GREEN CITY Challenge

Save the Bees

Queen	Corbicula	Drones	Bumblebee	2,500 Eggs a Day
Dangerous Pesticides	Beeswax	Workers	Honeycomb	B-Line
Preserving Habitat	Colony	FREE for Beelovers	Pollinator	Royal Jelly
4 Wings	Smelly Footprints	30 Million Years	Apis Mellifera	Almonds
11,400 Strokes per Minute	Waggle Dance	Hornet	Pheromones	Yellowjacket Wasp

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Colony	Apis Mellifera	Pollinator	2,500 Eggs a Day	Hornet
30 Million Years	Pheromones	4 Wings	Workers	11,400 Strokes per Minute
Dangerous Pesticides	Bumblebee	FREE for Beelovers	Smelly Footprints	Preserving Habitat
Waggle Dance	Queen	Almonds	B-Line	Honeycomb
Beeswax	Royal Jelly	Yellowjacket Wasp	Drones	Corbicula

GREEN CITY Challenge

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4 Wings	Dangerous Pesticides	Beeswax	Preserving Habitat	Workers
2,500 Eggs a Day	Corbicula	Smelly Footprints	Hornet	Almonds
30 Million Years	11,400 Strokes per Minute	FREE for Beelovers	Colony	Drones
Honeycomb	Royal Jelly	Queen	Yellowjacket Wasp	Apis Mellifera
B-Line	Bumblebee	Waggle Dance	Pollinator	Pheromones

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Beeswax	2,500 Eggs a Day	Pollinator	Waggle Dance	4 Wings
Honeycomb	B-Line	Workers	11,400 Strokes per Minute	Preserving Habitat
Colony	Royal Jelly	FREE for Beelovers	Queen	Hornet
Corbicula	Smelly Footprints	Yellowjacket Wasp	Drones	Pheromones
Apis Mellifera	Dangerous Pesticides	30 Million Years	Almonds	Bumblebee

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Save the Bees

Drones	B-Line	Hornet	Apis Mellifera	Preserving Habitat
Honeycomb	Workers	Dangerous Pesticides	Bumblebee	Pheromones
Corbicula	Royal Jelly	FREE for Beelovers	Almonds	Waggle Dance
30 Million Years	11,400 Strokes per Minute	4 Wings	2,500 Eggs a Day	Pollinator
Colony	Yellowjacket Wasp	Smelly Footprints	Beeswax	Queen

GREEN CITY Challenge

Save the Bees

Hornet	Preserving Habitat	Queen	Apis Mellifera	Beeswax
4 Wings	2,500 Eggs a Day	Pollinator	Bumblebee	Almonds
11,400 Strokes per Minute	Honeycomb	FREE for Beelovers	Waggle Dance	B-Line
Dangerous Pesticides	Drones	Smelly Footprints	30 Million Years	Pheromones
Corbicula	Yellowjacket Wasp	Colony	Royal Jelly	Workers

GREEN CITY Challenge

Save the Bees

Pollinator	Beeswax	Pheromones	2,500 Eggs a Day	Yellowjacket Wasp
Waggle Dance	Queen	Smelly Footprints	Almonds	Colony
Royal Jelly	11,400 Strokes per Minute	FREE for Beelovers	4 Wings	B-Line
Dangerous Pesticides	Preserving Habitat	Drones	Hornet	Honeycomb
Corbicula	Apis Mellifera	30 Million Years	Bumblebee	Workers

GREEN CITY Challenge

Save the Bees

Preserving Habitat	Queen	Waggle Dance	11,400 Strokes per Minute	Colony
4 Wings	Workers	Dangerous Pesticides	Beeswax	2,500 Eggs a Day
Pollinator	Hornet	FREE for Beelovers	Drones	Smelly Footprints
Apis Mellifera	30 Million Years	Almonds	Bumblebee	Honeycomb
B-Line	Royal Jelly	Pheromones	Corbicula	Yellowjacket Wasp

GREEN CITY Challenge

Save the Bees

Almonds	Queen	Corbicula	Dangerous Pesticides	Beeswax
Smelly Footprints	Colony	30 Million Years	11,400 Strokes per Minute	4 Wings
2,500 Eggs a Day	Drones	FREE for Beelovers	Preserving Habitat	Pollinator
Hornet	Bumblebee	Waggle Dance	Yellowjacket Wasp	Apis Mellifera
B-Line	Royal Jelly	Pheromones	Honeycomb	Workers

GREEN CITY Challenge

Save the Bees

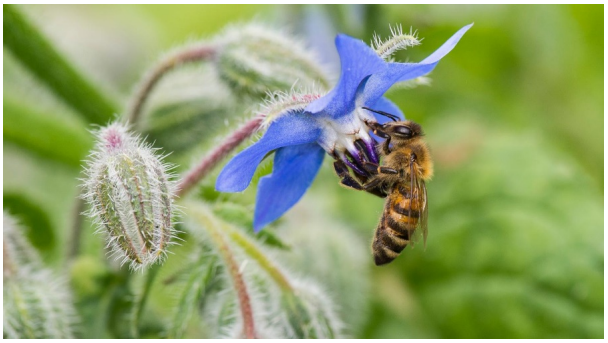
Almonds	Smelly Footprints	Apis Mellifera	Waggle Dance	Royal Jelly
Hornet	Colony	4 Wings	Yellowjacket Wasp	Queen
Preserving Habitat	2,500 Eggs a Day	FREE for Beelovers	Workers	30 Million Years
11,400 Strokes per Minute	Pheromones	Bumblebee	Dangerous Pesticides	Corbicula
B-Line	Drones	Pollinator	Beeswax	Honeycomb

