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UNDER MINISTRY OF ENVIRONMENT, FOREST & CLIMATE CHANGE

World Bee Day 2022

*"Bee Engaged: Celebrating the diversity of bees and
beekeeping systems"*

Bees



Did you know? Bees see all colors except the color red.

Explore Bees

Bumble Bees

Carpenter Bees

Honeybees

Killer Bees

Bee Facts for Kids

- Beekeepers use smoke to calm bees when they are collecting honey or relocating a hive.
- Bees make honey to feed their young and so they have something to eat during the winter.
- Bees are known as "pollinators," meaning they help plants live and reproduce by transferring pollen between various species of flowering plants like flowers. They carry pollen on their legs and body from one flower to another, helping to create what's known as "genetic variety" by distributing different genes throughout many plants and flowers.

There are about 20,000 different species of bees in the world. Bees live in **colonies** that contain the queen bee, the worker bee and the drone. The worker bee and the queen bee are both female, but only the queen bee can reproduce. All drones are male. Worker bees clean the hive, collecting pollen and nectar to feed the colony and they take care of the offspring. The drone's only job is to mate with the queen. The queen's only job is to lay eggs.

Bees store their venom in a sac attached to their stinger and only female bees sting. That is because the stinger, called an **ovipositor**, is part of the female bee's reproductive design. A queen bee uses her ovipositor to lay eggs as well as sting. **Sterile** females, also called worker bees, don't lay eggs. They just use their ovipositors to sting.

Bees see all colors except the color red. That and their sense of smell help them find the flowers they need to collect pollen. Not only is pollen a food source for bees, but also some of the pollen is dropped in flight, resulting in cross pollination. The



Bumble Bees

Bumblebees are considered to be beneficial insects because they [pollinate](#) crops and plants. They are very social bees and live in large "families".

Unlike honeybees, bumblebees can sting more than once because their stingers are smooth and do not get caught in the skin when they fly away.

- **Size:** 1"
- **Shape:** Oval, bee shaped
- **Color:** Black with yellow stripes
- **Legs:** 6
- **Wings:** Yes
- **Antenna:** Yes
- **Common Name:** Bumble bee
- **Kingdom:** Animalia
- **Phylum:** Arthropoda
- **Class:** Insecta
- **Order:** Hymenoptera
- **Family:** Apidae
- **Species:** Bombus

Diet:

Worker bees gather both pollen and nectar from flowers to feed to the [larvae](#) and other members of the colony.

Habitat:

Bumblebees often nest in the ground, but can be found above ground around patio areas or decks. They will sometimes build their nests in attics or under roof beams. If disturbed, bumblebees will buzz in a loud volume, and they will defend their nests.

Impact:

As part of the defense of their nests, bumblebees can chase nest invaders for long distances. The bumblebee sting is one of the most painful stings. Swelling and irritation can last for days after you are actually stung.

Prevention:

If you see bumble bees near your home, observe them from a safe distance and be sure to tell an adult.



Carpenter Bees

Carpenter bees are solitary bees. They build nests just for themselves and only feed their own young. They get their name from their ability to drill through wood. Carpenter bee stingers are not barbed, so they are able to sting over and over again.

- **Size:** 1"
- **Shape:** Oval, bee shaped
- **Color:** Blue-black
- **Legs:** 6
- **Wings:** Yes
- **Antenna:** Yes
- **Common Name:** Carpenter bee
- **Kingdom:** Animalia
- **Phylum:** Arthropoda
- **Class:** Insecta
- **Order:** Hymenoptera
- **Family:** Apidae
- **Species:** Xylocopa

Diet:

Worker bees gather both pollen and nectar from flowers to feed to the larvae and other members of the colony.

Habitat:

Carpenter bees bore through soft woods to lay eggs and protect their **larvae** as they develop. Female carpenter bees will chew a tunnel into a piece of wood to build a nest gallery. The bits of wood she chews and deposits outside the nest are called "frass". The tunnel openings usually look about one or two inches deep, but they can be up to 10 feet long! These tunnels usually have several rooms where the bees hold their eggs and food.

Impact:

Carpenter bees are beneficial because they pollinate plants that are ignored by honeybees.

Prevention:

Let an adult know if you see carpenter bees around your home! You may want to study them, but be sure to keep a safe distance.



Honeybees

Honeybees live in large "families" and are found all over the world. The honeybee is the only social insect whose colony can survive many years. That is because they huddle together and eat honey to keep themselves alive during the winter months.

Honeybees pollinate more than 100 crops in the U.S.

Their wings flap 11,000 times per minute, which is why it sounds like they are "buzzing". Honeybees can only sting once, because their stingers are barbed and tear off when they try to get away.

- **Size:** 1/2"
- **Shape:** Oval, bee shaped
- **Color:** Golden yellow with brown bands
- **Legs:** 6
- **Wings:** Yes
- **Antenna:** Yes
- **Common Name:** Honeybee
- **Kingdom:** Animalia
- **Phylum:** Arthropoda
- **Class:** Insecta
- **Order:** Hymenoptera
- **Family:** Apidae
- **Species:** Apis

Diet:

Honeybees produce honey from pollen and nectar of the plants they **pollinate**. They store the honey in honeycombs in their nests, which they use to feed their young in colder months.

