

Weir Wood LNR – Whillet's Meadows & Butterfly Recording 2011 Report (2nd edition)

Bob Johnson & Derek Washington

This edition updates the Acknowledgements and Appendix

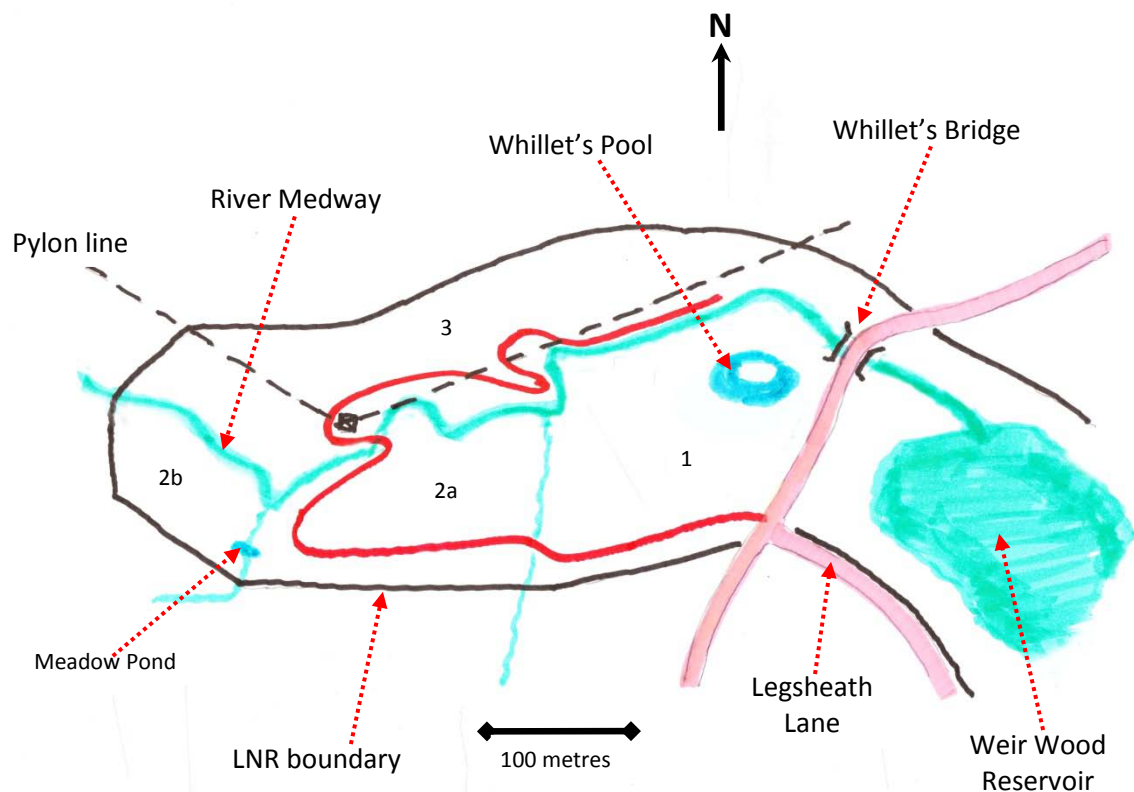
Summary

A butterfly recording path was established through the meadows at Whillet's and frequent counts were carried out during the season. Results are given for each butterfly species. Work to improve the meadows was undertaken at the end of the season. This report also summarises the state of the meadows before improvement with a brief section also on moths. The intention is to provide a baseline for comparison with future years.

Introduction

The meadows at Whillet's form the western end of the Weir Wood Local Nature Reserve (LNR) and Site of Special Scientific Interest (SSSI). Apart from the occasional open day there is no public access, but the meadows are visited by members of the Friends of Weir Wood Society engaged in regular survey work, and by Tuesday working parties under the auspices of the ESCC Ranger service. In 2011 the Friends initiated regular butterfly recording in these meadows. Walks were undertaken by three observers (Peter Erridge, Bob Johnson and Derek Washington) along a set path, the approximate route of which is shown in red on the rough sketch map below. The limiting grid references for the butterfly path were:

Start = TQ 37989 34442 Finish = TQ 37915 34564



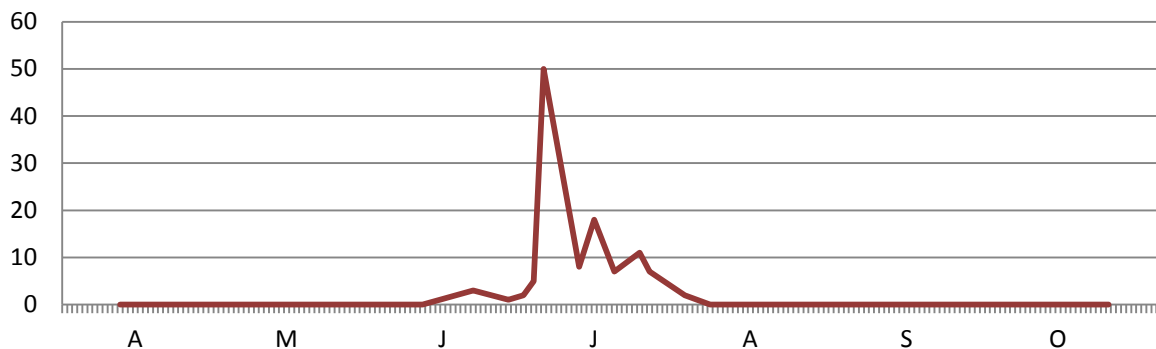
The main habitat comprised three meadows (1, 2 & 3 on the map) that had not been cut for several years. The path itself was mechanically mown twice during the recording period. The path was walked on 39 separate days between 12th April and 25th October. All butterflies that could be seen and identified from the path were recorded; this is not quite the same as traditional transect recording where observations are restricted to a limited distance from the path. However, the meadows have clear boundaries so it is reasonable to take our counts as valid indicators of species presence and trends. Also deviating from standard transect counting methods were the more random dates of observation rather than regular weekly visits. Nevertheless, we feel the results will provide a valuable baseline for comparison with future records and should have particular relevance in view of actions to improve the habitat that were undertaken towards the end of the season (see later).

Butterflies

This section presents in tabular and graphical form the data recorded for each species. Tables show the actual dates of every recording visit. Graphs cover the entire April to October season; the scales of the vertical graph axes vary according to the peak counts. In total, 19 species were recorded.

