

BUTTERFLY CONSERVATION UPPER THAMES BRANCH

Green Hairstreak Report 2014-2023

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Introduction

A plaintive “lonely hearts ad” in the Spring 2024 edition of Hairstreak alerted me to the absence of a species champion for Green Hairstreak. I had developed a prototype species champion data analysis tool, now called SCRIPT¹, when preparing my Small Blue species champion report for 2023. I thought it had potential value for other species champions, and so I was keen to refine and debug it using data for other species. I found out that the last Green Hairstreak species champion report had been written in 2014, and contacted Nick Bowles, species champion coordinator, to discuss volunteering as a “placeholder” species champion, and preparing a review report to cover the intervening 10 year period.

I had already suggested to Ben Paternoster that I would be happy to generate some material for a report for his own species, Dingy Skipper. The most recent report for Dingy Skipper had been written in 2012 and he was, not unreasonably, having difficulty knowing how to get started. I then discovered that Green Hairstreak was Ben’s favourite species, and that he would prefer to champion it than Dingy Skipper. This led me to suggest that he and I could be joint champions for both species, and that I could prepare a new report for both species. I proposed this arrangement to Nick, and he embraced it. It is novel, as far as I am aware, although it is not unprecedented for a 10km square to have joint champions.

The still-in-development SCRIPT was used to carry out data validation and analysis for both reports. Unfortunately, turning the prototype into a reasonably bulletproof first working version started too late and took too long for the two reports to be ready in time to inform the 2024 season. However, they are review reports, designed to fill gaps of 10 and 12 years without any reports; in that context, updated annual reports in 2025 seem acceptable.

The majority of the report is based on the ten year period 2014 – 2023, although it first briefly discusses the full data set that was used, which covers the period 1995 – 2023. The analysis in the report is based on the 1km x 1km square (“monad”) as the unit of analysis, rather than the 2km x 2km “tetrad” that has historically been standard. Per BC preference, the report uses the abbreviated form “1km square”, which is felt to be clearer than monad.

A separate report called “How to write a species champion report using SCRIPT” has also been written. The reader is thus advised at the outset that for brevity, multiple references to this separate report have been omitted. It can and should be consulted whenever explanation or detail is found to be lacking.

¹ Species Champion Report Information Processing Tool

The data basis for the report

I used a data set supplied by Peter Ogden, of records from the Butterfly Conservation database. This raw data set has the following features:

- 4,338 records (4,332 of adults, 6 of immature lifecycle stages)
- 29 years included (1995 - 2023)
- 359 1km squares represented (4.5% of UTB territory)

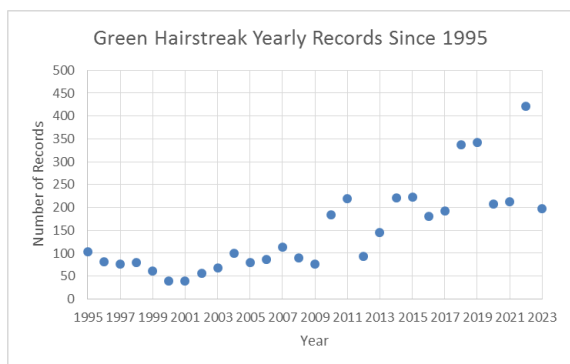


Figure 1: Green Hairstreak records per year since 1995

The number of records per year, plotted in **Figure 1**, has shown no overall trend over the last 10 years. The average over the last 10 years, of 251 records per year, comprises 7 years with about 200 records each, and three bumper years (2018, 2019 and 2022), each with a record count well above average. It can be seen that 2010 and 2011 also had anomalously high numbers of records, compared to the prevailing trend. The impression given by the data is an annual record count that flips between two

alternative trends, rather than fluctuating randomly about one trend as we might expect.

Data validation

The issues found in the data, and consequent edits and annotations, are as follows:

- 33 pairs of duplicate records: one of each pair was flagged EXCLUDE, and was not used in the analysis.
- 20 records with a grid reference error, of which:
 - 8 could be corrected based on the site name data. These records were flagged GRIDREF, and included in the analysis.
 - 12 could not be corrected on any apparent basis. These records were flagged EXCLUDE, and were not used in the analysis.
- 12 records of dubious validity (the associated 10km square had at most three records in the data set). These records were flagged SUSPECT, and could optionally also not be used in the analysis.

