MT. BAKER BEEKEEPERS ASSOCIATION

BEE BITS NEWSLETTER

Next Meeting

Wednesday, February 15 Time: 7 PM
Gateway Centre Suites 1313 E. Maple St.
The Rainier Room, Ste. 301 Bellingham, WA
"Bee-giners" session: 6—7 PM Rainier Room

REMINDER: NORTHWEST FLOWER AND GARDEN SHOW IS COMING

Aside from oohing and aaahing at the beautiful displays, the garden show offers a number of seminars, including "Making Your Garden Bee-Friendly" with Kate Frey, co-author of *The Bee-Friendly Garden,* a well-regarded and popular book among local apiarist/gardeners. Find more seminars of interest under the category: "SHARING THE EARTH: ATTRACTING BIRDS, BENEFICIAL POLLINATORS AND OTHER WILDLIFE."

Go online for tickets: www.gardenshow.com/

Washington State Convention Center
705 Pike Street, Seattle, Washington
FEBRUARY 22-26
Wednesday – Saturday: 9am – 8pm
Sunday: 9am – 6pm

DON'T LET THIS HAPPEN TO YOU! CLASSES ARE AVAILABLE TO HELP

Here are three great opportunities in our area to learn about beekeeping and improve your skills as a beekeeper:

Miguel Boriss's popular classes at Whatcom Community

Tentatively, Miguel's classes are scheduled for:
·Beginning Beekeeping: Saturday, April 22nd from 9am-1pm-- $55
·Beekeeping-- Level II: Saturday, May 20th from 9am-1pm -- $55

We do have a package rate ($95) that would save a bit of money if students would like to take both classes within the same quarter. For the most up-to-date information and to register, go to: whatcomcommunityed.com
Students may also call the registration line at 360.383.3200. Classes will be published online on February 17th, and at that point they will be ready to take registrations.

Jo Miller's Beginning Beekeeping Class 2017

Due to inclement weather, the first session of Jo Miller's beekeeping class was postponed until February 14. Here's a reminder of the info on the class:

We will meet for three hours a week in February and March, then once or twice a month for four more sessions (to be discussed). After February, some of the class sessions will be field trips, and classroom sessions will be adjusted to match seasonal needs. The class covers the material in the WA State Master Beekeepers Apprentice level text, with enhanced explanations and examples from my experience. Successful graduates receive Apprentice Certification and the opportunity to join the Journeyman level discussion group which meets once a month.

Please let me know, sjomiller@gmail.com, if you are interested in taking the class. I need to know how many texts to order. Thanks. Also, let me know if you would like me to remove your name from my list of folks wanting to take this class.

Where: Opportunity Council Building, 3406 Redwood Ave. between Alderwood Ave. and Hollywood Ave. Bellingham
When: Tuesday, February 14, 2017, 6:30 to 9:30 Orientation
Cost: $120, includes text and certificate
$100 for second member of family
$20 discount for 2017 Mt. Baker Beekeepers Assn. members

A very valuable resource is the website and blog honeybeesuite.com/, subtitled, "A better way to bee." Very knowledgeable in a wide variety of bee subjects, Rusty provides answers to almost every beekeeping question. *A must go-to site.*

Students getting hands-on experience at the Outback Apiary

The Outback Bees Project

Hands-on mentoring for new and experienced beekeepers is offered at **The Outback Apiary** on the WWU campus. It's a good way to test the waters; to see if beekeeping is right for you. And, a good way for current beekeepers to bolster skills and learn what it takes to keep bees alive and productive. We meet Saturday afternoons at 1pm during the active bee season from mid-March through Halloween, weather permitting.

The apiary was founded and is maintained by Michael Jaross, a Bellingham beekeeper. During his 12 years of beekeeping, Jaross has never had to buy new bees since his initial starting package. Instead, new queens are raised every year on-site at the apiary. They are used to start new colonies as needed and as "beekeeper energy" allows. The Outback's current 17 hives, (Carniolans) were started from two bare splits in 2010. Over-wintering has been very successful and the Outback has enjoyed a bountiful honey harvest every season.

Whether you are just beginning or want to increase your skills, the Outback Apiary provides mentoring, bees, and equipment. Get FREE hands-on experience working in established hives in a pleasant garden setting. No experience or equipment necessary—there is even a selection of bee suits available. For more information, contact Michael Jaross: **(360) 483-9754** or **outbackapiary@gmail.com**

ONLINE FORUM UPDATED

Yet another valuable resource, especially for local beekeeping issues, is the Mt. Baker Beekeepers' online forum. Join in on discussions with local beekeepers or ask questions about problems with your bees. The forum recently moved to *Groups.io* for its improved features. To join the group, simply go to the link https://groups.io/g/mtbakerbees and click on "Apply for membership in this group."

WEBSITE INFO

Remember also that the Mt. Baker Beekeepers' website: www.mtbakerbeekeepers.org/ has links to a variety of beekeeping materials, as well as an archive of all past *Bee Bits* newsletters.