Small Skipper

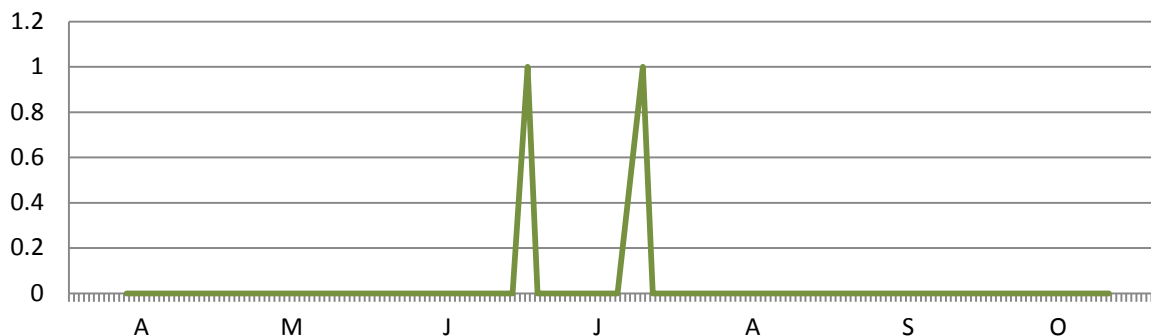
| April | | | | | May | | | | | June | | | | | July | | | | | August | | | | | September | | | | | October | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|----|------|---|----|---|----|--------|----|----|----|---|-----------|---|----|----|----|---------|---|---|----|----|---|----|----|----|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 2 | 5 | 50 | 8 | 18 | 7 | 11 | 7 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



The first record was on 21st June and the last on 2nd August.
The peak count was 50 on 5th July. By far the most numerous Skipper here.

Essex Skipper

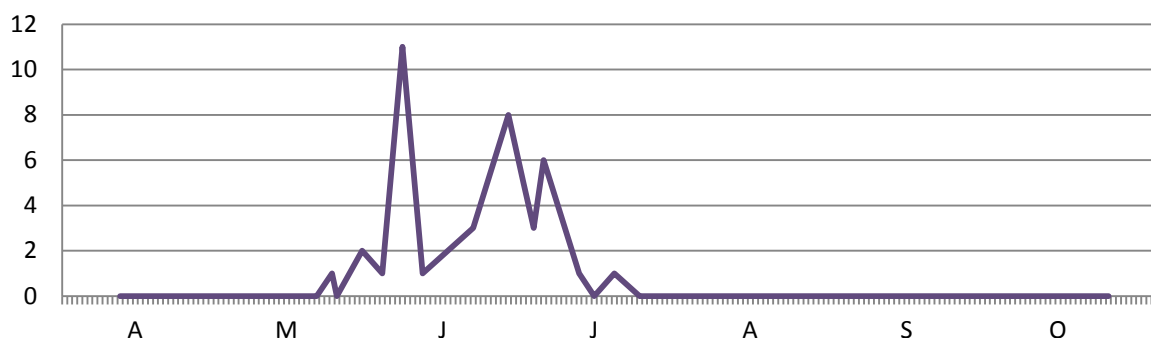
| April | | | | | May | | | | | June | | | | July | | | | | | August | | | | | September | | | | | October | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|----|--------|----|----|----|---|-----------|---|----|----|----|---------|---|---|----|----|---|----|----|----|---|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 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 | 0 | 0 | 0 |



Singles seen on 1st and 24th July. It is likely that this species is under-recorded here.

Large Skipper

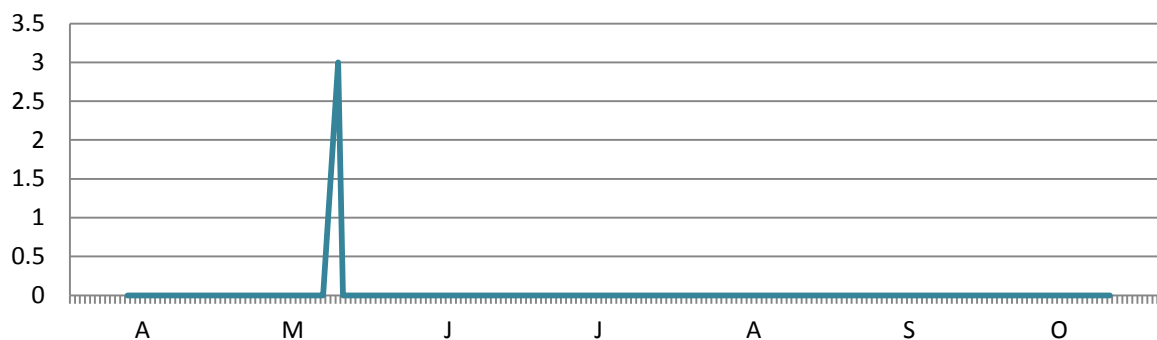
| April | | | | | May | | | | | June | | | | July | | | | | | August | | | | | September | | | | | October | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|----|----|------|----|---|---|---|----|--------|----|----|----|---|-----------|---|----|----|----|---------|---|---|----|----|---|----|----|----|---|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 1 | 1 | 11 | 1 | 3 | 8 | 5 | 3 | 6 | 1 | 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 |



The first record was on 24th May and the last on 19th July.
The peak count was 11 on 7th June.

Dingy Skipper

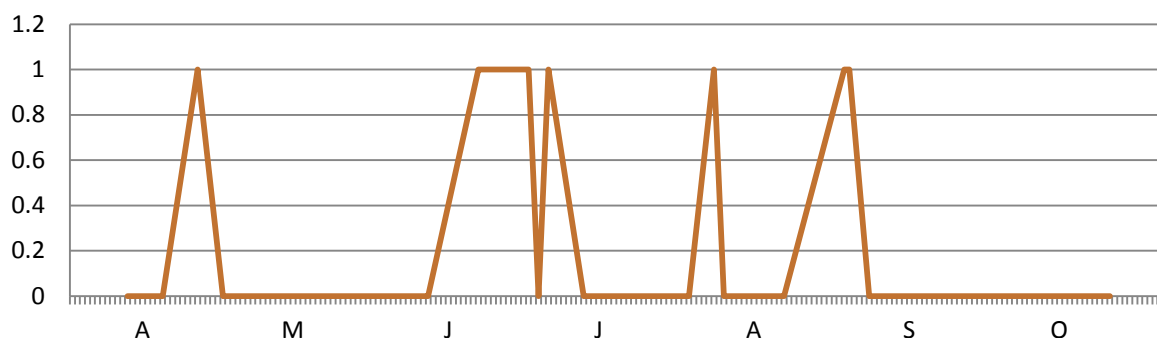
| April | | | | | May | | | | | June | | | | July | | | | | August | | | | September | | | October | | | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|--------|----|----|----|-----------|---|---|---------|----|----|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Three only, on 24th May.

