

THE MARIN BEEK NEWS

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What's the Buzz?

Our next meeting will be on Thursday October 1, 2015 at the American Legion Log Cabin, 20 Veterans Place, San Anselmo, CA. starting at 7:30 pm. The meeting will feature Marin County beekeepers showing off the gadgets and gizmos that they have found or built themselves to make their beekeeping a little easier.



Gizmos and Gadgets Night

Upcoming Meetings:

November 5, 2015

Kim Flottum, editor of Bee Culture Magazine. Kim has long had his finger on the pulse of the bee world. If he does not see it all, he sees much of it, and will offer an entertaining update on the state of the bee world.

December 3, 2015

Elina Nino, PhD, UC Davis Extension Apiarist. Dr. Nino is working on issues of bee breeding and starting a Master Beekeeping Program.

January 7, 2016

Neal Williams, PhD, UC Davis entomologists. Dr.

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What You Missed

Our September meeting featured a talk by Lilia De Guzman, PhD. Dr. De Guzman is a Research Entomologist specializing in Honey Bee Breeding, Genetics, and Physiology Research at the USDA-ARS lab in Baton Rouge, LA. She has been working as part of the Honey Bee Breeding, Genetics and Physiology Research Unit directed by Dr. Thomas Rinderer, who she also considers her mentor. Their main focus has been the search for mite resistant bees.

From 1989 to 1993 the team conducted the Yugoslavian Honey Bee Program. They found that Yugoslavian honey bees did not display much resistance to varroa mites but did have a level of resistance to tracheal mites.

The group then focused on Russian honey bees. The Russian honey bee had been exposed to varroa mites for the longest period of time of any group of *apis malifera*. From 1997 to 2002 the USDA imported bees from Russia. 362 queens were imported over that time period, each individually tested. The best 42 queens or 16% were selected for an extensive breeding program.

The queens were selected for:

- Varroa mite resistance
- Tracheal mite resistance

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- High honey production

Experiments included:

- 8 vs. 10 frame hives
- Hive location (sun vs. shade)
- fed or not fed sugar syrup
- fed or not fed pollen substitute

In summary, they found that hives in 8 frame boxes grew more than hives in 10 frame boxes, hives that were fed grew more than hives that were not fed, hives that were fed multiple times did better than hives that were only fed once. They also found that colonies that were fed pollen did better than colonies fed pollen substitute. They experimented with painting colonies either black or white but found no difference in colony build-up.

The team conducted studies comparing varroa mite management by European honey bees and Russian honey bees. They placed some colonies in sun and some in shade. They found that Russian honey bee colonies had lower mite levels than the European honey bee colonies regardless of sun or shade. They also found that European honey bee colonies placed in the sun had lower mite levels than European honey bee colonies placed in the shade. They also found that colonies placed in the sun had lower levels of small hive beetle infestation.

They created an apiary with a mix of Russian colonies and European colonies. They found that varroa mite levels for the Russian colonies were higher than an apiary was only made up of Russian colonies. The European colonies in the mixed apiary had higher varroa mite levels than the Russian colonies.

Dr. De Guzman suggested that, if possible, colonies of varroa resistant stock should be separated from colonies of non-resistant stock.

Dr. De Guzman then conducted studies of hygienic behavior. In her study hygienic behavior was defined as the ability to detect, uncap and remove infested brood. The test for hygienic behavior is to freeze kill a section of brood using liquid nitrogen. Bees with hygienic behavior will uncap and remove the killed brood. Inspection of the frozen brood after 24 hours will allow you to determine the level of hygienic behavior of the colony. She noted that hygienic behavior does not necessarily equate to varroa resistance.

Dr. De Guzman studied Russian honey bees for

hygienic behavior. In the first scenario she collected mites from different brood stages and transferred them to nearly sealed brood. In the second scenario she collected mites from nearly sealed brood and transferred them to other brood stages. In the first scenario the mites didn't reproduce because there was either no male or no female mite present. She found the same results in the second scenario. She concluded that interrupting the reproductive program of the mites leads to:

- Incomplete mite development
- Lack of mature daughters and male mite in the same cell resulting in mating failure.

