

# THE MARIN BEEK NEWS

Volume 8, Issue 1

January 2016

## What's the Buzz?

Our next meeting will be on Thursday January 7, 2016 at the American Legion Log Cabin, 20 Veterans Place, San Anselmo, CA. starting at 7:30 pm. The meeting will feature a talk by Neal Williams, PhD, UC Davis entomologists.

Dr. Williams is an expert on native bees and bee forage. He will speak on his model for bee habitat that will benefit native bees as well as honey bees.

### Upcoming Meetings:

#### February 4, 2016

Dave Tarpy, PhD, Department of Entomology, North Carolina State University. He is a popular professor at NCSU and a respected researcher.

#### March 3, 2016

Greg Hunt, PhD, Professor of Entomology, Purdue University. Dr. Hunt studies the grooming traits of bees. He also works with a multi-state consortium of survivor stock to breed the grooming trait into honey bees. He will be discussing mite-biting bees.

#### April 7, 2016

Dewey Caron, PhD, professor emeritus, Department of

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## What You Missed

Our December meeting featured a presentation by Elina Niño, PhD, Extension Apiarist, U.C. Davis. The title of Dr. Niño's talk was "What's BEEen happening: the year in review"

Lab mission: To support stakeholders (no matter how big or small) through conducting basic and applied research and to disseminate knowledge of honey bees and contemporary research findings through extension and outreach.

Dr Niño's primary interest is in honey bee queen reproduction and health.

Virgin Queens: No ovary activation. Weaker worker attraction.

Then they take mating flights.

Mated Queens: There are progressive changes.

- Stop mating flights / ovary activation.
- Changes in pheromone and gene expression. What causes these changes?

Laying Queens:

- Effects on queens: Ovaries activated. All laying queens should be the same physiological state – but are they?
- Effects on colony: Worker behavior. Worker physiology. Colony health / productivity.

Queens produce many pheromones from multiple glands.

- 1) Tergal glands
- 2) Tarsal glands
- 3) Mandibular glands
- 4) Dufours gland

Pheromone modulation by seminal volume and fluid components

- Signals queen mating status
- Suggestion regulation via stretch receptors (Queen using Dufour gland to indicate she's

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mated)

- Signals queen mating quality
- Can workers tell the difference?

Caged retinue choice assay with mandibular gland extracts: Do workers prefer naturally mated vs. instrumentally inseminated queens? They found workers prefer extracts of high volume and semen inseminated queens vs. saline solution.

What are implications in colony behavior? Workers adjust behavior and physiology according to queen mating success.

What other factors can affect queen pheromone changes? Viral infection? Pesticide exposure?

- Workers didn't care whether or not queens were infected with virus
- Viruses and pesticides do not seem to affect pheromone production / detection.
  - o Coumaphos and fluvalinate: apparently no effect
  - o Queen adapted pheromone production to communicate information specifically about her mating state and quality.
  - o BUT when exposed during development, there was a difference

Synergistic effect of Amitraz and Sivanto on queen reproductive health: Evaluate synergistic effects on:

- Number of queen cells built: Sivanto was common denominator in lower queen cells. But overall low queen take (47.3%) therefore repeating experiment in 2016.
- Weight of virgin queens: No difference
- Mating flights: number and time. Queens exposed to both miticide and pesticide took longer to come back. Possible effects on nervous system.

Synergistic effects of Amitraz and agro chemicals on adult honey bee survival:

- In 2013, more than 1928 million lbs of pesticides used in CA (that only includes active ingredient)
- Honeybee samples:
  - o Acquired bees from colonies raised on brand new equipment
  - o Used 3-5 frames of newly emerged bees
  - o Shook bees off and used bees that didn't fly off
- Preliminary results: Seemingly no synergistic effects, although no statistical difference it is worth a closer look.
  - No significant effect of Amitraz and several

insecticides, herbicides, fungicides on adult bees

- Adjuvants are worth further study

Efficacy of several biopesticide agents against varroa mites

- 2 biopesticides tested in '15
- Need more testing –next year, testing 4 more

In other news:

