



## July 2023 NEWSLETTER

**LANE COUNTY BEEKEEPERS ASSOCIATION**  
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### President's Message by Fonta Molyneaux

July begins our transit into late summer management as we start to experience the slowing of nectar availability, the increase of mite pressure and the onslaught of robbing season with yellow jackets and hungry honey bees often taking advantage of weak colonies.

I prepare alongside my bees for the upcoming busy fall by limiting my inspections to discourage robbing, making preparations for extraction, treatment and winterization!

Several events are coming up, the Lane County Fair and the Oregon State Fair. Think about entering your honey products into the fairs and also volunteering at the state fair. There is also a Bee Friendly Wine Tour in August at King Estates. Andony Melathopoulos, Associate Professor at OSU, will be there with information on how we can help out our pollinators. Andony is also our featured speaker at up upcoming July meeting.

Please join us this month as we help you prepare for this important time of the year!



### GENERAL MEETING

**July 18, 2023**

**In-Person Meeting**

**Come early to socialize and share your Questions with experienced beekeepers.**

**Social 7:00pm-7:30pm**

**Early Session**

**Doors open at 6:00pm**

**Session Starts at 6:15pm**

**Topic: Varroa Treatment Methods-  
The Organic Acids**

**Speakers: Fonta Molyneaux  
& Brian Jackson**  
Fireside Room

**General Meeting**

**Topic: Unsung Bee Diseases**

**Speaker: Andony Melathopoulos**  
Associate Professor, Pollinator Health  
Extension, Dept of Horticulture, OSU

**Program begins at 7:30pm**

Trinity United Methodist Church

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## Upcoming Events & Announcements

### July 19th-23rd: Lane County Fair

LCBA will have a display booth.

Enter your honey products. See page 7.

### Aug 25th - Sept 4th: Oregon State Fair

**Location:** Oregon State Fair & Exposition Center,

Salem <https://oregonstatefair.org/#>

LCBA Day is August 27th.

### Aug 19th: Bee Friendly Wine Tour

**Location:** King Estates Winery & Vineyard

Learn how to help bees at home, while enjoying fine wines.

Learn skills on beekeeping, bee biodiversity, planting for bees & mason bees.

[Oregon Bee Friendly Wine Tour—OREGON BEE PROJECT](#)

### Sept 29th – Oct 1: WAS International Conference Location:

Grey Eagle Resort & Casino Calgary, Canada

<https://www.westernapiculturalsociety.org/2023conference>.

### Oct 27th-29th: OSBA Fall Conference

**Location:** Riverhouse Hotel & Convention Center, Bend, OR

<https://orsba.org/>

**Beauty of the Bee Photo Contest**—Enter your photos. Helps raise awareness of the plight of bees.

**Deadline:** Aug. 17, 2023

[2023 Beauty of the Bee Photo Contest - Beyond Toxics](#)

## Volunteers Needed for OSBA Booth at the Oregon State Fair



**Date:** Aug 25-Sept 4

**Location:** Oregon State Fair & Expo Center, Salem, OR

**Booth Volunteers:** 3 hosts per shift, 3 shifts per day (4 hrs. each)

Each year the Oregon State Beekeepers Association (OSBA) has a great presence at the state fair. They are asking all the regional bee clubs to help out at their bee booth from August 25th to September 4th.

This is a great opportunity to help enlighten the general public, promote the importance of beekeeping and pollinator health, while doing what most of us do best, chatting about bees!

Volunteers get a free pass to the fair for the day and free parking very close to the building.

**LCBA day at the fair is August 27th.** Sign up to be a volunteer below. Or you may pick any other day to help out. All help is appreciated and greatly needed.

[2023 State Fair OSBA Volunteer Sign-Up - Google Sheets](#)

For more information or questions contact: Bonnie King [bonjking@gmail.com](mailto:bonjking@gmail.com) or text/call 503-864-2100.

## Lane County Fair Honey Entries

Let's have a great turn out of honey and wax entries for this year's fair! To encourage members to participate LCBA will be awarding first place winners a premium of \$10 for each category except Class 01 and 08 will be combined.

It's not too late to enter your honey or wax. Complete the entry form and drop it off with your entries on Monday, July 17th, noon to 7:00 pm at the Wheeler Pavilion, Lane County Fairgrounds.