She found that Russian honey bees can detect brood infested with varroa mites more quickly than European honey bees. Russians typically have lower mite infestation rates than European honey bees.

Dr. De Guzman studied grooming behavior of Russian honey bees, comparing them with Italian honey bees. There are two types of grooming behavior:

- Auto-grooming – bee grooms herself; the mites tend to be whole.
- Allo-grooming – bee is groomed by sisters; mites tend to be damaged.

Dr. De Guzman examined mites found on the bottom board to try and determine the level of grooming behavior. While this gave her some indication of grooming behavior it was difficult to measure auto-grooming from allo-grooming because of the presence of ants, wax moths and desiccation that can also damage the mites.

She examined the status of all mites trapped (young, fresh, injured, old, etc.). She found that a high ratio of old mites to total trapped mites is an indication of hygienic behavior.

While Dr. De Guzman and the USDA continue to study Russian honey bees, the responsibility for the breeding program was turned over to the Russian Honey Bee Breeders Association in 2008.

More information on Dr. De Guzman's research can be found on the USDA website at http://www.ars.usda.gov/pandp/people/people.htm?per_sonid=1308.

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.

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 breed 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 Entomology and Wildlife Ecology, University of Delaware. He is the author of "Honey Bee Biology and Beekeeping". He now spend 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

Reyes Farmstead Cheese

- tour & tasting at Heidrun Meadery
- Ace Hardware gift certificate
- one hour massage gift certificate
- lots of interesting bee equipment & paraphernalia

The Silent Auction will begin at 7:15 and close at the end of the meeting. Tables displaying the items will be set up at the back of the room. If an item interests you, write your name & phone number beside an amount on the provided bid card. A few items will be live auctioned during the Gadgets & Gizmos presentations.

Pollinator Plant Sale

Mark your calendar for the fall pollinator / drought tolerant / neonic free plant sale!

Our friends at Marin ACE are again holding a fall pollinator plant sale with 20% of the proceeds going to the Audacious bee conference.

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.

Oct. 24-25th, 8am - 6pm, the Marin ACE Hardware store in San Rafael (180 Merrydale Rd....on opposite side of 101 from Civic Center) will be having a plant sale with pollinator friendly, drought tolerant, neonic free plants!

Invite your friends and neighbors and get them planting more bee forage!

Volunteers wanted to talk to customers about bees and planting for pollinators. If you're interested in lending a hand, please email me:

bonnie@bonniebeecompany.com From 10am – 4pm both days, we'll have an observation hive.

From the Librarian's Desk

The club library will be closed Thursday evening, but please come out to support the our fundraiser to benefit the "Audacious Visions for the Future of Bees and Beekeeping" conference. Thanks to our generous donors, we have a number of great items, including:

- a flat of pollinator friendly plants
- wooden nuc box
- an autographed copy of Tom Seeley's book "Wisdom of the Hive"
- walking farm tour & cheese tastings at Point

Hive Tips

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

Reducing Hive Size

Temps are starting to drop 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 so the bees will not have to work as hard to keep warm. 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.

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.

Robbing

Robbing has reportedly been a problem for many Marin beekeepers this fall. If you suspect robbing is underway in your apiary, you need to take steps to stop it immediately! Reduce entrances, throw a sheet over the hive, close off the entrance with a screen. Before you see this problem, educate yourself on options to deal with it. Michael Bush has some good information available on his website: <http://www.bushfarms.com/beesrobbing.htm>

You can take some steps to prevent it in the first place. Keep entrances reduced – particularly if colony is small. Harvest excess honey not needed by the bees to reduce space they need to defend. If you're feeding, consider feeders accessed through the hive (like hive top feeders) as opposed to Boardman feeders next to the front entrance.

Where have the drones gone?

