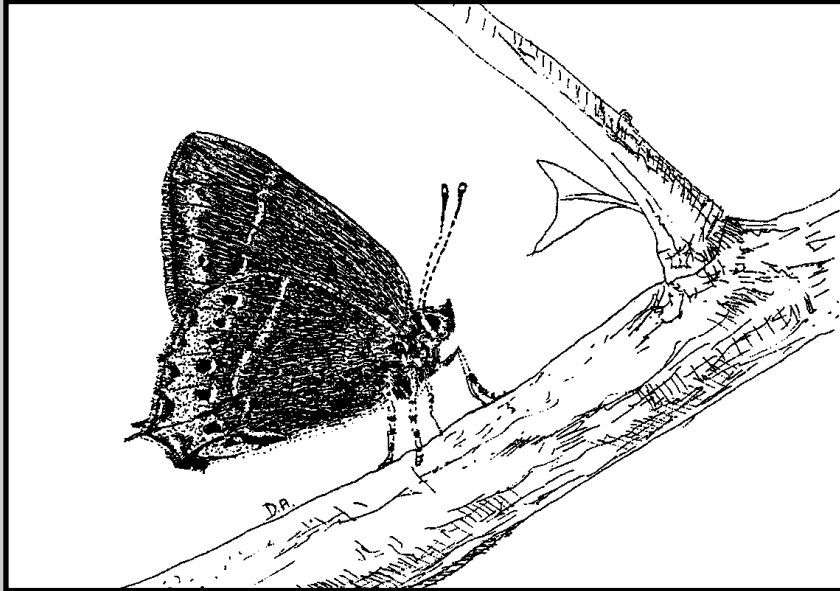


# Black hairstreak

*Satyrium pruni*



**National lead organisation(s):**  
Butterfly Conservation

**Local lead organisation(s):**  
Butterfly Conservation,

Bedfordshire Natural History Society  
(BNHS)

Black hairstreak is well described in the popular butterfly guides. There is a possibility of confusion with White Letter Hairstreak which may occur at the same sites in Bedfordshire and whose flight period may overlap in some seasons. Careful examination of the underside is necessary to observe the row of black dots on the hindwing which is diagnostic of Black hairstreak.

The butterflies are on the wing for only two to three weeks during the second half of June and the first week in July. They are difficult to observe, especially when populations are low. They tend to make mostly short quick flights but

under suitable conditions they can be seen nectaring on privet and bramble or feeding on honeydew on trees such as oak, ash and field maple. Peak activity is reported as being between 12.00 hrs and 14.00 hrs but the butterflies can also be active into the late afternoon in sites that remain in the sunshine at that time. The main larval foodplant is blackthorn (*Prunus spinosa*) but it is likely that this has not always been distinguished in the records from the similar cherry plum (*P. cerasifera*). The larvae are also said to feed on wild plum (*P. domestica*). The pupae, which look like bird droppings, are reputed to be easy to find by pulling down the higher branches of blackthorn. Winter is spent as eggs on the twigs of the foodplant.

## Current status

### National status

In Britain the Black hairstreak is limited to woods lying on heavy clays in a belt between Oxford and Peterborough, where a coppice rotation that could be as long as 40 years was formerly practised. In the 1970s the total number of colonies was estimated to be 30-35 but no up-to-date figures are available. This secretive canopy-dwelling species is difficult to monitor. There is a widespread impression that numbers have fallen during the last decade to very low levels indeed in 1999. This largely thwarted an attempt to re-survey known sites throughout its range in 1999.