Three of the records had the same grid reference error for the same site, a specific section of the Grangelands transect. This same error was originally identified when the author was doing data validation for Dingy Skipper. It turned out that the grid reference had been specified incorrectly when the transect was set up, incurring an error of 5 km, and had been used for a period of 7 years before the error was corrected, affecting 426 records for all species in the process. The author contacted UKBMS and confirmed that the UKBMS database records are now error-free. However, the UTB records that were downloaded annually from UKBMS over the period in question still need to be corrected.

Clustering the data

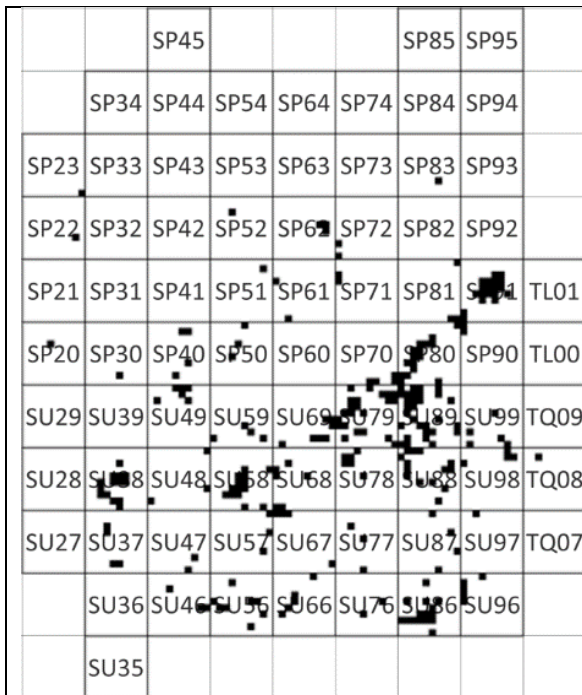


Figure 2: Monochrome distribution map for Green Hairstreak 2014-2023

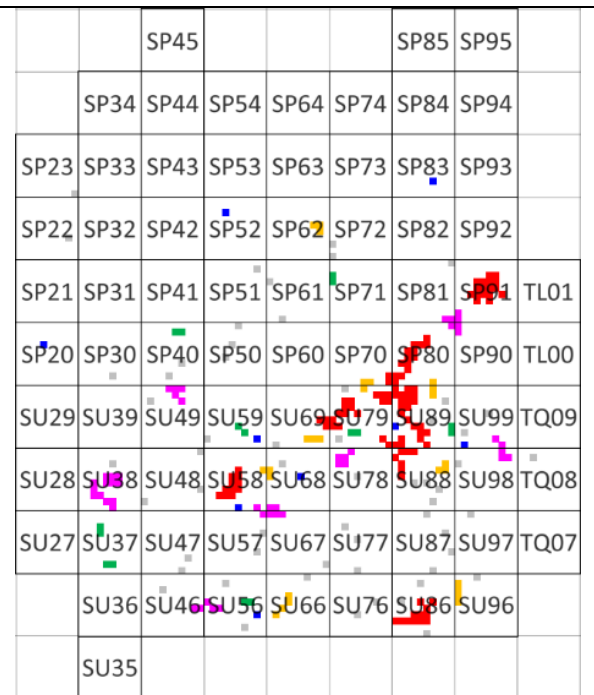


Figure 3: Clustered, isolated and random 1km squares for UTB Green Hairstreak 2014 - 2023 with 8-connectivity

Figure 2 simply shows a conventional distribution map: every 1km square represented in the validated data set (i.e. with at least one validated record from the period 2014 – 2023) is coloured black. Records flagged as EXCLUDE are excluded; records flagged as SUSPECT are included.

Figure 3 illustrates the clusters that were identified in the raw data, using 8-connectivity to define the clusters. The clusters are illustrated in quasi-heat map fashion according to **Table 1**. All the 1km squares that were coloured black in **Figure 2** are still present in **Figure 3**. The only difference is the colour-coding, which helps the eye to interpret what it is looking at.

