



CENTRAL COAST BEEKEEPERS NEWSLETTER

July 2018

ISSUE NUMBER 28

NEXT MEETING JULY 25TH, 2018

President's Message By Patti Johnson

When our club sets up a booth at a fair, or any other venue for that matter, there are periods of time when no one is coming through to look at the display, ask questions or share their excitement and stories about their own bee experiences. During those slow periods, when no one is looking, sharing or asking, there is a wonderful opportunity to talk to the fellow club members with whom you are working. It seems the last few times that I have participated in an event, the quiet time behind the table usually ends up in a discussion about the direction of the club. This has also been discussed, though not at length, in a couple of our board meetings. Maybe the time has come that we need to be thinking about it, especially you, the members at large. The big question, what do club members want? Is there any interest in providing education to venues beyond our monthly club meetings? Do you want to come to the meetings for education and social time, but don't think it is too important that the club goes out into the community to promote beekeeping, or on the other hand, do you think it is important? Are we interested in club growth and new membership?

Our club is a fairly young organization, with its first club meetings starting in 2015. The founders of the club put in a tremendous amount of work into organizing, working through the pros and cons of becoming a 501c non-profit and putting together a statement that succinctly describes the mission of the club. That statement reads: *"The Central Coast Beekeepers Association of Oregon is a non-profit organization of beekeepers that*

provides community, advocacy and education for those interested in raising honey bees and supporting their presence in the environment". With that said, our club is asked to participate and volunteer quite a lot of time in the community. Is this something we want to continue doing? If so, all of us will have to participate, not just a select few, and how will that be done?

The club has a wonderful reputation in the community, mostly due to a **few** individuals that have given generously of their time and in some cases, their money. Bottom line, this isn't sustainable. We as an organization need to decide what is important. We **all** need to think about it. We will be discussing this in a future meeting, but for now, let's look forward to hearing from Nick Van Calcar of Van Calcar Apiaries, who will discuss apiary sanitation, bee nutrition and package assembly from a commercial prospective. And then, make sure to get the August meeting on your calendar. We will be having a "Honey Bee Field Day and Club Picnic" on Saturday, August 25th at Pat Wackford's house. There is more information and sign-up sheets coming. It should be fun and we will have the opportunity to do a hive inspection, see and learn about flow hives, ask questions, share stories and eat good food.

I always look forward to seeing you!

Our July meeting is Wednesday July 25th at 6 pm at the **Newport Library**. We will hear from Nick Van Calcar, a commercial beekeeper and the person who has been supplying the packages the club has been ordering for the past few years. He will be discussing apiary sanitation, bee nutrition and package assembly from a commercial prospective.

INSTEAD OF OUR REGULAR AUGUST MEETING AT THE NEWPORT LIBRARY, WE WILL BE HAVING OUR FIRST FIELD DAY. SEE BELOW FOR DAY, TIME AND LOCATION!

HONEY BEE FIELD DAY AND CLUB PICNIC

AUGUST 25TH AT 1:00 PM

187 OLALLA ROAD, TOLEDO, OR.

Club members are invited to sign up at the July meeting to attend a Bee Field Day at Pat Wackford's home. We will be inspecting hives, discussing our successes and challenges for the year so far and enjoying an outdoor barbeque.

You will need to bring your own bee gear, a chair, something to drink if you want more than the water that the club will provide and a salad, side dish or desert to share with the group. The club will be providing hamburgers, hot dogs and brats. You may bring veggie burgers if you would like. The Club will also provide plates, napkins and utensils. A tub of ice will be available to keep drinks cold.

There will be a sign-up sheet at the July meeting so please sign up to let us know you are coming and let us know what you will be bringing to share (a salad, side dish or desert) so that we can adequately prepare.

Directions are as follows: East on Highway 20 from Newport for approximately 7 miles, left on Olalla Rd. Parking will be somewhat limited so look for a club member near the house to help direct you to a good place to park. If you have any questions or need to contact someone, you can call or text 602-770-7390.

Preparing to Harvest Honey

Thinking about harvesting honey this year? Here are some things to consider:

Should I harvest honey? Pretty much everyone gets excited when they think about the opportunity to extract some sweet honey, but it isn't always a good idea. When you harvest honey, you are basically removing the colonies food stores. Even though we are in the blazing heat of summer, beekeepers should already start preparing themselves for winter and making sure their colony has enough stored resources to make it on their own. If it gets late into the season and the nectar flow is low, you will want to not remove the honey stores. If this is your first year as a beekeeper, it commonly isn't recommended to harvest honey, especially if you started from a newly developed colony such as a package.