Large White

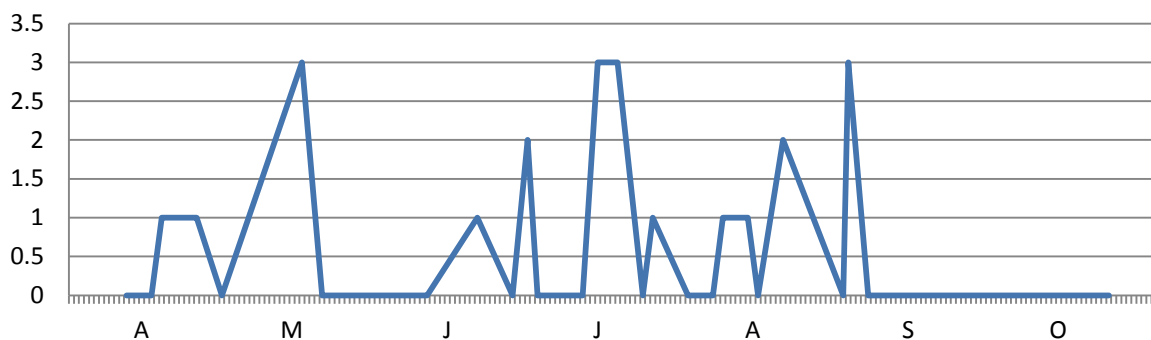
| April | | | | | May | | | | | June | | | | July | | | | | August | | | | September | | | October | | | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|--------|----|----|----|-----------|---|---|---------|----|----|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | | |
| 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



The first record was on 26th April and the last on 3rd September.
Singles on eight dates.

Small White

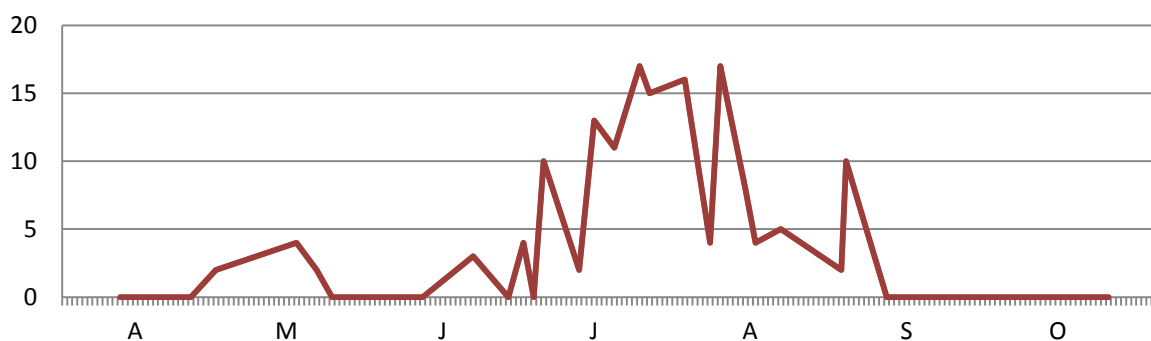
| April | | | | | May | | | | | June | | | | July | | | | | August | | | | September | | | October | | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|--------|----|----|----|-----------|---|---|---------|----|----|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | |
| 0 | 0 | 0 | 1 | 1 | 0 | 3 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 3 | 3 | 0 | 1 | 0 | 0 | 1 | 1 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



The first record was on 19th April and the last on 3rd September.
 Three was the maximum recorded, on four dates.

Green-veined White

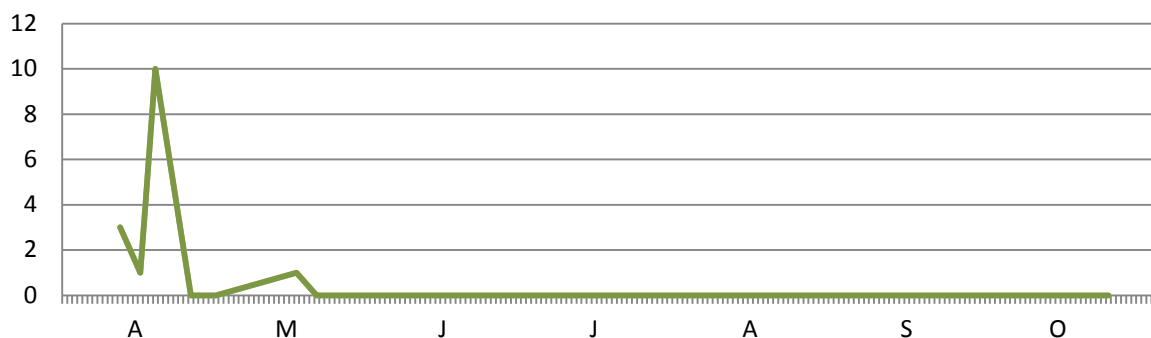
| April | | | | | May | | | | | June | | | | July | | | | | August | | | | September | | | October | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|----|---|--------|----|----|----|-----------|---|----|---------|----|----|----|----|---|---|----|----|---|----|----|----|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | |
| 0 | 0 | 0 | 0 | 0 | 2 | 4 | 2 | 0 | 0 | 0 | 0 | 0 | 3 | 0 | 4 | 0 | 10 | 2 | 13 | 11 | 17 | 15 | 16 | 4 | 17 | 8 | 4 | 5 | 2 | 10 | 5 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



The first record was on 1st May and the last on 7th September.
 Small first brood numbers in May followed by second brood peak counts of 17 on 24th July and 9th August. The most numerous of the Whites recorded here.

