OUSEBURN FARM

BUTTERFLY & DRAGONFLY

SURVEY, 2021

Michael Jeffries,
Department of Geography & Environmental Sciences,
Northumbria University,
Newcastle upon Tyne,
NE1 8ST

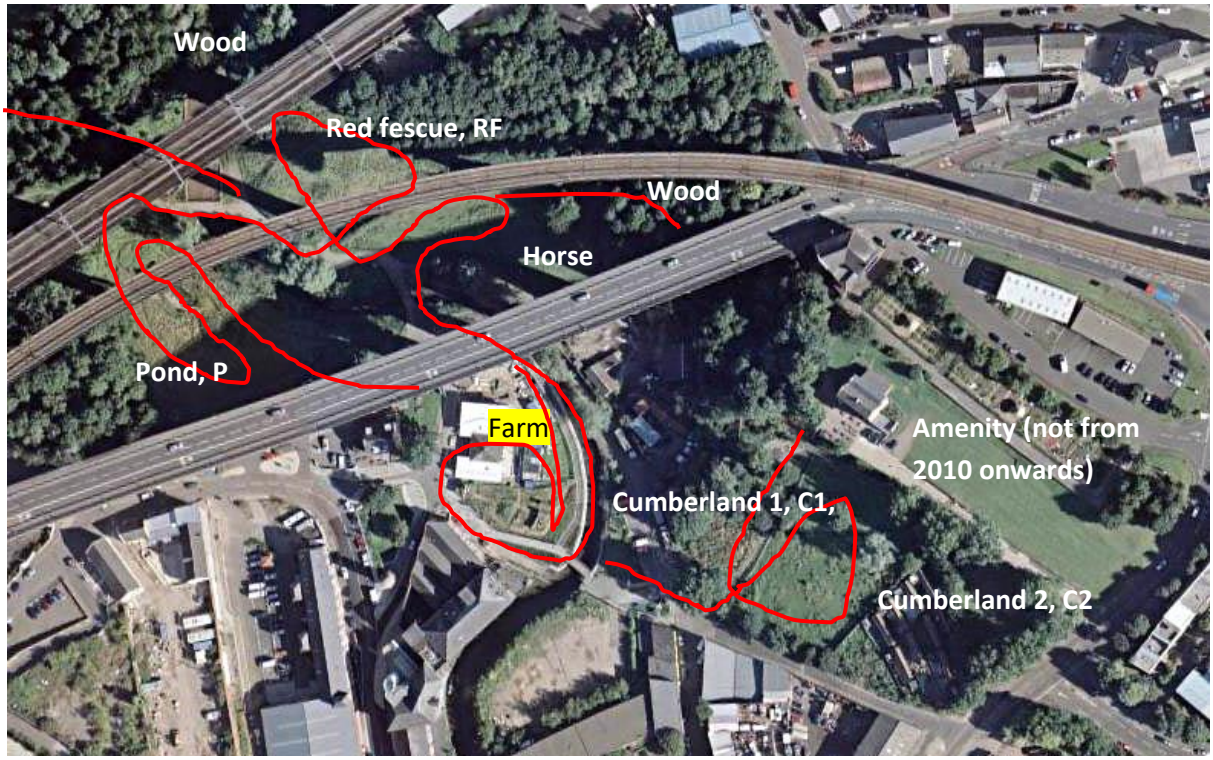
2021

Ouseburn Farm Butterfly, dragonfly and damselfly summary report 2021.

Butterflies, dragonflies and damselflies in and around the Ouseburn Farm were surveyed in 2021 in the same way as the 2006 to 2020 surveys but with a long gap in the summer covering nearly all of June, July and August. This is the main season for the butterflies of high summer and the dragonflies so represents an unfortunate gap in the records limiting data and comparisons between years.

Similar surveys have been carried out in 2006 to 2020 (Jeffries, 2006 - 2020), making the 2021 survey the 16th survey since the farm re-opened. In 2021 twenty-one walks were carried out, the first on the 8th March through to 31st May, then 28th August to 15th October. The surveys covered the pond meadow, red fescue meadow, farm grounds, horse meadow, woodland path from the horse meadow through to the Cumberland Arms, the old orchard, and the meadow below the Cumberland Arms. Surveys were carried out where possible on warm, sunny days. In the Farm grounds cabbages and nasturtiums were also checked for eggs and caterpillars of small land large whites

Figure 1. The Farm environs, meadows and butterfly recording walk. The red line shows the approximate route used in 2021. The names used for each field are shown.



Butterflies were recorded by walking slowly and noting species seen to either side in front, although this was not so rigorously enforced as the formal national butterfly recording transect scheme walks and quite often butterflies would be followed to check identity. Nonetheless the technique has been consistent on the farm since 2006. Within the Farm cabbage plants were searched for eggs and caterpillars of white butterflies too. Numbers of Burnet moths and dragonflies and damselflies were also counted.

