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Letter From Your President

June started hot and humid and is not about to let up! We hope you have been enjoying your beekeeping adventures thus far this year! We are quickly heading into harvest season, where your hard work is rewarded and more fun awaits!

As I mentioned last month, MABA will be involved in four fall festival events - the Delta Fair - 9/8/22 and 9/10/22, Germantown Festival 9/10-11/22, Cooper-Young Fest 9/17/22, and the Pink Palace Crafts Fair 9/23-25/22. It is a great opportunity to educate the public and share our bee knowledge and fascination with the honey bee. Members interested in chairing and being part of the MABA Festival Committee are asked to come see me to discuss during the July meeting, or email me at memphisbeekeeper@gmail.com. We anticipate a great turnout for these events!

MABA receives many requests each month from the public to give presentations. These are sometimes garden clubs, schools, libraries, and private groups as well. Public education about the honey bee and beekeeping is a significant part of the MABA charter. To this end, we need volunteers to chair and form a Community Education Committee to properly address these requests. If you are interested in coordinating these efforts, or actually making the presentations, then please let me know.

Look forward to a MABA Field Day in the days ahead!

See y'all soon!

Eric Caron
President
Memphis Area Beekeepers Association

REMINDER: WE WILL VOTE TO AMEND ARTICLE III OF THE BY LAWS.

Catch The Buzz…

Next Meeting will be held on July11th at 7-9pm at the Agricenter in The Banquet Room of Concourse C with Stuart Hooser as the speaker. Info below.

Agricenter Address: 7777 Walnut Grove Road, Memphis, TN 38120

UPCOMING EVENTS:

Monthly Meeting Dates:

July 11, 2022
August 8, 2022
September 12, 2022
October 10, 2022
November 14, 2022
December 12,2022

Time: 7-9pm.
Location: Agricenter- Banquet Room

Apiary Field Day
July 16, 2022 at 8:00am at the MABA sign up coming soon.

Community Events:

1) Delta Fair - 9/8/22 and 9/10/22

2) Germantown Festival 9/10-11/22

3) Cooper-Young Fest 9/17/22

4) Pink Palace Crafts Fair 9/23-25/22

This is a great time to volunteer and educate our community. Let us know if you are interested in getting involved!

BEEKEEPERS IN JULYAND THE

Check the hives, looking for evidence of a queen/eggs and larvae. Pay careful attention to weak hives to make sure strong hives are not robbing—taking the resources out of the weak hive. Again, watch for robbing.
• Try to determine if the honey flow slowed or not in your area and mark that date on a calendar for future references.
• Add honey supers, do not forget the queen excluder. A good rule is to add supers is when the bees cover 7 of 10 frames. As the supers fill up, add new supers.
• It is also a good time to harvest honey, once the honey is harvested put the supers back on the hive for the bees to refill or stand them on end and allow the bees to clean them out. If they are not to be used again until next season add para-dichlorobenzene—Moth Crystals and put a solid bottom and a solid top on them after treating them. (The Beekeeper may choose to put the super back on and allow the bees to fill it for the winter).
• Some beekeepers believe this is the time to re-queen.

BEES IN JULY

• Summer is here and The Bees are hot.
• They are bringing in water and any pollen and nectar.
• They may hang out on the front of the hive as a way to cool themselves and the brood chamber.
• The HOT bees may be a bit more aggressive as the honey flow may be tapering off and the bees have less to do.
• Swarming is possible but they are searching for water. They bring it back and fan it over the hive, some bees will transfer it to other bees in the brood chamber.

July Speaker for MABA

July 11th, Stuart Hooser will present "Honeybee Pest Control"

memphisbeekeepers.com

White chocolate, blueberry and honey buns

INGREDIENTS

7g sachet dried instant yeast
1 1/2 cups (375ml) lukewarm milk
1 cup (220g) caster sugar
Finely grated zest of 2 lemons
110g unsalted butter, melted, cooled, plus 2 tsp extra to brush
2 egg yolks
4 2/3 cups (700g) plain flour
100g white chocolate, chopped
90g dried blueberries