Habitat:

Honeybee nests vary in size. They typically build their nests in tree crevices, but will occasionally build nests in attics or chimneys.

Impact:

Honeybees do sting, but they only sting once. The sting can be extremely painful if the stinger is not immediately removed from the skin. Persons allergic to insect stings will have a more severe reaction.

Prevention:

If you notice any honeybees flying around your own home, make sure to observe them from a safe distance and let an adult know.



Killer Bees

Africanized "killer" bees look a lot like regular honeybees, but they have different wing measurements. Africanized bees live in South America and the Western and Southern United States.

Even though they are called "killer" bees, their venom is no more dangerous than

regular honeybees. However, these bees tend to attack in larger numbers, which poses a greater danger to humans, especially those who are allergic to bee stings.

Africanized bees can only sting once because their stingers are barbed and tear off when they try to get away.

- **Size:** 1/2"
- **Shape:** Oval, bee shape
- **Color:** Golden yellow with darker bands of brown
- **Legs:** 6
- **Wings:** Yes
- **Antenna:** Yes
- **Common Name:** Africanized honey bees
- **Kingdom:** Animalia
- **Phylum:** Arthropoda
- **Class:** Insecta
- **Order:** Hymenoptera
- **Family:** Apidae
- **Species:** Apis

Diet:

Worker bees gather both pollen and nectar from flowers to feed to the larvae and other members of the colony.

Habitat:

Africanized bees have small colonies, so they can build nests in unique places. They have been known to live in tires, crates, boxes and empty cars.

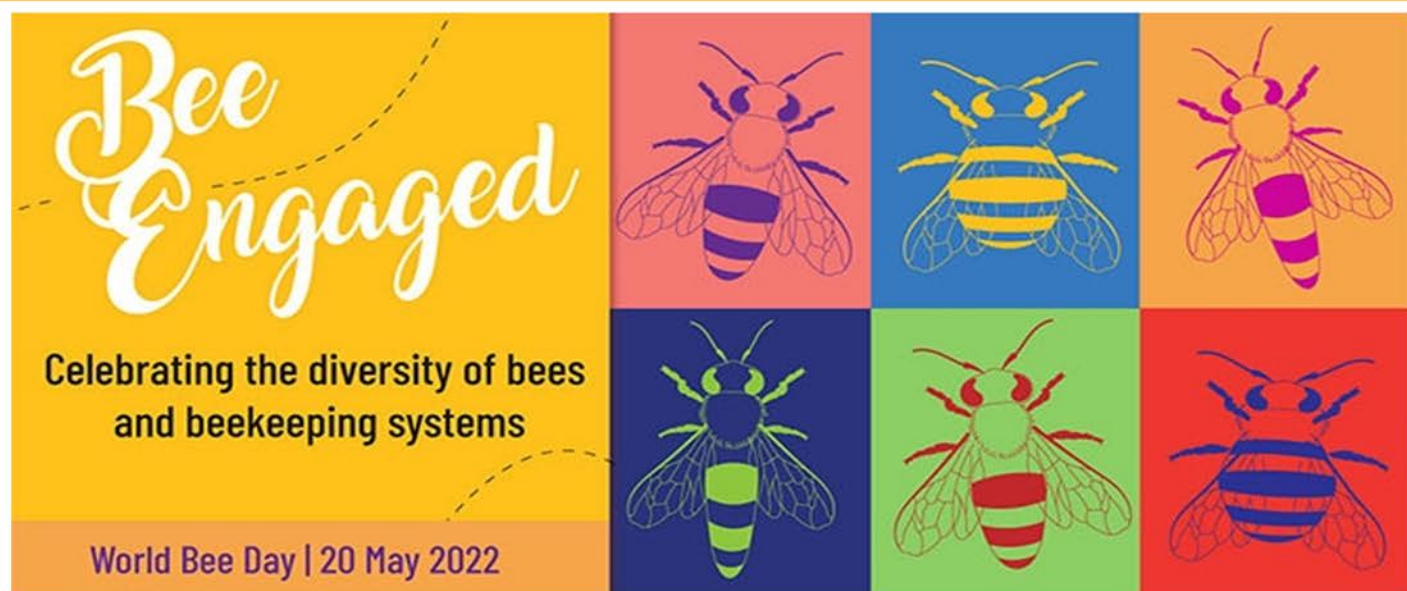
Impact:

Africanized bee venom is no more dangerous than regular honeybees - they just tend to attack in greater numbers, dramatically increasing the odds of having an allergic reaction to the venom.

If you are chased by Africanized bees, run in a zigzag pattern and seek shelter in a house or car. Do not jump in the water! The bees will just wait around until you come up for air.

Prevention:

If you see any killer bees, keep a safe distance and immediately tell an adult.



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