

# THE MARIN BEEK NEWS

Volume 10, Issue 9

October 2018

## What You Missed

Our last meeting featured a talk by Randy Oliver. Randy maintains the website, [scientificbeekeeping.com](http://scientificbeekeeping.com), and is a regular contributor to American Bee Journal. His talk was titled "Reading Combs: Understanding Bee Biology Over a Season."

Honey bees live in almost total darkness. Humans and birds are visually oriented. Most other animals are not. See the world through the bee's eyes.

What's happening outside. Nurse bees run the colony. The queen is basically an ovary. But nurse bees don't go outside so how do they know what is happening?

What to look at on the comb:

Look at the interface between honey and brood. Along the interface is a band of bee bread. Capped honey is energy stores. Brood is a protein demand. Bees are one of the few insects that do not hibernate and required generating warmth year round.

Open honey or nectar is an energy interface. Pollen and bee bread is a protein interface. The worker bees use the protein to make vitellogenin which they store in the fat bodies in their bodies. If there is too much pollen the bees will make bee bread out of it for long term storage.

There is a constant battle for space in the hive. The nurse bees will eat the pollen from the interface. The nectar foragers will try to fill the area with nectar and the queen will try to lay eggs in any vacant cell.

The only bees that can digest pollen are nurse bees. When they become foragers they lose this ability.

Fresh pollen stimulates the nurse bees to produce jelly. Excess pollen and fresh pollen indicate a good protein reserve. If they detect too much of one type of pollen the foragers will go out and find other pollen sources.

Young brood produce a pheromone that tells the hive

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## What's the Buzz?

Our next meeting will be on Thursday October 4, 2018 at the American Legion Log Cabin, 20 Veterans Place, San Anselmo, CA. starting at 7:30 pm. The meeting will feature a talk by Elina Nino, PhD, UC Davis Extension Apiarist. She will be discussing "Effects of Supplemental Forage on Honey bees."

### Upcoming Meetings:

#### November 1, 2018

[Janice Cox](#), Natural Beauty at Home, "Apiary Beauty". Janice will also hold workshops on Saturday, November 3rd.

#### December 6, 2018

Panel discussion on hive designs

#### January 3, 2019

[Ramesh Sagili](#), Oregon State University, Department of Horticulture, "Honey Bee Nutrition: What We Know, What We Need to Know"

#### February 7, 2019

[Leo Sharaskin](#), Horizontal Hives, "Natural Beekeeping". Leo will also hold workshops on

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Saturday, February 9th.

**March 7, 2019**

[Billy Synk](#), Director of Pollination Programs, Project Apis m, "Supporting Pollinator Habitat"

**April 4, 2019**

[Rachael Bonoan](#), Post doctoral researcher, Tufts University and Washington State University, "Why Bees Like Dirty Water"

**May 2, 2019**

[Mark Winston](#), Professor and Senior Fellow, Morris J. Wosk Centre for Dialogue

**June 6, 2019**

[Tom Seeley](#), Department of Neurobiology and Behavior, Cornell University, "Darwinian Beekeeping"

**July**

No meeting – Marin County Fair

First tree pollens:  
Initiates spring colony buildup  
Winter bees die off  
Minimal bee bread reserves

Parasites:

Nosema – draws energy from the bees. Nosema does not cause dysentery. Dysentery is caused by poor digestion, often yeast in the pollen. If the colony is infected with nosema then defecation in the hive can spread the nosema.

Early foraging stress from too much pollen causes the nurse bees to work hard and may cause collapse.

Randy suggests you create a bloom and colony progression chart for your local area. It gives you a guide for colony buildup in your location.

Growing colonies will go through their resources quickly. Food reserves are quickly depleted during inclement weather. If they run out of resources during inclement weather they will start to cannibalize the hive. First eating the eggs and then eating the open larvae. You may need to feed emergency protein. Nectar and pollen stimulate colony buildup

The earliest eggs to hatch do not get much jelly. The next stage should be covered in jelly in a strong colony. Larvae swimming in jelly are the sign of a strong colony.

The swarming impulse:

Nectar backfilling/no room for young larvae. When the cavity becomes full of capped brood the young brood pheromone is reduced and the bees will want to swarm. To avoid it you can put a new box of drawn comb above and the queen will move up and restart egg laying.

The main honey flow:

The bees need to rebound before the main honey flow. The capped brood that is left behind after swarming will emerge and allow the colony to take advantage of the nectar flow. The colony will shut the queen down so that they have more space to store honey for the nectar dearth. Stronger colonies make more honey.

You can trick the colony into storing excess honey by enlarging the cavity. If there is excess nectar coming in they will start to produce wax. This is when you

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that they are hungry and makes the foragers adjust their foraging to more pollen.

Four phases of honey bee year

When pollen starts coming in the colony will build up. When they get to a certain stage they will split. After that they will begin the food storage stage. Eventually the dearth arrives and growth will shut down.

