



Butterfly Conservation



Black Hairstreak

Satyrium pruni

Conservation status

Regional priority in East Midlands, East of England and South East England regions.



Pupal case resembling a bird dropping

The Black Hairstreak is one of our most elusive butterflies, found only in thickets of Blackthorn in woodlands on heavy clay soils between Oxford and Peterborough in the East Midlands of England. The adults spend nearly all their time in the canopies of trees or dense scrub where they feed on honeydew secreted by aphids. At certain times they make short looping flights in and out of the tree tops. Butterflies can be seen from early morning to early evening with a peak of activity around midday. The adults are easy to confuse with those of the White-letter Hairstreak and Purple Hairstreak which fly at the same time of year, so care is needed to confirm identification of the underside marking, which has a row of black spots in the outer orange margin and may have a white 'W'. The Black Hairstreak declined steadily during the twentieth century, with the majority of the remaining 50 or so sites in Oxfordshire and Buckinghamshire, where several recently discovered colonies suggests something of a recovery.

Life cycle

The butterfly is single-brooded with adults flying in a short period from early June to mid-July. The adults often congregate on Field Maple (*Acer campestre*) or Ash (*Fraxinus excelsior*), possibly because these trees contain large aphid populations that produce abundant honeydew. They are rarely seen at ground level but sometimes come down to feed on flowers of Wild Privet (*Ligustrum vulgare*), Dog-rose (*Rosa canina*) or bramble (*Rubus* spp.). Eggs are laid singly, usually on the bark of young growth (2-3 years old) on mature Blackthorn (over 10 years old). Most eggs are laid above 1.5m from the ground though small numbers are laid lower down on Blackthorn suckers. The eggs last through the winter and hatch in the spring, just before bud-burst, when the young larvae feed on the developing flower buds. Older larvae feed on the leaves, which they resemble closely. They move to pupate on the top of Blackthorn leaves or twigs, often in exposed positions, where the conspicuous black and white pupae resemble bird droppings.

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



Colony structure

The Black Hairstreak is a sedentary butterfly that often breeds in the same small, discrete part of a wood or thick hedgerow for 20 years or more. Larger woods may contain several separate breeding areas but butterflies are rarely seen outside woods, except along thick hedgerows with abundant mature Blackthorn. The Black Hairstreak has very limited powers of dispersal. One introduced colony in Surrey spread 1.5km over more or less suitable habitat in 30 years and even slower dispersal rates are recorded in its traditional East Midlands woodlands.

Foodplants

Blackthorn (*Prunus spinosa*) is used exclusively by most colonies, but occasionally Wild Plum (*P. domestica*) and other *Prunus* species are used.

Habitat

Most colonies breed in dense mature stands of Blackthorn growing in sunny, sheltered situations, usually along wood edges, the edges of rides or glades, or along hedgerow thickets. Smaller colonies occur in more exposed or shady situations, such as canopy gaps in mature woodland, small patches of scrub or in sheltered hedgerows.

Habitat management for the Black Hairstreak

The overall aim is to maintain dense mature 3-4m high Blackthorn stands along wood or ride edges and in hedgerow thickets.

Retention of Blackthorn

Woodland management that retains Blackthorn will benefit the Black Hairstreak. Any major clearance of Blackthorn in woods and hedges within its range should be avoided.



above Laying old Blackthorn stands like a 'hedge' encourages regrowth prolonging its suitability as breeding habitat

below Ideal Black Hairstreak habitat with mature Blackthorn along a woodland ride



Blackthorn Management

Cut even-aged Blackthorn stands in small patches (10-15sq m patches or 10-15m length of hedgerow) on long rotations (20-50 years depending upon the site) and allow to regenerate into mature stands. No more than 25 per cent of habitat should be cut at any one time and less on small sites. Irregular cutting of indentations into the Blackthorn should provide more sheltered conditions. On woodland sites, remove maturing trees where these shade Blackthorn thickets, but conversely, removing or laying tall hedges providing shelter to adjacent Blackthorn thickets should be avoided. Create new habitat nearby by allowing Blackthorn to spread by sucker growth.

Laying Blackthorn like a hedge may also be effective, especially when the cut material is laid with a south-facing aspect maximising the sunlight received by the regrowth. However if the Blackthorn is old, laying may be impractical without stems snapping. Compared to cutting, laying also has the advantage of potentially reducing the impact of management on over-wintering eggs.

below Opening up sheltered glades along rides encourages regeneration of both Blackthorn and nectar sources such as Bramble and Wild Privet



Planting

Include Blackthorn stands in any new woodland plantings within the Black Hairstreak's range. Select south-facing, sheltered locations, unshaded by trees. Only plant half the available area and create indented edges.

Deer Management

In some woods, natural regeneration of Blackthorn is limited by increasing deer populations, mostly introduced species such as Muntjac and Fallow Deer. Cutting Blackthorn at 1.5-2m height reduces grazing of regenerating shoots. Laying Blackthorn like a hedge rather than cutting it can reduce deer damage but reducing deer populations to acceptable limits is likely to be a more effective long term strategy. Fencing Blackthorn regeneration plots has been used where no deer management takes place.



Butterfly Conservation

Saving butterflies, moths and their habitats

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