



# CENTRAL COAST BEEKEEPERS NEWSLETTER

August 2022

Issue number 73

NEXT MEETING August 22, 2022

## **This Month: Annual Picnic**

Join us for our annual picnic on Saturday August 22<sup>nd</sup>.  
Details below in the President's message.



## **PRESIDENT'S MESSAGE**

**By Pat Wackford**

There will not be a general meeting this month. Instead, the club will hold its annual picnic. The picnic will be **August 27<sup>th</sup> at 1:00 PM at my home in Toledo**. My address is 187 Olalla Road off of Highway 20. Driving east on Highway 20, Olalla Road is about one mile past the Dairy Queen and a turn to the left.

We will have a BBQ. If you do not wish to have a hamburger or hot dog, bring something to BBQ. I have 8 chairs, but you may want to bring a chair.

Please bring a dish or something to share and something to drink. Bottled water and a tub of ice will be available. Please RSVP by Aug. 22<sup>nd</sup> to me at [pwacky@charter.net](mailto:pwacky@charter.net) to let me know how many will be attending. Bring a bee suit if you would like to look into a hive. This will be a good opportunity to get to know your fellow club members.

The State Fair is coming Aug. 26<sup>th</sup> to Sept. 5<sup>th</sup>. Our club is signed up for Aug 29<sup>th</sup> to staff the OSBA Booth, and there are other dates available if you cannot volunteer that day. Information and a sign up sheet were sent out by email to those on the club mailing list. Or respond to this email if you need more information.



## WATER FOR BEES

By Dewey Caron / [Beekeeping](#)

We typically think of honey bee foraging as gathering pollen and nectar from flowers. However, they also forage for propolis and water. As the bee nutrition studies at OSU by Ramesh Sagili and postdoc Priya Charkrabarti demonstrate, the nutritional requirements of honey bees are quite complex. It turns out that maybe nectar and pollen doesn't supply everything bees need – water might also be important.



PhD studies by Dr. Rachael Bonoan, at Tufts University demonstrated that honey bees use water sources to complement, and sometimes supplement, the minerals in their diet. Two of her findings specifically relate to fall dietary needs. As magnesium levels drop in pollen during the summer and fall, she was able to demonstrate that the bees seek mineral rich water sources. Another of the findings has shown that while calcium levels increase in fall pollen sources, so too do the bee's preference for calcium in water. We know calcium, along with potassium, are useful for the muscle activity needed to generate heat in their cluster during winter.

She suggests we supply our bees with "dirty water", i.e. not clean, pure water but "natural" water sources such as with vegetation in it. A water seep (wet mossy area frequented by the bees) or construct a garden water feature with plants and rocks for bees to access the water are better than clean tap water in a frequently cleaned/refreshed container. Offer the bees muddy water – in a cow pasture the water that gathers where the hoofprints break the soil become bee watering spots (but you might not be close to pastured cows).

Closer to home, the neighbors swimming pool can unfortunately become the bees favorite water gathering site. Then a neighbor-beekeeper conflict can quickly escalate. In the of beginning the year is the time to offer your bees a proper alternative. Especially now with the forecast of some hotter weather offering bees water close to the hives might keep them out of our neighbor's yard. Don't wait until a problem develops. Remember they are going to your neighbor's water source because it offers something you are not supplying to your bees.

## Bees Fight Back

From Science by Erik Stokstad

The greatest threat to honey bees isn't much larger than a pinhead. But left unchecked, the varroa mite—a blind, eight-legged parasite—can kill enough bees to doom an entire colony. Now, researchers report that a strain of honey bee bred to fight back survives much better than standard commercial colonies, even under the stressful conditions of industrial-scale pollinating.

“It's really encouraging, and I hope beekeepers pay attention,” says Marla Spivak, a bee breeder at the University of Minnesota, Twin Cities, who was not involved with the work.

Honey bee colonies in the United States produce about 68 million kilograms of honey each year. Just as important is their role in pollinating crops such as blueberries, apples, and almonds, which generates more than \$400 million in revenue per year. But beekeeping operations—large and small alike—face enormous losses from pesticides, inadequate nutrition, parasites, and pathogens. On average, about 29% of all colonies are too weak to survive into the next year, because they lose so many worker bees.

Of all these, the varroa mite is beekeepers' top concern, says Elina Niño, an entomologist who specializes in honey bees at University of California, Davis. Mites weaken bees by [feeding on their fat bodies](#), organs vital for metabolism and the immune system. In addition, the mites spread deadly viruses among the bees and between hives. “It's a big problem worldwide and can cause tremendous losses,” Niño says. To keep mites in check, most beekeepers rely on chemicals called miticides. But mites have evolved resistance to many of the chemicals.

A more sustainable approach is [breeding honey bees to fight the mites](#). Some bees are genetically predisposed to groom themselves and other bees; they kill mites during grooming by biting off their legs. Another behavior, known as varroa sensitive hygiene, prevents the mites from reproducing inside the hive. Varroa mites lay their eggs inside the brood cells where honey bee larvae develop. Honey bees with the right genes will check the cells for varroa mites and then remove any infested larvae from the hive.