Recruitment vs Attrition

Colony population increases when the queen laying exceeds the number of old bees that die off. In spring time you may have twice as many bees in a hive that are brood than adult bees.

Seasonal phases of colony conditions

Late winter coming out of hibernation:

For us it can start as early as September with coyote brush bloom

Winter bee cluster - the outside bees generate heat which is directed towards the center of the cluster. If the cluster gets too warm the cluster will expand and then contract as it gets colder.

Randy recommends insulating the cover to avoid condensation on the inner cover.

want to put in empty frames to have them drawn out. They will not draw out comb until all other comb is filled.

Late summer – brood rearing drops. No pollen coming in. Nurse bees cannibalize the young and it looks like spotty brood.

Varroa Mites:

More mites per bee during the late summer downsizing phase. As the bee population decreases the mites population increases, increasing the percentage of bees with mites. Mainly what is killing the bees is deformed wing virus. White flecks in the bottom of cells indicate a colony collapsed by mites. When the hive is collapsing the mites will switch from nurse bees to foragers and eventually transfer to other colonies.

Randy –

Splits colonies in spring and treats with oxalic acid. During honey flow he will treat with formic acid. He also uses thymol. He uses a variety of organic treatments so that the mites do not become resistant to the treatments.

First frost: Bees shut down brood rearing and go into survivor mode (no brood pheromone). Bees turn into winter bees, not nurse bees. Winter bees store pollen in their fat bodies.

In fall all of the summer bees will die off and only the winter bees will survive. The strongest colonies lose about half their colony strength in November.

Then the cycle starts again – Randy will feed with pollen substitute to start the buildup.

Randy's Recipe for Healthy Hives:

Run locally adapted stock.  
Use young vigorous queens (1½ seasons max before replacing).  
Monitor and control varroa all season long.  
Provide good nutrition, pollen substitute, if indicated.  
Minimize exposure to insecticides and miticides.  
Be proactive rather than reactive.

Those who monitor varroa and provide pollen substitute, when indicated, typically enjoy successful beekeeping.

## From the Librarian's Desk

We have several new books this month thanks to a generous donation by Penny Wells:

- Field Guide to the Common Bees of California text by Gretchen Lebuhn
- California Bees & Blooms by Gordon Frankie et al
- Swarm Essentials by Stephen Repasky
- Honeybee Democracy by Tom Seeley

Stop by the library table on Thursday and see if there's something of interest for you. Congratulations to Donn Davy who won the lucky draw for bringing a borrowed item back.

## Party at Peterson's

The annual Group Extraction at Dave Peterson's Honey House (garage) went off without a hitch last weekend. The number of participants was somewhat smaller than in years past. Dave reported that seven Members used his setup, extracting 127 frames of honey.

After extracting his supers for the year during the week, Dave makes the uncapping bin and extractor available for Club Members with a small number of frames to extract. This saves a lot of wear and tear on the equipment from being picked up and returned, not to mention the savings in time to set up and clean up after use.

The club has four extractors, two six-frame extractors, one twelve-frame extractor, and one 20-frame extractor. The two six-frame extractors will fit in most SUVs, station wagons, and some cars. The twelve-frame will also fit in station wagons and SUVs, the largest may need a truck to transport.

Dave Peterson manages a six-frame and a twelve-frame extractor. He is located in Ross. His contact info for Dave Peterson is [dpeterson307@aol.com](mailto:dpeterson307@aol.com)

Mary and Neil Nordquist manage a 20-frame extractor. They are located in Novato. Their contact info for Neil Nordquist is [neilmmary@verizon.net](mailto:neilmmary@verizon.net)

Rob Tysinger manages the other six-frame extractor. He is also in Novato; contact info for Rob is [rob@tysingerengineers.us](mailto:rob@tysingerengineers.us)

Each extractor comes with a cappings tub, straining screens, uncapping knife, and honey bucket with gate valve, everything you need to extract.

To reserve an extractor, contact one of the people listed above to see if the extractor they manage is available when you want it.

## Hive Tips

By Bonnie Morse, [Bonnie Bee & Company](#)

### Reducing Hive Size

Temps are dropping and your beekeeping season is winding down. Time to start thinking about winter preparations, if you haven't already (though the bees have been getting ready for months). Remove unused space and unneeded honey. In our area, bees need about 30 lbs of honey per colony going into the winter. For smaller colonies, a guide would be to have about 50% food / 50% brood.

Do your bees have enough food stored? We've seen more colonies than usual struggling to get the weight on before winter. If your bees don't have enough food, you might want to consider feeding them.

If you have a box on top of the hive that has no (or very little) built out comb on the frames, it needs to come off for winter. It is highly unlikely the bees will be building comb up there this season and that is a lot of dead air space where heat generated by the cluster will escape to.



### Planning for Winter

#### Mites!

Tis the season for mite problems in colonies. A colony reducing it's population for winter coupled with increasing mite levels can lead to crashing colonies.

