WMBC Malverns Lost Fritillary Project – Report July 2020

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Video guides

Video link: CTRL & CLICK… **MLFP SURVEYS MAY & JUNE 2020**

Video link: CTRL & CLICK… **EWYAS HAROLD HABITAT MANAGEMENT 2020**

WMBC Malverns Lost Fritillary Project – Report July 2020

Attachments…

- WMBC TRANSECT DATA 1987 – 2004 OF LOST FRITILLARIES
- Historical Records –Worcs. Biological Records of Lost Fritillaries
- UKBMS Butterfly Records around the Malverns 2019
- UKBMS Butterfly Records around Proposed Receptor Sites 2019
- A Survey of Violets around Proposed Receptor Sites - John Tilt, WMBC, 2017
- UKBMS Butterfly Records around Proposed Donor Sites 2019
- Timed Counts at Donor Sites Ewyas Harold, Herefordshire
- Timed Counts at Donor Sites Wyre Forest, Worcestershire

Mel Mason, Ian Duncan, Peter Seal
WMBC Malvern Local Group

Available on request:

1. 2016 Survey of Habitat Southern Malverns Natural England Katey Stephen
2. 2020 Survey Malvern (Receptor) Sites Nick Williams
3. 2020 Survey Ewyas Harold / Wyre (Donor) Sites when available

Ewyas Harold May 2019

Wyre Forest 2013

WMBC Malverns Lost Fritillary Project 2020

Introduction

The Malverns was described by Professor Jeremy Thomas in 1989 as '*one of the few places where High Brown Fritillary can be seen in any numbers, sweeping up the hillsides or fluttering around gaps in the bracken. It is heartening to know that the management of the area is specifically designed to encourage this and other Fritillaries*' [Butterflies of Britain & Ireland, Thomas & Lewington 1991 BWP]. Sadly, before the end of the twentieth century the Malverns had lost High Brown Fritillary, Pearl-bordered Fritillary and Small Pearl-bordered Fritillary. In 2014 he wrote: '*It was evidently a much harder task than was envisaged in those optimistic days*.' [Thomas & Lewington, Revised Edition 2014].

For many years WMBC has discussed a possible reintroduction of one or more of our lost Fritillaries. During the past 20 years volunteers surveyed their former strongholds for dog-violets, the larval host-plant, while habitat management continued in an ad-hoc fashion linked to occasional sightings in the hope that breeding pairs might return and re-establish a new colony. However, it is clear this cannot happen without a carefully planned reintroduction alongside modified habitat management only recently understood on more successful Fritillary sites around the UK, including Herefordshire and Worcestershire.

In February 2020, WMBC made the reintroduction of one of our lost Fritillaries a priority over the next five years – called the Malverns Lost Fritillary Project (MLFP).

Then in March, Covid-19 and "Stay at Home" bought all activities to a standstill.

In April, following online discussions with Ian Duncan and Peter Seal we decided to set up a local group to steer the project through the obvious difficulties imposed by social distancing and limited access to the countryside. We investigated potential receptor sites, probable donor sites, advice on habitat management, recent surveys, and we researched the historic data on all our past Fritillaries – High Brown, Pearl-bordered, Small Pearl-bordered, Dark Green and Silver-washed. Based on all these data we now had information to help answer our initial questions:

- Why did the Lost Fritillaries become extinct on the Malverns?
- Which Fritillary Reintroduction will succeed on the Malverns?
- Is it a habitat problem?
- Where are our receptor sites?
- Where are our donor sites?
- Do we have support from our partner organisations?
- Can habitat management be modified this winter rather than wait another year?

Introduction… contd.

In May when individuals were allowed to meet one to one with social distancing, we met on Chase End Hill to assess and video record the state of the habitat, in particular the distribution of violets, the larval host-plant. A week later we met again to look at Swinyard Hill and Eastnor. All sites appear to be ready for a reintroduction with modified habitat management.

In 2016 Natural England completed a survey of the selected sites with encouraging counts of violets distributed around the southern Malverns, but a more recent and more comprehensive survey – including the state of the habit – was necessary to meet the needs and the confidence of our partner organisations – AONB, MHT, Bromesberrow Estate, Eastnor Estate.

In late May and early June I accompanied Nick Williams, a professional consultant, to complete a two-day survey of the selected sites. His report was completed by mid June. Part of his conclusion states:

"*If a reintroduction is to take place, I believe that it should be of Pearl-bordered Fritillary. The habitat on the Malverns is not very different from that at Ewyas Harold, where appropriate management of the bracken and scrub has yielded spectacular increases in butterfly numbers, especially of the target PBF. That site and the Wyre Forest where similar success has followed carefully targeted management are relatively nearby and thus similar in climatic terms*."

We are now organising a survey of our donor sites while we contact our partners to discuss the reintroduction programme, habitat management and funding. Then we intend to submit a BC Proposal before autumn and, next spring, to introduce adult PBF onto selected sites from donor sites Wyre Forest and Ewyas Harold – alongside a breeding programme of captive larvae off-site.

The following report provides more detail and a proposed schedule & way forward.

Mel Mason / Vice Chair WMBC / July 2020
On behalf of West Midlands Butterfly Conservation
Local Steering Group including Ian Duncan & Peter Seal / Past Chairs WMBC

Mel Mason
West Midlands Butterfly Conservation
Volunteer Group
16 Albert Road North,
Malvern
WR14 2TP

malvernhills
Area of Outstanding Natural Beauty
PARTNERSHIP

Manor House, Grange Road, Malvern
Worcestershire WR14 3EY
Tel: 01684 560616
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Web: www.malvernhillsaonb.org.uk

24th June 2020

Dear Mel,

Malverns Lost Fritillary Project: letter of support.

We would like to offer this project our full support, and £500 towards the professional survey costs. The offer is based upon your proposal, emailed to me on 18/6/20, and will be paid against work done, plus invoices dated in this financial year.

We are prepared to consider further contributions as the project evolves, but in the meantime, please use this letter as evidence for other interested parties or funders, of our support.

It's an exciting project and we look forward to working closely with you, as we have so well before, to deliver it.

Yours sincerely,

David Armitage
Assistant AONB Manager

WMBC Malverns Lost Fritillary Project 2020

Aim – to reintroduce Pearl-bordered Fritillary *Boloria euphrosyne* [EN] back onto its former strongholds of the southern Malverns during the 20th Century – Swinyard Hill, Chase End Hill and Eastnor / Obelisk

In the longer term, to consider further reintroduction of High Brown Fritillary *Argynnis adippe* [CR] and/or Small Pearl-bordered Fritillary *Boloria selene* [NT] on their former strongholds up until the early part of the 21st Century.

Purpose

PBF is considered Endangered (EN) in both UK & Ireland - 95% decline on occurrence and 71% decline in abundance between 1976-2015 [BC State of Butterflies 2015] but is successfully managed at two nearby sites of Wyre Forest in North Worcestershire and Ewyas Harold in South Herefordshire. The proposed Malvern sites sit almost equidistant between these two successful PBF sites and appear to be well managed for a successful reintroduction.

Landscape and Geology and Flora

The Malvern Hills is in an Area of Outstanding Natural Beauty (AONB). The 14km spine with 22 individual summits - between Worcestershire Beacon 425m in the north and Chase End Hill 191m in the south - runs north-south and straddles the Worcestershire and Herefordshire border. The high hills are typically open acid grasslands, with the hillsides of mixed woodland, bracken and scrub, while the lower commons are primarily rough and wet grasslands. Triassic mudstones dominate the lower eastern slopes and beyond while a mix of Silurian and Cambrian limestone and sandstone and Cambrian and Ordovician mudstone dominate the lower western slopes and beyond [Nature of the Malverns NOM p18, Duncan I… et al, (2018) Pisces Pubs.]. Natural England (NE) has designated the Malverns as a Site of Special Scientific Interest (SSSI). Most of this land comes under the stewardship of local charity the Malvern Hills Trust (MHT) while two of the sites come under the stewardship of the Bromesberrow Estate and the Eastnor Estate. These varied habitats provide a rich diversity of wildlife including 33 species of butterflies

All the proposed sites are situated on the slopes of the Malvern Hills. Swinyard Hill and Chase End Hill are composed mainly of complex igneous rocks. Eastnor (East) Estate is composed mainly of sedimentary rocks. A mix of Bracken, Grassland and important flora including violets cover all sites. Annual surveys between 2013-2020 show violets, the host foodplant, are evident in flower in good number during April and hidden in the surrounding bracken during May on all sites.

Proposed Schedule & Way Forward… 2020 / 2021 / 2022

May 2020 – WMBC visit proposed sites to re-assess habitat following annual violet surveys and 2016 Survey by NE Katey Stephens

May – WMBC visit nearby Bringsty Common, Herefordshire as potential re-introduction site in the future

June – Ecology Consultant Survey (Nick Williams) to re-assess the habitat on the proposed sites and suggest how the habitat management can be modified over this coming winter rather wait another year

June – WMBC visit proposed donor sites Wyre Forest & Ewyas Harold and assess the suitability to provide adult PBF in spring 2020

July – Ecology Consultant Survey of proposed donor sites Wyre Forest & Ewyas Harold to assess the suitability to provide adult PBF in spring 2020

July – WMBC to contact partners AONB, NE, MHT, BROMSBERROW, EASTNOR and discuss habitat management and funding

August – complete BC Proposal Form including Survey of Proposed Malvern Sites, Proposed Donor Sites, Proposed Habitat Management by Partners and Funding Proposals.

August –contact BC fundraising

September – initiate crowd-funding programme via BC, Malvern WWT, MBG Facebook, local Industry & commerce

September –Talk to WWT members via Subscription ZOOM meeting to raise awareness, invite volunteers to take part

September – Volunteer support training programme for monitoring, habitat assessment, reintroduction, breeding, growing violets and spring nectar plants, including bugle

Winter - encourage partners to begin modifying habitat management

Proposed Schedule & Way Forward… 2020 / 2021 / 2022

Spring 2021/2022 – collect adult PBF from donor sites and reintroduce on proposed sites.

Spring 2021/2022 – monitor and assess progress, plant nectar plants

Spring 2021/2022/2023 – reassess habitat management and further reintroductions / larvae breeding programme

Annual – Assessment of habitat and autumn / winter management by WMBC and partners

Annual – Grow spring nectar plants – BC volunteers

Annual – Develop clearings / scallops for wildflower nectar sources – BC volunteers

Annual – Local crowd-funding appeal

Appearance

This attractive golden, orange and black butterfly is perhaps more easily recognised from the series of ‘pearls’ that run along the outside edge of the underside of the hindwing and covered by reddish chevrons unlike the small Pearl-bordered Fritillary with black chevrons. In the middle of the hindwing two bright patches of silver surround a central pentagonal cell containing a black dot that resembles a “duck’s head and beak”. The SPBF has a larger black dot or “duck’s eye”.

Status & Distribution & Habitat

The Pearl-bordered Fritillary has suffered a 95% decline in occurrence and 71% decline in abundance between 1976-2015 [BC State of Butterflies 2015]. It is categorised as Endangered (EN) in both UK and Ireland. It is now mainly found in isolated colonies in south-west Britain and central Scotland. Once more prevalent in open woodland clearings where it thrived alongside the practice of coppicing, it is now increasingly associated with more open bracken dominated sites facing south under careful habitat management.

Life Cycle - Imago (Adult)

This is the earliest Fritillary to emerge from the middle of April to the end of May and has a single brood. They feed from the flowers of bluebell, buttercups, Common Bird’s-foot - trefoil, dandelions, hawkweeds, Ragged-Robin, Selfheal, thistles and Tormentil but their favourite nectar source is Bugle. They tend to feed early in the morning in sunny weather but rest on flowerheads and leaves of various bushes in dull weather. Males are often seen patrolling low over the ground searching for females. When two males meet the briefest of skirmishes occurs before the two go their separate ways. If a male encounters an unreceptive female she will flutter her wings and fly off. A receptive female will fly to a suitable platform where the pair mate and stay together for 30-60 minutes. Mated females

will bask in the sunshine while waiting two days for their eggs to mature. They snap their wings shut when a male passes by to avoid unwanted attention.

Egg-laying females flutter slowly and deliberately over patches of foodplant. They prefer young plants in warm areas growing over bare ground or above heat-absorbing leaf-litter. The most widely used larval foodplant is Dog-violet although other violets are used. Eggs are laid singly, occasionally in pairs, on the underside of a leaf or on the stem or on nearby vegetation.

Life Cycle – Ovum (Egg)

The conical egg is greenish-yellow when first laid but turns yellow then grey prior to the larva emerging.

Life Cycle – Larva (Caterpillar)

The first instar emerges after about two weeks and crawls to a nearby violet plant where it feeds on the tenderest leaves. After around ten days the larva moults to form the second instar. When not feeding or basking on dead bracken / leaf litter it rests under a leaf or on the stem of the foodplant. After between one to two weeks the larva moults into the third instar. After another week or so it moults into the fourth instar. A couple of weeks later the larva enters into hibernation among dead vegetation. It awakens in early March and can be found basking on dead bracken and other leaf litter. It feeds by eating the lobes at the base of violet leaves and leaving characteristic feeding damage. Developing flower buds are also eaten. After two to three weeks the fully grown instar is 13mm long and moults into the final fifth instar. The larva is now black with a light band that runs along each side of the body with two rows of prominent black-tipped yellow spines. Larvae continue to feed by day and warm themselves on a dead bracken frond or dead leaf. The final instar larvae can move rapidly and cover large distances. After two to four weeks the larva is 25mm long

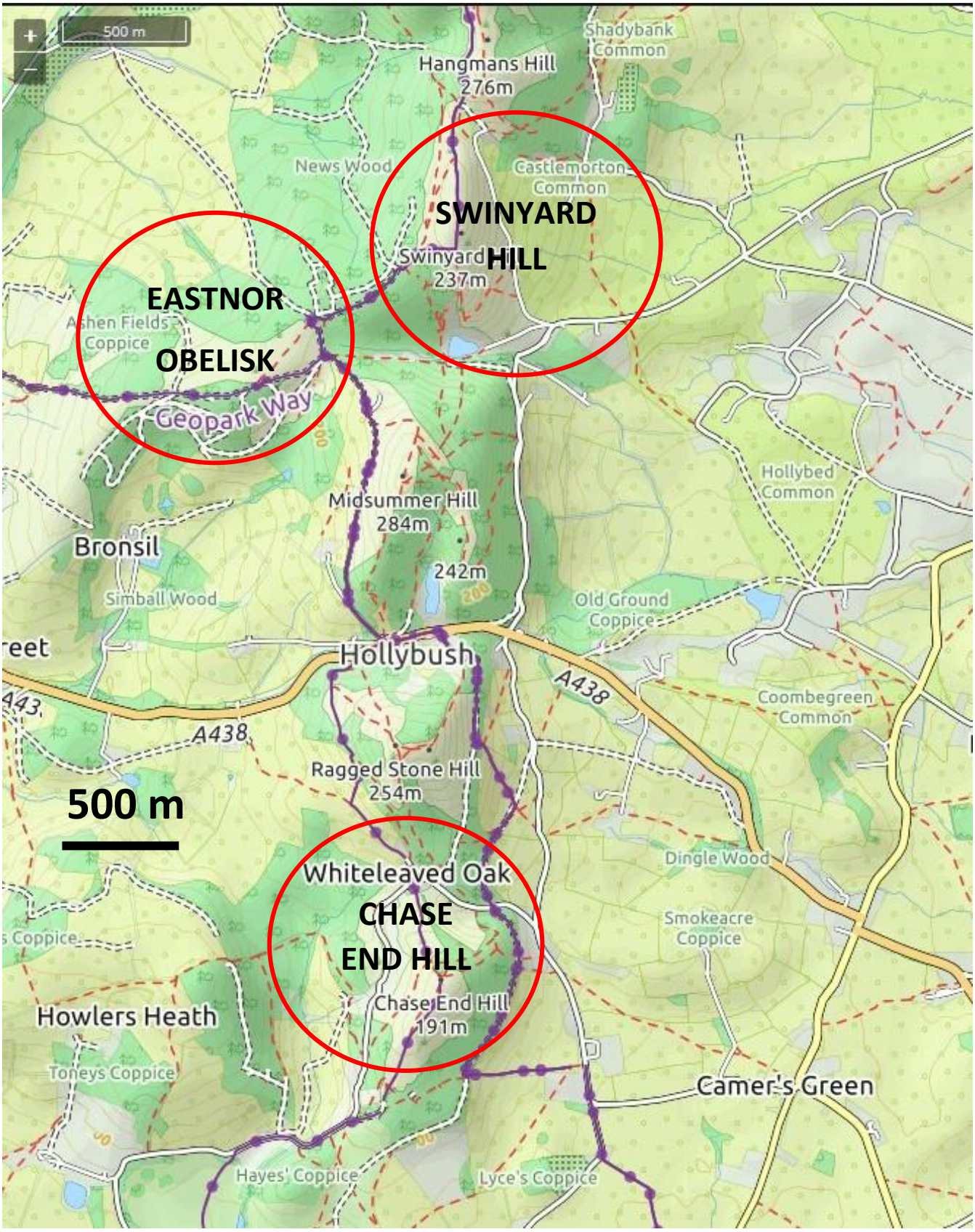
Life Cycle – Pupa (Chrysalis)

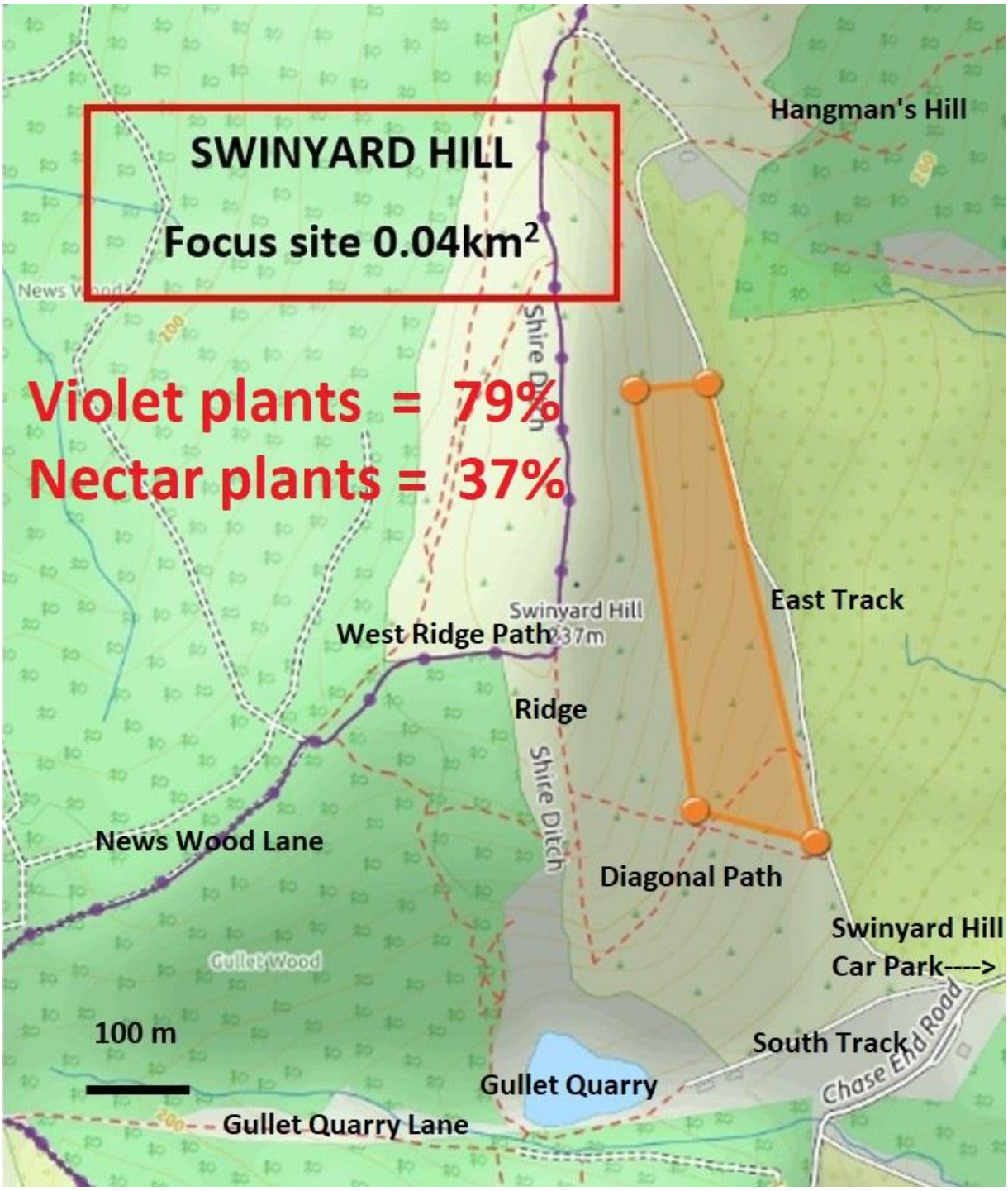
It prepares for pupation by spinning a silk pad low down in the vegetation on a leaf or stem from which it suspends itself upside down. After a few days the larva moults for the last time, revealing a 14mm long pupa attached to the silk pad by the hooks on its cremaster and resembles a dead leaf. Between 9 days and three weeks the adult butterfly emerges.