For more information and on-line entry form click on link below <http://atthefair.com/exhibits-creatives> then on 'Creatives Fair Book'. [Click here](#) for entry form in PDF format.

LCBA June newsletter has all the information on entering your honey.

## Welcome New Members

Trista Armstrong	Junction City
Stephanie Lawless	Eugene
Matt Thomsen	Cottage Grove

## Upcoming Tentative Meeting Topics

### General Meeting

**Aug 15** Early Fall Preparation, TBD

**Sept 19** Pheromones, Judy Scher

**Oct 17** Native Bees, August Jackson

**Nov 21** Honey Tasting

### Early Session

Prep for Fall Q&A Discussion

Winterization Q&A, Polly Habliston

Bee Stings & Allergies, Dr. Jason Friesen, MD

No early meeting

## Busy Bee

### Pollinator Day at the Library

On June 20th, In celebration of Pollinator Week, Pam Leavitt gave a presentation on "Pollinators in My Garden" and Polly Habliston on "Mason Bees" at the downtown library. LCBA had lots of information on pollination and plants for bees. Spring Creek Gardens donated plants to us to give out to the attendees. Pam brought the ones not taken to our June meeting to give away.

**Thanks Pam and Polly!**



Polly & Pam

### Field Day

The Lane County Beekeepers field day with the Linn Benton Beekeepers last month was well attended. About 60 members attended and it turned out to be a beautiful sunny day.

Dr. Ramesh Sagili, Professor OSU Bee Lab, gave a talk on varroa mites. Andony Melathopoulos, Pollinator Health Specialist at OSU, had boxes of frames with various issues. He asked us to grade the frames and write down if we would keep it or cull it. We had to also log why and Andony gave out geranium plants for prizes to those who had the correct answers! This was a great learning experience and we enjoyed separating into groups and talking about what we saw. Then Rick Olson, with LCBA, gave a presentation on how to make nucs and split hives using his simple techniques.

After lunch we broke up into groups and went through a hive with an experienced beekeeper. Judy Scher and Mike France from LCBA helped out and Rick Olson had a demo on how to mark your queens using drones as an example.

LCBA had a good turnout and everyone will tell you it was a great learning experience. We all had a lot of fun talking bees!



Dr. Ramesh Sagili



Paula Sablosky with Andony Melathopoulos



Rick Olson



Keep it or Cull it?



Rick Olson - Marking Drones



## Hive Demos



Judy Scher & Mike France

## LCBA Attendees



## WATER FOR BEES, by Dewey Caron

We typically think of honey bee foraging as gathering pollen and nectar from flowers. However, they also forage for propolis and water. The bee nutrition studies at OSU show that the nutritional requirements of honey bees are quite complex. It turns out that maybe nectar and pollen doesn't supply everything bees need – water is also important.



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 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. With the forecast of hotter weather offering bees water close to the hives might keep them out of our neighbor's yard.

**\*Editor's Note: Ventilation:** It is also important to provide more ventilation during these hot summer days. See Chuck's “Bee Tips” on using toothpicks to provide ventilation. You can use your moisture boxes. Turn them upside down in place of the inner cover. Don't put anything inside them. Another advantage is that it helps your bees cure more honey. The moisture from the nectar can condense under the cover and the relative humidity in the hive stays so it takes more



## Avoid Heat Exhaustion While Working Your Bees

Judy Scher, LCBA Member

With hot summer days coming, it's time for a reminder about avoiding heat exhaustion. Here are things every beekeeper needs to know and have on hand in the hot weather:

Always stay hydrated before and while working bees in the hot weather. If you do not replace fluids in hot weather heat exhaustion may easily occur. If this happens, you need to take it seriously to avoid heat stroke. Your summer inspection tools should contain the following:

- 1/2 - 1 gallon water,
- Electrolyte tablets (you can purchase these at REI or at a drug store)
- Ice in a container
- Cell phone

If you get flushed in the face and your heart rate increases, you feel dizzy or weak, immediately close up the hive, drink ice water with electrolytes (or a sports drink with ice) while sitting in the shade for 15 – 30 minutes. The shade of your car will work, or your car air conditioner. If your symptoms don't decrease in 15 minutes pack up and go home. Do not continue to work the hives. Heat exhaustion, which may lead to heat stroke isn't worth it. You can always work your bees the next day!

