



# The Bee Line

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Newsletter of the Oregon State Beekeepers Association



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**Image above:** "Flowers are a proud assertion that a ray of beauty out values all the utilities in the world."

—Ralph Waldo Emerson

## State of Honey Bee Colonies Employed for Almond Pollination and Research Plans for 2023

Ramesh Sagili, Oregon State University Honey Bee Lab

Hope you are all doing well and your bees have survived the winter.

You may have heard that many commercial beekeepers across the nation may have lost large numbers of colonies this past winter. I wanted to take this opportunity to provide some insights regarding these significant losses, so that you are aware of the status and understand the repercussions. Based on what I have gathered from our beekeepers in Oregon (who have almond pollination contracts) and a few California beekeepers, colony losses (nationwide) appear to be significantly higher compared to last year, if not catastrophic.

We do not have the colony loss statistics available yet. It appears that some almond farmers were struggling to meet their demand for colonies, but the majority of them were able to secure needed colonies for pollination. Further, this year the majority of the beekeepers in almonds appeared to have delivered relatively smaller colonies (6–8 frames average) compared to past several years (approximately 12 frames average). As usual, there appears to be no clear single factor that could be attributed to these smaller colonies/dead colonies. Based on discussions with several beekeepers, potential factors appear to be inclement weather during last spring/fall resulting in poor bee forage, Varroa/viruses, and pesticide exposure.

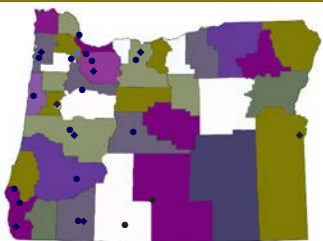
Each region in the US appears to have a different factor playing a major role in colony declines or smaller colonies. For instance: in the Willamette Valley the weather during 2022 April/May was rainy, cold, and cloudy, so the colonies that came from almonds that were strong swarmed and were unable to successfully requeen due to poor mating weather. The beekeepers were unable to rectify these colonies in time and hence saw cascading negative effects ripple into fall/winter. The poor weather also resulted in poor forage. Idaho beekeepers also had forage dearth last fall that affected their colony growth resulting in relatively smaller colonies during fall/late fall. I heard that the beekeepers in Florida and Georgia also had relatively smaller colonies going into almonds, as they had poor weather during December that resulted in population decline of foragers.

There is also some talk about colony losses being highest among beekeepers who regularly overwinter their colonies indoor in sheds. This is a bit surprising given that beekeepers who move their colonies indoors for winter generally claim to have relatively lower losses compared to beekeepers who leave their colonies outdoors.

Project Apis m. (PAm) has sent a questionnaire to commercial beekeepers pollinating almonds to assess the extent of colony losses that might provide more insights soon.

*Continued on page 3*

## OREGON STATE BEEKEEPERS ASSOCIATION EXECUTIVE COMMITTEE



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### • AFFILIATED REGIONAL ASSOCIATIONS

#### Central Coast Beekeepers Association

Meets 1:30 PM, fourth Wednesday, Newport  
Co-Vice President: Pat Wackford—pwacky@charter.net  
Website: www.ccbaor.org

#### Central Oregon Beekeepers

Meets 6:00 PM, fourth Tuesday, Bend  
President: Allen Engle—aengle@bendbroadband.com  
Website: www.cobeekeeping.org

#### Columbia County Oregon Beekeepers

Meets 6:00 PM, first Thursday, St. Helens  
President: Linda Zahl—503.799.7073

#### Columbia Gorge Beekeepers Association

Meets 6:15 pm, third Wednesday, Hood River  
President: Jerry Frazier—jerry1.frazier@gmail.com  
Website: gorgebeekeepers.org

#### Coos Beekeepers Association

Meets 6:00 pm, fourth Thursday, Myrtle Point  
President: Ann Marineau—annmarineau@gmail.com

#### Klamath Basin Beekeepers Association

Meets 9:00 AM, last Saturday, Klamath Falls  
President: Lorena Corzatt—541.892.8402  
Website: www.klamathbeekeepers.org

#### Lane County Beekeepers Association

Meets 6:30 PM, third Tuesday, Eugene  
President: Fonta Molyneaux—wildeverlastingfarm@gmail.com  
Website: www.lcbaor.org

#### Linn Benton Beekeepers Association

Meets 6:30 PM, third Wednesday, Corvallis  
President: Steve Oda—steve@lbba.us  
Website: www.lbba.us

#### Oregon Prison Beekeepers

Program Manager: Chad.E.Naugle@doc.state.or.us

#### Oregon South Coast Beekeepers Association

Meets 6:00 PM, third Thursday, Gold Beach  
President: Maarten Van Otterloo—maartyvo@gmail.com

#### Portland Metro Beekeepers Association

Meets 7:00 PM, second Thursday, Gladstone  
Pres: Paul Stromberg—president@portlandmetrobeekeepers.org  
Website: portlandmetrobeekeepers.org

#### Portland Urban Beekeepers

Meets 7:00 PM, first Wednesday, via Zoom  
President: Brent Hiram—president@portlandurbanbeekeepers.org  
Website: portlandurbanbeekeepers.org

#### Southern Oregon Beekeepers Association

Meets 6:30 PM, first Monday, Central Point  
President: Noah Clipp—noahitus@gmail.com  
Website: southernoregonbeekeepers.org

