

THE MARIN BEEK NEWS

Volume 6, Issue 5

May 2014

What's the Buzz

Our next meeting will be on Thursday May 1, 2014 at the American Legion Log Cabin, 20 Veterans Place, San Anselmo, CA. starting at 7:30 pm. The meeting will feature a talk by Rémy Vandame.

Rémy Vandame is a bee researcher at Mexico's El Colegio de la Frontera Sur (ECOSUR) who is a visiting scientist at UC Berkeley this year.

He has conducted numerous studies on native stingless bees and bumble bees with an overarching environmental concern. In a presentation asking "Why Is Bee Health Preserved in Latin America?" he proposes the possibility that the answer is in low-intensity agriculture and beekeeping. He can draw parallels to US beekeeping practices.

The focus of Rémy's talk will be two subjects, native bees diversity and management, and beekeepers and GM soybean in the Yucatán peninsula

Upcoming Meetings:

June 5, 2014

Dr. [Deborah Delaney](#), Assistant Professor at the University of Delaware. Dr. Delaney's research includes the genetic characterization of unmanaged bee colonies, savethehives.com feral bee project, and evolutionary biology of honey bees.

July 2 to 6, 2014

The Marin County Fair
Watch the Beek News and the Buzz for more information about how you can participate.

THERE IS NO REGULAR CLUB MEETING IN JULY.

What You Missed

Our last meeting featured a talk by Dr. Maryann Frazier, Sr. Extension Associate in the Entomology Department at Penn State University. Dr. Frazier's research includes determining the effect on honey bee colonies of pesticide residues in pollen collected by foraging bees.

Dr. Frazier stated that on average 1/3rd of bee colonies are lost every year. This loss is not just honey bees but also other bee pollinators and is not just in the United States. The prime suspects for colony loss are poor nutrition, varroa mites, genetics, viruses, nosema, pesticides, and colony stress.

Reduced immune function is also caused by these prime suspects, which allows viruses to take hold in the colony. Sub-lethal effects of pesticides also affect immune function.

Dr. Frazier began researching the role that pesticides

See What You Missed on Page 2

INSIDE THIS ISSUE

- | | |
|---|---------------------------|
| 1 | What you Missed |
| 1 | What's the Buzz |
| 2 | 2014 Marin Bee Census |
| 3 | Hive Tips |
| 4 | From the Librarian's Desk |
| 4 | Workshops |
| 5 | Beekeeping Classes |
| 6 | Fair News |

play. She sought to answer the question “Is honey bee exposure to pesticides important?” Her research team started out by looking at pesticides in general and at low (sub-lethal) levels. They collected over 1300 samples of pollen, wax, and bees from commercial beekeepers. These samples were tested for 172 different pesticides. Almost all of the samples had detectable levels of pesticides. They were able to detect 132 different pesticides. Up to 31 different pesticides were found in some samples, while the average was six detectable pesticides per sample. 51 of the 132 detected pesticides are systemic.

The next question raised was “Are managed honey bees exposed to enough pesticide residue to significantly impact individual bees, colonies, and populations?”

They found that assessing pesticide impacts on honey bees is complex and difficult because:

- Pesticides were present in different combinations.
- There are lethal and sub-lethal impacts to consider.
- The impact of systemic pesticides can be broad due to their presence in all parts of a plant.
- A.I. vs. formulation.
 1. A.I. = Active Ingredient
 2. Formulation includes the inert ingredients and adjuvants, which make a pesticide more effective. They are finding that inert ingredients often cause effects of their own.
- Acute vs. chronic (acute is a one-time dose while chronic can be many doses).
- Adult vs. larvae (pesticides are only tested on adult bees but many have impacts on larvae as well).
- Interaction with other factors.

Along with the many pesticides found there were also several fungicides detected by the testing. Fungicides, while not toxic to bees, do affect colony health.

The pesticide numbers found in the wax samples were higher. Wax tends to absorb and hold the pesticides.

