



October 2015 Bee-Mail



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Threats to Native Bee health

While there are many challenges to bees today, commercial transportation of honey bees is a large factor to native bees.

When hives are moved from crop to crop they are more susceptible to viruses, mites, and fungus from infected hives

Unkempt honey bee hives from home-owners can also weaken and spread disease to nearby healthy hives



Recent research

[Research](#) conducted on bumble bees in the U.K. concluded that infected honey bees transmit their parasites to other bees through visiting the same flower.

Why this matters to solitary bees

Diseases could also be transmitted to mason bees that visit infected flowers
Solitary bees don't manage themselves watching for diseased bees and infections may occur in within each nesting hole

In an Orchard Bee Association meeting last week (see below) the group concluded that **all mason bees should be harvested from nesting material.**

Research news:

Dr. Diana Cox-Foster will be leading the USDA/ARS/Logan Bee Lab this fall. She has been a prominent Penn State entomologist working with pathogen interactions. Logan specializes

in solitary bees... she will be a welcome addition. We hope this leads to new research helping understand disease interactions between bee species.

Why harvest your mason bee cocoons?

Cocoons *not* harvested: If a diseased bee dies in its cocoon, the inside mason bees must exit past this dead bee/larva. They will typically chew through it or die. The disease/virus/fungus can then be spread along the hole, on the outside of the mason bee house, and into the yard to be picked up and transmitted to other bees or next year's eggs.



Harvested cocoons: When you harvest your cocoons, a dead bee in its cocoon is just one of many loose cocoons. Walking on top of diseased cocoons is healthier than chewing through it. 😊



Check on the water level in your HumidiBee!

Tips for harvesting leafcutter bees

Nearly half of our customers raised leafcutter bees this year. That's awesome! We heard wonderful results from many gardeners!

So, your bees have nested and the leafcutter bees are in their holes ready for winter... Now what?

In discussion with the Logan Bee Lab this week, we agreed on this simple plan to ensure that your leafcutter bees are healthiest for next year's emerging bees.

Don't harvest your cocoons just now. You can, but it's not needed. Rather, store the unopened cocoons in a cooler environment like an unheated garage/shed. When your temperatures are in the 70's next summer and you'd like your bees to develop from larva to adult bee, you'll harvest then. We'll tell you about this in May.

Why not store leafcutter cocoons in your refrigerator like the mason bees? Mold can be an issue in refrigerators during the winter as mold spores from nearby food lands into the HumidiBee and begins to grow on the mason bee cocoons. A bit of bleach/water mix solves that. Mold may also grow on the leafy encasements of your bees. Getting these wet could be a bit troublesome.



If you've already harvested your leafcutter bees, keep the cocoons in a [HumidiBee](#) or similar device in your garage/shed for rodent protection. Remember, these are bees, not mammals and can survive fine in freezing weather.

From Our Community

As promised last month, here are a few photos shared with us:



Gary, near Lake Michigan, and many others found white larva with thin or no cocoons. In general, these are solitary wasps. The photo on the right was what the larva developed into this past July.

Cool! Wasps aren't fuzzy like bees.



A different type of solitary wasp uses grass to separate their prey/egg chambers. (They stuff caterpillars, spiders, etc. into the hole and then lay an egg.)

Shared by Dale in Michigan.



Another wasp... they look like bullets, don't they? These were shared by Angie in Maryland. We have found similar "bullet" shaped cocoons here in Washington State as well.



Pollen mites! You can read more about this pest [here](#).



This was from Lindsey, a VERY small bee that shines slightly blue and uses chewed up leafy material.

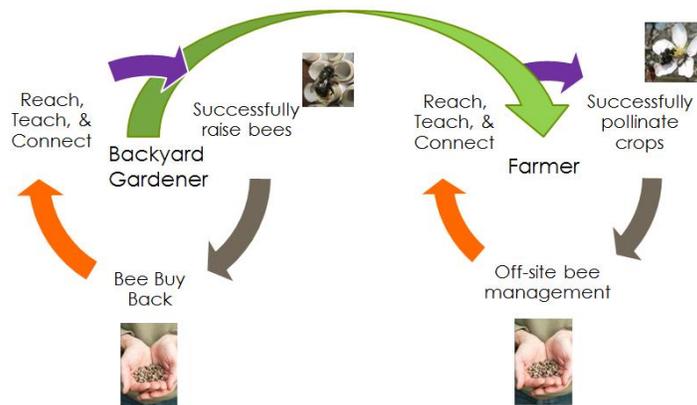


Osmia Coloradensis, found in the Pacific Northwest

Bee BuyBack

We would like your excess mason bees!