Understanding Moisture Content: Honey really isn't honey until its honey (understood?). Honey is created by the nectar honey bees collect from flowers, but you can't just pull the nectar from the flower and call it honey. Before the bees' cap over the nectar, it needs to thicken up and lose a lot of its moisture content. It is this thickening that complete the process from nectar

to honey and gives honey its long-lasting shelf life. To remove the unnecessary moisture, worker bees fan the uncapped honey to help expedite the evaporation. Honey is considered complete when it has 18% or less moisture. With so little moisture, it keeps the honey from producing mold or other forms of bacteria. You can use a [refractometer](#) to check the moisture of to see if it is ready, especially if you pull frames with uncapped honey. If the moisture count isn't quite right, just leave the frames in the hive to give them more time to develop.

Radial vs. Tangential Extractors: While there are several different sized [extractors](#), there are two different types that you need to be aware of; radial extractors and tangential extractor. Both do the same thing; the only difference is how frames are processed in them. Tangential extractors hold frames one side facing out. With this arrangement, only the side of the frames facing outwards will be extracted. After the first round of extracting, you will need to turn the frames around and do the same process again. Radial extractors load the frames pointing out from the center shaft, like spokes on a wheel. With Radial extractors, all sides can be extracted at once. This arrangement is most common with larger extractors that hold 9 frames or more.

Don't have an extractor? If you have just a few frames of honey to harvest, an extractor is not your only option. [Bucket filtering](#) systems and honey gates are also available. You will need to cut out and basically destroy the foundation to use a bucket filter, but new wax foundation can be cheaper than an extractor in the long run. Even though they can be a little more work and a little more mess, bucket filters can work great for small hobbyist beekeepers. If you don't want to destroy the foundation in your frames, you can also just [uncap](#) the frame, lay it facedown, and just let the honey drip naturally in to a bucket or container. This may be the slowest way to extract honey without scooping out each individual cell (please don't try that), but it's the best way to extract the honey inexpensively without destroying your foundation. **(The club has an extractor that you can borrow. It is a 3-frame hand crank)**

Comb Honey: Another popular way to distribute honey is still with the [comb](#). You can cut the comb straight from the frame and distribute in jars or boxes, but there are a couple things to consider when you do comb honey. Since it will be consumed with wax, you will want to make sure you started with as clean a wax as you can, and you wouldn't want the wax to be too thick; that will just make it chewy (some might say eww). If you plan to produce comb honey, most beekeepers use a thin cut comb foundation. You would want to avoid using wires with cut comb honey (unless you plan to just cut around the wires) and any frame larger than a shallow or medium frame could potentially collapse under the weight of all that honey without a wired support.

Honey Jar Labels: Looking to sell your honey? Not only is finding the right bottle key, but how you market your honey to sell and what you put on the required [label](#) is **very important**. Before you start planning out your label, you will want to research the restrictions or requirements in Oregon for what information is required on your label. For example, labels must include your

name and address (including street address), weight in both ounces & grams, and at least the word "honey". There are additional requirements regarding where information is located on your label and what size font must be minimally used. For the best information regarding what is required in Oregon, contact the Oregon Department of Agriculture.

The "Added Sugars" Issue of Honey Nutritional Labeling

BY Dr. Dewey M. Caron

Do you know what is in the foods you eat? Most of us are only vaguely aware. Nutritional labeling, mandatory on many foods, can help lead to a better understanding. Do you find that nutrition labels on honey jars better inform you of your dietary choice?

Oregon, like many states, requires some specific wording on the label, including a nutrition label. Do you know the Oregon honey labeling requirements? Most do not. Thankfully, most backyard Oregon beekeepers are exempt from licensing and inspection, although honey labels are still subject to product labeling requirements. This exemption is courtesy of the Farm Direct Bill. It states if a honey producer has 20 or fewer colonies and only sells direct to the consumer or wholesale, his/her honey registration is not required. But beekeepers need an exemption from Oregon Department of Agriculture (ODA). This simple exemption form is on their website at:

<https://www.oregon.gov/ODA/shared/Documents/Publications/FoodSafety!HoneyProcessorsExemptionForm.pdf>

Honey labels may soon be subject to a significant change. Honey producers and maple sugar producers were surprised to learn that new proposed 2020 U.S. Food and Drug Administration (FDA) nutrition labeling would mean they would need to add the words "added sugar" to their honey nutrient label.

