

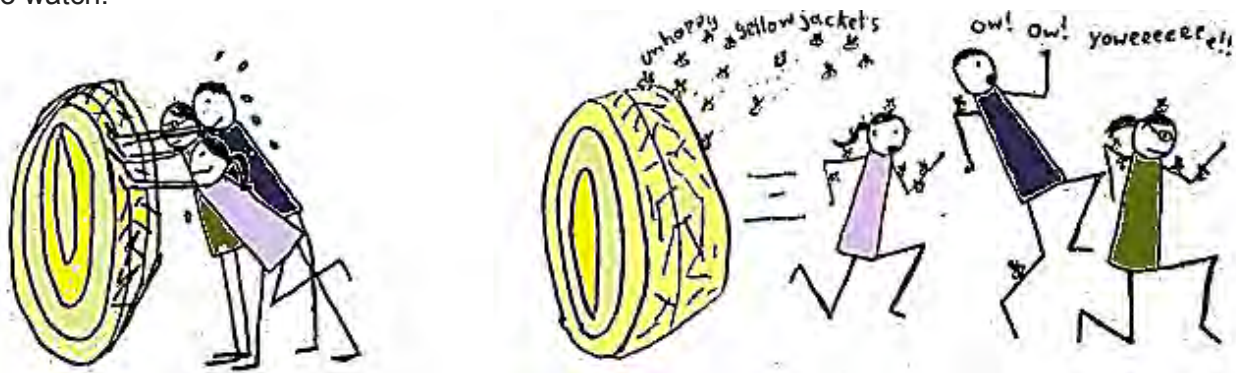
Bee Project Musing #3

July 27, 2018

Hello!

This week I'd like to tell you a bit about wasps, stingers, copycats and sneaky spiders and bees!

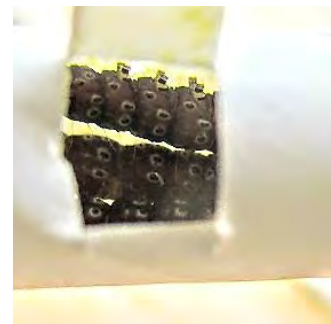
Have you ever been stung by a bee or wasp? I had my most exciting wasp encounter when I was doing some work at my sister's farm one summer. My siblings and I were transporting hay bales across the field and one bale happened to be the home of a Yellowjacket colony! I remember feeling a sharp sting on my ear followed by another dozen or so on my outstretched arms. This was followed by a chorus of alarmed cries of "Ow something bit me!" as my siblings and I fled the scene whooping and yelping as we ran. It was quite a painful and itchy experience, but we always laugh at ourselves when we think back to that day because it must have been a very funny scene to watch!



Unlike most bees we encounter here in Toronto, some wasp species can be very territorial and aggressive like the Yellowjackets in the hay bale. The large yellow and black-striped flying insects pestering your picnic at the park are most likely Yellowjacket wasps. Most adult wasps survive on very sugary diets which is why you might see them on flowers (like a bee!) or on the rim of your sugary drink.

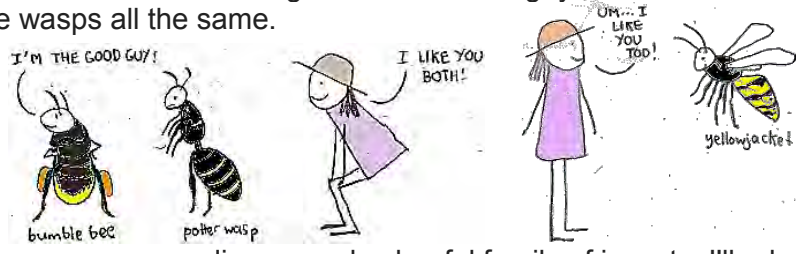


Baby wasps (larvae) however, are often carnivorous. In some wasp species, Mother wasps catch and parasitize small caterpillars and grubs for their larvae to eat. In a separate bee project that I worked on last summer, I once opened up one of my bee hotel tubes to find it stuffed full of immobilized caterpillars!



A window into a bee hotel tube shows the hotel full of caterpillars!

I know wasps are sometimes thought to be the "bad guys" while bees are the "good guys", but I've come to love wasps all the same.

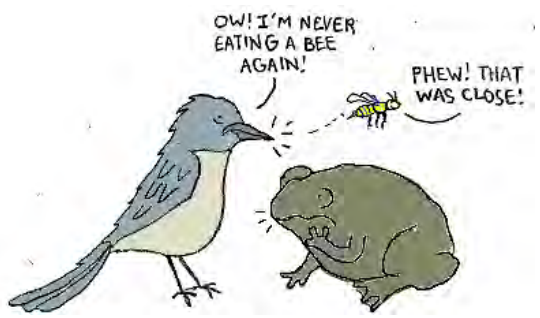


Just like bees, wasps are a diverse and colourful family of insects. I'll admit that my Yellowjacket encounter has made me warier of this particular subfamily of wasps but there are so many other species of wasps that I find to be absolutely fascinating. Like bees, many wasps are also solitary. These species and are often less aggressive than the much-feared Yellowjacket!