#### Tillamook Beekeepers Association

Meets 11:30 AM, second Saturday, Tillamook  
President: Brad York—dbradleyork@gmail.com  
Website: www.tillamookbeekeepers.org

#### Tualatin Valley Beekeepers Association Inc

Meets 6:00 PM, last Tuesday, virtually-North Plains  
President: Debby Garman—tualatinvalleybeekeepers@gmail.com  
Website: tvbabees.org

#### Umpqua Valley Beekeepers Association

Meets 6:00 PM, first Wednesday, Roseburg  
President: Adrian Aramburu—adrockz@msn.com  
Website: www.umpquavalleybeekeepers.org

#### Willamette Valley Beekeepers Association

Meets 7:00 PM, fourth Monday, Salem  
President: Richard Farrier—rfarrierfarms@gmail.com  
Website: wvbahive.org

Our PNW colony loss survey was mailed recently. I urge you to complete that survey at your earliest convenience, so that we can have a better picture of colony losses in Oregon and the Pacific Northwest.

Double whammy: Further, the inclement weather in California in February/March added insult to the injury when bees arrived for almond pollination. Almond bloom was delayed due to bad weather, and hence bees did not get the usual quick boost (colony growth) in time that they normally get from incoming almond pollen. At the time of writing this article, parts of California are still receiving snow and rain. California got back-to-back storms this year, which was good to relieve the severe drought the state is facing, but it has affected honey bee colony growth and potentially almond yields, which we will not know until a bit later. Some California beekeepers were joking that they would prefer to be in Oregon rather than in California this winter, as they witnessed these unusual storm systems.

This unusual weather pattern in California could result in smaller size colonies, as they did not brood as much as expected due to suboptimal foraging weather. This might affect beekeepers involved in nucleus hive sales and package bee sales. Even the queen breeders in California are having trouble getting enough drones produced for mating due to poor weather, which in turn may delay supply of queens from these California producers. Therefore, beekeepers looking for queens this spring should anticipate a delay of about two to three weeks. Many beekeepers have also been feeding sugar syrup often to their colonies in almonds this year,

thereby adding more labor and feed expenses. At the time of writing this article, it appears that the bees will be released from almond orchards almost two weeks late compared to previous years. This late release could also affect prior plans of beekeepers pollinating downstream crops such as blueberries, pear, and cherries.

I would also like to provide a quick update on research plans for 2023. Following are the studies planned for 2023:

- (1) Study to establish pollen nutritional composition database (we still need volunteers to collect pollen in spring, summer, and fall, so please contact me asap).
- (2) Flight cage (semi-field) study to understand the sterol requirements of honey bees.
- (3) Evaluating efficacy of amitraz (Apivar) via large-scale field study using commercial honey bee colonies.
- (4) Testing some effective Varroa control product regimens to find an optimal regimen for Oregon beekeepers.
- (5) Evaluating efficacy of commercially available protein supplements (digestibility and assimilation).

Please feel free to contact me if you would like to know more about these studies or would like to provide your input.

Hoping for and wishing you all a productive bee year. Thank you all for your support for our honey bee research and extension program.

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## Message from the President

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It sure seems to me that winter is not giving up. Last year we were done making nucs March 8 in California, and if you recall we thought we had a tough winter with cold weather during the almond bloom. Now this year it seems to be even more challenging. The weather in the whole state of California has been wet, cold, and snowy. The bees have not had much of a chance to build up so that will make it difficult to make nucs and packages. I doubt that the Northern California queen producers will have queens the first part of April. I'm writing this on March 9. I had a peach grower call me today and ask for bees next week. I guess those bees are going to need fur coats and snow shovels. I guess I'm getting cabin fever. I'm wanting to go out and work bees and make splits, maybe I should go prune some fruit trees. Spring will happen in its own time, and then I will be complaining about not having enough time for all of my beekeeping tasks. Sometimes it's hard to keep a things perspective, the weather will get better and then we will be all smiles.

*Joe Maresh*

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### Bee Weekend

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## Comparison of Varroa Mite Testing Methods: Alcohol Wash, Powdered Sugar Shake, and Carbon Dioxide

Paul Stromberg

### Introduction

*Varroa destructor* and the viruses it vectors present some of the most difficult problems facing beekeepers today. Recent surveys have shown up to a 40% annual colony loss in the United States, much of which is either directly or indirectly attributed to Varroa. Management is challenging and requires one to frequently monitor mite levels. A number of methods for monitoring mites have been developed. These include soapy water/alcohol wash, ether roll, powdered sugar shake, direct examination of pupae, sticky board monitoring, and CO<sub>2</sub> monitoring. Of these methods, the alcohol wash and sugar shake have been shown to be fairly accurate and have become very popular. There have been limited commercially available CO<sub>2</sub> testing kits. The alcohol wash method has the disadvantage of killing the bees tested and risks associated with using a highly flammable liquid. Sugar shake is messy and time consuming. Carbon dioxide has been used as a fast-acting anesthetic for honey bees. It has the potential advantages of being a nonlethal, quick, and clean method of testing mite levels. As part of my Master Level Certification in the Oregon Master Beekeeper Program, I worked with Dr. Ramesh Sagili and the OSU Honey Bee Lab to compare the efficacy of alcohol wash versus sugar shake and CO<sub>2</sub>.

