

# Hello Trees Resource Sheet

## What to look for outdoors in summer Insect pollinators: the role of trees

**No insect pollination means no apples, plums, pears or strawberries.**



Pollination is the transfer of pollen from one part of a flower to another so that fruits can develop.

Pollen is carried from one flower to another by the wind or by insects, birds or animals.

For more about wind pollination, see [Wind Pollination](#).

Birds and animals are responsible for some pollination but far and away the most important pollinators are insects, see [Insect pollination](#).

And the most important insect pollinators are bees and wasps, flies, butterflies and moths, and beetles.

Of these, bees are easily the most important.

Let's concentrate on bees, our main insect pollinators.

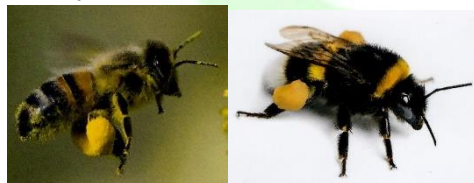
There are 3 types of bee: honey bees, bumblebees and solitary bees.

Honey bees are 'managed bees': bee keepers look after them in hives.

Bumble bees and solitary bees can be called 'native bees'. They make their nests in or on the ground, in plant stems, or holes in trees or brickwork.

Solitary bees are the best pollinators because of the way they carry pollen.

Honey bees and bumblebees use their legs to brush pollen from their



bodies, mix it with nectar to make a sticky ball and push the sticky ball into pollen baskets on their back legs. Once inside the basket, the pollen doesn't brush off easily on to the next flower.



Solitary bees carry dry pollen on their legs and bodies or on a pad under their body. It easily brushes off on to the next flower.

**That is what makes solitary bees the best pollinators.**



Or inaction! Stand or sit quietly near garden flowers, flowers in the park, or under a lime tree and see how the bees are carrying the pollen they are collecting.

If they carry pollen in pollen baskets, they are honey bees or bumblebees. ✓

If they carry dry pollen on their bodies, they are solitary bees. ✓



Native Bees



Managed Bees



Wasps



Flies



Butterflies



Moths



Beetles

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### Insect pollinators: the role of trees



You will also see the bees putting their tongue down into the base of the flower to suck up nectar – literally suck up: their tongue is like a straw.



A full tummy of nectar will give the bee enough energy to fly for about 40 minutes. No wonder they buzz from flower to flower topping up.



Not all bees have tongues long enough to reach the nectar in all flowers. Look at the depth of the flower and imagine how long the bees' tongues must be.



A Garden bumblebee has a tongue 15mm long:  $\frac{3}{4}$  of its body length! Here is a garden bumblebee on red clover that has a long flower tube.



A Mining solitary bee has a tongue only 4 or 5mm long. Here is a mining bee on a shallower flower.

Bees only live for about 6 weeks.

In that time, solitary bees have to find nectar, make a nest, mate, lay eggs, pack pollen round the eggs as food for the young when they hatch, then seal the nest chambers to keep the eggs, and then the young, safe. No pressure, then! As soon as the young develop, they will be off to live their short lives: generation after generation through the spring and summer until it is time to hibernate in October.

Bees wake from hibernation in March and they need nectar and pollen fast.



At last, we come to the importance of trees.

**Hedge trees provide early blossom for solitary bees.**

Blackthorn is vital.

It is the only blossom in abundance in March.

Other hedge trees soon follow: field maple and hawthorn.

And, of course, the all-important **blossom of orchard fruits**: apples, pears and plums.



*Blackthorn blossom*

**Hedge trees also provide safe places for bees to nest and hibernate.**

There are fewer and fewer bees than there used to be. We have cut back our all-important hedges and no longer leave space for wild flowers that provide pollen and nectar in summer.

It is a large problem and the Government have a new [National Pollinator Strategy](#).



But we can help. We can [Sow some wild flowers](#) and [make a place for solitary bees to nest](#) - a bee hotel.