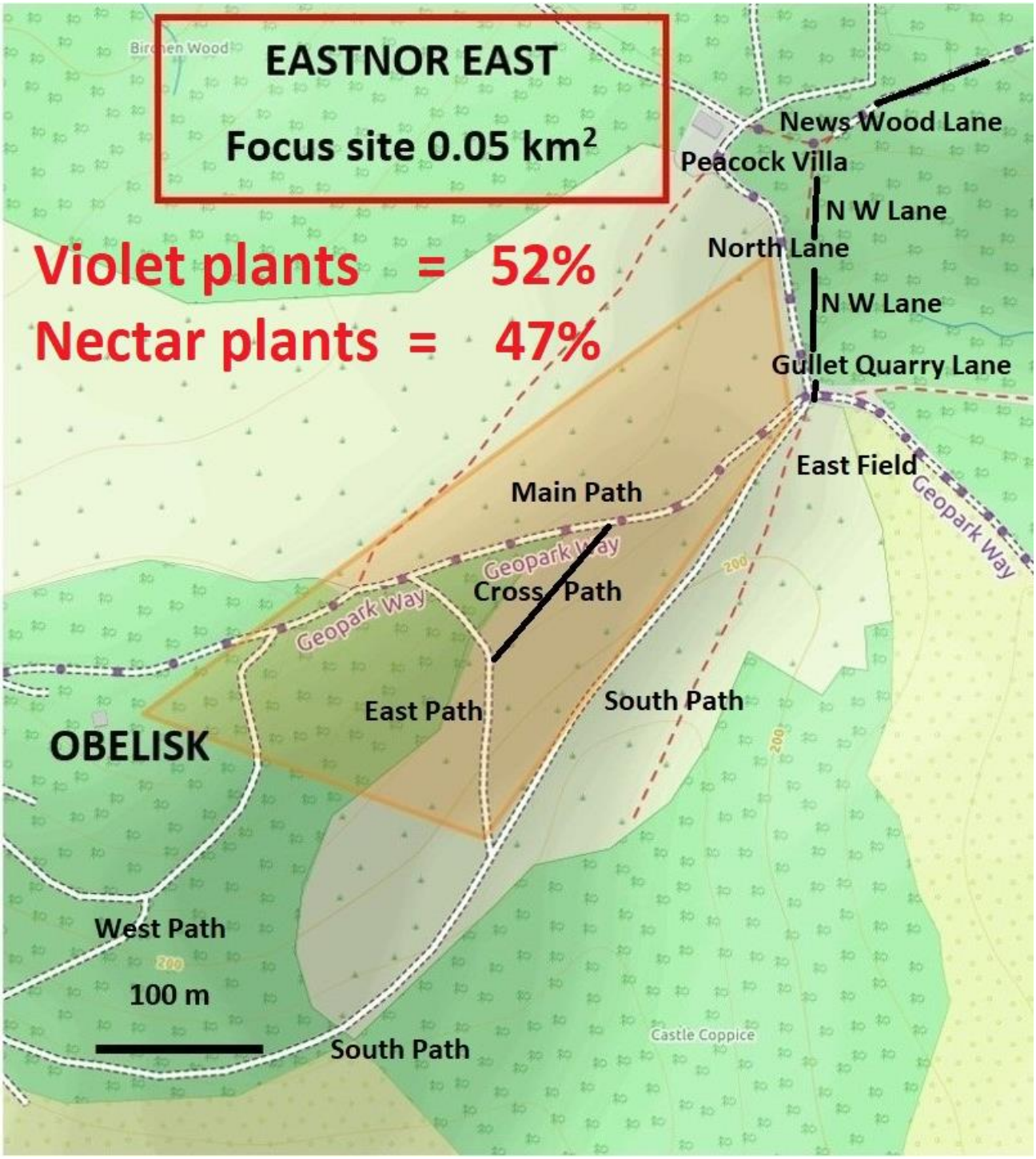
References

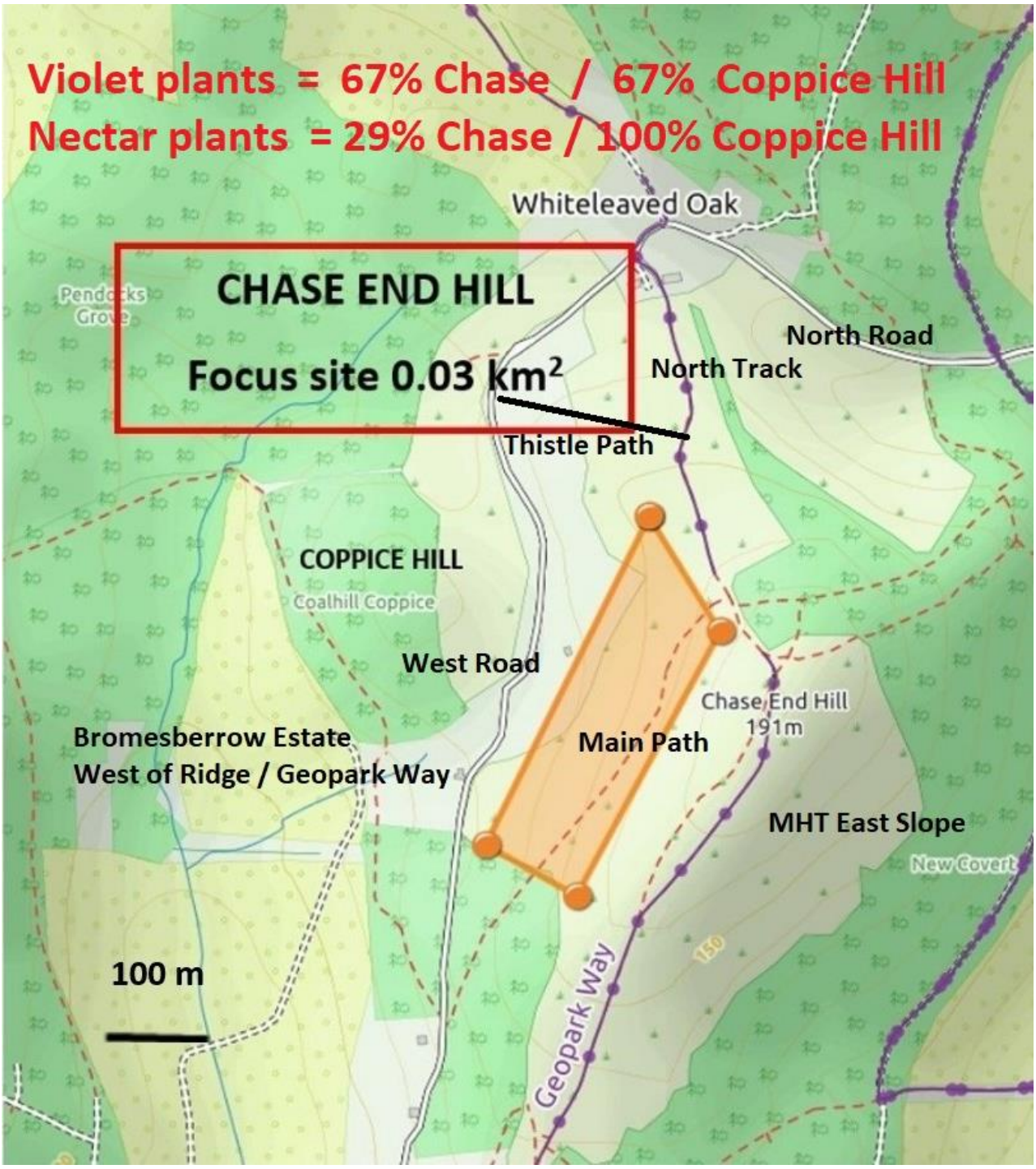
Life Cycles of Butterflies, Peter Eeles (2019) Pisces Pubs
The Butterflies of Britain & Ireland (Revised), Thomas J & Lewington R (2014) BWP
Butterflies of the West Midlands, Duncan I, et al (2016) Pisces Pubs.

Southern Malverns - Proposed Receptor Sites: Swinyard Hill, Eastnor Estate East, Chase End Hill




SWINYARD HILL
Focus site 0.04km²
Violet plants = 79%
Nectar plants = 37%
Hangman's Hill
Shire Ditch
East Track
Swinyard Hill
West Ridge Path
Ridge
Shire Ditch
News Wood Lane
Diagonal Path
Swinyard Hill
Car Park---->
Gullet Wood
100 m
South Track
Chase End Road
Gullet Quarry
Gullet Quarry Lane


EASTNOR EAST
Focus site 0.05 km²
Violet plants = 52%
Nectar plants = 47%
News Wood Lane
Peacock Villa
N W Lane
North Lane
N W Lane
Gullet Quarry Lane
East Field
Geopark Way
Main Path
Geopark Way
Cross Path
Geopark Way
East Path
South Path
OBELISK
West Path
100 m
South Path
Castle Coppice


Violet plants = 67% Chase / 67% Coppice Hill
Nectar plants = 29% Chase / 100% Coppice Hill
Whiteleaved Oak
CHASE END HILL
Focus site 0.03 km²
North Road
North Track
Thistle Path
COPPICE HILL
Coalhill Coppice
West Road
Chase End Hill
191m
Bromesberrow Estate
West of Ridge / Geopark Way
Main Path
MHT East Slope
New Covert
100 m
Geopark Way

2020 Survey of Proposed Sites by WMBC May 2020

NORTH - Swinyard Hill 227m - Eastern Slopes (MHT) – alt.220-160m area250x60m
The eastern slopes appear to be managed by cutting strips in the bracken and leaving cut bracken to the sides, ideal for the caterpillars to feed on the exposed violet leaves in spring and summer and then to hibernate in the bracken piles over winter. However, the bracken piles from past cuttings appear to be encouraging scrub growth and require further management.

CONFIDENTIAL… It is important to add that the last remaining stronghold of adders on the Malvern Hills lies adjacent to the proposed site. There is no need to interfere with this site and its management is sympathetic to the management of the PBF where many open areas between the bracken are maintained for basking adders but appear idea for violets and egg laying PBF.

Eastnor / Obelisk 225m (Eastnor Estate) – alt.230-190m area 400x125m
The eastern side of Swinyard Hill around the Obelisk is more open with longer grasses as well as bracken and scrub but violets are widely distributed and in good numbers. Nearby fields show abundant areas of violets.

Midsummer Hill and Ragged Stone Hill
These two hills link the north and southern sites. Midsummer Hill is more open on the western side with a very good violet distribution.
Ragged Stone is more overgrown with scrub and trees on the western side but violets flourish along the lower western path and on the southern ridge path. Edges of the nearby fields also contain violets. The lower path is wide in parts and may benefit from cutting back to encourage more nectar plants between northern and southern sites.

SOUTH - Chase End Hill 191m – Western Slopes (Bromesberrow Estate) – alt.175-150m area 150x60m
This western slopes are managed by cutting and grazing the bracken areas between autumn and spring. This reveals, in succession, large expanses of wild daffodils, wood anemones, violets, bluebells and finally bracken between spring and summer. Large areas of purple thistles provide good nectar source for many butterflies. The eastern slopes are managed by MHT and may offer an additional site.

Coppice Hill – adjacent (west) to Chase End Hill
This area is also very good for violets and even more nectar rich than Chase end Hill according the 2016 NE Survey.

WMBC – May 2020

2016 Survey of Proposed Sites by Katey Stephen Natural England

The results show violets recorded between 52 -79% at points on routes around Swinyard Hill, Eastnor, Midsummer, Coppice Hill and Chase End. The exception is Ragged Stone Hill where lower slopes are covered in scrub and difficult to access except for a wide path and open corridor in places.

It might be useful to open up the wide path / corridor on the western side of Ragged Stone Hill where violets are plentiful along the edges of the path (as recorded in June 2020) and provide an immediate 1km link south-to-north-to-south between Midsummer and Chase End Hills.

NE Survey 2016	Violets %	Nectar %	NE Survey 2016	Violets %	Nectar %
Swinyard Hill	**79**	**37**	**Ragged Stone Hill**		
Eastnor East	**52**	**47**	**Chase End Hill**	**67**	**29**
Midsummer Hill	**58**	**42**	**Coppice Hill**	**67**	**100**

Possible reasons for the decline of Pearl-bordered Fritillary during the 1990's

Records

PBF West Midlands counts from the same transects (data not available after 1993):

1989	90	91	92	93
235	404	430	284	132

Note the wide fluctuations per annum. The high counts of 90 and 91 followed the "good" springs of 89 and 90.

PBF Malverns (Digby) transect counts:

1986	87	88	89	90	91	92	93	94	95	96	97	98	99
20	41	6	20	17	47	38	7	6	12	1	14	0	0

The final records were on Chase End in 1998 when Mike Harper noted a female ovipositing and Digby Wood recorded four on May 24.

Note the springs of 93, 94 and 96 were "poor".
In fact, 1996 was the coolest spring of the century.

Habitat

The following were all being carried out at times in the 1990s:

-annual flailing to reduce the risk of fires
  eg 1994 Chase End whole area slashed in May (Digby Wood)
- summer path cutting to help egg-laying females
-winter raking to stimulate violets
-bracken bashing
-no management, to the extent by 2000 Chase End was very overgrown

There was no dedicated management plan to aid the PBF.

Comment

The backdrop to the loss of the PBF on the Malverns was a national 39% decline per annum up to 1999.

In the 1990s bracken management for fritillaries was in its infancy and several experimental schemes were tried by Martin Warren on the Malverns with the emphasis very much on the HBF.
It was not known how best to manage bracken habitats for the PBF .
We now know that only by regular, annual management can populations be sustained.

The dreadful springs of the early 1990s coupled with the lack of appropriate bracken management are likely to be the major causes of the loss of the PBF on the Malverns.

Data Sources

Duncan, I. 1999-2003 as branch PBF champion various unpublished notes and reports.
Minutes of the West Midlands Frits Action Group which met annually from 1999-03.
West Midlands branch annual summaries of butterfly sightings and transect results 1986-99. In particular, the Gullet to Eastnor transect walked by Digby Wood at this time was a very valuable source of information.
Wood, D. (1999) The High Brown Hills Project. Worcestershire Record.

2020 Ecology Consultant Survey of Proposed Sites
by Nick Williams

General Comments and Conclusions

I have now had a fairly good look at three of the main areas under consideration, each in different ownership, and at some of the intervening ground. Overall there are certainly plentiful Dog Violets, many under Bracken which is being managed, but often without sufficient bracken litter being left or drawn into windrows suitable for PBF overwintering.

There are a range of potential nectar sources, with the notable absence of Bugle, and at some of the sites there might need to be efforts to increase these. My visits at the end of a prolonged spring drought meant that I probably saw much less in the way of nectar plants than I would have in a normal year, but Mel Mason's photographs from previous years show how rich some of the sites are.

If thought appropriate, volunteers could be recruited to grow nectar plants for subsequent planting out on key sites, but the seed source should ideally be local or at least regional.

My understanding of the connections/flight paths for the butterflies between the main sites is not very good at present, but no doubt the Malverns Butterfly Group can provide more information on that element.

I note the difficulties experienced in trying to breed PBFs regionally and suggest that this is something which BC HQ might be able to advise on.

If a reintroduction is to take place, I believe that it should be of Pearl-bordered Fritillary. The habitat on the Malverns is not very different from that at Ewyas Harold, where appropriate management of the bracken and scrub has yielded spectacular increases in butterfly numbers, especially of the target PBF. That site and the Wyre Forest where similar success has followed carefully targeted management are relatively nearby and thus similar in climatic terms.

A reintroduction based on adult butterflies from both Ewyas Harold and the Wyre Forest should be attempted, with stock being released on the Malverns for three successive years at least, probably 50 PBFs from each donor site each year.

If someone with the time, the knowledge and the skills to breed PBFs can be found, additional stock derived from the same donor sites should be tried.

Nick Williams June 2020

M.Sc Landscape Ecology, Design and Maintenance, Wye College (London University) 1976
Certificate in Field Biology (London University Extra-mural Studies Dept) 1989
Cert. Ed (University of Central England)
Senior Warden, Wren's Nest NNR 1987-94
Lecturer in Conservation, Stourbridge College 1994-2008
Former Midlands Fritillary Project Officer 2009-12
Linking the Pearls Project Ecological Surveyor (FC/BC) 2012-15

Habitat management on all proposed sites

PBF prefer new / younger violets (mainly Common Dog-violet), biting crescents into the leaves, while SPBF prefer older violets (mainly Common Dog-violet and Marsh Violet).

First winter - allow bracken to grow in areas previously cut too regularly to provide shade and suppress excessive growth of grasses while encouraging the growth of violets.

Bracken piles previously left too long encourage bramble and scrub and need to be cut (or scraped) and placed to the side to reveal bare ground to encourage new growth of violets and create new ridges of bracken piles for hibernating caterpillars.

The imago emerges in April / May to take nectar, mate, and then lay eggs with a preference for younger violets in warm areas on bare ground or heat absorbing leaf / bracken litter.

In the spring and summer caterpillars feed on violets in the newly created open spaces, preferably where a thin layer (?) of dead bracken growth allows larvae to bask and raise their temperature.

The balance between encouraging a thin layer of dead bracken and avoiding the suppression of violet growth is important.

The caterpillars (fourth instar) then move to nearby bracken piles over winter to hibernate among dead vegetation / bracken piles.

The following spring the caterpillars resume eating nearby violets and moult to form fifth instar before pupating on nearby vegetation e.g. bracken frond.

Second or third winters - continue cutting and moving bracken into nearby ridges in selected areas on a rotational programme every two or three years to allow caterpillars to complete their life cycle in new bracken piles while bracken is allowed to grow in the more open areas to suppress the grasses and maintain violet growth for several seasons.

Every two / three years - Path edges and other less accessible areas, especially along connecting corridors, may need to be cut to develop scallops and encourage nectar plants.

Monitoring the habitat - the habitat is monitored each autumn to assess the violet growth, nectar plants, grass suppression, and bracken piles – and to inform the following winter's management on a rotational programme on each of the three proposed sites. This will be different on each site at different stages in the rotation cycle.

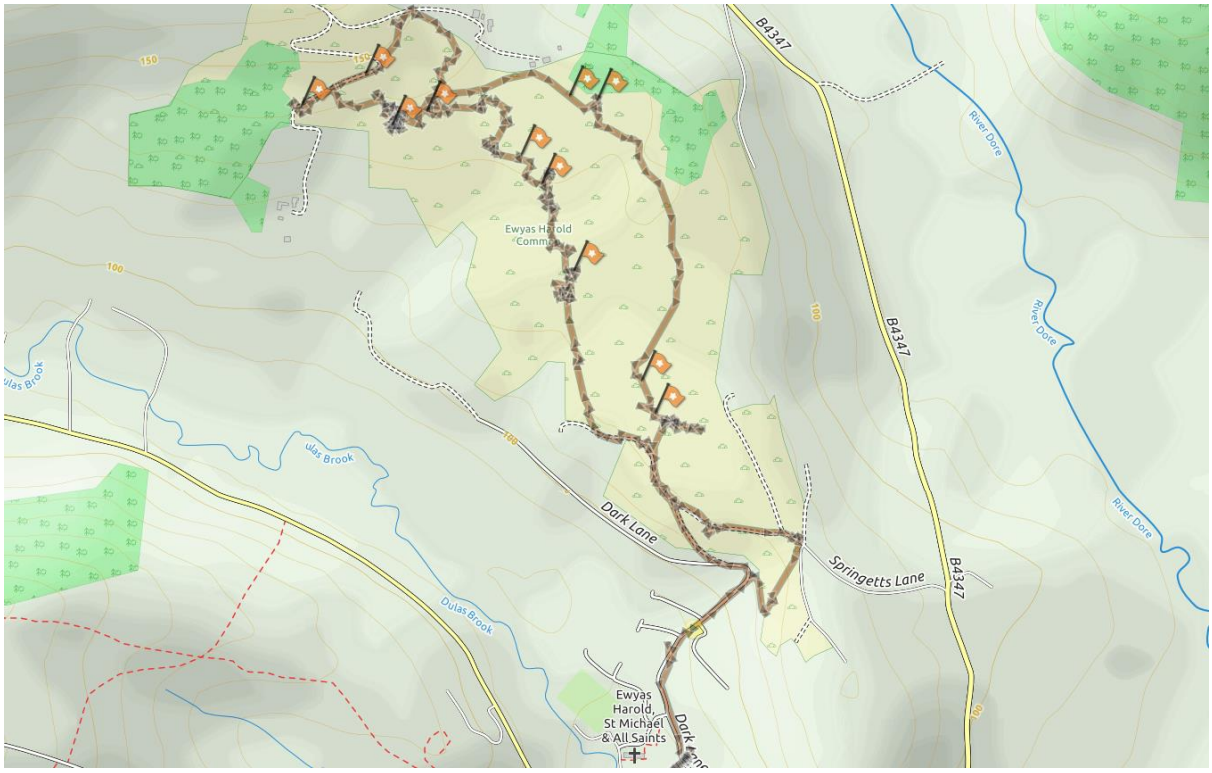
Grazing – Cattle may help to break up dense bracken litter where necessary and create germination sites for violets, and also break up the canopy to allow sunlight in.