### Cheap and easy recipe for “sports” drink

- 1 quart water
- 2 tablespoons honey
- 4 tsp salt
- 1/4 tsp baking soda
- fruit juice to taste if desired





## July Beekeeping Tips by Chuck Hunt, LCBA Member

1. Make sure that the bees have a supply of water nearby for the hot weather days when they need to cool their hives. Bees transport a considerable amount of water to cool their hives from a nearby source.
2. Also, the hives need some ventilation in order to cope with hot weather. Small openings, even as small as a toothpick under the hive lid and perhaps a crack or two between boxes will help the bees keep their hive cool and productive. As long as a honey flow is on and there are not too many yellow jackets around, small ventilation openings in the hive are helpful, not harmful, during warm weather.
3. It is time to begin to prepare for honey extraction. Get your extractor clean and uncapping knife ready. Honey that is mostly capped and has a moisture level of 18.2% or lower is ready to extract. Most early honey is easily within this range now even if it is not capped over. Make sure that all of your super removal is done before you need to put on medications.
4. Pick out a method of pulling the honey off your hives that is appropriate for the number of hives you keep. Smoking and brushing bees off combs works for beekeepers with one to five hives. If you choose this method, work slowly and be gentle with the bees. They will usually react well, especially if you brush them off in front of the hive.
5. If you have more than five hives, you may want to think about escape boards or fume boards as a removal method. Make sure that, whatever method you use, the equipment needed is in good shape and ready when you need it. Use caution when removing honey. Cover honey supers that have been removed to avoid robbing.
6. Honey supers may become the object of attention from wax moths. Be careful about storing supers for over a few days in the warm weather of late summer. This weather will allow wax moths to attack your combs. Combs can be placed in a freezer to kill wax moth eggs and eliminate the danger.
7. Taking honey off the hives and extracting is hard work. Make sure to take care when lifting boxes of honey that you do not injure your back. Also, watch yourself for signs of overheating and dehydration when you take honey off the hives. Drink lots of water and give yourself time to cool off.
8. Be cautious about fire. Keep an eye on your smoker. Things are very dry and it is easy to lose lives to fire.

### Drying Extracted Honey

If you have high moisture content in your honey you will need to dry it to 18.2%. All partially capped frames need to be extracted separately and checked for moisture. LCBA has a refractometer that will be available at our club meetings. Bring a jar of your honey and we'll check it out for you.

You can use a heat lamp that is used for baby chicks to dry out your honey. Clamp a heat lamp about 6" above the level of the honey in a bucket. Stir the honey about every 12 hours and then after 24 hours your honey should be nice and warm. Check the moisture content again.

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## How to Fix Excess Comb or Incorrectly Drawn Foundation

*Excerpt from The Bee Supply, Blake Shook*  
June 2023

While it can be annoying when bees draw out combs where we don't want them to, it is usually a really good sign! It means your hive is strong enough to draw out extra comb. I'm excited when I see excess burr comb on top bars, or a sheet of comb drawn out in the wrong place! There are a handful of areas bees will draw out excess comb. We'll cover each one and what to do to fix it.

**On top bars of frames** - This is super common and will happen in virtually every hive. Another term for burr comb would be "bridge comb" since bees often draw comb on top bars to act as a ladder to get to the next box above. They will also draw it out between the frames and the lid. In general, I avoid scraping it off unless it's excessive and in my way. I usually recommend scraping it all off a few times per year to clean everything up. The bees will draw it back out once you remove it, so I wouldn't bother doing it every time. It's natural, common, and OK! When a hive dies, I always scrape off the excess burr comb as well. Treat this as a housekeeping action to do a few times each year.



**A sheet of comb between frames, or between frames and the outside of the box** - This usually happens when you leave too much space between frames. Remember to always push frames tightly together in brood boxes after each inspection. If a large space is left between frames, the bees can draw out a sheet of comb or just widen the existing comb. If they add a sheet, brush the bees off, and remove the sheet. Push the frames tightly back together and you are good to go. The steps are the same if bees draw out a sheet of comb between the frames and the outside of the box. Gently remove the bees and then use your hive tool to remove the sheet of comb.



