

## Ng4 – PURPLE HAIRSTREAK EVENING TRANSECT – POINT COUNT METHOD

### INTRODUCTION

In general, only low numbers of Purple Hairstreaks are recorded on traditional transect walks. The vast majority of annual site counts received for this species are of 10 individuals or fewer. These low encounter rates mean that only a small (and possibly inconsistent) proportion of the population are being sampled. However, when the conditions are right, large numbers of Purple Hairstreak may be encountered in suitable habitat during the early evening.

This guidance note sets out a method for sampling Purple Hairstreaks in the canopy of suitable oak trees during the early evening. The method was tested and refined by UKBMS volunteers over the course of two seasons (2021 & 2022). When applied consistently, this method should sample a greater proportion of the population and contribute to more representative abundance trends.

### WHEN?

**Time of Year:** As per normal single-species transects, a count should be made each week during the flight period of the target species. For Purple Hairstreak this would typically be from mid-June to the end of August.

**Time of day:** These counts should be conducted during early evening when the adult butterflies are active. This could typically be between 18:00-19:30, though the best time window can vary according to local conditions (e.g. possibly earlier in northern areas or more shaded sites). Experience will determine the best time on each site and it is acceptable to wait a while at your first survey point, until you see Purple Hairstreak activity, before starting your count.

**Weather conditions:** It should be 17°C or above, with no more than a gentle breeze (Beaufort scale 3 or below). Ideal conditions are cloudy, muggy and still.

### WHERE?

**Route design:** Your single-species transect can be set up along a woodland ride, tree belt, hedgerow or parkland with mature oaks, where the canopy is visible at suitable points along the route. The overall length should be kept reasonably short (up to 1km), as the window of time to carry out each survey may be less than an hour.

You will not be recording continuously along the transect route, but stopping at regular spots along the route to record point counts. You need to identify up to 15 suitable locations along your route where there are mature oak trees and you can get a good view of the canopy.

At each recording point, you need to establish where you will stand to conduct the survey, which direction you will face and which tree(s) you will include in the survey. These features should be noted as part of the survey design and adhered to during all visits. Sample consistently on either one side, or both sides, of a ride, depending on the availability of oaks,

the ride width and visibility. If there are a large number of oaks, please be realistic about how many you can sample from one location.

Your survey should include oak trees which have supported Purple Hairstreaks in the past, or may do so in the future, as well as those where you know you will see the butterflies now. This provides more scope for monitoring long-term population changes.

Avoid selecting locations where you would be looking up towards the sun in the early evening – it is easier to view the canopy with the sun behind you.

## HOW?

**Recording method:** At each of the designated recording points, check your watch and record for a fixed period of time. For the purposes of consistency, this time period should be set (and noted) for each recording point when the transect is designed, and the same length of time used in each survey.

We recommend a period of 2 minutes for most situations, where the canopy of just one or two oaks are being monitored. This could be extended to 3 minutes for points where more trees are to be included. Most importantly, be consistent on each visit, and do not hang around for longer periods in the hope of improving your count.

Recording at each point is conducted by viewing the canopy from the same location during each visit. Purple Hairstreaks are only counted which emerge from, or fly around, the canopy of the target tree(s) included at that survey point. Binoculars can be useful for this survey, particularly where there is a high canopy.

As the butterflies tend to flit in and out of the canopy, you should only count the maximum number of Purple Hairstreak individuals that you are certain you have seen, rather than increasing the count each time a butterfly comes back into view.

At the end of the designated time period, note your count, and then move on to the next recording point.

**Data Entry:** The results from your Purple Hairstreak counts should be entered via the UKBMS website at <https://ukbms.org/mydata>.

You will need to set up a new transect routes specifically for these evening visits, and there is a separate guidance note and video available for this purpose at <https://ukbms.org/guidance-recording-forms>.

Once the new transect route has been set up, with up to 15 survey points identified, you can then enter your weekly counts in the same way as any normal transect, using the individual section columns for each point count along your route.

If you have any queries or require assistance, please contact  
[transect@butterfly-conservation.org](mailto:transect@butterfly-conservation.org)

## PURPLE HAIRSTREAK EVENING TRANSECT RECORDING FORM

Transect Name:															Date:	
Recorder Name:						Start Time:						End Time:				
Temperature: (Degrees C)						Wind Speed: (Beaufort Scale)						Wind Direction:				
POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
% Sunshine																Ave:
Purple Hairstreak																Total:

Transect Name:															Date:	
Recorder Name:						Start Time:						End Time:				
Temperature: (Degrees C)						Wind Speed: (Beaufort Scale)						Wind Direction:				
POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
% Sunshine																Ave:
Purple Hairstreak																Total:

Transect Name:															Date:	
Recorder Name:						Start Time:						End Time:				
Temperature: (Degrees C)						Wind Speed: (Beaufort Scale)						Wind Direction:				
POINT	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
% Sunshine																Ave:
Purple Hairstreak																Total:

Data should be entered online at <https://ukbms.org/mydata> by 31<sup>st</sup> October each year.

[www.butterfly-conservation.org](http://www.butterfly-conservation.org)

<https://ukbms.org>

By submitting these records you confirm that they contain data that you have collected, give permission for the records to be used for research, education and public information, and to be made generally available for re-use for any other legal purpose under the terms of the Open Government Licence (<http://www.nationalarchives.gov.uk/doc/open-government-licence/>), and agree that your name will be associated with the record. The UKBMS partners collect personal data in order to administer, run and share results of the scheme. The personal data we will collect and how it will be stored, shared and deleted (as necessary) are covered in our Privacy Notice <http://www.ukbms.org/privacy-notice>.