Developing extension materials

- 1) Best management practice guidelines for beekeeping
- 2) UC IPM Bee Toxicity Ratings

Developing CA Master Beekeeping Program

- Estimated launch fall 2016
- Dewey Carron is a new board member
- Working on: curriculum, workshops/activities, online materials, educational apiary
- Master beekeepers will be ambassadors for the bees

Youth education

- Developing programs tailored for school age children
- Developed a pollinator education program (grades 3-5)
- Applied for funding from CA & ES

Haagen-Dazs Honey Bee Haven

- Dr. Christine Cases is garden manager
- Docent tours of the garden
- Self guided tours also available.

Michael Parrella has been head of Entomology / Nematology department at UC Davis. He will be leaving in January 2016.

USDA-ARS: 3 new trailers coming which will be located near bee lab

WAS annual conference will be hosted by UC Davis in 2017.

Dewey Carron / Honey Bee Health Coalition has tools for varroa management info available: "A Guide for Effective Varroa Sampling and Control"

## From the Librarian's Desk

The rainy season is upon us and what better time to curl up with a good book from the library. Did you know that the Club's collection includes a nice assortment of bee-related fiction? Stop by on Thursday and see if there's a title for you!

## Dues are Due

A Message from Dave Peterson:

### Time to Renew Your Membership -- Take the Double Your Dues Challenge

Membership dues remain at **\$20.00** for another year. Memberships include all family members residing in the same domicile and are for the calendar year. Those new members joining after October 1 are paid through all of 2016. Renewals are due by the January meeting and delinquent after the February meeting. In mid February, we will purge the Buzz, Swarm and BeekAdmin list subscribers who have not renewed by that time.

The best and easiest way to pay your 2016 dues is online at [www.marinbeekeepers.org](http://www.marinbeekeepers.org). You do not need to sign in or use a password. Just click on "become a member", fill out the form and submit. Be sure to complete the payment section at the end, which is via PayPal. You do not need to have a PayPal account to pay using a credit card. There is a small transaction fee added to your dues which is assessed by PayPal.

Or... you can mail a check payable to Marin Beekeepers to our Treasurer:

**Mary Nordquist**  
2072 Hatch Rd.  
Novato, CA 94947

If all else fails, you can always pay at the door when you come to the monthly meetings.

### Support the Bee Audacious Conference -- with the Double Your Dues Challenge

You can **Double Your Dues** (or add more if you choose) and the balance over \$20 will go to support the Bee Audacious Conference. This is treated as a tax deductible contribution through PlanetWorks, the 501-3c Non-Profit, who is acting as the Fiscal Sponsor of the Conference. Any amount you donate online, by mail to Mary, or give at the door at the meetings, will automatically go toward this exciting project. **Only the portion over \$20 is tax deductible.** You will receive a deductible receipt for your contribution.

Two Marin Beekeepers, myself and Richard Hyde, have each pledged \$1,000.00 to match the first \$2,000.00 raised through the Double Your Dues Challenge. So the more you give, the more we give.

As many of you know, a number of "Enthusiastic Marin Beekeepers" are organizing a unique Conference

being held in December 2016, bringing together the best minds in beekeeping from all around the country and even some international participants. Those of us who are working to make the Conference happen are extremely honored that many of the leading minds in beekeeping have chosen our area to hold this Conference. We are organizing volunteers and fundraising to make it all happen.

The conference is being built around three "Leaders", Mark Winston, whose editorial in Bee Culture sparked the concept, Tom Seeley and Marla Spivak. All three have been part of our speaker series over recent years and are familiar with our club and what we are doing. These three will invite 7 more Leaders of their choosing. Then the ten Leaders will invite 45 participants from the world of beekeeping across the country and around the World. There will also be 45 participants selected, from open applications solicited from the wider beekeeping community. These Leaders and participants will be bought together for two days of intense discussions, in breakout groups, about the future of beekeeping. The conference will conclude with a round table presentation of the findings and aspirations. This presentation is to be held in a large auditorium, open to the public and streaming live over the internet. Hopefully recorded as a TED Talk. All very exciting. We hope you will help us in this fundraising effort.

