

Bees and wasps

GWF273

Updated February 2009

Bees are essential pollinators of many fruit and vegetable crops, and even the types considered pests do little damage. Wasps have their good side too.

Q Which bees are found in gardens?

A Bees are a large, varied family of insect. Some, like the honey bee and bumble bee, nest in colonies; others are solitary. They are well-known pollinators. Leaf-cutting bees remove leaf pieces for their nests. Mining or burrowing bees nest in soil, carpenter bees in garden structures and masonry bees in stonework.

Q What could I mistake them for?

A Bees could be mistaken for wasps, but don't have the familiar yellow bands, and are much furrier, often with yellow pollen sacs on sturdy hind limbs.

Q Are bees useful to gardeners?

A Honey and bumble bees are vital pollinators for fruit and vegetables and do no damage.

Q What damage can other bees do?

A The many species of leaf-cutter bees (*Megachile* spp.) live alone, making small nests in the soil, sometimes in pots, rotten wood or hollow stems. They make these nests out of circular pieces of leaf. Each nest has several individual cells containing eggs and young, plus a food supply of honey and pollen. The bees develop in these nests, emerging the following spring. Roses in particular are prone to this sort of damage, but privet, rhododendrons, lilac and

laburnum are all subject to attack. Petals of fuchsia, viola and geranium may also be used. Overall the effect on the plant is slight, and there is no need for action. Plants required for cutting or showing can be protected with insect-proof mesh.

Burrowing bees, such as the tawny burrowing bee (*Andrena armata*), nest in the soil. In lawns the spoil from their delving creates little heaps of fine soil. These often occur in groups, and may need to be brushed away before mowing. They make small burrows up to 30cm deep in spring and early summer, with a cell at the bottom and more cells in side tunnels. Each cell contains an egg and a food supply of pollen and honey. When fully stocked, the burrow is sealed with earth. The bees develop beneath the ground and emerge in spring.

Masonry bees are so called because they nest in holes in old walls. They are really several different species of bees which, like leaf-cutting bees, do not form swarms or hives. These bees favour warm banks, but soft walls are an alternative. To deter them, repoint the wall, as these bees cannot deal with hard materials.

Q What should I do about swarms of bees?

A Only honey bees swarm, when a queen leaves the hive to found a new colony. If you find a swarm in your house or garden, contact a local beekeeper and ask them to

remove it (they may charge for this). Ask the pest-control officer of your local council for contact details or, in an emergency, contact the police.

Q What wasps may I come across?

A Wasps are a large family of mainly helpful insects, of which two species are painfully familiar to gardeners. The most frequently seen wasps are the **common wasp** (*Vespula vulgaris*) and the **German wasp** (*Vespula germanica*), two fairly similar types. The most abundant wasp in Scotland is the **Norwegian wasp** (*Vespula norwegica*). **Hornets** (*Vespula crabro*) are a large, uncommon and non-aggressive wasp species. There are also **tree wasps** (*Dolichovespula sylvestris*), **red wasps** (*Vespula rufa*) and the **cuckoo wasp** (*Vespula austriaca*). They all look distinctively wasp-like so telling them apart is a job for the expert. Ordinary adults are female and 13mm long. Males and queen wasps are slightly larger.

Q What could I mistake them for?

A If you find a very large wasp with a long 'sting' - actually for egg laying - and no wasp waist, it is a **giant wood wasp** (*Urocerus gigas*) female. They are harmless. **Hoverflies** (*Melanostoma* species,) can be brown or have yellow and black banding, and are the same size as wasps. They mimic wasps

and bees to avoid being eaten by predators. Hoverflies can occur in large numbers, and can be recognised by their distinctive hovering and darting flight. Being flies, they have only one pair of wings. Some species are useful predators of garden pests. Others scavenge dead material; none sting.

Q What damage do wasps do?

A Their stings are well known. Wasps also attack plums, grapes nectarines, and late strawberries. The sweetest varieties seem to suffer most. Hard fruits like apples or pears are only attacked if they have been damaged.

Occasionally, wasps damage dahlias, rasping away the succulent stem and leaf-stalk tissue - apparently to get water. Wasps can also be seen collecting wood for their nests from garden furniture, posts, fences, trellis, and buildings, but do little real damage. They also rob beehives, but usually the bees are able to defend themselves.

Q When should I expect to see them?

A Wasps nests die at the end of the summer, the queens dispersing and hiding in dry, sheltered spots.

In spring, the surviving queens build new nests. Different species have different preferences for nest sites. The nest is built of chewed-up wood and saliva, which looks like paper. The queen builds the nest as a suspended ball, adding cells as her brood increases. Later, she stays in the nest and worker wasps do the foraging and building. The nest contains many cells, in each of which the queen lays an egg. This hatches into a grub which becomes an adult after pupating. The adult wasps can become numerous by midsummer.

Young queens and males are produced and mate in late summer. Workers and males live until the cold weather sets in. A new colony starts from scratch each year.

Q Should I destroy their nests?

A If you can find the nests, destroying them will reduce the number of wasps locally, but nests are still likely to exist in neighbours' gardens and other places you cannot get at. To find nests, watch the lines followed by flying wasps on a still, warm day. They will converge on or diverge from nests.

Nests should only be destroyed with approved products. Sprinkle the dust around the entrance to the nest. Returning foragers will carry the dust into the nest, killing the queen and grubs. This is best done at dusk, as the wasps will defend their nest at other times. If necessary, tape an old spoon full of wasp killer to a cane in order to get it near the nest; this should prevent you from being stung and also help reach awkward spots. When the nest is in an tricky place the local authority pest control officer may be able to help.

Q How do I keep wasps away from fruit?

A Insect-proof mesh over doors and ventilators will keep them out of greenhouses. Netting outdoor fruit to keep birds off will reduce the bird damage that encourages wasps.

Q Are wasps useful to gardeners?

A In the spring and early summer wasps feed mainly on insects. Although they do sometimes feed on honey bees and other useful insects, on balance, they seem to consume mainly pests. In addition, the adults feed on the nectar of flowers and are, therefore, potential pollinators.

Q Should I control them?

A Since wasps are useful, it is best to spare them wherever you can. However, if they are especially numerous, cover food to avoid contamination, and don't let children play close to a nest.

Q Should I kill single wasps?

A No. It's only worth it indoors. Aerosol sprays will knock down the occasional wasp, but remember that a dead wasp can still sting so dispose of it carefully.

Q Will killing the queens keep the remaining wasps away?

A Because queens will move into gardens from outside, killing any queens you find won't stop wasps invading your garden next year. Whatever you do in your garden is unlikely to have any lasting effect, as more wasps can arrive from up to one kilometre away.

Q What about wasp traps?

A Jars part-filled with diluted jam or other sweet liquid can lure in and drown wasps. It can help to get rid of annoying ones indoors, or distract them from a picnic, but where lots of fruit or jam is being prepared or especially delicious fruit is grown, you may find your traps don't make much difference.

Q How do I protect my wooden structures?

A If you feel wasps are doing significant damage to wooden structures, or furniture, apply a wood preservative. This will damage plants if it touches them, so it is best to apply it during winter.