

# Garden Bumblebees

## Attracting bumblebees and making artificial bumblebee nest sites in the garden



Bumblebees are insects of temperate climates. Quite different from honey bees and solitary bees, they live in small colonies of up to 200-300 and with their densely furry bodies can be active even in dull conditions. They are constantly busy in the garden, foraging for nectar and pollen, helping to pollinate flowers as they do so.

Up to 25 species of bumblebee live in the UK. Many are found only in habitats such as moorland or in coastal areas; only 6 or 7 species are widespread and visit gardens. There are also 6 species of 'cuckoo' bumblebees, that mimic other species and take over their nests.

In the last 30 years, two bumblebee species are known to have become extinct in this country, and many more have suffered a marked decline.

This factsheet suggests flowers and planting schemes to attract bumblebees, and shows how you can make special homes for them in your garden.

### Seven species you might meet in the garden

Workers hatched early in the year are much smaller than later siblings.

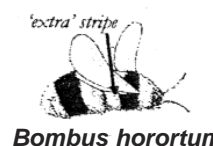


#### White-tailed

**Bombus terrestris** Buff-tailed bumblebee. 'Tail' quite variable white-yellow. BIG! Flying from June - October

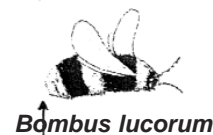
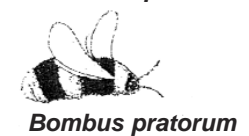
#### Red-tailed

**Bombus lapidarius** Red-tailed bumblebee. All black body with red tail. BIG! Flying from April - September



**Bombus hortorum** 'Garden' bumblebee. White-tailed, with extra yellow stripe on its abdomen. Medium sized. Flying May - October

**Bombus pratorum** Early bumblebee. Yellow striped with orange-red tail. Small sized. Flying from April - August



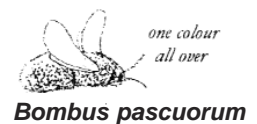
**Bombus lucorum** White-tailed be with no extra yellow stripe. Medium sized. Flying from April - September

**Bombus rederarius** Red-shanked 'Carder' bee. All black body with red tail and red hair fringing hind legs. Small sized. Flying from April - September



#### Brown

**Bombus pascuorum** Common 'Carder' bee. No stripes, usually all brown, but quite variable. Small sized and late flying June-October



### Bee watchful ... Observing a year in the life of a bumblebee colony

1. Early spring - Solitary Queen bees emerge from hibernation - these are the large bumblebees seen during February - March.
2. Queen looks for a likely nest site such as an old mouse nest or grassy tussock, familiarising herself with the area.
3. In the nest the queen lays her eggs, having kept them throughout the winter. The first workers emerge, more eggs are laid and hatch, until colony numbers 200-300. Some eggs develop into new queen bumblebees.
4. The first unfertilised eggs are laid and these develop into male bumblebees.
5. New queens and males leave the nest. Males patrol a chosen 'patch', leaving scent marks and looking for queens to mate with.
6. Autumn - Original queen bee, workers and males die. New queens, with their fertilised eggs go into hibernation.

### Flight of the bumblebee

Flying takes up a lot of energy - a third of bumblebee's daily energy intake is spent foraging for more nectar and pollen. By repeatedly 'shivering' their muscles and with their furry 'woolly jumper'-like bodies, bumblebees can stay warm and active on cool overcast days. Some bumblebees even live north of the Arctic Circle!

#### A stinging comment

The sting is modified ovipositor (egg laying tube) and so present only in the female bumblebees. They very rarely sting however, even when handled, but may do so if the entrance to their nest is obstructed. Unlike honey bees, stinging is not fatal for a bumblebee - she can fly away and sting again another day.



## Planting for bees

Early and late flowers, together with some bee favourites, will give a long supply of nectar. Planting in dense drifts; bees learn to recognise certain nectar - rewarding flowers and will revisit these repeatedly. Some bees have preferences for certain flower forms:

***Bombus terrestris*** and ***Bombus lucorum*** - Short open flowers e.g White Clover, Comfrey, Field Bean. Both are hole-biting 'nectar robbers' (see below.) ***B. terrestris*** rarely visit pendulous flowers - its large size means it is often not agile enough to so.

***Bombus hortorum*** - has a long tongue so can visit flowers with petals forming long tubes such as Honeysuckle, Delphiniums and Catmint.

