

What's the BUZZ on (solitary) BEEES?

Rise and shine! It's 8:15 a.m. Breakfast time. But what's this? No orange juice, almond butter or avocado toast? And forget that tasty chocolate croissant. It's gone too.

What the heck?

Welcome to a world without bees.

These amazing insects are the unsung heroes that keep our planet humming, especially when it comes to our food. As pollinators, they transfer sticky pollen so plants can grow and thrive. But imagine if pollinators didn't exist. Humans would have to pollinate trees, shrubs, plants and grasses by hand. Talk about a lot of work and expense.

But we're not only talking about honeybees that live together in buzzing hives. Of the 20,000-plus bee species worldwide, only seven actually make honey. There are also bumblebees and stingless bees that don't make honey, but still live together in nests.

But the rest?

But bees? They'll do it for free!

They're called wild, solitary bees.

Maybe that sounds like an oxymoron – a shy, lonely bee with a wild, exciting inner life! But nope. Unlike honeybees, wild, solitary bees aren't farmed. They also typically live on their own in burrows and holes. Comprising 95 percent of all bees on Earth, they're extremely important to our planet. Keep reading for fun facts and buzzy tidbits about bees, and how to keep them safe and happy.



You're pollen my leg!

Why are bees such excellent pollinators? Their furry legs and bodies are perfect for collecting pollen – think tiny dust mops – and transferring it from male to female parts of plants. Solitary bees have also evolved as different shapes and sizes, so there's a bee for every type of flower. And bees are very determined. You'll never find a bee saying, "Yawn. I just don't feel like collecting pollen today. Maybe I'll just play videogames." They **must** visit flowers or else they'd starve!

Look into my eyes...

Solitary bees range in size from gargantuan to as tiny as a grain of rice, and some are even green or blue. But many look very similar to honeybees especially as they whiz by. So how can a melittologist (bee scientist) tell the difference? Under a microscope, honeybees have hair on their **eyes**. Talk about giving someone the hairy eyeball!

Total number
of bee species
in Canada:

927

(Yep, most of them
are solitary)

Big bee for sale

Megachile pluto is a **mega** bee alright. Its wingspan is 6.35 cm! For more than a century, this solitary bee was thought to be extinct. But it was rediscovered in 1981 in Indonesia and is still popping up today. Unfortunately, because they're so rare, some crooked collectors are selling them on eBay for thousands of dollars. Now scientists are worried about their continued survival. Plastics, pesticides and climate change aren't the only things solitary bees need to worry about.

Flexible flyers

Usually, wild, solitary bees make their homes from cut leaves, twigs and mud. But some solitary bees in Argentina and Canada have been known to build nests partially out of plastic. Bees are adaptive and flexible to changing environments, and that's a good thing. But scientists still don't know whether the plastic will present a threat to the bees as it breaks down into tiny particles called microplastics.

Just because this fact is so weird...

Studies show flowers can "hear" bees coming. In one study, evening primrose flowers seemed to sense vibrations from pollinators' wings – and temporarily released more sugar into their nectar. Scientists think the sweet treat is meant to attract more bees.

