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## Pollinator Week Spotlight: San Francisco State University Biology Study Reveals Good News and Bad News About Bee Populations SFSU academic research partially funded by Healthy Hive Foundation, non-profit of Me & the Bees Lemonade

**AUSTIN & SAN FRANCISCO. June 22, 2020 -** Just in time for National Pollinator Week (June 22-28), San Francisco State University (SFSU) has released preliminary findings from a before-after control impact study conducted over the past two years to reveal that wild bee populations held steady after the 2017 fires. However, the data collected also confirms a significant decrease in the number of species over the past 15 years.

Bees are a keystone species in nearly every biome on earth. By studying how they were affected by the intense 2017 wildfires in Napa and Sonoma counties, SFSU Biology Professor and Director of the <u>Great Sunflower Project</u>, Gretchen LeBuhn, PhD, wanted to understand if pre- and post-fire plant-pollinator networks will assist in appropriate restoration of plant communities and guide future fire management to positively impact wild bees. Partially funded by the <u>Healthy Hive Foundation</u>, the purpose of the research was also to learn about wildfires' impacts on pollinators that provide services to gardens, orchards, vineyards and farms in the region and the wild plants that support these pollinators.

"The good news is, this new study reveals that bees are actually resilient when it comes to forest fires. However, it also provided shocking data confirming there is a large decline in bee populations and species types when comparing populations in the exact same areas during the same week on the calendar from 15 years ago. I felt a huge amount of stress when we discovered the significant decline from more than 80 bee species down to approximately 55 today," said Dr. LeBuhn. "I'm particularly surprised because the areas we studied are agricultural and have not experienced any much landscape change, further confirming that farming practices are now more detrimental to bees."

LeBuhn also speculated the decline would have some to do with climate change as well because California has essentially experienced a 10-year drought, which may have had an impact on some of the species that have not come back to the area. She says she and her team were able to study four places that burned and four that had not, revealing the amount of change in those two groups was about the same. But, when they compared the data to 15 years ago, that is where the blatant declines in population and species numbers were revealed.

The official report of the study will be released this fall and Dr. LeBuhn and her team of students will create a multi-year data set to track how plant-pollinator networks change in the years following wildfires and in general.

Supporting SFSU's wildfire impact study on bees was the Healthy Hive Foundation's first effort to further university research since it was created in 2016 by Mikaila Ulmer, Founder and CEO of Me & the Bees. She and her family founded the non-profit as a way to further her company's mission to save the bees by donating a percentage of the sale of its all-natural lemonades to organizations fighting hard to save the bees through education, research and protection. Healthy Hive advocates for bees by bringing attention and awareness that bees are critical to the environment, the ecosystem and economy, and some species are on the verge of extinction.

"What an honor to be able to help advance the work of Dr. LeBuhn who thankfully found minimal impact on bees due to the wildfires. It's impressive that she and her students were able to astutely connect the dots to her work from 15 years ago to make sound scientific conclusions about the decline in populations of several bee species," said Mikaila. "This is exactly the type of work we envisioned supporting with the creation of the Foundation, which is dedicated to increasing bee awareness and the number of safe environments for bees to survive and thrive. By bringing attention and awareness to the fact that bees are critical to the environment yet are on the verge of extinction, this study validates the important work we must continue to do to help save bee populations."

Today, Mikaila interviewed Dr. LeBuhn to kick off her "Bee Fearless" talk show series on Instagram Live found at @mikailasbees. The interview is will be posted on <u>Me & the Bees</u>' <u>Facebook page</u> for all to to learn more about the research firsthand and get tips for what do during National Pollinator Week and year round to help save the bees such as:

- Plant bee friendly flowers in home gardens and ask cities to do the same in public parks.
- Learn not to be afraid of bees like Mikaila did when she was just four years old after getting stung by two bees in one week.
- Avoid purchasing gardening products containing neonicotinoids as this chemical is detrimental to bees and other pollinators, as well as other animals.
- Advocate for cities to put solar panels on roofs and parking lots rather than in wild areas like deserts that are home to a large variety of bee species.
- Remember that bees are responsible for every third bite of food, so do you part to help take care of them.

The Healthy Hive Foundation will continue to support the worthy efforts of Dr. LeBuhn in the future. The Foundation's next project will be to collaborate with the The Ladybird Johnson

## Wildflower Center in Austin on a variety of projects including adding bee education into the curriculum of its virtual youth camp this summer.

Gretchen LeBuhn, PhD is a Professor of Biology at San Francisco State University and the Director of the Great Sunflower Project (Instagram: @greatsunflower, Facebook: The Great Sunflower Project), the largest citizen science project focused on pollinators with over 100,000 members. She is an ecologist and conservation biologist whose work focuses on understanding the relationships between changing landscapes and biodiversity and using this information to promote conservation and sustainable management. Her current research focuses on the role of management promoting biodiversity in grasslands and forests of California, the role of green space in maintaining biodiversity and ecosystem services in cities and understanding the effects of climate change in montane meadow communities. Her work ranges from the development of mathematical models to citizen science to field studies. She was elected to the California Academy of Sciences in 2006 and was a lead author for the Intergovernmental Panel on Biodiversity and Ecosystem Services report on pollinators and pollination services.

The Healthy Hive Foundation is a 501(c)3 non-profit organization dedicated to increasing bee awareness and promoting safe environments where bees can thrive through education, research and preservation. It was created in 2016 by the Founder and CEO of Me & the Bees Lemonade, Mikaila Ulmer, and her family to further her company's mission as to help educate consumers about the bee's role in the ecosystem and the alarming decline in the bee population. Please visit www.healthyhivefoundation.org or follow the foundation on social media at: Instagram-@healthyhivefdn or Facebook-Healthy Hive Foundation.

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