In 2012 the Marin County Beekeepers partnered with Penn State University to sample pollen and wax from various areas in Marin County. It was the first pesticide survey on an urban environment undertaken by Penn State. Over a period of eight months pollen samples were collected for analysis by Marin beekeepers whose apiaries were spread throughout the county. Marin County was divided into four geographical regions, and the pollen collected from

each region was combined to provide an adequately sized sample and to reduce the cost of the testing. A total of 46 samples were sent in for testing.

The study found that very little pesticide was found in the pollen; even the wax had very low levels of detectable pesticide. Most of the chemicals detected in the Marin hives were beekeeper applied miticides.

While the levels of pesticides found in the Marin samples were low there were several pesticides detected that are known to be toxic to bees. The study also raised the awareness of the Marin beekeepers to the types of pesticides in our local environment. To learn more about pesticides Dr. Frazier invites us to log on to the National Pesticide Information Center website <http://npic.orst.edu/index.html>.

For more information and results of the Marin Pollen Project, see “What the Bees Brought Home”, by M.E.A. McNeil, American Bee Journal, April 2014.

2014 Marin Bee Census

Census time is here again! Thank you to everyone who has contributed to four years of data concerning the bee population in Marin (and surrounding) counties and the beekeeping practices that shaped those results.

Everyone (who has been keeping bees since 2013 or prior) is encouraged to participate - even if you are just reporting in on a feral colony in a tree you have observed during the survey period of April 1, 2013 - March 31, 2014.

The survey takes about 10 minutes to complete in its entirety. Click on the below link to access:

2014 Marin Bee Census Survey

This survey is being conducted by volunteers from the Marin County Beekeeper Association with the purpose of tracking trends in colony failures/success. <https://www.surveymonkey.com/s/2FB83MC>

Do you know any local beekeepers who are not members of the Marin Beekeepers Association? Then please forward this information and encourage them to participate in the census survey.

Hive Tips

- **Prevent your bees from swarming: make sure there is adequate space in the brood chamber.**

- Strong hives are building quickly. If your bees are starting to get crowded, add more space. Most importantly – be sure there is contiguous space in the brood chamber. If you add additional space, but there is only honey between it and brood area, you will not prevent brood area congestion – which is the cause of swarming.

- Adding a new hive body above the brood with new frames? Help entice bees to move up by adding a frame of with built out comb in new box. Are you a new beekeeper who doesn't have any frames with built out comb? Help entice the bees to move up by pulling a frame with young brood (young larvae & eggs) up into the new hive body from area below. Nurse bees will stay with these bees and their presence above will entice building in the new hive body. If you do this:

1. Be sure frame you pull up is kept directly above other brood frame(s) for easy access by nurse bees.
2. Replace frame you pulled in lower box. At this time of year (warmer temps so bees can break cluster to access food in different parts of the hive), you can place the replaced frame in the brood cluster area, OR between outermost brood frame & food frame, OR outside last frame in the box.

- Bees not quite ready for more space above? But you are concerned about swarm prevention? Add space BELOW. A super below your other hive bodies will give queen potential space to expand into and also give space to returning foragers.
- In spring during a strong nectar flow, check your hive(s) every 2-3 weeks.

- **You tried to stay ahead of your bees and give them ample space, but they swarmed anyway. Now what?!**

- Give the new queen time to emerge, mature, go on mating flight(s) and start laying. You don't want to disrupt this process too early.

Give the colony about 3 weeks before you check for brood.

- You don't want to wait too long, either...if the queen is not successful in returning from her mating flight, you'll want to give the bees a hand (by getting a frame of brood with eggs and young larvae from another colony, or by ordering a mated queen) before they get laying workers, which complicates the process.

- Keep in mind...weather (rain / cooler temps) can delay mating flights. Think your colony should have a replacement queen but you don't see evidence of her? There are other signs that can indicate whether or not there is a queen:

1. Sound of the bees: calm/relatively quiet, as opposed to the sound of the "[queenless roar](#)".
2. Work being done: Bees remain purposeful and busy.
3. Combs in brood area remain open. (If queenless during a nectar flow, bees will start to plug up with food.)

- If there is no brood, you'll want to be extra cautious. If you injure or damage the new queen, the bees will not have the resources (eggs/young larvae) to make a new one.

