Is The Wyre Forest Still a Haven for its Distinct Butterflies? The Ups and Downs of the Wyre's Butterflies

JENNY JOY AND MIKE WILLIAMS

Over the last decade (2009-2019) Butterfly Conservation has written much about the Wyre Forest and its huge importance for Lepidoptera both regionally and nationally as well as the changes that have occurred with regard to particular species. In Butterfly Conservation's West Midlands Regional Conservation Strategy (part of the organisation's UK Conservation strategy 2025) the wider Wyre area still easily supports the highest number of priority species (12 butterflies and 12 moths) in our region. Meanwhile, the landscape with the second-highest number of priority species, the North Shropshire Mosses, supports only two-thirds the number of butterflies and half the priority moths. While this strategy changes nothing on the ground it does make for a strong argument that Butterfly Conservation's volunteers, staff and resources should continue to focus on this area. The West Midlands Branch of Butterfly Conservation has always regarded the Wyre Forest as one of its priorities, with two of the first butterfly transects set up nationally in the Forest in the early 1980s and a strong working relationship also being established with the Forestry Commission in the early days. One of these early transects was established by the late Frank Lancaster who was instrumental in consolidating our ties with the Forestry Commission.

The purpose of this article is to illustrate how things have changed over the past ten years with regard to some of the forest's most notable butterflies, and to highlight what we consider are the main challenges still facing them.

The importance of recording and monitoring

One of the biggest changes over the past decade, which has hugely contributed to our knowledge of Wyre, has been the number of volunteers involved in the monitoring programme (Table 1).

As Table 1 shows, the level of volunteer activity significantly increased on all levels with timed count and survey visits peaking at 227 and visits in 2017. This increase in volunteer involvement and effort means we now know far more about the distribution and abundance of our key butterflies across the forest than we did ten years ago. Nationally, the Wyre is also now one of the best monitored sites in the country for its butterflies, enabling us to identify trends with a degree of confidence seldom achievable elsewhere.

Pearl-bordered Fritillary still a success story

Photo 1. Pearl-bordered Fritillary. Dave Williams

In the Wyre Forest Study Group 2012 review we suggested that the Wyre Forest was now 'one of the premier sites for Pearl-bordered Fritillary *Boloria euphrosyne* in England'. This status is still supported by both timed count and transect monitoring data (see timed data summary data in Table 2) which suggest that this butterfly is widespread across the forest and locally abundant in some places where large colonies are present.

In Butterfly Conservation's dataset there are more

Table 1. Volunteer involvement in butterfly survey and monitoring in the Wyre Forest 2009-2019.

Summary statistic/year	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Total number of volunteers involved	<5	>20	>20	28	32	28	34	39	40	37	30
Total number of survey and timed count monitoring visits				78	75	155	191	180	227	165	122
Number of butterfly transects				4	4	4	4	4	4	4	5
Number of transect visits				85	94	94	93	86	87	89	100
Total number of volunteer visits				163	169	249	284	266	314	254	222

Table 2. Timed count for Pearl-bordered fritillary in the Wyre Forest 2002-2019. Colony sizes as Oates (2003) Large (L) = peak season counts of equal to or >50, Medium (M) = 21-49 and Small (S) = <21.

Year	Total no. occupied sites monitored by timed counts	No. small colonies	No. medium colonies	No. large colonies
2002	15	11	4	0
2003	14	13	1	0
2004	14	11	3	0
2005	18	17	1	0
2006	13	11	2	0
2007	16	10	6	0
2008	18	15	3	0
2009	13	11	2	0
2010	23	16	4	3
2011	30	16	3	11
2012	60	39	16	5
2013	43	35	7	1
2014	58	44	12	2
2015	55	48	6	1
2016	51	41	8	2
2017	59	53	3	3
2018	61	48	9	4
2019	56	40	12	4

records for *B. euphrosyne* in the Wyre Forest than there are for Silver-washed Fritillary *Argynnis paphia*. This is not because *B. euphrosyne* are more abundant than *A. paphia* but is due to the successful targeted recording effort for a nationally declining species. It is not all good news, however, and there are now some indications (*e.g.* a reduction in the number of new site colonisations or site re-colonisations which are recorded but not given here) which suggest that the distribution of this butterfly could already be starting to decline in some areas. We only know this thanks to the level of recording effort and we are already starting to address this problem by working with Natural England and Forestry England to try to maintain *B. euphrosyne* as a breeding species on rides in areas where no active woodland management is planned in the near future. It is also disappointing that none of the colonisations that have occurred further afield at Eymore Wood or Ribbesford have survived. We therefore need to work harder to try to create more suitable habitat outside the main forest block for future colonisations and to provide corridors connecting these areas to where the butterfly is currently found. The desire to work more with landowners in the wider landscape led to the establishment in 2015 of the Wyre Forest Facilitation Group which over the past 5 years has engaged with some 80 farmers and other owners to improve biodiversity and wildlife habitats.