The FDA is now taking another look at proposed nutritional labeling rules after an uproar from the maple syrup and honey producers who say that the new labeling would mislead consumers into thinking sugar is added to the natural sugars in honey and maple syrup. The nutrition label changes are part of a 2016 campaign to educate consumers about excess sugar in our diet. Honey of course doesn't have any "added sugar" so why would a honey label have to have "added sugar"? It turns out that in FDA 'speak', added sugar means *sugar added to our diet* in excess of what is nutritionally appropriate. They don't mean that "added sugar" is *sugar that is added to food*. Does this sound strange? It turns out this language change would be necessary because the FDA deemed honey as not "nutrient rich," like other naturally sugary foods, which do not need the wording "added sugar" on their package labels.

However, rather than change this unusual interpretation, FDA, in a draft guidance released this past February, proposed that pure, single-ingredient maple syrup and honey could have a footnote added to their labels that their sugars were naturally occurring. But the wording "added sugar" would still be required.

FDA advertised a six-month comment period on the footnoted label proposal. The American Honey Producers and American Beekeeping Federation alerted members to provide comments. Oregon State Beekeepers Association did as well. By the mid-June deadline period over 3,000 comments were sent to FDA. Both beekeepers and maple syrup producers pointed out that their products were not like foods that added sugar for taste or consumer appeal. Many felt this compromise might be confusing and misleading and might erode consumer confidence in their pure, natural products.

According to a press release of June 19th the "FDA recognizes the complexity of this issue and is grateful for the feedback it has received. The agency plans to take these comments into consideration to

swiftly formulate a revised approach that makes key information available to consumers in a workable wayThe agency looks forward to working with stakeholders to devise a sensible solution."

So dysfunctional as Washington is these days, we are left with only not much more than a promise of taking comments "into consideration". The FDA gave no indication it intended to eliminate the requirement so "added sugar" might need to be included. We will have to wait and see

Queen Rearing Workshop – Washington State University

By Rick Olson

Reproduction hasn't always been a settled science. Up until 250 years ago there was no understanding that an egg was required for reproduction or what the function of sperm was. Preformationists actually believed that a complete preformed humanoid was contained in each sperm. It wasn't till Lazzaro Spallanzani in the 1760s showed that actual contact between egg and semen is essential for the development of a new animal. His experiment consisted of putting pants made of pig's bladders and taffeta on male frogs. He was the first to perform in vitro fertilization, with frogs, and an artificial insemination, with dogs.

I was fortunate to be able to attend a queen rearing and bee breeding workshop at Western Washington University in Pullman, Washington last month. We were given an introduction to the fundamental tools for stock improvement. We also got classes in instrumental insemination and cryopreservation. WSU is on the cutting edge of some fascinating breakthroughs in honey bee genetics.

The workshop topics covered were centered around Susan Cobey's queen-rearing and research focusing on the post-insemination maintenance of queens and the selection of behavioral traits. Susan is an international authority on instrumental insemination and has taught these specialized techniques for more than 30 years. Cryopreservation techniques were covered as well by assistant research professor Brandon Hopkins, apiary and laboratory manager of the WSU apiary program.

There are 28 recognized subspecies of *apis mellifera*. Of these there are 26 old world honey bee subspecies recognized--a result of glaciations 18,000 years ago that separated various areas of the Europe allowing different geographic races of bees to evolve and adapt to diverse environments--phylogeography.

German bees were brought to the U.S. in 1622, Italians in 1859, Carniolans in 1877, Caucasians 1880-82. These small subsets of honey bee races created a genetic bottle neck. It was exacerbated in 1922 when bee imports were halted in an attempt to keep out tracheal mites. Further bottle necking is intensified by modern queen producers who create 869,500 queens from just 473 mother queens. With this limited stock they create 1000-3000 queens/day primarily Italians, Carniolans and Caucasians.

Africanized bees brought some diversity to North America, but diversity had been going down until 2014 when germplasm imports from Europe were allowed. This has had a major impact on the North American honey bee genetic pool. WSU has been a leader in using imported honey bee genetics from the old world and designing new techniques for diversifying our stocks. They have the only permit issued by the USDA to import honey bee semen into the U.S. Genetic material has been collected from Italy, Slovenia, the Republic of Georgia and Kazakhstan.