Mel Mason – WMBC Vice Chair / Malvern Rep. June 2020

References – Nick Williams Ecology Consultant / Life Cycles of Butterflies, Peter Eeles (2019) Pisces Pubs. / Ian Hart, Ewyas Harold / Conserving violet-feeding fritillary Butterflies at Marsland Nature Reserve by Tom Brereton, Gary Pilkington and David Roy / BC Bracken for Butterflies, Jenny Joy et al.

Donor Site - Ewyas Harold, Herefordshire

A Casual Survey of Pearl-bordered Fritillary 4th May 2019



The importance of bracken litter for basking Pearl-bordered Fritillary

Pearl-bordered Fritillary [38] was recorded at the locations indicated, especially in open patches of low-lying dead bracken where the surface temperature increased to 30°C in full sunshine while the ambient air temperature was only 10-11°C. PBF were basking on the sheltered patches of leaf / bracken litter, feeding on nearby nectar plants and appearing to lay eggs in the vicinity of nearby violets – Mel Mason / May 2019

Timed counts suggest a very high population, over 300 counted in one day during May 2020

10.6°C AIR temperature

30.0°C SURFACE temperature

Donor Site - Ewyas Harold, Herefordshire








Donor Site - Ewyas Harold, Herefordshire

WMBC survey June 2020

Guide and Reserve Manager – Ian Hart

This site is one of the best for PBF in the UK as evident from the transect and timed counts, over 300 on one day in 2020.

Most of the Common is over 120m (400ft), rising to 164m (538ft), and is tilted southwards. Geologically the Common is made up of three rocks – red marl, limestone and sandstone - belonging to the Old Red Sandstone or Devonian period.

The vegetation of almost half the Common is dominated by bracken. Some of it is dense with a thick layer of bracken litter while other areas are more open with some bracken cover to allow violets, the larval foodplant, to thrive.

The habitat is very well managed to maintain a balance between a thin layer of dead bracken to support basking caterpillars and adult butterflies, and a thicker layer of bracken to provide shelter for hibernating caterpillars. Large areas of bracken are cut in winter on a rotational programme to open up areas to encourage violets and other spring plants while also allowing hibernating caterpillars to complete their life cycle on the piles of cut bracken from previous years to provide shelter for the hibernating caterpillars. Large rides are maintained to allow access and encourage the growth of spring plants as a vital nectar source.

The site is well monitored and transect and timed counts are included at the end of this report.

During two visits in May 2019 and June 2020, we made a short video to illustrate the behaviour of the adult butterflies and the management of the bracken and wider habitat.

Many thanks to Ian Hart for his advice and support.

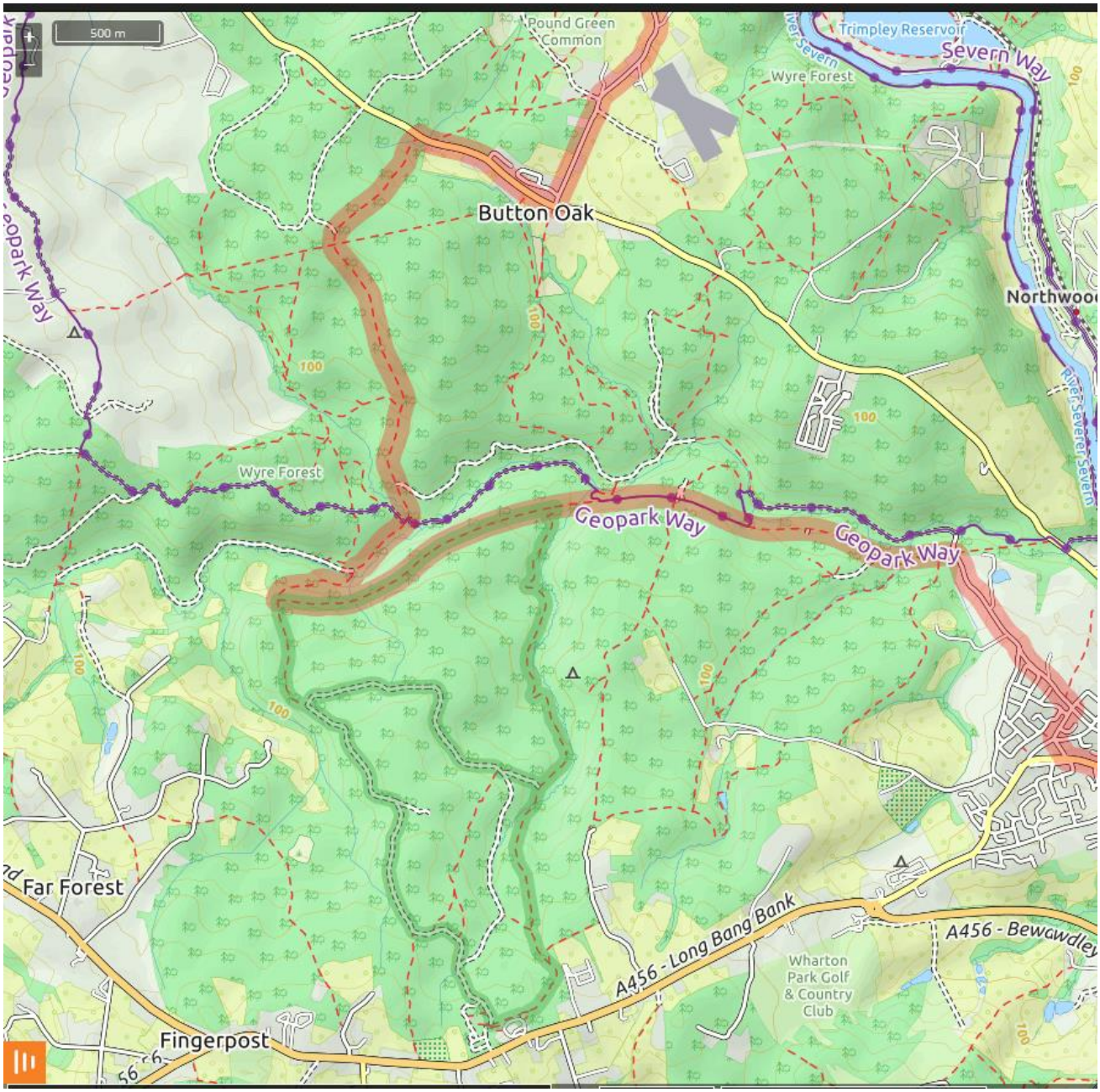
Mel Mason & Liz Lloyd – May 2019

Mel Mason, Ian Duncan, Liz Lloyd & Ian Hart – June 2020

Donor Site - Ewyas Harold, Herefordshire

Consultant Survey - pending

Donor Site – Wyre Forest, Worcestershire



Donor Site – Wyre Forest, Worcestershire








Donor Site – Wyre Forest, Worcestershire

WMBC survey July 2020

Guide and Reserve Manager –

Donor Site – Wyre Forest, Worcestershire

Consultant Survey - pending

Donor Site(s) – Wyre Forest & Ewyas Harold

TRANSECT TOTALS 2015-2020

YEAR	SITE	SPECIES	01-Apr	08-Apr	15-Apr	22-Apr	29-Apr	06-May	13-May	20-May	27-May	03-Jun	10-Jun	17-Jun	Total
2020	WYRE FOREST	Pearl-bordered Fritillary	0	0	0	17	7	20	41	38	14	1	0	0	138
2019	WYRE FOREST	Pearl-bordered Fritillary	0	0	0	0	1	13	23	30	23	7	0	0	97
2018	WYRE FOREST	Pearl-bordered Fritillary	0	0	0	0	0	0	3	51	39	26	2	0	121
2017	WYRE FOREST	Pearl-bordered Fritillary	0	0	0	0	2	6	17	21	8	0	1	0	55
2016	WYRE FOREST	Pearl-bordered Fritillary	0	0	0	0	0	0	23	14	13	14	0	0	64
2015	WYRE FOREST	Pearl-bordered Fritillary	0	0	0	0	2	15	15	21	22	23	10	0	108
															583
YEAR	SITE	SPECIES	01-Apr	08-Apr	15-Apr	22-Apr	29-Apr	06-May	13-May	20-May	27-May	03-Jun	10-Jun	17-Jun	Total
2020	EWYAS HAROLD	Pearl-bordered Fritillary	0	0	0	4	3	2	1	1	0	0	0	0	11
2019	EWYAS HAROLD	Pearl-bordered Fritillary	0	0	0	0	3	12	13	3	0	0	0	0	31
2018	EWYAS HAROLD	Pearl-bordered Fritillary	0	0	0	0	0	0	8	5	2	3	0	0	18
2017	EWYAS HAROLD	Pearl-bordered Fritillary	0	0	0	0	8	8	4	1	0	0	0	0	21
2016	EWYAS HAROLD	Pearl-bordered Fritillary	0	0	0	0	0	1	3	3	0	0	0	0	7
2015	EWYAS HAROLD	Pearl-bordered Fritillary	0	0	0	1	2	4	5	0	1	1	0	0	14
															102

TIMED COUNT TOTALS – EWYAS HAROLD

YEAR	2011	2012	2013	2014	2015a	2016	2017	2018	2019	2020
Totals	261	83	37	48	112	95b	120	346	224	208d

Note: Prior to 2011 the peak flight period from the records occurs from 12 May to 20 May in each year, with 9 of the 12 compartments having peaks in the period 14-15 May. In 2011, however, the peak occurred early on 28 April, whilst in 2012 and 2013 the peak occurred on 22 May due to a cold and late Spring. In 2020 the peak was very early, approx. 26-27 April.

a) Counts undertaken by Wessex Environmental Services (Clarke & Green) under contract.
b) Over 100 individuals counted by BC South Wales Branch Members.
c) Area 13 part-cut by Commoner for bedding in winter 2018/19.
d) An under-estimate. There were many more butterflies in Areas 13 and 15 at the peak period, but the weather intervened to undertake a count.

Records compiled by Ian Hart.

Conclusion

Wyre Forest transect records are at least five times more than at Ewyas Harold. However, timed counts for Ewyas Harold are impressive – up to 346 in 2018 and over 320 in 2020 during April “lockdown” - according to Ian Hart described as flying in clouds by local residents.

Refer to Attachments at end of Report for more detail

Education and Community Involvement

One of the aims of the project would be to recruit and train volunteers to help:

Assist with the re-introduction programme.

Monitor the butterfly population through the season.
Initiate studies to learn more about the habitat it prefers throughout its entire life cycle.
If successfully re-introduced, document what we did, as a blueprint for re-introductions elsewhere.
Organise visits for the public to show them the PBF on the Malverns.

Funding proposals

This will be a popular local project that could raise necessary funds with partners, local industry, and crowd funding especially with BC and WWT members.

All partners likely to be affiliated with the Countryside Stewardship Scheme so unlikely to qualify for Natural Network Grant.

All habitat sites are presently managed by MHT, Bromesberrow Estate and Eastnor Estate and appear to require minimum modification to create / maintain suitable habitat with minimum additional funding.

Creating scallops to open up corridors on the western side of Ragged Stone Hill to improve the link with other sites may require additional funding although volunteers could support this activity.

Budget Estimations –2020-2025

Budget Estimations – PAID WORK – 2020-2025

Activity	Days	Cost - £	Paid - £	Date(s)
Habitat Assessment - consultant	3	750	400	June 2020
Donor Assessment - consultant	6	1,500		
Re-introduction – consultant	20	5,000		
Breeding – consultant	10	2,500		
Reintroduction, Breeding Plant growing - Materials		1500		
Education & Community Involvement		1,500		
Contingency Fund		1,500		
TOTAL		14,250		

Budget Estimations –2020-2025

FUNDING COMMITED, so far…

Organisation	Date	Amount £
WMBC	June 2020	1,000
AONB - MALVERN	June 2020	500

Habitat management - Costs

Landowners are already managing the three proposed sites.

Budget Estimations –2020-2025

Budget Estimations – Unpaid Volunteer Work – 2020-2025

Activity	Full Days	Cost - £	
Habitat Assessment	6	1,500	15 part-time days
Donor Assessment	6	1,500	
Re-introduction – consultant & materials	60	6,000	3 volunteers per day
Breeding by volunteers	10	3,000	3 volunteers per day
Education & Community Involvement	5	1,500	3 volunteers per day
REPORT WRITING	10	1,000	
GROWING VIOLETS & SPRING FLOWERS	10	1,000	10 vol. over 5 yr.
ANNUAL WORK PARTIES 2020-2025	100	10,000	10 per day / 2days / yr.
Monitoring sites timed counts 2020-2025	500	5,000	10 counts / year /3 sites
Monitoring habitat 3 sites	15	1,500	At least once per year
Meetings with partners – annual – 3 sites	15	1,500	At least once per year
TOTAL		33,500	

Budget Estimations –2020-2025

Volunteer Work – Committed, so far…

Activity	Days	Date	Cost £	
Planning & reporting x3	2	May	600	
WMBC Survey Receptor Sites & reporting x 3	2	May	600	
May / June Report x 3	2	May	600	
Consultant Survey Receptor Sites	2	June	200	Inc. one volunteer per day
WMBC Survey Ewyas Harold	1	June	400	Four volunteers
WMBC Survey Bringsty Commonx3	2	June	600	Alternative receptor site
July Reporting x 3	2	June	600	Available on request
WMBC Survey Wyre forest x 5	1	July	500	Five volunteers
Liase AONB				
Liase MHT				
Liaise Bromesberrow Estate				
Liase Eastnor Estate				

Note: Volunteers are not paid or given expenses

Cost per day for volunteers estimated £100
(cf. cost per day for consultants estimated £250)
Reporting takes considerable time and involves research, analysing data and writing reports for WMBC and partner organisations

Not included:
Travel expenses are paid by volunteers
Communication also takes considerable time including emails and telephone

Proposal Form 2020

BC Proposal Form available by September 2020

ATTACHMENTS…

WMBC TRANSECT DATA 1987 – 2004

courtesy of John Tilt, WMBC Transect Coordinator

Malvern South & South A Transect Data

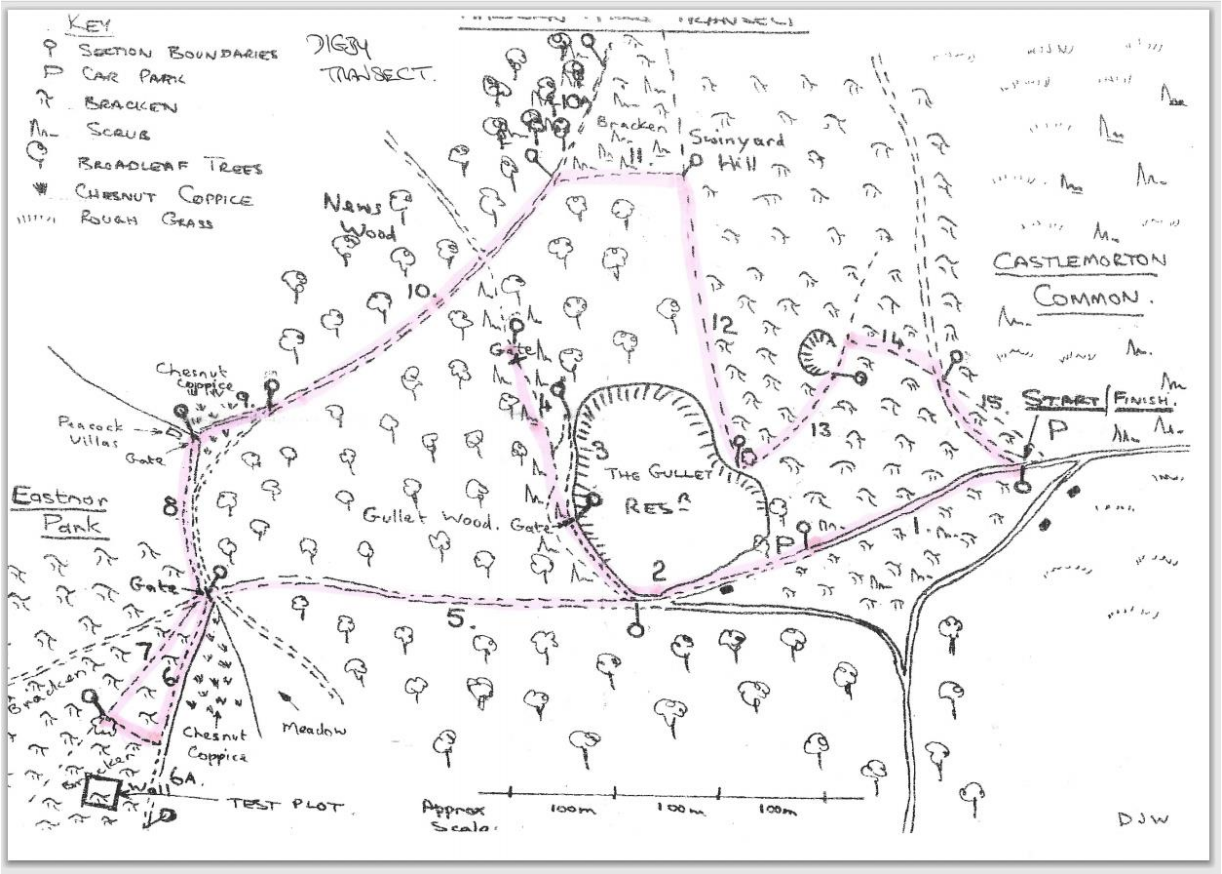
Sum of Qty	Column Labels																	
Row Labels	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2004**	**Grand Total**
Brimstone			8	3	4	1	3	2	3	6	16		2			1		49
Brown Argus				4														4
Clouded Yellow										1								1
Comma	3	1	6	2	15	6	3	1	10	5	10	3	2	3	1	2		73
Common Blue	5	8	26	23	16	4	1	6	6	6	16						4	121
Dark Green Fritillary			1															1
Gatekeeper	82	121	143	91	438	538	231	313	295	643	144	302	117	474	9	394	103	4438
Grayling	4									1	1	2						8
Green Hairstreak				1	1	4	4	2		1		3						16
Green-veined White	21	29	58	49	36	51	32	52	95	29	45	84	27	70	7	104	4	793
Heath Fritillary									1									1
High Brown Fritillary	152	31	17	13	77	40	30	61	130	90	38	14	8	11	22	10		744
Holly Blue			3	12	11	5				5	8	5				7		56
Large Skipper	30	26	17	13	17	28	19	18	33	46	12	5	9	8	2	10	2	295
Large White	14	28	18	17	13	24	23	25	30	17	23	27	9	16	1	31		316
Marbled White	10	7	7	2		1	2	2	2	2	9	4	4	2		4		58
Meadow Brown	125	152	129	152	137	154	85	88	190	113	52	87	107	172	13	103	5	1864
Orange-tip	3	3	10	7	8	1	4	9	6	7	8	2	1			18		87
Painted Lady	1	2		2	2				1	177						4		189
Peacock	21	8	13	10	35	72	18	11	34	118	34	30	28	25	1	16	2	476
Pearl-bordered Fritillary	41	6	20	17	47	38	7	6	12	1	14							209
Purple Hairstreak		3			1	5	4	1	3	3	4	2	2	2		1		31
Red Admiral	2	1	3	5	3	6		2	2	28	1	2	2	3	1	14		75
Ringlet	36	18	35	9	47	99	82	87	152	130	110	60	71	121	14	41		1112
Silver Y														1				1
Silver-washed Fritillary	13	4	2			2	3	6	8	22	9	5						74
Small Copper	40	14	31	6	21	13	17	15	21	4	51	37	2	12		8	6	298
Small Heath	63	28	59	58	48	47	10	1	11	18	30	11				4	1	389
Small Pearl-bordered Fritillar	81	34	56	32	20	14	8	19	4	1	5							274
Small Skipper	37	26	17	29	39	62	44	40	17	13	14	12	5	9		12		376
Small Tortoiseshell	58	5	13	35	36	72	12	1	20	36	35	3	6	9		10		351
Small White	19	13	35	7	3	20	3	16	22	25	7	5		5	1	3	3	187
Speckled Wood	61	39	111	50	65	75	37	47	62	38	42	39	14	14		49	9	752
Wall	7	1	5	4	3	14	4	2				1						41
White Admiral		1				3	3			2	1	1		1				12
White-letter Hairstreak					1		3	1				1						6
Grand Total	**929**	**609**	**843**	**653**	**1144**	**1399**	**692**	**834**	**1170**	**1588**	**739**	**747**	**416**	**958**	**72**	**846**	**139**	**13778**