### Local status

The Black hairstreak is known from only three sites in Bedfordshire — Marston Thrift, Wootton Wood and Holcot Wood. The species has been known in Marston Thrift only since 1984 and very few have been seen in recent years. Only two individuals have been seen in Wootton Wood, one in 1995 and one in 1998, and one in Holcot Wood in 1998 but Dr Jeremy Thomas has said (pers comm) that the species is so sedentary that if one individual is seen a colony is almost certainly present. The species was not previously recorded from these two sites. In all three sites, much of the blackthorn is inaccessible making detailed surveying and monitoring almost impossible. The butterfly may well exist in other woods in the county but the very low numbers in recent years have made it difficult to locate new colonies. It has not been seen in its two historical sites for many years; Putnoe Lane not since the early 1900s and Keysoepark Wood not since 1971. Neither site can now be regarded as particularly suitable.

## Current factors affecting the Black hairstreak

- c **Isolation of colonies** — This butterfly is extremely sedentary and, except in years when populations are high, gaps of a few hundred metres between suitable blackthorn stands can effectively isolate colonies. The butterfly's distribution in Britain is therefore fragmented and colonies are isolated. There is a need to reduce the isolation of the three Bedfordshire sites by developing corridors of favourable habitat.
- c **Habitat Requirements** — Black hairstreak appears to favour mature blackthorn bordering glades and rides that are both sheltered and sunny. Typically blackthorn stands chosen are extremely dense, at least 1.5 m. tall, well sheltered and not overshadowed at midday. These conditions can be found to a limited degree in the three Bedfordshire sites but there is a great deal of scope for extension and linking the favourable areas within each site. Plants to provide nectar for the butterflies are not essential so long as there is access to trees on which honeydew can be found. However, areas of bramble and particularly wild privet in flower can greatly assist monitoring by attracting butterflies within range for identification and counting.
- c **Blackthorn management** — Management of blackthorn stands to provide habitat continuity in the long term raises particular problems, especially when Black hairstreak populations are low. Without periodic clearance, blackthorn may eventually die. It usually reaches a height such that its shallow roots can no longer support its weight, and it then collapses. Blackthorn regenerates well after cutting but regeneration may be suppressed by deer browsing, especially with current high deer populations. Unless deer are controlled to a low level, they may need to be excluded from regenerating blackthorn either by fencing or by covering the cut stems with brush. Another method that has been used recently elsewhere is to lay the blackthorn as in a hedge creating a thicket impenetrable to deer. However the long-term effects are not yet known.

Blackthorn is most likely to be cut during the winter months which will destroy any eggs present on the twigs. This could be very damaging to Black hairstreak populations when these are already low. The alternative of cutting in early June and leaving the brash to lie until the butterflies have emerged from the pupae is preferable but may conflict with protection of nesting birds.

Unless the blackthorn in a wood is in one continuous block, it must be assumed that each block represents a separate colony of Black hairstreak and management planned accordingly. It is essential that only small sections of the blackthorn in a block are cut in winter so as to achieve an overall cutting cycle of at least 24 years. Clearing smaller fractions, on an even longer rotation, is ideal. In particular, blackthorn establishing itself around existing colonies should be retained, in order to provide shelter and future breeding sites as it becomes mature.

In hedges the eggs are placed towards the outside so are extremely vulnerable to hedge trimming. Ideally, hedges used by Black hairstreak should be allowed to become many metres thick and treated as scrub blocks. Removal of part of the width and length annually will retain the stock proof quality and introduce sheltered undulations. If the hedge must be mechanically trimmed, it should be divided into sections and each section trimmed sequentially on the longest schedule possible.

- c **Pollution** — Existing Black hairstreak colonies in Bedfordshire are within woods and should not normally be affected by drift of pesticides from adjacent agricultural land. However, it is possible that the decline in sightings on the blackthorn bushes bordering the green lane along the south-west edge of Marston Thrift may be associated with the deposition of dust from the adjacent landfill site
- c **Limitations and lack of knowledge** — The most serious limitation on any action to encourage populations of this species is the difficulty of monitoring. There is an urgent need for more paths through the blackthorn thickets, more bushes of wild privet and for viewing platforms or high seats on all sites so that the top of the blackthorn canopy can be viewed. Without better monitoring the success of this Action Plan cannot be assessed properly.

