

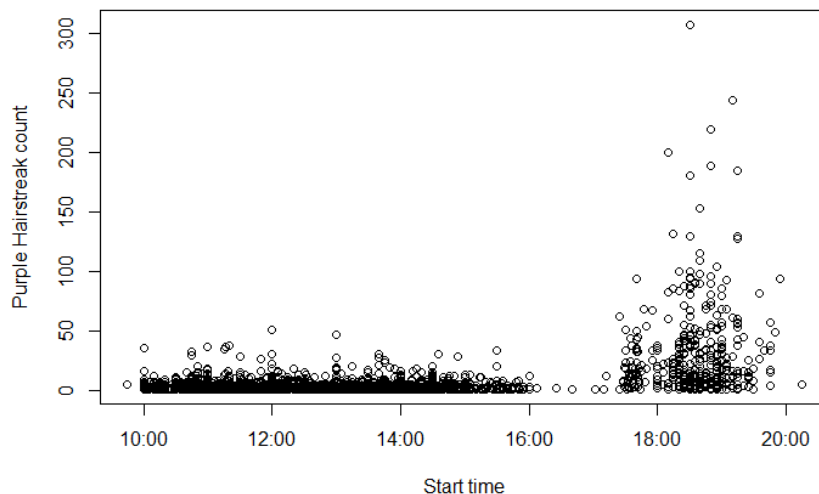
Purple Hairstreak monitoring by evening transect walks

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 is described below and being promoted for trial purposes during the 2021 season. We invite volunteers to trial the method on local sites and feedback their comments/observations on implementing the method. Any suggestions for refinement or improvement of the method are welcome.

We are not asking volunteers to submit their data online at this stage, in case the method is adjusted for future years. But we would welcome sight of completed recording forms, and the records can also be submitted to county recorders.

PURPLE HAIRSTREAK EVENING TRANSECT WALK METHOD

WHERE?

Route design: Set up a single-species transect up to 1km in length along a woodland ride or tree belt with mature Oaks, where the canopy is visible over the majority of the route.

Break the transect up into sections according to individual rides and habitat changes. Split long rides or long stretches of uniform habitat into equal sections.

Sample consistently on either one side, or both sides, of a ride, depending on the availability of Oaks and the ride width. If there are large numbers of Oak and the ride is wide, only sample on one side. For the opposite, sample on both sides.

WHEN?

Time of Year: As per normal single-species transects, walk 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: Between 18:15-19:45, primarily within a core period of 18:30-19:30.

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.

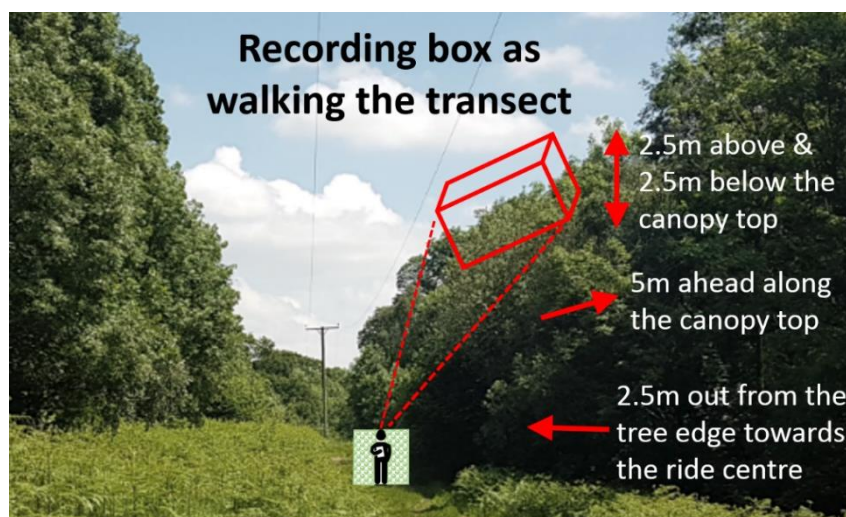
HOW?

Recording method: Walk at a slow steady space, scanning the canopy top and counting individual butterflies within a set area, which is defined and illustrated below.

Transect width: the first row of trees on one or both sides of the ride.

Recording box for each ride side: 2.5m above and below the canopy top, and 5m out from this vertical band (*i.e.* in a virtual 5x5m box like conventional transects but along the canopy top rather than at ground level).

At trees where there is a lot of activity, there may be a need to pause momentarily to make a count of individuals, but do not stop and wait for more butterflies to appear.



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>SECTION</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>SECTION</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>SECTION</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 data and feedback to Ian Middlebrook
imiddlebrook@butterfly-conservation.org by 31st October 2021.

www.butterfly-conservation.org

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