Number of 1km squares	More than 10	5-10	3-4	2	1 (isolated)	1 (random)
Colour						

Table 1: Colour key used to illustrate clustered, isolated and random 1km squares

The main UTB Green Hairstreak clusters

For reference, **Appendix 1: Green Hairstreak clusters** gives a summary table for all the clusters identified in the analysis. **Appendix 2: Green Hairstreak isolated 1km squares** and **Appendix 3: Green Hairstreak random 1km squares** give similar summary tables for the isolated 1km squares and random 1km squares. For simplicity of analysis in the current version of SCRIPT, the record counts in these tables exclude the immature lifecycle stages.

Six clusters comprise more than ten 1km squares, earning them the distinction of being coloured red in **Figure 3**. They are summarised in **Table 2**.

Cluster	1km squares	Visits	Records	Major Sites
Grangelands	41	6359	653	Bradenham, Brush Hill, Butlers Hangings, Coombe Hill, Grangelands, Lodge Hill, Munts Bank, Park Wood, Rifle Range, Sands Bank, Saunderton, Small Dean Bank, Yoesden
Ivinghoe	17	2637	431	College Lake, Incombe Hole, Ivinghoe, Pitstone Quarry,
Aston Rowant NNR	13	2394	296	Aston Rowant NNR, Watlington Hill
Aston Upthorpe	11	1276	154	Aston Upthorpe Downs, Lids Down, Oven Bottom
Wildmoor Heath	12	1681	40	Broadmoor Bottom NR, Edgbarrow Woods LNR, Owlsmoor, Moor Green Lakes NR, Wellington College, Wildmoor Heath
Homefield Wood	12	1974	35	Frieth, Homefield Wood, Nineacres, Shillingridge Wood, Strawberry Bank

Table 2: The six main UTB Green Hairstreak clusters

In terms both of 1km square count and record count, far and away the dominant Green Hairstreak cluster in UTB territory is the Grangelands cluster, with 653 records spread across 41 1km squares. No especial significance should be attached to the choice of Grangelands as a name to represent the cluster; any of several worthy candidates could have been used. Very much in second place, but still significantly bigger than the remaining four, is the Ivinghoe cluster, with 431 records spread across 17 1km squares.

It is interesting to note the clear difference between the first four clusters and the other two in terms of both records per 1km square and visits per record. The first four clusters all have an average value of records per 1km square in the range 14 - 25, whereas the other two have an average of only 3 - 4. Taken in isolation, this difference could conceivably represent the disproportionate popularity of the well-known sites, but taking the number of visits into account as well, it seems that record count actually is a measure of Green Hairstreak population size more than a measure of site popularity, at least in this case. Visits per record is between 6 and 9 for the first four clusters, whereas for the last two it is between 40 and

60. In simple terms, a visitor who wants to see Green Hairstreak is far more likely to do so by visiting one of the first four clusters than either of the other two (although for this conclusion to be bulletproof, the visit count would need to be confined to the Green Hairstreak’s flight period).

Flight period

The Green Hairstreak is a single-brooded species in UTB territory, and generally elsewhere (although there may be interesting exceptions: see **Final food for thought**). In **Figure 4**, the data has been aggregated into weeks to smooth it. Emergence begins as early as week 14 (the first week of April), and the species can typically be seen on the wing until week 26 (the last week of June), although there are a small number of records in the data set from much later in the year.

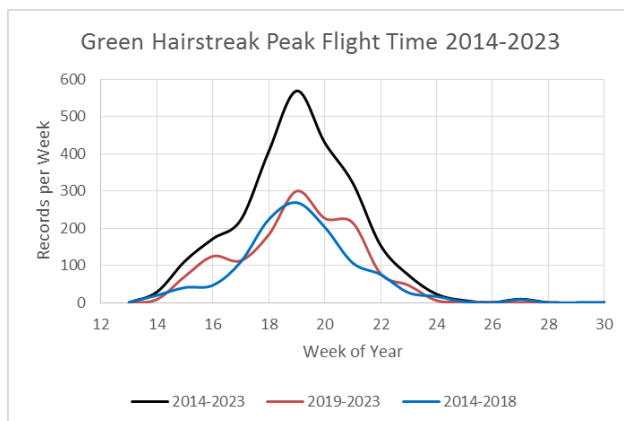


Figure 4: Green Hairstreak flight period

although there are a small number of records in the data set from much later in the year.