HONEY GLAZE

100g honey
50 g unsalted butter
DIRECTIONS

METHOD

1.
Preheat the oven to 100°C. Place yeast and milk in a bowl with 1 tsp sugar and set aside for 10 minutes or until frothy.
2.
Combine lemon zest, butter, egg yolks and remaining sugar in a bowl. Place the flour and a pinch of salt in the bowl of an electric mixer fitted with the dough hook. Add the yeast mixture and butter mixture, then knead for 8 minutes on medium-low or until dough is smooth and elastic.
3.
Turn off oven. Place dough in a greased bowl, cover with a clean tea towel and place in the warm oven for 2 hours or until doubled in size.
4.
Preheat the oven to 180°C. Knock back the dough and roll out on a lightly floured surface to a 20cm x 45cm rectangle. Brush with 2 tsp melted butter and scatter evenly with chocolate and blueberries. Working from the edge closest to you, roll up dough to form a loose cylinder. Cut into 12 equal pieces and place, cut-side up, in a greased 23cm rectangular cake pan. Cover with a clean tea towel and set aside for 25 minutes or until slightly risen. Brush with melted butter, then bake for 40 minutes or until golden and cooked through.
5.
Meanwhile, for the honey glaze, place honey and butter in a saucepan over medium-low heat, stirring until melted.
6.
Remove scrolls from oven and cool slightly, then pour over the honey glaze. Serve warm
.

From the Apiary

Our weekly June hive inspections have found the MABA colony populations expanding to high numbers. The transfer of resources continued on a couple of colonies in order to achieve a queen right condition. No new honey supers were added to the colonies in June. The June drought with extreme high temperatures has slowed or stopped the nectar flow. The farm crops were planted behind schedule due to excessive Spring rains. Hopefully the flow will pick back up as soon as irrigated crops start to bloom. Thanks to the members and presenters that came to our two June field days. Our next field day will take place Saturday morning, 8:00 am 7/16/22. We will assess colony queen right conditions, space management, and honey production as related to establishing a future honey harvest day.
Good Beekeeping,
Gregg Tingle

Australian state issues bee lockdown after varroa discovered

THE WONDERFUL WORLD OF BUMBLE BEES, AND WHY THEY NEED OUR ATTENTION

When two live bumble bee colonies showed up on my lab bench this spring, I wasn't entirely sure what I was getting myself into. Having never worked with bumble bees before, aside from occasionally moving stray bees off the sidewalk when they were too cold to fly, I had ordered these colonies from BioBest to prepare myself for an upcoming bumble bee research project. Now that I've had a glimpse into their world, I am absolutely hooked.

After spending so many years working with honey bees, bumble bees seem like fuzzy aliens. When I opened their box, their nest smelled weird, kind of musty, but in a good way. They scream at you if you bump their nest even slightly, using their wing muscles to generate an alarmingly high-pitched collective whine. And their brood cells and honey pots are arranged haphazardly, with what looks like more madness than method to an untrained eye. Their wax comes off their abdomen like a grease, rather than neat little flakes like honey bees, and it shows.

Most strikingly, while they still have four wings, an interest in flowers, and that unmistakably cute bee face, they operate with a tenacity and fervor that honey bees should be jealous of. Last year, for example, I captured a few bumble bees for practicing dissections, and those bees were not happy about being in a cage. Whereas honey bees might aimlessly scurry around in confusion, I could

Australia "the only major honey-producing country free from varroa mite," the most serious pest to honey bees worldwide Varroa mite was detected at the Port of Newcastle on Friday, prompting NSW to issue an emergency order to restrict bee movements.

June 27, 2022 — The Guardian

An emergency biosecurity zone has been imposed to stop the movement of bees across New South Wales after the deadly parasite varroa mite was discovered.

The mite was found last week at hives near the Port of Newcastle in NSW, with a further detection on Saturday at hives belonging to a commercial beekeeper about 10 km away.

The acting chief executive of the Australian honey bee industry council, Danny Le Feuvre, said up to 100 hives had been destroyed near the port as part of containment measures.

“The bee keeping industry in Australia has got its eyes on Newcastle at the moment,” he said.

“We’re still very confident that we have it contained and it’s eradicable,” he said.

Le Feuvre said the statewide standstill on bee movement was adopted to give authorities time for tracing activities.

“To identify where the commercial beekeepers’ hives are, where they’ve been and what other hives they’ve been in contact with,” he said.

He said the Newcastle beekeeper also had 120 hives at Trangie in central west NSW, which were inspected before being destroyed.

“We’ve inspected all the hives at Trangie, and there have been no mites identified ... however the mites are the size of a pinhead amongst thousands of bees.”