Orange Tip

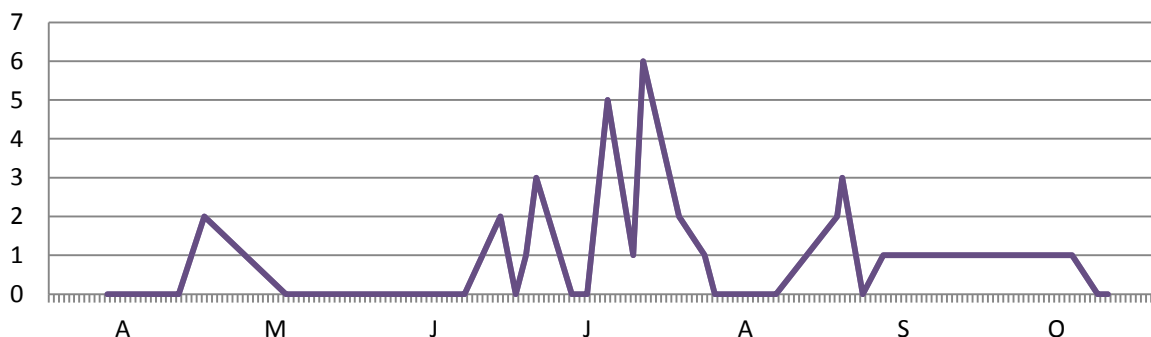
| April | | | | | May | | | | | June | | | | July | | | | | August | | | | September | | | | October | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|--------|----|----|----|-----------|---|---|---|---------|----|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | |
| 3 | 1 | 4 | 10 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



The first record was on 12th April (this was the date monitoring started, so it may have been present earlier) and the last on 17th May.
 The peak count was 10 on 19th April. A characteristically early species.

Small Copper

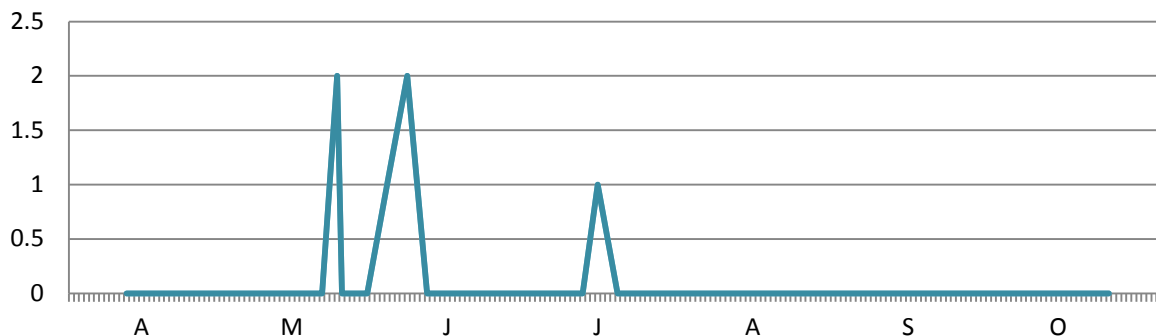
| April | | | | | May | | | | | June | | | | July | | | | | August | | | | September | | | | October | | | | | | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|--------|----|----|----|-----------|---|---|---|---------|----|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 1 | 3 | 0 | 0 | 5 | 1 | 6 | 2 | 1 | 0 | 0 | 0 | 0 | 2 | 1 | 0 | 0 | 1 | 2 | 1 | 0 | 1 | 1 | 1 | 1 | 0 | 0 | 0 | 1 | 1 | 0 | 0 |



The first record was on 1st May and the last on 18th October.
 The peak count was 6 on 26th July. Fairly regular in small numbers throughout most of the season.

Common Blue

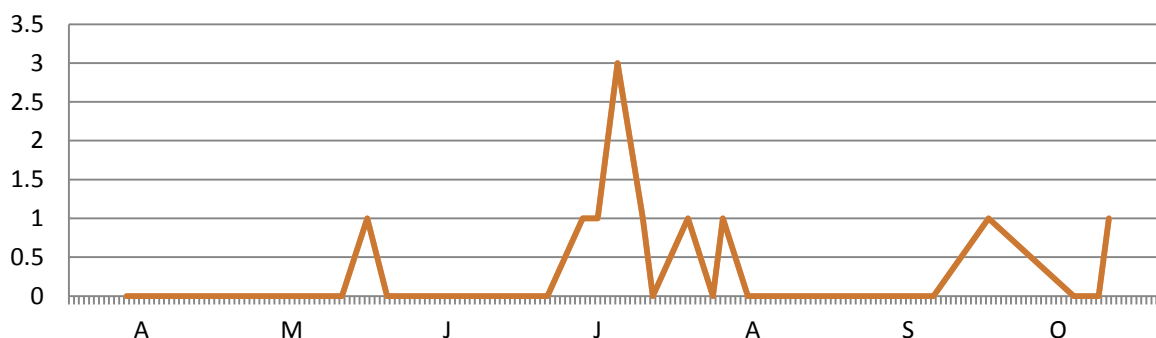
| April | | | | | May | | | | | June | | | | July | | | | | | August | | | September | | | October | | | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|----|--------|----|----|-----------|---|---|---------|----|----|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 0 | 0 | 1 | 2 | 0 | 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 | 0 | 0 | 0 | 0 | 0 |



Seen on only 4 dates between 24th May and 15th July, with a maximum count of two (twice).

Red Admiral

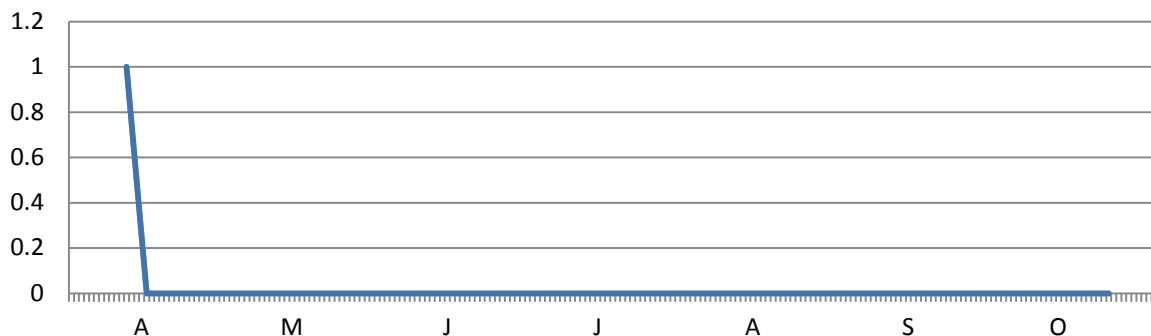
| April | | | | | May | | | | | June | | | | July | | | | | | August | | | September | | | October | | | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|----|--------|----|----|-----------|---|---|---------|----|----|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 3 | 1 | 0 | 1 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 1 |



The first record was on 30th May and the last on 25th October.
 The peak count was 3 on 19th July. Occasional throughout most of the season with a small concentration in the second half of July.