In addition the vegetation around the pond was searched for dragonfly exuviae. Exuviae are the cast skins left behind when the adult emerges from the final larval stage. By counting up the cumulative numbers of new exuviae you get a minimum estimate of the numbers of adults that have hatched form a site.

Results.

Butterfly species richness.

Only nine species of butterfly were recorded in 2021, compared to fourteen in 2020, 2019 and 2018, sixteen in 2017, fifteen in 2016 and fourteen in 2015. This fall simply reflects the lack of visits in June to August. Within the period of surveys butterfly species richness was the same as in previous years. Given the lack of summer samples this report does not include any comparisons across the years

Dragonflies and damselflies.

The absence of visits in June to August covered the main dragonfly flight period. However one encouraging find was an exuviae for a southern hawker at the pond. Although the pond is very overgrown and due to be restored this shows that these large dragonflies are still breeding.

The pond was restored in October having become very choked with common reed and bottle sedge. The dragonfly and damselfly fauna of 2011-2015 had been all but lost so the hope is the species will recolonise as they did after the pond clearance of 2010.

As in previous reports the counts of butterflies and dragonflies are given in two tables. Table 3 is simply the total of each species seen on each survey date. Table 4 presents data broken down for each section of the farm allowing comparisons between meadows.

References.

Jeffries, M.J. (2006) – (2020). Ouseburn Farm butterfly & dragonfly surveys. Department of Geography, Northumbria University, Newcastle upon Tyne. Copies of all the annual reports by Mike Jeffries can be obtained from michael.jeffries@northumbria.ac.uk.

Table 3. Total numbers of butterflies, burnet moths, dragonflies and damselflies counted during 2021. Counts were made on sunny days except where indicated by "cloudy" or "windy". Counts of eggs, caterpillars ("cats") and pupae ("pup") are approximate. "Exuviae" refers to the cast skins left behind when a dragonfly emerges; only new examples were recorded on each date and give a minimum estimate of the numbers hatching on site. "Unid white" refers to adults flying at a distance when precise identification could not be made. The four species highlighted in yellow and not recorded in 2021 fly during the period when no surveys took place. Other species not found are rare or absent most years.

	22nd Feb	28th Feb	23rd Mar	30th Mar	11th Apr	14th Apr	15th Apr	22nd Apr	9th May	13th May	18th May	24th May	27th May	31st May
Small skipper (none in 2021)														
Large skipper (none in 2021)														
Green veined white									1		1	1		1
Small white											1			
Large white									1				1	
Orange tip							1	7	8	6	6	7	4	4
Unid. white				1		2		2	5	2	2	2	3	5
Small copper (none in 2021)														
Holly blue (none in 2021)														
Common blue (none in 2021)														
Tortoiseshell				1		2	1							
Comma								1	1					
Peacock				1		1					1			
Painted Lady (none in 2021)														
Red Admiral														

	22nd Feb	28th Feb	23rd Mar	30th Mar	11th Apr	14th Apr	15th Apr	2nd Apr	9th May	13th May	18th May	24th May	27th May	31st May
Small heath (none in 2021)														
Wall (none in 2021)														
Meadow brown (none in 2021)														
Ringlet (none in 2021)														
Speckled wood									3	2	1	1		
6 spot burnet moth (none in 2021)														
Red darter dragonfly (none in 2021)														
Migrant hawker dragonfly (none in 2021)														
Southern hawker dragonfly														
Broad bodied Chaser dragonfly														1
Large red damselfly (none in 2021)														
Blue tailed damselfly (none in 2021														
Azure damselfly (none in 2021)														
Common Emerald damselfly (none in 2021)														

Table 3 continued

	Survey gap June to August	28th Aug	5th Sept	8th Sept	25th Sept	7th Oct	8th Oct	15th Oct
Small skipper (none in 2021)								
Large skipper (none in 2021)								
Green veined white								
Small white				1				
Large white								
Orange tip		1						
Unid. white		9	2	14	2			
Small copper (none in 2021)								
Holly blue (none in 2021)								
Common blue								
Tortoiseshell								
Comma		1	1					
Peacock								
Painted Lady (none in 2021)								
Red Admiral								

	Survey gap June to August	28th Aug	5th Sept	8th Sept	25th Sept	7th Oct	8th Oct	15th Oct
Small heath (none in 2021)								
Wall (none in 2021)								
Meadow brown (none in 2021)								
Ringlet (none in 2021)								
Speckled wood		5	1	10			1	1
6 spot burnet moth (none in 2021)								
Red darter dragonfly (none in 2021)								
Migrant hawker dragonfly (none in 2021)								
Southern hawker dragonfly		1 exuviae						
Broad bodied Chaser dragonfly								
Large red damselfly (none in 2021)								
Blue tailed damselfly (none in 2021)								
Azure damselfly (none in 2021)								
Common Emerald damselfly (none in 2021)								

