CENTRAL COAST BEEKEEPERS NEWSLETTER

August 2020

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NEXT MEETING AUGUST 26, 2020

August 26, 2020 Meeting

ATTENTION: PLEASE RESPOND TO THIS EMAIL ADDRESS IF YOU PLAN TO ATTEND OUR INPERSON MEETING ON AUGUST 26TH SO THAT WE CAN PLAN ACCORDINGLY!!!

As you probably remember, we are attempting an in person, socially distanced meeting on August 26th from 3pm to 5:30 pm where we will meet at Stu Willason and Britte Kirsch's property in the Florence

area and have 2 hands on sessions with the group split into smaller groups to facilitate social distancing. The sessions will include a honey extraction demonstration and an in-hive assessment focused on preparing for fall/winter. The property sits on 40 acres which will provide adequate space for social distancing. We will be utilizing an Ag building for the extracting demo and their apiary where we will have access to a hive. This will be followed by a social gathering, for all who wish to stay, held outside next to the Ag building under an awning or inside the building (with open bay door) depending on weather. This will be a great time for everyone to catch up in person rather than via Zoom. Light refreshments will be provided but feel free to bring your own food, drinks and utensils if you like. We will be observing social distancing, and FACE COVERINGS are REQUIRED. Detailed directions will be provided to those who send an email to confirm attendance.

Don't forget, please RSVP to this email.

PRESIDENT'S MESSAGE

By Becca Fain

Never thought these words would come out of my mouth, but I sure wish it would rain. The bees seem to like all this sunny weather and are working away, but it seems that I am spending an inordinate amount of time watering either the plants or the bees.

Hope none of you have had any issues with Parasitic Mite Syndrome or Foulbrood. If you are concerned about any issues with your hive, please let us know and we will have an experienced beekeeper assist you. Hopefully, the materials that I forwarded to you about these problems have been helpful. Let's cross our fingers that we have a better than average winter survival rate and that our bees are beginning to fatten up for the long days before next spring. And while we are at it, let's hope that the corona virus is behind us (as in a vaccine) as we come out of the winter months and get focused on the 2021 bee year next spring.

Looking ahead to September, we are excited to have another OSU Bee Lab staffer join us for a zoom session on September 23rd at 6:30 pm. Ellen Topitzhofer will be addressing us regarding Queen rearing which is an exciting process. I know because my husband, Rick Olson, is beginning to perfect the process with 12 out of 18 gaffed queen cells being drawn out on his last try. A few queens will be available so let us know if you need any. These were grafted from a hygienic queen. (contact Rick at rolson2@attglobal.net)

Hope you can join us on the 26th. I really look forward to seeing you all.

Pollination Podcast

Last month, Dr. Andony Melathopoulos, Assistant Professor Pollinator Health Extension at OSU, gave a wonderful presentation at our July meeting over Zoom. Dr Andony Melathopoulos, a fabulous and engaging speaker, discussed how we can build or enhance our bee friendly habitat. He has a weekly podcast, called Pollination, that focuses on wild and managed pollinators, especially bees. You can subscribe to it on your favorite podcast provider. It's worth a listen!

Bee disease spreading via flowers

One in 11 flowers carries disease-causing parasites known to contribute to bee declines, according to a Cornell University study that identifies how flowers act as hubs for transmitting diseases to bees and other pollinators.

The study, published July 20 in Nature Ecology and Evolution, also found that one in eight individual bees had at least one parasite.

The study was conducted in field sites in upstate New York, where the researchers screened 2,624 flowers from 89 species and 2,672 bees from 110 species for bee parasites through an entire growing season. They used molecular data to identify five common protozoan (free-living, single-celled) and fungal parasites.

"We know very little about transmission of these diseases," said senior author Scott McArt, assistant professor of entomology in the College of Agriculture and Life Sciences. "Our study shows that transmission can likely occur on a lot of different flowers, and the amount of disease in a community is shaped by both the floral community and the bee community."