### Materials

We used testing materials that are readily available, easily constructed or obtained. For the alcohol wash testing, we chose the “Varroa easyCheck” by Vétô-pharma (Figure 1). This is a common alcohol wash kit sold by most of the large bee supply companies. For the powdered sugar shake we used a pint Mason jar fitted with #8 mesh screen held by the ring lid (Figure 2). For the CO<sub>2</sub> testing we used a 4-inch white



Figure 1

Figure 2

Figure 3

PVC pipe fitted with end caps. On the inside 1 inch above the bottom of the pipe, a #8 mesh screen was attached with hot melt glue. Several exhaust holes were placed above the mesh and one CO<sub>2</sub> insertion port placed above (Figures 3–4). The CO<sub>2</sub> source was a 20-oz refillable paintball canister with valve, hose, and injector (Figure 5).



Figure 4



Figure 5

### Methods

We selected 10 colonies to be part of the study. These colonies were not treated for Varroa as we felt that the testing would have greater statistical significance if the mite levels were higher. We waited until mid-August as that is typically a time when the Varroa levels are peaking. When designing the experiment, we felt that there could be sample variability that might influence the results. In order to try and minimize this we did several things. First, we decided to take 3 samples each of the 3 mite testing methods. The samples were taken only from frames that had a significant amount of brood. This required 9 samples per colony or about 5 frames of brood and bees. Second, we placed all the bees to be sampled in a single large tub prior to testing to allow the bees to mix and to become more uniformly distributed. By the time the study was performed on August 17, 3 of the colonies were not strong enough to provide the necessary samples. Three alternate colonies that had been treated once for mites were used instead.

Each colony was opened, inspected, and had 5 frames of brood and bees removed. Care was taken to locate and isolate the queen. The frames were then shaken into a large tub. A sample consisting of 1/2 cup or approximately 300 bees was placed in each of the 9 testing containers. The testing was then divided up into 3 teams each doing one of the test types. For the alcohol wash using the Varroa easyCheck, 70% isopropyl alcohol was placed completely covering the bees up to the indicated line. The container was then gently shaken and swirled for 60 seconds. The filter containing the bees was removed and the bees discarded. The bottom container was held up to the light and the mites counted. The alcohol was run through a fine filter to remove the mites to be reused. For the sugar shake, 2 tablespoons of fine loose powdered sugar was placed through the #8 screen completely covering the bees. The container was allowed to sit for 60 seconds. The container was then inverted over a white tub and shaken for 60 seconds allowing the residual sugar and mites to fall into the tub. The bees were returned to the hive. A small amount of water was placed in the tub to dissolve the sugar allowing visualization of all the mites. The mites were then counted. The container was cleaned and dried. For the CO<sub>2</sub>, the gas was carefully

*Continued on page 13*



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## Keeping Bees in April

Max Kuhn

April is generally a happy time in the apiary of most beekeepers. Full of hope, thankfulness, and wonder. Hopefulness for the future season's success in each of our own endeavors. Health of the honey bees being at the top of the list for most beekeepers. Followed by success at their own pollination efforts, or efforts at queen rearing, honey production, pollen collection, and all the many other reasons why we keep bees. We are also thankful. Thankful for the colonies that survived the winter as most do. Sadly, some do not. But the memory of those that do not survive will soon fade and that sadness will be replaced with optimism for the future. Wonder is on many beekeepers' minds this time of year as we open our hives for the first time in several months. Wonder and amazement at what we see inside the hive. All the worker bees going about their duties in spite of our clumsy intrusion into their home. The sight of the queen going about her work with the majestic dignity that only the queen can display. All while being respectfully followed about by her loyal retinue. It is truly an amazing world inside the hive and never more amazing than in April. I look forward to it each year.

So what will we do on our first visit inside the hive this year? Well . . . As all the experienced beekeepers (all together now!) are saying in unison, "THAT DEPENDS." Yes, it does depend. But considering the limitations on time and space for this article

I will only make a short list of things you may want to consider on your first visit inside the hive this year. I will attempt to list them in their order of priority.

- #1 – Evaluate the overall health of your colony.
  - \* Is it warm enough? (60°F or above)
  - \* Disease present? Mite count? Test? Treat?
  - \* Population? Large, small, or appropriate to the season?
  - \* Queen Right? Observed or Suspected? Marked?
  - \* Brood? Eggs, Larvae, Pupae?
  - \* Food Supply? Nectar, Capped Honey, Pollen?
  - \* Bottom box empty of brood?
  - \* Boxes rotated?
  - \* Hive closed up in 15 minutes or less?
- #2 – Log book updated after today's evaluation? Bloom log?

More comprehensive, printed, check-off sheets are available from different bee supply companies as well as some bee associations, the Oregon Master Beekeeper program website, and other outlets. If you want to try one, seek them out and choose the design you like.

Happy beekeeping and good luck with your bees.

### A Favorite Honey Bee Plant: April

Glen Andresen

Scientific name: *Acer macrophyllum*

Common name: bigleaf maple

Portland-area bloom time: March, April

I live in the city and often tout to beekeepers of all experiences the benefits to our bees of the myriad plants that gardeners tend to almost year-round. We gardeners want variety, color, and something to do just about every month of the year, including watering plants during droughts and protecting them in extreme cold. But what city-dwelling honey bees don't have access to is acres and acres of forage.

Or do they?

I would argue that our tree-lined city streets are the somewhat-equivalent of acres and acres of forage, and my favorite blooming plant this month is the native bigleaf maple tree, the largest leaved maple species in the world. These behemoths can grow up to 100 feet tall and about that across. They produce both pollen and nectar in late March and April and are a great resource for our rapidly expanding brood nests this time of year. Oftentimes the



Bee on bigleaf maple bloom.

rainy weather hampers the bees' ability to do forage, but when they can get out, we beekeepers are rewarded with excellent brood expansion, and to my taste buds, one of the most delicious light honeys out there!

