



# CENTRAL COAST BEEKEEPERS NEWSLETTER

November 2022

Issue number 76

NEXT MEETING November 30, 2022

## This Month: Holiday Potluck!

This month we celebrate the holiday season with a potluck **on November 30<sup>th</sup> at 6:00 pm** at the Newport Extension office. Food! Honey tasting! Voting for officers and board members!

Bring a dish that you'd like to share and some honey samples from this year's crop. The extension office has a full kitchen for us to use. Also, if you would like to serve as a board member or officer, we'd love to have you participate. This club only exists due to its active members. Being a part of the Board is fun and doesn't require much of your time. You can indicate your interest by responding to this email.

**The LC Extension Office is at 1211 SE Bay Blvd., Newport, OR 97365**, on the Newport Bay front, just beyond the Embarcadero on the opposite side of the street.



## **PRESIDENT'S MESSAGE**

**By Pat Wackford**

I hope that all of you have prepared your hives for the winter months. At our meeting in October there was a round table discussion about how each of us prepared our hives, and there were a number of different methods used. Some members made different choices depending on the weather conditions in their microclimate. Some were sure to leave adequate honey stores while others chose to feed through the winter. All agreed that checking the weight of the hives often was necessary. Wishing the best to everyone getting colonies through to spring.

Please note that this month's meeting will be held on November 30<sup>th</sup> due to the Thanksgiving Holiday. The meeting will be a potluck so bring a little something to share. For those of you that have not come to a meeting at the OSU Extension office, there is a large kitchen area adjacent to the meeting room.

Also, there will be a honey tasting and judging. Bring a small sample or samples of this year's crop for members to taste and judge. It's always interesting to sample the differences.

Also, at this month's meeting it is election time for new club officers for 2023. All three officers will not be running for president, vice president or secretary /treasurer. So, until our meeting be thinking about who you would like to nominate for these positions. There are also positions available on the Board.

There will not be a meeting in December. May everyone have a special Holiday Season.

At the January meeting there will be discussion about buying package bees and nucs for spring. In the past the club has been able to offer members discounts on bees. Your club dues must be paid to receive the discount. Club dues remain \$15 for individuals and \$25 per family.

## Tips from Last Month's Meeting

A lot of knowledge was shared at our October meeting. Here's a quick recap:

1. Rick Olsen brought in his new battery powered oxalic acid vaporizer. It's small, easy to use and the battery life is good.
2. A screened bottom board will help keep your hive free from a buildup of rainwater than a solid base.
3. Several members have found bubble wrap insulation helpful for keeping hives warm.
4. Using an alcohol wash higher than a 70% concentration appears to deliver more accurate mite counts according to recent research.
5. Several apps are helpful for identifying plants. A couple of suggestions are: PictureThis, Florallncognito, and PlantNet.



## Our Contribution to the OSU Bee Lab

This year the club donated \$500 to the OSU Bee Lab. This contribution is matched dollar for dollar. A special thanks to Becca Fain and Pat Wackford for donating the proceeds from honey sales to the OSU fund. The money we earned from teaching the beginning beekeeping class at OCCC was also included in the contribution. Thanks to all the members who participated in making this donation possible.

# The Biggest Mistake

By Scott Derrick Blythwood Bee Company

The Biggest mistake you make is inspecting your hive more times than necessary. Understand the difference between regular hive inspection and frequent hive inspection. Frequently and unnecessarily inspecting your hive will make the bees unsafe and therefore, convince them to find a more hospitable environment to live in.

