JENNY JOY AND MIKE WILLIAMS

The Wyre Forest and its Changing Butterflies

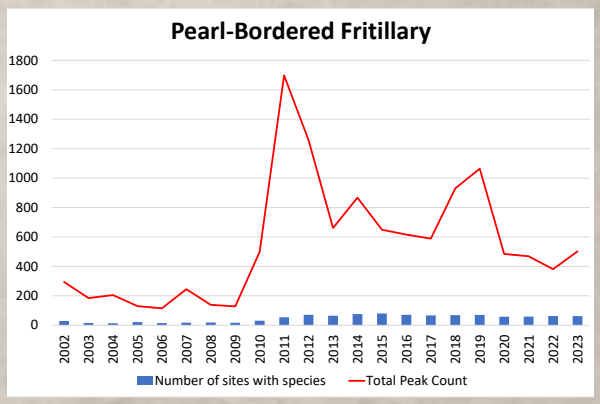
In 2020 we produced an article for the Wyre Forest Study Group Annual Review in which we posed the question *Is the Wyre Forest still a haven for its distinct butterflies?* In that article we focused particularly on the fortunes of five species which are declining nationally but still found in the Wyre: Pearl-bordered Fritillary, Wood White, Dark Green Fritillary, Small Pearl-bordered Fritillary and Grizzled Skipper. This new article is intended as an update on the status of these five species plus two other species which are now a cause for concern (Dingy Skipper and Common Blue), one that is now expanding its range in the Forest (Marbled White), and the surprising discovery in 2023 of a butterfly that has never been recorded in Wyre before. The article concludes with a few suggestions on how we can best conserve the Wyre's butterfly heritage and offers some suggestion of how members of the Wyre Forest Study Group may be able to assist.

All the species graphs in this article are based on the combined data from peak counts undertaken on all monitored sites across the Wyre Forest from 2002 - 2023. These figures include sites monitored by both timed counts and transects. The graphs included for the two sites are based on the same peak count data. As this data set has only just been completed the graphs included here just provide a simple visual representation of the data. It is hoped that a more detailed statistical analysis of all of this data will follow in due course.

National Priority Species for which the Wyre Forest is still a major stronghold.

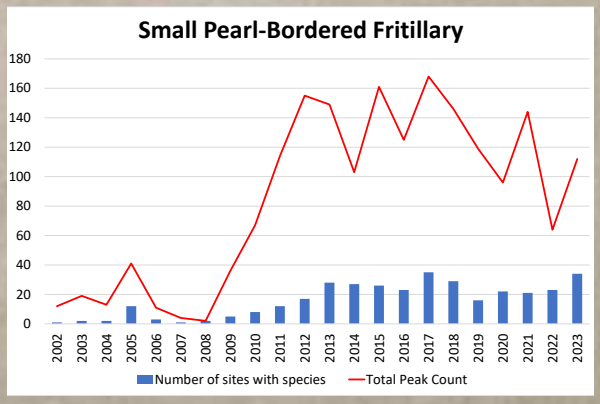
Pearl-bordered Fritillary

In 2003, timed count monitoring across the Wyre Forest was initiated for **Pearl-bordered Fritillary** as the transect results suggested it might be undergoing decline here. Ever since then, the Pearl-bordered Fritillary has continued to be the main emphasis for timed count recording as the Wyre Forest is now regarded as one of the top three areas for this butterfly in the UK. For this reason, the Pearl-bordered Fritillary is well represented off transects and only five out of the 133 sites/areas recording this butterfly over the past 22 years were transect routes. While the Pearl-bordered Fritillary has been seen throughout the forest, as well as on several nearby sites outside of the forest, during this time, its concentration is within the main forest block especially on the south facing slopes.



Small Pearl-bordered Fritillary

The **Small Pearl-bordered Fritillary** had been known to be present in the Wyre Forest for many years due to two ongoing transects which were first set up here in the 1980s. In the first nine years of timed count monitoring, it was poorly represented with 2011 marking the start of a major change. It is now well represented off transects and only 5 out of the 81 sites/areas recording this butterfly over the past 22 years were transect routes. It tends to be seen in the damper rushy areas of the forest. It is likely to be under-recorded as it tends to occur in much smaller numbers than the Pearl-bordered Fritillary and the flight of the two species overlap which can cause identification problems. A significant percentage of site/areas where this butterfly has been seen (17%) have also only ever had a singleton sighting.



