



# CENTRAL COAST BEEKEEPERS NEWSLETTER

December 2022

Issue number 77

NEXT MEETING January 25, 2023

## 2023 Meetings: New Time & Place

In an effort to increase attendance at our meetings, we are making some changes to our meeting schedule. Starting in January, we will meet on the 4<sup>th</sup> Wednesday of the month at 1:30-3:30PM at the Newport Public Library. For those wanting to save time and travel expenses, we will also have an option to join via Zoom. Now there's no excuse not to participate! Please let us know if you have any questions or comments about the changes.



## **PRESIDENT'S MESSAGE**

**By Pat Wackford**

The Board held a Zoom Meeting on Friday December 9<sup>th</sup> and a summary of the meeting follows. Present at the meeting were me, Jim Parish, Judi Irving, Max Kuhn, Steve Niles, and Becca Fein. Becca was kind enough to set up the meeting using her Zoom account.

The agenda items: Nomination of officers for 2023, changing the location, time, and days of General Meetings, and declining meeting attendance. It was noted that attendance began to drop after moving meetings to the OSU Extension Office and changing meeting time to 6PM to 8 PM. We discussed moving the meetings back to the Newport Library, as their hours have recently been extended. Other ideas were to have meetings at the same time of the month but in different places such as Florence or Waldport, to accommodate those members that live south of Newport. Judi reported that there are approximately 45 paid members, and they reside in all areas of the county. Another Idea was to have Zoom meetings in conjunction with the in-person meetings. The Board has asked for volunteers for the office of President, Vice President, Secretary, and Treasurer. Steve Niles volunteered to take the office of Treasurer/Secretary for 2023. I agreed to stay on as President through January to help with the transition of a new President. We will still need a President and a Vice President. Max volunteered to take one of the officer positions but only for a short time. The Board then discussed having a nominating committee to fill the officer positions and we will need volunteers to be Members at Large on the Board to provide input and help steer the Club. Hopefully with increased attendance we will be able to fill these positions.

As a result of the meeting, we have changed the time and location of the meetings and offered them via Zoom. We still need officers and Board members, so if you are interested, please let us know.

I wish all of you and happy and safe holiday season and hope to see you in the new year.

## 2023 Membership Dues

The club will once again offer members discounts on bees and will coordinate delivery. Your club dues must be up to date to receive the discount. Club dues remain at \$15 for individuals and \$25 per family and are due at the beginning of the year. You can pay via bank transfer, PayPal (using our email [centralcoastbeekeepers@gmail.com](mailto:centralcoastbeekeepers@gmail.com)) or check sent to CCBA at PO Box 1916, Newport, OR 97365. No additional paperwork is needed for renewing members.

You may also want to consider supporting OSBA. Members can join for \$40 a year. The club benefits from your affiliation with the OSBA such as matching donations to the USU Bee Lab and liability insurance for events.



## Genetic Factor? Honey Bee Life Spans 50% Shorter Now Compared to 50 Years Ago

By UNIVERSITY OF MARYLAND NOVEMBER 14, 2022



In a new study, entomologists show that the lifespan for individual honey bees kept in a controlled, laboratory environment is 50% shorter than it was in the 1970s.

### **Colony losses and lower honey production in recent decades could be explained by a drop in longevity for lab-kept honeybees.**

The lifespan for individual honeybees kept in a controlled, laboratory environment is 50% shorter than it was in the 1970s according to a new study by University of Maryland entomologists. When scientists modeled the effect of today's shorter lifespans, the results corresponded with the reduced honey production trends and increased colony loss seen by U.S. beekeepers in recent decades.

Bee colonies naturally age and die off, making colony turnover an accepted factor in the beekeeping business. However, U.S. beekeepers have reported high loss rates over the past decade, which has meant having to replace more colonies to keep operations viable. In an effort

to understand why, researchers have focused on pesticide exposure, environmental stressors, parasites, diseases, and nutrition.



Despite improved standards for keeping honey bees in the lab, UMD research shows caged bees have shorter lifespans than they did 50 years ago, suggesting something other than environmental conditions could be causing higher rates of honey bee colony loss for commercial bee keepers. Credit: Anthony Nearman / UMD

“We’re isolating bees from the colony life just before they emerge as adults, so whatever is reducing their lifespan is happening before that point,” said Anthony Nearman, a Ph.D. student in the Department of Entomology and lead author of the study. “This introduces the idea of a genetic component. If this hypothesis is right, it also points to a possible solution. If we can isolate some genetic factors, then maybe we can breed for longer-lived honeybees.”

Nearman first noticed the decline in lifespan while conducting a study with entomology associate professor Dennis van Engelsdorp on standardized protocols for rearing adult bees in the laboratory. Replicating earlier studies, the researchers collected bee pupae from honeybee hives when the pupae were within 24 hours of emerging from the wax cells they are reared in. The collected bees finished growing in an incubator and were then kept as adults in special cages.

Nearman was evaluating the effect of supplementing the caged bees’ sugar water diet with plain water to better mimic natural conditions when he noticed that, regardless of diet, the median lifespan of his caged bees was half that of caged bees in similar experiments in the 1970s. (17.7 days today versus 34.3 days in the 1970s.) This prompted a deeper review of published laboratory studies over the past 50 years.

