

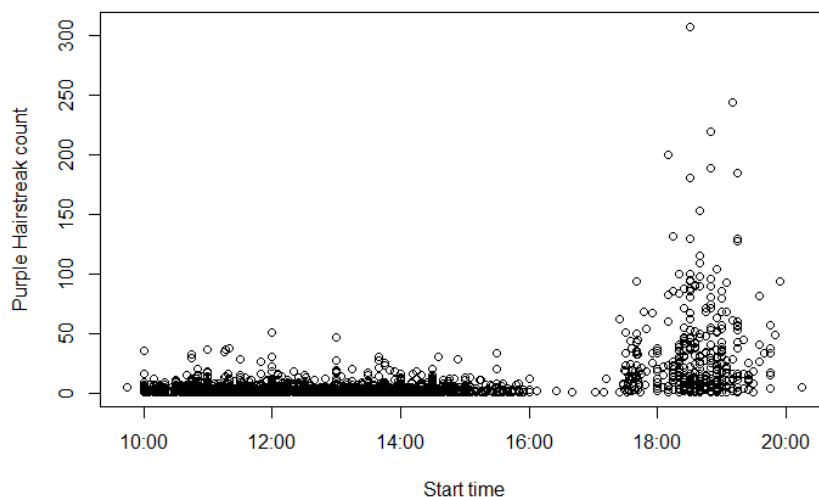
Purple Hairstreak monitoring by evening transect walks

Background

In general, only low numbers of Purple Hairstreak's are recorded on Pollard walks. The vast majority of annual site counts received for this species are of 10 individuals or fewer.

There are general concerns that UKBMS trends for Purple Hairstreak, and other canopy species, may not be truly representative due to low encounter rates and a small (and possibly inconsistent) proportion of the population sampled. Furthermore, their chief habitat, the canopy, is not sampled during a standard Pollard walk.

However, large numbers (up to 300) may be encountered in suitable habitat (the edges of mature oak woodland) during the early evening, especially from 18:30-19:30 on overcast muggy evenings. A few single-species transects for Purple Hairstreak within the UKBMS, that sample the canopy during this time period, have proved highly productive.



Plot of Purple Hairstreak counts in relation to time of day

We believe a consistent method can be rolled out to get better data on the abundance of Purple Hairstreak. This is a priority because the butterfly appears to be in decline in several regions (based on both abundance and occupancy data), and we need to be sure that our data are a true representation of how the species is faring.

A proposed methodology was circulated for trial purposes in summer 2021, and the feedback from this trial indicated that more work needed to be done before finalising the method. The most significant change to the method now being trialled is a move from 'continuous walking' as per normal transects, to a series of point counts.

We would welcome any feedback on this revised methodology during the next trial period.

Although we'd be interested to see data sheets from the trial, these data will not yet form part of the UKBMS data set. We would advise you to submit them directly to your county recorder for inclusion in the county dataset.

PURPLE HAIRSTREAK EVENING TRANSECT – POINT COUNT METHOD (2022 TRIAL)

WHEN?

Time of Year: As per normal single-species transects, undertake the transect 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: Typically 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).

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: Set up a single-species transect no more than 1km in length along a woodland ride, tree belt or hedgerow with mature oaks, where the canopy is visible at suitable points along the route.

You will not be recording continuously along the transect route, but stopping at regular spots along the route to record point counts. 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 will need to establish where you will stand to conduct the survey, 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, be realistic about how many you can sample from one location.

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. Be consistent, 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 Hairstreaks that you can see at any one time, rather than increasing the count each time a butterfly comes in to view.

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

PURPLE HAIRSTREAK EVENING TRANSECT RECORDING FORM

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

During this trial period, please submit your feedback on the methodology to Ian Middlebrook imiddlebrook@butterfly-conservation.org by 31st October 2022.

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