

THE MARIN BEEK NEWS

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December 2017

What You Missed

Our last meeting featured a talk by Janet Brisson, owner of Country Rubes Beekeeping Supplies. Janet's talk was titled "Small Hive Beetle Coming Soon to your Neighborhood".

Small hive beetles (SHB) are generally 1/8" to 1/4" long, have retractable heads, and clubbed antennae. Their retractable heads and antennae serve to protect them against bees. They are originally from Africa. They were first discovered in the United States in Florida and have spread around the US and Canada. They are now also in Hawaii & areas of Europe.

SHB are active at night when bees are clustered. They drop to the bottom of the hive looking for places to lay eggs. They lay their eggs in the brood in little cracks and crevasses. During the day they move to the top of the hive to stay away from the guard bees. If you open an infested hive the beetles will start moving down out of the light. Worker bees and small hive beetles can co-exist in the comb.

SHB can lay from 1k to 2k eggs in their six month life span. They can puncture larvae capping and lay eggs in cells with larvae. The eggs hatch in 4 days and then they feed on pollen.

Larvae stage is the most damaging. Larvae feed on pollen and honey, tunneling through comb. When they defecate they have yeast in the feces. This ferments the honey and causes what is called slime. It smells like rotten oranges.

Larvae mature in 7-10 days. They leave the hive and pupate in the soil. They prefer sandy soil. Then they emerge as adults and start the cycle again.

SHB larvae look a lot like wax moth larvae but only about half the size. Wax moth larvae have more legs. SHB has three sets of legs and then dorsal fins. SHB larvae don't destroy comb but wax moth larvae can then invade and they will destroy comb.

SHB can fly for miles but don't fly inside the hives. They can land on vertical surfaces. SHB have a keen sense of smell.

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What's the Buzz?

Our next meeting will be on Thursday December 7, 2017 at the American Legion Log Cabin, 20 Veterans Place, San Anselmo, CA; starting at 7:30 pm. The meeting will feature a talk by Gene Brandi, President, [American Beekeeping Federation](#), "Beekeeping from a Commercial Perspective"

Gene will be speaking about his business and generally describe how they manage their bees for honey production and crop pollination; describe some of the difficulties they face with pesticides, mites, etc., and discuss some of the challenges and opportunities they face today. He also plans to talk about some of the political issues that impede progress in pollinator protection from pesticides, and the fact that Federal, State, and local policies are not always "bee friendly," even though many folks love to proclaim that they want to "help the bees!"

Upcoming Meetings:

January 4, 2018

January 4, 2018: Our first meeting in the new year will be a panel discussion of community breeding / sourcing of bees followed by Q&A. Panelists include: Volker Ackermann, Jennifer Berry, Roy Crumrine, (Anything Bees), Richard Hyde, Bonnie Morse (Bonnie Bee & Company) Cynthia Perry (Split Squad) and Dave Peterson.

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Adult beetles shun light while the larvae are attracted to light.

In the winter the adult beetles can hang out in cluster to keep warm.

The eggs need 70% humidity to hatch.

The larvae prefer sandy soil to pupate in.

They love pollen patties.

SHB made their way to California, hitching rides from migratory beekeepers coming to pollinate almonds. California is mostly clay soils but there are areas of sandy soil. The California Department of Agriculture rates SHB as a B pest (Not widely spread yet).

Beetles are usually discovered when inspecting the hive. When lids are removed the light causes beetles to run along the frames. Powdered sugar can cause SHB to drop through a screened bottom board.

Weak hives do not have enough bees to defend against SHB and larvae. Both adults and larvae destroy honey bee eggs.

If you have SHB it is important to extract the honey as soon as possible. Your house, garage, or honey house can be overrun with beetles if you bring supers in let them sit without extracting the honey. Honey contaminated by SHB is not fit for human consumption

What to do if you have small hive beetles?

- Early detection is important.
- Keep hives in sunlight.
- Keep colonies strong.
- Keep mite load low to reduce stress on the bees.
- Keep apiary and honey house clean.
- You need to break the cycle

Mechanical devices:

- Beetle baffle, developed by Haynes Hasselmaier - metal strips mounted on wood spacers put all around on top of the bottom board.
 - Beetles can't climb over things because their bodies can't bend due to the hard shell.
 - Adult beetles will drop to the floor at night. During the day with baffles installed the beetles are trapped on the floor. They can't get back up above the baffle and will drop through the screened bottom board.

- Diatomaceous earth is good to kill SHB and not as messy as oil.
- You can also use traps like beetle jails or beetle blaster.
 - These are baited with apple cider vinegar and oil. Bees will tend to propolize them.
- Blue shop towels can also trap SHB.
 - Bees will chew them up, which makes them fluffy. SHB will hide in the fluffy towels.

Chemical applications:

- Checkmite under the screened bottom boards.
- Guardstar, soil drench to kill larvae.
- Plastic sheeting under hives – larvae fall on plastic and die from the heat.
- Larvae can be killed by dipping in strong bleach solution.

Janet also discussed the use of powdered sugar as varroa mite control.

Bee Culture calendar has dated to check you hives for mites. It calls for mite test 8 out of 12 months.

The most accepted test for mite counts are sugar shake or alcohol roll. You can also use powdered sugar dusting for mite counts.

