

GARDEN MUSEUM



Buzz.. Buzz... Buzz..... **BEEES!**

- What is the difference between a bumblebee and a Honeybee?
- What do bees do for us?
- *Both bees pollinate over 250,000 species of plants*
- *100 different crop plants*
- *1/3 of all food we eat.*

Bumble Bee



Honey Bee



Bumblebee Vs Honeybee

Bumblebee

- Fat and furry
- 25 species in UK
- Various tongue lengths so can feed on diverse shape of flowers
- Live in nests in gardens with 50-400 bees
- Queen lives for only 1 year
- Pollinate flowers
- Small amounts of honey-eat themselves

Honey bee

- Smaller and slim-wasp like
- Only 1 species in Europe
- All have short tongues –prefer cup shaped flowers
- Live in hives 20,000 -60,000 bees
- Queen lives for 3- 4 years
- Pollinate flowers (managed pollinators)
- Make lots of honey-used commercially.

Are humans to blame for the decline in bees?



Yes



No

In some areas, flowering plants are flowering earlier so there are big gaps between flowers that would normally flower one after the other. This prevents the bees from having a constant source of food.



Many farmers use broad spectrum pesticides on their crops to increase yield.

These Pesticides kill most insects including bees. This also reduces the range of habitat and diversity of flowers that bees can feed from.



Varroa mites are becoming increasingly common in the UK and much of the world. They reached the UK in 1992 from Europe and Asia. They are parasites and suck blood especially during larval stage and pass virus to the bees.. This severely weakens individuals in the hive and the killing can be spread over several weeks.



With many gardeners choosing to have decking in their garden, the amount of plants in the garden is decreasing.



Bee friendly gardens should have long grass to provide shelter and have a wide range of native wildflower species. This would be an ideal habitat for different bee species.

Bee friendly planters at the Garden Museum



The BBC reported that 2019 was the warmest Spring and Summer on record with a very low rainfall. Without rain, plants cannot grow quickly and make nectar during flowering.



In the 1930s, the amount of beekeepers in the UK was three times more than it is today.

Though there has been a recent surge in popularity in keeping bees in urban areas.

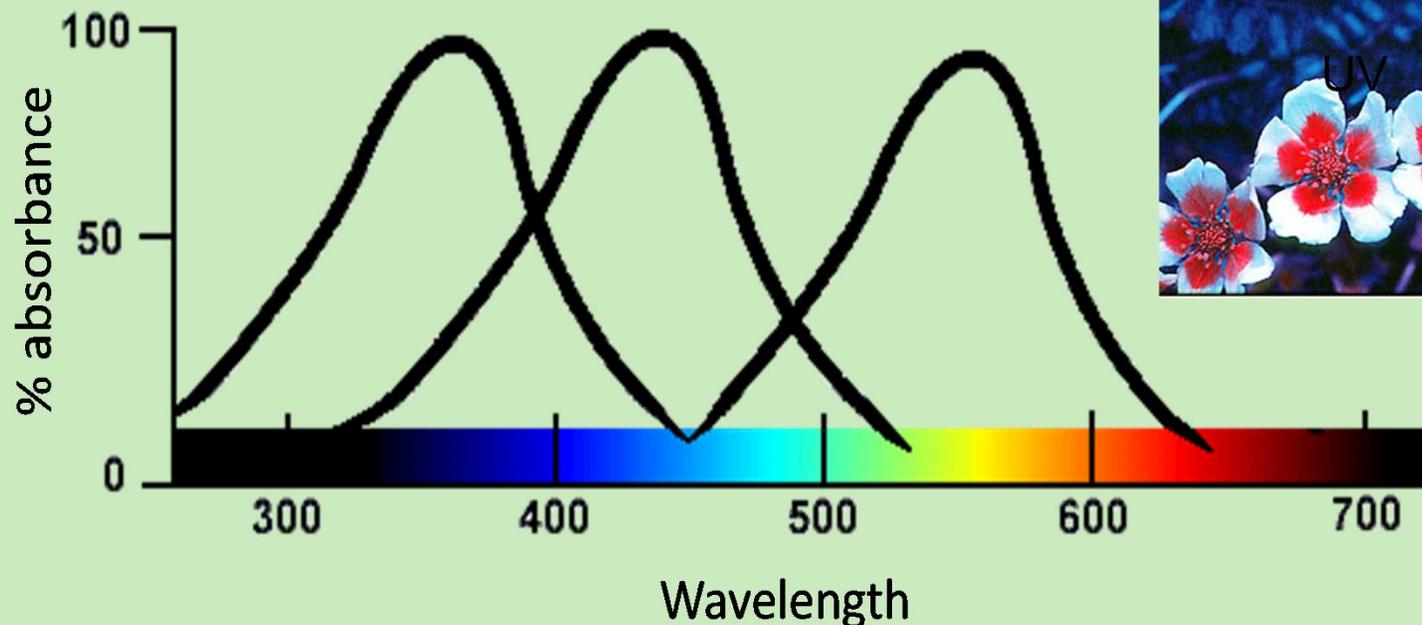


Flower colours and insect vision

- Bees have three 3 receptors for light (maximum sensitivity for UV, blue and green)
- These wavelength spectrums are optimal for discriminating between flower colours!



Potentilla anserina



Pollination - cheating



- Some insects, such as bumblebees, can cut holes in the bases of flowers and take nectar without actually engaging in pollination!
- This is called *nectar robbing*



Pollination - cheating



- Some plants advertise rewards to insects with bright colours and scents, but don't actually offer nectar or much pollen in return, thereby tricking the insects into pollinating them!
- This is the case for 1/3 of all orchids!