You may need to add an additional frame, center all the frames, or leave the excess space between the frame feeder (if that's what you are using for a feeder) and the box to keep them from doing this again. Finally, if bees just build out comb wider than your frames because there was too much space, you can fix this by brushing the bees off that frame and use your hive tool to scrape off the top quarter inch of comb to reduce the thickness of the frame. If it's a frame of brood, they will only thicken the ring around the frame with honey. Scrape off the top quarter inch of honey and comb into a container and remove to prevent robbing. It will be messy, but the bees will quickly repair the frame and clean up any drips of honey. I recommend doing this in the late evening to prevent robbing if you are not in your major honey flow.

**Frame feeders** - If you use a frame feeder and don't have a cap and ladder on it, the bees will often draw out comb inside it. I actually don't mind this unless it's so excessive it fills the whole feeder or if the queen is laying in the comb. In those cases, I'll smoke the feeder heavily a few times and give the bees a chance to run out of it- then I'll gently remove the comb. Watch carefully for the queen if there is brood inside the feeder. To prevent excess comb, I prefer inserting some hardware cloth in the feeder or a loose sheet of foundation to give the bees something to grip, but also fills the space and prevents drawing comb. Cap and ladder systems work as well, but I prefer a more open feeder for better access to the syrup.



**Incorrectly drawn comb on frames with plastic foundation** - This one is common. Bees don't always draw out new comb the way we want them to. They will sometimes draw an entire sheet of comb out right over the top of the plastic foundation without using the foundation. Or they may draw strips of comb out over the top of the foundation. The solution for all of these is to brush the bees off the comb, scrape the excess comb completely off, recoat the frames with wax and let the bees try again.



*continued on page 8*



In the following I've outlined some special considerations when fixing incorrectly drawn comb on foundation. I usually see this happen for 3 reasons:

1. The plastic foundation was dirty or unwaxed. The solution is to recoat the foundation with wax.
2. The hive is weak or hungry and doesn't have the resources to fully draw the frame properly. The solution here is to feed the hive or wait until a stronger honey flow begins.
3. Too much space was left between frames. As bees are drawing out foundation, it helps to tightly press the frames together. In a honey super, with a strong hive on a strong honey flow, you can space the frames slightly and they will usually still draw them out properly. But, on a weaker flow or a weaker hive they are more apt to draw it improperly.

Note: Leaving space between frames only applies to honey supers. As stated, too much space between frames will cause excess comb building between brood nest frames. Always push them close together.

There are other areas bees will draw excess comb, like in an empty box with no frames that was left on too long, etc. The key is always to brush the bees off the excess comb, scrape it off, and remove the excess space that caused the issue.



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## June General Meeting Highlights, by Matt Stouder, LCBA Secretary

### Varroa Destructor, The Major Threat of Apis Mellifera, by Pam Leavitt



Pam Leavitt

Pam started off the meeting by discussing the important resource titled “*Tools for Varroa Management Guide*” from the Honeybee Health Coalition. This is an important resource for beekeepers to have and understand and is free to download. It can be found using Google and is also on the LBCA website.

Pam discussed that while honeybees face challenges from a variety of issues, the threat from varroa is the biggest. When considering bee health, it is important to consider the 3 P’s – pests and diseases, poor nutrition and pesticides. Pests like varroa and the viruses they vector can overwhelm the honeybees immune system and cause mortality of the colony. Pam noted that all hives in the US have varroa mites. Varroa first came into the US in 1987 after jumping from its native host, *Apis cerana*, to the European honeybee, *Apis mellifera*. Varroa appeared in Canada in 1989.

Understanding the life cycle of the honeybee and varroa is critical to understanding this pest. In the colony, the queen lays eggs in cells. The female varroa mite enters the cell just before the cell is capped. Once capped, the female varroa lays an egg in the cell about 30 hours later. She will lay multiple eggs. The first egg she lays is always a male. Subsequent eggs develop into females. Following this pattern, the population of varroa in a colony can double every four weeks.

Varroa mites are able to transfer from bee to bee. During what is called the phoretic phase, mites ride around on individual bees waiting until a cell is ready for them to invade. During this phase, the female mites use chemical and non-chemical cues to know when to enter into a cell. Cell invasion occurs 15 to 20 hours prior to cell capping in the case of worker cells and 40 to 50 hours prior to cell capping in drone cells. Prior to capping, the mite hides behind the larva in the brood food at the bottom of the cell.

The reproductive phase of the varroa mite takes place exclusively within the sealed brood. Without brood there can be no mite reproduction; this is a critical component for the beekeeper to understand. In the reproductive phase, the mite feeds on the larva by creating a wound at the feeding site. Subsequent mites that are born under the cell capping also feed on the larva.