## BEEKEEPER EVENTS

### — 2023 —

April 29 (8:30 AM–5 PM)–Sunday, April 30 (10 AM–5 PM): Oregon Ag Fest. Oregon State Fair & Expo Center. Salem.

May 20: World Bee Day. Efforts of the Government of Slovenia with Apimondia support led the UN General Assembly to declare 20 May as World Bee Day in 2018. The date coincides with the birthday of Anton Janša, who pioneered modern beekeeping techniques in his native Slovenia in the 18th century.

June 19–25: Pollinator Week: Pollinators and Climate Change. *Information:* <https://www.pollinator.org/pollinator-week>. (Let us know how you participate this year!)

July 31–August 4: Eastern Apiculture Society Conference, Past, Present and Beyond. Amherst, Massachusetts. *Information:* [easternapiculture.org/conference/eas-2023/](http://easternapiculture.org/conference/eas-2023/).

August 25–September 4: Oregon State Fair. Oregon State Fair & Exposition Center. Salem.

September 4–8: 48th International Congress, Apimondia. Santiago, Chile. *Information:* <https://apimondia2023.com/>.

September 29–October 1. 2023 WAS International Conference. Calgary, Canada. *Information:* <https://www.westernapiculturalsociety.org/webinar-registration>.

October 7–8: WASBA Pacific Northwest Beekeeping

Conference. Olympia Hotel at Capitol Lake, Olympia WA. *Information:* <https://www.eventbrite.com/e/wasba-pacific-northwest-beekeeping-conference-tickets-549671541377>.

October 27–29: OSBA 2023 Fall Conference. The Riverhouse Hotel & Convention Center, Bend. *Information:* <https://orsba.org/osba-fall-conference/>.

Conference Volunteers Wanted! The OSBA Conference Committee is looking for volunteers. We are currently seeking individuals to join the Committee who are interested helping with the following:

- Audio/Visual
- Registration and Information Desk
- Auctions and Donations
- Honey Judging

Please contact OSBA Vice President Jeremy Mitchell at [osba.vice.president@gmail.com](mailto:osba.vice.president@gmail.com) for more information.

November 14–16: 2023 California State Beekeepers Association Annual Convention. Hilton Orange County/ Costa Mesa. *Information:* <https://www.california-statebeekeepers.com/annual-convention/>.

**Note:** See also respective regional association events in the following reports. Let us know what you have shared and learned!

## Some Recent News . . .

Project Apis m. sponsored the virtual option for the American Beekeeping Federation's recent conference and has made recordings of general session presentations available on their YouTube channel, including those listed below. (Thank you!)

### 2023 ABF Conference General Session

Dr. Diana Cox-Foster, **Ensuring Healthy Pollinators for Crop Production: Defining Forage Needs of Bees Through Examination of Interactions of Bee Species and Pollen Use:** [https://www.youtube.com/watch?v=Y6e5gHA7D\\_s](https://www.youtube.com/watch?v=Y6e5gHA7D_s)

Dr. Diana Cox-Foster, **Bee Health: Untangling the Impacts of Agrochemicals and Pathogens:** <https://www.youtube.com/watch?v=aUbKFPn2bO0>

Dr. Samuel Ramsey, **Pollinator Pandemic:** <https://www.youtube.com/watch?v=jlhvHavThxA>

Dr. Jay Evans, **Understanding and Managing Honey Bee Diseases:** <https://www.youtube.com/watch?v=q9L5UVB4hSI>

Dr. Scott McArt, **Disease Transmission and Spillover in Plant-Pollinator Networks:** <https://www.youtube.com/watch?v=i1WUxk9HZU8>

Dr. Garrett Slater, **What Causes “Dud” Drones?:** [https://www.youtube.com/watch?v=5q7\\_rJz\\_lmU](https://www.youtube.com/watch?v=5q7_rJz_lmU)

Danielle Downey, **Project Apis m. Research and Programs Update:** [https://www.youtube.com/watch?v=132cl\\_i1zVA](https://www.youtube.com/watch?v=132cl_i1zVA)

Megan MaHoney, **Commercial Beekeeping as a Platform for**

**Selection:** <https://www.youtube.com/watch?v=6iff0d3aUxU>

Randy Oliver, **Scientific Beekeeping: Beekeeper Funded, Applied Research:** <https://www.youtube.com/watch?v=jK1Zf306nt0>

Recent weeks have been notable for continuing pollinator stories from multiple sources of “mainstream” news in addition to ongoing accounts of losses. The losses are hard, must be tracked, researched, and responded to—no question. Keep good records and complete those surveys! Yet these other reports provide glimpses of the profound intelligence that we know is fundamental to the life of bees. A couple of these are:

**Media Report:** <https://www.bbc.com/news/uk-64884107>

**The Study:** <https://journals.plos.org/plosbiology/article?id=10.1371/journal.pbio.3002019>

**Citation:** Bridges AD, MaBouDi H, Procenko O, Lockwood C, Mohammed Y, Kowalewska A, et al. (2023) Bumblebees acquire alternative puzzle-box solutions via social learning. *PLoS Biol* 21(3): e3002019. <https://doi.org/10.1371/journal.pbio.3002019>. Published: March 7, 2023.