- **Is water pooling on your bottom board?** This is usually something that we get more concerned about with the approach of winter. But with our late rains (Yeah! We need it!!), you'll want to be sure that water is not pooling inside the hive on your bottom board during rains. By tilting the hive forward slightly (shims work well for this purpose), you can help the bees stay warm and dry.

- **Cleaning out a winter dead out in preparation for the arrival of new bees?**

- Check frames closely for the presence of American Foulbrood. While chances are more likely that your bees perished for another reason, this highly contagious disease continues to be found in colonies in Marin. Do yourself – and your neighboring bees – a favor and educate yourself on the signs. Unsure? Ask for help on the Buzz.

- **Time to set up your bait hives!**

- First swarm of the season was reported on March 5th. If you plan to set out bait hives this year, now is a good time to do so.
- Review Tom Seeley's book, **Honeybee Democracy**, for complete details on what his research has shown that swarms prefer in a nesting cavity.
- No time to read? Local beekeepers report success with the following set up:
 1. Deep hive box
 2. A couple of frames with empty built out combs (if you have them) in the center surrounded by empty frames with starter strips (or just empty space – but you'll need to add frames soon after they move in or else they will start building from the top of the box).
 3. Entrance reducer set to medium
 4. Box above the ground 2-3' (higher if you are able)
 5. Optional: Spray lemon grass tea (boil lemon grass until you make a dark tea) or other substances mimicking queen pheromones on the top of the frames and entrance of the hive. Wait to observe scouts!
- Have a bait hive tip? Post it to the Buzz!



Watching a Swarm Move Into a Bait Hive

From the Librarian's Desk

Looking forward to seeing you at the Library table on Thursday! As always, we have a selection of beekeeping magazines for you to read and discount subscription forms for the American Bee Journal. All club members are eligible to borrow materials from the Club Library. If you borrowed anything from the library don't forget to return it at this month's meeting.

Workshops

Dr. Deborah Delaney, who is our June speaker, will also be leading two workshops on Saturday, June 7th (each workshop is \$40 per person and limited to 20 people each) that you can register for on the Marin Beekeepers Association website:

<http://marinbees.org/wp/workshops-2/>

Pest & Disease ID and Treatment Options

Saturday, June 7th, 9:00am - 12:00pm

Identification of some of the diseases commonly seen in the area including mite vectored diseases (Deformed Wing Virus, "snotty" brood, etc.) and chalkbrood. Using a microscope, learn to identify Nosema and tracheal mites.

Handling Bees

Saturday, June 7th, 1:00pm - 4:00pm

Learn how to handle and mark your queens (starting with practicing on drones) and attending (adding nurse bees) queens in queen cages for transport.

Beekeeping Classes

Master Classes Workshops

\$20 fee per class, \$15 current local bee organization members, \$10 limited income. 6:30-9:00PM.

These Master Class Workshops:

- Provide the foundation to move your beekeeping practices comprehensively to the next level;
- Convey critical awareness about the obvious clues and timing for each seasonal next step;
- Share insight into the rhythmic patterns unique to San Francisco and the Bay Area.
- Will be especially meaningful to those who have had hives for several years but need to know what's next, and will provide a full spectrum of valuable insight for new and recent beekeepers. These synergistic classes weave together core knowledge of hive management with a bird's eye view of the entire year, and how timing is critical at each phase for overall hive success and prosperity.

May - (date/location to be announced)

LATE SUMMER - ANTICIPATE DEARTH, RUN AROUND DEATH, AND WHISTLE PAST TROUBLE

- Mite monitoring schema, Integrated Pest Management (IPM) techniques, organic mite control methods. Viruses, bacterial disease impact, and parasite vectored diseases - FoulBrood & Nosema Ceranae, tests for Hygienic Bee Behavior, Mite resistance, Phorid Fly Parasitism. Dearth Impact, Record Keeping.

August - (date/location to be announced)

MAINTAINING HIVE HEALTH THROUGH THE ANNUAL CYCLE, PLUS FOUNDATIONAL WORK FOR NEXT SPRING'S SUCCESS

- Fall nectar flow patterns, seasonal population decline, protein feed health essentials, preparation for winter & hive shutdown, working hives through winter.

