

Statement

The Humble Bumble

a long-tongued bumblebee



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Introduction

The 'humble bumble' (*Bombus humilis*), together with about half of the British species of bumblebee, has suffered a drastic decline in range in recent decades. Its conservation is addressed nationally by a UK Species Action Plan. The humble bumble is somewhat smaller than the common garden bumblebee (*B. terrestris*), and has a fairly uniform, golden colour.

In London as a whole the species is rare, though it remains widespread in suitable habitat along the East Thames Corridor, especially on the Essex side. The humble bumble has been recorded from the London Boroughs of Barking and Dagenham, Bexley, Newham, Tower Hamlets and Havering and most records are from flower-rich brownfield land near the tidal Thames. As the species is absent from some apparently suitable sites further inland, coastal influence is likely to be a key element of its habitat requirements.

Bombus humilis has no universally-accepted English name. One translation of its specific name from the Latin is 'humble bumble', hence the name we use in this Statement for the sake of convenience. The bee is a member of two groups of species known as long-tongued bumblebees and carder bees.

Distribution and Requirements

The decline in the humble bumble's range throughout the 20th century, where it had disappeared from most of its northern and inland sites by the early 1960s, has been attributed to habitat loss through the development of modern agricultural practice. The mechanisation of hay-making and, later, the shift to silage making, has resulted in a restricted distribution, now concentrated mainly on the East Thames Corridor, south-western coasts of England and southern coast of Wales.

Both nationally and in the London area, the changes in population and distribution of the bumblebee have been like a 'miner's canary', reflecting significant rural and urban environmental changes over the last half-century.

The humble bumble is associated with flower-rich habitats, but uses a surprisingly restricted range of species for foraging, notably certain perennial, deep-rooted members of the pea and dead-nettle families. The right combination of conditions is usually found in London's wasteland sites, otherwise known as 'post-industrial wasteland'. These sites are usually unmanaged and are often characterised by their sandy substrates, open conditions and low nutrient status.

This bumblebee appears to be able to survive on long, narrow mosaics of habitat better than other threatened bumblebees. However, the bee's nesting density is low so it needs a large area of land to support a viable colony. Narrow habitat-mosaics are unfortunately particularly vulnerable to fragmentation.

Conservation Considerations

In East London, the decline of the humble bumble is overwhelmingly the result of wasteland loss to development. The continuing pressures to develop on such sites constitute by far the greatest threat to the species in the London area – particularly at its Thames-side locations.

Habitat management can be of benefit in some cases, particularly on sites whose clay substrate and higher nutrient status encourages plant growth. In these areas, phased removal of vegetation on a long rotation, or disturbance management, is essential to prevent the development of a sward dominated by false oat-grass, which crowds out the bumblebee's wildflower foraging resources. Regular or frequent cutting, however, can be catastrophic.

Future Actions

There are five broad actions that could benefit the humble bumble. Most of these are inter-dependent.

Survey, monitoring and research Survey work is required to assess the bee's distribution and population more accurately. This should be targeted at those sites under greatest threat of development. Monitoring is also required on known sites, to answer questions about natural fluctuations in the species' populations and their response to environmental variables other than development and direct disturbance. Also, the absence of the species from some apparently suitable habitat raises questions about its nesting requirements, foraging behaviour, minimum viable area and range. Answers to these questions will help to assess whether a population could survive if a site were to be partially developed.

Raising awareness of wasteland land biodiversity The humble bumble has no legal protection, though its status as a UK Biodiversity Action Plan species is an important consideration. As the humble bumble is part and parcel of issues surrounding the conservation of wasteland, linking it to habitat action will strengthen the case for its conservation. As a member of one of the more popular groups of insects, the plight of this bumblebee should be used as a flagship in raising awareness of biodiversity, and social and landscape values of wasteland.

Reviewing the GLA's site evaluations Most of the GLA's ecological sites are acknowledged in Unitary Development Plans (UDPs) through designation as Sites of

Nature Conservation Importance (SINC) or equivalent. The degree of protection of sites in UDPs is, to a large extent, dependent on this status and improved survey data may justify re-evaluating for some sites. Reviews should be prioritised in accordance with the timetable for the review of UDPs themselves.

Protecting wasteland habitat A wasteland site's status as a SINC could help to justify a Section 106 Agreement to manage a site for its nature conservation benefit. This management should be guided by the foraging requirements of the humble bumble where the bee may be present.

Managing more nutrient-rich sites Whilst these, too, may be threatened by development, the risk is that these sites will become so dominated by false oat-grass that they will lose the habitat resources that the humble bumble depends on. As noted above, management would therefore be required.

Further Reading

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Contact

The contact for this Statement is the Greater London Authority

Graham Myers
Strategy Directorate
GLA
Romney House
Marsham St
London SW1P 3PY

Tel 020 7983 4311
Email graham.myers@london.gov.uk
Web www.london.gov.uk