

GRAYLING REPORT 2022

Butterfly Conservation Upper Thames Branch

Des Sussex - UTB Grayling species champion

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<https://www.upperthames-butterflies.org.uk/specieschamps>

The Grayling butterfly *Hipparchia semele* is one of our rarest and most threatened species and is listed under Section 41 (S41) of the 2006 Natural Environment and Rural Communities (NERC) Act as a 'priority for conservation action'. At a national level, in 2022 the Grayling was moved from Vulnerable to Endangered on the butterfly 'Red List' .

<https://butterfly-conservation.org/news-and-blog/half-of-british-butterfly-species-on-new-red-list>

The "The State of the UK's Butterflies 2022 Report" * report cites that "Although it remains widely distributed, mainly around the UK coastline, there is increasing concern about Grayling, which has suffered a severe long-term decline. Since 1976, the abundance of this species has decreased by 72% and its distribution by 92% at the UK level, and with major declines in both measures in England, Scotland and Wales. These ongoing, rapid declines recently led to Grayling being upgraded from Vulnerable to Endangered on the GB Red List. Dependent on fine-leaved grasses growing in sparse vegetation with much open ground or rock, the butterfly faces threats from habitat degradation due to ecological succession and nitrogen deposition, and from consequent small population size and increasing isolation.

<https://butterfly-conservation.org/news-and-blog/half-of-british-butterfly-species-on-new-red-list>

*download the State of the UK's Butterflies 2022 Report [here](#)

<https://butterfly-conservation.org/state-of-uk-butterflies-2022>



Grayling often fly up to trees and perch / roost on the trunks of pine and birch in the forests. They can be hard to see until they move.

The Grayling in Berkshire in 2022

In 2022 there were 141 individual Grayling butterflies reported from the UTB area. All sightings were from the core areas of south Berkshire and along the Hampshire and Surrey borders. This total was down on the last few years, in part due to the lack of high counts from Mortimer which had boosted the totals in 2019-21.

There were 61 separate records submitted by 25 different recorders.

The recorded flight season in Berkshire during 2022 was 84 days running from 24th June to 17th September. Once again most records were of singles (39) or in the 2-5 range (16). Only 7 records were counts of 6 or more, and the highest count was just 11 from Buckler's Forest. The butterflies either endured or enjoyed the exceptional heatwave, during which most of the grasses and flowers on the dry heaths became parched and dried to a crisp. The fine grasses on which larvae depend did recover quickly once the rains arrived again, and it will be interesting to see how the Grayling numbers fare in 2023 and if there is any positive or negative legacy of the heatwave & drought.

In table 3 below I have listed all the tetrads where Grayling has been recorded since 1997, a few of which are just over the boundary in N Hampshire. It has been seen in a total of 38 tetrads since 1997, but only from 20 of those tetrads since 2017. It has almost certainly been lost from some locations, and it has not been recorded from 8 previously occupied tetrads for over 20 years. The table may prompt some searches for suitable habitat and butterflies in those tetrads.

Buckler's Forest in Crowthorne was again a good place to see the species (and very accessible – although the car park is often full), and the sites at Greenham to Crookham Common, 50 & 100 Acres Pieces, Barossa, Swinley Forest, and Buttersteep Forest all continue to hold populations dispersed over large areas. It was good to get some records from BBOWT's Wildmoor Heath and Broadmoor Bottom Nature Reserves, also from Burnt Common and an unexpected record came from farmland at Finchampstead at some distance from where the species has been seen before. This may well have been a wandering individual which was taking advantage of the heatwave to dispersing in search of suitable breeding habitat.

Many heathland and forestry site managers undertake habitat and estate management which benefits the Grayling, such as scrub clearance, heather and grass mowing, bare ground creation, Bracken control, ride verge widening, and creation of new patches of open habitat with heathers and acid grassland grasses and flowers. Some examples are shown below.

Many thanks to all who look out for this species and submit records, or help with site and habitat management.

Des Sussex 5 March 2023

A Grayling in a little 'sun trap' at Barossa. The fine grasses that the caterpillars depend on soon went dry and brown in the 2022 drought & heatwave. Fortunately they did green up again when the rains finally arrived.



One of the more typical places to see Grayling is on bare sandy/gravelly ground, often on paths and tracks at heathland and forestry land.

Habitat Management for Grayling and other species that favour 'early successional' habitats



Bare ground creation.
A mini-excavator is scraping off the vegetation to expose bare sand in patches on a heathland nature area near Ascot. The bare area was used in 2022 by various burrowing bees and wasps, green tiger beetles, and Grayling.

Heather structural diversity.

A tractor mounted flail collector is mowing patches of heather in Buttersteep Forest. This creates a varied age and height mosaic in the heather, with lots of valuable 'edge' habitat. Both Grayling and Silver-studded Blue benefitted from this work in 2022.



Heathland habitat restoration in Swinley Forest - Autumn 2022



A 5 ha site at Wickham Bushes to the south of Caesars Camp had all the young birch and pine trees cleared and removed as biomass.