**Media Report:** <https://www.cnn.com/2023/03/09/world/ bees-waggle-dance-scn/index.html>.

**The Study:** <https://www.science.org/doi/pdf/10.1126/science.ade1702>

**Citation:** Shihao Dong, Tao Lin, James C. Nieh, Ken Tan (2023) Social signal learning of the waggle dance in honey bees. *Science* 379, 1015–1018. Dated: 10 March 2023.



## REGIONAL NEWS

### Regional Representative

#### Southwestern Oregon

In Southwestern Oregon, 2023 is looking like a good year to be Carniolan. Since the mid-1800s, the Rogue Valley has been known to have several weeks of warmer weather in late January/early February. This gives our bees a reprieve from winter, with abundant pollen from creekside trees. This year's West Coast cool/moist weather has limited foraging, but has given moisture with promise of a good honey year. Hives with large populations have consumed much of their honey stores. Local beekeepers are monitoring weights and feeding light hives. With a cooler start to the year, hive growth has been slower and we are expecting swarming to be delayed. Likewise, colony splits and nucleus colony production will occur a little later than usual.

Southern Oregon Beekeepers Association is organizing Bee School for new beekeepers April 15. The association will also be purchasing a third extractor to meet the needs of our growing membership. We also are fortunate to have a number of beekeepers providing quality nucleus colonies who can be found on our website ([www.southernoregonbeekeepers.org](http://www.southernoregonbeekeepers.org)).

*Andrew Watson*

### Regional Associations

#### Central Oregon Beekeepers Association

As usual, we seem to be getting a majority of our snowfall in March and April. Apparently, the moisture content is getting up towards average in some places, but may not be helping with our longer term drought. We're hoping it's enough that more of our local farmers will get their water allotments.

The cycle is starting again. We had our early bulbs in the later part of March. This month, we'll be starting to see more of the early flowers and bulbs in town with some of the trees, maples and birches, flowering as well (in a schadenfreude way, we can tell when they are blooming because some folk's allergies start to kick in). On this side of the mountains, however, the "green" doesn't really kick in until late in April or early May, so many folks will take a "health day" and drive over to the valley to get their early season dose of green and spring.

In March, we had a talk about laying workers and drone laying queens. In April we're excited to hear from a prior commercial beekeeper about spring prep and equalizing. In March, we also provided a beginner Beekeeping Course to our members and public. This year, one of the goals for COBKA is for more hands-on experiences for a variety of levels of experience. We also, with help from a local expert, updated our bylaws. It was a seemingly daunting task, but important step, and will provide a

better foundation for us to operate from in the future.

Please accept our invitation to attend any of our meetings. They are usually held on the 3rd Tuesday of most months, starting at 6 PM at the Environmental Center in Bend. *Allen Engle*

#### Coos Beekeepers Association

In Coos Bay, snow accumulation, with extended freezing temperatures, is sporadic at best, but that's where we are—hoping spring arrives soon.

Driven by our mission statement, we currently are working on five projects: 1. Make improvements to the club apiary, 2. Offer scheduled hive inspections at the apiary for members to observe or participate in, 3. Plan displays, activities, and handouts for local events (festivals, fairs, conferences . . .) to promote the association and share the beekeeping experience, 4. Raise funds for projects by holding a raffle for a horizontal hive, and 5. Continue offering speakers and open discussions at our monthly meetings.

Our area is seeing many folks trying beekeeping for the first time and our local experienced beekeepers are stepping up by sharing knowledge, becoming mentors and offering assistance. Coos Beekeepers continue to grow. *Ann Marineau*

#### Lane County Beekeepers Association

Greetings fellow beekeepers! The LCBA has been active over the winter months preparing for another season of presentations, events, and educational opportunities for our community. We have several new board members, and folks taking on new jobs and responsibilities. We started our season off in January with our yearly presentation by Dr. Ramesh Sagili offering insights into new & ongoing research coming out of the bee lab at OSU! Our February meeting featured Early Spring Management by longtime beekeeper Judy Scher, and in March I'll be offering a presentation on my favorite aspect of beekeeping: Making Splits and Nucs. We have a great lineup of speakers ahead and the enthusiasm for spring and our beekeeping season is shared even if this late winter weather is disheartening! We know how fast Oregon can pivot between extremes! Spring is coming!

*Fonta Molyneaux*

#### Portland Metro Beekeepers Association

With a mixture of sunshine, rain, sleet, and snow in late February and early March, our bees are raising brood and waiting patiently for spring. The photo [page 11] was taken last year the day after my two nucleus colonies arrived! Now is a good time to prepare for our colonies with prepped woodenware, clean and disinfected hive tools, washed suits, jackets, and gloves for this season. We have published Dave Schwartz's "Seasonal Beekeeping Calendar" as a public link on our website to help guide us. We are reminded to continue to check hive weight to assess honey reserves and augment if needed, as this is the time of

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year colonies will starve. Bees are out and bringing in pollen with days above 45 degrees. In my yard, hellebore, snowdrops, and crocus are in bloom.



Our February speaker was Zee Searles Mazzacano, a scientist, educator, and naturalist with a PhD in Entomology from the University of Minnesota. She presented a passionate lecture on the “sociality of bees,” reminded us of the many native bees (3500–4000 in US/Canada) in our own backyards, provided an extensive review of social and solitary bees, their life cycle, reproduction, habitat, nest structure, and pollinating habits. I was unaware that wild bees account for 23% of our food pollination. She suggests inviting more wild bees to your own garden by providing patches of thin mulch, leave hollow twigs, pine cones, shells, and stones for nesting habitat.