Robust analysis of the flight time ignores the small number of extreme values at either end of a distribution, and quotes “percentiles”: the values that divide the data set up into standard fractions. Typically the 5th and 95th percentiles, written as p_{05} and p_{95} , are used. These are the values below which 5% and 95% of the data lie, hence between them they include 90% of the data.

Table 3 shows the results obtained for Green Hairstreak flight period for 2014 - 2023.

Year	First	p_5	p_{50}	p_{95}	Last
2023	20-Apr-23	30-Apr-23	21-May-23	10-Jun-23	26-Jun-23
2022	10-Apr-22	18-Apr-22	13-May-22	08-Jun-22	01-Jul-22
2021	17-Apr-21	23-Apr-21	30-May-21	14-Jun-21	13-Jul-21
2020	09-Apr-20	22-Apr-20	18-May-20	31-May-20	17-Jul-20
2019	11-Apr-19	19-Apr-19	14-May-19	01-Jun-19	05-Sep-19
2018	14-Apr-18	04-May-18	15-May-18	09-Jun-18	13-Jul-18
2017	07-Apr-17	11-Apr-17	13-May-17	02-Jun-17	21-Jun-17
2016	20-Apr-16	04-May-16	15-May-16	06-Jun-16	17-Jun-16
2015	12-Apr-15	21-Apr-15	16-May-15	11-Jun-15	25-Jun-15
2014	09-Apr-14	16-Apr-14	16-May-14	12-Jun-14	25-Jun-14

Table 3: Green Hairstreak flight period dates for 2014 – 2023

Notice that the last recorded sighting is atypically late in four out of the last six years; it seems unlikely that these can all be misidentifications, especially given that the Green Hairstreak ought, at least in principle, to be the least misidentified species in the UK. The early September record in 2019 is especially interesting. Also of interest are the records for 13 July in two separate years, and more particularly for 2018, when the date represents not an isolated record but nine records, one for each of nine separate sections of the Aston Rowant transect. The 2021 record was also from Aston Rowant.

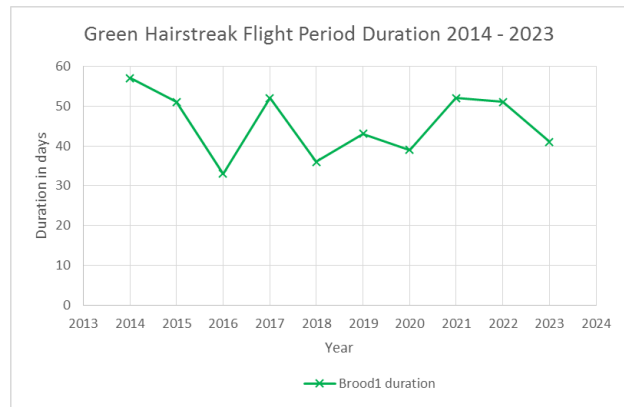


Figure 5: Green Hairstreak flight period duration

The flight period duration for each year, calculated as $p_{95} - p_{05}$, is plotted in **Figure 5**. It fluctuates around an average value of 45 days, but there is clearly no trend.

The overall population size (compared with recent years)

As discussed in the Small Blue champion report for 2023, abundance is a tricky measure to make meaningful use of, because it varies so widely from a few very high values to a majority of values of 1. One of the advantages of cluster analysis is that it provides big enough sample sizes for average values to be plausible, particularly as we can anticipate that abundance is likely to be characteristic of sites that are near to each other.

