



## Meet the SMUD Beekeepers

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Bees are a vital part of our ecosystem and important for human health and wellbeing. 1 in every 3 bites of food we take is supported by pollinators which include bees and also birds, butterflies, moths, beetles, flies and bats. Facing the combined threats of climate change and habitat destruction, pollinator populations are struggling to survive. SMUD's Biodiversity & Habitat Conservation Working Group members are addressing these challenges in many different ways. One of them is beekeeping.

SMUD hosts a small number of commercial beehives on a few of our properties throughout the region. And some of our colleagues here at SMUD are skilled beekeepers, tending to various numbers of hives and taking different approaches. Here are some highlights of their work and links where you can learn more.

# SMUD Beekeepers



## Ambrose Flores

Ambrose made his bee keeping dreams a reality in 2020, during the COVID-19 pandemic. He uses a “low touch” approach, which encompasses many aspects of his hobby. Ambrose checks in on his hives about once a month and tries to open the hives only when necessary, allowing the bees to do their thing. This minimalist approach also avoids the use of anything to kill mites or feeding the bees sugar water to supplement natural nectar sources. Ambrose believes so fully in his method that he doesn’t wear a bee suit or gloves! Yes, he does get stung regularly, but he doesn’t have much of a reaction. His feet do swell up when he’s stung below the knee.

What does he do with his honey? Ambrose believes that honey is for the bees, and only extracts extra honey from his hives. His hives still produce hundreds of pounds of honey annually that he gives away.



## SMUD Board Member Dave Tamayo

Board Member Tamayo recently retired from Sacramento County where he worked on pollinators, integrated pest management and helped create the River Friendly Landscape program. He now manages 7 honeybee hives. He’s enrolled in the UC Master Beekeeper Apprentice program and is a volunteer for swarm relocations with the Sacramento Area Beekeeping Association (SABA). He also recently became an Ambassador for the Xerces Society which promotes invertebrate conservation with a big focus on pollinators. Director Tamayo also works on native bee conservation with the Oregon Bee Atlas Master Melittologist Program. Melittology is the branch of entomology concerned with the scientific study of bees.

He keeps bees because it is a fun and interesting opportunity to apply scientific knowledge to a practical challenge. He began this journey assisting his fiancée Ariane in removing her lawn and replacing it with pollinator plants. Her appreciation for the creatures the pollinator plants attract to her yard led to the decision to add bee hives to her yard, and eventually to his addition of hives mainly for the pollination services they provide. His yard, pictured on the left, is a mixture of California native and other drought-tolerant plants.



He’s still in learning mode and enjoys figuring out the rhythm of the hives and adjusting his inspection schedule, treatments and honey harvesting accordingly. A side benefit is the honey, which he gives away to friends and as “thank you” gifts to neighbors who also maintain bee-friendly yards. He’s aware of, and concerned about the tension between urban beekeeping and native bee conservation (more on that on page 4) and is working to increase awareness of this issue via the SABA and his work with the Xerces Society.

# SMUD Beekeepers



## Ryan Hammond

Ryan began his beekeeping journey in 2006, with a single hive. He now has 2 hives and has taken care of all his bee keeping tasks by bike since 2008. When he started keeping bees car-free, he wrote an article published by the Sacramento Area Beekeepers Association (SABA) and Sacramento Area Bicycle Advocates (SABA) on the benefits of keeping bees by bicycle. Not only does he use his bike for picking up equipment, he also travels by bike for deliveries (where possible) and even for collecting swarms. He fabricated his own honey extractor using bicycle wheels, a 55-gallon food grade drum, and a ½" D-handled drill to spin the extractor. While he doesn't consider his hobby to be completely fossil fuel free, he sees significant carbon reduction and improved air quality for all by using only his bike.

Like many other beekeepers, Ryan uses the medium depth Langstroth design for his hives. The uniformity encourages bees to build their honeycomb within frames that can be safely removed. He only paints the corner and end grain of the hives to mitigate water absorption and to allow the hive to "breathe" easier through the hive walls. Ryan doesn't use a queen excluder or chemicals, and relies only on wild caught bees, relocating them from a swarm to a new hive. Having 2 hives helps Ryan monitor the health of his hives, as each one has a unique personality.