Ideally, you started checking your levels in August...if not sooner. If not, it's not too late to start checking. Not sure how? Check out [this pamphlet produced by the bee lab at the University of Minnesota](#).

You really can't tell just by looking at a colony how bad the mites are. Sure – you know you have a problem

with a significantly decreased adult population and when you see sick larvae and discolored uncapped pupae. But don't be fooled by what appears to be a thriving colony with frames of apparently healthy brood. You never know what is feeding on the underside of your bees unless you check.

As we saw with the two years of data collected in the broodless study, monitoring boards under screened bottom boards may not give you an accurate reflection of what's going on the hive. Sugar rolls (or alcohol washes) are important tools for determining the level of infestation in your colony.

### Where are all the drones?

Drones have started to disappear for the season. Some resourceful colonies still have some drones around – and are even continue to raise drone – but they have all but disappeared in others.

What does this mean to you? Well, if you have a colony that supercedes the queen this fall, the new queen may have difficulty mating, or getting well mated. It also means you should be particularly careful during hive inspections as a colony may have a more difficult time replacing a killed or injured queen despite weather that would make mating flights possible.

## Janice Cox Workshop

Janice will be leading two workshops on Saturday, November 3rd (click below on "Register on Eventbrite" to sign).

9am to 12pm: ["Natural Beauty Products from the Hive"](#)

Cost: \$50. [Register on Eventbrite](#). To be held in Novato at the home of Rob & Karen Tysinger. (Address to be sent to registered participants the week prior.)

Join Natural Beauty expert and author of the newly revised *Natural Beauty from the Garden*, Janice Cox and learn to create your own natural skin and hair care products. The skin is our largest organ and the products and ingredients we use have a direct impact on our overall health and wellness. Learning to create your own products is fun, cost effective and will also make you a better consumer. Honeybees are nature's

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best cosmetologists. They produce natural beauty ingredients that science has yet to duplicate. You will create: Honey Shampoo, Honey Oatmeal Cleanser, Facial Toner, Natural Clay Facial Mask, Honey Aloe Sheet Mask, Soothing Honey Cream and Moisturizing beeswax lip balm. The use of garden herbs and flowers will also be discussed and how you can customize your own products. All materials are included and you can take home the products you create. (Books will be available for sale at a discounted price of \$19.95 )

1pm to 4pm: ["Natural Beauty from the Garden – Holiday Gifts"](#)

Cost: \$50. [Register on Eventbrite](#). To be held in Novato at the home of Rob & Karen Tysinger. (Address to be sent to registered participants the week prior.)

Join Natural Beauty expert and author of the newly revised *Natural Beauty from the Garden*, Janice Cox and learn to create your own natural skin and hair care products using ingredients you already have in your home. Learning to create your own products is fun, cost effective and will also make you a better consumer. They also make wonderful gifts for friends and family. You will create a Honey Bath Bomb, Lavender Bath Salts, Beeswax Lip Balm, Facial care kits including DIY sheet masks, and a soothing Gardeners hand cream. Gift ideas and packaging will also be discussed. All materials are included and you can take home the products and gifts you create. (Books will be available for sale at a discounted price of \$19.95 )

## Pollinator Plant Sale

October 27, 2018

Our friends at Marin ACE Hardware are once again holding a fall pollinator plant sale, with 20% of the proceeds going to the Bee and Butterfly Habitat Fund. This fund is helping to re-establish pollinator habitat on farms in the midwest along the monarch corridor. For just \$100, they can plant an acre of forage.

Fall is a great time for planting. You can take advantage of fall root growth, winter rains, followed by spring root growth so a plant can get better established before another dry summer sets in requiring a lot of irrigation to keep plants looking their best.

And Marin ACE Hardware is a great place to get your pollinator friendly, neonic free plants! Marin ACE Hardware is located at 180 Merrydale Rd, San Rafael, CA.

Bonnie & Gary will be on hand with an observation hive on Saturday from 11am – 2pm. Want to help out and talk about bees and point people in the direction of their favorite plants? Email Bonnie: [bonnie@bonniebeecompany.com](mailto:bonnie@bonniebeecompany.com).

## Beekeeping Workshop

Apis Arborea – The Ancient Craft of Tree-Apiculture and Building Log Hives  
Green Gulch Farm, October 7, 2018; 9am – 4pm

During the workshop, we will build 'honey bee nests' in logs, using traditional and contemporary tools. Wear layers. We will be outside for most of the day. We will look at the reemergence of ancient and traditional ways of apiculture, such as the "Zeidler", the craft of caring for bees in living trees. Rewilding habitat and nest restoration for honeybees is becoming increasingly essential for honeybees to survive. As wild bees survive in non-managed ecosystems and nest sites, they represent a resource for new strategies for contemporary apiculture and a fundamental shift in bee stewardship. For more information and to sign up contact:

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