In early March we joined our neighbor bee club, Portland Urban Beekeepers, for a Zoom presentation by Frank Rinkevich from the USDA regarding Amitraz resistance.

Our March lecture with Andony Melathopoulos was held at our new location in Clackamas. Andony is an associate professor in Pollinator Health Extension in the Department of Horticulture at Oregon State University and has a weekly PolliNation podcast. He discussed strategies to reduce swarming which is perfect timing, and timing is key! As we know, a swarm is the product of a honey bee colony’s genetically embedded desire to reproduce or multiply. Andony reminds us that the change from winter bees to summer bees is quick and that we must stay ahead of colony growth to decrease swarming. All PMBA lectures are recorded for members on our website.

This is the perfect segue to the PMBA swarm list, which is available to its members. This was developed last year, utilizing a call-in hotline that routes the caller to a beekeeper in their area. Our swarm list is going live this month.

Upcoming events include our queen rearing classes that begin April 21 for two weekends and are led by Paul Stromberg and Joe Maresh. Attendees will have a didactic Zoom lecture followed by a practice grafting session and then a queen grafting session on the 29th. The association plans to participate in the Clackamas County Master Gardener Spring Fair in Canby the first weekend in May.

Our “Bee Day” is fast approaching on May 13 this year, a later date this year with hopes for improved weather for hive inspections. We will return to Hansens’ apiary at Foothills

Honey Farm in Colton. This is a full day of honey bee related activities, including educational lectures, hands-on colony observation/inspections, lunch, and raffle with prizes. This is an excellent event for new beekeepers to be in the bee yard under the guidance of skilled beekeepers. This is all made possible by PMBA volunteers and the generosity of the Hansen family. Space is limited so we recommend early registration. Registration forms are available on our website [www.portlandmetrobeekeepers.org](http://www.portlandmetrobeekeepers.org) Finally, a reminder to fill out the PNW honey bee survey during the month of April at [www.pnwhoneybeesurvey.com](http://www.pnwhoneybeesurvey.com).

*Sandi Collis*

### Umpqua Valley Beekeepers Association

We have an official new name! Douglas County Bees is now the Umpqua Valley Beekeepers Association (UVBA)! We started the year with a new name, website, gmail, and Facebook page. All of our updated info can be found on our new website: [www.umpquavalleybeekeepers.org](http://www.umpquavalleybeekeepers.org). The new Swarm Hotline is (541) 236-4732 and our business line is (541) 236-5952.

With new board members, Adrian Aramburu (president), Charley Moyer (vice president), Kimberly Kinney (secretary/education coordinator), and Cynthia Moyer (treasurer/social media), as well as Ivory LosBanos (events), Tony Beerbohm (community liaison), and Ian Fuller (swarms chair), the UVBA will focus on educating the public on the importance of pollinators—especially the honey bee, and mentoring our members from swarm season through honey flow, all the way to tucking their girls in bed for winter.

We plan to have speakers, field trips to members’ hives, trips to gardens to discuss gardening for pollinators, and we’ll soon start up our new Beeks Academy for members, with both summer and winter sessions. Our March meeting was a hands-on learning session about how to catch a swarm, from arrival at the swarm location to how to treat the property owner, human safety, equipment needed to safely bring the new bees home, and what to do to encourage them to stay.

We’re also busy setting up our festival season, which so far includes the Glide Wildflower Show in April, Douglas County Master Gardener Plant Expo in May, Elkton Blooms & Butterflies in June, Growing Miracles Lavender Festival in July, and the Douglas County Fair in August. We’re ordering the new festival banners, and already fielding more calls for future tabling events, appearances, and people interested in having beehives put on their farms. I taught a Honey Bees in Your Garden class for the Douglas County Master Gardener’s “Spring into Gardening” one-day workshop on March 11 and brought some UVBA friends to assist in the class. It was such a fun day!

By our third meeting this year, we had 30 new members and seven guests, which is a great start to 2023.

We’re definitely excited for spring to come! *Cynthia Moyer*

## Reminders and Updates . . .

### LIABILITY INSURANCE FOR EVENTS

Affiliated associations seeking a certificate of liability insurance for events this year, please remember: (1) Events must be announced prior in media such as newsletter or website. (2) The information needed for making the request is Date, Time(s), and Place of the event, AND the Name, Title, email address, and Phone number of the Person in charge of the facility. (3) When this information has been gathered, contact Harry Vanderpool at shallotman@yahoo.com to request the certificate.

### APIARY REGISTRATION

Every person who owns, or is in charge of, five or more colonies of bees located within the state or Oregon, must register each year with the Oregon Department of Agriculture. The form needed to register colonies is located at: [apps.oregon.gov/SOS/LicenseDirectory/LicenseDetail/606](https://apps.oregon.gov/SOS/LicenseDirectory/LicenseDetail/606) or obtained in person by visiting: 635 Capitol Street NE, Salem OR 97301.

The current cost of apiary registration is \$10 with an additional charge of \$0.50 per colony for five or more hives. After July 1, the registration fee will increase to \$20. The fee per hive remains at \$0.50 per colony for five or more hives. The number of colonies that must be registered is equal to the highest number of full strength colonies managed within the state at any point during the previous year, prior to the registration deadline of June 1.

