




Managing for bespoke species/assemblages within Countryside Stewardship – guidance template

Species/assemblage name	Conservation status
<p>Basil Thyme Case-bearer (<i>Coleophora tricolor</i>)</p>  <p>Basil Thyme habitat and plant (below) (both Sharon Hearle, Butterfly Conservation)</p> 	<p>Section 41, pRDB</p>  <p>Rideside edge supporting Basil Thyme and moth (G.M. Haggett)</p>
<p>Introduction</p> <p>Confined as a breeding species to the Brecks. This species has an annual life cycle and is known to fluctuate in numbers from year to year, possibly in response to cool August temperatures. The adult is diurnal and flies from late June until early August. The larva feeds from September from within a case on the seeds of basil thyme. However, later in the autumn it moves to a blade of grass, seemingly with a preference for Yorkshire fog (<i>Holcus lanatus</i>), excising a new case in which to overwinter, resuming feeding on the grass in spring, the final case being c.9mm in length. It is associated with light, dry, thinly vegetated calcareous soils, frequenting open situations which support basil thyme. It has also been found on old WWII hard standings and forest restocking sites.</p>	
<p>Why a bespoke species/assemblage?</p> <p>One of a suite of Breckland species that benefits from regular disturbance of the soil. The</p>	

Basil Thyme Case-bearer is usually found on calcareous soils and its foodplant, basil thyme is reliant on ground disturbance to persist. This can be undertaken through mechanical dragging, harrowing or screefing of light, calcareous, sandy soils. Close mowing of any site supporting the foodplant should be avoided, but in particular during the larval period.

When and where to apply this guidance

This species is confined to the Norfolk and Suffolk Brecks, where it is restricted to calcareous soils. Disturbance of the vegetation is best undertaken in late spring to encourage flowering and seeding of basil thyme. Limited ground disturbance combined with unfavourable weather in any one year can result in low numbers, therefore effort should be made to ensure ground disturbance is undertaken on and close by to as many sites that support basil thyme as possible (although this is not always necessary if there is a high mole population).

Developing a Countryside Stewardship agreement

Relevant CS options

WD2	Woodland improvement
GS14	Creation of grassland for target features
SP9	Threatened species supplement

Prescription guidance for WD2

This species requires tailored management of glades and rides within woodlands to achieve rotational disturbance for the foodplant to increase. A woodland management plan (PA3) is required to specify the management required at each site. The options available within WD2 in combination with GS14 and SP9 will deliver the required grassland habitat within woodland involving extensive disturbance.

It is likely that this species and its foodplant require large areas of land. Early successional stages are required to promote the foodplant, and some ground disturbance, such as limited rotovation, may encourage the foodplant and consequently populations of the moth. Heavy sheep grazing is detrimental, particularly so when combined with rabbit grazing. Prevention of scrub encroachment may be necessary to maintain open conditions. Old hard standings such as former airfields, can provide valuable habitat, particularly as they deteriorate.

Prescription guidance for GS14

P10 - Only use pesticides, including herbicides, to spot-treat [or weed-wipe] for the control of injurious weeds[, invasive non-natives, nettles, rushes or bracken.

P42 - [Control] [bramble] [in XXXX] [by cutting] so that [by year [5]] cover [of the [LOCATION] is no more than [5] %]. {Remove all cut material.]

P400 - Only plough, cultivate or re-seed as part of an agreed sward enhancement programme.

P423 – Establish [an open weedy sward with Basil-thyme (additional species) by natural

regeneration in parcels XXXX / in the areas identified in XXX.]

P667 - [From [year 3] onwards], manage by [rotovating on rotation[to maintain an open weedy sward] [so that sward height is maintained between 5-10cm].

P470 - [By year 3], [~~at least 2 moderate/high value indicator species Basil-thyme for Priority habitat feature Lowland Calcareous Grassland must be frequent/in flower during May to September and 2 high value indicator species XXXX for Priority habitat feature XXXX occasional (as defined in XXXX (currently the FEP Handbook)).~~ [By year 3], cover of [species Basil Thyme should be frequent].

IoS for GS14- NOT yet available

Prescription guidance for SP9

The Basil-thyme Case-bearer requires patches of Basil-thyme growing in sunny situations along woodland rides and glades. The foodplant is a pioneer of disturbed ground and cannot compete with coarse grasses / scrub. It is best established by scraping / rotovating / ploughing areas of rank grass and then maintaining the established sward by cutting, but close mowing must be avoided. Cut material should not be removed as the larva overwinters in a case attached to grass stems.

P697 - Carry out the management for [Basil-thyme Case-bearer][so that by year [3] [Basil-thyme is frequent within the sward and on an annual basis, new areas are created for colonisation of the foodplant]] [as set out in XXXX/Implementation Plan/Feasibility Study produced by [name, organisation] dated [date]].

IoS

Presence of the moth and good stands (frequent) of the foodplant.

Monitoring

The best method is to search for larval cases in autumn by gathering samples of Basil Thyme seed heads, and again after the winter by searching grasses for feeding damage - impossible I think. The adult moth can also be found by light trapping and by searching in sunny conditions. A specialist needed for survey.

Further information

See Ellis, S, Bourn, N. & Bulman, C. 2012. *Landscape-scale conservation for butterflies and moths: lessons from the UK*. Butterfly Conservation, Wareham. This contains a chapter entitled *Specialist moths in Breckland: creating bare ground habitat on a landscape scale* (includes the Basil Thyme Case-bearer), see <http://butterfly-conservation.org/files/landscape-scale-conservation-for-butterflies-and-moths-low-resolution.pdf>

See also Emmet, A.M. (ed.). 1996. *The Moths and Butterflies of Great Britain and Ireland. Volume 3*. Harley Books, Colchester.

Authorship/version control

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