Painted Lady

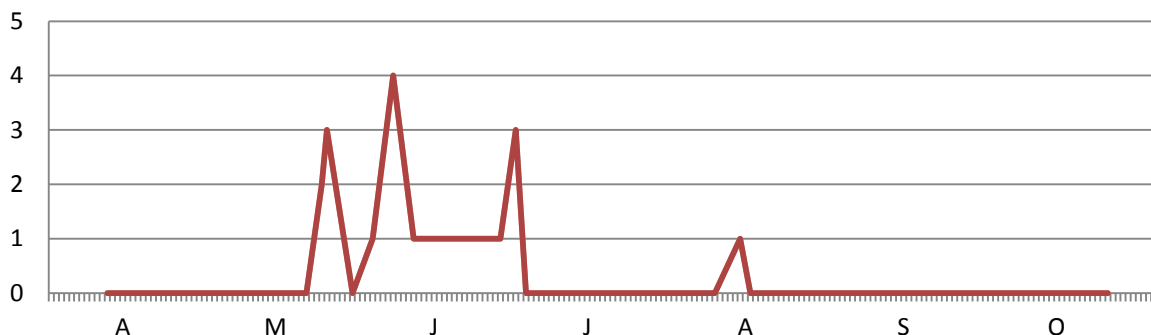
| April | | | | | May | | | | | June | | | | July | | | | | August | | | | September | | | October | | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|--------|----|----|----|-----------|---|---|---------|----|----|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



One only, on 12th April, a rather tatty individual.

Small Tortoiseshell

| April | | | | | May | | | | | June | | | | July | | | | | August | | | | September | | | October | | | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|--------|----|----|----|-----------|---|---|---------|----|----|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2 | 3 | 0 | 1 | 4 | 1 | 1 | 1 | 3 | 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 | 0 | 0 | 0 |

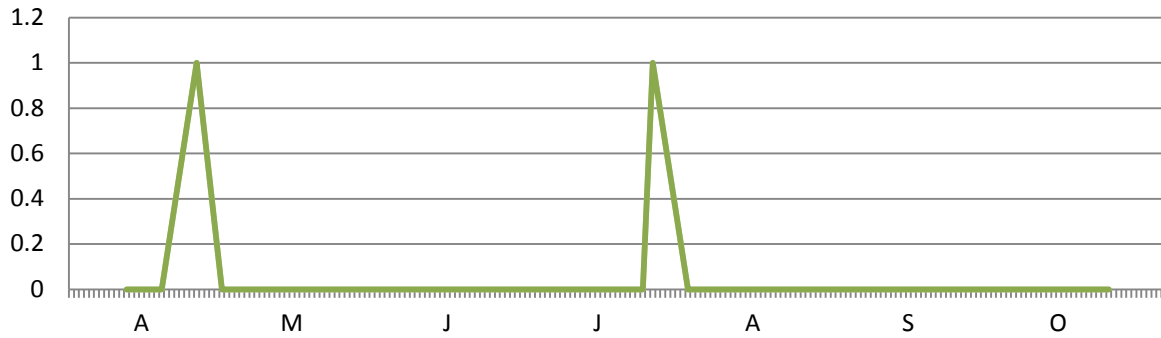


The first record was on 24th May and the last on 14th August.

The peak count was 4 on 7th June. Main concentration was throughout June, with a single occurrence in August.

Peacock

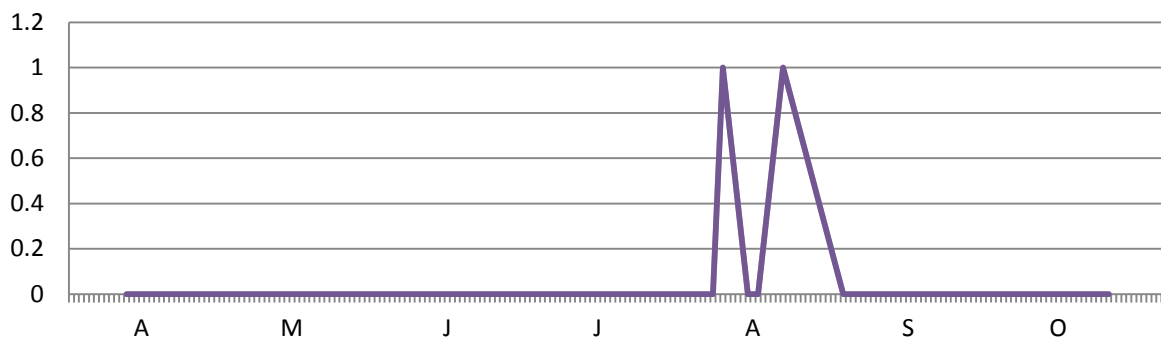
| April | | | | | May | | | | | June | | | | July | | | | | August | | | | September | | | | October | | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|--------|----|----|----|-----------|---|---|---|---------|----|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | | |
| 0 | 0 | 0 | 0 | 1 | 0 | 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 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Uncommon, singles only on 26th April and 26th July.

Comma

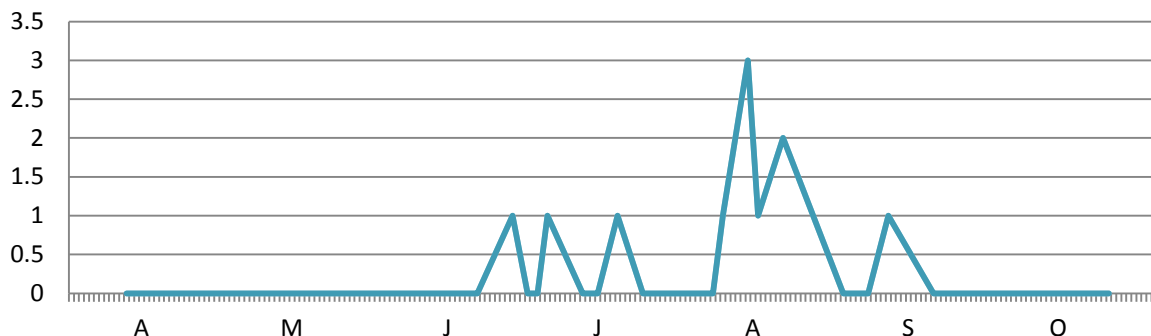
| April | | | | | May | | | | | June | | | | July | | | | | August | | | | September | | | | October | | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|--------|----|----|----|-----------|---|---|---|---------|----|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | | |
| 0 | 0 | 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 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



Uncommon, singles only on 9th and 21st August.

