

THE MARIN BEEK NEWS

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March 2012

What You Missed

Our last meeting featured a talk by Diana Sammataro, Ph.D., Research Entomologist, USDA-ARS Carl Hayden Honey Bee Research Center, Tuscon, AZ. Diana's talk was about the world of mites.

The study of mites is called Aracology. They generally have four pairs of walking legs, although the larval stage usually has only three pairs of legs. They have cholistori, which are mouth parts, and a body that is separated into two regions. They are closely related to ticks.

There are over 50,000 named species of mites and probably over one million unnamed species. Mites live in almost all habitats on earth and rival insects in variation of living places. Their habitats include soil, aquatic, plants, brachiopods, vertebrates, invertebrates, and polar and arctic extremes.

Mites can be very specific in their habitat. There are specific mites that inhabit monkey lungs, sea snake noses, and sea urchin guts. They can be found on mold and on snails eating slime. Some common mites are red palm mite, two spotted spider mite, and straw itch mite.

see What You Missed on page 2

What's the Buzz

Our next meeting will be on Thursday, March 1, 2012 at the American Legion Log Cabin, 20 Veterans Place, San Anselmo, CA, starting at 7:30pm.

Eric C. Mussen, Ph.D., Extension Apiculturist
University of California Davis
Dr. Mussen will speak on the current state of beekeeping.

Upcoming Meetings:

April 5, 2012

Katie Lee, the Bee Informed Project

Katie will speak about "The Bee Team: Helping CA Bee Breeders Select Stock"

May 3, 2012

Serge Labesque, local beekeeping guru

Serge will speak about spring beekeeping.

June 7, 2012

Dan Stralka, Marin beekeeper

Dan will be discussing survivor stock bees.

June 30 to July 4, 2012

The Marin County Fair

Watch the Beek News and the Buzz for more information about how you can participate.

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They are found on mammals. There are chigger mites, house dust mites (which eat dead skin, etc.) and hair follicle mites (any creature with hair probably has them). In soil there is the red soil mite. On birds there are specialized feather mites that only live on specific areas of birds. There are mites that inhabit the ears of moths, but only one ear so that the moth does not become deaf and a easier target for predators. They are found on practically all animals including amphibians and reptiles. They are found on all parts of plants, leaves, roots, flowers, seeds, and in the soil. They are found in cheese, stored products and pet food. In short, they are all around.

How do mites get around? They have many ways of spreading. They can spread by wind or water. They can travel on other insects (phoresy) or even other mites.

In European honey bees, more than 50 species of mites have been discovered. Fortunately many of them are benign. There are three mites that are associated with honey bees that are a concern.

Tracheal mites:

Tracheal mites live and breed in the respiratory system. They feed on hemolymph, which is bee blood. They affect all types of adult bees. The female mites will move off of the old host, quest (hang out in a certain area waiting for a new young bee to pass by) and migrate. The mites are able to distinguish between young and old bees.

Tracheal mites cause damage to the bee's tracheal tubes. They create puncture wounds in the tracheal tubes as they feed. These wounds scab over and reduce the effectiveness of the tube. The mites also leave debris in the tracheal tubes that reduces the tube's capacity. Bees infected with tracheal mites may leave the colony, leaving behind honey and abandoning brood.

Currently, tracheal mites are found in all subspecies of European honey bees. They have most recently been found in Asian honey bees.

Varroa mites:

Varroa mites live and breed in bee brood, although they can also live phoretically on adult bees. A female mite will crawl into the cell of a developing bee larva. When the larva is capped over the mite will first lay a male egg and then a series of female eggs. The mites hatch, mate, and feed on the developing larva. When the bee emerges, the female mites also emerge

searching for a new larva to infest. Mites infesting worker cells average 1.5 daughters per cell, while mites infesting drone cells average 2 or more daughters per cell. This is the reason that mites prefer to inhabit drone cells.

Varroa mites live on hemolymph. There are over 18 viruses that are vectored by varroa mites. It is commonly assumed that the viruses are transmitted through the mite's saliva.

Varroa mites were first identified in the United States in 1987. They have currently be found on all inhabited continents of the world, except Australia.

Tropilaelaps mite:

This is a mite that has recently been found on the giant honey bee. It is felt by some aracologists that it is only a matter of time before it will infest the European honey bee. Tropilaelaps mites are similar to varroa mites except that bee brood is absolutely essential for their survival. They carry deformed wing virus and are currently prevalent in the tropics.

