



Tiree's great yellow bumblebee project

Facts about the great yellow bumblebee

LATIN NAME • *Bombus distinguendus*

GAELIC NAME • *Seillean mòr buidhe*

✧ HOW RARE ARE THEY?

It's one of the UK's rarest bumblebees

✧ WHERE ARE THEY FOUND?

Now only found in the Scottish
islands and the northern mainland
coast of Scotland

✧ WHAT DO THEY NEED TO SURVIVE?

- ✧ a suitable nest site
- ✧ a continuous supply of flowers from
June to September, especially
kidney vetch, red clover and knapweed
- ✧ a suitable place for queens
to hibernate



The great yellow bumblebee

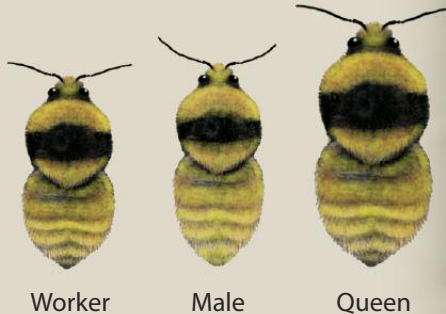
The great yellow bumblebee (GYBB) can be identified by its yellow or yellowish-brown colouring with a distinct band of black hairs between the wings.

Once widespread throughout the UK, the principle causes of decline are the loss of flower-rich meadows and the intensification of farming and grazing practices. As a result, the current distribution of the great yellow bumblebee reflects the distribution of flower-rich machair and locations where traditional crofting practices are still maintained. With its expanses of machair habitat, wildlife-friendly land management and lack of competition from non-native insects, the Isle of Tiree is home to one of the largest populations of great yellow bumblebees in the UK, making it an important refuge nationally.

Queen – slightly larger and often a more golden yellow than workers and males

Worker – slightly smaller and usually carrying pollen in the pollen baskets on its legs

Male – similar to worker but slightly elongated in shape, with slightly longer antennae and no pollen baskets





Lifecycle

The great yellow bumblebee is a late emerging species, with queens usually seen from mid-June. Queens must feed on nectar to give them the energy to begin searching for a suitable nest site, and collect pollen to provide for their developing young.

Great yellow queens will use old mouse burrows and other holes under machair grass tussocks as nest sites.

Great yellow queens produce small colonies compared to other bumblebees, with only 20-50 workers. Workers, seen from mid-July onwards, collect nectar and pollen to support the nest. The queen will switch from producing workers to rearing males and daughter queens in late July. Males emerge from the nest in early August and daughter queens are seen from mid-August.

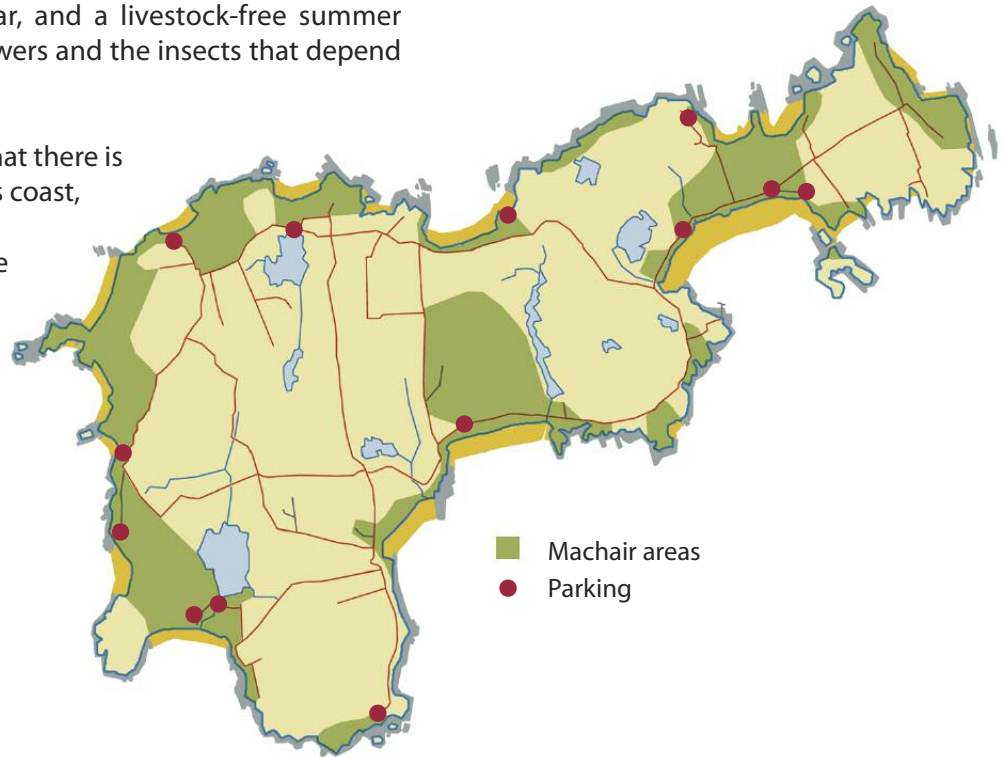
After mating, daughter queens find suitable hibernation sites in burrows in soil or sand dunes. They will not emerge again until June the following year.