The impact of mite infestation can result in the premature loss of adult bees, learning disabilities in impaired adult bees, a lower rate of return to the hive, a reduction of honey yield, and numerous honeybee viruses. varroa vectored viruses, including deformed wing virus, acute paralysis virus, Kashmir virus, and others are a major problem for health of the colony.

Parasitic Mite Syndrome is a result of high mite infestation and is associated with varroa, viruses and combination of the two. You may notice hygienic bees trying to remove varroa infested cells by opening them to halt development of the larva or pupa. Eventually brood production shuts down and the colony will be lost.

Honeybees and varroa follow seasonal phases. When the honeybee population increases in spring, the varroa population lags. However, when the bee population decreases after the summer solstice, the varroa population continues to increase. This is why you may notice much higher varroa populations in the fall months. The goal for the beekeeper is to keep the mite population below an economic threshold. Using integrated pest management strategies such as a screened bottom board, drone foundation, brood breaks, etc. is helpful, but you definitely need to monitor infestation levels to determine accurately whether treatment is needed. Monitoring mite population at least four times per year is minimum and monthly monitoring during the summer and fall is best.

Methods to monitor mites include using an alcohol wash or sugar shake. Reference the Honeybee Health Coalition’s [Tools for Varroa Management Guide](#) and webpage for information and free videos that show how to monitor. You will want to sample 300 adult bees, which about a ½ cup. Using the alcohol wash or powdered sugar shake, count the number of mites seen and divide that by the number of bees to calculate the percentage of mites. Interpret the findings to know if treatment is necessary.

During the decrease phase (August-September to November-December), the colony will be producing winter bees. These bees need to live for 6 months or longer to make it through winter. High mite loads in winter bees will cause them to have inadequate fat body stores and jeopardize the colony’s chances of surviving winter. Winter bees have fat

bodies that store energy and release it when bees need it (during clustering) in the winter. If the bees don't receive enough fat bodies because the colony is weak due to Varroa, then their immune function is reduced, along with their metabolic activity, which presents problems in the winter cluster.

There are multiple ways to treat for varroa, including cultural, physical and chemical controls. Cultural controls include removing drone comb, requeening with hygienic bees, etc. Physical controls include using screened bottom boards. Chemical controls include miticides and essential oils. Use chemicals responsibly and make sure to rotate treatment choices to reduce mite resistance. Always repeat mite sampling after treatment to confirm the effectiveness of the treatment used.

See Pam's slide show on our website:



Drone Larvae with Adult Female Mites



Varroa & Deformed Wing Virus

### June Early Session: "Honey Extracting" by Lynn Hellwege and Mike France

Mike France and Lynn Hellwege provided an overview on honey extraction. Honey extraction starts by getting the supers off the hives. You want to make sure you don't wait too long to do this because varroa mites can become a major problem. The target date for taking supers off in the Willamette Valley is around July 15<sup>th</sup> depending on the year, or when the blackberry bloom is over.

To remove the supers, you will need to get the bees out of them. There are several ways to accomplish this. The easiest if you only have a box or so to deal with is a bee brush. A bee escape board works well. Leave it on for approximately 24 hours and place it under the honey supers. It comes in different styles including the triangle, cone and porter. Finally, fume boards can be used which involves using a spray to drive the bees out of the supers. Different options include Bee-Quick, Bee-Dun, Bee-Gone, etc. Do not use honey robber or Bee-Go.

When removing frames, consider placing them in a spare western and covering them with a towel to keep bees out. After removing the bees and frames, it is best to extract the honey on the same day if possible. Make sure to store the supers and frames in a bee tight warm area. If unable to extract the honey for several days, it is best to store the frames in a freezer until extraction.

The best way to get liquid honey out of the combs is to use an extractor in a bee tight area like your garage or similar area. One major benefit of an extractor is that you can reuse your combs for next season. If you don't own an extractor, you can borrow one from LCBA if you are a member.

Tools that you will need to extract honey include filters, pails with gates, a tank or bucket to catch cappings, a wet cloth, a knife or scratcher and a frame drip tank. Filters come in several sizes. You should place the larger diameter filter above the smaller diameter filters to remove materials like bee parts, wax, pollen, etc. Consider putting down a 10x10 blue tarp to keep things from getting sticky.



