



Butterfly Conservation



White-letter Hairstreak

Satyrium w-album

Conservation status

Priority Species in UK Biodiversity Action Plan.

The Wildlife and Countryside Act (1981) specifies that a licence is needed for trading in this species.

egg on girdle scar

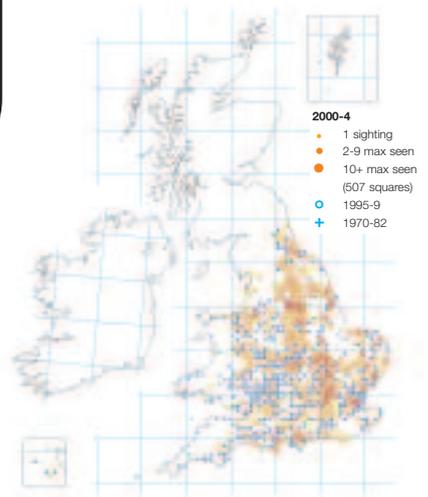
The White-letter Hairstreak is a small butterfly with an erratic, spiralling flight typical of the hairstreaks. It is distinguished by a white 'W' mark across the underside. The dark upperside is only seen in flight as the butterflies always settle with their wings closed. Adults are difficult to see because they spend so much time in the tree canopy, although they occasionally come to ground level to nectar on flowers near elm trees or scrub saplings. The species declined during the 1970s when its foodplants were reduced by Dutch Elm Disease, but is recovering in a few areas.

Life cycle

The species is single brooded with adults flying from mid June until mid-August. The eggs are laid singly, usually around the terminal bud or where new growth joins the previous year's growth. The dark brown eggs are well camouflaged as they overwinter on the twig. The larvae emerge in early spring, when elm begins to come into flower, and they feed on developing flower buds. As the larvae grow, they move to feed on leaf buds and then the new leaves. Fully grown larvae are green with angled stripes, and resemble unopened leaves. Wood Ants have been seen attending larvae. The dark-brown pupae are normally formed under elm leaves and sometimes against twigs, attached with a single silk girdle.

Colony structure

Information on the colony structure is sparse, but a marking experiment along one ride has shown a population numbering several hundred with adults regularly moving between trees up to 300m apart. Many colonies are restricted to a small group of trees, but dispersal appears quite common and individuals have been seen several kilometres from known breeding sites.



Foodplants

The butterfly breeds on various elm species, including Wych Elm *Ulmus glabra*, English Elm *U. procera* and Small-leaved Elm *U. minor*. A preference and higher breeding success on Wych Elm has been demonstrated at one site and may be used almost exclusively in northern England. It prefers to breed on flowering trees, but smaller elms, including suckers, may be used.

Habitat

The White-letter Hairstreak breeds where elms occur in sheltered hedgerows, mixed scrub, and the edges of woodland rides, and also on large isolated elms.

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

Habitat management for the White-letter Hairstreak

The overall aim is to maintain elm trees in suitable habitats.

Retention of Elm Trees

Woodland and hedgerow management that retains elm trees will benefit the White-letter Hairstreak. Fell trees infected with Dutch Elm Disease. Weak and dying elm trees provide the under bark habitat for broods of elm bark beetle. Check for brood trees in spring, and fell and debark to limit the spread of the disease. Field Maple *Acer campestre* and Ash *Fraxinus excelsior* are also thought to be important for White-letter Hairstreak so retention of these around elm within a hedgerow/ woodland would be beneficial. Lime trees in close proximity to elm should also be retained as these are used for nectaring.

Suckering, Regrowth and Coppicing

Encourage suckering of elm from roots or regrowth from cut stumps. Elm regrowth usually becomes infected with Dutch Elm Disease at about 12 years, when it reaches 5-10m tall, so coppicing elm on a 10 year cycle will limit re-infection.

Hedgerow Management

Avoid clipping elm hedgerows until after July, ensuring larvae have a plentiful supply of flowers and young leaves to feed upon. Wide field margins should be retained for nectar sources such as thistles and brambles.

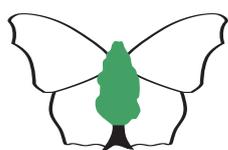
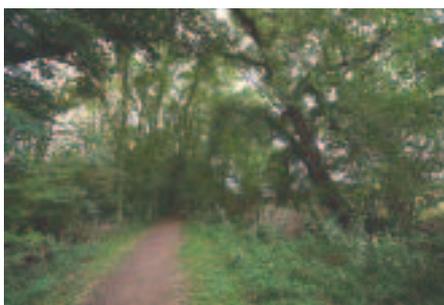
Planting

Include elm of local provenance in new woodlands and hedgerows. Disease-resistant trees are now propagated for this purpose.

Survey/Monitoring

Finding and identifying elm is a suitable beginning when surveying for the butterfly. Not all elm in a landscape is dead and often small elms are overlooked. Adults can be seen from mid June - early August high in the tree canopy. Adults are seen high in the tree canopy and also in sunny sheltered spots around elm trees. On some sites searching for eggs and larvae can be used to establish breeding presence. Eggs can be found on branches throughout the winter and are characterised by their 'flying saucer' shape. They are often situated on the underside of the girdle scar, (where the most recent growth meets the older wood); at the base of side shoots; on old leaf scars or at the base of buds. Larvae in the early stages of development can be found in eaten-out seeds within seed clusters. Oval patches of feeding damage on leaves, especially at the base can indicate the presence of mature larvae.

below Suitable breeding habitats



Butterfly Conservation

Saving butterflies, moths and their habitats

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