Following initial clearance there was still a thick layer of organic material over the sandy soil.



The organic layer was carefully scraped off and removed from the site to enable regeneration of heather and fine grasses. The aim is to establish a heathland / acid grassland habitat. The left hand side of this photo shows an area that has been scraped. Vegetation growth in 2023 to see if the site needs any additional seed.

Appendices

Table 1. Recent trends in Grayling recording in the UTB area

Table 2. Distribution trends

Table 3. Tetrads occupied since 1997 and in 2022

Figure 1 Map of 2022 data at a tetrad resolution

Habitat information

Table 1. Recent trends in recording in UTB area

Year	Number of records	Number of recorders	Total Grayling butterflies counted	Highest count	Number of Occupied Monads (1km square)	Number of occupied tetrads (2x2 km square)	First date	Last date
2016	28	13	135	28		9	14/07	30/08
2017	33	14	257	60		11	04/07	15/09
2018	19	15	92	32		11	29/06	16/09
2019	44	25	230	67		15	08/07	08/09
2020	47	18	384	136	21	13	22/06	15/09
2021	68*	28	180	35	23	14	10/07	21/09
2022	61	25	141	11	25	14	24/06	17/09

*24 of the 68 records were from a single group survey visit.

Table 2. Distribution trends for 5 year recording periods (does not include 'dubious' outlier records)

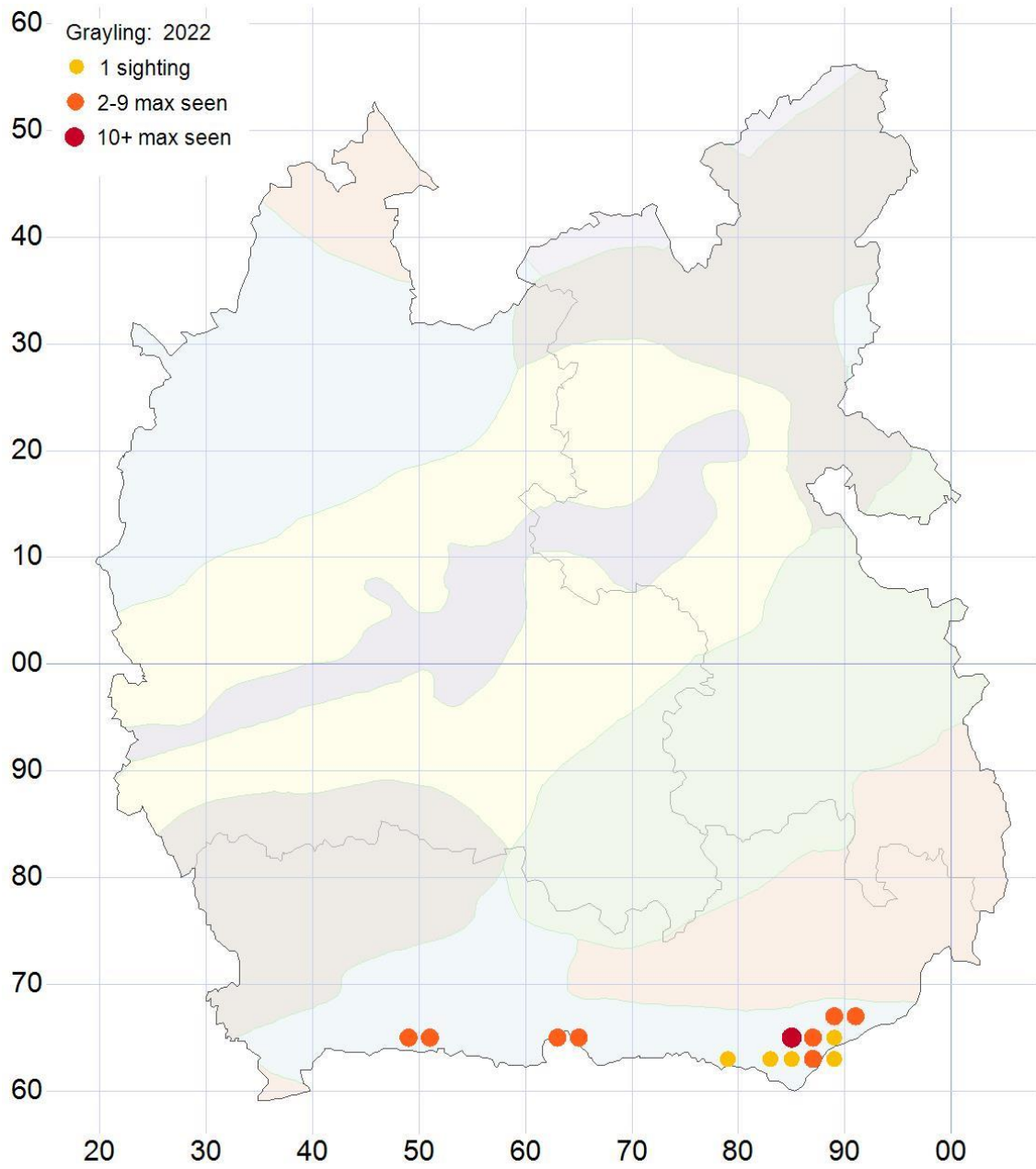
Year	Total Number of occupied tetrads (2x2 km) squares		
1997-2001	23		
2002-2006	15		
2007-2011	16		
2012-2016	20		
2017-2021	25		
2022-	14		