Speckled Wood

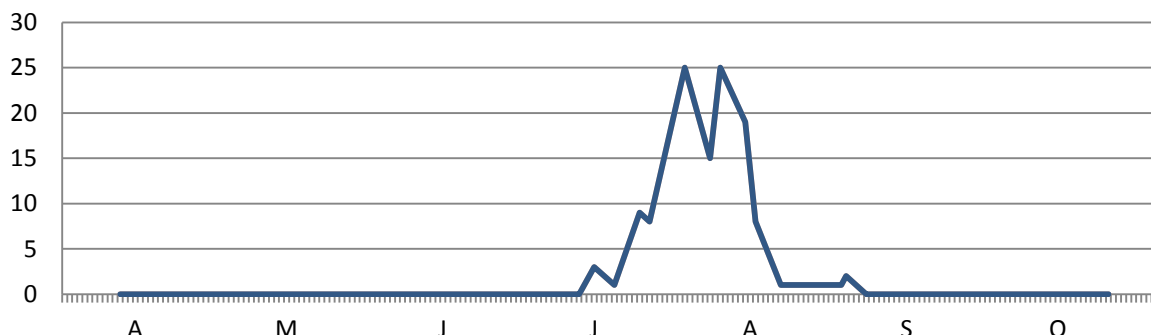
| April | | | | | May | | | | | June | | | | July | | | | | August | | | | | September | | | | October | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|--------|----|----|----|----|-----------|---|---|----|---------|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1 | 1 | 0 | 0 | 1 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 3 | 1 | 2 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |



The first record was on 28th June and the last on 11th September.
 The peak count was 3 on 14th August. Not a meadow species, but typically found here where the path passes through a narrow woodland belt between meadows.

Gatekeeper

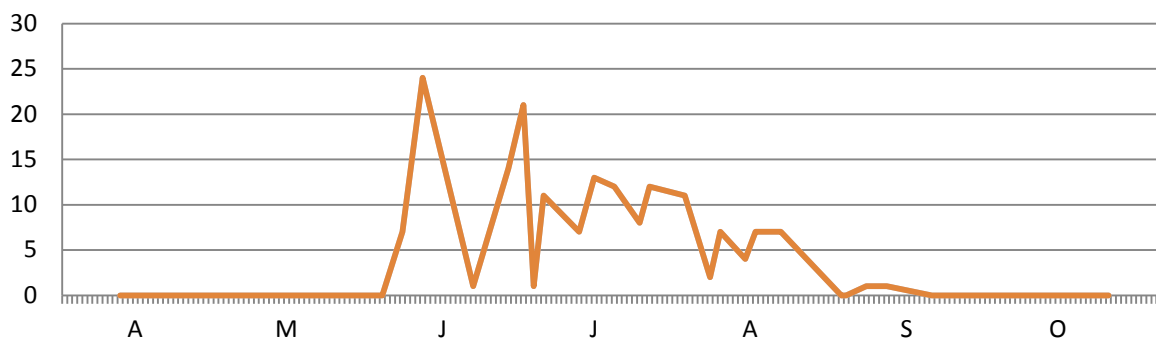
| April | | | | | May | | | | | June | | | | July | | | | | August | | | | | September | | | | October | | | | | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|---|---|---|--------|----|----|----|----|-----------|----|----|----|---------|----|---|---|---|----|----|---|----|----|----|---|---|---|---|---|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | | | | | | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 3 | 1 | 9 | 8 | 25 | 15 | 25 | 19 | 8 | 1 | 1 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



The first record was on 15th July and the last on 3rd September.
 The peak counts were 25 on 2nd and 9th August. Mainly occurred during last week of July and first two weeks of August.

Meadow Brown

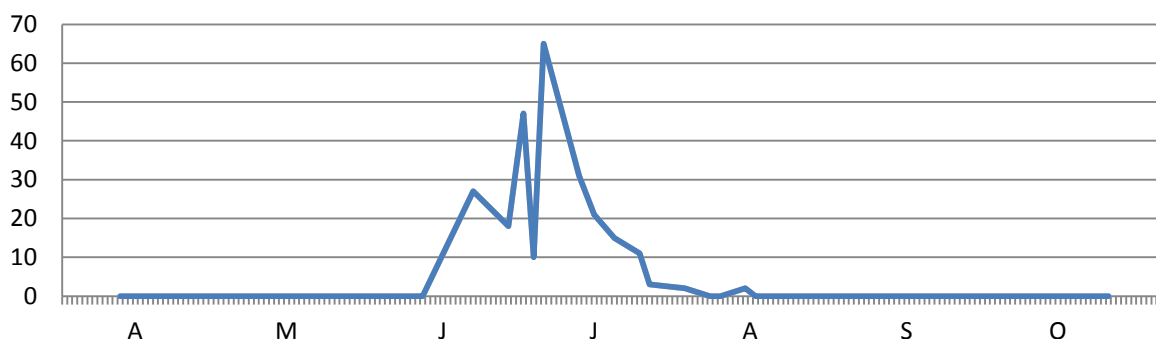
| April | | | | | May | | | | | June | | | | July | | | | | August | | | | September | | | | October | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|----|---|----|--------|----|----|----|-----------|----|---|---|---------|----|----|---|---|---|----|----|---|----|----|----|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 7 | 24 | 1 | 14 | 21 | 1 | 11 | 7 | 13 | 12 | 8 | 12 | 11 | 2 | 7 | 4 | 7 | 7 | 0 | 0 | 1 | 1 | 0 | 0 | 0 | 0 | 0 | 0 |



The first record was on 7th June and the last on 11th September. The peak count was 24 on 11th June. Another numerous species, with earlier and a wider spread of dates than Gatekeeper.