The Lost Fritillaries… HBF, PBF, SPBF

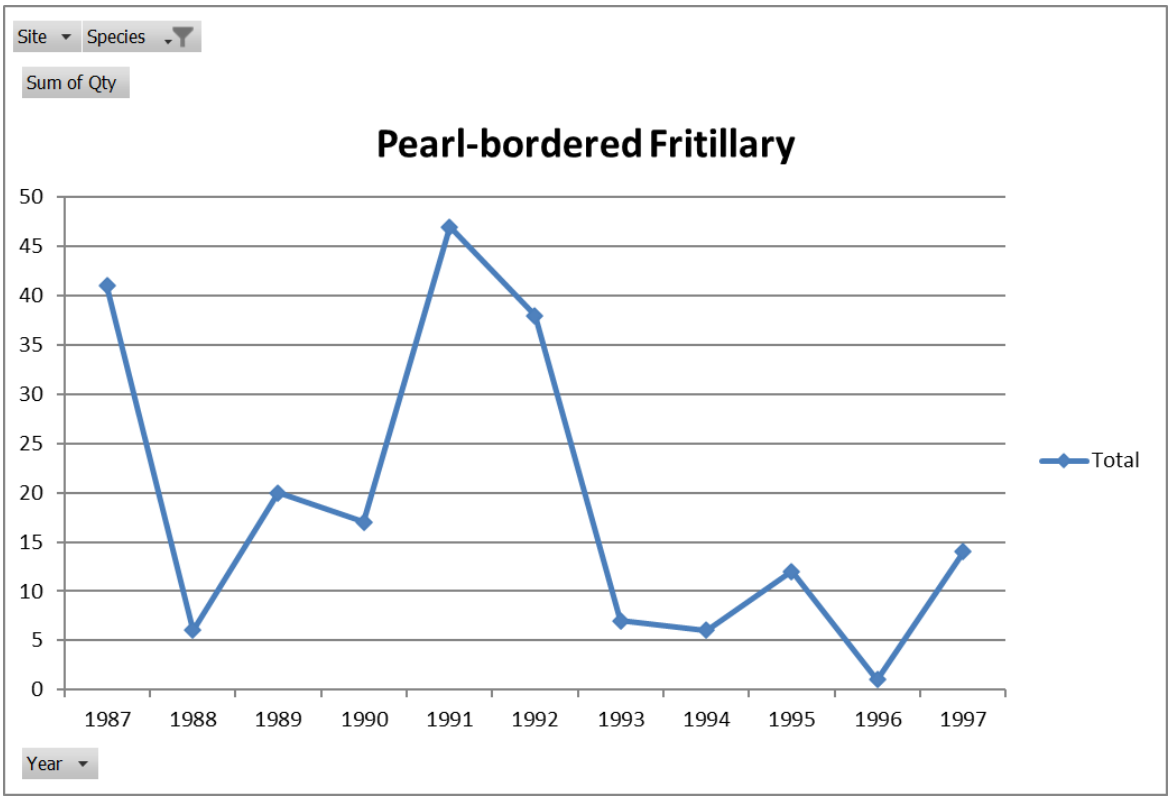
	1987	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**	**2000**	**2001**	**2002**	**2004**	**Grand Total**
Dark Green Fritillary			1															1
High Brown Fritillary	152	31	17	13	77	40	30	61	130	90	38	14	8	11	22	10		744
Pearl-bordered Fritillary	41	6	20	17	47	38	7	6	12	1	14							209
Silver-washed Fritillary	13	4	2			2	3	6	8	22	9	5						74
Small Pearl-bordered Fritillary	81	34	56	32	20	14	8	19	4	1	5							274

WMBC TRANSECT DATA 1987 – 2004

Malvern South & South A Transect Data – courtesy of Digby Wood, transect recorder



Malvern South & South A Transect Data



Note:

The Malvern South Transect data is linked to the route around Swinyard Hill and Eastnor as illustrated.

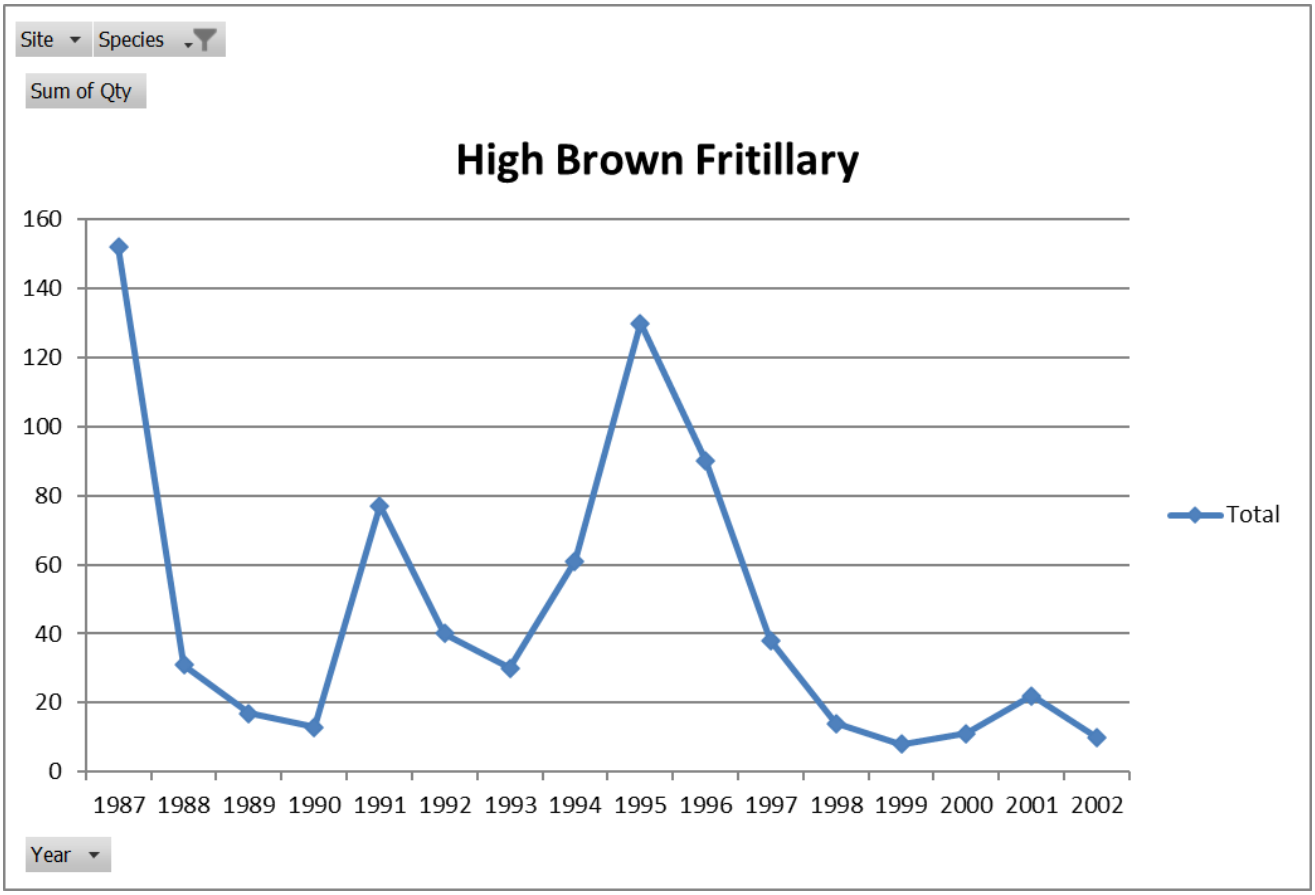
Chase End Hill – this was walked inconsistently by the Ledbury Naturalists 1997-2004 but not every year and not every week. However, the Worcester & Herefordshire Biological Records for Vice-Counties 73 / 74 illustrate counts at Chase End / Chase End Hill / Malvern – Chase End Hill / White-leaved Oak / White-leaved Oak Malverns / Whiteleaved Oak / Whiteleaved Oak Malvern Hills (different labels for the same location around Chase End Hill)

PBF Records WBRC VC 73 / 74 - See Record Table on p43 for more detail

Sum of No.	Column Labels																												
Row Labels	**1914**	**1927**	**1949**	**1950**	**1967**	**1968**	**1969**	**1970**	**1977**	**1978**	**1979**	**1980**	**1985**	**1986**	**1987**	**1988**	**1989**	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**Grand Total**
British Camp		2									2																4
Chase End																								1		1	2
Chase End Hill										2										48	20	6	10	10		4	100
Eastnor						1																					1
Eastnor Castle				1																							1
Eastnor Park																							1		2		3
Malvern			18																								18
Malvern - Chase End Hill																										2	2
Malvern Hills									2					2						1	1						6
Malvern Hills South															41	6	32	19	47	38	5		6		3		197
Malvern Hills South A																				9	3	2	14	1	13		42
Midsummer Hill																									1		1
News Wood					1																						1
Old Storridge	1																										1
South of Eastnor obelisk					1																						1
Swinyard Hill									2																		2
The Gullet Area														1													1
The Malvern Hills							1	1				1	1			1									2		5
White Leaved Oak																									2		2
White Leaved Oak Malverns																							1				1
Whiteleaved Oak																									10		10
Whiteleaved Oak Malvern Hills																				4							4
Grand Total	**1**	**2**	**18**	**1**	**2**	**1**	**1**	**1**	**4**	**2**	**2**	**1**	**1**	**3**	**41**	**7**	**32**	**19**	**47**	**100**	**29**	**8**	**32**	**12**	**31**	**7**	**405**

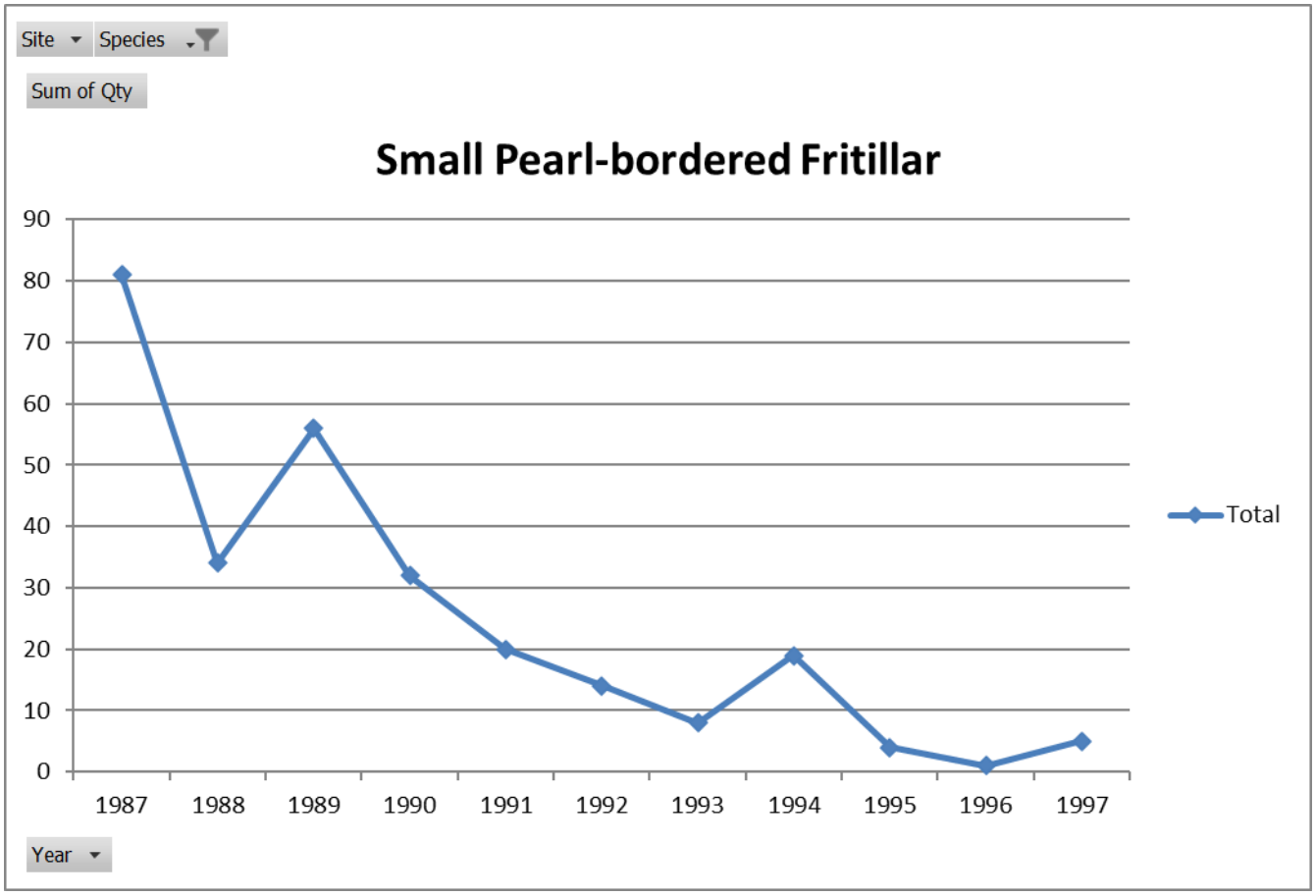
However, recording on Chase End Hill was more focused on the target species High Brown Fritillary, for example in 1995:

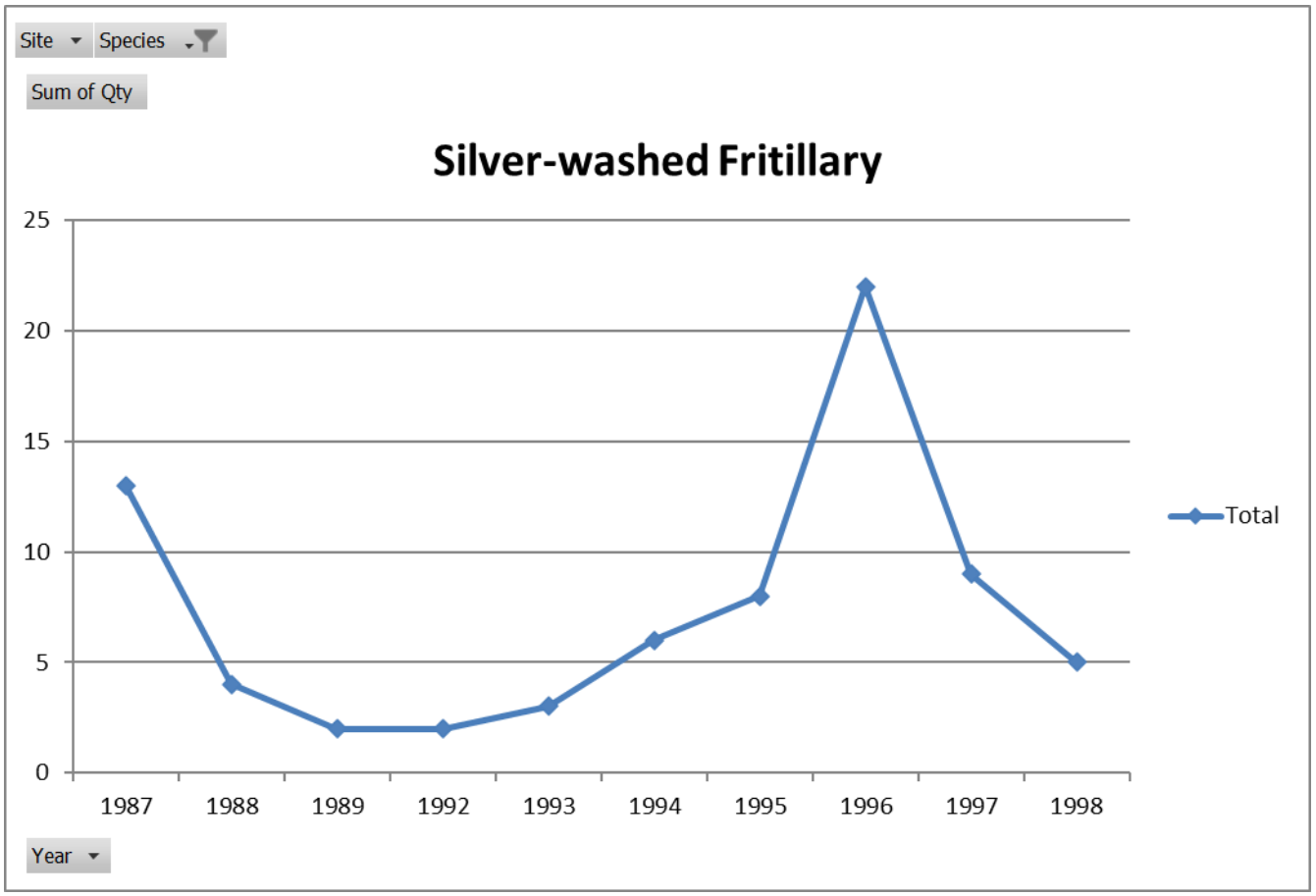
WMBC Transect records Pearl-bordered fritillary 1987 – 1997



WMBC Transect records Pearl-bordered fritillary 1987 – 1997

Malvern South & South A Transect Data


Site
Species
Sum of Qty
Small Pearl-bordered Fritillar
90
80
70
60
50
40
30
20
10
0
1987
1988
1989
1990
1991
1992
1993
1994
1995
1996
1997
Total
Year


Site
Species
Sum of Qty
Silver-washed Fritillary
25
20
15
10
5
0
1987
1988
1989
1992
1993
1994
1995
1996
1997
1998
Total
Year

Historical Records - Worcestershire Biological Records and WMBC:

High Brown since 1927 = 2772
Last recorded in 2008 Digby Wood

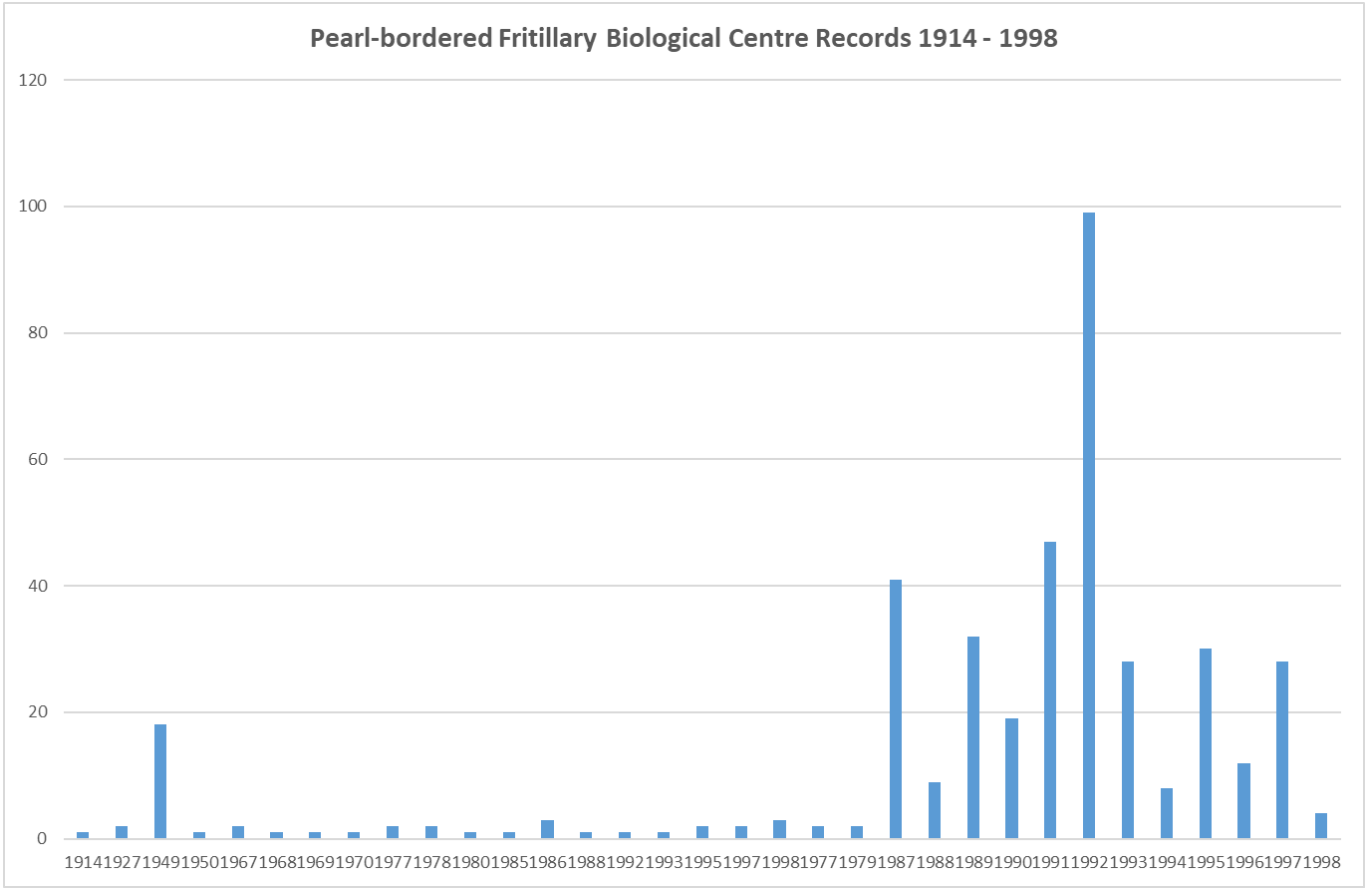
Pearl-bordered Fritillary since 1914 = 407
Last recorded in 1998 Mike Harper