By late September the old queen, workers and male great yellow bumblebees have died.

Machair

Machair is a Gaelic word for the herb-rich land lying inland of coastal fore-dunes. It is the result of centuries of wind-blown sand, seaweed application and grazing by livestock. Winter grazing by cattle in particular, and a livestock-free summer keeps it at its best for wild flowers and the insects that depend upon them.

Although the map indicates that there is machair around most of Tiree's coast, it is only the areas that are grazed in winter and stock-free in summer that have the best flowers for great yellow bumblebees. The best areas can change from year to year depending on grazing regimes.



Key wild flowers known to be used by great yellow bumblebees



kidney vetch

loosely erect, up to 25cm tall; flower-head 2-4cm across



red clover

mostly erect, up to 30cm tall; flower-head 2-4cm across

Dimensions from 'Wild Flowers of Coll and Tiree', John Bowler, Emma Grant, Charlie Self and Simon Wellock. Cinquefoil Publishing, 2008.



knapweed

erect, 30-100cm tall; flower-head 2-4cm across



ragwort

erect, up to 100cm tall; individual flowers 1½-2½cm across

Bumblebees of Tíree



Common carder bee
Seilleán buidhe



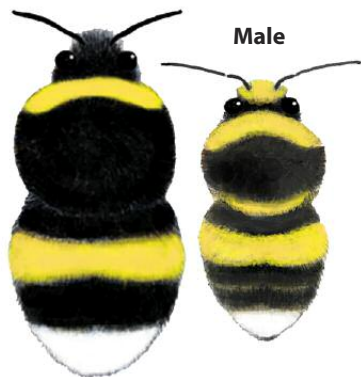
Moss carder bee
Seilleán ruadh



Great yellow bumblebee
Seilleán mòr buidhe



Red-shanked carder bee
Seilleán dubh



Male

White-tailed bumblebee
Seilleán an tòine ghile



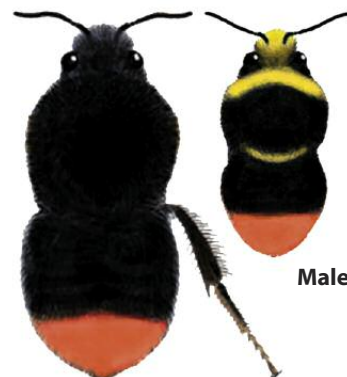
long
face

Garden bumblebee
Seilleán an tòine ghile



round
face

Heath bumblebee
Seilleán an tòine ghile



Male

Red-tailed bumblebee
Seilleán an tòine ruaidh

The Project: Flowering habitat and recording of great yellow bumblebees on Tiree

The distribution of the great yellow bumblebee has declined by 80% in the last century making it one of the UK's rarest bumblebees. Tiree is home to one of the largest GYBB populations in the UK, but even here, the species appears to be struggling. Early food supply is thought to be a key limiting resource for queen bees when they emerge from hibernation in June to establish new colonies. Many queens seem to favour patches of kidney vetch flowers in June, and require additional flowering plants to sustain them throughout the summer.

RSPB Scotland is the lead organisation for the GYBB in the UK Biodiversity Action Plan, and has launched a project that seeks to:

- enhance early forage provision through sowing locally sourced kidney vetch seeds;
- enhance forage provision in summer through sowing other suitable flower seeds;
- monitor the numbers of GYBB seen throughout the summer; and
- involve the Tiree community in its delivery.

