



National Bee Unit

Solitary Bees

January 2022

The UK has around 267 species of bees which fall under the category of social colonies or solitary bees. Social colonies, such as honeybees and bumblebees, live with a single reproductive queen, drones (male bees) and female worker bees which go out collecting nectar, pollen and organise the building of the nest. There are around 220 species of solitary bee and every species is important for pollination but due to intensive agricultural farming and urbanisation, the loss of habitats has led to a decline in bee numbers.

The Life Cycle of a Solitary Bee

In general, a solitary bee's life begins in the spring when the adults emerge from the nest site. Usually the males are the earliest to emerge and congregate outside the entrance holes, waiting for the females. They mate and the females depart looking for new nest sites. Depending on the species this can vary from snail shells, woodworm holes, beetle borings, hollow plant stems, holes dug in the ground or in walls and cliffs. The female then collects pollen and lays a single egg before sealing up the chamber. The nest sites vary considerably, and adult females will live just over a month, laying around 20 or so eggs. Their eggs develop into larvae and stay within the cocoon throughout the summer and winter where they will finally pupate and emerge the following spring.

Sometimes large numbers of solitary bees' nest in one area, and the number of flying bees around these 'villages' may be quite daunting. Solitary bees are not defensive of their nest sites and only sting if handled roughly or squashed. Only the female solitary bee possesses a sting, but it doesn't have very much venom and usually only results in localised redness around the site of the sting. The sting is more of a surprise than painful and the best way to avoid being stung is to make sure that children have shoes on around nest sites and preferably to encourage them not to disturb the bees and to watch from a distance. If they do, pollen can be seen being brought back to the nest sites either on the underside of the abdomen or in pollen baskets on their hind legs. Usually, solitary bees are only active around the nest site for a short period of time because of their short lifespan.

To attract solitary bees, nests can be made from cane cut at 6–8-inch lengths, cut so that the node acts as a stopper at one end. These can be bundled together and placed into a

cylindrical structure such as a short length of downpipe and hung on the South facing side of a fence or shed. Solitary bees such as the Red Mason Bee are very common and widespread so if you put the nest up in March, by the time the apple trees have started to blossom, bees may have started to nest in the canes.

Further information

If you would like to know more information regarding Solitary, or any other species of bee, then you may find this website useful: [The Bees, Wasps and Ants Recording Society](http://www.bwars.com) (www.bwars.com)

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