As the popularity of mason bees increasing across the US and Canada, we are relying on our many "Mason Bee Ranchers" like you across the US to help us provide bees to others. Last year we received mason bees from over 20 states across the US and Canada. These bees went back to other gardeners, researchers, orchards and garden centers.



Our long range goal is to provide about 1 billion mason bees to assist farmers across North America produce more food.

We need your help to significantly increase the mason bee population!

How many bees should you keep?

Most yards need about 100 cocoons to adequately pollinate their fruit trees or flowers in their yard. We suggest to keep about 200 if your yard is large. We'd love to receive your extras.

We'll give you free tubes, reeds, wood trays, gift certificates, or even cash for your mason bees. [Please visit this link](#) to learn more!

Reporting back from the Orchard Bee Association



Last week in Hood River, Oregon, the Orchard Bee Association (OBA) met for their annual conference.

The group consists of commercial mason bee producers, orchard managers, researchers, and companies from around the world. I was able to meet with Chris Whittles of England, Tom and Claudio of *Wild Bienen + Partners* from Switzerland.

We find the mason bees are becoming more popular in spring crops. Many cherry, pear, almond, apple, kiwi and strawberry farmers have tried using them and are continuing to pollinate more crops with these super-pollinating bees.

Switzerland and England have more farmers asking for mason bees than the US or Canada. We also find that the US sprays much more chemicals than our peers in Europe. The same trees and similar diseases are present in both regions, however US farmers seem to want to spray more. We hope this changes. I believe we'll see an OBA-Europe this next year.

There were many technical discussions throughout the conference. Here are a few interesting pieces I learned:

- Not all mason bees may nest or pollinate. It's possible about 1/3 may actively nest in holes, 1/3 may forage on nearby pollen/nectar and not nest, and 1/3 may just do nothing. Peculiar.
- A good sugar/water mix for sustaining emerged bees is 25% white table sugar, 75% water.
- Sunlight is a huge factor with foraging. On darker days bees pollinate less. This is very important, especially in England where it's cloudy a lot of the time. Mud is also a major factor if you don't have clayey soil.
- The *Osmia Bicornis*, the popular mason bee in Europe, has two subspecies that are VERY different. In England, the bee will not nest in any square house. Put a round tube with paper tubes and a square house with paper tubes side by side in 30 locations and you'll find virtually all bees only in the round-shaped house. In Switzerland with the same bee, no issues... they nest in square houses just fine ~ weird.

- We had reported that there may not be a difference between eastern and western blue orchard mason bees a few years ago. It seems there *are* differences, though both species can mate with each other.
- The spotted wing drosophila, a horrible fruit fly from Mexico, is causing farmers to spray the worst possible chemicals on their fields. It kills all living insects to protect their soft skinned crops like cherries, tomatoes, berries, etc. In response to a question from the audience, a researcher said the best solution may be to practice "entophagy" and stop being picky. Entophagy is the practice of eating insects. Yum! (My wife and I have found SWD in our blackberries and have closed our eyes when eating a bowl full of ripe berries. I can't taste them...)



Next year, we'll be in Hood River again and will concentrate on changing the organizational structure to focus more on farmers than those raising the mason bees. It is important that farmers learn simple basics of the mason bee to enhance their yield!

Robo Bee news



Breaking news from Harvard has the Robo Bee able to swim as well as fly. Click on the picture to see a video of the Robo-bee in action.

Will we replace natural bees with robotic ones anytime soon? Here what we read in the article:

The one thing these robot bees can't do, however, is pollinate. Popular Science reports that it would take at least 20 years before robot bees are capable of pollinating crops, which sucks because we are losing bees at such an alarming rate.

It is good to know that our native bees have a chance to make a difference for a decade or two!

Meet Danielle, our Communications & Marketing Manager

Danielle Onat joined us this week to help us reach, teach, and relate more gardeners. She's wonderful with graphics, editing and social media.

She has wonderful vision and thoughts for how we can enhance what we're doing.

- "Dave, the home page needs to be much more enticing with a better call to action."
- "We need to have more consistency with all we do here at Crown Bees."
- "I'm so excited to help create more awareness about these awesome bees."



If you aren't yet following us on Facebook, Twitter, Instagram, Pinterest, etc., you should! I'm excited for the future that Danielle will bring.

Hien Hong, our past social media, has been wonderful and carried us far. Now that she's graduated from college, her interests have moved in a different direction. Good luck Hien!