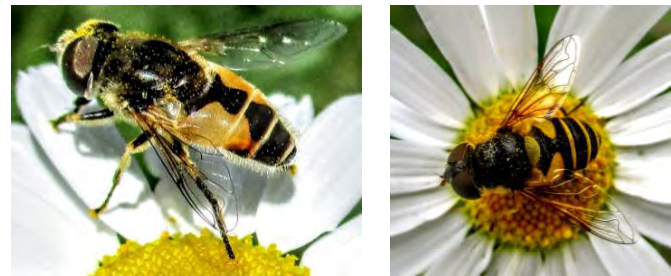


A few wasps from my observations this summer. I don't know the identity of these, but common wasp characteristics that make them different from bees include skinny waists and very little hair. The long needle-like organ at the end of the wasp in the first photo is a structure for laying eggs (called an ovipositor).

Most bees on the other hand (solitary and social), are usually quite docile and won't sting unless they are grabbed or handled. I find bumble bees extremely friendly because they let me get a really close look at them. On one occasion, I put my face so near a female bumble bee on a flower while watching it, that she flew smack into my face when leaving the flower! Even then, she didn't sting me. In general, the stinger serves as a lesson for insect-eating animals like toads and birds that quickly learn to avoid eating anything that looks like a bee.



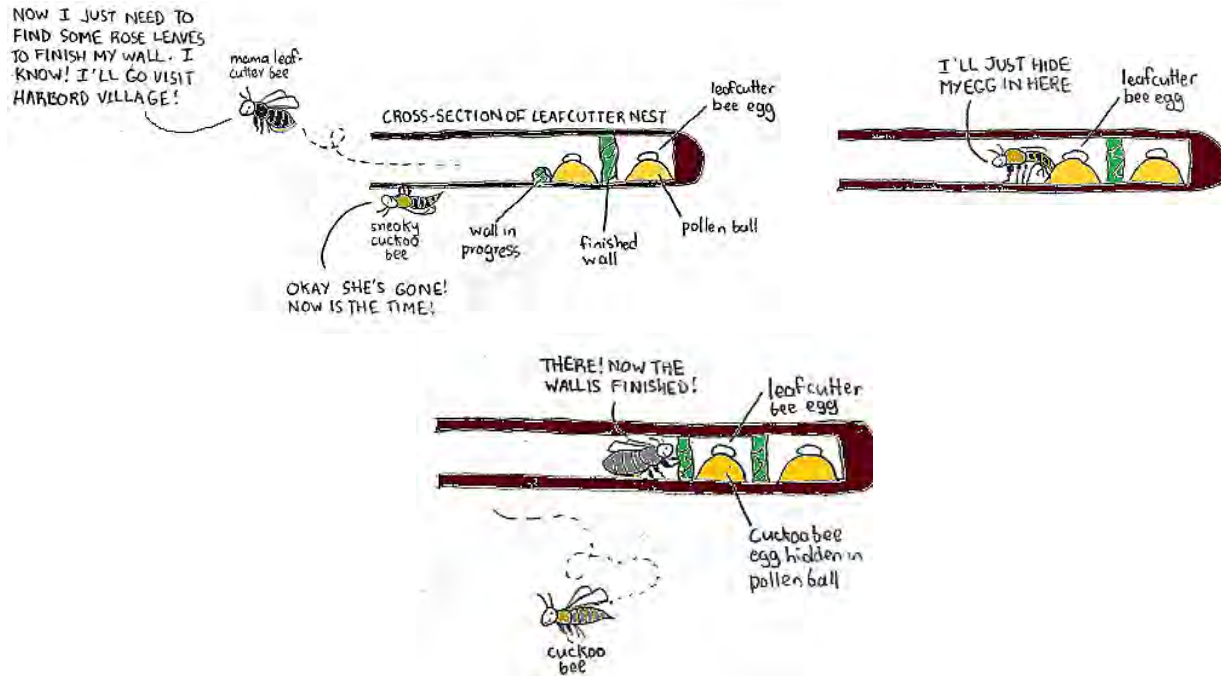
Some flies have colours and patterns that make them look like bees. These flies do not have stingers, but insect-eating predators still avoid them because they look just like bees! I often see these "bee copycats" (also known as bee "mimics") in your gardens visiting flowers. You can usually distinguish these bee copycats because they have very big bulgy eyes and aren't as hairy as most bees.



Two bee mimics: [1] European hoverfly (*Eristalis arbustorum*) and [2] Transverse Flower Fly (*Eristalis transversa*)

Some insect eaters however, have come up with ways to get around the bee's stinger. In one of your gardens, I watched a small white spider patiently wait under a purple coneflower before biting and immobilizing a very unfortunate honey bee! (see video in link attached to email). Now that's a sneaky spider!

There are also bees that have sneaky ways around other bees. The mother cuckoo bee (*Coelioxys*) sneaks into the nests of other bees and lays her eggs on the pollen balls built by unsuspecting mothers! Unfortunately, the cuckoo bee larva usually hatches faster and often eats the original mother's larva...Very very sneaky.



Anyways, that's it for this week! I'll write to you again next week.

Lydia

P.S. I realize I made a mistake explaining the "pollen baskets" in last week's musing so I wanted to make a quick correction here. In North America, the only bees that have pollen baskets (also called 'corbiculae') are honey bees and bumble bees. A pollen basket consists of a groove in the bee's leg. Other bees like the mining bee in the photo I showed last week, have very dense, long hairs on their back legs (or abdomens in the case of the leafcutter bees) which stick to pollen.