Ringlet

| April | | | | | May | | | | | June | | | | July | | | | | August | | | | September | | | | October | | | | | | | | | | | | |
|-------|----|----|----|----|-----|----|----|----|----|------|---|---|----|------|----|----|----|----|--------|----|----|----|-----------|---|---|---|---------|----|----|---|---|---|----|----|---|----|----|----|---|
| 12 | 16 | 17 | 19 | 26 | 1 | 17 | 21 | 24 | 25 | 30 | 3 | 7 | 11 | 21 | 28 | 1 | 3 | 5 | 12 | 15 | 19 | 24 | 26 | 2 | 7 | 9 | 14 | 16 | 21 | 2 | 3 | 7 | 11 | 20 | 1 | 18 | 23 | 25 | |
| 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 27 | 18 | 47 | 10 | 65 | 31 | 21 | 15 | 11 | 3 | 2 | 0 | 0 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |



The first record was on 21st June and the last on 14th August. The peak count was 65 on 5th July. By far the most numerous species in the Whillet's meadows.

Butterflies seen here in recent years but not recorded in 2011

Three species:

Brimstone,
Holly Blue,
Marbled White.

Moths

Moth recording was relatively casual in the sense that species were noted whenever the meadows were visited (e.g. for maintenance & work party activities) and were not specific to the butterfly path visits.

Day flying Moths recorded in 2011:

The following represents the full sightings for 2011. Due to lack of expertise by the recorders Micro moths have not generally been recorded.

1 Silver-ground Carpet on 1/5 & 21/5,
1 Burnet Companion on 29/5,
1 Mother Shipton on 31/5,
1 Cinnabar on 17/5 & 7/6 - Cinnabar caterpillars – 1 on 3/7, 7 on 19/7 & 1 on 14/8,
1 Blackneck on 3/7,
1 Cnaemidophorus rhododactyla (a micro moth) on 3/7,
1 Shaded Broad-bar on 24/7,
1 Brown China-mark on 29/5, 14/8 & 21/8,
1 Six-spot Burnet on 28/6.

In previous years there has been some sporadic recording of moths seen during the day in the meadows and the only additional species recorded are a Narrow bordered Five-spot Burnet in 2005, Silver Y in 2007, Flame Carpet in 2009,

Night flying Moths recorded in 2011:

The following represents the full night flying species records for 2011:

1 Drinker caterpillar seen on 20/5,
5+ Water Veneer caterpillars seen in the pond in Meadow 2 on 14/8.

Very occasionally a moth box has been put out in the meadows in past years, but none was carried out in 2011. The meadows area has never been regularly night recorded for moths, partly because there are no recorders available who have the time to operate the moth box that regularly, and more specifically there is an equipment risk problem with leaving out all night unguarded expensive moth recording equipment that is very visible when its operating, in areas that can be easily seen from the road. Manned moth lights also proved not to be a solution because in summer the light attracts thousands of biting midges etc. which become unbearable to those trying to identify any moths that are attracted, and general identification of moths at night in field conditions for the amateur is very much more difficult. Previous moth records we have are mostly from unmanned moth box locations near the edges of the meadows close to trees where the light is less likely to be noticed from the road, these records cover no more than about 50 species, most of which are more general species than any particular meadow specialists.

The meadows before improvement

Traditionally before these became Southern Water land and a reservoir in 1954 they would have been natural meadows with animals grazing. Since coming into Southern Water ownership the meadows were sown with grasses to improve the grazing, also land drains were installed in meadow 2 to drain this traditionally wet meadow to help increase grass yields for grazing. However, according to a wild flower survey report carried out in 2000, it was reported that the land drains had collapsed.

Grazing of some sort continued into the 1980's when problems with ticks and animal contaminants in the reservoir water caused Southern Water eventually to decide to stop all the grazing rights at their reservoirs' water side meadows. After the removal of grazing rights, it was agreed by Southern Water to fund an annual mower cut but, for various reasons, this cutting has not always happened, particularly in the latter years.

The meadows are officially designated as Improved Grassland, a habitat type which is not a particularly rich wildlife habitat, the dense grass out-competes and inhibits the wild flowers and thus seriously reduces the diversity of the meadows. Even with collapsed land drains, the generally drier conditions of recent times in Meadow 2 had encouraged the drier-loving invasive plants which were taking over, such as creeping thistle, hogweed and dense grasses. We therefore encouraged some winter flooding to help bring back more of the traditional wetland plants, a strategy which was showing some slight improvement on the areas that laid very wet during the winter.

The three meadows are described as follows:

Meadow 1 which is on a gentle slope over the top area is our best meadow with the greatest diversity of flowers, with a lot of Meadowsweet and Knapweed, also some Birdsfoot Trefoil and more of the finer grasses which are the preferred plants for several species of butterfly. The meadow grasses however are becoming dense and some invasive plants such as creeping thistle are starting to show and management control will be needed.

Meadow 2 has a natural marshy area (western end of 2a) and a pond (between 2a and 2b), we have many of the traditional wet meadow plants still, including Cuckoo flower, Angelica, Greater Birdsfoot Trefoil, Marsh Ragwort, Water Mint, Marsh Thistle, and Hemlock Water Dropwort. Many rushes and sedges are also showing. These will all benefit from the meadow being managed as a traditional wet meadow.

Meadow 3, partly because of poor access problems, has had less management than the rest and is probably the least diverse of the three. The eastern end of the meadow has become scrub which floods in the winter when reservoir levels are very high, the western side has some dense blackthorn stands, the grass areas are mainly dense grasses with creeping thistle and hogweed.

All our meadows have a mixture of some of the more common traditional meadow plants, but in low numbers, there have been no particularly special rarities recorded, apart from Orange Foxtail which grows in good numbers when conditions are right on winter flooded drying bare ground at Whillet's Pool area, which is to the north of Meadow 1, also in this area are good numbers of Nodding-Bur and Trifid-Bur Marigolds. There have been no orchid records from any of the actual meadows area.

Meadow improvement actions

After a lapse of several years, mowing and sowing operations were carried out in October 2011. Rough estimates of the percentage of open area mown in each meadow are included below. Flower seeds (see Appendix) were obtained via the Weald Meadows Initiative.

Meadow 1 – about 75%, situated north of the butterfly path, was cut with a tractor-drawn mower. The arisings were removed by the mower and left in heaps around the wooded edges. Several unmown strips were left in the mown area as cover for wildlife. A strip about two metres wide along the north edge of the butterfly path was sprinkled with Yellow Rattle seed.