Genetic diversity creates more robust survivor bees. They will communicate better, have a better division of labor, store more pollen and nectar, have a more diverse work force. Reduces prevalence and severity of disease and pests. There will be a greater microbial diversity as well leading to less susceptibility to pathogens.

G. M. Doolittle was a 19th-century beekeeper and author considered to be the father of commercial queen rearing. Beekeepers still use his methods today trying to create the best queens. But bee breeding differs from commercial queen production which actually works against diversity by looking for only a few traits such as honey production and pollination effectiveness.

Genetic diversity, however, is made up of a complex suite of characteristics: productivity, Varroa tolerance, brood viability, temperament, weight-gain, over-wintering, swarming, propolis (resin collection for social immunity--self-medication against fungal, bacterial and viral diseases), hygienic behavior, disease resistance, etc.

Bee breeding is a balancing act--a game of hedging bets. Selecting for just a few traits may suppress other traits. Raising good honey producers and pollinators may result in bees with poor Varroa resistance, for instance, or a low winter survival. In other words, you can't breed for just one or two traits. With that in mind you can see that it will take more than a season to adequately evaluate colonies.

At WSU they control everything about queen genetics. They do not rely on feral drone congregation areas (DCAs). They raise drones as well as queens to control mating. If queens were released to mate with local drones traits would quickly become diluted.

The basic sequence for queen rearing that Susan Cobey uses: In the spring queen rearing is begun. In the fall a pre-selection is done. Primary traits looked for are brood viability, temperament, pollen/honey stores, disease/parasites, hygienic behavior. Then the bees are over-wintered. In the spring there is a final selection based on spring buildup, production, Varroa growth, brood diseases. As she says, "Breeding takes a career not a season." See <http://honeybeeinsemination.com> for a detailed description of her methods.

Susan Cobey gave us a laboratory demonstration of instrumental insemination of queens. She pioneered these techniques and it was fascinating to watch how efficient she is. She explained that different races of honey bees require a slightly different technique! She offers classes for those who want to go further.

As most of us can't afford instrumental insemination equipment. We were given a frame of open brood and shown how to graft. First you need to get a larva that is 24-48 hours old with a grafting tool. Make sure to get a good dollop of royal jelly when you scoop out the larva. It has to be placed exactly in the center of a plastic or wax cell cup. Place cups in a grafting frame. Each frame will hold 15-25 cells. Keep the grafted larva covered with a damp towel before moving them to a starter box.

Brandon Hopkins gave us a demo on cryogenically freezing drone genetic material in liquid nitrogen. Samples are stored at -320 deg F. WSU is using this method to create a repository for honey bee genetics. Theoretically, sperm can be stored for up to 10,000 years and still be viable. Brandon has adapted cryogenic freezing to preserve germplasm from other animals like cattle.

It was an incredible weekend of learning for me. Everything from the history of bee diversity to the cutting edge genetic research of the honey bee and instrumental insemination.

We've come a long way since Lazzaro Spallanzani put pants on frogs!

ANNOUNCEMENTS AND OPPORTUNITIES

August 3rd-5th – Western Apiculture Conference – Boise, Idaho.
www.westernapiculturalsociety.org

August 18th – Oregon Honey Festival – Ashland, OR from 11 am to 5 pm www.oregonhoneyfestival.com Oregon Honey (& Mead!)

Festival is a family-friendly event held at the largest private space in downtown Ashland. It showcases Bees, Honey, Beekeeping, Mead and Hive Products. Come and taste the land!

Special cultural presentations by the Lakota Youth Development Group Honey Lodge. Learn to taste Honey with Amina Harris, Director of the UC Davis Honey and Pollination Center who will present some unusual honeys for tasting. Meet Beekeepers including OSU's Dr Andony Melathopoulos and try the People's Choice Award offerings presented by Ride My Road's Lauren Trantham! Be sure to look for our other events:

Sept 15th - Tom Seeley Event Location: TBD somewhere in the Portland area Cost: Early Bird by Aug. 15th \$40, after the 15th \$50 Sp

**ponsored by: Portland Urban Beekeepers Assoc. For more informat
ion: <https://portlandurbanbeekeepers.org/seeley2018/>**

**October 26th – 28th Oregon State Beekeepers Association annual
conference at the Salem convention center.**

Mark your calendar now and more information will be coming once the agenda for the conference is finalized. Several club members have attended over the past few years and have found the presentations and networking to be very valuable.

**APIMONDIA 2019 congress which will take place in Montréal
from September 8 to 12, 2019 www.apimondia2019.com.**

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