If you've been keeping bees for at least a couple of years, you may have noticed that frequently colonies in Marin have drones through the fall. It has not been uncommon in San Rafael to have queens mating into mid-November. This season has been very different.

Presence (or absence) of drone brood and adult drones has been tracked with the colonies in the [broodless study currently underway](#). Many of the colonies ceased drone rearing as early as August this season.

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.

American Foulbrood:

Just to keep this on everyone's radar....another case of AFB was found in Marin recently.

With so many new beekeepers and increasing hive density, it is imperative that we all continue to keep on the lookout and act quickly.

Because of the highly contagious nature of the disease, if you have a colony perish, it is important to secure the hive in a bee proof place (like garage) until you can determine the cause of death. Chances are, it will be mite and mite vectored disease related, but you can't risk the chance of it being something worse and having an AFB infected colony get robbed out. Our bees are all flying pretty far....so (like it or not) we're all in this together.

Don't know how to diagnose your dead out? Don't be afraid to ask for help! Post pictures to the Buzz, ask a beekeeping friend to look at your hive, bring a frame or two to a Marin Beekeepers meeting, etc.

If you do discover your hive has been infected, you need to burn it. Antibiotics will only affect the vegetative stage. Spores can remain viable for decades. Contact Richard Hyde (rh@hyderanches.com) or Bonnie Morse (bonniebmorse10@gmail.com) if you need assistance in finding an incineration option.

Get educated. Stay vigilant. Help us keep all our bees healthy!

Audacious Visions for the Future of Bees and Beekeeping

A.K.A. Bee Audacious

Help the Marin County Beekeepers and Planetnetwork get some of the *best bee minds on the planet* together in Marin for a working conference!

"Audacious Visions for the Future of Bees and Beekeeping"

A **collaborative working conference** to envision bold evidence-based ideas through which honeybees, wild bees, beekeepers and pollination managers can prosper.

Leaders for this January 2017 conference scheduled to take place at Marconi Conference Center in Marin County include Thomas Seeley, Marla Spivak, and Mark Winston.

Check our booster.com campaign!

www.booster.com/beeaudacious

Feel inspired? Help us spread the word! If we can sell 6,000 t-shirts – or get equivalent in donations – this conference is a go! If we sell more, it can be even better!

Don't want a t-shirt? Tax-deductible donations will be gratefully accepted. Send your check made payable to "Planetnetwork" to: Planetnetwork, c/o Bonnie Morse, PO Box 3835, San Rafael, CA 94912

Ambitious goal? Well, this is a rather audacious conference....

- **10 leaders**
- **100 participants** (1/2 invited by leaders, 1/2 selected by applications)
- **2 day conference** (January 2017)
- recorded / live streamed **panel discussion** of leaders post conference
- follow up **writings** by leaders

Want more info? Check out www.beeaudacious.com or ask: info@beeaudacious.com

Party at Peterson's

Setting up to do your own extraction for a small number of frames can be very time consuming, messy and generally a lot of work. For this reason Club Member, David Peterson, hosts a fall Extraction Party in his Honey House (his garage) in Ross, now a nine-year tradition.

Over the weekend of September 26 & 27 there were 13 participating Club Members. There were also several new beekeepers with no frames to extract who just came to observe. 246 frames were run through the Club's extractors resulting in about 300 pounds of honey.



Dave stores and schedules some of the Club's extraction equipment at his place, both the 6 frame and the 12 frame. Rob Tysinger stores a second 6 frame extractor in Novato and the Nordquists store the Club's 20 frame extractor. This equipment is available for use by all Club Members and can be reserved by contacting:

Dave at dpeterson307@aol.com,

Rob at rob@tysingerengineers.us or

Neil and Mary at neilmary@verizon.net.

Generally it requires a station wagon, SUV, van or truck to transport the extractors. A truck is required for the 20 frame machine. Club Members can check them out for use a few days at a time. There is also an electric uncapping knife, a scratcher and uncapping bin available to go with the extractor. The equipment should be picked up, used, cleaned and returned within a few days to a maximum of one week.