

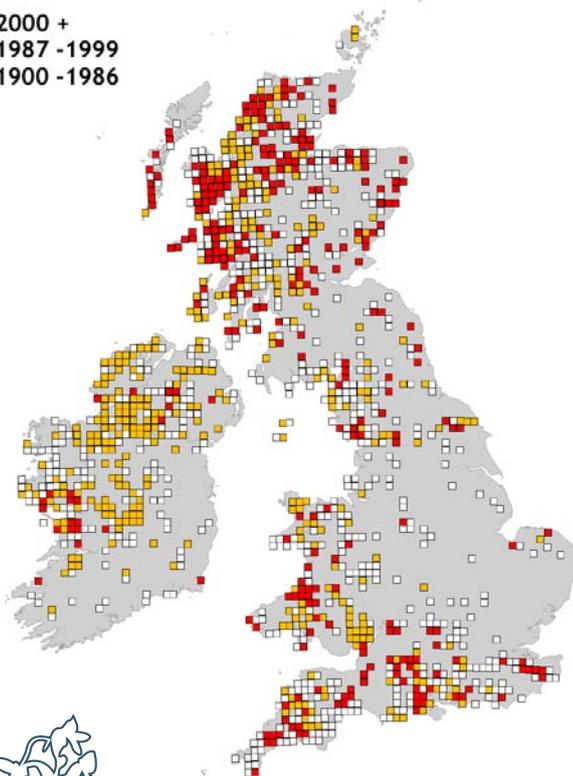
Lesser Butterfly-orchid *Platanthera bifolia*

Lesser butterfly-orchid is a member of the orchid family (*Orchidaceae*). The plant has a single flowering spike with two 5-8 cm shiny blue-green elliptical-oblong blunt leaves. Plants that grow in wetter conditions tend to have more oval leaves. The flower-spikes can be up to 30 cm high with 5-30 white, slight greenish tinged flowers in a narrow cylindrical spike. The flower lip is 6-10 mm long and the flower's spur is 14-20 mm long. The best way to distinguish it from the similar greater butterfly-orchid is by the two pollen sacs (pollinia), which are 2 mm long, vertical, parallel and close together forming an 'II' shape. Greater butterfly-orchid is very similar except that it is larger, the green tinged flowers are bigger with a longer (24-37 mm) spur, and the two pollinia are 3-4 mm long and converge above while being widely spaced at the base in an inverted 'V' shape. Hawk-moth's pollinate lesser butterfly-orchid by hovering in front of the flower and taking nectar from the long spur at the back of each flower. The pollinia are caught on the hawk-moth's proboscis and transferred to other flowers.



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Lesser butterfly-orchid distribution across Britain and Ireland

The data used to create these maps has been provided under licence from the Botanical Society of Britain and Ireland (BSBI) and accessed from the Society's online distribution database.

Lifecycle

Lesser butterfly-orchid is a long-lived tuberous perennial, which flowers from June to July. As with other orchids, young plants will not flower until several years old, as little as three or four in cultivation but there is no information on this in wild plants.

Habitat

This species tolerates a remarkable range of conditions, as does its sibling species greater butterfly-orchid. In most remaining sites in the north, the west and the New Forest it tends to occur in wet acidic bogs, mires and flushes, on damp heathland and in acidic damp grassland such as culm and rhos grassland. Elsewhere, it also occurs in dry neutral to calcareous grassland and in semi- to deep-shade in scrub and woodland.

Distribution

Formerly widespread across much of England, a major decline was already evident by 1930. Overall lesser butterfly-orchid has been lost from about 75% of its recorded range in England. Losses have occurred throughout the range, but especially in the east; east Midlands, Yorkshire and Humber. Lesser butterfly-orchid is much reduced even in its strongholds of Cumbria, Dartmoor & Exmoor and Wessex. Across Wales, lesser butterfly-orchid is widely scattered but the majority of sites are in Cardiganshire. Cae Blaen Dyffryn Nature Reserve in Carmarthenshire hosts a population that in good years can exceed 3000 individuals in a single 9 acre (3.7 ha) field, but the majority of populations are much smaller and this example is the exception rather than the rule. It is also present across Scotland, Northern Ireland and Ireland.

Lesser Butterfly-orchid

Platanthera bifolia

Species fact sheet

Habitat management for lesser butterfly-orchid

Precise management requirements are not known as this plant grows in such a wide variety of habitats. Little research has been undertaken on its preferred management or how to encourage germination and new colony formation. Historical site management should be investigated, and continued if it appears to be maintaining populations at historic levels. Note, however, the number of flowering individuals of lesser butterfly-orchid can vary markedly on an annual basis.

In grassland sites, appropriate habitat management is undoubtedly based on long periods of low-input extensive grazing. Ideally, a period of heavier grazing from late summer (July/August) until December should be undertaken to remove thatch and reduce sward height. This grazing regime can follow a hay cut if appropriate. Avoid grazing in spring as emerging leaves and flower spikes can be easily damaged. The aim in all situations is to provide a level of grazing that allows plants to grow from early spring, flower in May and June and then set seed, but which keeps highly competitive vegetation under control. As is often the case, it is the intensity and timing of grazing that is the most important.

For heathland sites, light grazing with pulses of periodic heavier grazing should be undertaken. Periodic grazing is likely to be more difficult on heathlands, but again the aim should be to maintain open habitats with a mosaic of grass and heather, without allowing the latter to dominate and out-compete the lesser butterfly-orchid.

In woodland sites lesser butterfly-orchid tends to grow along rides and clearings. Management should focus on rotational woodland clearance (following historical site management regimes such as coppicing) around populations of orchids to encourage their expansion. Any ride cuttings (grass and brash) should be cleared into piles set back from the edge of the ride so that thatch does not prevent lesser butterfly-orchid seeds from germinating and developing.

Lesser butterfly-orchid freely produces seed and managing nearby sites suitably may help this uncommon plant to spread. The tiny seeds can disperse widely on the wind but require a specific mycorrhizal fungus to germinate and for early development, without which the seeds are not viable. The habitat requirements for this fungus are not known but it is susceptible to fertiliser and fungicides.

GB Status and rarity

It is classified as 'Vulnerable' in The Vascular Plant Red Data List for Great Britain 2005 because of the magnitude of the decline in its range and area of occupancy.

Reasons for decline

This species can tolerate heavy grazing for a short time but requires stable management and seed production over many years for populations to increase. Many populations have declined slowly over decades. Drainage, eutrophication, and insufficient grazing leading to scrub encroachment and over-shading have all played their part. Agricultural improvement of grasslands including re-seeding and over-seeding of pasture, use of fertilisers and conversion of grassland to arable land use has also affected this species. Lesser butterfly-orchid seedlings rely on a symbiotic fungus for their early development which is very sensitive to fertilisers and fungicides.

Protection under the law

This plant is included as a species "of principal importance for the purpose of conserving biodiversity" under Section 41 (England) of the Natural Environment and Rural Communities Act 2006.

Survey method

Individual plants are easily recognisable and only rarely does this plant occur at very high density. Surveys are usually a census of the entire population by counting flowering spikes in June. In hot years the flowering period can be very short.

◀ Orchid populations in woodland rides and clearings can be encouraged to expand through historical management regimes such as coppicing.



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