Mike & Lynn

*continued on page 11*



Before putting the frames in the extractor, you will need to uncap them. A hot knife works best, but you can also use a cold knife or a scratcher. Make sure to collect the wax cappings in a bucket or tank and strain them later because there will be quite a bit more honey in them that you can collect. It is also handy to have a spatula to clean out the tank, clear the filters, etc. Additionally, a bucket of warm water will work wonders when cleaning up the tools and extractor.

When extracting, make sure to extract all fully or mostly capped frames first. You want to balance the frames evenly from the weight perspective in the extractor. It helps to use a different pail to extract partially capped frames, and you can check the moisture level of the honey with a refractometer. The moisture levels should be no higher than 18.2%. Any frames that aren't capped and are above 18.2% moisture should be extracted separately and fed back to the bees. Do not store uncapped frames with nectar in them because they will ferment. If using tangential extractor, spin the first side at slow speed and then reverse the frames and spin at full speed. Finally, reverse the frames again and spin once more at full speed. If using a radial extractor, there is no need to reverse frames.

Store honey frames dry; do not put out frames to allow bees to clean them up as this encourages robbing and attracts yellow jackets. Place frames back on the hives above an inner cover and only leave on for a day or two. Doing so will allow the bees to clean them out. If you leave them on too long the bees may begin to fill them with nectar again. You can store wet frames in plastic tubs, a honey box or a freezer. Make sure to protect frames from wax moth by placing in the freezer for two days prior to storage. Alternatively you can apply para-moth (not moth balls) and store the frames in a dry area that receives daylight. Clean honey boxes before storing by scraping the top and bottom edges, frame rests and any comb on the inside of box walls. Store boxes in a dry bee tight area.

**Thanks Mike & Lynn!**

View Mike & Lynn's slide show on our website [MikeLynn\\_Honey\\_Extraction\\_062023.pdf \(lcbao.org\)](http://lcbao.org/MikeLynn_Honey_Extraction_062023.pdf).

**Rendering Wax** - After extracting, what do you do with the wax? How to you process it? See Ken Ograin's slide show under "Talks" on our website. It is pretty self explanatory. Slide show link: [Rendering Wax](#)



Getting Bees Out - Bee Brush & Escape Boards



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## “Bee Foraging Constancy and Fidelity”

by Dewey M. Caron

Last month I highlighted a study an undergraduate performed measuring elevated body temperature of pollen foraging eastern bumble bees *Bombus impatiens*. This month I reference an article by a post-doctoral student, Fabiana Fragoso, in conjunction with USDA Madison, Wisconsin Vegetable Crops Research lab scientist Johanne Brunet. The study directly compared foraging behavior of honey bees with the same eastern bumble bee, *B. impatiens*.<sup>1</sup>

Foraging is what our honey bee colonies maximize this month. Colony worker populations are at their largest now, at least for colonies that were not split or did not naturally divide by swarming. If we enter colonies during our elevated temperature days, we might move the frames of a super from outside of boxes to the center. This will help bees take advantage of the last flowers since the lack of moisture and higher temperature will soon prevail and flowering resources disappear.

You may be aware that pollinators, like bees and butterflies, have a tendency to return to previously visited locations to forage a single plant species, even though there may be a smorgasbord of different flowers available. A number of studies have demonstrated attracting different pollinators both imparts advantages to plants and pollinators alike. Competition among pollinators has been shown to promote greater quantity (improved yield), better quality (sweetness) and even management qualities such as a more uniform fruit ripening.

Honey bees exhibit pollinator flower constancy behavior. This means on subsequent foraging episodes, a bee forages only one flowering plant species of many available. Returning to the same site is termed fidelity. With flowers normally unevenly distributed, constancy to a single flowering plant and fidelity to specific patches can increase foraging efficiency and decrease movement costs for the pollinators. It benefits memory and learning capabilities of pollinators while ensuring pollen is transferred within the same species for flower pollination. Although it might limit pollen movement and gene flow among a plant species, attracting different pollinators is to the advantage of plants and pollinator alike.

The foraging study concluded: “honey bees are more faithful to their flower patches than bumble bees. ” Honey bee patch fidelity (76%) was clearly greater than that of bumble bees (47%). Honey bees were more likely to return to the alfalfa patch where they were marked. Patch size affected the level of patch fidelity for bumble bees but not for honey bees. Bumble bees were more likely to return to larger rather than smaller patches.