“When I plotted the lifespans over time, I realized, wow, there’s actually this huge time effect going on,” Nearman said. “Standardized protocols for rearing honeybees in the lab weren’t really formalized until the 2000s, so you would think that lifespans would be longer or unchanged, because we’re getting better at this, right? Instead, we saw a doubling of mortality rate.”

Although a laboratory environment is very different from a colony, historical records of lab-kept bees suggest a similar lifespan to colony bees, and scientists generally assume that isolated factors that reduce lifespan in one environment will also reduce it in another. Previous studies had also shown that in the real world, shorter honeybee lifespans corresponded to less foraging time and lower honey production. This is the first study to connect those factors to colony turnover rates.

When the team modeled the effect of a 50% reduction in lifespan on a beekeeping operation, where lost colonies are replaced annually, the resulting loss rates were around 33%. This is very similar to the average overwinter and annual loss rates of 30% and 40% reported by beekeepers over the past 14 years.

Nearman and vanEngelsdorp noted that their lab-kept bees could be experiencing some sort of low-level viral contamination or pesticide exposure during their larval stage, when they’re brooding in the hive and worker bees are feeding them. But the bees have not shown overt symptoms of those exposures and a genetic component to longevity has been shown in other insects such as fruit flies.

The next steps for the researchers will be to compare trends in honeybee lifespans across the U.S. and in other countries. If they find differences in longevity, they can isolate and compare potential contributing factors such as genetics, pesticide use, and the presence of viruses in the local bee stocks.

Reference: “Water Provisioning Increases Caged Worker bee Lifespan and Caged Worker bees Living Half as Long as Observed 50 Years Ago” 14 November 2022, *Scientific Reports*.



## Tankers of Sugar Syrup and Pollen Aided 1.7 Billion Bees Affected by Hurricane Ian

Among Hurricane Ian's victims were tens of thousands of honeybee colonies.

By [Mary Jo DiLonardo](#)

Published November 17, 2022, 12:00PM EST TreeHugger

Fact checked by [Haley Mast](#)



Cluster of bees in Tampa.

When Hurricane Ian tore through Florida earlier this fall, among its victims were tens of thousands of [honeybee](#) colonies. With vegetation uprooted and feeders wiped out, the bees were left with no food source.

“Early estimates are that tens of thousands of hives have been destroyed along with many of the feeders used by beekeepers,” Brooke Nowak, vice president for people and plant programs at Greater Good Charities, tells Treehugger.

“The storm also wiped out much of the natural forage used to feed [pollinators](#) leaving the bee populations who did survive at risk of starving.”

In order to help the bees survive, Greater Good Charities hastily organized an emergency delivery of five tanker trucks of sugar syrup and thousands of pounds of pollen replacement to beekeepers in the state.

The organization worked with Cargill, a food corporation based in Minnesota, and beekeeping supplier Mann Lake. They held three events that donated more than 508,800 pounds of sugar and more than 96,900 pounds of bee pollen substitute to help nearly 1.7 billion bees affected by the hurricane.

The goal was to help feed the bees for 30 days to help [beekeepers](#) rebuild. “But our partners tell us the destruction was so severe it will take much longer for them to rebuild,” Nowak says. “There was massive damage to the equipment and the bees.”

Most bees die during a hurricane, flood, or other disasters because of the way [hives](#) are built. Both natural and man-made hives have openings at the bottom. During a natural disaster, the bees’ instinct is to go up, so they are often trapped and can’t get out.

“According to our partner, Mann Lake, the most important thing right now is keeping the queens well fed so that they continue to lay eggs of both the worker bees and future queens,” Nowak says.



Hurricane Ian was a Category 4 Atlantic hurricane that caused significant damage in western Cuba and the southeastern United States, primarily in Florida and South Carolina. It made landfall in Florida on Sept. 28 and was soon downgraded to a tropical storm, with destructive rainfall. At least 119 people died due to the storm.

### **A Sweet Solution**

According to a report from Florida State Beekeepers Association, 1,500 beekeepers were affected by the storm with 100,000 hives destroyed. That doesn't include other impacts, like bee colonies that were lost to issues such as disease, beetle predators, or lack of foraging.

"The damage to equipment and bees was equally devastating. Another factor is the loss of revenue for honey processing, as this is the late season harvest," John Coldwell, president of the Florida Beekeepers Association, tells Treehugger.

"Beekeepers not only need new equipment; the bees and queens are at inflated prices and limited availability. This is a demanding process as they are committing financial reserves to rebuild and access to stock, bees, and queen and food are limited."

In order to rebuild colonies, they need good weather and to have the natural foliage recover. Coldwell says this has to happen before February or March or they may not recover.<sup>4</sup>

There are nearly 5,000 registered beekeepers in Florida, managing approximately 630,000 colonies, according to the University of Florida. Honeybees contribute almost \$20 billion to the crop industry by providing pollination services throughout the United States, and Florida's honey industry is ranked among the top five states in the country.<sup>5</sup>



## Club Info

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