fast approaching.

New Zealand's Mānuka Honey Appellation Society first applied to trademark the name in 2015, and the Intellectual Property Office of New Zealand

eventually accepted in 2018. But the Australian Manuka Honey Association lodged an objection. A similar sequence of events played out in the UK, after its office accepted a New Zealand trademark application and Australia objected – that hearing is due to be revisited this month.

The hearing in the New Zealand Office was due to take place on 18 August, but was scuppered when the country went into a nationwide lockdown to stamp out a coronavirus outbreak. A decision on a new date is pending.

The Mānuka Charitable Trust – a group representing industry, iwi (tribes) and government – was formed after Australia lodged its objection and will advocate on New Zealand's behalf, backed by NZ$6m of government funding.

Its chair, Pita Tipene said the goal was simple – to stop the term Mānuka Honey from being used on products made outside New Zealand.

"For Māori, this means that our reo is respected and a precious taonga [treasure] is being honoured and protected. For consumers, it means that they can trust they are getting genuine honey produced in New Zealand from our Mānuka trees. It also protects the industry, export earnings and jobs."

Tipene likened their plight to that of France battling to stop wine producers labelling their sparkling wines as champagne.

"Now anything labelled champagne must be from that region," he said. "For us it runs even deeper because Mānuka is our taonga and our reo [language]."

New Zealand was the only country in the world that had a formal, scientific definition for honey derived from Mānuka, which was regulated by the ministry for primary industries, Tipene said.

Bees on honeycomb at an apiary in the Australian state of New South Wales. Photograph: Gregory Plesse/AFP/Getty Images

"This definition requires that all honey exported from New Zealand under the name 'Mānuka honey' (which includes variations on the name) meets test requirements, ensuring it is unadulterated and true to labelling. This enables consumer confidence in this genuine and unique honey of New Zealand."

'Both countries lose'

John Rawcliffe, the chief executive of the UMF Honey Association, which verifies the authenticity and antimicrobial activity of Mānuka honey, said the trademark was about protecting what was unique to New Zealand.

Rawcliffe pointed out that Australia had 83 varieties of Leptospermum, which the industry there classifies under a broad umbrella as Manuka. But not all of these *Leptospermum* varieties are created equal.

"It's like calling all citrus species an orange," he said.

"If they turn around and say, 'I'm going to call of these different honeys Manuka because I can quickly make a dollar out of it,' it is short term, it is incorrect and it is not helping the consumer, nor is it helping Australian beekeepers.

"It is absolutely critical to turn these products into an artisan journey. If we don't do that, we commodify it and destroy it," Rawcliffe said. "Both countries lose because we both have a story of our land, of our product and our environment."

But Australia argues that New Zealand's attempt to trademark a plant's name is wrong.

The chair of the Australian Manuka Honey Association (AMHA) , Paul Callander, said the anglicised word 'Manuka' had been used in Australia for more than 100 years.

"We will never use the Te Reo Māori version of the word, however, the word Manuka as we spell it has no meaning in the Māori language. We look at that as an Australian word."

Callander said two Māori board members on the AMHA backed Australia's stance and that there was no "unified Māori approach" on protecting the name.

"This is actually not about benefiting Māori, it is about controlling the industry."

Callander said it was a false comparison to compare Mānuka to champagne. "Manuka is not a geographical name, it is a plant name, and does not have a right to place-name protection."

He said the industry was an uneven playing field, with New Zealand dominating the market. Now the New Zealand association had added insult to injury by going after individual Australian beekeepers who were attempting to trademark their own products.

“If you go after bankrupting our beekeepers, we’re going to get pretty upset.”

The AMHA has produced a 5,000-page document for its legal challenge, but Callander said the preference would be for New Zealand and Australia to work together, to share the name, collaborate in the market and set industry standards together.

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