The NSW agriculture minister, Dugald Saunders, issued the order on Sunday, saying no bees will be allowed to be moved across the state.

“Australia is the only major honey-producing country free from varroa mite, the most serious pest to honey bees worldwide,” Saunders said.

The tiny reddish-brown parasites could cause severe damage to the Australian bee industry,

hear these bumbles chomping at the cage bars for hours, desperate to get out and back to their chores, like a truly wild animal.

Bumble bees make honey bees look like sheep, but that doesn’t mean they are indestructible. While I have focused on studying how extreme temperatures affect honey bee fertility for the last four years, bumble bees experience these conditions too. Yet, we know remarkably little about how their fertility may hold up in the face of these same challenges.

A dim prognosis

We have good reason to think that their outlook, at the population level, is not good. In a paper evaluating long-term population data for 66 bumble bee species in Europe and North America, authors Peter Soroye, Tim Newbold, and Jeremy Kerr describe how the growing frequency of hotter temperatures predicts whether a given bumble bee population will persist or not.1 That is, heat events explain patterns of local bumble bee extinction.

While warming temperatures also mean that the bees’ habitable range is expanding to higher latitudes, we can’t count on climate change being a net neutral phenomenon. Some bumble bee species will persist and move into their newly available habitats (hopefully with wildflower abundance still in sync with their life cycle), and others will cease to exist, but no new species will magically evolve to fill that void in our lifetime.

As Dave Goulson, author of “Silent Earth: Averting the Insect Apocalypse,” writes, “The trouble is, this time climate change is happening very fast, and it is occurring in a world when natural habitats are already badly degraded. As a result, most butterflies and bumblebees don’t seem to be moving north.” Research by Jeremy Kerr and colleagues agrees with this view, showing that over the last century, bumble bee populations have, by and large, been compressed from the south and failed to move poleward.2

It’s getting hot in here

Sperm of many animals are sensitive to heat, and one reason why heat events are so predictive of local bumble bee extinction could be through reductions in fertility. Research conducted on fruit flies in the tropics, for example, shows that the temperature at which the flies’ fertility is impaired predicts their population distributions better than their lethal thermal limits.3

We have a reasonably good idea of what those fertility limits are for honey bees, but not bumble bees. What’s more, there are around 250 species of bumble bees worldwide (around 50 in the United States), and different species likely have different temperature sensitivities, too. As far as I can tell, only one research article has yet investigated the impact of heat on fertility of different bumble bee species, and the results were not hopeful.

That work was done by Baptiste Martinet, a researcher at the University of Brussels in Belgium, and one of my collaborators. Martinet and colleagues tested how simulated heat waves affected male fertility of three different bumble bee species4 — Bombus terrestris, B. magnus, and B. jonellus, the latter two being cold-adapted species whose populations are in decline, whereas B. terrestris is an abundant warm-adapted species. The researchers found, perhaps not surprisingly, that the fertility of the two cold-

which is worth $147m annually.

The mites spread viruses that cripple bees' ability to fly, gather food and pollinate crops.

An initial 50 km biosecurity zone was put in place at the Port of Newcastle on Friday where beekeepers must notify the state Department of Primary Industries of the location of their hives.

All hives within the 10 km zone were eradicated, while a 25 km surveillance zone is also active around the site with officials monitoring and inspecting managed and feral honey bees.

"If varroa mite settles in the state, it will have severe consequences, so we're taking every precaution and action needed to contain the parasite and protect the local honey industry and pollination," Saunders said.

"We're working with apiary industry bodies and stakeholders to ensure beekeepers are well informed and can continue to help us with this critical response," Saunders said.

Microbe protects honey bees from poor nutrition in study

BLOOMINGTON, Ind. — Indiana University researchers have identified a specific bacterial microbe that, when fed to honey bee larvae, can reduce the effects of nutritional stress on developing bees.

Their findings were recently published in the International Society for Microbial Ecology Journal.

"The effects of poor nutrition are most damaging in the developing larvae of honey bees, who mature into workers unable to meet the needs of their colony," said Irene Newton, a professor in the IU Bloomington College of Arts and Sciences' Department of Biology, who led the study. "It is therefore essential that we better understand the nutritional landscape experienced by honey bee larvae."

"We've changed the way we use our land in the U.S.," Newton said. "Now we have tons of monoculture crops like corn, which are wind pollinated and therefore no use to bees, covering acres and acres of land. Other crops that bees do pollinate are grown in monoculture as well, limiting the options for bees. "If you

adapted species suffered significantly from heat exposure, whereas B. terrestris males were more tolerant to the heat.