## Kaitlyn Bednar

Kaitlyn started keeping bees right before the COVID pandemic hit. Not surprisingly, she became even more dedicated during the pandemic and quickly learned new skills and expanded her hives from 5 to 100. She now helps with orchard pollination, education, swarm rescue and queen rearing.

Each Friday, she ventures out to her hives in West Sacramento, Placerville, Somerset or Rancho Cordova to check in on them. Kaitlyn tries to "interpret the bees' story" during her inspections and will make adjustments or fix any issues that she sees. Kaitlyn wears a bee suit depending on the season and the bees' behavior, but she still gets stung often. This is a good thing for a beekeeper because without regular stings, you could develop an allergic reaction. She also selects colonies with specific genetics that are both high in honey production and have a gentle nature to graft from and rear queen bees for other beekeepers throughout California.

On Saturdays from July through October, you can find Kaitlyn at the Sunrise Mall farmer's market selling her honey and beeswax products such as lotion and candles. You can also purchase her honey through her website, [restingbeefaceco.com](http://restingbeefaceco.com) and social media (@restingbeefaceco).



# Did you know?



## Honeybees vs. native bees

While we're highlighting the great pollination work of our SMUD beekeepers and their bees, we recognize that honey bees (*Apis mellifera*) are not native to California or even to the United

States. Many biologists consider them an "invasive" species which competes with native species for nectar resources and can force native bees to travel longer distances for food. Native pollinators play an important role in maintaining healthy food supply so their decline threatens human health.

Even small native garden plots or native plants in containers can make a difference and help expand the native bee habitat in the built environment.

Here are the best ways to create habitat for native pollinators:

- Replace turf with a variety of native plants, shrubs and ground cover.
- Select plants thoughtfully so that something is in bloom throughout the year.
- Use rakes instead of leaf blowers, which disturb ground nests.
- Allow some ground to remain unmulched and bare, to provide nesting sites for ground nesting bees.
- Eliminate (or carefully target) pesticide use.
- Provide water in a shallow fountain or birdbath.
- Join the Homegrown National Park program! More information on that below.

## Beehave!

Bee behavior can vary depending on the species and whether they are captive or wild. Depending on the time of year and temperature, bees can behave differently. In spring, when nectar and pollen are widely available, bees are generally

calm. If bees are harassed by a predator or it's later in the year when food sources are scarce, they can become more aggressive.

Ryan Hammond caught a wild hive once that exhibited some problematic characteristics that he had never seen before or since. Bees are normally "protective" of their hive, but this particular group displayed an exceptionally high level of aggression. The bees would occasionally chase a perceived threat down a city block and had powerful memory, even extending into the following day. The hive was also extremely prolific and grew much faster than a normal hive. Thankfully, this hive was an anomaly.

## Liquid gold

- Like any other food, honey varies in taste based on season and location.
- Depending on what's in bloom in the area around a hive, the honey produced will exhibit a wide variety of flavors.
- Lighter honey is produced in spring and most robust honey is produced in fall.
- A typical colony in our area can produce 20 to 100 pounds of honey.



# Did you know?

## Queen bee

- Queen bees are responsible for laying fertilized eggs and are the only female bees in a hive capable of doing so.
- Queens can die suddenly or even be killed by the hive.
  - When this happens, a new queen needs to be introduced if the colony does not produce on their own.
  - This can be done by giving a colony eggs, and they'll establish a new queen.
  - A queen that has already been mated can also be introduced. This occurs over a period of 3 days while the mated queen is safely placed in a queen cage that protects her and allows the worker bees to slowly get acquainted to her pheromones.
- Breeding queens is a good way to create queens with different or coveted genetics.

## Local beekeeping organizations and resources

- Sacramento Area Beekeepers Association
- The Bee Box
- Sacramento Honey Company
- SolaBee Farms



**THE BEE** Box



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## Do you host native plants where you live?

The Homegrown National Park programs aims to expand biodiversity, 1 plant and 1 person at a time. If you already have native plants in your garden, even if only 1, you can become a part of the program. Potted plants on patios or balconies also help support pollinators. You can even join if you are still planning your native plant garden! Find out more and get on the map at [homegrownnationalpark.org](http://homegrownnationalpark.org)



This fact sheet brought to you by the SMUD Biodiversity & Habitat Conservation Working Group. To find out more, contact Kathleen Ave at [Kathleen.Ave@smud.org](mailto:Kathleen.Ave@smud.org)