



Bee thankful!



Why should we be thankful for bees?

Our lives – and the world as a whole – would be a much different place if bees didn't exist. Bees are easily amongst the most important insects to humans on Earth. These humble, buzzing bugs deserve a huge thanks!

1. Bees help provide food for us

They give us honey!

Made by bees regurgitating nectar and passing it in their mouths to one another before depositing it in a honeycomb for their winter food stores. We humans are quite fond of this amber liquid as well!

They pollinate plants that give us food

Pollination is the transfer of pollen from the male part of the flower (anther) to the female part of the flower (stigma). Upon the two's meeting, a plant's seed, nut, or fruit is then formed.

Bees are responsible for pollinating about one-third of everything we eat! We would not have broccoli, asparagus, melons, cucumbers, pumpkins, blueberries, almonds, apples, cranberries, and cherries if bees did not pollinate these plants!

2. Bees make the planet beautiful

Bees are beautiful creatures to look at. By pollination bees help flowers grow which provide attractive habitats for animals such as insects and birds. We also enjoy looking at flowers and plants!

Bees in Ireland

There are lots of different species of bees. Most are solitary bees that most of the time exist on their own. Others live in colonies or hives. There are 101 bee species in Ireland. 19 of these species are bumblebees, and more than half of these bumblebee species are in decline. Ireland has one native honeybee species. Most of the other 81 bee species in Ireland are solitary. Nearly half of these solitary species are in decline. Sadly, 3 bee species have become extinct in Ireland within the last 80 years. Bees are declining because we are making them homeless by using most of the landscape for farming, forestry and housing and not leaving enough natural habitats for them to live. Climate change also threatens many species.

HONEYBEE

There are about 3000 beekeepers in the Republic of Ireland and 700 in Northern Ireland who keep hives of honeybees and produce honey. In the wild they make their nests in hollow trees and don't have to share their honey with anyone!



BUMBLEBEES



Two of the common bumblebees in Ireland are:
the **white tailed bumblebee** and



the **common carder bumblebee**.

See if you can find them in your garden or local park.



Also watch out for the **red tailed bumblebee**, which is a lot less common but can sometimes be spotted.

Queen bumblebees emerge from hibernation in spring, make a nest and lay eggs in it. Some eggs become female worker bees who look after the colony and raise the young. Other eggs become males who leave the colony and try to find another queen with which to mate. In late summer some eggs become new queens instead of workers. The colony dies in winter, except for the new queens who go into hibernation until spring.

Bumblebees are very important pollinators. When a female bee visits a flower, she drinks nectar and gathers pollen on her hairs and in pollen baskets on her back legs. Some pollen attached to the bee's body at one flower will be transferred to the next flower; this allows the important process of pollination to occur.

Only female bees can sting. Bumblebees do not swarm and are generally not aggressive unless disturbed.

SOLITARY BEES

Unlike the honeybee, solitary bees and bumblebees produce little or no honey. Solitary bees are not big and furry like bumblebees. Most are much smaller and come in lots of different shapes and colours. Some are small and black and look like flying ants, others have black and yellow striped bodies like wasps.

Although most solitary bees prefer to live alone, some species are more sociable and like to build their nests in little groups or aggregations.

Solitary bees take one whole year to pass through a complete life cycle, and may only survive as adults for 2 weeks. This isn't long enough for them to raise their offspring, so the young bees have to fend for themselves. Mum makes a nest, lays eggs in it and leaves a food supply of honey and pollen, and then dies when the colder weather arrives. The offspring survive the winter and emerge the following spring, when they try to find a mate and the cycle begins again.

Mining bees make their nests by digging holes in the ground. Many like to nest in south facing banks of exposed soil so that the nest will get plenty of sun to keep them warm.



Grey striped mining bee



Chocolate mining bee (male)



Tawny mining bee

Leafcutter bees cut circular pieces out of leaves with their teeth and carry them back to line their nests in hollowed out twigs and bamboo canes.



Silvery white leaf cutter bees



Other solitary species prefer to nest in old beetle holes in dead wood or in cavities in walls.

The **Dune snail bee** (*Osmia aurulenta*) lives in sand dunes and will only nest in empty snail shells!