

Shrill carder bee (*Bombus sylvarum*)

Brown-banded carder bee (*Bombus humilis*)



Left: Shrill carder bee (*Bombus sylvarum*)



Right: Brown-banded carder bee (*Bombus humilis*)

The Shrill carder bee has a single black band on its thorax, and two dark bands across its body with a pale orange tail. The Brown-banded carder bee is a tawny coloured bee with a brown band on the top of the body. Both of these bumblebee species were once widespread in the early part of the 20th century, they rapidly declined in the 1960s and due to the extent of their declines they are both Species of Principal Importance.

Life cycle

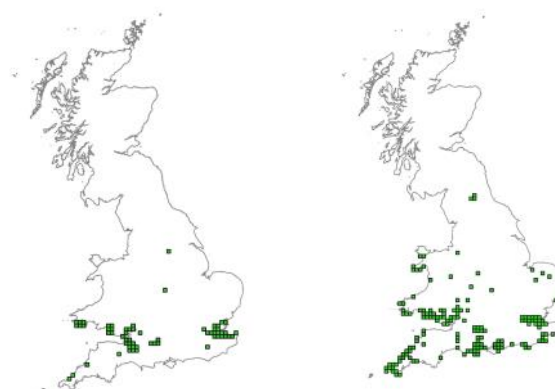
Both species have similar life cycles. In May the queens emerge from hibernation and build new nests. From July to September males can be seen in flight and at the end of their cycle the queens will hibernate from October to April.

Reasons for decline

A huge reduction in the area of wildflower-rich grasslands through agricultural intensification, along with loss of field margins and set-aside has been the main cause of decline in these species. There were once large areas of wildflower-rich unimproved habitat, however these habitats are now small, isolated from each other and unfortunately are still

being lost. Other issues that threaten wildflower-rich habitats for these species include scrub encroachment and excessive disturbance as a result of vegetation clearance, new grass-cutting and grazing regimes, drainage, forestry and development.

Distribution maps



Shrill carder bee (*Bombus sylvarum*) Brown-banded carder bee (*Bombus humilis*)
(Post-2000 records - the information used here was sourced through the NBN Gateway. Contains OS data © Crown Copyright 2016)

The Shrill carder bee is now restricted to small areas of the South and East of England and in Wales. The Brown-banded carder bee has been lost from many inland sites but it is still quite common on the coast of southern England and South Wales and on inland chalk grasslands areas, notably Salisbury Plain.

Habitat

These two species need large areas of fairly tall, open flower-rich grasslands with a variety of plant species, particularly long-tubed flowers from the Pea (Fabaceae), Figwort (Scrophulariaceae), Broomrape (Orobanchaceae) and Mint (Lamiaceae) plant families. Both species need large areas of flowers, however whereas the Shril carder bee needs continuous areas, the Brown-banded carder bee uses smaller patches more widely distributed across the landscape. Both species nest on the surface or just below.

Habitat management

- **Remove or reduce stocking levels** on grasslands between 15 April and 1 September to encourage flowering. Stands of knapweed, burdock or thistle still flowering should be protected to provide food for queens.
- **Plan grassland cutting regimes** to ensure flowers are available through the year. If cutting between April and March ideally cut areas in rotation to ensure some flowers remain, and ideally leave some areas uncut until September.
- **Nectar flower mixes** should contain at least four pollen and nectar rich plants ideally including Red clover. Other useful species are bird's-foot trefoils, Black horehound, Red bartsia, Lucerne and Knapweed. It is important that these mixes are combined with other non-cropped land and field corners to provide spring foraging for queens.
- **Sow nectar mixes in strips** or blocks of 0.5ha, with at least one block every 20ha. Encourage late flowering by cutting half of the sown area at the end of May then the whole area to 10cm between 15 September and 31 October. Remove the cuttings.
- **Encourage brambles and Black horehound** adjacent to flower-rich habitat to provide late season pollen and nectar provisions.
- **Create grassy areas** at the edges of scrubby patches to provide potential nesting sites. Nesting areas

should be created within a kilometre of flower-rich sites, ideally on south facing slopes with a sunny aspect and with a mix of habitats present. Cut these areas no more than bi-annually or graze very lightly to allow a thatch, or litter and moss layers to develop.

Countryside Stewardship

- BE3 Management of hedgerows
- GS6/7/8 (OT2) Maintenance/restoration/creation of species-rich grassland
- GS2/GS 5/OT1 Permanent grassland with very low inputs/organic land management grasslands
- GS17 Lenient Grazing supplement
- GS4/OP4 Legume and herb-rich swards
- GS1 Take field corners out of management
- AB1 Nectar flower mixture
- AB8/AB16 Flower-rich margins and plots/autumn sown bumblebird mix
- AB10 harvested cereal headland
- SW1/SW2/SW3 Buffer and Grass strip
- AB11 Cultivated areas for arable plants
- WT1/WT2 Buffering of in-field ponds and ditches

The **'Wild Pollinator and Farm Wildlife Package'** has been designed to help address the declines in our wild insect pollinators. It includes both in-field options, such as flower-rich margins and plots, and non-farmed habitat options such as management of hedgerows. In combination they can provide the key life cycle requirements of our native insect pollinators.

References

This sheet can be accessed on the web at www.buglife.org.uk. The Bumblebee Conservation Trust has detailed factsheets on why and how different management options can be used to create beneficial habitats for bumblebees. These are downloadable from www.bumblebeeconservation.org - just follow the links to 'Farming and land management'.

Bees, Wasps & Ants Recording Society www.bwars.com Aculeate Information Sheets

Bumblebees, Bombus species, associated with open grasslands - Hymettus Ltd 2006.