Small Pearl-bordered Fritillary since 1965 = 442
Last recorded Swinyard 30-Jun-2013 Mick Colquhoan
Two on Chase End Hill 06-Jul-2017 Dave Vernon

Dark Green Fritillary since 1975 = 57
Usually between 1-5 sightings per year but 5+ recorded near Norrest 2018, 2019, 2020

SWF – more common and more widespread in recent years but most common on Hangman's Hill and Swinyard Hill

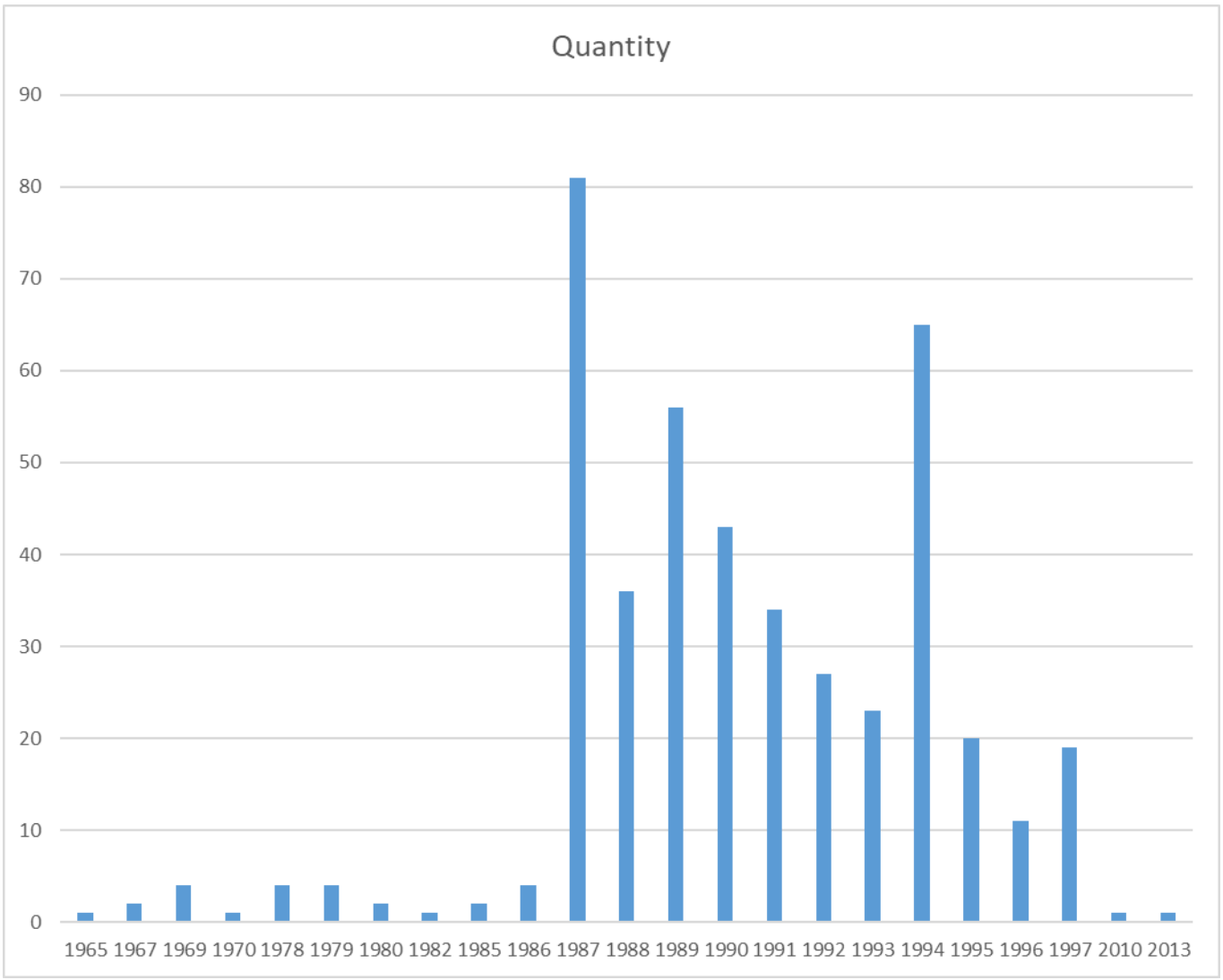
PBF - Historical Records from Worcestershire Biological Records bet. 1914-1998



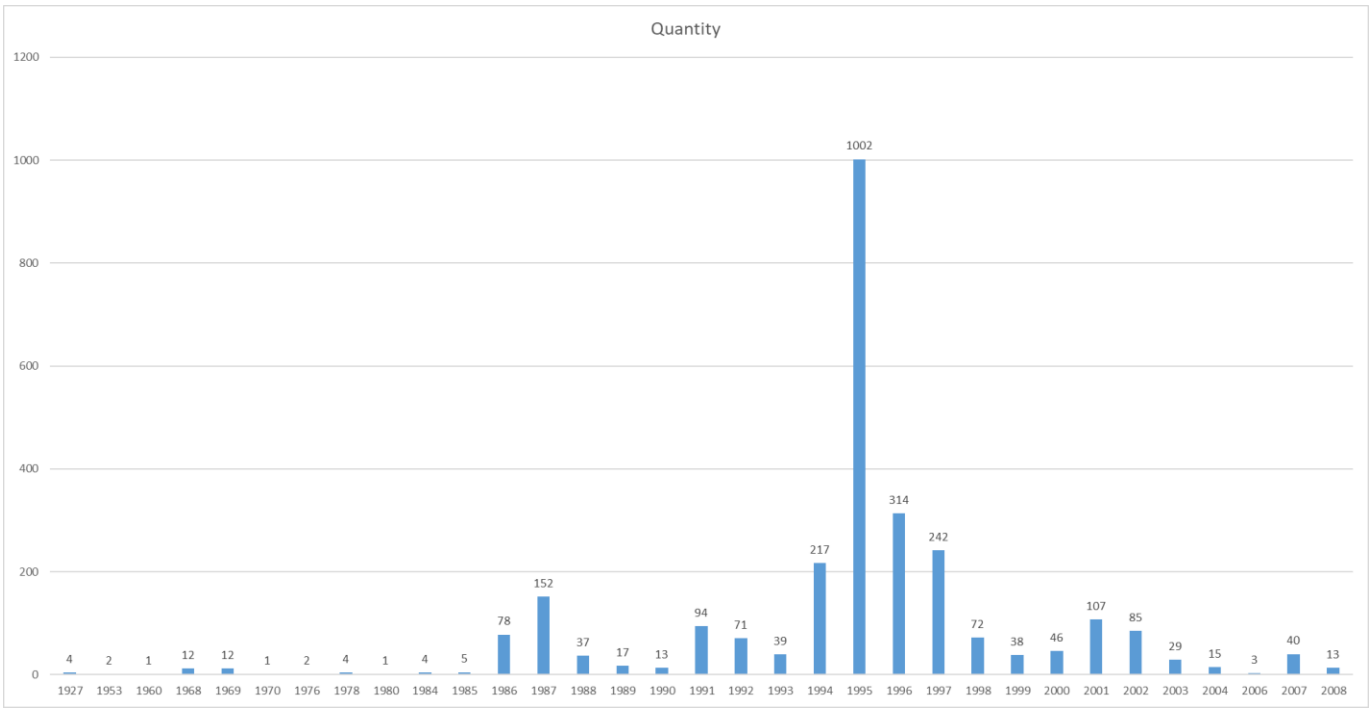
PBF - Historical Records from Worcestershire Biological Records bet. 1914-1998

Site	Gridref	VC	No.	Date111	Date222	Recorder	Method	Comment	Site	Gridref	VC	No.	Date111	Date222	Recorder	Method	Comment
Old Storridge	SO75K	37	1	1914	1914	Anon from TWNC	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO756379	37	4	1991	10-Jun-91	Digby Wood	BMS TRANSECT	T=18 S=100%
British Camp	SO73U	37	1	1927	1927	Warwickshire BRC	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO756379	37	1	1991	17-Jun-91	Digby Wood	BMS TRANSECT	T=15 S=100%
British Camp	SO74Q	37	1	1927	1927	Warwickshire BRC	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO764383	37	1	1991	21/05/1991	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Malvern	SO73U	37	1	1949	1949	Not Recorded	Unknown		Malvern Hills	SO761380	37	1	1992	1992	Digby Wood	Daytime observation	BC habitat
Malvern	SO73M	37	1	1949	1949	Not Recorded	Unknown		Malvern Hills South	SO762380	37	1	1992	14-May-92	Digby Wood	BMS TRANSECT	T=23 S=100% 12: SM?
Malvern	SO73N	37	1	1949	1949	Not Recorded	Unknown		Malvern Hills South	SO764381	37	4	1992	14-May-92	Digby Wood	BMS TRANSECT	T=23 S=0% 12: SM?
Malvern	SO73T	37	1	1949	1949	Not Recorded	Unknown		Malvern Hills South	SO756379	37	3	1992	14-May-92	Digby Wood	BMS TRANSECT	T=23 S=100% 12: SM?
Malvern	SO73S	37	1	1949	1949	Not Recorded	Unknown		Malvern Hills South	SO759383	37	1	1992	14-May-92	Digby Wood	BMS TRANSECT	T=23 S=100% 12: SM?
Malvern	SO74R	37	1	1949	1949	Not Recorded	Unknown		Malvern Hills South A	SO766456	37	3	1992	14-May-92	Digby Wood	BMS TRANSECT	T=23 S=100%
Malvern	SO74T	37	1	1949	1949	Not Recorded	Unknown		Whiteleaved Oak Malvern	SO757357	36	1	1992	14-May-92	Digby Wood	Daytime observation	BC habitat 38,43
Malvern	SO74S	37	1	1949	1949	Not Recorded	Unknown		Chase End Hill	SO757357	37	12	1992	14-May-92	Not Recorded	Unknown	
Malvern	SO74Q	37	1	1949	1949	Not Recorded	Unknown		Malvern Hills South	SO764381	37	4	1992	21-May-92	Digby Wood	BMS TRANSECT	T=21 S=0%
Malvern	SO73M	37	1	1949	1949	Fred Fincher	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO764383	37	1	1992	21-May-92	Digby Wood	BMS TRANSECT	T=21 S=100%
Malvern	SO73N	37	1	1949	1949	Fred Fincher	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO756379	37	2	1992	21-May-92	Digby Wood	BMS TRANSECT	T=21 S=100%
Malvern	SO73S	37	1	1949	1949	Fred Fincher	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO756379	37	2	1992	21-May-92	Digby Wood	BMS TRANSECT	T=21 S=100%
Malvern	SO73T	37	1	1949	1949	Fred Fincher	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO765382	37	1	1992	21-May-92	Digby Wood	BMS TRANSECT	T=21 S=100%
Malvern	SO73U	37	1	1949	1949	Fred Fincher	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South A	SO765459	37	2	1992	21-May-92	Digby Wood	BMS TRANSECT	T=21 S=100%
Malvern	SO74Q	37	1	1949	1949	Fred Fincher	Unknown	WCA NERC s.41 UKBAP	Whiteleaved Oak Malvern	SO757357	36	1	1992	26-May-92	Digby Wood	Daytime observation	BC habitat 38,43
Malvern	SO74R	37	1	1949	1949	Fred Fincher	Unknown	WCA NERC s.41 UKBAP	Chase End Hill	SO757357	37	8	1992	26-May-92	Not Recorded	Unknown	
Malvern	SO74S	37	1	1949	1949	Fred Fincher	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO764381	37	2	1992	02-Jun-92	Digby Wood	BMS TRANSECT	T=18 S=0%
Malvern	SO74T	37	1	1949	1949	Fred Fincher	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO756379	37	1	1992	02-Jun-92	Digby Wood	BMS TRANSECT	T=18 S=100%
Eastnor Castle	SO73N	37	1	1950	1950	Anon from TWNC	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO756379	37	8	1992	02-Jun-92	Digby Wood	BMS TRANSECT	T=18 S=0%
South of Eastnor obelisk	SO73N	37	1	1967	1967	Anon at Worcs Nats Clu	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South A	SO765459	37	1	1992	02-Jun-92	Digby Wood	BMS TRANSECT	T=18 S=0%
News Wood	SO73U	37	1	1967	1967	Anon at Worcs Nats Clu	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO756379	37	1	1992	06-Jun-92	Digby Wood	BMS TRANSECT	T=22 S=100%
Eastnor	SO74G	37	1	1968	1968	Anon at Worcs Nats Clu	Unknown	WCA NERC s.41 UKBAP	Whiteleaved Oak Malvern	SO757357	36	2	1992	06-Jun-92	Digby Wood	Daytime observation	BC habitat 38,43
The Malvern Hills	SO766472	37	1	1969	1969	Jack Green	Unknown	WCA NERC s.41 UKBAP	Chase End Hill	SO757357	37	4	1992	06-Jun-92	Not Recorded	Unknown	
The Malvern Hills	SO766472	37	1	1970	1970	Not Recorded	Unknown		Chase End Hill	SO757357	37	4	1992	06/06/1992	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Swinyard Hill	SO73U	37	1	1977	02-Jul-77	Not Recorded	Unknown		Chase End Hill	SO757357	37	12	1992	14/05/1992	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Swinyard Hill	SO73U	37	1	1977	02/07/1977	Diana Cockerill	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO762380	37	1	1992	14/05/1992	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Malvern Hills	SO73S	37	1	1977	1977	Anon at Worcs Nats Clu	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO764381	37	4	1992	14/05/1992	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Malvern Hills	SO73T	37	1	1977	1977	Anon at Worcs Nats Clu	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO764383	37	1	1992	14/05/1992	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Chase End Hill	SO758353	37	1	1978	1978	Jack Green	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South A	SO766456	37	3	1992	14/05/1992	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Chase End Hill	SO759355	37	1	1978	1978	Jack Green	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO765382	37	1	1992	21/05/1992	Digby Wood	Unknown	WCA NERC s.41 UKBAP
British Camp	SO73U	37	1	1979	20-May-79	Not Recorded	Unknown		Chase End Hill	SO757357	37	8	1992	26/05/1992	Digby Wood	Unknown	WCA NERC s.41 UKBAP
British Camp	SO73U	37	1	1979	20/05/1979	Owen Wilson	Unknown	WCA NERC s.41 UKBAP	Malvern Hills	SO764382	37	1	1993	1993	Digby Wood	Daytime observation	BC habitat
The Malvern Hills	SO766472	37	1	1980	1980	Jack Green	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO764381	37	1	1993	18-May-93	Digby Wood	BMS TRANSECT	T=15 S=0%
The Malvern Hills	SO766472	37	1	1985	1985	Jack Green	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO764381	37	1	1993	24-May-93	Digby Wood	BMS TRANSECT	T=21 S=0%
Malvern Hills	SO73U	37	1	1986	1986	Not Recorded	Unknown		Malvern Hills South A	SO765459	37	2	1993	24-May-93	Digby Wood	BMS TRANSECT	T=21 S=100%
Malvern Hills	SO73U	37	1	1986	1986	British Butterfly Conse	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO764381	37	1	1993	29-May-93	Digby Wood	BMS TRANSECT	T=18 S=0%
The Gullet Area	SO761381	37	1	1986	1986	Jack Green	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South	SO764383	37	1	1993	29-May-93	Digby Wood	BMS TRANSECT	T=18 S=50%
Malvern Hills South	SO756379	37	2	1987	06-May-87	Trevor Trueman	BMS TRANSECT	T=22 S=0%	Malvern Hills South A	SO765459	37	1	1993	05-Jun-93	Digby Wood	BMS TRANSECT	T=22 S=100%
Malvern Hills South	SO764381	37	1	1987	13-May-87	Trevor Trueman	BMS TRANSECT	T=14 S=0%	Chase End Hill	SO757357	37	10	1993	07-Jun-93	Not Recorded	Unknown	
Malvern Hills South	SO756379	37	21	1987	13-May-87	Trevor Trueman	BMS TRANSECT	T=14 S=100%	Chase End Hill	SO757357	37	10	1993	18/05/1993	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Malvern Hills South	SO756381	37	1	1987	13-May-87	Trevor Trueman	BMS TRANSECT	T=14 S=100%	Malvern Hills South	SO764381	37	1	1993	24/05/1993	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Malvern Hills South	SO757382	37	1	1987	13-May-87	Trevor Trueman	BMS TRANSECT	T=14 S=100%	Malvern Hills South A	SO765459	37	1	1994	31-May-94	Digby Wood	BMS TRANSECT	T=20 S=100%
Malvern Hills South	SO756381	37	1	1987	25-May-87	Trevor Trueman	BMS TRANSECT	T=19 S=100%	Malvern Hills South A	SO765459	37	1	1994	11-Jun-94	Digby Wood	BMS TRANSECT	T=17 S=100%
Malvern Hills South	SO756379	37	5	1987	25-May-87	Trevor Trueman	BMS TRANSECT	T=19 S=100%	Chase End Hill	SO757357	37	6	1994	13/05/1994	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Malvern Hills South	SO764381	37	3	1987	25-May-87	Trevor Trueman	BMS TRANSECT	T=19 S=0%	White Leaved Oak Malvern	SO750350	34	1	1995	1995	Digby Wood	Daytime observation	
Malvern Hills South	SO764381	37	2	1987	27-May-87	Trevor Trueman	BMS TRANSECT	T=14 S=0%	Eastnor Park	SO750370	36	1	1995	1995	Digby Wood	Daytime observation	
Malvern Hills South	SO756379	37	4	1987	27-May-87	Trevor Trueman	BMS TRANSECT	T=14 S=100%	Malvern Hills South A	SO765459	37	2	1995	02-May-95	Digby Wood	BMS TRANSECT	T=20 S=100%
Malvern Hills South	SO756379	37	3	1988	10-May-88	Trevor Trueman	BMS TRANSECT	T=20 S=100%	Malvern Hills South A	SO765459	37	1	1995	02-May-95	Digby Wood	Daytime observation	BC habitat
Malvern Hills South	SO756379	37	3	1988	15-May-88	Trevor Trueman	BMS TRANSECT	T=21 S=100%	Malvern Hills South	SO756379	37	4	1995	06-May-95	Digby Wood	BMS TRANSECT	T=23 S=100%
The Malvern Hills	SO74T	37	1	1988	1988	Mike Wilkinson;Johnny	Unknown	WCA NERC	Malvern Hills South A	SO765459	37	5	1995	06-May-95	Digby Wood	BMS TRANSECT	T=23 S=100%
Malvern Hills South	SO756379	37	2	1989	08-May-89	Digby Wood	BMS TRANSECT	T=17 S=100%	Malvern Hills South	SO756379	36	2	1995	06-May-95	Digby Wood	Daytime observation	BC habitat
Malvern Hills South	SO762382	37	1	1989	16-May-89	Digby Wood	BMS TRANSECT	T=19 S=100%	Malvern Hills South A	SO765459	37	2	1995	06-May-95	Digby Wood	Daytime observation	BC habitat
Malvern Hills South	SO764381	37	1	1989	16-May-89	Digby Wood	BMS TRANSECT	T=19 S=0%	Chase End Hill	SO757357	37	10	1995	06-May-95	Not Recorded	Unknown	
Malvern Hills South	SO756379	37	2	1989	16-May-89	Digby Wood	BMS TRANSECT	T=19 S=100%	Malvern Hills South A	SO765459	37	1	1995	22-May-95	Digby Wood	BMS TRANSECT	T=18 S=100%
Malvern Hills South	SO764381	37	1	1989	16-May-89	Digby Wood	BMS TRANSECT	T=19 S=0%	Malvern Hills South A	SO765459	37	3	1995	22-May-95	Digby Wood	Daytime observation	BC habitat
Malvern Hills South	SO756379	37	8	1989	22-May-89	Digby Wood	BMS TRANSECT	T=26 S=100%	Chase End	SO760364	37	1	1996	02-Jun-96	Garner, P.	Daytime observation	BC habitat 31
Malvern Hills South	SO764381	37	3	1989	22-May-89	Digby Wood	BMS TRANSECT	T=26 S=0%	Malvern Hills South A	SO765459	37	1	1996	06-Jun-96	Digby Wood	Daytime observation	BC habitat
Malvern Hills South	SO764381	37	3	1989	27-May-89	Digby Wood	BMS TRANSECT	T=Not recorded/no data S=0%	Chase End Hill	SO757357	37	10	1996	06/06/1996	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Malvern Hills South	SO756379	37	5	1989	27-May-89	Digby Wood	BMS TRANSECT	T=Not recorded/no data S=61%	Eastnor Park	SO750370	36	2	1997	1997	Digby Wood	Daytime observation	BC habitat
Malvern Hills South	SO756379	37	3	1989	27-May-89	Digby Wood	BMS TRANSECT	T=Not recorded/no data S=61%	Malvern Hills South	SO756379	37	1	1997	02-May-97	Digby Wood	BMS TRANSECT	T=21 S=100%
Malvern Hills South	SO756379	37	3	1989	30-May-89	Trevor Trueman	BMS TRANSECT	T=19 S=100%	Malvern Hills South A	SO765459	37	3	1997	02-May-97	Digby Wood	BMS TRANSECT	T=21 S=100%
Malvern Hills South	SO761384	37	1	1990	30-Apr-90	Digby Wood	BMS TRANSECT	T=21 S=100%	White Leaved Oak	SO758358	36	2	1997	02-May-97	Bucknall, T.	Daytime observation	BC habitat 34
Malvern Hills South	SO756379	37	3	1990	30-Apr-90	Digby Wood	BMS TRANSECT	T=21 S=100%	Malvern Hills South	SO756379	37	2	1997	14-May-97	Digby Wood	BMS TRANSECT	T=17 S=100% No suitable v
Malvern Hills South	SO756379	37	1	1990	30-Apr-90	Digby Wood	BMS TRANSECT	T=21 S=100%									No suitable weather in w
Malvern Hills South	SO764381	37	1	1990	08-May-90	Digby Wood	BMS TRANSECT	T=14 S=0%	Malvern Hills South A	SO765459	37	1	1997	14-May-97	Digby Wood	BMS TRANSECT	T=17 S=100% No suitable v
Malvern Hills South	SO758380	37	1	1990	08-May-90	Digby Wood	BMS TRANSECT	T=14 S=100%									No suitable weather in w
Malvern Hills South	SO762382	37	1	1990	16-May-90	Digby Wood	BMS TRANSECT	T=17 S=100%	Midsummer Hill	SO759369	36	1	1997	15-May-97	Daw, A.	Daytime observation	BC habitat
Malvern Hills South	SO764381	37	2	1990	16-May-90	Digby Wood	BMS TRANSECT	T=17 S=0%	Whiteleaved Oak	SO757357	36	10	1997	24-May-97	Davies, M.	Daytime observation	BC habitat
Malvern Hills South	SO756379	37	6	1990	16-May-90	Digby Wood	BMS TRANSECT	T=17 S=0%	Malvern Hills South A	SO765459	37	1	1997	26-May-97	Digby Wood	BMS TRANSECT	T=17 S=100%
Malvern Hills South	SO756379	37	1	1990	23-May-90	Digby Wood	BMS TRANSECT	T=19 S=100%	Malvern Hills South A	SO765459	37	1	1997	26-May-97	Digby Wood	Daytime observation	BC habitat
Malvern Hills South	SO764381	37	2	1990	16/05/1990	Digby Wood	Unknown	WCA NERC s.41 UKBAP	Malvern Hills South A	SO765459	37	3	1997	29-May-97	Digby Wood	BMS TRANSECT	T=18 S=100% Bracken in se
Malvern Hills South	SO756379	37	13	1991	21-May-91	Digby Wood	BMS TRANSECT	T=24 S=50%	Malvern Hills South A	SO765459	37	3	1997	29-May-97	Digby Wood	Daytime observation	BC habitat
Malvern Hills South	SO764383	37	1	1991	21-May-91	Digby Wood	BMS TRANSECT	T=24 S=100%	Malvern Hills South A	SO765459	37	1	1997	14/05/1997	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Malvern Hills South	SO756379	37	4	1991	21-May-91	Digby Wood	BMS TRANSECT	T=24 S=100%	Malvern - Chase End Hill	SO7535	36	2	1998	1998	Mike Harper	Daytime Observation	BC habitat
Malvern Hills South	SO756379	37	16	1991	01-Jun-91	Digby Wood	BMS TRANSECT	T=15 S=100%	Chase End	SO7434	34	1	1998	1998	Harper, M.	Daytime Observation	BC habitat 31
Malvern Hills South	SO756381	37	2	1991	01-Jun-91	Digby Wood	BMS TRANSECT	T=15 S=50%	Chase End Hill	SO757357	37	4	1998	24/05/1998	Digby Wood	Unknown	WCA NERC s.41 UKBAP
Malvern Hills South	SO756379	37	5	1991	08-Jun-91	Digby Wood	BMS TRANSECT	T=15 S=10% Hazy sun. Weather not up to standard									
								Weather not up to standard									