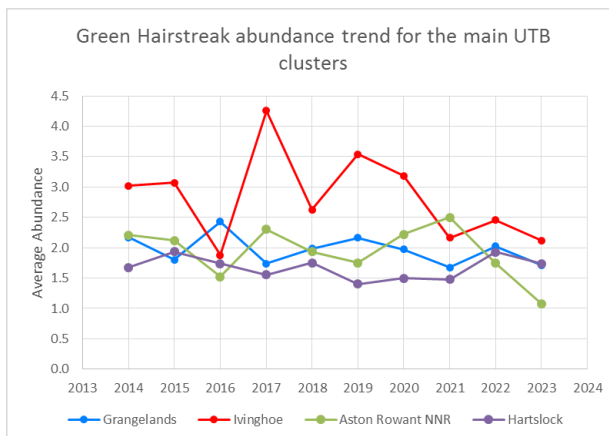


Figure 6: Green Hairstreak abundance trend for the main UTB clusters

For the four main UTB Green Hairstreak clusters, the average abundance from 2014 - 2023 is plotted in **Figure 6**. Each value plotted is an average of at least 15 individual abundance values, generally a lot more (only 4 out of the 40 averages plotted are based on fewer than 20 values).

It is clear that the Ivinghoe cluster is the one to visit if you want to see the Green Hairstreak in good numbers, although the abundance appears to have been decreasing steadily since the high point in

2017. The Aston Rowant and Grangelands clusters are comparable to each other, generally with slightly lower abundance, but no apparent trend, although abundance at the Aston Rowant cluster has dropped sharply in the last two years. The Hartslock cluster has slightly lower abundance again, but the abundance does seem stable, and not prone to the boom/bust behaviour apparent in the other three clusters.

Any changes in distribution

Lost sites

The most reliable way to identify lost sites seems to be to scrutinise isolated 1km squares, and small clusters, with a reasonable number of records. We're looking for sustained plausible evidence of occupation over several years, followed by low or zero record count recently².

On this basis, two clusters seem to merit scrutiny in 2025 (as noted in **Introduction**, it was not possible to carry out SCRIPT development and analysis work in time to issue this report before the Green Hairstreak 2024 flight period was finished). **Table 4** gives the details. Both the Calvert Jubilee NR cluster and the Watts Bank cluster have no Green Hairstreak records for 2021 – 2023, after consistent records for most or all of the preceding seven years:

Cluster	1km squares	Visits	Records	2023	2022	2021	2018 - 2020	2014 - 2017
Calvert Jubilee NR	3	343	46	0	0	0	18	28
Watts Bank	2	302	8	0	0	0	4	4

Table 4: Clusters from which Green Hairstreak may have been lost

The only isolated 1km square with the potential to be a lost site is the Blue Lagoon at Bletchley, but record numbers are too low to give a reliable steer (no records for 2019 - 2023, and only three records for 2014 – 2018). What does seem clear is that the species has only ever been present there at a very low level in recent years.

New sites

To identify new sites, we still need to be looking for small clusters or isolated 1km squares, but with the opposite profile: sustained absence of evidence of occupation (infrequent or no records) over several years, followed by a small number of records in each of recent years.

Three clusters stand out as new sites (although none of them had any records from 2023), with details given in **Table 5**:

Name	1km squares	Visits	Records	2023	2020 - 2022	2017 - 2019	2014 - 2016
Wytham Woods	2	217	15	0	3	12	0
Cock Marsh	3	131	10	0	1	9	0
Wasing	2	48	7	0	4	3	0

Table 5: Newly-discovered or newly-colonised Green Hairstreak clusters

One isolated 1km square also deserves mention as a new or previously unrecognised site: Broadwell disused airfield in SP2406, which is approximately 20 km to the west of the

² Ideally, this analysis would look at the number of visits per year rather than simply an aggregated visit count, to confirm that absence of records is not simply the result of absence of visits, but this is a refinement that will have to await future development of SCRIPT.

nearest cluster. There are two Green Hairstreak records from 2021 and five more from 2022 (four of them the author's). Although Green Hairstreak was not recorded in 2023, the author recorded it there again on 25 May 2024. With records from three of the last four years, and no prior records, this is a noteworthy newly-discovered or newly-established colony ... especially as the visit count is only 15, so the 1km square has a value of 2.1 for visits per record, much lower than the typical value of 10 or more.