To give you an impression of what might have developed this conclusion patches of alfalfa were planted among tall fescue grass on an experimental farm in Madison Wisconsin. Nearby crops were corn, soybeans and alfalfa, which was cut prior to study. One bee hive was moved to the site but bumble bees were natural nests, which were not located for the study. Large patches in this study were each planted with 225 plants; smaller patches were about 10 by 10 yards with 100 alfalfa plants each.

Two hundred and seven individual bumble bees and 387 honey bees were marked in the experiment. The queen marking numbered discs available from Betterbee were used to mark. Data was collected over about a month for two years. A total of 67.6% of the marked bumble bees, and 53.1% of the marked honey bees were observed at least once in a patch. On average, an individual bumble bee or honey bee was observed more than six times in this study on three different days. The number of observations per individual bee was similar between the two bee species.

In addition to understanding patch fidelity and influence of patch sizes, the study sought to understand pollinator foraging behaviors of two major legume pollinators This study might help guide the design of effective habitats to further enhance pollinator conservation.

**Speaking of Hot** – as I mentioned about bumble bee internal temperature last month, according to University of Maine scientists at the Climate Reanalyzer project, the entire planet sweltered for the three unofficial hottest days in human recordkeeping based on satellite data and computer simulations Monday July 3rd, Tuesday July 4th and Wednesday July 5th. In Oregon these three days had 90s and even 100 degree days for our holiday. I hope you and your bees kept their cool.

<sup>1</sup>Fabiana P. Fragoso and Johanne Brunet. 2023. Honey bees exhibit greater patch fidelity than bumble bees when foraging in a common environment. Ecosphere <https://doi.org/10.1002/ecs2.4606>





## Bumblebee Size

When it comes to bumblebees,  
does size matter?



*Excerpt from Bee Culture Magazine*  
July 8, 2023

While honey bee workers are all the same size, that's not true for bumblebees. Scientists aren't sure what's behind the wide variety in bumble body sizes, but a new UC Riverside project aims to find out.

Certain crops, like greenhouse tomatoes, eggplant, peppers, and blueberries, rely on bumblebees for a style of pollination that only bumblebees can perform. Among growers, the preference can be for bigger-bodied bumblebees because they're thought to be more efficient pollinators.

Enabled by a \$750,000 grant from the National Institute of Food and Agriculture, the research team will investigate factors suspected of influencing bumblebee biology and body size, including climate change, wildfires, and the presence of nearby honey bee colonies.

In many cases, individual animals are born smaller when their habitat has less nutrition available. The researchers want to know if this is also true for bees. **"One idea is that honey bees are taking more food resources, resulting in smaller bumbles.** This is part of what we will be testing," said UCR entomologist and project lead Hollis Woodard.

To test this, the researchers will collect bumblebee size data over the next four years from places both with and without honeybees nearby. "It's hard to find anywhere in the lower 48 without either managed or feral honey bees. For this reason, we're headed to Alaska for part of the study," Woodard said.

Fire may also play a role in bumblebee development. Some research has shown that bumblebees are born bigger, and in higher numbers, during the years following a wildfire. Since wildfires are common in California, the research team will also be collecting data from places throughout the state with different types of fire histories.

"Fires are good in some ways for bees," Woodard said. "As the land recovers from the burn, a lot of flowers appear, offering food."

In addition to the mystery of what influences the bees' body size, it's also unclear what role size plays in a bumble colony. While all bumblebee workers perform the same functions, variation in size could allow the hive as a whole to collect pollen from a wider variety of flowers.

Though bigger bees can collect more pollen, they might not be right for every plant species. For some flowers, especially those that are trumpet-shaped, smaller bumblebees are better pollinators.

"There are theories that bumblebee sizes are just random, or that it's just generally good to have variation," Woodard said. "Right now, we don't yet know exactly what this variation in size does for colonies."

In addition to benefitting crop growers, the team's findings could ultimately benefit the bees themselves. "Any insights we gain into factors affecting the bumblebees could help us better understand how to bolster their dwindling populations," Woodard said. "Helping them in turn helps ensure the health of wildflowers, as well as our food supply."

