



CENTRAL COAST BEEKEEPERS NEWSLETTER

April, 2026

NEXT MEETING April 16 2026

Important Notice: Join us **Thursday, April 16th at 1:30 p.m. at the OSU Extension office, 1211 SE Bay Blvd, Newport, OR**, when two of our members – Steve Niles and Jim Parrish – will present and lead the discussion on **SWARMS !!!** Yes, swarm season is upon us and you will have an opportunity to learn how to avoid/stop them and, if the inevitable happens, how to catch them and expand your apiary or sell them.



Nectar and Pollen
Plants of North Ameri

Click on the PDF above and look at some interesting information on a research project that Julie O'Connor – a beekeeper with the Central Oregon club -is doing in conjunction with Andony Melathopoulos from OSU and Priya Basu from WSU. She is looking for folks who can help her collect data so, if you are interested in citizen science, this might be just the opportunity you have been looking for. You can contact Julie at jocflie@gmail.com.

JUST A REMINDER ! April 16th is your last chance to buy bees through the club.

The deadline for the 2026 Bee order is approaching

We will be getting bees from Henry Storch at Oso Apiaries, the supplier we have used for our bee orders for the last several years. Henry's bees are a mixed race bee he calls "Oregon hybrids." He started with Buckfast and introduced Carniolans, Caucasians, Russians. They are gentle bees, easy to work and average honey producers.

\$170 – 3 lb packages (tentative delivery date – May 6th)

\$210 – 5 frame Nucs (tentative delivery date – May 15th)

Marked queens add \$10

Bees can be ordered either by sending a check to the club mailbox (P.O.Box 1916, Newport, OR , 97365) or by paying in person with cash or check at any meeting. Drop dead date to order is the April 16th meeting. You must be a club member to order. Bees will be delivered to Toledo, Lincoln City, Newport, Waldport, Yachats and Florence.

Saving the queen: Scientists study bee reproduction to strengthen colonies

Texas A&M AgriLife explores how environmental pressures disrupt the biology of honey bee colonies

One-third of the food we eat depends on a tiny worker most people rarely think about – the honey bee. But across the U.S., beekeepers have seen honey bee colonies collapse at alarming rates.

Now a team of [Texas A&M AgriLife Research](#) scientists is looking inside the hive for answers. A new research effort is exploring how the reproductive health of honey bee queens and their mates, or drones, shape and strengthen the survival of colonies.

The AgriLife Research team will look at parasites, disease and environmental stressors like weather and chemicals that are putting growing pressure on the important pollinators supporting a significant share of the nation's food supply.

Juliana Rangel, Ph.D., AgriLife Research entomologist and professor of apiculture in the [Texas A&M Department of Entomology](#) in the [College of Agriculture and Life Sciences](#), leads the new five-year, [U.S. Department of Agriculture](#)-funded project fittingly named SWARM – Sustainable Ways to Advance Reproductive Management in Honey Bees.

The project brings together researchers across disciplines and continents to better understand how environmental stress affects the way queens and drones grow, mate and ultimately keep colonies healthy.

"This couldn't have come at a timelier moment because of issues with high colony losses," Rangel said. "If we can help improve the reproductive health of the queens that head these colonies, then we can help improve colony health, productivity and sustainability."

Rangel is joined on the project by department colleague and assistant professor Erick Motta, Ph.D., AgriLife Research scientist whose research focuses on microbial communities and their dynamic relationships across ecological and agricultural systems, and Nancy Ing, Ph.D., AgriLife Research scientist and professor in the [Department of Animal Science](#) and [Department of Veterinary Integrative Biosciences](#), whose expertise includes genetics and reproductive biology.

The project also includes collaborators in Northern Ireland and the Republic of Ireland, where scientists face other environmental challenges affecting bee reproduction.

Rangel and team are partnering with Irish colleagues to identify reproductive characteristics across in the Irish bee population that could help colonies in the U.S. remain more resilient under environmental stress.

A honey bee colony depends on one queen, who mates with 12-15 drones during brief, risky flights early in her life. According to Rangel, the number of drones she mates with, the quality of their sperm and the viability of what she stores in her reproductive organ, known as a spermatheca, determine how long she can sustain the colony.

But environmental pressures can disrupt this delicate process.

In Texas, Rangel said obstacles often include high pathogen levels in developing colonies, nutritional stress and pesticide residues in the nectar, and pollen that the bees forage. The

team will examine how each of these factors affects both queens and drones — from nuptial flight behavior to sperm count and viability.

In Ireland, honey bees face a different challenge. Queens have a very short mating season due to frequent rain, which limits the opportunity for mating flights. The short window and challenging conditions decrease the likelihood that queens travel far, often leading to inbreeding, which weakens colonies over time.