## Do NOT Do These Either

- Don't rush the inspection. Take time, move slowly and be gentle when handling the frames.
- Don't change the order of the frames inside the hive body. Take them out and return them to the same location within the hive box. Use a [frame perch](#) for help.
- Don't remove frames from more than one hive body at a time.
- Don't inspect the hive when the bees are not flying around.
- Don't inspect the hive when it's windy, cold or rainy. Pick a warm sunny day.
- Don't put off addressing issues you discover during a hive inspection. Treat on the spot!
- Don't release the queen too early in new hives or hives that are being requeened.
- Don't begin your hive inspection until you have adequately prepared. Make sure you have everything you need before opening up the hive.
- Don't face the sun while performing a hive inspection. Stand with your back to the sun when looking at a frame.
- Use smoke when you notice agitated bees or when you see they are paying more attention to you.
- Keep your tools clean, maintained and stored correctly.



## How 'Rented' Solitary Bees Can Help Your Garden

Leased nesting materials bring these 'sweet little bees' to your home.

Mary Jo DiLonardo - Treehugger

It's cleaning time for pollinator houses as people get ready for next year's [bees](#).

Based in Bothell, Washington, the company [Rent Mason Bees](#) rents two species of bees across the U.S. Farmers, teachers, and nature fans set up nesting material in their yard and then release solitary bees that don't have a queen or a colony.

In October, the company cleans and sterilizes cocoons and nesting blocks. Washing them removes predators like pollen mites and Houdini fly larva that can be harmful to bees. Then the nests are prepared to be shipped out, starting in spring.

It's a painstaking process to ensure the bees and their surrounding ecosystems stay healthy, says Thyra McKelvie who runs the company's pollination program.

Mason bees are "sweet little bees," says McKelvin, who talked to Treehugger about solitary bees, why people rent them, and how they help the world around them.

### **Treehugger: What is a solitary bee?**

**Thyra McKelvie:** Solitary pollinators are one of mother [nature's best pollinators](#) because of the way they pollinate. They have tiny hairs on their bodies called scopa. They are clumsy little bees and belly flop onto the flowers, which collects loose pollen all over their bodies. They can visit up to 2,000 flowers a day dropping pollen as they go from flower to flower. [Honeybees](#) meticulously collect pollen on their legs and don't drop much because they have to carry it back to their hive. This results in an astonishing difference of pollination rate between the two bees. [Mason bees](#) pollinate 95% of the flowers they land on. Honeybees pollinate 5%.

There is no queen, and they don't make honey. Each solitary female bee finds her own nest, gathers her own food and each one lays all her own babies. Without a queen or hive to protect, they are docile and not aggressive. You can stand right next to a nesting block and watch them work. The males don't have a stinger and the females have a small one, but never use it as a defensive mechanism to protect them. The only time you could get stung is if you squish one and their sting doesn't have any anaphylactic venom, so bee allergies are not a problem.

When they lay an egg, it grows into a larva that eat the pollen loaf mom left and then spins a silk cocoon. Just like a butterfly, it will hibernate in that cocoon all summer and winter and then emerge the following spring as a full-grown bee. Mason bees only lay about 15 babies in their lifetime whereas a honey bee queen can lay up to 2,000 babies a day.

### **What was the impetus behind the creation of Rent Mason Bees?**

We get asked all the time “Rent bees? How does that work?” It may be a bit confusing, but hosts release bees into their yard and habitat and rent the nesting material. The rental part is that we do all the maintenance and cleaning of the block and bee cocoons. Many people don’t realize that this is a critical step when hosting solitary bees. Just like honeybees need maintenance, solitary bees do too. But with our rental program, you don’t have to do any of the maintenance. Your bees will lay babies in your nesting block and then send the block back and we’ll clean and remove all the predators. Our bees are sorted by region, so your “baby bees” will be all clean and ready to release the following spring.

**Who are your typical clients? Backyard homeowners or farmers (or both)?**

We work with backyard gardeners, school teachers who use our kits to teach kids about pollination, and people who want to make an impact in their area by helping release more pollinators and enrich their habitats.

