Scarce bees in Tower Hamlets

Brown-banded Carder Bee (*Bombus humilis*)

Photo by John Archer

This is a nationally scarce bumblebee and a Species of Principal Importance in England. The bee has suffered tremendous declines in its abundance and distribution over the last 100 years due to intensification of agriculture and urban expansion, but strongholds remain in the Thames Gateway. There are definite records in Tower Hamlets from Isle of Dogs and Tower Hamlets Cemetery Park, with unconfirmed records from Mile End Park and East India Dock Basin. The bee is found on the south side of the Thames opposite Tower Hamlets in Greenwich Park, Blackheath and the Greenwich Peninsula, and throughout the Lee Valley.

This bee is active from May to September and requires legume-rich habitats, feeding predominantly on clovers, vetches, Birdsfoot Trefoil, Kidney Vetch and Everlasting Pea, as well as labiates including Black Horehound and deadnettles. Scabious, knapweeds, thistles, Cats-ear and Viper's Bugloss are also visited.

Nesting occurs on the ground under tussocks of tall grass in undisturbed grassy habitats. This is a eusocial species, forming a colony of up to 50 workers. The workers will disperse over several hundred metres to forage, so each colony requires a substantial area of suitable habitat to occupy. Large expanses of favourable habitat (up to 10km^2) are required to support viable populations of this bee.

Reduction in mowing and conversion of more grass areas to flower rich meadows will support this species. Flower rich corridors are particularly important for this bee to allow dispersal and connectivity in-between patchily distributed breeding sites.

Records in the borough may pertain to individual bees dispersing from other nearby breeding sites in the Lea Valley and further down the Thames, as regular breeding in the borough is perhaps unlikely. Tower Hamlets Cemetery Park, Mile End Park and Mudchute have the greatest potential to support this species in the borough if favourable habitat can be extended through planting and sympathetic management. Joint action with neighbouring boroughs and landowners with suitable habitat (Lee Valley Park, Olympic Park, the Greenwich sites, Newham Greenway etc.) would help to preserve the species locally.

Red-girdled Mining Bee (*Andrena labiata*)

Photo by Mark Patterson

This is a small solitary bee, dark in colour, with a light pile of silvery hair covering its thorax and a bright red band across the upper abdomen. It has a widespread distribution across southern and eastern England, but is generally scarce and has greatly declined since the 1950s. This species is active from late March to late June.

The bee favours unimproved grasslands, woodland edge, brownfield sites, allotments and gardens. Its preferred flowers are Germander Speedwell (with which it is strongly associated), forget-me-nots and stitchworts, but will also visit buttercups, legumes, crucifers and occasionally flowering shrubs. This bee requires sparsely-vegetated, light sandy soils to excavate its burrows – a habitat often found in abundance on urban brownfield sites.

The bee is present in Tower Hamlets Cemetery Park, where the practice of maintaining sparsely vegetated areas of soil by mulching with sandy substrate helps maintain favourable nesting sites. This management also helps maintain favourable patches of forage plants. Maintaining sunny woodland rides and glades rich in Greater Stitchwort will also support this species.

Other practices which can assist this bee include the delayed or reduced mowing of lawns in spring to allow Germander Speedwell and other lawn flowers a chance to bloom. Allotment holders and gardeners can help by maintaining till-free areas and bare patches in lawns where the bees can nest.

Black Mining Bee (*Andrena pilipes*)

Photo by Penny Frith

This large, jet black solitary bee is among the most widespread bees globally, with a distribution covering most of continental Europe, North Africa and east into Russia. On the Continent it is found in a wide variety of habitats and utilises a wide range of food plants. It has, however, a very restricted range and distribution in the UK, where it is strongly associated with southern coastal areas. There are a scattering of colonies along the Thames Gateway including a population at Mudchute. While in no way globally threatened, its restricted distribution within the UK leaves its population precariously poised and worthy of conservation.

This bee is bivoltane, with two generations produced each year. The spring generation flies from April to late May and is heavily reliant on flowering scrub including hawthorn, cherries and willows as well as spring umbellifers like Alexanders. The later generation flies during July and August and relies heavily on Hogweed, Bramble, Dog Rose and Wild Mustard.

Nesting occurs in soft rock or soil cliffs and embankments. At Mudchute the bee nests in the steep, raised earthen mounds around the site. Nesting aggregations can be very large.

Maintaining flowering scrub and tall flowering herbage supporting its preferred food plants will help this species. Clearance of compartments along the raised banks to maintain sparsely vegetated nesting sites will also aid this species.

This bee is not fussy about its food source or choice of habitat on the continent and it is not understood why it has such a restricted range or flower preference here in the UK.

Clover Blunt-horn Bee (*Melitta leporina*)

Photo by Mark Patterson

This is one of four species of *Melitta* bee found in the UK. All the species in this genus are highly specialised pollinators with a narrowly oligolectic or monolectic habit (utilising only a few species or a single species of flowers for foraging). The Clover Blunt-horn Bee, like all of the UK *Melitta* bees, has a patchy distribution, restricted mostly to the south of the country and is strongly associated with chalk soils. It has been recorded on the Chalk Maze in Scrapyard Meadow at Tower Hamlets Cemetery Park, and is known from brownfield sites in the Thames Gateway where rubble and crushed concrete replicate their preferred calcareous grassland habitat. The species' Greater London strongholds are in the southern part of the region bordering the North Downs, and there are only a handful of records for this species in London north of the River Thames.

They are active from June to August and collect pollen exclusively from legumes, mostly White Clover but also Hare-s-foot Clover, Lucerne, Birdsfoot Trefoil, various vetches and melilots. The males in particular will nectar from a wider range of flowers than the pollen-collecting females, and are known to visit thistles, bramble and Yarrow. At Tower Hamlets Cemetery Park, males were noted to mostly visit Wild Marjoram and Birdsfoot Trefoil. Nesting occurs in burrows excavated in chalk soils.

Maintaining legume rich grasslands especially on chalk substrates will benefit this species. Preserving the chalk maze at Tower Hamlets Cemetery Park is particularly important. Creation of chalk grassland habitats on green roofs could also help.

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