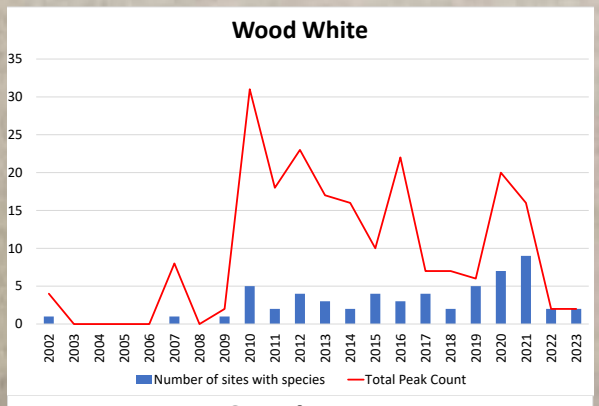
Species already known to be in decline.

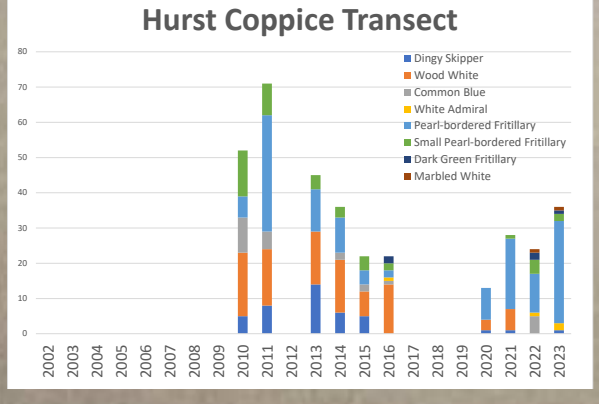
Wood White

The **Wood White** has not been well recorded away from the Postenplain area of the Wyre

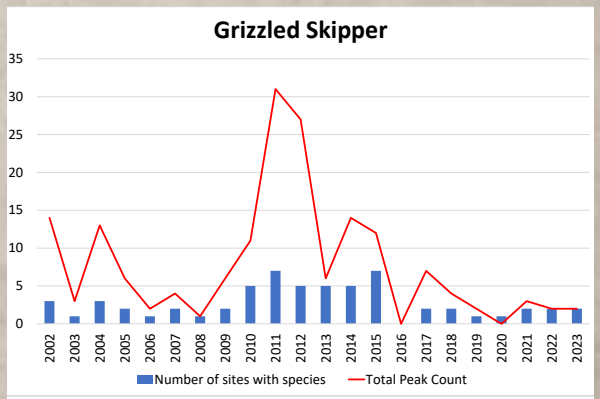
Forest from 2002 - 2023. While it has been recorded on five of the transects, all of these transect records or records from other parts of the forest have been singletons or two adults at most. The Hurst Coppice transect initially recorded good numbers of Wood White after it was set up (see the Hurst Coppice transect results graph) following on from targeted project work to improve its habitat here. Unfortunately, these habitat improvements have been hard to maintain for a variety of reasons: habitat deterioration, damage by horseriders, succession of poor springs, and loyalty of species to a small and diminishing area of habitat have all been contributory factors. This means that, despite considerable targeted survey effort around the forest over many years, it has only been seen on 14 sites/ areas of the forest from 2002- 2022, with just two singletons seen in 2023.

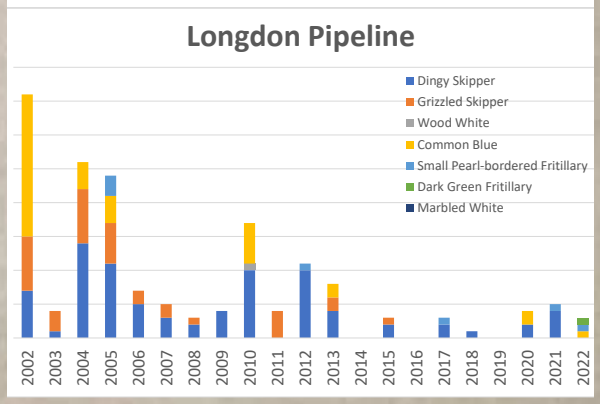
Elsewhere in Worcestershire, Wood Whites are doing well after reintroductions of the species by Butterfly Conservation took place initially at Monkwood NR near Hallow and subsequently at Grafton Wood reserve. In both cases, the butterfly has gone on to colonise new areas in the surrounding countryside and appears regionally (including Shropshire) to be going through an expansion phase making its decline and possible extinction from Wyre all the more surprising.