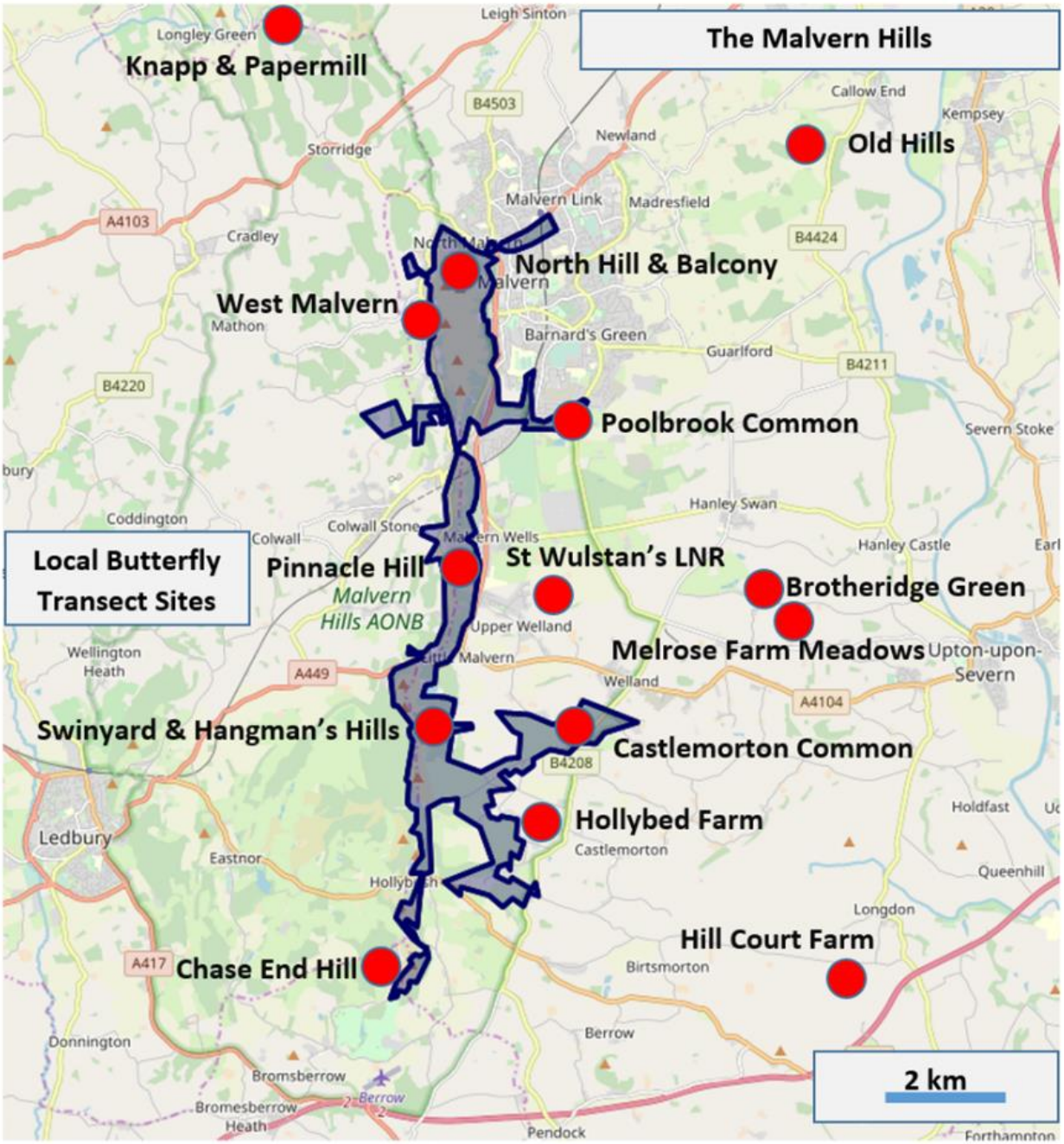
SPBF - Historical Records from Worcestershire Biological Records bet. 1965-2013



HBF - Historical Records from Worcestershire Biological Records bet. 1927-2008



Butterfly Transect Sites around the Malvern Hills



See below for UKBMS Butterfly records at nearby sites – April to September 2019:

UKBMS Malvern Region 14 sites 2019

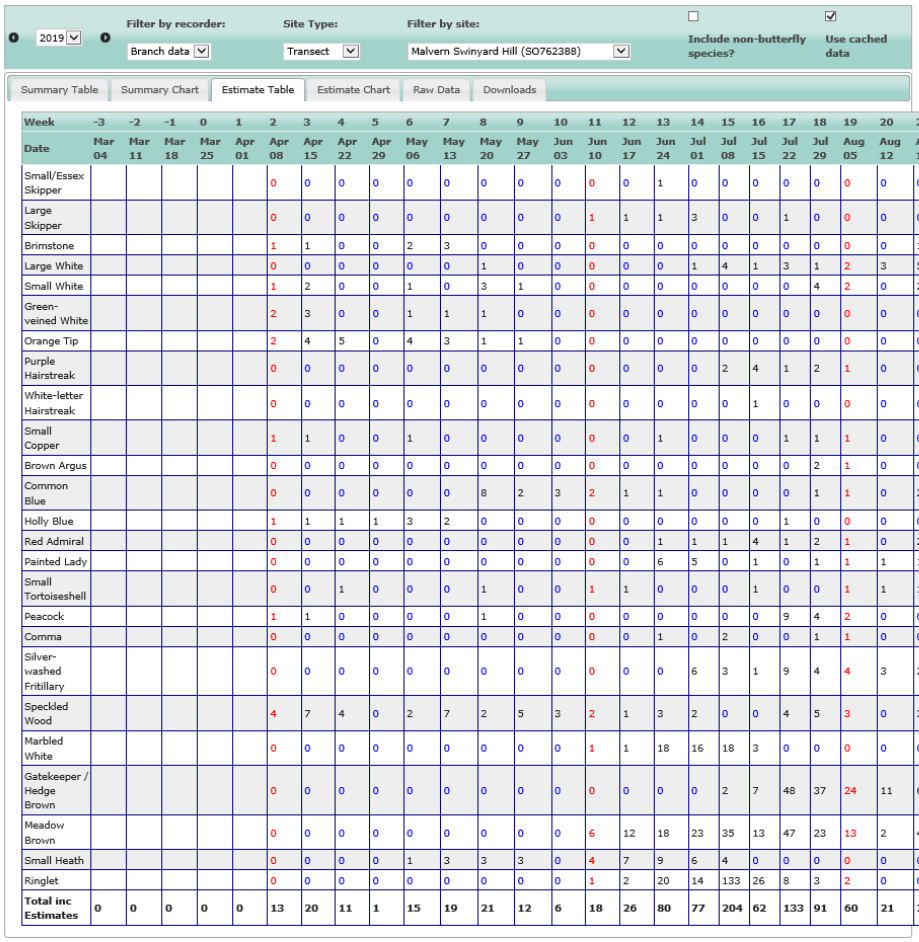
UKBMS Malvern Swinyard & Hangman Hills 2019

UKBMS Malvern Chase End Hill 2019

UKBMS Malvern Region 14 sites 2019

Week	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Date	Mar 04	Mar 11	Mar 18	Mar 25	Apr 01	Apr 08	Apr 15	Apr 22	Apr 29	May 06	May 13	May 20	May 27	Jun 03	Jun 10	Jun 17	Jun 24	Jul 01	Jul 08	Jul 15	Jul 22	Jul 29	Aug 05	Aug 12	Aug 19	Aug 26	Sep 02	Sep 09	Sep 16	Sep 23	Sep 30	Oct 07	Oct 14	Oct 21	(with estimates)
Small Skipper				0	0	0	0	0	0	0	0	0	0	0	0	1	10	11	6	25	17	7	9	3	1	1	0	0	0	0					**91**
Essex Skipper				0	0	0	0	0	0	0	0	0	0	0	0	3	7	9	13	15	11	8	6	5	1	0	0	0	0	0	0				**78**
Small/Essex Skipper				0	0	0	0	0	0	0	0	0	0	0	7	3	18	33	134	382	285	131	51	11	4	0	0	0	0	0	0				**1059**
Large Skipper				0	0	0	0	0	0	0	0	0	2	11	27	45	50	66	54	19	7	2	1	0	0	0	0	0	0	0	0				**284**
Dingy Skipper					0	0	0	0	0	0	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0						**5**
Brimstone				5	0	15	26	19	23	21	14	5	5	5	2	2	2	0	0	10	6	4	0	2	7	3	1	1	0	0	0				**178**
Large White				0	0	2	5	3	5	6	4	10	5	2	0	0	2	5	42	46	79	47	20	18	42	32	31	19	8	4	0				**437**
Small White				2	1	9	11	15	15	13	10	7	7	8	4	0	2	12	65	92	127	86	43	37	68	81	58	34	29	12	0				**848**
Green-veined White				0	0	4	12	20	27	22	42	21	27	10	3	0	3	3	27	78	68	87	81	65	41	47	25	11	11	5	0				**740**
Orange Tip				2	16	37	89	90	93	79	62	26	11	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0				**508**
Green Hairstreak				0	0	0	0	0	0	0	2	5	1	3	2	1	3	0	0	0	0	0	0	0	0	0	0	0	0	0					**17**
Purple Hairstreak				0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	8	5	5	5	2	0	0	0	0	0	0	0					**29**
White-letter Hairstreak				0	0	0	0	0	0	0	0	0	0	0	0	0	1	4	0	1	4	0	0	0	0	0	0	0	0	0	0				**10**
Small Copper				0	0	1	1	0	3	10	11	9	12	10	6	5	2	0	0	0	2	12	7	15	7	11	4	3	2	2					**135**
Brown Argus				0	0	0	0	0	0	1	2	5	2	3	1	1	1	0	0	0	0	5	18	19	29	24	12	0	2	1	0				**126**
Common Blue				0	0	0	0	0	0	4	8	48	77	81	72	72	50	24	10	2	0	24	55	152	149	96	38	9	2	1	0				**974**
Holly Blue				0	0	7	15	23	14	23	27	19	8	3	0	1	0	0	0	1	7	10	4	6	5	0	0	0	0	0	0				**173**
White Admiral					0	0	0	0	0	0	0	0	0	0	0	0	0	2	2	0	0	0	0	0	0	0	0	0	0	0					**4**
Red Admiral				2	0	0	1	1	1	1	0	1	4	6	3	6	19	15	14	16	33	17	10	6	9	13	17	15	16	9	0				**235**
Painted Lady				0	0	0	0	0	0	0	0	0	0	0	3	5	43	40	11	5	6	30	33	43	44	35	27	13	5	2	0				**345**
Small Tortoiseshell				6	14	15	19	20	7	4	2	2	5	4	8	15	18	18	26	12	10	20	16	11	12	2	22	9	3	1	0				**301**
Peacock				17	8	25	39	32	24	18	16	8	3	2	0	0	2	0	1	7	122	88	20	10	3	2	3	2	3	1	1				**457**
Comma				6	8	9	2	1	1	2	0	1	0	0	2	3	10	16	18	14	22	21	13	7	5	6	14	25	12	10	0				**228**
Silver-washed Fritillary				0	0	0	0	0	0	0	0	0	0	0	0	0	1	10	11	11	15	9	8	3	4	0	1	0	1	0	0				**74**
Speckled Wood				1	1	20	40	78	65	45	48	24	58	46	47	44	55	18	24	27	63	76	88	72	87	113	170	110	76	32	0				**1528**
Marbled White				0	0	0	0	0	0	0	0	0	0	3	9	87	307	1269	1328	681	221	70	11	1	1	3	0	0	0	0	0				**3991**
Gatekeeper / Hedge Brown				0	0	0	0	0	0	0	0	0	0	0	0	3	5	15	109	389	1006	975	594	402	143	43	11	0	0	0	0				**3695**
Meadow Brown				0	0	0	0	0	0	0	0	0	0	34	166	392	1292	2669	2626	2966	2825	1982	1153	754	463	190	58	7	2	0	0				**17579**
Small Heath				0	0	0	0	0	2	5	10	17	31	22	22	32	80	75	37	27	16	7	3	5	12	17	7	2	4	2					**435**
Ringlet				0	0	0	0	0	0	0	0	0	0	0	30	75	345	1196	1382	844	362	100	21	13	4	0	0	0	0	0	0				**4372**
Total inc Estimates	**0**	**0**	**0**	**41**	**48**	**144**	**260**	**302**	**280**	**254**	**259**	**210**	**259**	**257**	**414**	**796**	**2328**	**5514**	**5948**	**5675**	**5319**	**3823**	**2267**	**1660**	**1141**	**719**	**499**	**260**	**176**	**82**	**1**	**0**	**0**	**0**	**38936**

UKBMS Malvern Swinyard & Hangman Hills 2019

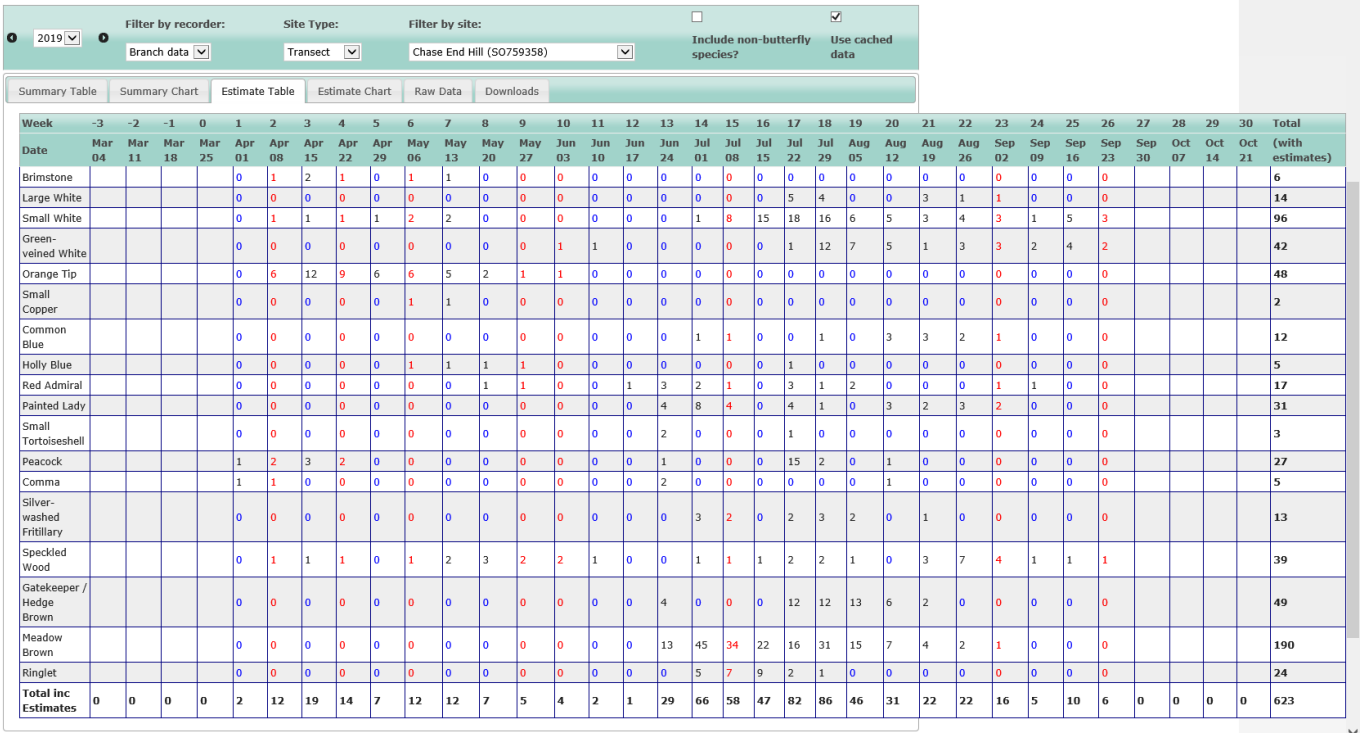


2019 | Filter by recorder: Branch data | Site Type: Transect | Filter by site: Malvern Swinyard Hill (SO762388) | Include non-butterfly species? | Use cached data

Summary Table | Summary Chart | Estimate Table | Estimate Chart | Raw Data | Downloads