**What is in the rental bee kit? When they are returned, how are they returning the next generation of bees?**

We provide two types of solitary bees. spring mason bees who emerge when temperatures reach 55-plus degrees and summer leafcutter bees who emerge when temperatures reach about 75-plus degrees. All kits will include a black house or shelter, nesting block, clay for mason bees, flower seeds, and about 60 bees snug in their cocoons. When bees emerge they will fly off and find natural holes in their habitat or lay eggs in your nesting block. In September, nesting blocks are returned, and we harvest and clean all the cocoons and blocks.

**How are the bees shipped and how do people determine what kind to get?**

We ship our bees using USPS Priority mail so that bees arrive quickly. They are protected by their cocoons and safe for transportation. Mason bees don’t do well in really hot weather, so we don’t sell bees to certain states.

## **What is the setup like and what upkeep is necessary?**

Solitary bees are very easy to set up. Simply hang your black house in a sunny morning spot, usually south-facing. Insert the nesting block, put the white tube on top of the block, and pull the tape off the hole. The bees will emerge once temperatures warm up and they'll crawl through the hole and find food.

There needs to be a mud source nearby for mason bees, so we provide you clay to mix with your soil. The only maintenance would be to make sure your clay stays damp and sticky. It's a great job for a child to "water the clay" and stir with a stick. Since you are renting the nesting block there is nothing you need to do throughout the season. We'll notify you when to swap blocks (switch from mason to leafcutter bees) and you'll send the blocks back in September. The rental service is where we do all the cleaning and maintenance of the bees and blocks.

## **Because these are spring/summer pollinators, why is this an important season as you clean the blocks and take orders for next year?**

Many people don't realize the importance of cleaning mason bees every fall. Predators, such as pollen mites, Houdini fly larvae, chalkbrood, and many other predators need to be removed from the nesting block in order to stop the population growth of predators. One of the big things we try to teach mason bee hosts that raise their own bees, you can't leave your nesting material out all year round. Mason bee blocks are removed at the end of spring and stored safely in the garage or shed. Summer predators can harm your bee population.

## **What questions/concerns do potential clients have?**

The No. 1 question we get asked is, "Why rent?" We realize that some people want the entire year experience of caring and cleaning mason bees, but for those who want to support bees and get their yards pollinated but not worry about cleaning all the mites and predators off cocoons, sterilizing the nesting blocks and storing over winter, they rent from us and we do all the



maintenance for you. The second question we get asked is “Do they make honey?” No, they do not.

### **What are the benefits to the ecosystem and to the individuals who take part?**

Solitary bees are incredible pollinators. Whenever they touch a flower, they are strengthening the tree or plant, which makes them grow stronger and bigger, resulting in better soil and cleaner air.



### **Do bumble bees play?**

***Jessica Murray*** *The Guardian*

Thu 27 Oct 2022 16.00 BST

Bumblebees are associated with lives of work rather than play, but researchers have for the first time observed the insects playing with balls for enjoyment, just like humans and dogs.

A team of UK scientists watched bees interacting with inanimate objects as a form of play and said the findings added to growing evidence that their minds are more complex than previously imagined.

Lars Chittka, a professor of sensory and behavioral ecology at Queen Mary University of London (QMUL), said bees were “a million miles from the mindless, unfeeling creatures they are traditionally believed to be”.

She added: “There are lots of animals who play just for the purposes of enjoyment, but most examples come from young mammals and birds. This research provides a strong indication that insect minds are far more sophisticated than we might imagine.”



The findings, [published in the journal \*Animal Behaviour\*](#), were based on a series of experiments where bumblebees were found to repeatedly roll balls when given the option, despite no apparent incentive to do so. Younger bees were found to roll more balls than older bees, while adult males rolled for longer than their female counterparts.

The researchers designed an experimental arena where 45 bumblebees were given the option of either walking through an unobstructed path to get a treat or going into areas with wooden balls.

According to the researchers, individual bees rolled balls between one and 117 times over the course of the experiment, and the repeated behavior suggested ball rolling was rewarding, the team said.