Meadow 2a – about 60%, situated north of the butterfly path, was cut with a tractor-drawn mower. The arisings were removed by the mower and left in heaps around the wooded edges. Several unmown strips were left in the mown area as cover for wildlife. In preparation for sowing wild flower seeds within the mown area, a strip about six metres wide was mown again along the whole length of the butterfly path, with the cutting blades set very close to the ground. Subsequently the eastern two thirds of this strip were raked by hand to disturb the soil to see if that will improve seed germination. The eastern third was sown with wild flower mix. The western two thirds were sown with wild flower and meadow grasses mix. The entire strip was also sown with Yellow Rattle.

It should also be recorded that a 25 square metre trial plot, located partly in the eastern third strip, was planted with Yellow Rattle in April 2011. Success rate was relatively poor due to a combination of dry weather and Pheasants uprooting the plants. These problems were addressed by laying temporary netting over the area, and enlisting help from Tuesday working parties with watering. Eventually 27 Yellow Rattle plants produced flower spikes.

Meadow 2b – this area west of the small stream that flows through Meadow Pond was left unmown. Small saplings of Hawthorn, Hazel and Field Maple were planted in November 2011 with the intention of creating a windbreak hedge at the western side of Meadow Pond to improve the habitat for dragonflies.

Meadow 3 – about 25% of the central area was mown in strips with a hand-operated machine. About half the arisings were removed by hand and left in heaps around the wooded edges. Yellow Rattle seed was scattered over the entire mown area.

Acknowledgments

Thanks to the following for their particular contributions:

Ken McManamon for facilitating the cutting of the meadows, arranging the purchase of wild flower seeds, and negotiating permission from Natural England for meadow improvement within the SSSI.

Friends of Weir Wood Society for funding the purchase of wild flower seeds.

East Sussex County Council Ranger Service and Friends of Weir Wood volunteers for practical work during Tuesday work parties.

Peter Erridge for contributing butterfly records.

Dawn Brickwood for arranging seed supply and providing the data for the Appendix.

Appendix – Seed compositions & quantities applied to the Whillet’s meadows

Weald Native Origin Yellow Rattle (3kg):

| | |
|-------------------------|---------------|
| <i>Rhinanthus minor</i> | Yellow Rattle |
|-------------------------|---------------|

Weald Native Origin Single Species (wild flower mix, 1kg):

| | |
|-----------------------------|------------------------------|
| <i>Betonica officinalis</i> | Betony |
| <i>Lotus corniculatus</i> | Bird's-foot-trefoil, Common |
| <i>Lotus pedunculatus</i> | Bird's-foot-trefoil, Greater |
| <i>Pimpinella saxifraga</i> | Burnet Saxifrage |
| <i>Trifolium pratense</i> | Clover, Red |
| <i>Tragopogon pratensis</i> | Goat's - beard |
| <i>Centaurea nigra</i> | Knapweed, Black |
| <i>Malva moschata</i> | Mallow, Musk |
| <i>Leucanthemum vulgare</i> | Ox-eye Daisy |
| <i>Silum silaus</i> | Pepper Saxifrage |
| <i>Plantago lanceolata</i> | Plantain, Ribwort |
| <i>Prunella vulgaris</i> | Selfheal |
| <i>Achillea ptarmica</i> | Sneezewort |
| <i>Vicia cracca</i> | Vetch, Tufted |
| <i>Lathyrus pratensis</i> | Vetchling, Meadow |
| <i>Achillea millefolium</i> | Yarrow |

Weald Native Origin Mixed seed (wild flower and meadow grasses mix, 2kg) species expected in the mix:

| | |
|------------------------------|------------------------------|
| <i>Agrostis capillaris</i> | Bent, Common |
| <i>Agrostis stolonifera</i> | Bent, Creeping |
| <i>Agrostis canina</i> | Bent, Velvet |
| <i>Dactylis glomerata</i> | Cocksfoot |
| <i>Cynosurus cristatus</i> | Crested Dog's-tail |
| <i>Festuca rubra</i> | Fescue, Red |
| <i>Poa trivialis</i> | Meadow-grass, Rough |
| <i>Briza media</i> | Quaking Grass |
| <i>Anthoxanthum odoratum</i> | Sweet Vernal-grass |
| <i>Phleum pratense</i> | Timothy |
| <i>Holcus lanatus</i> | Yorkshire Fog |
| <i>Carex flacca</i> | Sedge, Glaucous |
| <i>Carex hirta</i> | Sedge, Hairy |
| <i>Carex ovalis</i> | Sedge, Oval |
| <i>Luzula campestris</i> | Wood-rush, Field |
| <i>Agrimonia eupatoria</i> | Agrimony |
| <i>Lotus corniculatus</i> | Bird's-foot-trefoil, Common |
| <i>Lotus pedunculatus</i> | Bird's-foot-trefoil, Greater |
| <i>Ajuga reptans</i> | Bugle |
| <i>Ranunculus acris</i> | Buttercup, Meadow |
| <i>Hypochaeris radicata</i> | Cat's-ear, Common |
| <i>Centaureum erythraea</i> | Centaury, Common |
| <i>Potentilla reptans</i> | Cinquefoil, Creeping |

| | |
|-------------------------------|------------------------|
| <i>Trifolium pratense</i> | Clover, Red |
| <i>Linum catharticum</i> | Flax, Fairy |
| <i>Pulicaria dysenterica</i> | Fleabane |
| <i>Leontodon autumnalis</i> | Hawkbit, Autumn |
| <i>Leontodon hispidus</i> | Hawkbit, Rough |
| <i>Crepis capilaris</i> | Hawk's-beard, Smooth |
| <i>Centaurea nigra</i> | Knapweed, Black |
| <i>Cerastium holosteoides</i> | Mouse-ear, Common |
| <i>Dactylorhiza fuchsii</i> | Orchid, Common Spotted |
| <i>Leucanthemum vulgare</i> | Ox-eye Daisy |
| <i>Prunella vulgaris</i> | Selfheal |
| <i>Achillea ptarmica</i> | Sneezewort |
| <i>Rumex acetosa</i> | Sorrel, Common |
| <i>Ranunculus flammula</i> | Spearwort, Lesser |
| <i>Stellaria graminea</i> | Stitchwort, Lesser |
| <i>Trifolium dubium</i> | Trefoil, Lesser |
| <i>Vicia sativa</i> | Vetch, Common |
| <i>Vicia cracca</i> | Vetch, Tufted |
| <i>Lathyrus pratensis</i> | Vetchling, Meadow |
| <i>Achillea millefolium</i> | Yarrow |
| <i>Rhinanthus minor</i> | Yellow Rattle |

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 Bob Johnson & Derek Washington
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