

# How to Manage your Hedges for Hairstreak Butterflies

## Introduction

Hedges are more than just lines of shrubs. They usually have some sort of herbaceous growth at or near the base and many contain emergent trees. They may be set on banks and can have ditches along one or both sides. The best hedges have wide margins, often referred to as buffer strips or headlands, which are managed differently from the arable or grass crop. These five different components: mature/emergent trees, shrub layer, base/bank, ditch and margins, need to be thought about when deciding how to manage a hedge.

There are five species of hairstreak butterfly in Britain, two of which are closely associated with hedges. These are the brown hairstreak *Thecla betulae* and the white-letter hairstreak *Satyrrium w-album*. Two more, the black hairstreak *S. pruni* and the purple hairstreak *Neozephyrus quercus* may also occur in hedges. Green hairstreaks *Callophrys rubi* are less likely to be associated with hedges although several of their food plants do occur in hedges.



Brown Hairstreak butterfly  
Photo: Rob Wolton

## A Good Hedge for Hairstreak Butterflies

This advice sheet concentrates on the brown and white-letter hairstreak butterflies because they are most likely to be affected by hedge management. A good hedge for hairstreak butterflies will feature mature trees, especially ash and elm trees, which are important both as assembly points and as a shelter feature.

Brown hairstreaks depend upon a 'master' tree close to the breeding site. This is usually an ash tree. They also need vigorous blackthorn bushes with some south-facing branches and young growth. Flowers with flat open inflorescences such as hemp agrimony, ragwort and thistles in the field margin will provide nectar sources.

White-letter hairstreaks depend upon mature elms (including suckers that have reached sufficient age to bear flowers). Younger flower-bearing twigs on the south-facing side of the hedge are essential. The butterflies will nectar at flowering plants such as bramble and wild privet in the shrub layer and hogweed, thistles and hemp agrimony in the field margins.



Mature ash tree in hedge  
Photo: Rob Wolton



Hogweed in margin  
Photo: Rob Wolton

## Hedge Components used by Hairstreak Butterflies

Mature/Emergent Trees	✓
Shrub Layer	✓
Bank/Base	X
Ditch	X
Margin	✓

## Key Management Tips

A hedge can be improved to support hairstreak butterflies by:

- Encouraging young growth of blackthorn and elm in sheltered situations. This is critical to maintain colonies as complete removal of young growth will rapidly eliminate them.
- Blackthorn hedges should be trimmed on a two to three year rotation after the end of August. Cutting alternate sides of the hedge will also help to ensure that colonies survive. Trimming the hedge sides and tops on alternate years may also help to maintain a vigorous population. Where the brown hairstreak is known to occur at least a third of blackthorn on the south-facing side should be left uncut each year.
- South-facing hedges and those which have a sheltered warm micro-climate should be treated with particular care. Conservation field margins can be used to encourage the growth of young blackthorn in sunny field corners.
- If a hedge is wide enough, creating scallops along the hedge can provide areas of sheltered young growth.
- Allowing suitable trees to develop. In areas where elm suckers occur, letting some of these gain height and maturity will help white-letter hairstreak. Encouraging occasional mature ash trees will help in areas where the brown hairstreak is known to occur.
- Encouraging flowering plants such as bramble and wild privet, close to suitable breeding sites for hairstreak butterflies.

## Ecology of the Hairstreak Butterflies

Adult hairstreak butterflies are often overlooked because they usually fly high amongst the canopy of trees; but they will visit flowers in the shrubby part of the hedge or in the field margin. They also require sheltered warm places for egg laying. Brown hairstreaks require an assembly point or 'master tree', which is usually an ash tree with aphid honeydew that provides a food source for the butterflies. Mating occurs at higher elevations.

Hairstreak butterflies share several common features in their life cycle, spending the majority of their lives as an egg, laid in the summer, hatching into a caterpillar the following spring. Hairstreak butterflies lay their eggs towards the tips of twigs. Both black and brown hairstreaks require blackthorn and normally lay their eggs in the fork between two young twigs. Their caterpillars feed on young blackthorn leaves.

The brown hairstreak pupates beneath the bush amongst surface litter, whilst black hairstreak caterpillars pupate attached to twigs and mimic a bird dropping. The white-letter hairstreak requires elm and normally lays its eggs on twigs in the area between the newest growth and the second year growth. Its caterpillars feed on the flowers of elm and then on the leaves before pupating, attached to a leaf or twig. Purple hairstreaks favour oak; their caterpillars initially burrow into oak buds before their first moult, after which they feed on young leaves; mature caterpillars pupate in soil or loose litter and amongst crevices.

The brown hairstreak butterfly is widely distributed in southern England and southern Wales, extending north to Worcestershire and Lincolnshire in well wooded landscapes where blackthorn is a common shrub of woodland edge and hedges. White-letter hairstreak butterflies occur more widely across the countryside and extend their range as far as Northumberland and Cumbria.

The very rare black hairstreak is confined to a few counties from Oxfordshire through to Cambridgeshire (in woods and adjacent hedges on clay soils). The purple hairstreak is the most widely distributed species and occurs throughout England and Wales, north to central and south-western Scotland and Northern Ireland.

The brown hairstreak and the white-letter hairstreak are both priority species listed in Section 41/42 of the Natural Environment and Rural Communities Act (2006). The brown and black hairstreaks are also protected under the Wildlife and Countryside Act, 1981 (as amended).



Elm tree in hedge  
Photo: Rob Wolton



Brown Hairstreak butterfly egg  
Photo: Rob Wolton

## Further information

Butterfly Conservation — [www.butterfly-conservation.org](http://www.butterfly-conservation.org)  
Thomas, J. & Lewington, R. (2010) *The Butterflies of Britain & Ireland*. British Wildlife Publishing Ltd.  
Hedgeline leaflet (2013) *The Complete Hedge Good Management Guide*. [www.hedgeline.org.uk](http://www.hedgeline.org.uk)