Table 3. Tetrads occupied since 1997
Green shading = 2022 records

	Tetrad	Tetrad location & sites	Most recent record	Recorded 2022
1	SU4264	Crockham Heath to Hamstead Park	1997-2001	
2	SU4864	Greenham	2022	YES
3	SU5064	Greenham Common to Crookham Common	2022	YES
4	SU5264	Crookham Common	2007-2011	
5	SU5268	Bucklebury Common	1997-2001	
6	SU5662	Brimpton Common to Wasing	2012-16	
7	SU5862	Paices Wood	2017-21	
8	SU5864	Paices Wood to Aldermaston	2017-21	
9	SU6060	Pamber Forest/Heath (Hants)	1997-2001	
10	SU6062	Silchester Common & Decoy Heath Nature Reserve (part Hants)	2012-16	
11	SU6064	Padworth Common	2017-21	
12	SU6262	Silchester Common & Beynons Inclosure	1997-2001	
13	SU6264	Padworth/Burnt Common, Fifty Acre Piece, Hundred Acre Piece,	2022	YES
14	SU6464	Holden Firs	2022	YES
15	SU7262	Wellington Country Park (Hants)	2002-06	
16	SU7462	Bramshill (Hants)	1997-2001	
17	SU7862	Blackwater Valley- Fleethill to Moor Green 'new workings' west	2022	YES
18	SU8062	Moor Green 'new workings'	2017-21	
19	SU8064	Simons Wood, Gorrick Plantation	2021	
20	SU8066	Gorrick Plantation	2017-21	
21	SU8262	Wellington College Heath	2022	YES
22	SU8264	Gorrick Plantation, Heathlake	1997-2001	
23	SU8462	Wildmoor Heath NR, Broadmoor Bottom NR	2022	YES
24	SU8464	Crowthorne Woods, Buckler's Forest, Swinley Forest (Hut Hill)	2022	YES
25	SU8466	Beaufort Park, Downshire Golf	2007-11	

		Course		
26	SU8660	Royal Military Academy Sandhurst	2002-06	
27	SU8662	Barossa: Broadmoor Bottom to Wishmoor Bottom. Poppy Hills to Swinley Forest Lower Star Post	2022	YES
28	SU8664	Swinley Forest: Caesar's Camp & The Look Out to Upper Star Post & Lower Star Post	2022	YES
29	SU8862	Swinley Forest: Lower Star Post SE	2022	YES
30	SU8864	Swinley Forest: Pudding Hill and Penny Hill to Rapley	2022	YES
31	SU8866	Swinley Park, The Berkshire GC	2022	YES
32	SU8868	Whitmoor Bog	2012-16	
33	SU9064	Buttersteep Forest: Dukes Hill. The Berkshire GC, Swinley Forest GC	2017-21	
34	SU9066	Buttersteep Forest, Swinley Brick Pits, The Berkshire GC	2022	YES
35	SU9068	Englemere Pond LNR	2021	
36	SU9466	Sunningdale GC, Chobham Common (Surrey)	1997-2001	
37	SU9468	Silwood Park	2012-2016	
38	SU9666	Chobham Common N (Surrey)	1997-2001	

Figure 1 Map of 2022 data at a tetrad (2x2km) resolution



Habitat requirements and management guidance

The butterfly depends on early successional habitats with plenty of bare and sparsely vegetated ground. In our local area it is restricted to sandy and gravelly soils. Even within nature reserves and protected sites it is at risk of the loss of suitable 'open' habitat if there is a lack of management. Without adequate management natural succession tends to make heathland, grassland and open forestry areas too overgrown for the Grayling to complete its lifecycle. Management activities such as rotational mowing, grazing, or even surface 'scraping' is required to create some form of 'disturbance' to provide suitable open conditions, with a supply of the short fine-leaved grasses that the caterpillar feeds on, and flowering nectar plants such as heathers which the adults feed from. The Grayling appears to be quite mobile and able to find newly restored or created patches of habitat within a few km of its local range.

Useful weblinks

<https://butterfly-conservation.org/butterflies/grayling>

<https://www.upperthames-butterflies.org.uk/specieschamps>

Grayling Species Factsheet

<https://butterfly-conservation.org/sites/default/files/1.grayling-species-factsheet.pdf>

Bare Ground for Butterflies and Moths

https://butterfly-conservation.org/sites/default/files/2021-12/BareGround_WalesLeaflet_2.pdf