Week	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Date	Mar 04	Mar 11	Mar 18	Mar 25	Apr 01	Apr 08	Apr 15	Apr 22	Apr 29	May 06	May 13	May 20	May 27	Jun 03	Jun 10	Jun 17	Jun 24	Jul 01	Jul 08	Jul 15	Jul 22	Jul 29	Aug 05	Aug 12	Aug 19	Aug 26	Sep 02	Sep 09	Sep 16	Sep 23	Sep 30	Oct 07	Oct 14	Oct 21	(with estimates)
Small/Essex Skipper						0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0								1
Large Skipper						0	0	0	0	0	0	0	0	0	1	1	1	3	0	0	1	0	0	0	0	0	0								7
Brimstone						1	1	0	0	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1								10
Large White						0	0	0	0	0	0	1	0	0	0	0	0	1	4	1	3	1	2	3	5	0	0								21
Small White						1	2	0	0	1	0	3	1	0	0	0	0	0	0	0	0	4	2	0	2	4	2								22
Green-veined White						2	3	0	0	1	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0								8
Orange Tip						2	4	5	0	4	3	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0								20
Purple Hairstreak						0	0	0	0	0	0	0	0	0	0	0	0	0	2	4	1	2	1	0	0	0	0								10
White-letter Hairstreak						0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0								1
Small Copper						1	1	0	0	1	0	0	0	0	0	0	1	0	0	0	1	1	1	0	0	0	0								7
Brown Argus						0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	0	0	0								3
Common Blue						0	0	0	0	0	0	8	2	3	2	1	1	0	0	0	0	1	1	0	2	1	1								23
Holly Blue						1	1	1	1	3	2	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0								10
Red Admiral						0	0	0	0	0	0	0	0	0	0	0	1	1	1	4	1	2	1	0	2	1	1								15
Painted Lady						0	0	0	0	0	0	0	0	0	0	0	6	5	0	1	0	1	1	1	1	0	0								16
Small Tortoiseshell						0	0	1	0	0	0	1	0	0	1	1	0	0	0	1	0	0	1	1	1	0	0								8
Peacock						1	1	0	0	0	0	1	0	0	0	0	0	0	0	0	9	4	2	0	0	0	0								18
Comma						0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	0	1	1	0	0	1	1								7
Silver-washed Fritillary						0	0	0	0	0	0	0	0	0	0	0	0	6	3	1	9	4	4	3	2	0	0								32
Speckled Wood						4	7	4	0	2	7	2	5	3	2	1	3	2	0	0	4	5	3	0	3	6	3								66
Marbled White						0	0	0	0	0	0	0	0	0	1	1	18	16	18	3	0	0	0	0	0	0	0								57
Gatekeeper / Hedge Brown						0	0	0	0	0	0	0	0	0	0	0	0	0	2	7	48	37	24	11	6	3	2								140
Meadow Brown						0	0	0	0	0	0	0	0	0	6	12	18	23	35	13	47	23	13	2	4	0	0								196
Small Heath						0	0	0	0	1	3	3	3	0	4	7	9	6	4	0	0	0	0	0	0	0	0								40
Ringlet						0	0	0	0	0	0	0	0	0	1	2	20	14	133	26	8	3	2	0	0	0	0								209
Total inc Estimates	**0**	**0**	**0**	**0**	**0**	**13**	**20**	**11**	**1**	**15**	**19**	**21**	**12**	**6**	**18**	**26**	**80**	**77**	**204**	**62**	**133**	**91**	**60**	**21**	**29**	**17**	**11**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**947**

UKBMS Malvern Chase End Hill 2019

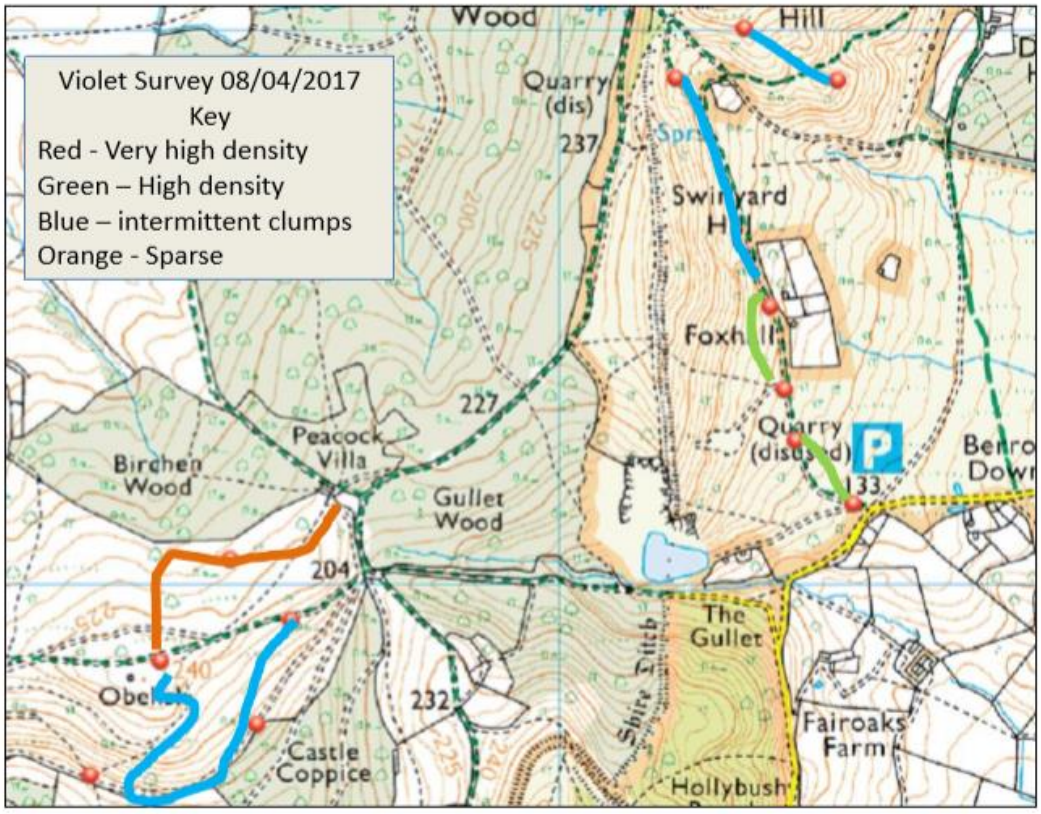


2019 | Filter by recorder: Branch data | Site Type: Transect | Filter by site: Chase End Hill (SO759358) | Include non-butterfly species? | Use cached data

Summary Table | Summary Chart | Estimate Table | Estimate Chart | Raw Data | Downloads

Week	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Date	Mar 04	Mar 11	Mar 18	Mar 25	Apr 01	Apr 08	Apr 15	Apr 22	Apr 29	May 06	May 13	May 20	May 27	Jun 03	Jun 10	Jun 17	Jun 24	Jul 01	Jul 08	Jul 15	Jul 22	Jul 29	Aug 05	Aug 12	Aug 19	Aug 26	Sep 02	Sep 09	Sep 16	Sep 23	Sep 30	Oct 07	Oct 14	Oct 21	(with estimates)
Brimstone					0	1	2	1	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					6
Large White					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	5	4	0	0	3	1	1	0	0	0					14
Small White					0	1	1	1	1	2	2	0	0	0	0	0	0	1	8	15	18	16	6	5	3	4	3	1	5	3					96
Green-veined White					0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	1	12	7	5	1	3	3	2	4	2					42
Orange Tip					0	6	12	9	6	6	5	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					48
Small Copper					0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					2
Common Blue					0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	1	0	3	3	2	1	0	0	0					12
Holly Blue					0	0	0	0	0	1	1	1	1	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0					5
Red Admiral					0	0	0	0	0	0	0	1	1	0	0	1	3	2	1	0	3	1	2	0	0	0	1	1	0	0					17
Painted Lady					0	0	0	0	0	0	0	0	0	0	0	0	4	8	4	0	4	1	0	3	2	3	2	0	0	0					31
Small Tortoiseshell					0	0	0	0	0	0	0	0	0	0	0	0	2	0	0	0	1	0	0	0	0	0	0	0	0	0					3
Peacock					1	2	3	2	0	0	0	0	0	0	0	0	1	0	0	0	15	2	0	1	0	0	0	0	0	0					27
Comma					1	1	0	0	0	0	0	0	0	0	0	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0					5
Silver-washed Fritillary					0	0	0	0	0	0	0	0	0	0	0	0	0	3	2	0	2	3	2	0	1	0	0	0	0	0					13
Speckled Wood					0	1	1	1	0	1	2	3	2	2	1	0	0	1	1	1	2	2	1	0	3	7	4	1	1	1					39
Gatekeeper / Hedge Brown					0	0	0	0	0	0	0	0	0	0	0	0	4	0	0	0	12	12	13	6	2	0	0	0	0	0					49
Meadow Brown					0	0	0	0	0	0	0	0	0	0	0	0	13	45	34	22	16	31	15	7	4	2	1	0	0	0					190
Ringlet					0	0	0	0	0	0	0	0	0	0	0	0	0	5	7	9	2	1	0	0	0	0	0	0	0	0					24
Total inc Estimates	**0**	**0**	**0**	**0**	**2**	**12**	**19**	**14**	**7**	**12**	**12**	**7**	**5**	**4**	**2**	**1**	**29**	**66**	**58**	**47**	**82**	**86**	**46**	**31**	**22**	**22**	**16**	**5**	**10**	**6**	**0**	**0**	**0**	**0**	**623**

A Survey of Violets - courtesy of John Tilt, WMBC, in 2017



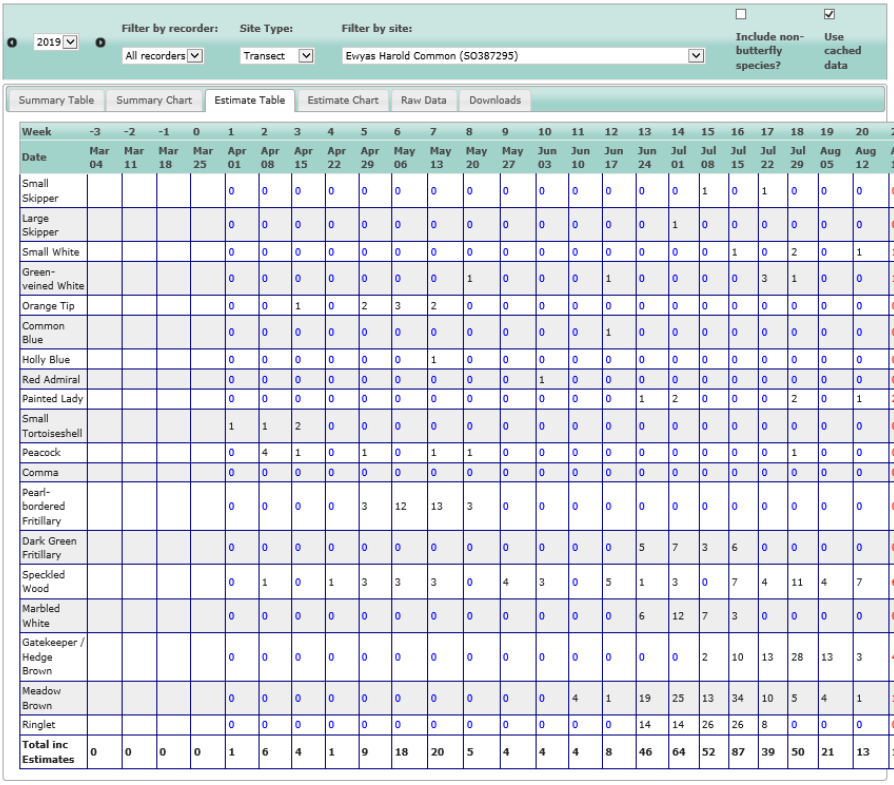
UKBMS Butterfly Transect Records at Donor Sites 2019

YEAR	SITE	SPECIES	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	Total
			01-Apr	08-Apr	15-Apr	22-Apr	29-Apr	06-May	13-May	20-May	27-May	03-Jun	10-Jun	17-Jun	24-Jun	01-Jul	08-Jul	15-Jul	22-Jul	29-Jul	05-Aug	12-Aug	19-Aug	26-Aug	02-Sep	
2020	WYRE WEST	Small Pearl-bordered Fritillary	0	0	0	0	0	0	2	2	10	1	0	2	2											19
2020	WYRE WEST	Pearl-bordered Fritillary	0	0	0	8	5	16	17	20	4	0	0	0	0											70
2020	WYRE WEST	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	17	5											22
2020	WYRE WEST	Silver-washed Fritillary	0	0	0	0	0	0	0	0	0	0	0	1	9											10
2019	WYRE WEST	Small Pearl-bordered Fritillary	0	0	0	0	0	0	0	0	4	10	3	0	7	2	2	0	0	0	0	0	0	0	0	28
2019	WYRE WEST	Pearl-bordered Fritillary	0	0	0	0	0	4	9	14	16	5	0	0	0	0	0	0	0	0	0	0	0	0	0	48
2019	WYRE WEST	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0	0	0	0	2
2019	WYRE WEST	Silver-washed Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	3	17	0	6	20	18	17	24	13	2	0	120
2018	WYRE WEST	Small Pearl-bordered Fritillary	0	0	0	0	0	0	0	2	3	0	0	0	0	0	8	0	0	0	0	0	0	0	0	13
2018	WYRE WEST	Pearl-bordered Fritillary	0	0	0	0	0	0	1	6	10	7	2	0	0	0	0	0	0	0	0	0	0	0	0	26
2018	WYRE WEST	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2018	WYRE WEST	Silver-washed Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	11	24	9	14	28	26	4	2	0	0	0	118
2017	WYRE WEST	Small Pearl-bordered Fritillary	0	0	0	0	0	0	5	1	2	1	5	2	1	0	0	0	0	0	0	0	0	0	0	17
2017	WYRE WEST	Pearl-bordered Fritillary	0	0	0	0	0	3	10	14	5	0	1	0	0	0	0	0	0	0	0	0	0	0	0	33
2017	WYRE WEST	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	1
2017	WYRE WEST	Silver-washed Fritillary	0	0	0	0	0	0	0	0	0	0	0	7	3	10	13	12	5	9	12	10	6	0	0	87
2016	WYRE WEST	Small Pearl-bordered Fritillary	0	0	0	0	0	0	0	0	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	5
2016	WYRE WEST	Pearl-bordered Fritillary	0	0	0	0	0	0	20	6	12	6	0	0	0	0	0	0	0	0	0	0	0	0	0	44
2016	WYRE WEST	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	0	3	0	8	0	0	0	0	0	0	0	11
2016	WYRE WEST	Silver-washed Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	14	2	2	1	10	6	1	0	36
2015	WYRE WEST	Small Pearl-bordered Fritillary	0	0	0	0	0	0	0	0	1	0	4	1	1	6	0	0	0	0	0	0	0	0	0	13
2015	WYRE WEST	Pearl-bordered Fritillary	0	0	0	0	0	14	12	6	5	8	2	0	0	0	0	0	0	0	0	0	0	0	0	47
2015	WYRE WEST	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	1	1	0	0	0	0	9
2015	WYRE WEST	Silver-washed Fritillary	0	0	0	0	0	0	0	0	0	0	0	1	0	9	12	9	6	4	6	8	4	3	1	64
2020	WYRE EAST	Small Pearl-bordered Fritillary	0	0	0	0	0	0	1	1	13	4	5	4	0	0										28
2020	WYRE EAST	Pearl-bordered Fritillary	0	0	0	9	2	4	24	18	10	1	0	0	0	0										68
2020	WYRE EAST	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	2	0	0										2
2020	WYRE EAST	Silver-washed Fritillary	0	0	0	0	0	0	0	0	0	0	0	10	31	16										57
2019	WYRE EAST	Small Pearl-bordered Fritillary	0	0	0	0	0	0	0	0	29	0	3	1	2	4	0	0	0	0	0	0	0	0	0	39
2019	WYRE EAST	Pearl-bordered Fritillary	0	0	0	0	1	9	14	16	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	49
2019	WYRE EAST	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	5	1	2	4	0	2	0	1	0	0	0	15
2019	WYRE EAST	Silver-washed Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	6	39	0	33	51	56	32	17	19	4	0	257
2018	WYRE EAST	Small Pearl-bordered Fritillary	0	0	0	0	0	0	0	0	0	4	0	9	3	0	0	0	0	0	0	0	0	0	0	16
2018	WYRE EAST	Pearl-bordered Fritillary	0	0	0	0	0	0	2	45	29	19	0	0	0	0	0	0	0	0	0	0	0	0	0	95
2018	WYRE EAST	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	5	4	7	2	3	0	0	0	0	0	0	21
2018	WYRE EAST	Silver-washed Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	8	83	43	72	86	2	18	0	0	0	0	312
2017	WYRE EAST	Small Pearl-bordered Fritillary	0	0	0	0	0	0	0	0	3	10	11	7	7	0	0	0	0	0	0	0	0	0	0	38
2017	WYRE EAST	Pearl-bordered Fritillary	0	0	0	0	2	3	7	7	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	22
2017	WYRE EAST	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	3	0	1	0	0	0	0	0	6
2017	WYRE EAST	Silver-washed Fritillary	0	0	0	0	0	0	0	0	0	0	0	4	20	70	37	68	29	53	22	3	1	0	0	307
2016	WYRE EAST	Small Pearl-bordered Fritillary	0	0	0	0	0	0	0	0	0	8	12	1	0	5	0	0	0	0	0	0	0	0	0	26
2016	WYRE EAST	Pearl-bordered Fritillary	0	0	0	0	0	0	3	8	1	8	0	0	0	0	0	0	0	0	0	0	0	0	0	20
2016	WYRE EAST	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	3	1	0	0	0	0	6
2016	WYRE EAST	Silver-washed Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	4	2	20	29	34	16	27	23	1	7	0	163
2015	WYRE EAST	Small Pearl-bordered Fritillary	0	0	0	0	0	0	0	0	0	1	0	1	9	6	0	0	0	0	0	0	0	0	0	17
2015	WYRE EAST	Pearl-bordered Fritillary	0	0	0	0	2	1	3	15	17	15	8	0	0	0	0	0	0	0	0	0	0	0	0	61
2015	WYRE EAST	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	7	0	0	1	15	2	10	0	1	0	0	0	0	36
2015	WYRE EAST	Silver-washed Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	3	11	63	29	53	57	72	49	1	1	0	339
2020	EWYAS HAROLD	Pearl-bordered Fritillary	0	0	0	4	3	2	1	1	0	0	0	0	0	0	0									11
2020	EWYAS HAROLD	Dark Green Fritillary	0	0	0	0	0	0	0	0	1	6	5	0	1	1	1									15
2019	EWYAS HAROLD	Pearl-bordered Fritillary	0	0	0	0	3	12	13	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	31
2019	EWYAS HAROLD	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	5	7	3	6	0	0	0	0	0	0	0	21
2018	EWYAS HAROLD	Pearl-bordered Fritillary	0	0	0	0	0	0	8	5	2	3	0	0	0	0	0	0	0	0	0	0	0	0	0	18
2018	EWYAS HAROLD	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	2	0	4	2	2	2	0	0	0	0	0	0	0	12
2017	EWYAS HAROLD	Pearl-bordered Fritillary	0	0	0	0	8	8	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	21
2017	EWYAS HAROLD	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	3	2	2	1	0	1	0	0	0	0	0	0	9
2016	EWYAS HAROLD	Pearl-bordered Fritillary	0	0	0	0	0	1	3	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	7
2016	EWYAS HAROLD	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0	1	0	0	0	0	4
2015	EWYAS HAROLD	Pearl-bordered Fritillary	0	0	0	1	2	4	5	0	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	14
2015	EWYAS HAROLD	Dark Green Fritillary	0	0	0	0	0	0	0	0	0	0	0	2	1	1	0	0	0	0	0	0	0	0	0	4

UKBMS Butterfly records around proposed donor sites 2019

Ewyas Harold, Herefordshire

Transect Records 2019



2019 | Filter by recorder: All recorders | Site Type: Transect | Filter by site: Ewyas Harold Common (SO387295) | Include non-butterfly species? | Use cached data

Summary Table | Summary Chart | Estimate Table | Estimate Chart | Raw Data | Downloads

Week	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Date	Mar 04	Mar 11	Mar 18	Mar 25	Apr 01	Apr 08	Apr 15	Apr 22	Apr 29	May 06	May 13	May 20	May 27	Jun 03	Jun 10	Jun 17	Jun 24	Jul 01	Jul 08	Jul 15	Jul 22	Jul 29	Aug 05	Aug 12	Aug 19	Aug 26	Sep 02	Sep 09	Sep 16	Sep 23	Sep 30	Oct 07	Oct 14	Oct 21	(with estimates)
Small Skipper					0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0					2
Large Skipper					0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0					1
Small White					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	0	1	1	0	0	0	0	0					5
Green-veined White					0	0	0	0	0	0	0	1	0	0	0	1	0	0	0	0	3	1	0	0	1	2	3	1	0	0					13
Orange Tip					0	0	1	0	2	3	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					8
Common Blue					0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0					1
Holly Blue					0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					1
Red Admiral					0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					1
Painted Lady					0	0	0	0	0	0	0	0	0	0	0	0	1	2	0	0	0	2	0	1	2	2	0	0	0	0					10
Small Tortoiseshell					1	1	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					4
Peacock					0	4	1	0	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0					9
Comma					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1					2
Pearl-bordered Fritillary					0	0	0	0	3	12	13	3	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					31
Dark Green Fritillary					0	0	0	0	0	0	0	0	0	0	0	0	5	7	3	6	0	0	0	0	0	0	0	0	0	0					21
Speckled Wood					0	1	0	1	3	3	3	0	4	3	0	5	1	3	0	7	4	11	4	7	6	5	15	7	8	4					105
Marbled White					0	0	0	0	0	0	0	0	0	0	0	0	6	12	7	3	0	0	0	0	0	0	0	0	0	0					28
Gatekeeper / Hedge Brown					0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	10	13	28	13	3	4	5	0	0	0	0					78
Meadow Brown					0	0	0	0	0	0	0	0	0	0	4	1	19	25	13	34	10	5	4	1	1	1	0	0	0	0					118
Ringlet					0	0	0	0	0	0	0	0	0	0	0	0	14	14	26	26	8	0	0	0	0	0	0	0	0	0					88
Total inc Estimates	**0**	**0**	**0**	**0**	**1**	**6**	**4**	**1**	**9**	**18**	**20**	**5**	**4**	**4**	**4**	**8**	**46**	**64**	**52**	**87**	**39**	**50**	**21**	**13**	**15**	**15**	**18**	**8**	**9**	**5**	**0**	**0**	**0**	**0**	**526**