The graph for the **Grizzled Skipper** is similar to that of the Wood White. However, despite undergoing huge decline in the forest it is still regarded as extant on one privately owned site albeit in low numbers. Nevertheless, it would now require a huge amount of effort to turn around its fortunes in the forest to both create sufficient habitat and retain it in the long term. The graph included for the Longdon Pipeline illustrates the decline and disappearance of the Grizzled Skipper here alongside the ongoing decline of some other species.



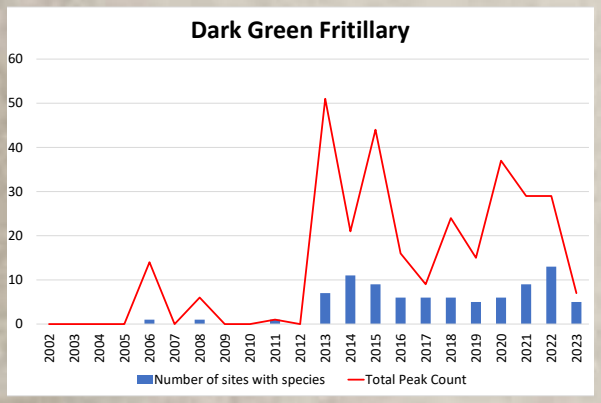


Species whose numbers/distribution are now causing concern

Dark Green Fritillary

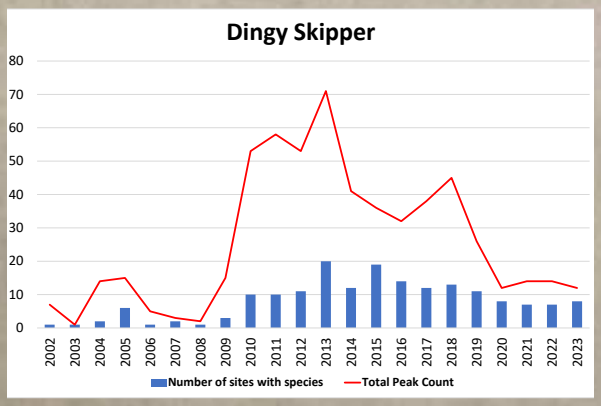
There were no recent records of the Dark Green Fritillary prior to 2006 when it was first recorded on the Wyre Forest West transect. This was followed by records from the Wyre Forest East transect and the meadows around Lodge Hill. While the meadows around the Dowles Brook are still its main area (with one of the transects here recording it for 12 out of the past 13 years), it is now also regularly seen elsewhere (*e.g.* in the Postenplain area) as well as occasionally on new outlier sites. These sightings have resulted in it being recorded on 23 sites/areas of the forest since 2006.

However, despite this apparent spread it is now not being recorded in the same quantity it was in the early years following colonisation although reasons for this are unclear.



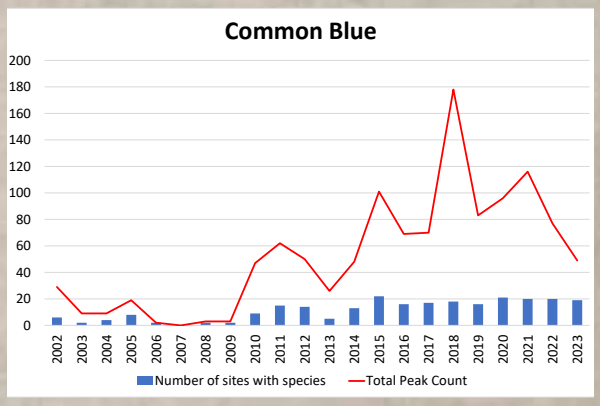
Dingy Skipper

This butterfly has been recorded on all 6 transects and 42 other widespread sites/parts of the forest during the 22 years monitoring period which is interestingly higher than the Common Blue. However, the total of Dingy Skipper peak counts over the 22 years is only 567 adults compared with 1 125 for the Common Blue. The highest number recorded were on the Roxel timed count where it has been continuously recorded for 14 years with a maximum of 28 counted in 2011 but only two in 2022. As a similar decline has occurred on a number of the other known Dingy Skipper sites, this butterfly is not so readily encountered in the forest or as widespread as it was in the recent past (note its declines on both the Hurst Coppice transect and the Longdon Pipeline).