## Current action

### Legal

The Black hairstreak is listed on Schedule 5 of the 1981 Wildlife and Countryside Act (for sale only). This means that it is a criminal offence to sell, offer or expose for sale, or possess or transport for the purposes of sale, whether alive or dead, any wild specimen and parts or derivatives of them; or for anyone to publish or cause to be published any advertisement indicating or suggesting that they buy or sell such things.

All the current sites in Bedfordshire are County Wildlife Sites. Marston Thrift is an SSSI and is managed by the Bedfordshire County Council as a nature reserve. Holcot Wood is owned and managed by the Woodland Trust. Wootton Wood is privately owned and is managed primarily for shooting.

### Management, research and guidance

#### Surveys, ecological research and monitoring

The report by Dr Jeremy Thomas (Thomas, 1975) summarised the status of the Black hairstreak in the early 1970s and the action necessary to conserve it. Since this time there has been little ecological research or systematic surveying. The Wildlife Trust for Bedfordshire, Cambridgeshire, Northamptonshire and Peterborough organised a one-day conference in October 1997 for those involved in Black hairstreak research and management

of sites. Notes from the conference (Anon, 1997) are available from the Wildlife Trust's Northampton office.

Ground searches for new sites for Black hairstreak can be very time-consuming, especially when populations are low. In Bedfordshire, attempts from the air to identify areas of abundant blackthorn were made during the flowering period in the springs of 1998 and 1999. This method appears promising particularly in supporting ground surveys for locating blackthorn within individual woods.

Sites with colonies of the Black hairstreak managed by Forest Enterprise are monitored in June/July by counting adults for a half-hour period. However, this technique cannot be used effectively in the Bedfordshire sites at present because so much of the blackthorn is inaccessible. The installation of a temporary observation tower at Glaphorn Cow Pastures in Northamptonshire during the flight period increased the number of butterflies seen by enabling the blackthorn canopy to be watched.

### **Management work**

In Bedfordshire, management work in Marston Thrift is done by contractors employed by Bedfordshire County Council and by a volunteer group from Cranfield in accord with the management plan for the wood. Neither Wootton Wood nor Holcot Wood yet receive management specifically for Black hairstreak.

### **Species management guidance**

Management for Black hairstreak has three components:

1. managing the site to provide optimal conditions of sun and shelter;
2. managing both the site and its surroundings to link colony locations within the site and linking isolated sites;
3. managing the blackthorn to provide optimal sized plants and also continuity.

All these aspects are dealt with elsewhere in this Action Plan but more detail can be found in Anon (1997), Bourn & Warren (1998), Thomas (1976) and in the leaflet on management of Black hairstreak colonies produced by Upper Thames Branch of Butterfly Conservation.

### **Advice**

Advice on management for Black hairstreak in Bedfordshire can be provided by the County Ecologist (Bedfordshire County Council), the Beds and Northants Branch of Butterfly Conservation and the Recorder for Butterflies for the Bedfordshire Natural History Society.

## **Action plan objectives and targets**

### **Objective**

- A. To optimise and reduce the isolation of the habitats of existing colonies of Black hairstreak in Bedfordshire and extend the present distribution by locating additional optimal sites and introducing the species into them.

## Targets

- A. By the year 2005 — complete the development of viable networks of favourable areas throughout its current sites and maintain them from then on.
- B. By the year 2010 — reduce the isolation of existing sites by encouraging the development of suitably situated areas of blackthorn.
- C. By the year 2010 — secure the future of the species in Bedfordshire by locating five additional potential sites, bringing them into suitable management and establishing new colonies of the species there.