The researchers found three main factors -- flower abundance, numbers of social bees and bee diversity -- played roles in disease transmission.

As the season progresses, the number of flowers goes up. For example, in the fall, flower-laden goldenrod dominates many New York fields. At the same time, the proportion of flowers with parasites goes down, lowering the risk that a bee will pick up a parasite when it visits a flower.

"That has really important conservation implications, because if you want to limit disease spread, just plant a lot of flowers," said McArt, adding that planting flowers also provides food for pollinators. "It's a win-win: If we plant flowers and create a lot of forage, we can also dilute disease."

The study revealed that social bees, such as honeybees and bumblebees, were more likely to be infected with parasites than solitary bee species. The researchers found that later in the season, the number of social bees increases, while bee diversity overall decreases.

And as a general rule, diversity of species lowers the spread of disease.

"Both bee diversity and fewer of the social bees make it less likely for bees [overall] to be infected. That's another win for conservation: if we promote bee diversity, there will be less disease," McArt said. High numbers of infections in the social species may also spill over to infect other species, he said.

Future studies will try to determine whether increased flower abundance cancels out the negative effects of increased numbers of social bees combined with lower overall bee diversity later in the summer.

More study is also needed to understand why social bees are so susceptible to parasites, whether they lack defenses and if they are sharing disease in close colony quarters.

Story Source:

Materials provided by **Cornell University**. Original written by Krishna Ramanujan. Note: Content may be edited for style and length.

Science sweetens stingless bee species honey health claims

Science has validated Indigenous wisdom by identifying a rare, healthy sugar in native stingless bee honey that is not found in any other food.

University of Queensland organic chemist Associate Professor Mary Fletcher said Indigenous peoples had long known that native stingless bee honey had special health properties.

"We tested honey from two Australian native stingless bee species, two in Malaysia and one in Brazil and found that up to 85 per cent of their sugar is trehalulose, not maltose as previously thought," she said.

Dr Fletcher said trehalulose was a rare sugar with a low glycaemic index (GI), and not found as a major component in any other foods.

"Traditionally it has been thought that stingless bee honey was good for diabetes and now we know why -- having a lower GI means it takes longer for the sugar to be absorbed into the blood stream, so there is not a spike in glucose that you get from other sugars," Dr Fletcher said.

"Interestingly trehalulose is also acariogenic, which means it doesn't cause tooth decay."

Dr Fletcher said the findings would strengthen the stingless bee honey market and create new opportunities.

"Stingless bee honey sells now for around AUD $200 per kilogram, which is up there with the price of Manuka and Royal Jelly honey," she said.

"The high commercial value also makes it a risk for substitution, where people could sell other honey as stingless bee honey, or dilute the product.

"But due to this research, we can test for this novel sugar, which will help industry to set a food standard for stingless bee honey.

"People have patented ways of making trehalulose synthetically with enzymes and bacteria, but our research shows stingless bee honey can be used as a wholefood on its own or in other food to get the same health benefits."

The work of Dr Fletcher and the research team has led to a new project funded by AgriFutures Australia and supported by the Australian Native Bee Association.

Working with Dr Natasha Hungerford from UQ's Queensland Alliance for Agriculture and Food Innovation and Dr Tobias Smith from the School of Biological Sciences the new project will investigate storage and collection, to optimise the trehalulose content of Australian stingless bee honey.

Stingless bees (Meliponini) occur in most tropical and sub-tropical regions, with more than 500 species across Neotropical, Afrotropical and Indo-Australian regions.

Like the well-known Apis mellifera honeybees, stingless bees live in permanent colonies made up of a single queen and workers, who collect pollen and nectar to feed larvae within the colony.

Dr Fletcher said keeping native stingless bees was gaining in popularity in Australia, for their role as pollinators as well as for their unique honey.

As well as having health benefits, stingless bee honey is valued for its flavor and is in high demand from chefs.

Story Source:

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

. (Photo: Adkin Alexandr/Shutterstock)

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