

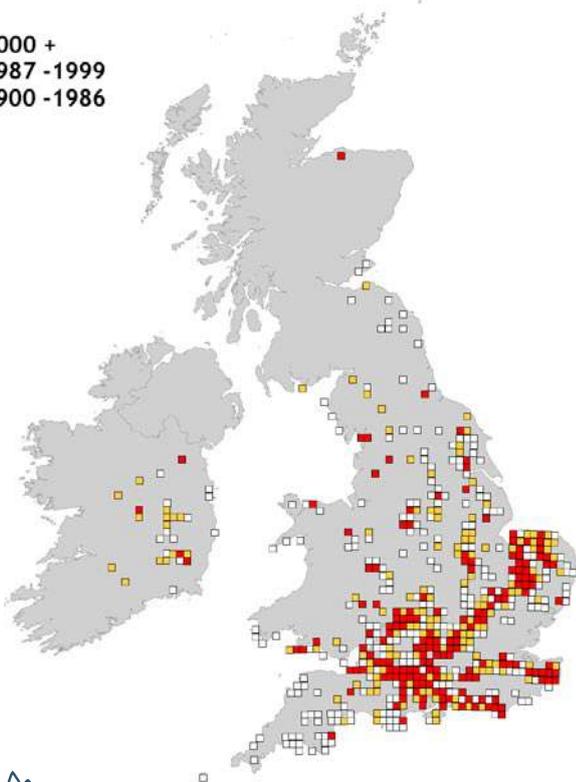
Basil Thyme *Clinopodium acinos*

Basil thyme belongs to the dead-nettle family (*Lamiaceae*). It can grow up to 15 cm, but is usually much smaller and may have a branched and creeping habit with ascending stems in grassland. The square stems are hairy with oval-elliptical leaves that are shallowly-toothed. Whorls of 4-6 violet flowers with white markings on the lower lip grow from the upper leaf axils of each stem. The stalked calyx has 13 veins, is hairy and curved and has a diagnostic swollen 'pouch' at the base, most obvious when it is in fruit. Many members of the dead-nettle family are particularly good for pollinating insects like bees and butterflies and basil thyme probably shares these characteristics providing a good source of nectar.



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Basil Thyme 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

Basil thyme is often an annual, but in grassland frequently a short-lived perennial, flowering between May and September. Seeds require patches of sparsely vegetated or bare ground on which to germinate.

Habitat

Open habitats in dry calcareous grassland, especially around rock outcrops, and also in arable fields where it is now rare. It can also be a rare casual of quarries and waste ground where calcareous rocks and lime-rich soil has been exposed and railways with lime-rich ballast.

Distribution

This native lowland plant grows mainly in southern and eastern England and is very rare in Wales, Scotland and northeast England. Its distribution closely follows that of underlying chalk and limestone rock. It is also present in eastern Ireland where it is considered an alien species.

GB Status and rarity

It is classified as 'Vulnerable' in The Vascular Plant Red Data List for Great Britain 2005 because it has suffered a substantial decline, particularly in arable situations, and across all habitats in peripheral parts of its range such as in the northeast and southwest of England. Basil thyme is considered to be a good indicator species for high quality calcareous grassland.

Habitat management for basil thyme

Several different types of management can be undertaken for this species. They should be targeted towards present populations or historical records where there might be viable seeds present in the soil seed bank.

Basil thyme usually occurs in short open calcareous swards, often on the thinnest soils where rocks are close to the surface or actually outcrop. The plant tolerates these stressful conditions which result in reduced competition and an open structure with an element of bare ground. In such situations short swards are often maintained by grazing livestock as well as wild herbivores, notably rabbits. Continuous spring grazing, especially by sheep, might cause a decline in the numbers of basil thyme and other annual or short-lived perennial species. Decisions about grazing will depend on other features of the site, as grasslands with basil thyme are likely to have other species of high wildlife value whose possibly differing requirements might have to be taken into account. Recent environmental stresses such as drought will also influence decisions about stocking densities and timing. Any management decisions should reflect the requirements of this plant and aim to produce or maintain short open swards with sufficient bare ground to allow basil thyme to complete its life cycle.

Additionally, appropriate scrub removal and creation of small scrapes would increase the bare ground available for this species as the seeds need an element of bare soil to germinate. If scrub is long established, however, nutrient enrichment might mean basil thyme is likely to be outcompeted by more vigorous weeds such as common nettle and docks. Soil disturbance or heavy grazing should be avoided during the summer to enable basil thyme to complete its lifecycle. In some sites with heavy rabbit grazing, however, the plant thrives on the resulting short open conditions and rabbits appear to avoid eating the plant itself.

In arable situations, this spring germinating plant requires relatively open conditions. The best arable management for this uncommon species is spring cultivation with the margin or a plot left fallow into the autumn to allow seeds to be shed. Basil thyme does not survive under a densely drilled fertilised crop as the cereal out-competes it, shading out the light and taking most of the available nutrients. Herbicide also detrimentally affects this species and should be avoided where basil thyme is present.



Reasons for decline

On arable land, this plant declined as a result of more efficient methods of weed control almost causing its complete extinction in this habitat. Basil thyme is only present on less intensively used arable and the majority of surviving populations are present in chalk and limestone grassland and open swards in old quarries. Threats to grassland populations include a lack of bare ground which is required by this species to aid seed germination.

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 of this annual can be distinguished and counted, although the plant can branch from leaf axils close to the base and multiple intertwined individuals can easily be mistaken for a single plant so some care needs to be taken. For larger populations it might be easier to note the number and size of clumps in a particular area and estimate the number of individuals in each clump. The plant flowers earlier in the south, from May onwards, and slightly later further north and is much easier to find when the violet-coloured flowers are present. In dry seasons plants can shrivel up by midsummer, but otherwise they remain visible until later in the year.

◀ Removing scrub increases the bare ground available for this species as the seeds need an element of bare soil to germinate.