Tiles

Almonds	Queen	Corbicula	Dangerous Pesticides	Beeswax
Smelly Footprints	Colony	30 Million Years	11,400 Strokes per Minute	4 Wings
2,500 Eggs a Day	Drones	FREE for Beelovers	Preserving Habitat	Pollinator
Hornet	Bumblebee	Waggle Dance	Yellowjacket Wasp	Apis Mellifera
B-Line	Royal Jelly	Pheromones	Honeycomb	Workers

Bee Bingo Information

Almost 90% of wild plants and 75% of leading global crops depend on animal **pollination**. One out of every three mouthfuls of our food depends on pollinators. Crops that depend on pollination are five times more valuable than those that do not.



Bees can be found living in so many locations, some surprising. Let's list a few…marshes, shingle, sand dunes, soft cliffs, heathlands, wetlands, chalk grasslands, quarries, gravel pits, sea walls and even post-industrial land.

Imagine trying to travel around without our road and rail network. Or imagine if nine out of every ten miles of road just didn't exist – life would be impossible! **B-Lines** are an imaginative and beautiful solution to the problem of the loss of flowers and pollinators. The B-Lines are a series of 'insect pathways' running through our countryside and towns. They link existing wildlife areas together, creating a network, like a railway, that will weave across the landscape.

Honeybees have a dance move called the **'waggle dance'**. It's not actually a dance move at all, rather a clever way of communicating between themselves to tell their nestmates where to go to find the best source of food. It took the researchers at Sussex University two years to decode the waggle dance.

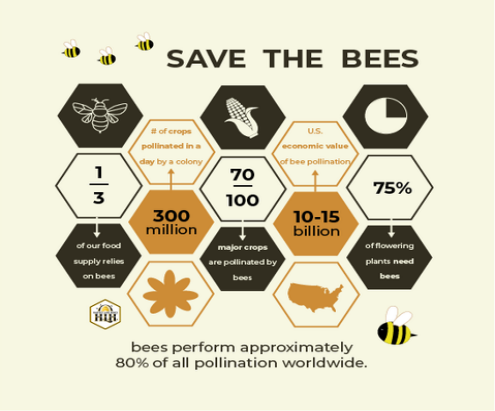
The buff-tailed bumblebee has a brain the size of a poppy seed. Which is incredible given the fact scientists have managed to train them to score a goal in 'bee football' in return for a sugary treat. Quite unbee-lievable!

Scientists from the University of Bristol have discovered that bumblebees have the ability to use their **'smelly footprints**' to distinguish between their own scent, the scent of a relative and the scent of a stranger. This means they can improve their success in finding food and avoid flowers that already have been visited.

If the queen bee dies in a honeybee hive the workers can create a new queen bee. They do this by selecting a young larva and by feeding it special food called **'royal jelly'** the larva will develop into a fertile queen.

Beneath their "bellies," the young honeybees have four special glands that excrete liquid wax, the way that we humans sweat. Once exposed to air, the wax begins to harden. **Beeswax** is an essential byproduct that the bees create for their hive: it's used to build comb that stores honey and provides living space for new bees. Beeswax is formed mainly of plant resins, and, unlike some synthetic waxes, is safe to eat and use cosmetically. Beeswax is used in cosmetic products such as Body Balm and Body Butter. It is also commonly utilized in candles, medicines, varnishes, electrical parts, and even as a coating for the cheese to prevent mold. A lot of natural car waxes also contain beeswax.

Did you know that...