You can learn more about the Conference or volunteer to help at [www.BeeAudacious.com](http://www.BeeAudacious.com).

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Entomology and Wildlife Ecology, University of Delaware. He is the author of "Honey Bee Biology and Beekeeping". He now spends time living in both Oregon and Bolivia. He will share his hands-on expertise on the Africanized honey bee.

#### May 5, 2016

Yves Le Cont, Research Director at the Institut National de la Recherche Agronomique. After French apiaries were devastated by varroa mites in 1982, Le Conte investigated the few surviving apiaries and was able to identify traits in those bees that allowed them to rid their colonies of the mites.

#### June 2, 2016

Bonnie Morse, co-owner Bonnie Bee & Company. She will be discussing results from the broodless study.

#### July 2016

County Fair

## Hive Tips

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

\* Cold doesn't kill bees - moisture does. Make sure your hive tilts forward slightly so moisture doesn't condense inside on your bottom board. Not sure the bees have enough ventilation? On a warm day, quickly check the inside of your top to see if it is wet or has mold. If so, consider giving them a little more ventilation by adding a shim, stick, or thin piece of wood between the top and inner cover.

\* Cold may not kill bees, but it can make smaller clusters work harder to keep warm and go through their food stores more quickly. There's no reason to let a colony starve. On a day that is 60 degrees or warmer, you can go in and check out their food stores. If you prefer not to go into the hive(s) at this time of year, you can also check the weight of the hive by trying to lift it from behind. If it is difficult to lift, the colony likely has ample stores. If it is easy to lift, you may want to feed.

\* It's time to start getting ready for next season! Clean up equipment from dead outs and pulled honey supers from last season. Read a book. Sign up for a class. Order and assemble new equipment. The 2016 season will be upon us quickly!



Cleaning up Equipment for Winter Storage

## Beekeeping Classes

### Upcoming Beginner and Intermediate Classes

**Beginner Series:** Classroom sessions will include basic bee information, seasonal cycles of a colony, equipment options, where to place your hive, how to get bees and tips on working with your equipment. When the weather warms up, there will be a field session so you can observe and practice working with your tools and bees.

Class room sessions: Wed., Jan. 13th – Wed. Jan. 27th, 6:30pm - 8:30pm (3 classes, course code 24633, drop in fee = \$30/class)

[San Rafael Community Center](#), 618 B St., San Rafael

Field Day: Sat., Mar. 12<sup>th</sup>, 9:30am – 12:30pm

**Intermediate Series:** You've got your colony through winter (or not) - now what? Class sessions will include how to clean up your equipment, expanding hive size for spring, swarm prevention- and if that fails, swarm capture, setting up bait hives for swarms, identification of common pest and diseases and management options for them. Topics will also include dealing with special situations: aggressive hives, queen failures, and laying workers. Field day will include information on how to split a colony, pest and disease ID, and swarm prevention.

Classroom sessions: Wed., Feb 10<sup>th</sup> – Wed. Feb 24<sup>th</sup>, 6:30pm - 8:30pm, 3 classes, course code 24632, drop in fee = \$30/class

[San Rafael Community Center](#), 618 B St., San Rafael

Field Day: Sat., Mar. 14<sup>th</sup>, 1:30pm – 4:30pm

## Thanks

I want to take this time to wish everyone a happy new year. I also want to thank the people who contribute to the newsletter. Particularly, I would like to thank Bonnie Morse and Marina Wright, who provide a lot of the content that goes into the newsletter. I also want to thank my wife Karen Tysinger who diligently proof reads the newsletter every month and makes me look like a better writer than I really am.