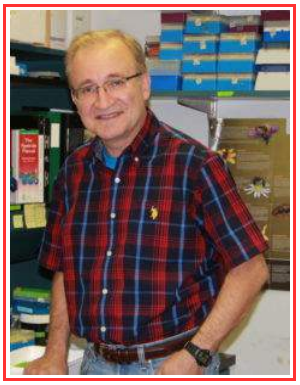
IN CASE YOUR BEES ARE SLACKING OFF THEIR NEW YEAR'S RESOLUTIONS

Remember a couple of years ago we first heard about this product as a new method of ridding bees of varroa mites? Well, it still seems to be out there—anybody willing to get one and try it out?
Here's the link from Vita Europe, including a video of the apparatus in action:
www.vitaeurope.com/products/bee-gym/

Meet the Bee Heroes Working On the Front Lines to Save Pollinators

Last month we looked at bee scientist and advocate, Marla Spivak. Continuing the article from Civil Eats; here are Dr. Ernesto Guzman and Dr. Nigel Raine, who are taking a hard look at the role of pesticides in declining bee numbers. Remember to take advantage of the excellent links supplied in the article.

As a high school student in Oaxaca, Ernesto Guzman heard a lecture on honey bees and fell in love with the insects—their social life, and how, "as a society," he says, "they work for their community in a very organized and efficient way." Now Guzman serves as the director of the Honey Bee Research Centre at the University of Guelph in Ontario, Canada.


Dr. Ernesto Guzman

He leads a team that's looking closely at the effects of multiple stressors on bee health and mortality, including varroa mites and Nosema fungus—both of which transmit disease to colonies—and the pesticide class known as neoniconitoids. "How do these stressors affect bees' immune response and their lifespan? We have parts of the puzzle solved, but not all of it," says Dr. Guzman.

Much of the blame for the alarming thinning of bee ranks has been directed at neoniconitoids, the newest and most widely used class of pesticides in an agrochemical market valued at $207.5 billion in 2014. But the problem of bee declines, like bee life and bee society itself, is complex. Scientists know now that there's a synergistic effect going on: pesticides can make bees more vulnerable to parasites and poor nutrition (from lack of forage or monocropping) can weaken their immunity.

So charged is the debate over bee loss, says Dr. Guzman, that those in favor of the use of insecticides—mainly agrochemical companies and conventional farmers—often place the blame for colony loss solely on varroa mites. This, he notes, is true in the winter but irrelevant at other times of the year. "Springtime deaths seem more related to pesticide poisoning," he says. In 2010, Guzman published a study that found that 85 percent of the wintertime die-offs of honey bees in Ontario were associated with infestations of

varroa mites. This increase was largely due to resistance the parasites had developed to miticides that beekeepers had been using to keep them in check.

While the answer to why bees are dying is complex, Guzman says the bottom line is that in published studies "pesticides are the most frequently cited factor affecting honey bee health." And, he adds, honey bee populations are not declining all around the world, but mostly in the Northern hemisphere and "mostly in countries with developed agriculture."

Last June, Dr. Guzman sat on a panel of experts whose advice led the province of Ontario to begin phasing out neonics. Beginning in 2017, farmers there will have to prove they have a specific need for the pesticides to be allowed to use them. "It took courage," Dr. Guzman says of the provincial government's decision, "because it goes against so many interests."

Dr. Nigel Raine

Nigel Raine grew up in Britain, attended the University of Oxford, and responded to a chance request by a professor to collect some pollen during a summer research project in Tanzania. The experience eventually steered him to study the pollination of Acacia trees in Western Mexico. "Bees and their interactions with flowers have been critical to my research ever since," he says.

Raine is one of many researchers amassing growing evidence that the level of neonic exposure bees are now subjected to can in fact negatively affect their health and their ability to to pollinate crops.
In 2014, Raine and Richard Gill of Imperial College London equipped bees with tiny radio frequency tags in order to monitor their pollen foraging ability. They found long-term exposure to two neonicotinoids, imidacloprid, and pyrethroid, prevented bees from learning essential pollen collecting skills.

Then, in 2015, Raine and several colleagues published an article in *Nature,* which found that exposure to "field-realistic" levels of neonicotinoids can harmfully affect bees' foraging behavior, homing ability, and reproductive success. The term "field-realistic" is key, since agrochemical companies say that field studies don't mimic actual crop field conditions.

After exposing bumble bee colonies to the neonicotinoid thiamethoxam, Raine and his colleagues allowed them access to virgin apple trees. Compared to the control group, pesticide-exposed bees visited the apple trees and collected pollen less often, and the apples produced by these colonies contained 36 percent fewer seeds, a marker of poor pollination services as well as fruit quality. It was the first paper to show the harmful effects of neonicotinoids on bees' ability to pollinate, not just on the bees themselves.

When asked for a response to the study, the agrochemical company Bayer AG issued a statement noting that "when viewed in the proper context" the *Nature* study is "quite in line with most science on neonics—that at realistic levels of exposure, they do not pose adverse risk to pollinators." Bayer also called the neonic exposure level of bees in the study "highly unrealistic," the equivalent of calling black what the researchers called white.
Bayer and other agrochemical companies that manufacture neonics tout them as the safest pesticides manufactured so far. The companies also insists that neonics are necessary because they can control crop pests that have become resistant to older insecticides.

Raine's concern, however, is that neonicotinoid use has moved from low levels since their introduction in the early 1990s "to almost prophylactic levels" today. Applied on roots, as seed-coatings, on soil or sprayed on crops, they function systemically, taken in by the plant and circulated throughout its tissue, pollen, and nectar. Pests that eat the plants receive a large enough dose to kill them; pollinators that collect their pollen and imbibe their nectar receive sub-lethal doses.

"The weight of scientific evidence suggests that we should be concerned about insecticide impacts on bees," says Raine, "and the essential pollination services they provide to crops and wild plants."