Photo 2. Wood Whites. John Devries

Wood White – more to do

Another important species in the Forest is the Wood White *Leptidea sinapis*, a nationally declining species but still surviving in parts of the West Midlands. L. sinapis was the focus of part of the Back to Orange Project which ran from 2008-2010. In the Wyre Forest Study Group 2010 review we reported on an increase in sightings for *L. sinapis* at Hurst Coppice following the opening-up of the stream valley running through this area. Sadly, although this improvement in numbers was maintained for the next few years, since 2014 numbers have been gradually declining (Figure 1). While Butterfly Conservation work parties have temporarily halted the habitat decline along the stream valleys at Hurst Coppice and Birchen Vallets, horses have also caused significant damage to the ride sides in both of these areas, especially where the foodplants of this butterfly were most abundant. There is therefore now an urgent need for more long-term habitat improvements both along the ride sides and in the stream valleys trialling different methods, as well as looking at opportunities for habitat creation in other parts of the forest where *L. sinapis* has been recently recorded (most notably close to the Railway line where it used to occur).

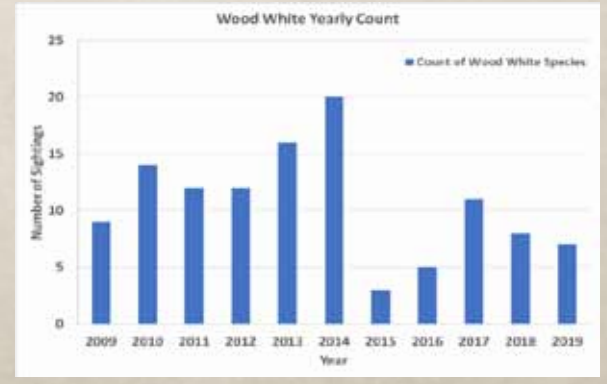

Figure 1. Wood White sightings in the Wyre Forest 2009-2019.


Photo 3. Dark Green Fritillary. Richard Woolley

Dark green Fritillary – a species on the up

In the Wyre Forest Study Group 2014 review the increasing number of reports of Dark Green Fritillary *Argynnis aglaja* was discussed by Mike Williams with the conclusion that localised breeding might be occurring in some areas such as along the Dowles Brook.

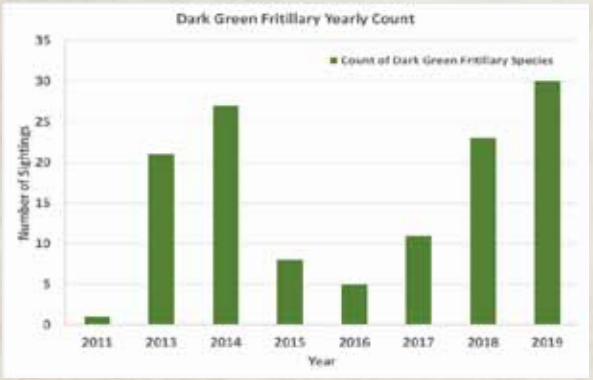

Figure 2. Dark Green Fritillary sightings in the Wyre Forest 2009-2019.

Sightings of *A. aglaja* continue and the regular annual recording of this butterfly on several sites across the forest now undoubtably adds them to the list of breeding species. Most sightings remain in the Dowles Valley but increasingly they are being reported from elsewhere including sections of the North Kinlet powerline and Blackgraves Copse and in 2020 on the western edge of the Forest. They are commonly on sites already occupied by at least two other fritillary species (usually Small Pearl-bordered Fritillary *Boloria selene* and *B. euphrosyne*). We suspect that they remain under-recorded because of their similarity to *A. paphia*, especially in flight.

Small Pearl-bordered Fritillary – a regionally important site

The Small Pearl-bordered Fritillary *B. selene* has perhaps received far less attention than other notable


Photo 4. Small Pearl-bordered Fritillary. Roger Littleover

Wyre butterflies even though nationally it has declined by 58% since 1976 and, in the West Midlands region, only in Shropshire are there still a good number of colonies. These are focused on the south-western corner where caterpillars feed on Marsh Violets *Viola palustris* in rush pasture type habitats. The situation for this butterfly in the Wyre Forest is very different as it is the only remaining regional forest where this butterfly could be considered to be widespread and abundant. Here they are likely to be benefitting from a variety of the active management practices being carried out including coppicing, the opening-up of wet flushes and streams, the maintenance of areas of permanent open space and ride-side management regimes. This is reflected in the number of adult sightings received by the West Midlands Branch for this butterfly in the Wyre which has varied from 205 in 2009 to just 26 in 2016 but with an overall total of 741 adults recorded from 2009-2019.