Club Bee Order

Over the last several years one of the goals of the club has been to reduce the quantity of packaged bees introduced to Marin County from stock that is not able to survive the Marin County climates. In the past, the Nuc has researched the available bee breeders and selected breeders to support based on their commitment to developing lines of bees able to survive without the use of harsh chemical treatments.

This year the Nuc decided to support the efforts of our club members Bonnie Bollengier and Gary Morse who have started Bonnie Bee & Company to provide nucs with queens mated from local Marin stock. If you are planning on purchasing bees this year, we strongly urge you to contact Bonnie or Gary to find out about their new business.

Five deep* frame nuc (nucleus) colonies are \$140 each and will be available late April - mid-May (weather dependent).

*Some medium frame nucs will be available, request when ordering.

Order your bees directly from Bonnie Bee & Company by contacting Gary Morse: gpmorse@comcast.net, tel: 415-699-5856, www.bonniebeecompany.com

Farm Day

Farm Day will be taking place this year on Thursday, March 22, set-up 8:00am, event: 9:00am - 11:30am
Thank you to those who have already committed to helping with the event. At this time, we could still use 2-3 more people.

Approximately 1200 school kids (K-6) attend this event. The Marin Beekeepers table has always been a popular one. Table includes observation hive, bees vs. yellow jackets flashcard game, tools & equipment, wax comb, etc.

This is a great opportunity to reach out and teach kids - and their parents - about bees (and why they should not fear them).

If you would like to help staff the table, please contact:
Bonnie Bollengier, bonnie@bonniebeecompany.com.

interferes with natural selection is not in the spirit of this experimental project. And we would discover which bees could make it on their own, having evolved to live with the mites and survive and having adapted to our local area.

Splittees had to be experienced beekeepers that had bees but lost all of them. They agreed to care for the splits, not treat them and if they survive, keep records, report the progress of the split, and to share them with other Marin beekeepers in 2012.

This year we will change things a bit, having learned quite a lot from the first go around. We will have a hands on workshop and those who learned last year will be offering their advice too. If you want to participate this year, please contact Cynthia Perry directly OFF THE BUZZ to her personal email: cynthiasps@gmail.com.
She will put you on the list and will send out info next month.

Split Squad

The fruit trees are blooming the drones are flying and a lot of us have colonies that already need a super! It is time to think about splitting Marin colonies in the hope of propagating survivor bees. The ad hoc volunteer Split Squad was formed last year to learn how to split and to see if we could get local survivor bees from ourselves to ourselves in the future.

Here is how it worked last year:

Cynthia Perry volunteered to coordinate our Marin beekeepers who wanted to learn how to split their bees, were willing to share those splits with Marin beekeepers who had lost their bees, and get a bit of money for their trouble(\$75.00) and maybe keep a split for themselves if they needed bees. Also everyone who participated (15 givers and 15 getters) kicked in some money so we could hire Serge Labesque to come to Marin and teach us how to split. The idea is that those who learned from him would go on to teach others.

We got 21 splits and of those, two did not take, five were ok until winter and then died, 11 are still alive, and three people have not reported in yet.

Here were the conditions:

Splitters had to be beekeepers that had bees which survived at least one year with NO TREATMENT WHATSOEVER. Feeding ok, but powdered sugar, thymol, formic acid, oxalic acid or anything else that

Sixth Annual Bee Symposium



SMALL SCALE BEEKEEPING

A Benefit for (PANNA) Pesticide Action Network of North America
The 2012 Bee Symposium is dedicated to the efforts of small-scale and local beekeepers

Saturday, March 10th, 2011
9:AM to 5:PM

Sebastopol Veterans Building
282 South High Street
Sebastopol, California

Tickets
\$35.00 in advance
\$40.00 at the door

For more information and to order tickets go to
www.beekind.com

Pollen Project Update

The Pollen Project is set to begin. Sampling for the pollen project, a collaborative effort between beekeepers in Marin County and Maryann Frazier/Penn State University is set to begin in March.

Twenty beekeepers will be collecting samples at 34 apiary locations.

Thank you to everyone who has supported this project financially, as well as the beekeepers who have committed their time to collect samples from their hives!

