



Butterfly Conservation

Basil Thyme Case-bearer

Coleophora tricolor

Conservation status

Priority Species in UK Biodiversity Action Plan.



Basil Thyme

This micro-moth gets its English name from the behaviour of the larva, which seals the young flowerhead of Basil Thyme with silk, forming a protective portable case. Many members of this genus exhibit similar behaviour (*Coleophora* meaning 'case-bearing'). This species is currently known only from the Breckland in Suffolk and Norfolk, although two examples were recorded from Sussex from around the turn of the 19th century.

Foodplants

The larvae feed on Basil Thyme *Clinopodium arvensis* before moving on to grasses such as Yorkshire Fog *Holcus lanatus*, on which they overwinter and feed in spring.

Habitat

The species is found on unimproved Breck grassland where Basil Thyme occurs in open conditions. Sites also include disused airfields where the hard surface is cracking up, and along track and ride edges in conifer plantations on former heathland.

Life cycle

The species is single-brooded. Eggs are laid on Basil Thyme in August. The larva hatches and feeds within the flowerhead, occupying a single calyx and spinning silk over the opening to form a protective case. The larva then moves with this case on to nearby grasses where it overwinters. It moves out of their calyx-case to create a new case from hollowed out grass leaf-blades in late spring. The species then pupates in the grass case low down, with the adults emerging in late July and August.

■ Larval record 1999 to 2004
● Adult record 1999 to 2004



	J	F	M	A	M	J	J	A	S	O	N	D
Egg								■				
Larva	■	■	■	■	■				■	■	■	■
Pupa						■	■					
Adult							■	■				

Habitat management for the Basil Thyme Case-bearer

The ecological requirements of this species and, equally importantly the foodplant, Basil Thyme are only beginning to be understood. Moreover, recent studies suggest that both the moth and its larval foodplant have a natural cycle of fluctuation in abundance, which makes it more difficult to prescribe management regimes for them.

The following are thus provisional recommendations:

- ◆ 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.
- ◆ 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.

How to survey/monitor

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. The adult moth can also be found by light-trapping and by searching in sunny conditions.

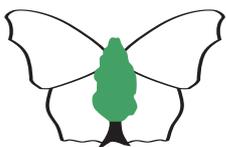


above left Larva in its first protective case formed in the Basil Thyme flower

above right Larva in its second protective case (this example slightly atypical) formed from grasses

below left Former airfield site

below right Forest rideside habitat



**Butterfly
Conservation**

Saving butterflies, moths and their habitats

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