Ask Sage, Bee-ologist

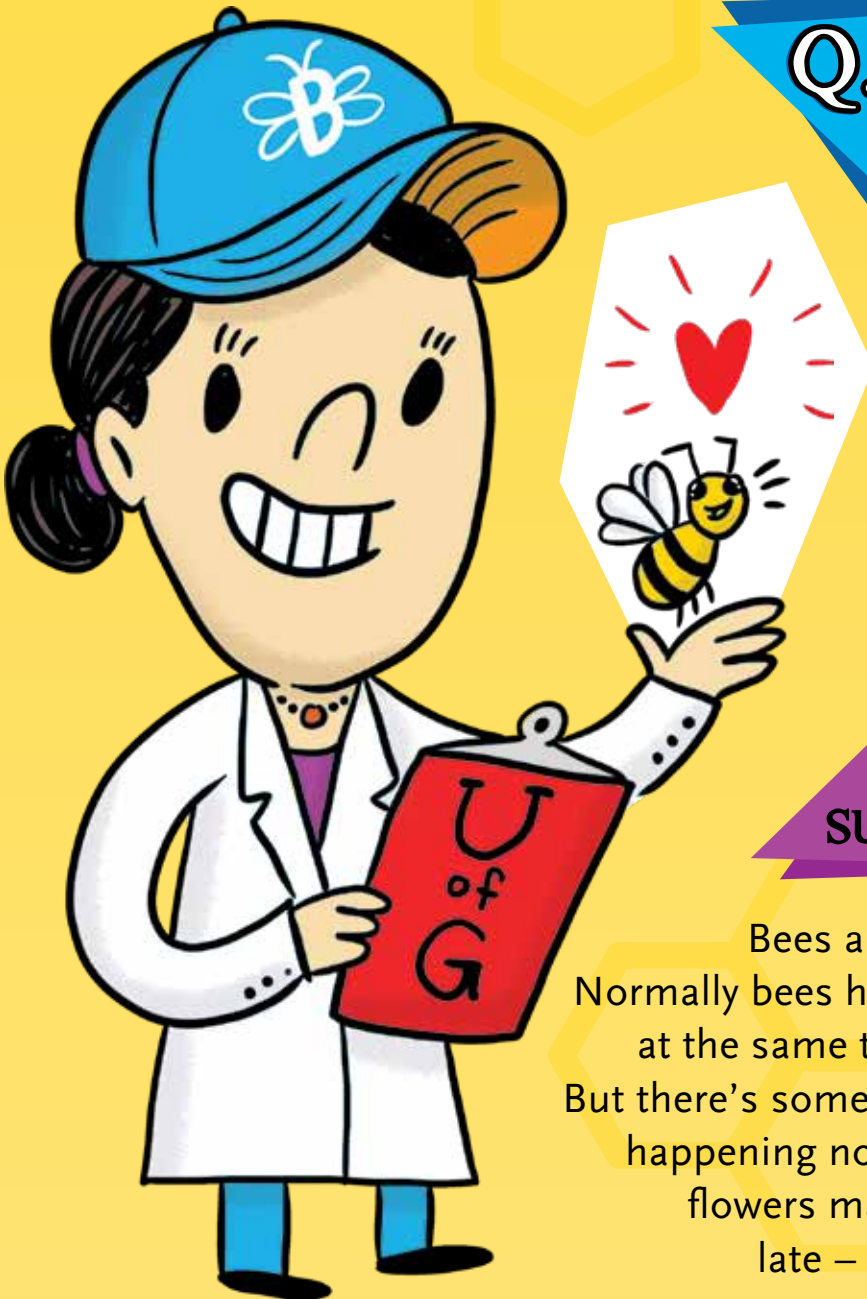


For more

info: beesatschools.ca

Q. Why are bees so cool?

First, there's the fear factor. Bees can sting us, so you have to respect them. But they're also cool because of how important they are for feeding us. And they're just so dang cute! They're fluffy, tiny things flying through the air – especially the solitary ones. They're little loners doing their own thing, collecting pollen.



Q. Do solitary bees ever make friends?

I would say yes. Some of them do. There are ground-nesting bees that will live as neighbours. They won't usually nest together or raise each other's young, but they'll nest in the same area.

Q. Why is climate change such a concern for bees?

Bees are linked to the flowers they feed on. Normally bees hatch and the flowers they like bloom at the same time. That's great. They're linked up. But there's something called "phenotypic mismatch" happening now. As the environment gets warmer, flowers may bloom too early or the bees hatch late – and suddenly there's no food to eat.

Bee the Change You Want to See

Many solitary bees love to find little crevices and holes to burrow into, and build nests. Think hollowed out reeds and sticks, and warm soil. But unfortunately, these home sweet homes are becoming harder to find as human neighbourhoods take over wooded areas and fields. What's more, pesticides are killing wildflowers along sides of roads and highways. There goes dinner!

Luckily, there are things **you** can do to give solitary bees a furry leg up:

Leave them **bee**

If you find a solitary bee nest, just walk away. Solitary bees are generally non-threatening because they aren't protecting a hive so they rarely sting. They're also an important part of your neighbourhood's biodiversity.

Garden **less**

Let your grassy lawn grow longer so bees can feed as the grass flowers. And forget laying down mulch in some areas of the garden. Mulch makes it harder for bees to dig holes in the dirt.

Build a **nest**

Want to make it even easier for solitary bees? Make them a home. Some people call human-made nests **bee hotels**, but they are more like bee condos since bees live in them long-term. Make sure your nest has different sized holes, has a back on each tube and there are no splinters. The hotel should also be small (lots of tubes can attract too many bees and make them more susceptible to harmful parasite attacks). Or just throw a pile of sticks in a corner of your yard. Forget keeping things neat and tidy! Your neighbourhood bees will thank you.



Keep it clean!
Clean your bee hotel with warm and soapy water once a year to destroy deadly fungal spores and disease.

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