Beyond advancing scientific understanding, Rangel believes the project could provide practical applied science and tools for beekeepers.

One of the project's most groundbreaking components is the search for molecular "marker RNAs" inside queen-laid eggs. These tiny biological signatures could allow beekeepers to assess queen fertility without harming her. A reliable queen fertility test would be a significant advancement for beekeepers, Rangel said.

This project also includes an outreach component. [Texas A&M AgriLife Extension Service](#) specialists will develop beekeeper surveys, expand queen-rearing workshops and deliver new training in Texas and Ireland based on the research findings.

"The goal is to continue improving the reproductive health of queens and drones," she said. "Healthier queens mean healthier colonies, and that strengthens the pollination systems that our food supply depends upon."

SoCal honeybees can fend off deadly mites – Hybrid species exhibit unusual defenses.

Southern California is home to a flying black and yellow treasure. While commercial honeybee hives nationwide are collapsing under attack from deadly parasites, a unique hybrid bee found only in this part of the state has demonstrated the ability to survive.



Southern California hybrid honeybee hive hanging from a tree in the wild. (Boris Baer/UCR)

U.S. beekeepers reported losing up to 62% of their managed honeybee colonies in 2025, which threatens our food supply. The losses are driven by a combination of pesticides, climate pressure, habitat loss, and parasites, with the Varroa mite among the most destructive of these factors.

Varroa mites feed on honeybees' fat body tissue, which weakens their immune systems, reduces their body weight, and shortens their lives. The fat body is an organ in a honeybee that stores energy, helps fight infections, and keeps the bee healthy, similar in some ways to the human liver.

The mites also act as vectors for deadly viruses like Deformed Wing Virus and Acute Bee Paralysis Virus, which they transmit directly into a bee's bloodstream. Beekeepers rely on chemical treatments for suppression that can lose effectiveness over time.

A new [study](#) from UC Riverside published in Scientific Reports is the first to show that a locally adapted population of honeybees can naturally and consistently suppress the mites.

“We kept hearing anecdotally that these Californian honeybees were surviving with way fewer treatments. I wanted to test them rigorously and understand the driving

force behind what the beekeepers were seeing,” said Genesis Chong-Echavez, a UCR graduate student and lead author of the study.

Alongside entomologists from UCR’s Center for Integrative Bee Research ([CIBER](#)), Chong-Echavez monitored 236 honeybee colonies between 2019 and 2022.



A Varroa mite on a developing honeybee larva inside a brood cell. (Genesis Chong-Echavez/UCR)

The Californian bees were not entirely immune to the mites. However, colonies headed by locally raised Californian hybrid honeybee queens had about 68% fewer mites on average than colonies headed by commercial honeybee queens. They were also more than five times less likely to cross the threshold at which chemical treatments become necessary.

The bees in the study are not a commercial breed. They come from a genetically mixed population of honeybees established in Southern California, often from feral colonies living in trees. Recent research shows they are a hybrid population with ancestry from at least four honeybee lineages, including African, Eastern European, Middle Eastern, and Western European bees.

To more fully understand the bees’ resistance to the mites, the researchers also ran laboratory experiments with developing honeybee larvae. Varroa mites must enter brood cells to reproduce, so the team tested whether mites were equally drawn to larvae from commercial and Californian hybrid honeybee colonies.

They were not.

Mites were less attracted to the Californian hybrid honeybee larvae, especially at seven days old, the stage when mites are normally most likely to invade. The finding suggests the bees' secret to fending off mites lies in early development, before any adult worker behaviors might come into play.

"What surprised me most was the differences showed up even at the larval stage," Chong-Echavez said. "This suggests the resistance mechanism may go deeper than some kind of behavior and may be genetically built into the bees themselves."



Researchers inspecting honeybee colonies as part of long-term monitoring of Varroa mite infestations. (Genesis Chong-Echavez/UCR)

The findings could have implications beyond Southern California. Honeybees pollinate crops worth billions of dollars and are under growing pressure from multiple environmental stressors. The research suggests that part of the answer to improving honeybee health may lie in the biology of these bees.

Boris Baer, UCR entomology professor and co-author of the study, said the study also highlights the value of listening to working beekeepers.

"This question did not start in the lab. It started in conversations with beekeepers," Baer said. "They were not just observers; they helped shape the questions behind this research."

The researchers caution that the Californian hybrid honeybees are not entirely mite-free, and they do not suggest abandoning current management practices. Instead, they hope to learn which traits help these honeybees keep mite levels lower, and whether those traits could support future breeding programs or reduce dependence on chemicals.

Next, the team plans to investigate the genetic, behavioral, and chemical signals that may make the larvae less attractive to mites.

“At a time when pollinators are facing global decline, this work offers a hopeful message: solutions may already be emerging in the field, and we just need to understand them,” Chong-Echavez said.