Source: [ucr.edu](http://ucr.edu)

### Extractor Information

The club has five, three frame extractors with hot knives for use by its current members. These are on a reserved use basis. Please limit your use to no more than three days, and always clean the extractor before returning. Extractors clean very easily if cleaned with warm soapy water and flushed out with a garden hose after you finish for the day. If you wait until the next day cleaning is more difficult. These units are easy to use and transport.

Eugene, North River Road Area - Katie James 541-688-4111

Eugene, Cal Young Area - Pam Leavitt - 541-344-4228\*\*

Pleasant Hill - Tina & John Franklin 541-953-2028

Creswell - Amy Sierzega 541-505-4033

Elmira - Ken Ograin 541-935-7065

**\*\*NOTE: The Cal Young Area extractor will not be available June 14th-July 15th.**

**Remember--return it on time, and return it clean!**

### Refractometer

LCBA has three refractometers to check the moisture content in your honey. Remember honey is not honey unless the moisture content is 18.2% or below. We will have it available at our monthly meetings to test your honey. If unable to attend call or email one of our members to schedule a time to check out your honey.

Eugene - Judy Scher, 541-344-2144,  
[judyscher@gmail.com](mailto:judyscher@gmail.com)

Elmira - Ken Ograin 541-935-7065,  
[woodrt@pacinfo.com](mailto:woodrt@pacinfo.com)

Cottage Grove - Francis Rothauge 541-520-8391  
(no email)

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OMB Regional Representative - Rick Olson	541-997-3792	<a href="mailto:rolson2@attglobal.net">rolson2@attglobal.net</a>
Best Practices Liaisons for Lane County - Mike France	541-232-1610	<a href="mailto:michaelj62@gmail.com">michaelj62@gmail.com</a>



**Classified Ads**

Bee-related classified ads cost \$5.00/month for non-members and are free to members. Classified ads run for three issues and may be renewed by contacting the editor. Bee-related business ads start at \$35. To place an ad, contact Nancy Ograin by the 1st of the month, 541-935-7065 or via e-mail,

**FOR SALE**

**Complete 10 frame one story hive \$260.00**

- **Deep** frames
- New locally raised queen
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**Complete 10 frame one story hive \$240.00**

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- New locally raised queen
- New equipment

**Contact Morris Ostrofsky**

541-510-1167

[ostrofsky@pacinfo.com](mailto:ostrofsky@pacinfo.com)

**FOR SALE**

Bushy Mountain Pollinator Jacket & Veil Size XL **\$30**

Big Ben Full Suit & Hat w/Veil Size XL chest 45, inseam 51 **Free**

Hat & Veil \$10

Gloves \$10

All have been washed.

**Contact Lucy O'Neil**

541-510-1167



Pollinator Jacket

**FOR SALE - Hive w/Bees**

**Re-homing my bees due to medical necessity.**

**Langstroth 10 frame hive** with 2 deeps.

Lovingly & beautifully painted, thriving.

2023 Queen & package of Italian bees from GloryBee.

Also have jacket with hood, 2 pairs of gloves (1 canvas, 1 goatskin), smoker, misc. tools and accouterments. Can sell individual gear components separately.

U-haul from North River Rd residence.

**Contact Lyndsie for prices 541-735-5360** (text or call)"

**FOR SALE - Misc Equipment**

Donated equipment to LCBA, decent condition.

New Unassembled Frames

New Deep Box

New Plastic Waxed Coating Foundation

Home made used wood nucs, swarm boxes, inner covers, 1 deep box, queen excluders, telescoping cover, bottom board, 1 screen bottom board and misc equipment.

All proceed benefit the OSU Bee Lab.

Contract Nancy for more info, pricing and to check out what is available.

541-935-7065 or [nancy.ograin@gmail.com](mailto:nancy.ograin@gmail.com).

For discounts on American Bee Journal subscriptions contact Nancy Ograin for discount form.

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Editor: Nancy Ograin 541-935-7065 [nancy.ograin@gmail.com](mailto:nancy.ograin@gmail.com)

**2023 LCBA New/Renewal Memberships**

\$25 per year per calendar year (Jan-Dec 2022) per household or family.

Please remit payment to:

LCBA Treasurer, Polly Habliston  
1258 Dalton Dr., Eugene, OR 97404  
[polly@uoregon.edu](mailto:polly@uoregon.edu)

Membership forms for new members and renewals are available on the LCBA website. [Click here](#) to access.

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Honey Bee Health  
Coalition

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<https://www.honey.com/>



**Honey Bee Health**

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