



R. Williams

Shrill carder bee - *Bombus sylvarum*

The shrill carder bee is one of around 17 species of bumblebee in the UK and is also one of nine Biodiversity Action Plan bees in Kent. Its overall colour is a greenish-grey, with a single wide band of black hairs across its thorax (between the wing bases) and two dark bands on the abdomen (the section behind its wing bases), with an orange tail. The name of the bee comes from the high-pitched buzz it makes as it flies around.

The queen shrill carder bee emerges from hibernation in spring, and in common with other carder bees, begins to make her nest from fragments of grass stems and moss, on the surface or slightly below ground. Old mice or voles nests are sometimes used as the foundation for the nest. She rears a few workers in some wax cells within the nest, and these workers then rear more young on pollen and nectar. Eventually, new queens and male bees are produced, and the old queen, males and workers die in the autumn, leaving the new queens to hibernate and make nests next year.

The habitats preferred by the shrill carder bee are extensive flower rich areas, particularly those containing plants with long flower tubes such as

vetches, red clover, dead-nettles and red bartsia. A wide variety of plant species, flowering at different times, is needed to provide the bee with food supplies from April until September.

To support viable metapopulations, the shrill carder bee requires very extensive areas of suitable foraging habitat, in the order of 10 to 12 square kilometres. The loss of the once widespread extensive flower rich areas from Britain means that the shrill carder bee, having once been widespread and common in southern England, is now restricted to a few population centres. These are in the Somerset Levels, Salisbury Plain Training Area and in parts of south Essex and north Kent, including some flower rich brownfield sites. Classified in 1991 as Nationally Scarce in Great Britain, the shrill carder bee has undergone a serious decline in recent years, and some consider it now to be Endangered in the UK. It is a UK Biodiversity Action Plan priority species.

Within Kent, the species has been recorded in the past from a variety of locations throughout the county, such as Lydd-on-Sea, Deal, Stodmarsh, Appledore and East Malling. However, in recent years the species has only been recorded from north west Kent in the area of the Thames



estuary, such as Sheppey, Grain and the Swale. In 2003, a male shrill carder bee was recorded near Groombridge (west of Tunbridge Wells). This highlights the fact that queens may disperse widely and that if sufficient foraging habitats are created, there is a chance that the decline this insect is still experiencing could be reversed. In the Kent Red Data Book the shrill carder bee is considered to be vulnerable.

The most immediate threats to the continuing survival of the shrill carder bee are developments causing loss of the extensive areas flower rich foraging habitat that it requires, since the major population centers of Kent, as well as Essex, are in the Thames corridor that is being targeted for development. Although this area includes many SSSIs (Sites of Special Scientific Interest) and other statutory designations that offer some protection, they have mainly been designated for their waterbird interest, and as such largely cover the mudflats and lower saltmarsh, excluding much of the higher, drier ground needed by the shrill carder bee. An exception to this is the habitat provided by the grass-covered flood defence embankments along the North Kent coast. Here, the Environment Agency is experimenting in places with clover re-seeding and improved mowing methods to enhance shrill carder bee habitat. Targeted action is also on going in Romney Marsh for the large garden bumble bee (*Bombus ruderatus*) and the 'humble bumble' bee (*Bombus humilis*), two other BAP bees that have been recorded recently in Kent.

FURTHER INFORMATION:

UK Biodiversity Action Plan:

www.ukbap.org.uk/ukplans.aspx?10=156

Environment Agency: www.environment-agency.gov.uk

English Nature: www.english-nature.org.uk

Kent Wildlife Trust: www.kentwildlife.org.uk

Kent Biodiversity Action Plan: www.kentbap.org.uk

The Kent Red Data Book, available from Kent County Council: www.kent.gov.uk/biodiversity

Farming and Wildlife Advisory Group:

www.fwag.org.uk

Buglife -The Invertebrate Conservation Trust:

www.buglife.org.uk

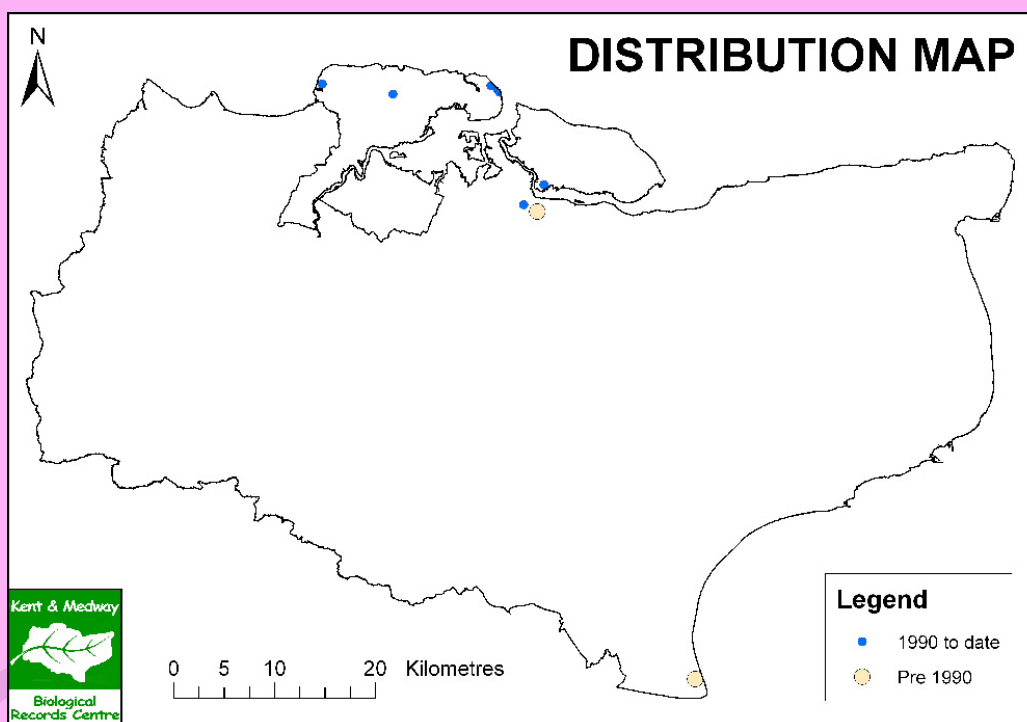
Kent Landscape Information System:

www.kent.gov.uk/klis

Kent and Medway Biological Record Centre:

www.kmbrc.org.uk

Grant aid is now available to landowners under agri-environment schemes for establishing nectar-rich field margins and managing wildflower meadows. It is hoped that by informing and encouraging people to create habitat and plant flowers suitable for this and other species, the shrill carder bee will recover and start to return to many of the areas in which it once foraged.



Data courtesy of Geoff Allen (Kent Field Club)