Other sites of note

As well as the large clusters comprising well-known and popular sites, where lots of records testify to well-established and widespread populations, there are two small clusters for which relatively small numbers of records still indicate well-established populations:

- The Westcott cluster comprises only two 1km squares, and has between 1 and 4 records from each year of 2014 – 2023.
- The Dry Sandford Pit cluster comprises five 1km squares, and has between 1 and 4 records from each year of 2014 – 2023 except one (2017).

Observations on foodplants and immature lifecycle stages

The Green Hairstreak data set is virtually devoid of records for any life cycle stage except adult. The Green Hairstreak is known to be unusually catholic in its choice of food plant, which may help to account for the paucity of records of immature lifecycle stages; it is unusually difficult to search for immature life cycle stages when they could be found on any of several different foodplants! The UK Butterflies website (www.ukbutterflies.co.uk) lists seven food plants used by the Green Hairstreak, but in alphabetical order rather than in any order of preference. The Butterfly Conservation website (www.butterfly-conservation.org) is more helpful, categorising preferred food plant by underlying geology:

- Calcareous grassland: Common Rock-rose and Common Bird's-foot-trefoil
- Heathland and other habitats: Gorse, Broom and Dyer's Greenweed
- Moorland, and throughout Scotland: almost exclusively Bilberry
- Geology unspecified: Other foodplants include Dogwood, Buckthorn, Cross-leaved Heath and Bramble

In total, there are just six records of immature life cycle stages in the UTB Green Hairstreak data set: two old (prior to 2000) records of eggs, and four records of larvae, of which three are all from the same recent visit to MOD Arccott in 2022. MOD Arccott is top of the list of random 1km squares, because as well as the larvae records, it also has four records of adult Green Hairstreak, from three different dates in 2022. Two of the three larvae records from MOD Arccott note that the larvae were found on Dyer's Greenweed, consistent with the underlying acid clay geology (classed as "Heathland and other habitats" for this purpose). The recorder informs me that these larvae records were "by-catch": identified during a search for moth larvae rather than as the result of looking specifically for Green Hairstreak larvae.

Final food for thought

The number of random 1km squares identified by the analysis is comparable to, indeed slightly higher than, the number identified in the Small Blue report for 2023. In that report, the analysis was compared with a basic analysis of a Chalk Hill Blue data set, to try and get a handle on the incidence of false positive records in the Small Blue data set. The Chalk Hill Blue was found to have almost no random 1km squares, indicating at least the possibility that many if not most of the Small Blue random 1km squares represent bogus records. What then are we to make of the Green Hairstreak, which like the Chalk Hill Blue ought to be very seldom misidentified, and yet has even more random 1km squares than the Small Blue? We can only speculate, but this unexpected finding does indicate that the Green Hairstreak may be covertly distributed a lot more widely than currently known.

In UTB we are accustomed to thinking of the Green Hairstreak as a single-brooded species, but this may not be universally true elsewhere. The Norfolk branch of Butterfly Conservation has reported Green Hairstreak sightings in August. The author has also corresponded with a Jersey resident who has observed the Green Hairstreak on Jersey much later in the year than almost all UTB records. Almost, but not quite; as pointed out in **Flight period**, there are a small number of anomalously late UTB records (in mid-July, and even one in early September) from the last 10 years. Scrutiny of older records reveals that this is not a new thing. There are another seven records from July and August from five different years between 1998 and 2013. It is implausible that all these records should be the result of misidentification; as noted already, in principle the Green Hairstreak should be Britain's least-misidentified species.

Ostensibly, these anomalous sightings suggest that the Green Hairstreak may be double- or even triple-brooded in some circumstances, but this is not the only explanation. A phenomenon called diapause, in which an organism takes "time out" in the course of its usual life cycle, in response to specific atypical environmental conditions, could also be responsible.

When thinking about the phenology of the Green Hairstreak, we also need to consider possible links with foodplant. Nick Bowles informs me that the species emerges characteristically earlier in the north of the UK, whereas intuition would suggest that it ought to emerge later because the climate is colder, all other things being equal. Clearly, all things are not equal, and one thing that is not equal is the foodplant, which as noted in **Observations on foodplants and immature lifecycle stages** is typically Bilberry in the north of the UK, rather than other food plants such as Common Birds-foot-trefoil and Common Rock-rose used in the south. This observation indicates at least the possibility that the Green Hairstreak's phenology might be linked to the foodplant being used.