Table 4. Numbers of butterflies, dragonflies, damselflies and burnet moths counted within individual sections of the farm, 2021. The sections are coded as P = pond meadow, RF = red fescue meadow, H = horse meadow, W = woodland on northern slopes, F = farm grounds including adjacent river path, C1 = orchard below Cumberland Arms, C2 = meadow below Cumberland Arms. Counts were made on sunny days except where indicated by "cloudy" or "windy". Counts of eggs, caterpillars ("cats") and pupae ("pup") are approximate. "Exuviae" refers to the cast skins left behind when a dragonfly emerges; only new examples were recorded on each date and give a minimum estimate of the numbers hatching on site. The four species highlighted in yellow and not recorded in 2021 fly during the period when no surveys took place. Other species not found are rare or absent most years.

	22nd Feb	28th Feb	23rd Mar	30th Mar	11th Apr	14th Apr	15th Apr	2nd Apr	9th May	13th May	18th May	24th May	27th May	31st May
Small skipper (none in 2021)														
Large skipper (none in 2021)														
Green veined white														
Small white											P 1			
Large white									RF 1				H 1	
Orange tip							P 1	P 2, H 2, RF 1, F 1, C1 1	P 3, W 2, H 1, RF 2	P 3, H 2, RF 1	P 2, H 3, W 1	P 2, RF 2, H 3	H 2, P 2	P 2, RF 2
Unid. white									P 1		P 1	W 1		P 1
Small copper (none in 2021)														
Holly blue (none in 2021)														
Common blue														
Tortoiseshell				RF 1		P 1, RF 1	P 1							
Comma								RF 1	P 1					
Peacock				F 1		P 1					P 1			
Painted Lady (none in 2021)														
Red Admiral														

	22nd Feb	28th Feb	23rd Mar	30th Mar	11th Apr	14th Apr	15th Apr	2nd Apr	9th May	13th May	18th May	24th May	27th May
Small heath (none in 2021)													
Wall (none in 2021)													
Meadow brown (none in 2021)													
Ringlet (none in 2021)													
Speckled wood									W 1, P 2	W 2	P 1	W 1	
6 spot burnet moth (none in 2021)													
Red darter dragonfly (none in 2021)													
Migrant hawker dragonfly (none in 2021)													
Southern hawker dragonfly													
Broad bodied Chaser dragonfly													P 1
Large red damselfly (none in 2021)													
Blue tailed damselfly (none in 2021)													
Azure damselfly (none in 2021)													
Common Emerald damselfly (none in 2021)													

Table 3 continued

	Survey gap June to August	28th Aug	5th Sept	8th Sept	25th Sept	7th Oct	8th Oct	15th Oct
Small skipper (none in 2021)								
Large skipper (none in 2021)								
Green veined white								
Small white				F 1				
Large white		RF 1						
Orange tip								
Unid. white		W 2, H 3, RF 3, P 1	F 2	RF 3, W 6, H 2, C2 3	F 2			
Small copper (none in 2021)								
Holly blue (none in 2021)								
Common blue								
Tortoiseshell								
Comma		P 1	F 1					
Peacock								
Painted Lady (none in 2021)								
Red Admiral		W 1						

	Survey gap June to August	28th Aug	5th Sept	8th Sept	25th Sept	7th Oct	8th Oct	15th Oct
Small heath (none in 2021)								
Wall (none in 2021)								
Meadow brown (none in 2021)								
Ringlet (none in 2021)								
Speckled wood		P 2, RF 2, C2 1	RF 1	P 3, W 5, H 1, C2 1			RF 1	RF 1
6 spot burnet moth (none in 2021)								
Red darter dragonfly (none in 2020)								
Migrant hawker dragonfly (none in 2021)								
Southern hawker dragonfly		P 1 exuv						
Broad bodied Chaser dragonfly								
Large red damselfly (none in 2021)								
Blue tailed damselfly (none in 2021)								
Azure damselfly (none in 2021)								
Common Emerald damselfly (none in 2021)								

2021 photos

Male orange tip

Green veined white

Comma in springtime

Small tortoiseshell sunning itself on plank in pond, April

Speckled wood

Speckled wood underside

Pond (= orchard) meadow early spring

Pond meadow in early summer, looking overgrown

Red fescue (= hill) meadow early spring

Red fescue meadow in summer; limited grazing has allowed flowers to come through

Horse meadow in early spring

Horse meadow in early summer, reduced grazing has let the flowers come through

Pond 31st June. Wooden paths on both sides now broken

Pond in August, very choked with common reed at far end and bottle sedge in centre

Pond one or two days after restoration in October

August vegetation in riverside rafts