All money collected from apiary registration shall be spent on research at the OSU Honey Bee Lab predominantly focused on honey bees ([honeybeelab.oregonstate.edu](https://honeybeelab.oregonstate.edu)).

### SWARM CALL

The swarm call list is open, and people are indeed signing up—yet another welcome promise that spring is on the way! Please note that a few things are required—each and every one of which has already not been provided in one form or another from beekeepers asking to be listed for 2023. There are five:

1. Name (member): \_\_\_\_\_
2. Phone Number: \_\_\_\_\_
3. Text (yes or no): \_\_\_\_\_
4. Fee (yes/amount or no): \_\_\_\_\_
5. Up to 10 locations for listing (i.e., no more than 10; city/city denotations count as two): \_\_\_\_\_

We can do this! The list is emptied every year to ensure that the process works as well as possible, both for the public and for participating beekeepers. Please also indicate regular times of unavailability. And please let me know ([osba.newsletter@gmail.com](mailto:osba.newsletter@gmail.com)) if/when you want your name removed from the list for this good bee season!

### VETERINARIANS

A listing of veterinarians schooled in bees is available at: <https://orsba.org/veterinarians/>.

If you know a veterinarian interested in receiving training for honey bees, contact Dr. Michelle Kutzler, Oregon State University, at: [michelle.kutzler@oregonstate.edu](mailto:michelle.kutzler@oregonstate.edu).

### BEE YARDS

Areas available for siting colonies are provided at: <https://orsba.org/bee-yards/>.

### CLASSIFIED ADS

Members receive up to four free online classified ads per year. Please note that these particular ads are online, i.e., they are not printed in *The Bee Line*.

### PUBLICATION SUBSCRIPTIONS

Both *American Bee Journal* and *Bee Culture* graciously support beekeepers in offering discounts to those belonging to associations such as OSBA. Contact [osba.newsletter@gmail.com](mailto:osba.newsletter@gmail.com) for details. It is a benefit of membership.

### 2023 FALL CONFERENCE

Plans for the 2023 Fall Conference are in the works, and we can begin to mark our calendars and consider how we might participate. Thus far, what is known is:

We will be meeting October 27–29 at The Riverhouse Hotel & Convention Center.

We can watch for items to contribute to both online and on-site auctions during our spring cleaning and the coming months.

We can keep our bees with the Conference Honey Show (as well as that held during the Oregon State Fair) in mind to celebrate their good work during this 2023 season.

We can offer our time, skills, and energy during the conference in helping with Audio/Visual, Registration and Information Desk, Auctions and Donations, and Honey Judging. Contact Jeremy Mitchell at [osba.vice.president@gmail.com](mailto:osba.vice.president@gmail.com) for information.

And, as we wait for specific information about presenters and activities, we can consider booking lodging accommodations. Those on site have been set up for Riverhouse on the Deschutes, 3075 N Business 97, Bend OR 97703. They include three options (1) Deluxe 2 Queen Room and (2) Deluxe King Room, both at \$159/night + taxes and fees, and (3) Superior King - River View at \$179/night + taxes and fees.

Conditions: Rooms must be booked (1) by using the 2023 OSBA Fall Conference Discount Link (hard linked **HERE** and at <https://orsba.org/2023-meals-lodging/>) or (2) by calling the hotel directly to make a reservation by phone at (541) 389-3111 and informing the hotel that the rooms are part of the “OSBA Block.” ADA accommodations are available online for Deluxe Rooms; for the Superior Room, make the request by phone and indicate that you are with the OSBA Conference. The conference organizer requests that 3rd party sites be avoided when booking rooms.

Deadline: Room rates are guaranteed until September 27, 2023; after that date, subject to current rates and availability.

**Varroa**—Continued from page 5

injected into the closed container for 10 seconds allowing for a complete gas exchange. The container was allowed to sit for 60 seconds. The container was shaken for 60 seconds. The upper lid was removed and the bees returned to the hive. The lower lid was removed and the mites counted on this and any mites on the screen or walls. The container was wiped clean using a damp towel.

**Results**

Results are provided in Table 1.

Table 1

	Alcohol	Sugar	CO <sub>2</sub>
Hive #115	# Mites	# Mites	#Mites
Sample 1	27	12	20
Sample 2	26	12	26
Sample 3	36	22	15
Hive #109			
Sample 1	21	25	7
Sample 2	26	17	28
Sample 3	17	18	27
Hive #108			
Sample 1	35	31	21
Sample 2	26	20	24
Sample 3	25	24	27
Hive #116			
Sample 1	15	36	25
Sample 2	23	28	26
Sample 3	26	44	16
Hive #112			
Sample 1	32	34	19
Sample 2	30	25	31
Sample 3	36	24	31
Hive #46			
Sample 1	0	4	5
Sample 2	4	4	2
Sample 3	0	5	2
Hive #50			
Sample 1	29	26	25
Sample 2	59	44	47
Sample 3	64	26	28
Hive #1			
Sample 1	19	16	12
Sample 2	19	14	14
Sample 3	11	11	19
Hive #1			
Sample 1	5	4	7
Sample 2	5	6	7
Sample 3	6	4	6
Hive #5			
Sample 1	7	17	7
Sample 2	11	3	6
Sample 3	7	16	6

**Costs**

The initial investment in equipment for the 3 methods is significantly different but the ongoing costs after equipment purchase is modest and fairly similar. The sugar shake method runs less than \$3. Using 1 ounce of powdered sugar runs around \$0.09/test. For an alcohol wash using the Varroa easyCheck, it runs about \$34 including shipping. It takes approximately 9 oz of isopropyl alcohol to fill the chamber, which costs around \$1.30. If it is only used once then the cost per test is \$1.30; however, it is common to run the alcohol through a filter to be used multiple times. Assuming it is used 10 times, then the cost per test is \$0.13. The CO<sub>2</sub> method requires a tank, valve, hose, blow gun, #8 mesh, PVC pipe, and caps. The initial investment is approximately \$90. A 20-ounce CO<sub>2</sub> tank refill is around \$7 and will do about 50 tests at a rate of \$0.14/test.