Swarms

Swarming - what you need to know:

There's been a lot of *buzz* lately about the appearance of drones. Why? Because like storm clouds before the rain, drones mean colonies are preparing for "swarm season" -- in effect, the "mating season" for bees.

Swarming is a natural behavior and is a good thing, as it is the colony's method of propagation. Bee colonies that have survived winter and are thriving, are probably also feeling the constraints of a "winterized" colony (a hive that has been compacted down to the smallest possible size, to accommodate the cluster without allowing for additional space, which might become stressful to maintain during the long winter months).

While the queen bee does slow or even stop laying eggs until after the winter solstice, as soon as the days start to get longer, she starts laying again. By the time the warm weather hits, a colony's home can be very crowded.

Unfortunately, bee swarms are not great PR to our surrounding neighbors, and should be closely managed, particularly with the proliferation of backyard beekeepers throughout Marin. In short, bee swarms are not neighborly!

Now is the time to inspect your colonies and look for signs of swarming:

Early Signs:

1) Crowding -- are your bees building comb *outside* of the "normal" hive box areas? For example, around the inner cover hole or outside of follower boards?

2) Drones -- do you see a lot of drones and/or drone comb? A winter colony won't "waste" by producing drones, since their singular purpose is to mate with virgin queens. If you see a lot of drones, the likelihood is that your colony is recognizing that virgin queens will soon be aloft. If they are getting ready to send drones out, they are expecting to send out virgin queens, too.

3) Is your colony honey bound? Perhaps you don't see crowding or an abundance of drones. The next thing to look for is room in the brood nest for the queen. If the foragers have filled all available frames with nectar/honey, then the queen will not have space to lay eggs. The lack of developing brood can trigger the swarm instinct. Make sure that the brood nest area (generally the 6 inside frames on brood boxes) are not full of honey. If they are, drop some empty frames in.

Latent Signs:

1) Brood nest ratio: Do you see eggs & uncapped larvae? What is the ratio of the young (uncapped) brood to capped brood? A colony that is nearing swarming will have more capped brood than uncapped brood. A ratio in excess of 50% (more capped brood than uncapped & eggs) is leaning toward swarming. Remember that the queen slows down and even stops her egg laying in preparation for a swarm. (Worker bees chase her around, preventing the laying and getting her fit for flight). Therefore, a diminishing number of young brood, particularly when there is ample space for them, is an indication that a swarm might be brewing.

2) Swarm Cells: If you find swarm cells -- and there will likely be more than one or two -- this means the instinct is in full swing, and your efforts to thwart the swarm will be challenging. The best approach at this point is to make a split (i.e. split the colony), since that is what the bees' intention is anyhow. In this way, you will not lose the bulk of your bees to a swarm, you avoid angering or frightening your neighbors, and you can grow your apiary (if that is your desire). Otherwise, there are always beekeepers who will gladly take the extra bees off your hands!

Some beekeeping guides suggest that destroying queen cells will prevent swarming. While destroying queen cells *might* prevent a swarm, the likelihood is that all you will accomplish with their removal is destroying a valuable resource (queen cells from a colony that survived the winter)... because the colony will probably swarm anyhow. When they've decided to go, they generally go.

Finally, it is important to know that a colony that swarms might not only swarm once. Frequently, a colony will swarm two or even three times (in intervals of a few days to a couple of weeks). Beekeeping books often say that an emerging queen will seek and destroy other queen cells.

However, experienced beekeepers know this isn't necessarily the case -- frequently a colony will spawn several swarms of diminishing size. The first swarm is the largest, contains the resident queen, and is called the primary swarm. Subsequent swarms are castes and fly with the newly hatched and mated queen(s). They are generally not as big as the primary swarm.

All of this information and more can be found at club member Anna Gravley's website marinbees.com.

Workshops

SELECTING DISEASE RESISTANT COLONIES FOR BREEDING STOCK

Date: Saturday, April 7, 2012

Time & Location: TBA

Katie Lee, the Bee Informed Project


Watch for more information on these workshops in future newsletters and on the Marin Buzz.

The Librarian's Desk

We've had a wonderful donation of bee-related fiction books from Mea McNeil. Be sure to drop by the library table at the back of the Hall & have a look. Do remember to keep our books in circulation and return them each month so that all club members can enjoy!

Bee Magazine Offers

Members can use the attached offers to subscribe or renew their subscriptions to Bee Culture and/or the American Bee Journal.



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