



## The Bees and Why We Need Them

*By Alice and Emily*

Across the world there are around 275 different species of bees, with 24 different species in the UK alone. These bees all play a crucial role in how we get our food. However, the bees are disappearing and no one really knows definitively why. There are numerous ideas and one such theory is that areas referred to as 'Agricultural Food Deserts' are causing a decline; these are usually farmland that has little to no fauna on it and limited



hedgerows. This 'desert' means bees have to travel extended distances in order to get their food. This causes them to become weaker and they sometimes won't survive the journey.

It is known that bees living in areas with a large array of wildflowers have their chances of surviving into the next year increased by up to four times, and restoring native patches of wildflowers by having a selection of different flowers in spring and summer is thought to help increase their survival rate. Currently though, it is estimated we have lost up to 97% of our flower rich grassland and meadows since 1930 and since 1940 two species of bees have become extinct. The Cullem's Bumblebee was last recorded in 1941 and the Short-haired Bumblebee was last seen in 1988. The decline in wildflower numbers and how this affects bees really goes hand in hand. The wildflowers decline as there are less bees to pollinate them and the bees decline because there are less wildflowers to pollinate. It is a vicious cycle that could see us losing more than two species.

Furthermore, with the growing use of pesticides in agriculture, there could be connections between them and colony collapse disorder. Colony collapse disorder is the phenomenon where thousands of bees in hives all around the globe are simply disappearing. All they leave behind is the queen and immature bees. While no one really knows what causes this phenomenon, scientists and environmentalists worldwide have speculated that pesticides have played a part. Most pesticides are bee safe, and have been tested to make sure of this, but when insects are exposed to a cocktail of drugs they can become disorientated and lose their hives or even die as a result.

Other reasons for the bee crisis that have been considered are the increase in the population size of the 'Honey bee tracheal mite' which inhabits the windpipes of the bees. More than a hundred of these parasites can be living in the bee at one time and cause them numerous problems and issues. A way to avoid using pesticides and avoid parasites like the tracheal mite is to use plants in your garden that discourage pests such as clovers, chrysanthemums, geraniums and petunias. Gardens cover over one million acres of land in the UK and if everyone planted just a few more bee-friendly plants (Honeysuckle is fabulous) we could see drastic changes.

If all of this doesn't convince you that this is an issue worth considering, then just think about the important role that bees play in what we eat.

In 2005 honey bees' pollination contributed to an estimated \$200 billion worth of food globally and £400 million in the UK alone, and to top it all off bees pollinate an estimated one third of our food. This means that some of your staple foods like apples, oranges and onions could essentially disappear completely as production will drop to less than 10% for many crops. Fruits and nuts such as watermelons, cashews and almonds could be eradicated from our shelves completely. We have seen the effects a limitation of food has on our nation, when the recent courgette crisis saw the prices of courgettes rise from around £6 a crate to £26. The country was left floundering when supermarkets were having to apologise because they could not provide any lettuces to their customers. If we lose one of our top pollinators, fruits and vegetables may have to be pollinated manually and this would mean the cost of fruit and vegetables could increase massively. If healthy foods like these get more expensive, families may have to cut down on how much they buy and this could only develop further the growing obesity problem in our country.

The future of our bees relies on us and there is a lot that we can do. As mentioned before, you can plant plants that are good for bees and avoid plants that are long and funnel like as it is harder for bees to feed from them. You can donate to charities such as the Bumblebee Conservation Trust and you can participate in surveys across the country to document what species of bees you can see. Overall, bees need help and we have to capacity to provide them with it. Get outside and help the bees.