

# Large garden bumblebee

(*Bombus ruderatus*)



Large garden bumblebee (*Bombus ruderatus*) queen © Steven Falk



Habitat at Kenfig National Nature Reserve, Bridgend © Steven Falk

The Large garden bumblebee (*Bombus ruderatus*) is a large, long-tongued bumblebee which forages on a wide range of plant species. Queens, workers and males have a yellow collar, yellow midriff band and a white tail, although completely black individuals are not unusual. It can sometimes be very difficult to distinguish the Large garden bumblebee from the closely related Garden bumblebee (*Bombus hortorum*), which is a common species. The Large garden bumblebee has experienced a severe decline in its distribution and is listed under Section 7 of the Environment (Wales) Act 2016 as a Species of Principle Importance in Wales.

## Life cycle

It has a short life-cycle, as queens usually emerge from hibernation in May and colonies die off by August. After establishing a nest, the hibernated queen first produces workers, which can be seen flying from June to August. Nesting typically occurs underground in old mammal burrows. Males and new queens are then produced, and can be seen from July to August. New summer queens, having left the nest and mated, will hibernate from October to April.

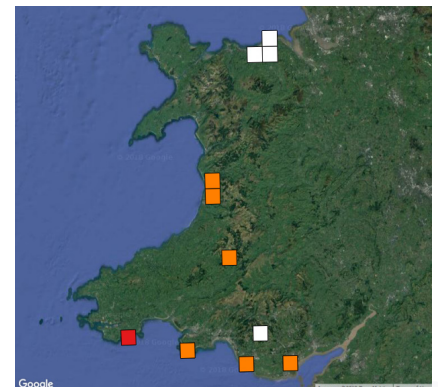
## Distribution map

Formerly widespread across Wales and southern England, this bumblebee has suffered a severe decline in its distribution and has been lost from an estimated 80% of its known localities over the last 100 years. In the UK, it is now largely found in the Fens, East Midlands and Cambridgeshire.

It has been seemingly lost from much of Wales, with just one modern record from Lydstep Point, Pembrokeshire. Difficulties in identification mean that it is potentially under-recorded in Wales.

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(Red squares show distribution between 1990 and 2017; orange squares between 1950 and 1989; white squares between 1800 and 1949. The most recent (top most) dates overlay the earlier dates (lower ones). The information used here was sourced through the NBN Atlas and Local Environmental Records Centres Wales from the following sources: Bees, Wasps and Ants Recording Society (BWARS), Biodiversity Information Service for Powys and Brecon Beacons National Park (BIS), Bumblebee Conservation Trust (BBCT), National Trust, Natural Resources Wales, North Wales Environmental Information Service (Cofnod), South East Wales Biodiversity Records Centre (SEWBRc), and West Wales Biodiversity Information Centre (WWBIC). NBN Atlas occurrence download at <http://nbnatlas.org>. Accessed 01 March 2018.)

## Habitat

In Wales, it is typically found in coastal grassland and cliff-tops (e.g. Lydstep Point, Pembrokeshire), agricultural settings (e.g. Bow Street, Ceredigion and Rhandirmwyn, Carmarthenshire), and coastal dunes (e.g. Ynyslas National Nature Reserve, Ceredigion) where legumes (particularly clovers) are abundant.

Other habitats include flood banks, ditch margins, brownfield sites, and occasionally woodland and urban settings. It is vital that pollen and nectar sources are available within foraging distance of nests from April to September. It needs disused burrows of small mammals for nesting sites; these are also believed to be where the queens hibernate over winter. This bumblebee may particularly benefit from agri-environment schemes such as the planting of wildflower field margins and red clover leys.

## Reasons for decline

Declines have been largely attributed to the loss of large expanses of unimproved open habitat to agricultural intensification, development and commercial forestry. Scrub encroachment and a loss of forage areas may have made many sites unsuitable for this species. The decline of traditional land use with its unimproved soils, flower-rich habitat and hedge banks, will have undoubtedly had an impact on this and many other bumblebees.

## Habitat management

- **Sow pollen and nectar flower mixes:** Mixes should be flower-rich and contain at least three pollen and nectar rich plants favoured by this species, particularly Red clover (*Trifolium pratense*). Other species that should be present are Common toadflax (*Linaria vulgaris*), woundworts and Teasel (*Dipsacus fullonum*), as well as thistles and knapweeds which are favoured by males, and White dead-nettle (*Lamium album*) which is particularly important for hibernated queens;
- **Sow mixes in strips or blocks** of 0.5ha, with at least one block every 20ha and stimulate late flowering by cutting half of the sown area to 20cm in June then the whole area to 10cm between 15 September and 31 October, and remove the cuttings;
- **Plant late spring blossoming shrubs** (e.g. late willow and crab apple): These are favoured by queens and in wet grassland and ditches encourage Yellow flag iris (*Iris pseudacorus*), Comfrey (*Symphytum officinale*) and Marsh woundwort (*Stachys palustris*);
- **Cut annually and remove cuttings:** If pollen and nectar sources are abundant, cutting should preferably occur September to March and cuttings should be removed.

If pollen and nectar sources are limited, cutting areas of grassland during April to September should occur on a small scale and in sections or on rotation. This type of cutting will ensure that suitable plants are always available for bumblebees;

- **Stock control:** Remove stock from a site between 15th April and 1st September. Stands of knapweed, burdock or thistle still flowering should be protected to provide food for queens; and
- **Maintain areas of rough tussocky grass:** These will provide the moss and dead grass used as nesting material, and attract mice and voles to create nesting sites.

## Further information

This sheet can be accessed on the web at [www.buglife.org.uk](http://www.buglife.org.uk)

This bee is included in Buglife Cymru's Wales Threatened Bees report which can be downloaded from [www.buglife.org.uk/wales-threatened-bee-report](http://www.buglife.org.uk/wales-threatened-bee-report)

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](http://www.bumblebeeconservation.org)

Bees, Wasps & Ants Recording Society [www.bwars.com](http://www.bwars.com) Aculeate Information Sheets.

**Hymettus 2006: Bumblebees associated with open grasslands.**