**Discussion**

The overall results showed that the alcohol wash yielded the higher mite counts. The sugar shake and CO<sub>2</sub> methods were statistically equivalent and yielded 84–88% of the mites compared to the alcohol wash. A surprising finding was the variability found both between samples of a given testing method and between the testing methods themselves. In the majority of the tests, the alcohol shake found the most mites, but 3 times the sugar shake and CO<sub>2</sub> test revealed more. Within a given testing type there could be variations that could impact decision making. Examples of variability of a given test type include colony sugar shake mite counts of 17, 3, and 16, CO<sub>2</sub> counts of 28, 27, and 7, and alcohol counts of 0, 4, and 0. The reason for these variations is not clear. Care was taken to try to get as homogeneous a sample mixture as possible and yet the variations persisted. One could speculate that this could occur if some bees have multiple mites. Another possibility may be that the bees stratify themselves in the communal tub prior to taking samples. This stratification could be based on multiple factors such as age or presence/absence of mites.

The 3 testing methods all have advantages and disadvantages. The alcohol wash is the fastest and yields the highest mite counts. The disadvantages include the fact that it is lethal to the bees and one has to work with a highly flammable liquid. Care must be taken with alcohol if using a smoker to manage the bees. It is intermediate in cost and availability. The sugar shake takes the longest to perform and is the most untidy. It is simple, readily available, and least expensive of the three. The bees are not sacrificed but do have to contend with a coating of sugar. The CO<sub>2</sub> method is the most expensive and requires effort to acquire and construct. It is fast, clean, and the bees are returned to the colony. Removing the mites from the container between tests can take some time if there are many mites on the screen.

Given the findings of this study, if high accuracy is important such as in scientific studies or in costly mite treatment decision-making in a commercial apiaries, then the alcohol wash will give the best results. If one is a sideline or hobbyist

beekeeper, then any of the 3 methods will give adequate results to help manage Varroa populations. The take home message is that 1) alcohol is still the gold standard, 2) sugar shake and CO<sub>2</sub> are statistically the same (84–88% compared to alcohol), and 3) there can be significant variability between individual tests and test types. If you really want to know how many mites you have, test more than once.

**Note:** Paul Stromberg shared this research in his presentation, Comparison of Varroa Mite Testing Methods: Alcohol Wash, Powdered Sugar Shake, and Carbon Dioxide, during OSBA's 2022 Fall Conference. He is president of the Portland Metro Beekeepers Association and received Master-level certification through the Oregon Master Beekeeper Program in 2021.



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The **Oregon State Beekeepers Association** is a 501(c)(3) nonprofit organization representing and supporting all who have an interest in honey bees and beekeeping. Membership is open to anyone with an interest in bees and beekeeping. Members do not need to own bees or reside in Oregon to join. Membership includes the ongoing work of the organization on behalf of the honey bee and beekeeping, a vote in OSBA elections, swarm call listing, four free online classified ads per year, discounts on publications, and an annual directory and subscription to *The Bee Line*.

Please send check made payable to OSBA with a **completed form for each individual to:**

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4207 SE Woodstock Blvd, Ste 517, Portland, Oregon 97206

**Date:** \_\_\_\_\_  New Member  Membership Renewal

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Share all information **OR Share:**  mailing address  phone number  e-mail address

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**Note:** To renew or join online, please visit:  
[orsba.org/membership](http://orsba.org/membership)

**Thank you!**

**Reminder:** Memberships are recorded on an annual basis—i.e., for the calendar year.

Renewals are welcome at any time, as are new members.

New memberships are applied through December 2023.



Oregon State Beekeepers Association  
4207 SE Woodstock Blvd Ste 517  
Portland OR 97206  
orsba.org

### Bee Food for Thought

**The Beautiful Flowers That Bees Can't Use**—<https://www.bbc.com/future/article/20230222-the-beautiful-flowers-that-bees-cant-use>

**Quoted Resource:** <https://xerces.org/publications/guidelines/pollinator-friendly-parks>

### ***The Bee Line***

*The Bee Line* is the official publication of the Oregon State Beekeepers Association. Annual subscriptions to the newsletter are included with membership.

Please send news about your bees and your experiences in keeping them, as well as events, corrections, comments, questions, photographs and stories, interviews, recipes, points of view—and ads/advertising—to: Rosanna Mattingly, *The Bee Line*, 4207 SE Woodstock Blvd Ste 517, Portland OR 97206; e-mail: [osba.newsletter@gmail.com](mailto:osba.newsletter@gmail.com). It's your newsletter—we want to hear from you!

The next issue to be printed will be the **May 2023** issue. The deadline for submitting copy is **April 10, 2023**. Please let me know if you find difficulties with the deadline so we can work out the space and timing for the material.

*May all be well!*

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