In further tests, another 42 bees were given access to two colored chambers, one of which contained wooden balls. When the balls were later removed, the bees showed a preference for the color of the chamber previously associated with the balls, proving the bees were moving the balls for no greater purpose other than play, the experts said.

The scientists wrote in the paper: “We found that ball rolling did not contribute to immediate survival strategies [and] was intrinsically rewarding.”

Samadi Galpayage, a PhD student at QMUL, and first author on the study, said: “It is certainly mind-blowing, at times amusing, to watch bumblebees show something like play. It goes to show, once more, that despite their little size and tiny brains, they are more than small robotic beings.”

The latest study builds on previous research by Chittka, which showed that bumblebees can be taught to score a goal in exchange for a sugary food reward.

Link to the video: <https://www.theguardian.com/science/2022/oct/27/bumblebees-playing-wooden-balls-bees-study>

## **Bee swarms create massive electrical charge**

### **A study measuring the electrical charge generated by bees found a shocking result**

27 October 2022

**Interview with**

Sam England, University of Bristol



**Bees are well known to create a buzz when they fly, but scientists were shocked to register an electrical charge build-up on swarming bees on par with a thunder cloud, as Will Tingle heard from Bristol University's Sam England...**

Sam - In our lab, we're really interested in the ways that, you know, animals and plants use this naturally occurring electricity that kind of exists all around us in their lives. So we are often both doing experiments or taking measurements with animals such as honeybees, but we also want to get a nice background measurement of the kind of naturally occurring electricity that's just in the atmosphere all the time. And one day we were doing some of these background recordings and it just so happened that one of our honeybee hives decided to swarm, which is when the queen of the hive, she flies away and makes a new nest somewhere else. And it just so happened that we captured this on our electric field sensor. We saw this massive spike. Obviously it wasn't the most controlled experiment ever, so that kind of told us that we should keep an eye out for next time. If there's going to be another honeybee swarm, we should be a bit more prepared with all of the recording equipment ready, all of the cameras to film the whole thing. So it was a bit of a happy accident really. But sometimes the funniest science works out that way. The main finding of our study is actually that it's pretty remarkably high. When these bees are on their own, we already know that they do carry a small amount of electric charge, and this actually helps them do things like pollination. For example, it allows pollen to jump from a flower onto a bee without any contact even being made. So we already knew that there was some small amount of charge on individual bees, but we've never measured an entire swarm. And it turns out when you measure a swarm, unsurprisingly, there's a lot more charge going on. And so at ground level where we made our measurements, the strength of this electric field is really comparable to the kinds of changes in electric field you see during thunderstorms.

Will - And as we search for renewable sources of energy, though, I'm assuming it wasn't enough to hook these bees up to a dynamo and maybe power our kettle.

Sam - I mean, you could definitely get something out of it. I don't know about a kettle, but you could maybe power like a very low power LED or something like that, perhaps.

Will - That's fair enough. What do you think causes these bees to generate this charge?

Sam - This is something that we're kind of trying to figure out and have been trying to figure out for quite a while. There are two main mechanisms that we think are probably behind it. The first one is something called triboelectricity, which is basically a really fancy word for friction, right? In the same way when you rub a balloon against your hair, the balloon becomes charged, your hair becomes charged, and you can move your hair around with it. We're thinking that maybe that's something that's going on. So as they fly through the air and their wings and body make friction with the air, but also with the body of the bee itself, that this charges them up. But we also think that possibly as they're flying around, they're also scavenging ions, so charged particles that are floating around in the air all the time, that they're kind of being focused onto the bee in that way. But the honest answer is that we really don't know.

Will - To postulate for a second, as you say, this is in the early stages of its development, but do you think that this electrical charge generation is only unique to bees? For instance, we have these large swarms of locusts. Would they be, do you think, generating the same sort of thing?

Sam - Yeah, I think definitely. So we've actually measured quite a lot of different insects including some, some locusts actually. And it's generally true that most insects tend to build up at least some amount of positive electric charge. So it's possible that it's quite a widespread phenomenon. What makes it really interesting with bees and locusts is that they do form these very big swarms and so their kind of collective charge can become very large.

