

Common Carder Bee, *Bombus pascuorum*

This beautiful bee is one of our most common bumblebees. She goes by the name Common Carder Bee, *Bombus pascuorum*, and if you have Green Alkonet, White Dead Nettle or Yellow Archangel growing nearby you'll be sure to see her out foraging from spring through till late Autumn.

B. pascuorum is one of the four brown coloured carder bumblebees found in the UK. The others, *B. muscorum*, *B. humilis* and *B. sylvarum* are all quite rare. Don't confuse with the Solitary 'Wool Carding' Bee, which is an entirely different species, *Anthidium manicatum*, which nests underground, lining its nest with 'carded' hairs gathered from plant leaves.



Photo: Brigit Strawbridge

Carder bees differ from other bumblebees in that they usually make their nests above ground in tussocky grass, under hedges and in plant litter, rather than under the ground, though old mammal holes close to the ground surface are sometimes used. They gather dried grass and moss that they comb or 'card' to cover their nests, hence their name 'carder bees'.

B. pascuorum, and other carder bees have a medium to long length proboscis so are associated with flowers with longer corollae, such as the Green Alkonet in this photograph but can often be found foraging on clovers, vetches, blackberries, and later in the year on thyme sage and lavender. The nectar in these flowers can only be reached by a bumblebee with a medium to long tongue.

Colonies typically contain 50 to 150 workers. Only young queens survive the winter; they establish new nests in spring, laying the first eggs into pots of wax. After hatching, the white larvae are fed on honey and pollen by the queen. When they are fully-grown, the larvae cease to feed and develop into pupae after spinning a protective silk cocoon around themselves. During the pupal stage the larvae undergo complex changes, and develop into adult workers.



When the first workers are fully developed they take over foraging and care of the brood, the queen simply laying eggs. The workers feed the larvae on pollen and nectar which they gather on groups of hairs on the back legs, the 'pollen baskets'. When the colony reaches its peak, males and new queens are produced. Males develop from unfertilised eggs and appear in summer, flying in search of new. Shortly after mating, the male dies and the newly mated queen searches for a place to hibernate. The colony, together with the old queen, gradually dies, though colonies of this species are amongst the longest-lived of British bees, persisting until October. The newly mated queens emerge the following spring, to establish new colonies.



From a painting by Val Littlewood

Many British bumblebee species have undergone a worrying decline, largely as a result of changes in agricultural practices leading to a loss of open habitats and important food plants. The scientific name *pasuorum* is derived from the Latin *pasuum*, meaning of the pastures. Agricultural changes, such as the widespread switch from hay meadows to silage production have greatly affected the Common Carder Bee. Silage is made from grass treated with fertilisers and cut regularly through the year; grasses treated in this way are poor in flowers needed by bees. This bee is also at risk from mowing and ploughing due to its surface-nesting habits. The use of insecticides on food species of plants adds to the bee's woes.



The colour of the *B. pasuorum* is variable with two distinct forms; to the south, bees have a darker abdomen, while in Scotland they are lighter, with fewer back hairs. The distribution seems to be spreading northwards, Orkney having been colonised in the last 20 years.

One of Lincolnshire's rare wildflowers, the Red Hemp-nettle, *Galeopsis angustifolia*, which has suffered serious decline through the 20th century, is most often pollinated by the Common Carder Bee. The survival of this flower may be dependent on a healthy bee population.