BUTTERFLY CONSERVATION
WEST MIDLANDS REGION

EWYAS HAROLD COMMON

PEARL BORDERED FRITILLARY COUNTS

Maximum number recorded in each compartment
2011-2020

Cpt	2011	2012	2013	2014	2015a	2016	2017	2018	2019	2020
A	31 (28/04)	8 (22/05)	2 (22/05)	4 (14/05)	4 (12/05)	3 (12/05)	3 (07/05)	10 (19/05)	4 (12/05)	10 (26/04)
B	44 (28/04)	14 (22/05)	7 (22/05)	12 (14/05)	48 (12/05)	21 (16/05)	10	17	20	31 (26/04)
C	11 (28/04)	5 (22/05)	0	1 (14/05)	7 (12/05)	0	1	3	8	1 (26/04)
D	50 (28/04)	7 (22/05)	2 (22/05)	5 (14/05)	14 (12/05)	8 (16/05)	7	3	6	12 (26/04)
E	42 (28/04)	7 (12/05)	9 (22/05)	9 (14/05)	1 (12/05)	4 (12/05)	3	9	16	12 (26/04)
F	22 (28/04)	7 (12/05)	3 (22/05)	4 (14/05)	2 (12/05)	1 (12/05)	1	1	3	3 (26/04)
G	17 (28/04)	10 (22/05)	3 (22/05)	5 (14/05)	6 (12/05)	4 (16/05)	4	4	9	19 (26/04)
H	1 (28/04)	3 (12/05)	1 (22/05)	1 (14/05)	2 (12/05)	0	0	0	6	6 (26/04)
I	4 (28/04)	5 (08/05)	0	0	0	1 (12/05)	1	4	6	4 (26/04)
J	9 (28/04)	6 (22/05)	1 (22/05)	2 (14/05)	4 (12/05)	2 (12/05)	2	4	10	11 (26/04)
K	16 (28/04)	3 (08/05)	2 (22/05)	1 (14/05)	4 (12/05)	0	55	5	15	12 (26/04)
L	14 (28/04)	8 (12/05)	7 (22/05)	4 (14/05)	5 (12/05)	7 (16/05)	7	5	16	11 (26/04)
Area 2							1	6	0	n/a
Area 13					13 (12/05)	32 (12/05)	58	148	71c	48 (06/05)
Area 14						12 (12/05)	3	0	0	n/a
Area 15							14	127	34	28 (06/05)
Herp Area					2 (12/05)	0	n/a	n/a	n/a	
Totals	**261**	**83**	**37**	**48**	**112**	**95b**	**120**	**346**	**224**	**208d**

Note: Prior to 2011 the peak flight period from the records occurs from 12 May to 20 May in each year, with 9 of the 12 compartments having peaks in the period 14-15 May. In 2011, however, the peak occurred early on 28 April, whilst in 2012 and 2013 the peak occurred on 22 May due to a cold and late Spring. In 2020 the peak was very early, approx. 26-27 April.

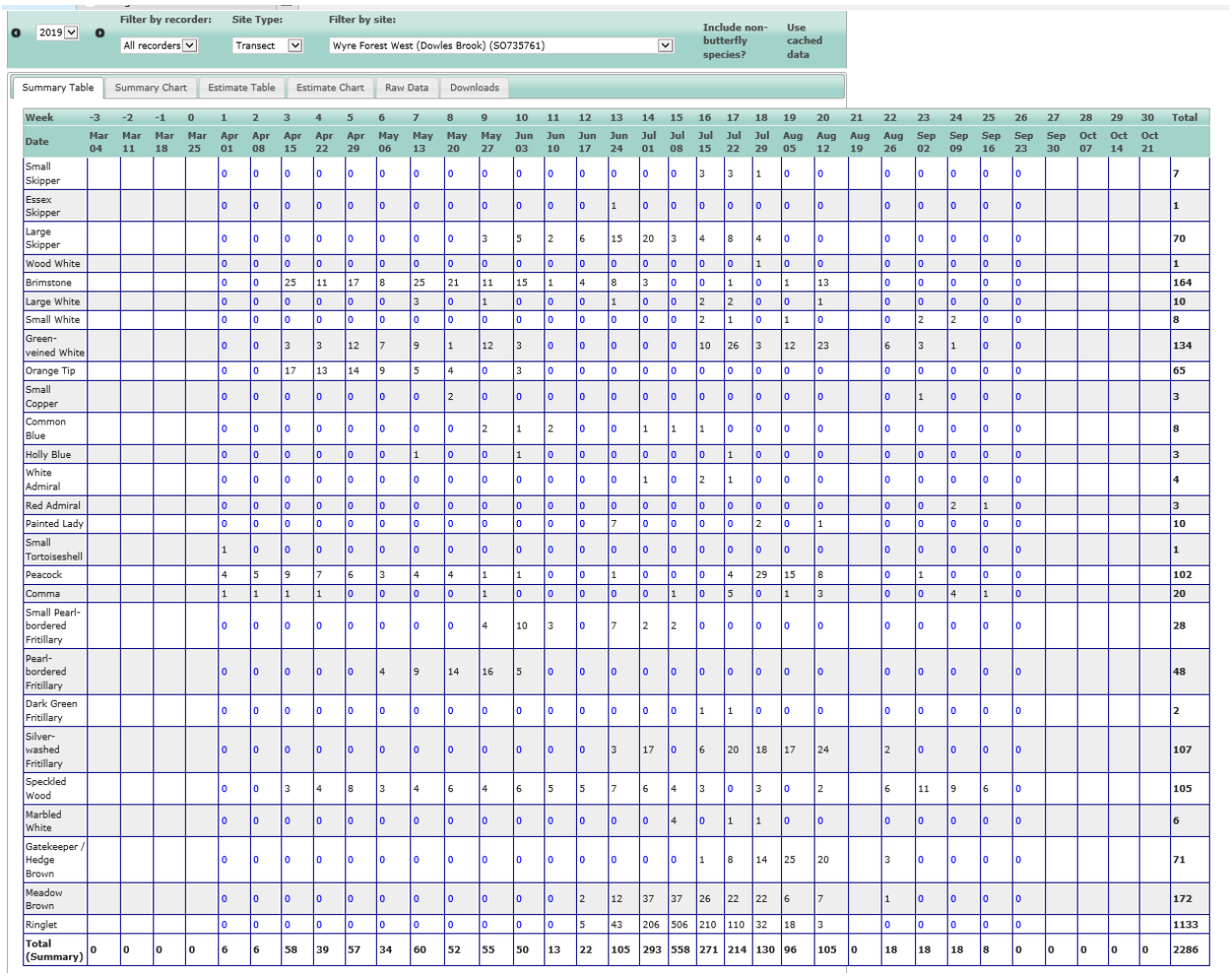
a) Counts undertaken by Wessex Environmental Services (Clarke & Green) under contract.
b) Over 100 individuals counted by BC South Wales Branch Members.
c) Area 13 part-cut by Commoner for bedding in winter 2018/19.
d) An under-estimate. There were many more butterflies in Areas 13 and 15 at the peak period, but the weather intervened to undertake a count.

Records compiled by Ian Hart.

UKBMS Butterfly records around proposed donor sites 2019

Wyre Forest West

Transect Records 2019



2019 | Filter by recorder: All recorders | Site Type: Transect | Filter by site: Wyre Forest West (Dowles Brook) (SO735761) | Include non-butterfly species? | Use cached data

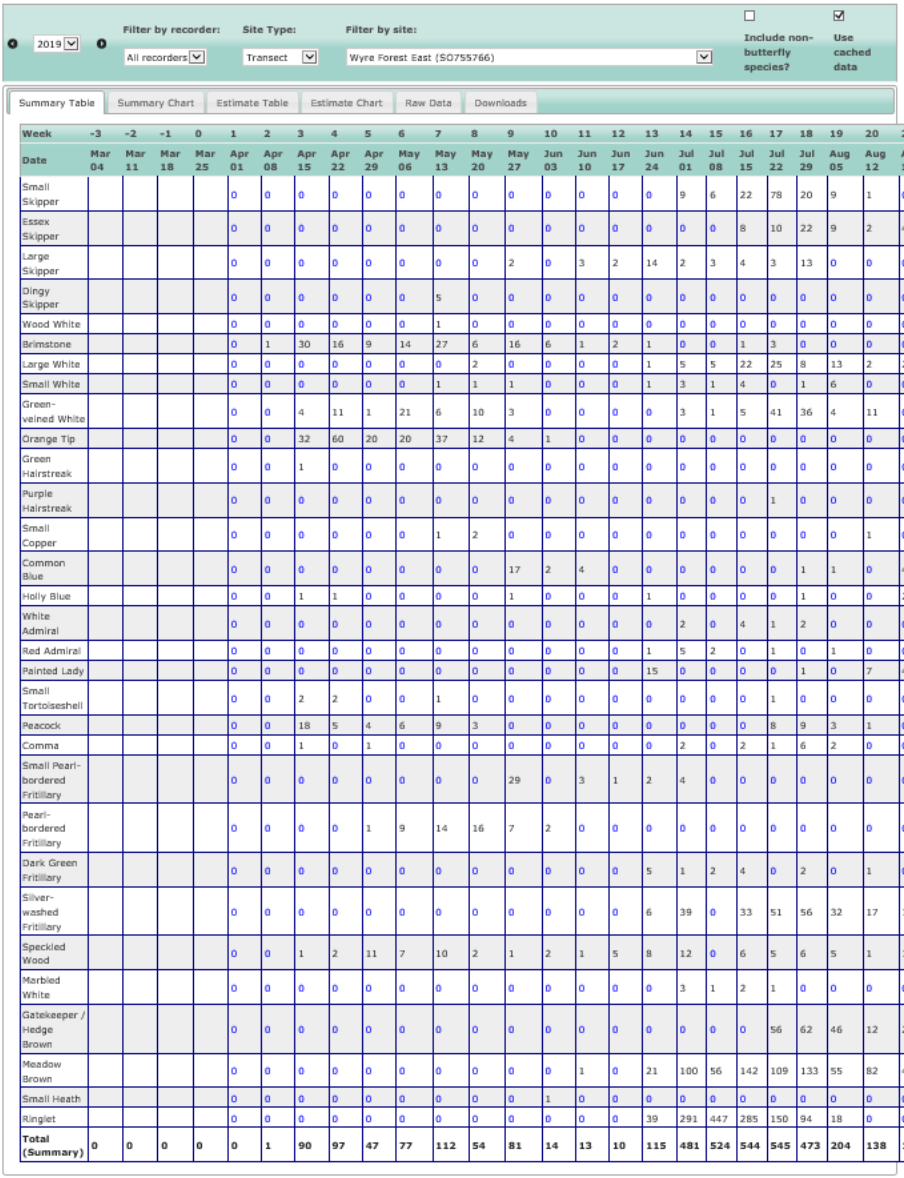
Summary Table | Summary Chart | Estimate Table | Estimate Chart | Raw Data | Downloads

Week	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Date	Mar 04	Mar 11	Mar 18	Mar 25	Apr 01	Apr 08	Apr 15	Apr 22	Apr 29	May 06	May 13	May 20	May 27	Jun 03	Jun 10	Jun 17	Jun 24	Jul 01	Jul 08	Jul 15	Jul 22	Jul 29	Aug 05	Aug 12	Aug 19	Aug 26	Sep 02	Sep 09	Sep 16	Sep 23	Sep 30	Oct 07	Oct 14	Oct 21	
Small Skipper					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	3	3	1	0	0		0	0	0	0	0					**7**
Essex Skipper					0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0		0	0	0	0	0					**1**
Large Skipper					0	0	0	0	0	0	0	0	3	5	2	6	15	20	3	4	8	4	0	0		0	0	0	0	0					**70**
Wood White					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0		0	0	0	0	0					**1**
Brimstone					0	0	25	11	17	8	25	21	11	15	1	4	8	3	0	0	1	0	1	13		0	0	0	0	0					**164**
Large White					0	0	0	0	0	0	3	0	1	0	0	0	1	0	0	2	2	0	0	1		0	0	0	0	0					**10**
Small White					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	2	1	0	1	0		0	2	2	0	0					**8**
Green-veined White					0	0	3	3	12	7	9	1	12	3	0	0	0	0	0	10	26	3	12	23		6	3	1	0	0					**134**
Orange Tip					0	0	17	13	14	9	5	4	0	3	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0					**65**
Small Copper					0	0	0	0	0	0	0	2	0	0	0	0	0	0	0	0	0	0	0	0		0	1	0	0	0					**3**
Common Blue					0	0	0	0	0	0	0	0	2	1	2	0	0	1	1	1	0	0	0	0		0	0	0	0	0					**8**
Holly Blue					0	0	0	0	0	0	1	0	0	1	0	0	0	0	0	0	1	0	0	0		0	0	0	0	0					**3**
White Admiral					0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	2	1	0	0	0		0	0	0	0	0					**4**
Red Admiral					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	2	1	0					**3**
Painted Lady					0	0	0	0	0	0	0	0	0	0	0	0	7	0	0	0	0	2	0	1		0	0	0	0	0					**10**
Small Tortoiseshell					1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0					**1**
Peacock					4	5	9	7	6	3	4	4	1	1	0	0	1	0	0	0	4	29	15	8		0	1	0	0	0					**102**
Comma					1	1	1	1	0	0	0	0	1	0	0	0	0	0	1	0	5	0	1	3		0	0	4	1	0					**20**
Small Pearl-bordered Fritillary					0	0	0	0	0	0	0	0	4	10	3	0	7	2	2	0	0	0	0	0		0	0	0	0	0					**28**
Pearl-bordered Fritillary					0	0	0	0	0	4	9	14	16	5	0	0	0	0	0	0	0	0	0	0		0	0	0	0	0					**48**
Dark Green Fritillary					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	1	0	0	0		0	0	0	0	0					**2**
Silver-washed Fritillary					0	0	0	0	0	0	0	0	0	0	0	0	3	17	0	6	20	18	17	24		2	0	0	0	0					**107**
Speckled Wood					0	0	3	4	8	3	4	6	4	6	5	5	7	6	4	3	0	3	0	2		6	11	9	6	0					**105**
Marbled White					0	0	0	0	0	0	0	0	0	0	0	0	0	0	4	0	1	1	0	0		0	0	0	0	0					**6**
Gatekeeper / Hedge Brown					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	8	14	25	20		3	0	0	0	0					**71**
Meadow Brown					0	0	0	0	0	0	0	0	0	0	0	2	12	37	37	26	22	22	6	7		1	0	0	0	0					**172**
Ringlet					0	0	0	0	0	0	0	0	0	0	0	5	43	206	506	210	110	32	18	3		0	0	0	0	0					**1133**
Total (Summary)	**0**	**0**	**0**	**0**	**6**	**6**	**58**	**39**	**57**	**34**	**60**	**52**	**55**	**50**	**13**	**22**	**105**	**293**	**558**	**271**	**214**	**130**	**96**	**105**	**0**	**18**	**18**	**18**	**8**	**0**	**0**	**0**	**0**	**0**	**2286**

UKBMS Butterfly records around proposed donor sites 2019

Wyre Forest East

Transect Records 2019



2019 | Filter by recorder: All recorders | Site Type: Transect | Filter by site: Wyre Forest East (SO755766) | Include non-butterfly species? | Use cached data

Summary Table | Summary Chart | Estimate Table | Estimate Chart | Raw Data | Downloads

Week	-3	-2	-1	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	Total
Date	Mar 04	Mar 11	Mar 18	Mar 25	Apr 01	Apr 08	Apr 15	Apr 22	Apr 29	May 06	May 13	May 20	May 27	Jun 03	Jun 10	Jun 17	Jun 24	Jul 01	Jul 08	Jul 15	Jul 22	Jul 29	Aug 05	Aug 12	Aug 19	Aug 26	Sep 02	Sep 09	Sep 16	Sep 23	Sep 30	Oct 07	Oct 14	Oct 21		
Small Skipper					0	0	0	0	0	0	0	0	0	0	0	0	0	9	6	22	78	20	9	1	0	0	0	0	0	0					145
Essex Skipper					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	8	10	22	9	2	4	0	0	0	0	0					55
Large Skipper					0	0	0	0	0	0	0	0	2	0	3	2	14	2	3	4	3	13	0	0	0	0	0	0	0	0					46
Dingy Skipper					0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					5
Wood White					0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					1
Brimstone					0	1	30	16	9	14	27	6	16	6	1	2	1	0	0	1	3	0	0	0	0	0	0	0	0	0					133
Large White					0	0	0	0	0	0	0	2	0	0	0	0	1	5	5	22	25	8	13	2	2	3	1	0	0	0					89
Small White					0	0	0	0	0	0	1	1	1	0	0	0	1	3	1	4	0	1	6	0	0	1	3	0	3	0					26
Green-veined White					0	0	4	11	1	21	6	10	3	0	0	0	0	3	1	5	41	36	4	11	0	11	0	1	0	0					169
Orange Tip					0	0	32	60	20	20	37	12	4	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					186
Green Hairstreak					0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					1
Purple Hairstreak					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0					1
Small Copper					0	0	0	0	0	0	1	2	0	0	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0					4
Common Blue					0	0	0	0	0	0	0	0	17	2	4	0	0	0	0	0	0	1	1	0	4	0	4	0	0	0					33
Holly Blue					0	0	1	1	0	0	0	0	1	0	0	0	1	0	0	0	0	1	0	0	2	0	0	0	0	0					7
White Admiral					0	0	0	0	0	0	0	0	0	0	0	0	0	2	0	4	1	2	0	0	0	0	0	0	0	0					9
Red Admiral					0	0	0	0	0	0	0	0	0	0	0	0	1	5	2	0	1	0	1	0	0	1	1	1	0	0					13
Painted Lady					0	0	0	0	0	0	0	0	0	0	0	0	15	0	0	0	0	1	0	7	4	2	4	1	0	0					34
Small Tortoiseshell					0	0	2	2	0	0	1	0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	1	3	1	0					11
Peacock					0	0	18	5	4	6	9	3	0	0	0	0	0	0	0	0	8	9	3	1	0	1	0	0	0	0					67
Comma					0	0	1	0	1	0	0	0	0	0	0	0	0	2	0	2	1	6	2	0	0	0	1	0	1	0					17
Small Pearl-bordered Fritillary					0	0	0	0	0	0	0	0	29	0	3	1	2	4	0	0	0	0	0	0	0	0	0	0	0	0					39
Pearl-bordered Fritillary					0	0	0	0	1	9	14	16	7	2	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					49
Dark Green Fritillary					0	0	0	0	0	0	0	0	0	0	0	0	5	1	2	4	0	2	0	1	0	0	0	0	0	0					15
Silver-washed Fritillary					0	0	0	0	0	0	0	0	0	0	0	0	6	39	0	33	51	56	32	17	19	4	0	0	0	0					257
Speckled Wood					0	0	1	2	11	7	10	2	1	2	1	5	8	12	0	6	5	6	5	1	12	8	2	5	9	1					122
Marbled White					0	0	0	0	0	0	0	0	0	0	0	0	0	3	1	2	1	0	0	0	0	0	0	0	0	0					7
Gatekeeper / Hedge Brown					0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	56	62	46	12	27	7	0	0	0	0					210
Meadow Brown					0	0	0	0	0	0	0	0	0	0	1	0	21	100	56	142	109	133	55	82	48	10	3	3	0	0					763
Small Heath					0	0	0	0	0	0	0	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0					1
Ringlet					0	0	0	0	0	0	0	0	0	0	0	0	39	291	447	285	150	94	18	0	0	0	0	0	0	0					1324
Total (Summary)	**0**	**0**	**0**	**0**	**0**	**1**	**90**	**97**	**47**	**77**	**112**	**54**	**81**	**14**	**13**	**10**	**115**	**481**	**524**	**544**	**545**	**473**	**204**	**138**	**122**	**48**	**20**	**14**	**14**	**1**	**0**	**0**	**0**	**0**	**3839**

UKBMS Butterfly records around proposed donor sites 2019

Wyre Forest East & West

Timed counts