Appendix 1: Green Hairstreak clusters

Based on visits per record, the best destination for a Green Hairstreak enthusiast seems to be the two 1km squares comprising the Westcott cluster, with 19 records from 60 visits, and hence a value of just 3.2 visits per record. All other clusters have a value of at least 6, and the majority have a value of more than 10 (the overall average is 24).

Name	Key Words	1km squares	Visits	Records	First In	Last In	Consistency
Grangelands	Bradenham, Brush Hill, Butlers Hangings, Coombe Hill, Grangelands, Lodge Hill, Munts Bank, Park Wood, Rifle Range, Sands Bank, Saunderton, Small Dean Bank, Yoesden	41	6359	653	2014	2023	100%
Ivinghoe	College Lake, Incombe Hole, Ivinghoe, Pitstone Quarry,	17	2637	431	2014	2023	100%
Aston Rowant NNR	Aston Rowant NNR, Watlington Hill	13	2394	296	2014	2023	100%
Hartslock	Hartslock, Holies, Lardon Chase	7	2046	233	2014	2023	100%
Aston Upthorpe	Aston Upthorpe Downs, Lids Down, Oven Bottom	11	1276	154	2014	2023	100%
Aston Clinton	Aston Clinton Ragpits, Crong, Dancers End, Wendover Woods	7	1766	101	2014	2023	100%
Warburg	Warburg	5	809	50	2014	2023	90%
Calvert Jubilee NR	Calvert Jubilee NR	3	343	46	2014	2020	100%
Devil's Punchbowl	Devil's Punchbowl, Hackpen Hill, Pigtrough Bottom, Sparsholt Firs	6	279	41	2014	2023	100%
Wildmoor Heath	Broadmoor Bottom NR, Edgbarrow Woods LNR, Owlsmoor, Moor Green Lakes NR, Wellington College, Wildmoor Heath	12	1681	40	2014	2023	100%
Swyncombe Downs	Sliding Hill, Swyncombe Downs	3	325	37	2014	2022	89%

Homefield Wood	Frieth, Homefield Wood, Nineacres, Shillingridge Wood, Strawberry Bank	12	1974	35	2014	2023	100%
Oakley Hill	Oakley Hill, Chinnor Quarry	3	429	34	2014	2023	80%
Seven Barrows	Crog Hill, Seven Barrows, Sheepdrove Farm	7	740	21	2014	2023	60%
Westcott	Westcott, Wotton Underwood DRL	2	60	19	2014	2023	100%
Dry Sandford Pit	Dry Sandford Pit, Cothill Pitt, Hitchcopse Pit	5	557	16	2014	2023	90%
Greenham Common	Greenham Common, Crookham Common	5	975	16	2014	2023	80%
Prestwood LNR	Prestwood LNR	3	656	16	2014	2022	67%
Wytham Woods	Wytham Woods	2	217	15	2018	2022	80%
Swains Wood	Litmore Shaw, Swains Wood, Wormsley	2	89	11	2014	2023	60%
Decoy Heath	Decoy Heath, Padworth	4	494	10	2014	2023	60%
Cock Marsh	Cock Marsh, Winter Hill	3	131	10	2017	2022	67%
Bulstrode	Bulstrode, Wapseys Wood, Stampwell Farm	5	187	9	2014	2021	75%
Watts Bank	Cleeve Hill, Watts Bank	2	302	8	2014	2020	71%
Cholsey	Cholsey, Crowmarsh Gifford, North Stoke	3	326	7	2014	2023	50%
Wasing	Wasing	2	48	7	2018	2022	80%
Gomm Valley	Gomm Valley BBOWT	2	316	7	2015	2023	67%
Swinley Brick Pits	Englemere, Swinley	4	156	6	2014	2023	50%
Little Wittenham	Little Wittenham, Northmoor Trust Farming Project	2	218	4	2014	2021	50%
Little Hidden Farm	Little Hidden Farm	2	32	2	2014	2018	40%

Appendix 2: Green Hairstreak isolated 1km squares

Broadwell disused airfield has the lowest value of visits per record (2.1). The overall average is much higher (18).

