

Solitary Bees

Solitary Bees make up the largest percent of the bee population, with 90% of bee species in the solitary category.

There are about 250 species of solitary bee in Great Britain and 20,000 – 30,000 different species worldwide, including mason bees, leafcutters, mining bees, white faced bees, carder bees and digger bees.

As the name suggests, solitary bees are lone bees, which means they do not belong to a colony.

Only the female solitary bee has a sting, which is used to prey on aphids and other insects. They are only ever likely to sting people in self-defence. Being loners, solitary bees fly around by themselves, not in swarms. They do however often choose the same locations to lay their eggs, so it's not uncommon to see a number of them in close proximity.

They are generally harmless, not even protecting their own nests. They create nests in hollow reeds or twigs, in holes in wood or masonry, or most commonly in tunnels in the ground.

The female solitary bee typically creates a compartment (a 'cell') with an egg and some provisions for the resulting larva, then seals it off. A nest may consist of numerous cells and usually the last cells (those closer to the entrance) contain eggs that will become males.

The adult solitary bee does not provide care for the brood once the egg is laid and usually dies after making the nests. The males typically emerge first and are ready for mating when the females emerge. Providing nest boxes for solitary bees is increasingly popular for gardeners.

While solitary females each make individual nests, some species are gregarious, preferring to make nests near others of the same species, giving the appearance to the casual observer that they are social. Large groups of solitary bee nests are called aggregations, to distinguish them from colonies.

In some species, multiple females share a common nest, but each makes and provides for her own cells independently. This type of group is called 'communal' and is not uncommon. The primary advantage appears to be that



a nest entrance is easier to defend from predators and parasites when there are multiple females using that same entrance on a regular basis.

Each cell will be stocked up with ample pollen and nectar to feed the offspring when they are born. The female will lay one egg in each of the cells, seal it up and then fly away.

Solitary bees are very interesting to watch, you can see them regularly in your garden busying about, pollinating flowers and looking very efficient.

Solitary bees are important pollinators and pollen is gathered for providing the nest with food for the brood. Often it is mixed with nectar to form a paste-like consistency. Some solitary bees have very advanced types of pollen- carrying structures on their bodies. A very few species of solitary bees are being increasingly cultured for commercial pollination.

Solitary bees are often oligoleges (bees that exhibit a narrow, specialized preference for pollen sources), in that they only gather pollen from one or a few species/genera of plants, unlike honey bees and bumblebees which are generalists.