- Bees have 5 eyes
- Bees are insects, so they have 6 legs
- Male bees in the hive are called drones
- Bees fly about 20 mph
- Female in the hive (except the queen) are called **worker bees**
- Losing its stinger will cause a bee to die
- Bees have been here about **30 million years!**
- Bees carry pollen on their hind legs in a basket or **corbicula**
- An average beehive can hold around **50,000 bees**
- Foragers must collect nectar from about 2 million flowers to make 1 pound of honey
- The average forager makes about 1/12 th of a teaspoon of honey in her lifetime
- Average per capita honey consumption in the US is 1.3 pounds
- Bees have 2 pairs of wings-so actually have **four wings**- The two wings each side hook together to form one larger pair when flying and then unhook when they're not flying.
- The principal form of communication among honey bees is through chemicals called **pheromones**
- Bees are important because they pollinate approximately 130 agricultural crops in the US including fruit, fiber, nut, and vegetable crops. Bee pollination adds approximately 14 billion dollars annually to improved crop yield and quality.
- The honey bee is the only insect that produces food eaten by man.
- A honey bee can fly for up to six miles, and as fast as 15 miles per hour, hence it would have to fly around 90,000 miles -three times around the globe – to make one pound of honey.
- It takes one ounce of honey to fuel a bee's flight around the world.
- Honey is 80% sugars and 20% water.
- Honey bees must consume about 17-20 pounds of honey to be able to biochemically produce each pound of beeswax.
- Bees maintain a temperature of **92-93 degrees** Fahrenheit in their central brood nest regardless of whether the outside temperature is 110 or -40 degrees.
- A populous colony may contain 40,000 to 60,000 bees during the late spring or early summer. Worker honey bees live for about 4 weeks in the spring or summer but up to 6 months during the winter.
- The queen bee lives for about 2-3 years. She is the busiest in the summer months, when the hive needs to be at its maximum strength, and lays up to **2500 eggs a day**.
- The queen may mate with up to 17 drones over a 1-2 day period of mating. The queen may lay 600-800 or even 1,500 eggs each day during her 3 or 4 year lifetime. This daily egg production may equal her own weight. She is constantly fed and groomed by attendant worker bees
- The average honey bee will actually make only one twelfth of a teaspoon of honey in its lifetime.
- Honey bees fly at up to 15 miles per hour. The Honey bee's **wings stroke 11,400 times per minute,** thus making their distinctive buzz.
- A honey bee visits 50 to 100 flowers during a collection trip.
- Honey bees, scientifically also known as **Apis Mellifera**, are environmentally friendly and are vital as pollinators
- Fermented honey, known as **Mead**, is the most ancient fermented beverage. The term "honey moon" originated with the Norse practice of consuming large quantities of Mead during the first month of a marriage.

What's Killing the Bees

Scientists know that bees are dying from a variety of factors—pesticides, drought, habitat destruction, nutrition deficit, air pollution, global warming and more. Many of these causes are interrelated. The bottom line is that we know humans are largely responsible for the two most prominent causes: pesticides and habitat loss. The number of working bee colonies per hectare provides a critical metric of crop health. In the U.S. — among crops that require bee pollination — the number of bee colonies per hectare has declined by 90 percent since 1962. The bees cannot keep pace with the winter die-off rates and habitat loss.

Biologists have found more than 150 different chemical residues in bee pollen, a deadly "pesticide cocktail" according to University of California apiculturist Eric Mussen. The chemical companies Bayer, Syngenta, BASF, Dow, DuPont and Monsanto shrug their shoulders at the systemic complexity, as if the mystery were too complicated. They advocate no change in pesticide policy. After all, selling poisons to the world's farmers is profitable.

Furthermore, wild bee habitat shrinks every year as industrial agribusiness converts grasslands and forest into mono-culture farms, which are then contaminated with pesticides. To reverse the world bee decline, we need to fix our dysfunctional and destructive agricultural system.

Honey bees — wild and domestic — perform about 80 percent of all pollination worldwide. A single bee colony can pollinate 300 million flowers each day. Grains are primarily pollinated by the wind, but fruits, nuts and vegetables are pollinated by bees. Seventy out of the top 100 human food crops — which supply about 90 percent of the world's nutrition — are pollinated by bees.

Solutions That Save the Bees

Common sense actions can restore and protect the world's bees. Here's a strong start:

1. Ban the seven most dangerous pesticides.
2. Protect pollinator health by preserving wild habitat.
3. Restore ecological agriculture.

https://honeybeenet.gsfc.nasa.gov/Honeybees/Basics.htm
https://americanbeejournal.com/tiposlinks/fun-facts/
https://www.wwf.org.uk/learn/fascinating-facts/bees
https://www.greenpeace.org/usa/sustainable-agriculture/save-the-bees
https://waxingkara.com/where-does-beeswax-come-from/

Unfortunately, bee populations worldwide are in decline, and the number of recorded hives in the United States is the lowest it has been in 50 years. Bee diseases and habitat destruction cause this decline. According to The Bee & Butterfly Habitat Fund, almost 24 million acres of grassland were converted into cropland over the past decade, eliminating vital habitat. Climate change is exacerbating the problem. Additionally, the widespread use of insecticides (specifically, neonicotinoids) on farms and urban landscapes has been toxic to bees.

We want to save all types of bees. The United States is home to at least 4,000 different native bee species. Honeybees are only one species—and they are not native to the U.S. But when people think about bees, they usually think about honey. Only honeybees and bumblebees live in hives; 70 percent of bees nest in holes in the ground.

We rely upon the honeybee to not only make honey but also pollinate a wide variety of crops. But honeybees are a managed crop themselves, and much of what they pollinate are also dependent on wild bees. According to a recent scientific study published by Royal Society Publishing, wild bees and honeybees provide “comparable amounts of pollination for most crops,” though it varied by crop type. For example, almonds are 100 percent reliant upon honeybees for pollination, while pumpkin crops depend more on wild bees. An earlier study released by the National Academy of Sciences found that “behavioral interactions between wild and honeybees increase the pollination efficiency of honeybees on hybrid sunflower up to 5-fold.” So, we need to save all of the bees!

SAVE THE BEES

https://projecthivepetcompany.com/blogs/blog/why-do-we-need-to-save-the-bees