Commercial bee stocks generally lack these behaviors. And bees bred with varroa-sensitive hygiene have not been widely popular among beekeepers because many strains produce less honey or have fewer workers.

So over the past 14 years, researchers with the U.S. Department of Agriculture (USDA) in Baton Rouge, Louisiana, have been working to create the “Pol-line” strain of bees, named for their ability to pollinate. Breeders brought together queens and reproductive males from several strains of bees to produce a line with several beneficial traits: The docile Pol-line bees have large colonies and make a lot of honey. What's more, they have high levels of varroa-sensitive hygiene.

USDA wanted to see how the bees perform under the stressful conditions of migratory beekeeping. In these operations, bee colonies are trucked around the country, from one field to another as the seasons change, to maximize revenue by pollinating various crops. The frequent

transportation is hard on the bees, and they are exposed to more diseases and mites when stacked together in storage lots or farm fields.

“It’s probably the most demanding system you can place a colony of honeybees into,” says Thomas O’Shea-Wheller, an evolutionary biologist now at the University of Exeter. Starting in 2017, he and his colleagues began a large-scale experiment with 173 colonies of Pol-line bees and compared them with 193 colonies of standard commercial bees.

The colonies started the experiment in Mississippi with a commercial beekeeping operation. One group of bees—half of them Pol-line—were trucked to South Dakota in the spring to pollinate alfalfa and other crops and produce honey. In the fall, the bees were shipped to California to overwinter and then pollinate almond orchards in the spring, before returning to Mississippi.

Pol-line colonies were [30% more likely to survive this grueling workload](#) than commercial bees. Counting the mites in their colonies revealed why: They did a better job of keeping the parasites under control. After two miticide treatments, half the commercial bee colonies survived the season, compared with 65% of the Pol-line, the team reports today in *Scientific Reports*. Colony sizes and honey production were about the same in both groups, suggesting they can perform well as pollinators.

The researchers also treated some colonies with only one dose of miticide, to see whether the Pol-line bees could survive with less help from the chemicals. The result was dramatic, O’Shea-Wheller says. The commercial bee colonies cratered, with only 9% surviving the season. In contrast, Pol-line colonies managed a survival rate of 56%. This shows that beekeepers who want to reduce the use of chemicals—and are willing to accept larger losses—would benefit significantly from using mite-resistant bees, O’Shea-Wheller says. “It’s exciting because these bees demonstrate a remarkable ability to resist infestation, to the point that they can survive without being treated.”

The study also contained another surprise. The team analyzed the levels of four key viruses spread by mites, including deformed wing virus. In most cases, virus levels didn’t significantly affect the odds of colony survival for either the regular or Pol-line bees. That unexpected result suggests the mite is more harmful than the viruses it helps spread, says University of Georgia honey bee expert Keith Delaplane. “This is important to know ... we’ve all been fixated on viruses for an awful long time now.” The good news, he adds, is that although there are no treatments for bee viruses, beekeepers have several proven ways to control the varroa mite.

Pol-line bees require more study before they’re ready to hit the market, the researchers say. They are currently analyzing the results of a second year of experiments. Meanwhile, USDA has been working with a company in Hawaii to commercialize and distribute a related version of Pol-line, called [Hilo Bees](#).

If mite-resistant bees become more popular, beekeepers will benefit from a kind of herd immunity, Spivak says. Overall levels of mites will decline, and their spread between hives will

diminish. The success of the Pol-line bees, she says, is a welcome proof of concept for high-performing mite-resistant colonies. In the fight against the varroa mite, "This is a toehold."



## Honey recalled after FDA detects active ingredient to treat ED in product

By [News Desk](#) on July 14, 2022

Shopaax.com in Newark, DE is recalling all lots of Kingdom Honey Royal Honey VIP because it contains undeclared Sildenafil, the active ingredient in the FDA-approved prescription drug Viagra, used to treat erectile dysfunction.

The recall was initiated after FDA laboratory analysis confirmed that Kingdom Honey Royal Honey VIP contains Sildenafil.

The FDA [sent a warning letter](#) to the company, as well as three other honey companies, about the presence of active drug ingredients in their products.

FDA approval of Viagra is restricted to use under the supervision of a licensed health care professional. The use of products with the undeclared active ingredient may pose a threat to consumers because the active ingredient may interact with nitrates found in some prescription drugs (such as nitroglycerin) and may cause a significant drop in blood pressure that may be life-threatening. People with diabetes, high blood pressure, high cholesterol, or heart disease often take nitrates. Among the adult male population who are most likely to use these products, adult males who use nitrates for cardiac conditions are at the most at risk from these products.

### Recalled products:

- The product comes in a golden box and contains 12 sachets of 20 grams of honey with different expiration dates stamped on the back side.
- It is promoted and sold for sexual enhancement on various websites, including [www.shopaax.com](http://www.shopaax.com) and possibly in some retail stores.
- The company began selling this product on Shopaax.com on 02/2021 and was suspended on 07/2022.

The selling of this product has been suspended.

The company has temporarily removed all other products on the website pending investigation. The product may still be available on other websites and retail stores.



### Club Info

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