The only real targeted search for *B. selene* colonies was carried out by the Wyre Forest Study Group during 2008 and 2009 to complement their work on wet flushes when they were found in nine areas of the forest (Wyre Forest Study Group, 2009). As *V. palustris* is now virtually non-existent in the forest, the Small Pearl-bordered fritillary caterpillars must be feeding on Common Dog-violet *Viola riviniana*, as does *B. euphrosyne* a supposition supported by the fact that these two fritillaries are commonly occupying the same forest clearings. One study here suggested B. selene focus on lush larger-leaved violets growing in damper positions than Pearl-bordered Fritillary (Bingham, 2013). There is no doubt they favour damper spots within the forest as their favoured nectar sources are Marsh Thistle *Cirsium palustre* and Ragged-robin *Silene flos-cuculi*. The success in terms of their increased numbers after the clearance of scrub from

the 'Great Bog' in Town Coppice followed by grazing is testament to this.

Worrying declines for grizzled skipper

Photo 5. Grizzled Skipper. Mike Williams

The fate of the Grizzled Skipper *Pyrgus malvae* in the Wyre is an altogether different story (see Figure 3). Despite efforts directed at trying to improve the habitat for this butterfly on several parts of the Elan Valley pipeline as well as in the Roxel area, the habitat improvements have been short-lived and have not resulted in any long-term increase in sightings. The reason for the decline is that its early successional habitats are the first ones to go under natural succession and therefore its favoured caterpillar foodplants (Wild Strawberry *Fragaria vesca* and Creeping Cinquefoil *Potentilla reptans*) quickly disappear. As early as 2010 Owen Tudor observed that the number of butterflies recorded per hour on the Pipeline transect from 2005-2010 was falling (Tudor, 2010). Sadly, this decline has continued and today even Dingy Skippers *Erynnis tages* are no longer commonly seen on the Pipeline in any numbers although they are much more widespread across the forest than *P. malvae*. If the fortunes of *P. malvae* are really to be turned around at Wyre it will need radical action, likely re-introduction of adults from elsewhere and agreement to manage a number of areas across the forest for short turf species. Maintaining short turf areas with increasing temperatures resulting in longer grass-growing seasons as well as other atmospheric effects may be challenging but does that mean we should just let this species go? This is currently a subject for debate. *P. malvae* has a contracting range nationally (-37% since 1976) and used to be more common in Worcestershire than any of the other West Midlands counties. That is certainly no longer the case today and even in this county it is now restricted to just three sites.

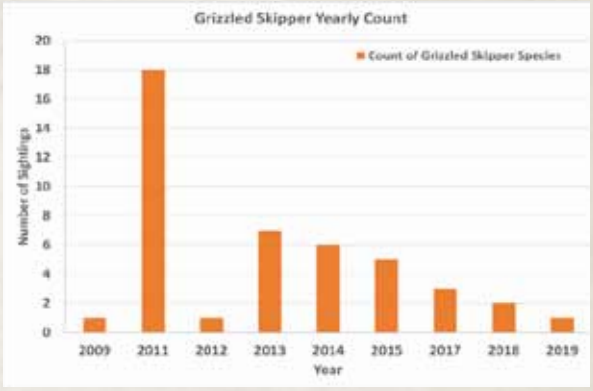

Figure 3. Grizzled Skipper sightings in the Wyre Forest 2009-2019.

So, as you can see there are many reasons why Butterfly Conservation is continuing with its involvement in the Wyre Forest. We are hugely grateful to our volunteers who contribute so much to our knowledge of what is really happening on the ground and we are always keen for more people to join the group. There are still plenty of hidden corners across the Wyre where butterfly species and numbers are changing. While we have focused on the most notable ones here, seeing the Marbled Whites *Melanargia galathea* spread northwards across the forest has given us just as much pleasure.

Acknowledgements

Thanks to all our volunteer recorders, to John Tilt (West Midlands Branch Recorder) for supplying the data and annual figures; to Forestry England (particularly Richard Boles and Phil Rudlin) and Natural England (particularly Alice James, Tom Simpson, and Nick Woodward) for all the efforts they have made in terms of taking opportunities for habitat improvements particularly in the main forest block.

References

Bingham, J. (2013) Fritillary marking project in the Wyre Forest 1987. *Review 2013*, pp 9-17. Wyre Forest Study Group, Bewdley.

Oates, M. (2003) *The ecology and dynamics of the Pearl-bordered Fritillary Boloria euphrosyne in a Gloucestershire woodland.* Butterfly Conservation Report SO3-12, Wareham, Dorset.

Tudor, O. (2010) Earnwood Pipeline Butterfly Transect 2005-10. *Review 2010*, p61. Wyre Forest Study Group, Bewdley.

West Midlands Regional Conservation Strategy 2025 (butterfly-conservation.org).

Wyre Forest Study Group (2009). *Small Pearl-bordered Fritillary survey work 2008 and 2009. Project 1F: Back to Orange.* Unpublished report. Grow with Wyre Landscape Partnership Scheme.