***Bombus lapidarius*** - another large bee which likes to land on flowers with horizontal massed 'platforms' e.g. Daisy family, especially Knapweeds.

***Bombus pratorum*** - small agile size and medium-length tongue means it can probe a range of flower depths; able to visit upside-down and drooping flowers such as Comfrey and Bugloss.

***Bombus pascuorum*** - long-tongued for long-tubed flowers, especially late flowers of White deadnettle, but also visits a wide variety of flowers. Male bees seem to visit compound daisy-like flowers (e.g Marsh Thistle) more than females.

### 30 Plants popular with bumblebees:

Betony	Bugle	Alkanet
Comfrey	Clovers	Buddleia
Field Bean	Foxglove	Knapweed
Thistles	Lavender	Viper Bugloss
Verbascums	Woundworts	White Deadnettle
Chives	Borage	Single Larkspurs
Nasturium	Rosemary	Poached Egg plant
Catmint	Toadflax	Figwort
Marjoram	Curry plant	Snapdragon
Sage and mints	Cranesbills	Agastache

#### Early Flowers

Bluebells	Primrose
Dandelion	White Deadnettle
Aubretia	Wallflower
Single Crocus	Flowering currant
Hazel	Forget-me-not
Pussy willow	Winter Heather

#### Late Flowers

Michaelmas daisies	Ivy
Buddleia	Goldenrod
Sedum	Lavender
Escallonia	Echinacea
Ceanothus	Red Valerian

## Nectar 'robbing': a free lunch ...?

The Buff-tail bumblebee is a big heavy bee with a short tongue that can't always gain access to smaller, pendulous or tubular flowers - so it cheats! It nibbles a hole in the base of flowers such as honeysuckle and clover and sips up the nectar without entering the flower. Other bees and insects may buzz along and use the hole afterwards. Surprisingly this behaviour can actually help pollination - because other bees are then forced to visit even more flowers than they would normally for their nectar.

## Making a bumblebee nest for the garden

### Building a bumblebee box

Build a 100 mm x 100 mm x 200 mm box with a lid, from wood. Cut an entrance hole at the bottom of the box.

By the end of April, dig a hole in a dry, well drained spot and place the box inside.

Force a rod or pipe (25-30 mm wide) into the ground so that it meets up with the entrance hole.

Place bedding material such as dry grass, straw, or upholsterer's cotton (but not cotton wool) in the box, close the lid and cover over with e.g turf, logs or a paving stone.

Plant a 10 cm tall stick upright nearby as a 'marking post' to help bees find their way back to the nest.

#### Flight of the bumblebee

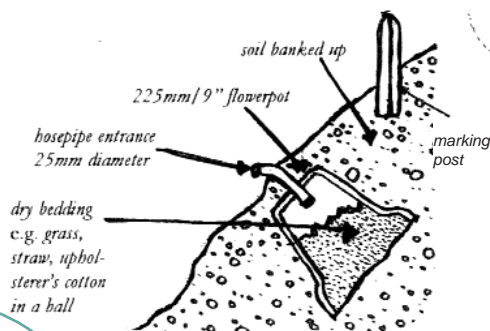
Bumblebee buzz is generated by air forced out through breathing holes in the bee's abdomen - a bit like humming through your nose!

### Winter hibernation spots

In late summer the colony's new Queen bees need to find themselves somewhere to hibernate. They dig themselves a shallow subterranean chamber in which to stay until the following spring. This is often dug into loose soil in a cool north facing bank. Try providing places like this for hibernating Queen bumblebees in your garden in quiet, undisturbed spots.

#### A palace fit for a Queen bee

Queen bumblebees build their nests in old mouse and vole nests on or below ground level. Heat insulation and avoiding dampness are of great importance and sometimes nests are covered over with moss. These two designs simulate a vacant des-res bumblebee nest site ideal for rearing a colony.



#### In a clay flower pot

By the end of April, half bury a 9"/225 mm deep clay flowerpot in a dry, well drained, sheltered, sunny flowerbed or hedge bottom so that the drainage hole in the base faces outwards.

Attach a short 5-6 cm length of hosepipe (25-30 mm wide) to the drainage hole.

Add some bedding material such as pets' bedding, dry grass, straw, or upholsterer's cotton (not cotton wool.)

Cover over the rest of the pot with soil or vegetation so that the pipe sticks out. Plant a 10 cm tall stick upright nearby - bees may use this as a 'marking post' to help them find their way back to the nest.