Sift or dust heaping cup of powdered sugar on top brood box. The go to second brood box and repeat. You can use window screen mounted on a frame for sifting the sugar.

Use screened bottom board with white observation board. Wait 20 minutes. Scrape powdered sugar from observation board into water. Then count mites.

When there is brood present you will only be counting about half of the mites, since half will be in the capped brood. You will need to adjust your count by multiplying the actual number of mites counted by 2. In the winter or if you have a brood break all mites are phoretic so no adjustment is necessary.

Janet developed the following comparison between using the sugar roll or alcohol wash method of mite counting and the powdered sugar dusting method that she uses.

3 mites with roll = 22 mites by sugar dusting
5 mites = 43 mites
10 mites = 100 mites
12 mites = 114 mites
12 mites = 141 mites

If you have over 40 mites you want to treat with organic miticide or start a sugar dusting program.

Powdered sugar dusting can be a good mite control but you need to be consistent (dusting every 5 days until mite counts are consistently low). Go to Countryrubes.com, under information, to see how to do sugar shake and powdered sugar dusting.

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February 1, 2018

Mace Vaughn, Pollinator Program Co-Director, Xerxes Society for Invertebrate Conservation, "Habitat and Lobbying".

March 1, 2018

Leo Sharaskin, editor, Keeping Bees with a Smile, "Natural and Practical Beekeeping".

April 5, 2018

Samuel Ramsey, Doctoral Student, University of Maryland, "Varroa Research".

May 3, 2018

Elina Nino, Extension Apiculturist, UC Davis, "Effects of Supplemental Forage on Bees".

June 7, 2018

Marin Beekeepers, "Gadgets and Gizmos".

July

No meeting: Marin County Fair, June 30 – July 5.

August

No meeting: Marin Beekeepers Annual Potluck.

Hive Tips

By Bonnie Morse, [Bonnie Bee & Company](http://BonnieBee.com)

By now, you've hopefully made sure your hive is queenright and ready for winter. Unless there is good reason (extreme weather events, for example) to do otherwise, it's now best to let the bees alone. Inspecting hives now will break propolis seals (which will be hard for bees to repair in cold temperatures) and release heat needed to keep the brood warm. If the cluster is small, the latter could provide disastrous as they may have difficulty bringing temperature back up.

For the curious, you can find out a lot of information without opening the hive. Put your ear up to the side and knock gently. What kind of buzz do you hear? Does it sound like a large cluster or a few sporadic bees?



Knocking to Check on the Hive

Try to heft the hive. Is it heavy with stores? Or is it light and lifted with ease? If you have a screened bottom board, what do you see on the monitoring board? From debris, can you see if the size of the cluster is the same, smaller or larger than when you looked last? Do you see dark cappings from brood emerging? Or lighter cappings where stored food is being consumed?

Beekeeping Classes

Upcoming Classes

Beginner Beekeeping class series (9 hours, \$99)

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: Wednesdays, January 24, 31, February 7, 6:30pm – 8:30pm (3 classes, drop in fee = \$30/class)

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

Registration through the San Rafael Community Center opens November 1.

Field Day: Sat., March 17, 9:30am – 12:30pm, location TBD, tent. San Geronimo

Intermediate Beekeeping class series (9 hours, \$99)

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: Wednesdays, February 21, 28 & March 7, 6:30pm – 8:30pm, 3 classes, drop in fee = \$30/class

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

Registration through the San Rafael Community Center opens November 1.

Field Day: Sat., March 17, 1:30pm – 4:30pm, location TBD, tent. San Geronimo

Aid for Beekeepers in Disaster Areas

The Sonoma County Beekeepers Association is now accepting donations to help beekeepers recover equipment, etc. lost in the fires. Link to PayPal can be found here:

<http://sonomabees.org/sonomabees-fire-fund/>

That site also includes a survey to help assess who has lost what, and who can help out. If you want to help (equipment donations, provide temporary apiary locations, help work next spring, etc.) enter your contact information then scroll down to #6 to indicate how you can help.

As many of you know, Mike & Deborah Turner, active in both Marin and Sonoma, escaped the fires with the clothes on their backs and their two cats. Everything else was lost. If you want to donate - or sell (Mike said he is happy to pay for gently used tools / etc.), check out this google sheet for what is needed and please enter your information so there are no duplications. (Of course, when it comes to items like hive boxes / frames / etc., much is needed and all are welcome.)

https://drive.google.com/open?id=1UgbM_t-pDWsf7VjSuOr_2vuuoKaFhR1gwRrUzunJAG8

They are still looking for a permanent home and Mike has limited space to collect items. He will need tools first so he can get back to work, while some bee equipment can wait until spring. By entering your information, he can contact you when the timing is right.

Every little bit helps. Just think...even though an individual bee only produces a 1/12 of tsp in her lifetime, together the colony can produce hundreds of lbs. a year. In that spirit, you might consider giving \$10 to the fund to help support beekeepers in Puerto Rico. On the mainland, those impacted by disasters have their surrounding communities to support them in times of crisis. But our fellow Americans in Puerto Rico are all in crisis. Help the Pollinator Partnership help them. Every dollar counts and right now Blue Diamond Growers will match the next \$5000 donated so your contribution can have double the impact.

<https://www.gofundme.com/fund-for-puerto-rico039s-pollinators>