For further information - 415-722-7640,
robert@citybees.com, or
<http://citybees.com/classes.htm>

Beekeeping Basics (3 hours, \$35)

Saturday, May 17th, 9:30am – 12:30pm, San Geronimo

This class is for new beekeepers and “newish” beekeepers. Learn tips and techniques for using smoker, bee brush and hive tool. We will look into how to work your frames and what to be looking for to determine health of your queen and the colony as a whole. As urban beekeepers, it is important to prevent swarming (to the best of our ability), so you'll learn what causes swarming, how to prevent, and how to recognize early warnings that a colony is making preparations to swarm.
Email bonnie@bonniebeecompany.com to register.

Summer and Fall Hive Management class series (9 hours, \$99)

Class room sessions: Tues. July 8th – Tues. July 22nd (3 sessions), 6:30pm – 8:30pm
San Rafael Community Center, 618 B St., San Rafael
Field Day: Sat., July 26th, 9:00am – 12:00pm (location TBD, tent. San Geronimo)

Register through the [San Rafael Community Center](#), course barcode 21743

Zen and the Art of Living with Bees with Michael Thiele/www.gaiabees.com

Saturday, May 24, 2014
Green Gulch Farm, 1601 Shoreline Highway, Muir Beach, CA

Topics will include: biology, the life forces and natural gestalt of bees, alternative beehive designs, an overview and study of the life-rhythms and cycles throughout the bee year, biodynamic approaches and bee-centered management, along with the study of various texts and contemporary bee research. More info

at: <http://www.sfzc.org/ggf/display.asp?catid=3,76,125&pageid=3569>

Fair News

The 2014 Marin County Fair is fast approaching. This is a fun annual July 4th event in which we can all participate on two levels. This year the theme is "The Happiest Fair on Earth".

First -- staffing the bee booth inside the exhibit hall during the Fair. This is our club's opportunity to do outreach and get the word out about our little "trusts" and hopefully dispel some misinformation. We get to talk about bees, show off the observation hive, look for the queen and enjoy the various reactions. Even as a "newbie" you have more knowledge than most of the public. The club also gets paid from the Fair to help continue our excellent list of speakers.

We staff the bee booth with 2 people during each 3- to 4-hour time slot. In exchange, each staffer receives a pass to get into the Fair and each time slot will have one car pass to the exhibitors' parking lot in back of the exhibit hall. The rest of the day you can enjoy the other parts of the Fair. Check out the web site <http://www.marinfair.org/2014> for entertainment (all included with entry), special events and attractions, especially the fireworks display each night at 9:30 p.m. The sign-up schedule will be circulated during the next two meetings and on the Buzz. Please sign up and join in the fun!

Second -- a little good-hearted competition with other beekeepers on all types of hive products: honey, beeswax, and candles. Cash prizes are associated with the first 5 places. There are two big prizes, the Best of Show and the Barney Salvisberg Award. All the exhibits are on prominent display at the bee booth during the fair (ribbons included) for your friends and neighbors to see, and we can showcase the many different hive products produced locally in Marin. The Adult Honey exhibit rules can be found online at:

http://www.marinfair.org/2014/competitive-exhibits/~media/Files/Fair/2014/Exhibits/2014_HONEY.pdf

Entry forms are also available on the web site.

The important dates are:

May 15

Entry form deadline for exhibits.
If you entered last year you should have received an entry package. If not, or if you are entering for the first time, there are entry forms and category descriptions for the Adult Honey Department on the Fair website, under Competitive Exhibits.

Please don't be shy; enter as many categories as you wish even if you are not yet sure that you will have an entry prepared.

June 6 and 7

Drop off exhibits in the Fair building at the back of the Fairgrounds

Friday, June 6: 3:00 to 7:00 p.m.

Saturday, June 7: 10:00 a.m. to 5:00 p.m.

We can accept late entries even if you hadn't submitted a form, but please make every effort to send in your forms by May 17.

June 8

Judging by Chef Frank Villa, former Executive Chef at Marinitas in San Anselmo.

June 22

Finalize Bee Booth sign-up.

July 2 to 6

MARIN COUNTY FAIR!



Finding the Queen