This year, I am aiming to add data from a fourth species — B. impatiens — which is why I walked into the lab to a buzzing benchtop last March. Normally, B. impatiens queens would be just awakening from their winter dormancy, with several weeks until their first clutch of workers would emerge to form a nascent colony. Thanks to the commercialization of bumble bees for greenhouse pollination, though, well-established colonies with ~200 individuals are available from BioBest and other producers year-round.

The great escape

To be clear, B. impatiens is not endemic to British Columbia, where I live; their native range is southeastern Canada and the eastern U.S., but they were brought to the West Coast to facilitate greenhouse pollination in the late 1990s, when availability of B. occidentalis, a species native to the West, was suddenly limited. While there has been speculation that the demise of B. occidentalis was caused in part by the unregulated harvesting of wild queens for commercial rearing, this has not yet been officially recognized.

As the story inevitably goes, despite promises of being contained in greenhouses which would theoretically prevent their dispersal, somewhere along the way, mated queens escaped. This is no surprise to me, as bumble bees seem happy to ….

TO SEE THE FULL ARTICLE VISIT
https://americanbeejournal.com/category/columns/science-insider/

NATIONAL HONEY BEE REPORT

MISSISSIPPI: The beekeepers are busy checking the hives and making sure the bees are in good condition. The Chinese Tallow looks plentiful and the heavy rains in late April brought plenty of wildflowers to work with. No major losses or problems reported at this time. A decent honey flow is expected when the beekeepers pull from the hives.

ARKANSAS: During the month of May temperatures were above normal across most of the state. Precipitation during May was about normal across most of the same area. According to the U.S. Drought Monitor website, Arkansas had normal soil moisture across most of the state for May.
No supply chain issues reported. Too few prices exist to establish a current market price for wholesale white honey.
TENNESSEE: Tennessee had an average to better than average nectar flow in May. Tulip Poplar and clover were the main nectar and pollen sources. The bees across Tennessee have built up quickly and appear to be more healthy than past years. Supply chain issues are still causing issues for beekeepers needing woodenware and extracting equipment. Beekeepers are moving more to purchasing from local woodenware producers and away from the big beekeeping supply companies in order to get woodenware in a timely manner.

limit yourself to only eating one thing, that's not healthy for you. You have to have a broad diet that will help fulfill all of your nutritional needs. Bees are the same way."

Honey bee larvae are fed by their sister bees. Their diet [is derived from] foraged ingredients such as nectar and pollen, as well as royal jelly — a bee glandular secretion that is complex and nutrient rich. If larvae are destined to be queens, they will eat royal jelly their whole lives. In addition to being more nutritious than [the standard worker diet], royal jelly has long been known to possess potent antimicrobial properties due to its acidity, viscosity and the presence of antimicrobial peptides. This means that most microbes exposed to royal jelly die, Newton said.

Except one.

According to their new study, Newton and her research team found that a specific microbe — Bombella apis — is the only larva-associated bacterium that's actually able to thrive in royal jelly. They also found that B. apis makes royal jelly more nutritious by significantly increasing its amino acid content, which helps developing bees build resilience against nutritional stress.

"We have identified a nutritional symbiont of honey bees — a microbe that can help bolster the bees against nutrient scarcity and stress," Newton said. "When we limited bee nutrition during development, we saw a drop in mass for the bees; bees were much smaller than their control counterparts.

"When B. apis was added to these same bees, although they had poor nutrition, they reached the same mass as control bees given full nutrition. The microbe was able to make up for the poor diet. This suggests that B. apis could be added to colonies as a probiotic to protect from nutritional stress."

The results suggest that B. apis may have potential as a key supplement in future beekeepers' efforts to counteract the negative influence of poor nutrition on honey bee health. B. apis can survive for over 24 hours in sugar water, so beekeepers who are already supplementing their colonies could potentially integrate a B. apisprobiotic into their bees' diets.

This research expands on over six years of previous studies by Newton and her colleagues,

MEMBER SPOTLIGHT

Submit your story here!
Have a great story or tip to help your local beekeeper buddies? Send me your story!
Email: diamondbadams@gmail.com

including findings that B. apis protects bees against fungal infections and is a significant part of the queen gut microbiome.

For more information, please click here to contact us.

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