Will - Obviously we want to look after our insects. It's important to know where they are in what numbers they're in. So if we know that they are generating electrical charge, do we have sensors that could potentially map or track our insects to better find out their distribution, maybe help preserve them a bit better?

Sam - With the honeybee swarms, it's likely that their effect on the electric field around them is going to be relatively local. So we're kind of talking within a few meters of where the swarm is. But locust swarms, for example, are much bigger and tracking them is also important because they cause

huge agricultural damage. And I think there is definitely a possibility that the kinds of sensors that we've already used in our study and that other people are using to record thunderstorm activity could be repurposed for tracking locust swarms. We've really neglected the influence of naturally occurring electricity in our understanding of the lives of animals and plants and I think this provides a really nice example of that, but I think there's so much more to be discovered, because electricity really is everywhere. It's not a man-made thing. You know, it's been around since before life was on earth. And so it kind of makes sense that a lot of animals and plants and other organisms would be exploiting it in some way.

## **Bizarre New Bee Species Discovered With Dog-Like Snout**

By CURTIN UNIVERSITY NOVEMBER 1, 2022

Specimen of new bee species, *Leioproctus zephyr*. Credit: Curtin University



A new native bee species with a dog-like “snout” has been discovered in the Perth bushland of Western Australia. It was identified through Curtin University-led research that sheds new light on our most important pollinators.

Dr. Kit Prendergast, from the Curtin School of Molecular and Life Sciences, named the new species after her pet dog Zephyr after noticing a protruding part of the insect’s face looked similar to a dog’s snout. The name also acknowledges the role her dog played in providing emotional support during her PhD. Dr. Prendergast is the author of a paper on the discovery that was published on October 31 in the *Journal of Hymenoptera Research*.

According to Dr. Prendergast, the rare and remarkable finding would add to existing knowledge about our evolving biodiversity. It would also ensure the bees, named *Leioproctus zephyr*, were protected by conservation efforts.

“When I first examined the specimens that I collected during my PhD surveys discovering the biodiversity of native bees in urbanized regions of the southwest WA biodiversity hotspot, I was instantly intrigued by the bee’s very unusual face,” Dr. Prendergast said.

“When I went to identify it, I found it matched no described species, and I was sure that if it was a known species, it would be quite easy to identify given how unusual it was in appearance.

“You can only confirm a particular species once you look at them under a microscope and go through the long process of trying to match their characteristics against other identified species, then going through museum collections.

“When perusing the WA Museum’s Entomology collection, I discovered that a few specimens of *Leioproctus zephyrus* had first been collected in 1979, but it had never been scientifically described.”

Dr. Prendergast said she was excited to play a role in making this species known and officially naming them.

“Insects in general are so diverse and so important, yet we don’t have scientific descriptions or names for so many of them,” Dr. Prendergast said.

“The *Leioproctus zephyr* has a highly restricted distribution, only occurring in seven locations across the southwest WA to date and have not been collected from their original location. They were entirely absent from residential gardens and only

present at five urban bushland remnants that I surveyed, where they foraged on two plant species of *Jacksonia*.

“Not only is this species fussy, they also have a clypeus that looks like a snout. Hence, I named them after my dog Zephyr. She has been so important to my mental health and well-being during the challenging period of doing a PhD and beyond.”

Dr. Prendergast was able to confirm that the new species was most closely related to other species of unidentified *Leioproctus* through DNA barcoding.

Reference: “*Leioproctus zephyr* Prendergast (Hymenoptera, Colletidae, *Leioproctus*), an oligoletic new bee species with a distinctive clypeus” by Kit S. Prendergast, 31 October 2022, *Journal of Hymenoptera Research*.  
[DOI: 10.3897/jhr.93.85685](https://doi.org/10.3897/jhr.93.85685)



## Club Info

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