Name	1km square	Visits	Records	First In	Last In	Consistency
Paices Wood	SU5863	282	37	2014	2023	100%
Bushy Bank	SU5891	106	23	2017	2023	71%
Ardley Quarry	SP5327	322	20	2014	2022	67%
Holtspur Bottom	SU9190	542	13	2014	2023	60%
Broadwell disused airfield	SP2406	15	7	2021	2022	100%
Warren Bank NR	SU6585	19	4	2014	2022	44%
Westridge Green North	SU5580	92	3	2020	2023	75%
Blue Lagoon NR, Bletchley	SP8632	45	3	2015	2018	75%
Piddington, Buckinghamshire	SU8093	78	2	2021	2023	67%

Appendix 3: Green Hairstreak random 1km squares

Visits per record varies widely, from 1 (a lucky strike!) to 701; one third of all random 1km squares had more than 100 visits per record.

Name	1km square	Visits	Records	From
MOD Arncott	SP6016	54	4	2022
Sydlings Copse	SP5509	317	3	2022
Shabbington Wood (M40 compensation area)	SP6210	312	2	2023
Woolley Down	SU4081	4	2	2023
Greenfield	SU7191	18	2	2022
Headington Quarry	SP5406	336	2	2022
Silwood Park, Ascot	SU9369	18	2	2018
Snelsmore footpath	SU4670	18	2	2018
Owlpit Copse (transect section 2?)	SU5873	103	1	2023
Fyfield Wick	SU4197	20	1	2023
Penn Jubilee Wood	SU9192	58	1	2023
Rushymead	SU9595	420	1	2023
Boundary Brook NR Allotment	SP5304	220	1	2022
Sarsden	SP2823	85	1	2022
Maidenhead (adjacent to Maidenhead Thicket east)	SU8681	100	1	2022
Shepherd Meadows	SU8560	27	1	2021
Five Ways, Aston Rowant	SU7299	12	1	2020
Harleyford Lane	SU8384	34	1	2020

Emmer Green	SU7277	147	1	2020
Cholsey	SU6287	18	1	2020
Marsh Benham	SU4367	1	1	2020
Rebellion Studios, Didcot	SU5091	12	1	2020
Appleton 1	SP4401	123	1	2020
Green Hill, Hughenden	SU8694	32	1	2020
Widmer End	SU8897	366	1	2020
Cumnor	SP4603	18	1	2020
Jubilee River	SU9279	21	1	2019
Greatmoor	SP7022	36	1	2000
Quarry Wood	SU8584	29	1	2019
Fobney Island (transect section 4?)	SU6971	186	1	2019
Bix & Assendon CP	SU7485	10	1	2019
Benson Battle Barns path	SU6190	242	1	2019
Furze Platt, Hindhay Lane	SU8783	47	1	2019
Cores End (adjacent to Slate Meadow)	SU9087	101	1	2019
Hazebrouck Meadows (South)	SU7765	27	1	2019
Woolley Firs (environmental education centre)	SU8579	117	1	2019
Maiden Erlegh Park	SU7470	701	1	2019
Harts Hill Road	SU5368	21	1	2019
Marish Lane & Denham	TQ0288	12	1	2010
Caversham Lakes	SU7475	4	1	2018
Grendon & Doddershall Woods	SP7020	258	1	2018
Basildon	SU5976	516	1	2018
Chimney Meadows	SP3501	23	1	2018
Bramshill Plantation	SU7463	7	1	2018
Touchen-end	SU8876	33	1	2018
Larks Hill Park (nearby)	SU8670	53	1	2018
Gore Hill South	SU4983	18	1	2017
Rollright Stones	SP2930	16	1	2017
Astley Bridge Farm to Brashfield	SP5818	11	1	2017
Chieveley (A34 embankment)	SU4772	11	1	2016
Burghfield	SU6669	25	1	2016
Bracknell, nr Peacock Farm	SU8468	77	1	2015
Harwell	SU4989	592	1	2015
Sparsholt	SU3587	221	1	2011
Gorrick Plantation	SU8165	20	1	2015
Chawridge Bank	SU8973	35	1	2005
Crafton	SP8919	4	1	2014