

The Honeybee



Honeybee on a clover flower. By Richard Rickitt

Pollination

Honeybees harvest nectar and pollen from flowering plants. They help us by pollinating the flowers of fruit trees and vegetables.

Bees pollinate apples, plums, beans and marrows, almonds, onions, lemons, cherries, carrots and many more of our favourite foods.



Honeybees are essential for food production.

Bees pollinate around £510 million-worth of crops every year in the UK.

Honey

Honeybees are famous for their delicious honey. They produce honey as food stores to survive winter.

Luckily for us they produce two-three times more honey than they need, so we get to enjoy the tasty treat too.

An average hive produces around 11kg of honey per season. That's around 24 jars.

Bees are able to extract heavy metals and pollutants when producing honey, so they can make very clean honey, even in a city.

Stings

Honeybees only sting when they sense danger or to protect the colony. The poor bee dies after it has stung.

Flapping your arms makes them frightened and they are more likely to sting.



Many children enjoy beekeeping. Here a girl from Wiltshire is harvesting a honeycomb filled with honey.

By Richard Rickitt

A honeybee colony

Honeybees live in large groups called colonies. Domesticated colonies live in hives. There are up to 50,000 bees in a colony in summer. They are divided into three types:

1. Queen: Only one. Her job is to lay the eggs that will produce the next generation of bees. She also produces scents that keep the colony together.
2. Workers: these are all female. They forage for food (pollen and nectar from flowers), build comb, protect the hive, clean and circulate air by fanning their wings. Workers are the only bees most people see flying around outside the hive.
3. Drones: these are male bees. They have no sting. Their purpose is to mate with new queens. Several hundred live in each hive during the spring and summer. In winter, when the hive goes into survival mode, the drones are kicked out.



About a honeybee

Honeybees have five eyes – two on the front of their face, and three on the top of their head.



Honeybees have four wings. This is one way of telling bees from hoverflies, which only have two wings.

They hook their wings together to form one big pair when flying, and then unhook them when not flying.

Honeybees are great flyers. They fly at around 25km per hour and beat their wings 200 times per second.

Honeybees have six legs.

They have a hook inside the front leg especially to comb pollen from their antennae.

They use pollen baskets on the back of their legs to bring home pollen.



A honeybee with full pollen baskets. By Prijetno Domače

A bee's life

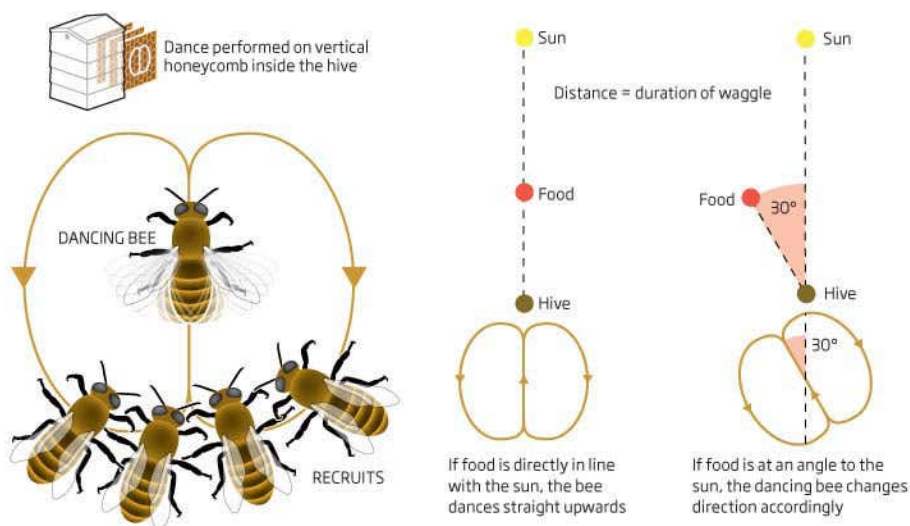
The average worker bee lives for just five to six weeks. During this time, she'll produce around a twelfth of a teaspoon of honey.

The queen can live up to five years. She is busiest in the summer months, when she can lay up to 2,000 eggs a day.

Communication

Each bee has 170 smell receptors, which means they have a really good sense of smell. They use this to communicate within the hive and to recognise different types of flowers.

Honeybees are brilliant dancers. To 'tell' other bees where to find flowers, they perform a 'waggle dance'.



©NewScientist

Bees in the world

There are 267 different species of bees in the UK and around 20,000 worldwide. In the UK, we only keep one species of bee for honey: *Apis mellifera*.

Sadly, over the past 15 years, colonies of bees have been disappearing, and the reason remains unknown. Called 'colony collapse disorder', billions of honeybees across the world are leaving their hives, never to return.

Bumblebees

There are 26 different species of bumblebee in the UK. In the UK, many species of bumblebee are declining, with two bumblebee species known to be extinct.

In *Harry Potter*, Professor Dumbledore's name comes from an old English word for bumblebee.

Bumblebees are social and live together in small nests of about 200 bees, ruled by a queen.

Solitary bees

Solitary bees like to live on their own. They do not produce honey. They are also most likely to move into a bee hotel.

Solitary bees are even more efficient pollinators than honeybees. Just one red mason bee can pollinate as much as 120 worker honeybees.

Most solitary bees nest in the ground. They are the mining bees. Some species, such as mason and leafcutter bees nest above ground. They are known as cavity nesting bees and like to live in walls, dead wood or cavities in trees.

Bees are not the only pollinators. They get help from butterflies, moths, flies, wasps and beetles, as well as some birds and mammals.

Some easy-to-grow bee-friendly flowers:

- | | |
|--------------------|-------------------|
| 1. Alyssum | 9. Goldenrod |
| 2. Catmint | 10. Larkspur |
| 3. Chives | 11. Lambs ears |
| 4. Clover | 12. Marjoram |
| 5. Cornflower | 13. Nasturtium |
| 6. Deadnettle | 14. Sage |
| 7. Foxglove | 15. Sunflower |
| 8. French marigold | 16. Sweet William |

Nasturtiums Urbanseedling.com



Find out more

Wiltshire Beekeeping Association has observation hives which can be safely brought into schools, and speakers who can talk about honeybees. To book a visit to your school during the summer term, contact Tony Awdry tonyawdry@hotmail.com

The Wiltshire Bee & Honey Day takes place every October and has classes especially for school children: A Bee Made Out of Vegetables and/or Fruit; An Artistic Exhibit related to bees or beekeeping; an exhibit of Pollinating Insects and their Place in the Ecosystem; Three Cup Cakes decorated with a bee theme; a Mobile with a Beekeeping Theme. Contact Tony Awdry for more information.