

Female Fringe-horned Mason Bee



©Paul Brock

Bugle



Species fact-sheet: Fringe-horned Mason Bee

The Fringe-horned Mason Bee (*Osmia pilicornis*) is a rare bee associated with open-structured woodland. It used to occur over much of southern England and into parts of South Wales, but has declined dramatically in recent decades and has only been recorded recently from a few sites in South-east England. Changes in woodland management practices are thought to be the main cause of its decline, resulting in a lack of nesting opportunities and a lack of suitable plants to forage on.

Habitat and life cycle

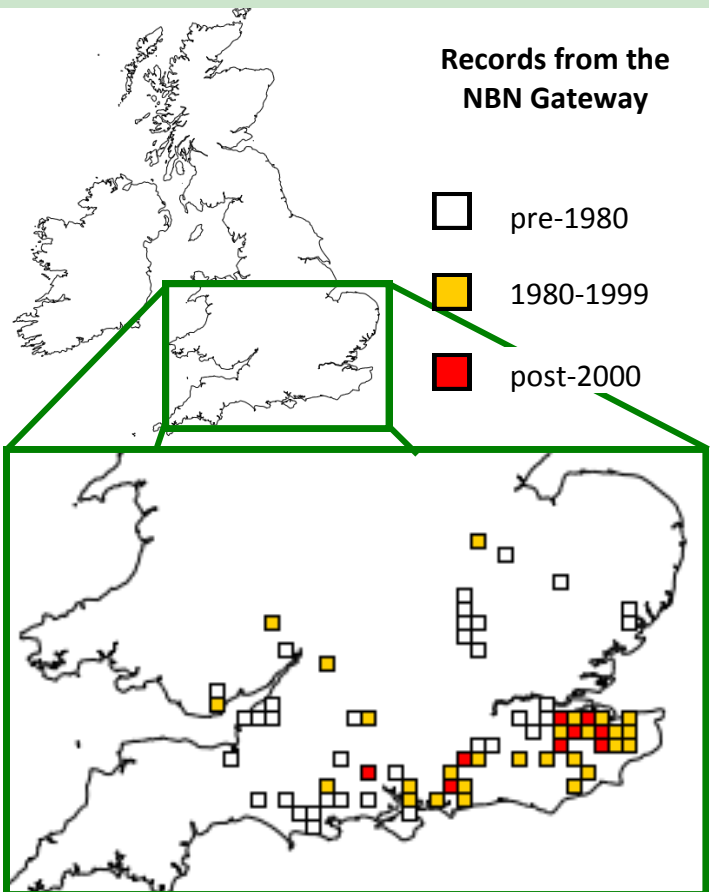
The bee emerges in the spring and flies from April to June. It inhabits the warm, open areas of woodland, such as rides and clearings. It is most commonly associated with broadleaved woodland where regular coppicing occurs, but it also occurs in clear-fell areas of coniferous woodland.

The females collect pollen primarily from Bugle (*Ajuga reptans*) and Ground Ivy (*Glechoma hederaceae*), and both the males and females nectar on a range of flowers, such as violets and willows.

Nests are constructed in existing burrows or holes in dead wood, such as old coppice stools. The females cut off pieces of leaves, chew them up and then use this pulp to construct individual cells in their nest. Each cell is provisioned with nectar and pollen and contains one egg. The larva hatches out, consumes the supplies and then pupates, overwintering as an adult.



Suitable habitat



Identification

There are 12 species of mason bee (*Osmia*) occurring in the UK. The Fringe-horned Mason Bee is 8-12mm long. The females are largely covered in striking reddish-orange hairs, with the rest of the hairs black and a black body underneath. They are likely to be found on flowers, while the males usually fly low and rapidly between patches of flowers. The males are silvery in colour and have a row of hairs along their antennae, which give the species its name.

The habitat requirements of the Fringe-horned Mason Bee are similar to those of other open-structured woodland specialists such as the Pearl-bordered Fritillary butterfly (*Boloria euphrosyne*). Therefore, managing habitat specifically for the bee will have benefits for other species, many of which are also declining and highly threatened (and *vice versa*).

Habitat management advice

The main aim is to have woodland habitat in cyclical management to provide spring flowers year on year. Sunny, flower-rich clearings containing dead wood would allow the bees to forage easily and find a suitable nesting site. Such clearings can be achieved through coppicing of adjacent woodland plots or regular clear-felling and replanting of areas of high forest.

It is important to ensure a continuity of management, with the clearings connected by broad rides. The bees readily fly along these sunny rides between patches of flowers and these “flyways” are a key component of their habitat. Scalloping of rides is a good way to create warmer areas, which would be of benefit to the bee and other species.

Rides should be cut on a rotational basis, to encourage the growth of flowering plants and to ensure their continuous availability. It is better to remove the cuttings, which will decrease the fertility of the soil and help to prevent the spread of more vigorous species.

Over-grazing/browsing (e.g. by deer) could result in a lack of flowers for the bees to forage on and it may therefore be necessary to control their populations.

Grants may be available from the Forestry Commission for woodland management.



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Pearl-bordered Fritillary



Sweet Chestnut coppice stool



Bugle



Ground Ivy



Common Dog-violet



Typical habitat (Fore Wood RSPB reserve)

Overview of habitat requirements

- * Continuous supply of connected open woodland habitat (e.g. rides, clearings)
- * Dead wood in open areas (e.g. stumps, branches)
- * Good number of forage plants (e.g. Bugle, Ground Ivy)
- * The above resources should be within fairly close proximity of each other, as the Fringe-horned Mason Bee will not travel much more than 500m from its nest to a patch of flowers

For further information, please contact Rosie Earwaker:

rosie.earwaker@rspb.org.uk

RSPB HQ
The Lodge
Potton Road
Sandy
Bedfordshire
SG19 2DL



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For further resources on bees, see:

www.bwars.com

www.hymettus.org.uk

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