Common Blue

Like the Dingy Skipper the Common Blue has been recorded on all six transects but on slightly fewer (40) other sites across the forest during the monitoring period. However, when it is present, the Common Blue is seen in greater numbers than the Dingy Skipper. The apparent recent decline in Dingy Skipper records during monitoring counts is to some extant mirrored by that of the Common Blue and this appears to be happening on sites where there is still sufficient foodplant present (again note its declines on both the Hurst Coppice transect and the Longdon Pipeline). Both species share the same larval foodplant- Common Bird's-foot Trefoil. Nevertheless, this butterfly is still well represented on the meadows both around Dowles and elsewhere and on some sections of the pipeline.



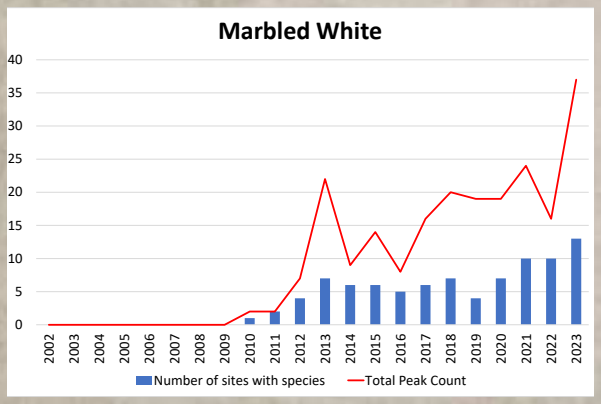
Not all bad news

In our earlier article, we put forward the suggestion that one of the reasons for the decline in certain species may be linked to climate change. Longer grass-growing seasons combined with generally milder winters has perhaps made it more difficult to sustain the early successional habitats on which a number of the Wyre's species depend. Generally, species are emerging much earlier in the year than would have previously been the case but because of changes in weather patterns, especially in the Spring, breeding success has been affected. In some butterflies, this has encouraged the emergence of an additional generation later in the year when larval food plants are not in prime condition to support the early stages thereby affecting survival. In 2023 the first observation was made of a female Pearl-bordered Fritillary egg-laying on the cooler north facing side of a clearing on a

very warm day. This is a good strategy to adopt for survival as increasingly hot summers are likely to cause foodplants on hot south-facing edges to die whereas those in shady north-facing edges are more likely to survive. Future management work will also need to take these changing needs into account.

Nevertheless, climate change can have a positive effect and can result in some species expanding their geographical range and a good example of this is the Marbled White at the Wyre Forest.

The species first appeared on monitored sites in 2010 and has now been recorded on 29 sites/areas of the forest. It is widely seen off transects (on 23 areas/sites) but usually in fairly low numbers. It is still most common on monitored meadows but does occur elsewhere (usually in ones or twos). It is also now well distributed locally outside the forest *e.g.* around Bewdley.



One of the most remarkable records which occurred only last year was that of a male Purple Emperor which was discovered dead in the conservatory of John Robinson's house at Lodge Hill. This is a species that was only recorded in Worcestershire for the first time in 2019 and since then it has been reported from a number of sites mainly in the eastern half of the county. The butterfly stems from an unofficial release made into an area of woodland on the Worcestershire/Warwickshire border in 2004 but, since then, the butterfly appears to have naturally extended its range westward, colonising initially the Heart of England Forest and then both Grafton and Tiddesley Wood. The specimen found in the Wyre last year is as far as we know the first ever historical record of the species being found there and it will be interesting to see whether this proves an isolated occurrence or the beginnings of an actual colonisation.

What next?

We do need more volunteers to help us survey and monitor butterflies in the forest and if any Study Group members feel that they can help, we would be pleased to hear from them. We are particularly keen to recruit volunteers to help us monitor Pearl-bordered Fritillary in April/May but we would also like to give more emphasis to those species mentioned in this article which fly later in the year, notably June and July. Better coverage might allay some of our concerns about the other species mentioned in this article. Another worthwhile project, in the light of the potential arrival of the Purple Emperor in the Forest, which is not so weather dependent as recording butterflies, would be to map areas of the forest where Broad-leaved Sallow is found. This is the main larval foodplant of the Purple Emperor and having better knowledge of the plant's distribution would assist in locating the butterfly in future years.

Acknowledgements

We would like to thank all those, including members of the Wyre Forest Study Group, who have helped us with survey and monitoring work in the past. Without people's past contribution, we would not be able to discern long term trends or focus our conservation efforts around those species that clearly need our help. We are also grateful to Natural England (Tom Simpson) and Forestry England (Phil Rudlin) for all of their support during the compilation of the data set.


Marbled White Mike Williams