HOW TO GET INVOLVED

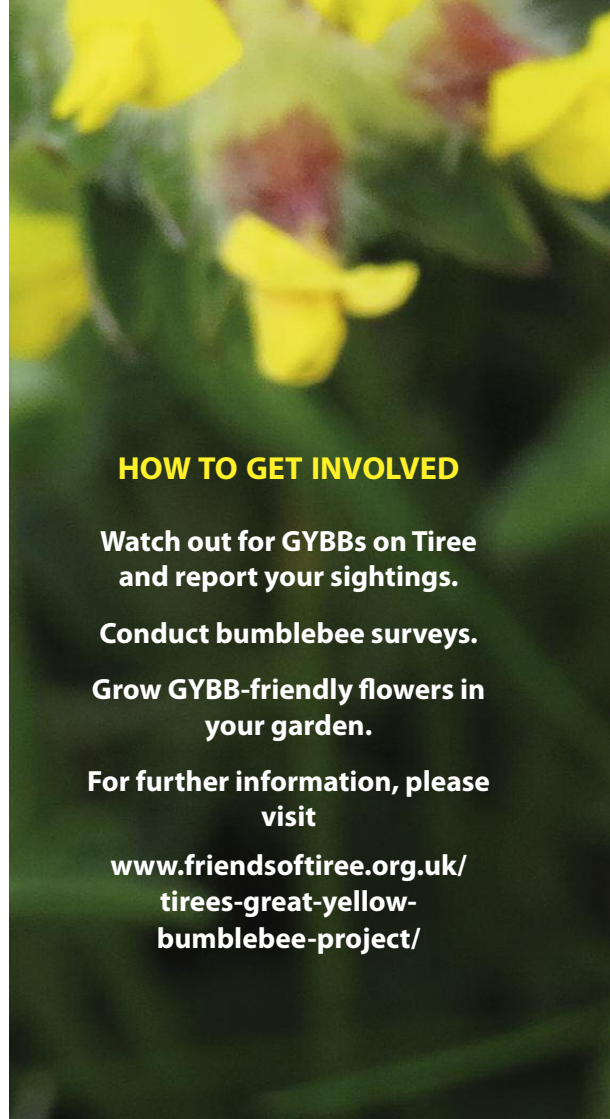
Watch out for GYBBs on Tiree and report your sightings.

Conduct bumblebee surveys.

Grow GYBB-friendly flowers in your garden.

For further information, please visit

**[www.friendsoftiree.org.uk/
tirees-great-yellow-
bumblebee-project/](http://www.friendsoftiree.org.uk/tirees-great-yellow-bumblebee-project/)**



Getting involved

We need your help to do the best we can for the survival of Tiree's special population of great yellow bumblebees. Here are some options. Please contact Janet Bowler for further details:

Telephone | 01879 220748 - email | gybb@friendsoftiree.org.uk

• Gardening for GYBBs – The Tiree Bumblebee Garden Network

Our aim is to create a network of patches of GYBB 'super-food' throughout the island so that there is a good source of nectar and pollen within reach of GYBB nests throughout their active period (June-September). Gardens are a great opportunity to grow flowers that provide GYBBs with more food than they might find in wild flowers. We can provide suitable plant seeds, materials and equipment, and instructions for cultivation.

• Bumblebee Surveys

Bumblebee surveys are basically a 1-hour stroll through flower-rich machair in beautiful summer weather. What's not to like? We use a particular method for our bumblebee surveys – all bumblebee species are recorded, along with the abundance of key flowering plants, and additional information is required when GYBBs are encountered. We can provide training, instructions, identification guides and recording sheets, and we will seek landowner permission for the area you'd like to survey.



- **Keep an eye out for GYBBs**

Let us know if you see any GYBBs in your garden, on the croft, or when out on walks. You can record your sightings on this form, or simply get in touch. A photograph would help us to confirm its identity.

Date	Place / Grid Reference	Number of GYBBs	Type of flower(s) the bees were feeding on

ACKNOWLEDGEMENTS

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Tony Davison, Christine Hall,
Amy Millard, James Phillips,
David Wood, Paul Wood.

Bumblebee illustrations
courtesy of the Bumblebee
Conservation Trust.



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Web | www.friendsoftiree.org.uk/tirees-great-yellow-bumblebee-project/