CrownBees

BeeMail Newsletter

WHAT'S IN THIS JULY 2016 ISSUE

MASON BEE MONTHLY TIPS & REMINDERS

Occasionally we receive emails from people confused about when to refrigerate their mason bees. PLEASE DO NOT REFRIGERATE UNTIL THEM UNTIL FALL.

Don't keep your bees anywhere cold until autumn.

In short, you want your developing larvae acclimating to normal summer

temperatures. When in doubt, think about what's natural. In the wild, mason bees may nest in broken reeds, tree bark and other holes. As such, developing larvae are not exposed to temperatures that fluctuate wildly or are especially cool. They need moderate temperatures for proper development.

We also read emails about woodpeckers and other birds eating away at outer portions of nesting holes. Protect your developing bees in a **BeeGuardian bag** and store it safely in a shed/garage or similar place.

LEAFCUTTER BEE MONTHLY TIPS & REMINDERS

You may find small holes in your leafcutter tubes that were completely filled a while back. Leafcutter bees can emerge a second time if the temperatures are warm enough. It can take as little as 3-4 weeks for the eggs to hatch, larva to consume the pollen and then metamorphous into adult bees.

If you haven't tried out leafcutter bees, do consider doing so. You can buy them on sale as a "Buy One, Get One Free" through mid-August (or until we run out.) **Use coupon code LC2for1.**

Interesting parallels: Leafcutter Bees to Mason Bees

Debbie, our Office Manager, kept leafcutter bees in our office (in a BeeGuardian Bag) and at her home (in tubes, reeds and trays) to see how long it would take for the leafcutter bees to emerge at a consistent and moderate temperature close to 70 degrees. It took about 6 weeks. After a few males began to emerge, we opened a few holes up to see what the bees looked like within the reeds, trays, and paper tubes.

One thing really surprised us. Spring mason bees that use mud will have a thick plug at the hole entrance and then a gap before she creates her last egg chamber. Leafcutter bees are no different!

Rather than mud, they use cut leaf sections for their nesting material. The end plugs are individual sections of leaf bits. In one hole we found over 60 individual leaf circles to protect her hole.

Debbie had about 200 leafcutter bees nesting in her yard. She found only a few holes in her leaves... we learned that these gentle summer bees have little noticeable impact to plant leaves.

In the holes below, you'll see end plugs in the reeds (left side of picture) and in the right side of the wood tray picture.

One last note:
We're running an experiment this month with various types of wood trays to see which is preferable by the leafcutter bees... alder, spruce, douglas fir, hemlock, pine, ponderosa pine, and anything else we can get our hands on. We'll report back to you next month on our results.

HONEY BEES STARVING WILD BEES

A recent Swedish scientific experiment sheds a different light on honey bee impacts to wild bees within their foraging range.

On June 13, an extremely well documented and very rigorously controlled experiment was summarized in this **article**.

Essentially the researchers counted short and long range nesting bumble bees across twenty large one kilometer radius areas for a season and then placed honey bee hives in ten of those areas. They then counted the bumble bees again. There was a decline of 81% of the short range bumble bees.

While this is interesting news, I always want to ask "why?" Here are my thoughts.

It's important to understand why any bee gathers pollen. The pollen is used to feed their babies (larvae).

One pea-sized mound of gathered pollen is needed for each egg.

Honey bee queens lay about 1,000 eggs a day where native solitary bees might lay one egg a day. That's a lot of pollen gathering! We know that in an orchard setting honey bees can strip all of the pollen from trees within an acre in a few hours and then spread out in their 2+ mile search for more pollen.

Long range bumble bees can forage farther than honey bees. If bumbles are found in a honey bee area, it's likely that the hive isn't impacted as the bumbles can expand their search area. Short range bumble bees would have their hive within the honey bee shadow and would therefore have to either reduce their numbers (because they couldn't find enough pollen and thus lay less eggs) or relocate. Bumble bees don't relocate like a swarming honey bee hive, so they are more likely to have their numbers diminish.

Native solitary bees have an even shorter pollen gathering range than short range bumble bees. If there is little pollen, they are more likely to fly to someplace outside of the honey bee shadow or risk starvation.

The article also reiterated that honey bees are probably spreading their diseases to the native bees and that honey bees aren't great pollinators. They are however, awesome pollen *gatherers*!

Lastly, the honey bee isn't native to Sweden, but rather has been imported there for pollination and honey production. The article concluded that Sweden is considering measures to regulate the number of hives in a given area, citing that the pollination of food is vital and native bees are superior pollinators.

What you should take away from this article

While this may be damaging news to the honey bee industry, the world today continues to be heavily reliant on honey bee use for commercial pollination. There are few honey bee alternatives due to limited quantities of native bees and even more limited knowledge of them. Widespread reliance on the honey bee will not likely change anytime soon, but we need to ponder the damage being done to our native pollinators.

We need the honey bee now for pollination, but we also need to consider other managed and wild pollinators for our food supply. The backyard gardener *(YOU)* holds the key to success. We need you raising mason bees, participating in the Bee BuyBack program and encouraging your friends and neighbors as well.

Our future food supply needs your proactive attention.

WHAT'S IN YOUR GROUND?

Emily, one of our customer support teammates, brought in something unusual she found in a potted plant from her yard. As she pulled the plant out of the pot, she found huge leafcutter bee cocoons within the dirt.

70% of bees nest in the ground, and many of the bees use leaf bits, similar to the alfalfa leafcutter bees we sell. Bees do not shift between ground nesting and hole nesting. So what she found are native ground nesting leafcutter bees. The size of the cocoons was amazing. In the picture below is a quarter, the ground nesting leafcutter bee cocoon and an alfalfa leafcutter bee cocoon.
Here are a few thoughts to consider as a gardener IF you use chemicals in your yard.

When we place Preen, Roundup, diatomaceous earth, chemical fertilizers and other toxic chemicals into our yard to do something, we truly have no idea what damage we're doing to the world beneath the surface. If you no longer spray chemicals directly on flowers because of potential bee impacts, consider what may be nesting beneath those flowers and plants as well.

Even a natural product like diatomaceous earth can be harmful as the grains get into joints of hard shell insects, damaging their joints and speeding up their death. Bees are hard shell insects who crawl through the earth to either begin their new life or tunnel to lay their eggs.