| <b>Proposed action</b>                   |   |                       |
|--|---|-----------------------|
| <b>Abbreviations</b>                     |   |                       |
| BCC                                      | Bedfordshire County Council   |                       |
| BC                                       | Butterfly Conservation  |                       |
| BNHS                                     | Bedfordshire Natural History Society  |                       |
| WT                                       | Woodland Trust  |                       |
| <b>Action</b>                            |   | <b>Implemented by</b> |
| <b>Policy and legislation</b>            |   |                       |
| a).                                      | Lobby for the improvement of financial incentives for the conservation management of broadleaved woodland throughout the range of Black hairstreak (especially measures that will encourage the maintenance of suitable blackthorn stands)  |                       |
| b).                                      | Use any financial incentives currently available to encourage good management of Black hairstreak sites   |                       |
| c).                                      | Lobby MAFF and FA to press for the introduction of financial incentives for the effective management of deer populations  |                       |
| <b>Site safeguard and management</b>     |   |                       |
| a).                                      | Ensure that owners and site managers have all relevant information about the species, including this action plan  |                       |
| <b>Species management and protection</b> |   |                       |
| a).                                      | Manage Marston Thrift to reduce shading of blackthorn stands, to create and maintain sheltered rides and clearings and to create and maintain access for monitoring including the installation of viewing platforms   | BCC                   |
| b).                                      | Incorporate actions to favour the Black hairstreak in a management plan for Holcot Wood and implement the plan.<br>Recommended actions include reducing shading of blackthorn stands, creating and maintaining sheltered rides and clearings and creating and maintaining access for monitoring including the installation of viewing platforms | WT                    |
| c).                                      | Encourage the incorporation of actions to favour the Black hairstreak in a management plan for Wootton Wood and the implementation of the plan. Recommended actions include reducing shading of blackthorn stands and creating and maintaining rides and clearings  |                       |
| d).                                      | When habitat structure has been optimised and/or when Black hairstreak populations have recovered from their present low levels, begin a planned programme of blackthorn regeneration on a long cycle   |                       |
| e).                                      | Identify five additional woods where there is potential for establishing viable populations and negotiate arrangements for suitable management to make the sites optimal for future releases of Black hairstreak  |                       |
| f).                                      | When optimal conditions have been achieved in the five additional sites, establish populations there following current guidelines. Ascertain that no natural population is present before attempting introductions  |                       |

|   |          |
|---|----------|
| g). Incorporate suitable areas of blackthorn in the planting plans for Brogborough Landfill Site to create a corridor between Holcot Wood and Marston Thrift                                  |          |
| h). Negotiate with landowners arrangements for increasing the amount of blackthorn between Marston Thrift and Wootton Wood to reduce the isolation of these colonies                          |          |
| <b>Advisory</b>   |          |
| a). Ensure that all site owners / managers receive advice on practical habitat management for the Black hairstreak and how to incorporate this with other management priorities and interests |          |
| b). Maintain the links established between those involved in conservation of the Black hairstreak   |          |
| c). Produce a brief, practical guide on habitat management for the Black hairstreak, incorporating this with management for other wildlife  | BC       |
| <b>Future research and monitoring</b>   |          |
| a). Establish the status of populations at the three currently known sites and maintain annual monitoring. This action could be carried out mainly by expert volunteers                       | BC, BNHS |
| b). Conduct surveys within the likely range of the species to discover new colonies. This action could be also carried out mainly by expert volunteers  | BC, BNHS |
| c). Encourage the submission of records to the Biodiversity Recording and Monitoring Centre   |          |
| d). Review the action plan annually and update when necessary. Ensure that it takes account of significant national developments  | BC, BNHS |
| <b>Communication and publicity</b>  |          |
| a). Publicise this action plan, the restricted distribution of the Black hairstreak and the measures needed to conserve it.   |          |



## Complementary plans

This action plan should be considered in conjunction with the Bedfordshire and Luton Action Plans for Woodland and for Farmland and the Butterfly Conservation Species Action Plan for Black hairstreak (Bourn & Warren 1998).

### Acknowledgements

This species action plan has been written by Charles Baker and David Aldred, representatives of Beds & Northants Branch of Butterfly Conservation and Bedfordshire Natural History Society.

The picture of a Black hairstreak was kindly supplied by David Aldred.

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