OUSEBURN FARM

BUTTERFLY & DRAGONFLY

SURVEY, 2016

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

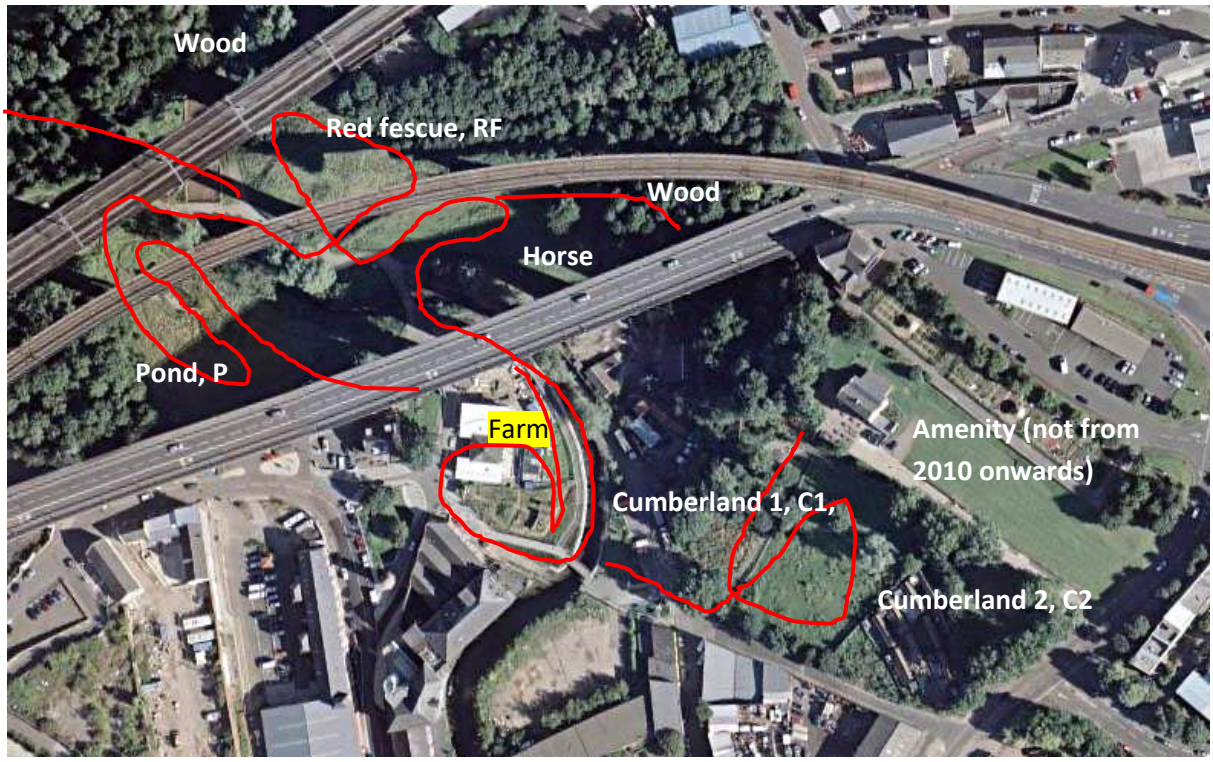
2016

Ouseburn Farm Butterfly, dragonfly and damselfly summary report 2016.

Butterflies, dragonflies and damselflies in and around the Ouseburn Farm were surveyed regularly in 2016 from late spring through to early autumn.

Similar surveys have been carried out in 2006 to 2015 (Jeffries, 2006 - 2015), making the 2016 survey the 11th survey since the farm re-opened. In 2016 twenty six walks were carried out, the first on the 25th February, the last on the 24th October, with a concentration on the spring season to spot early arrivals. 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 (except 4th July, Pond meadow only). Surveys were carried out where possible on warm, sunny days. The areas north of the Pond and Red Fescue meadows which had been fenced off during bridge repairs a couple of years ago were again included, with the area north of the pond meadow added into the pond totals, the area adjacent to the Hill meadow added into the totals for that meadow. These areas had been part of the adjacent meadow counts until they were fenced off for bridge repairs.

Figure 1. The Farm environs, meadows and butterfly recording walk. The red line shows the approximate route used in 2016. 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.

Fifteen species of butterfly were recorded, compared to fourteen in 2015, thirteen in 2014, and fourteen in 2013.

However overall numbers were low, especially of the high summer species such as large and small skippers or meadow browns and ringlets. The highest count for meadow browns was only 5 compared to 30+ in 2014 and 5 for ringlets compared to 19 in 2014. These low numbers were typical of patterns across the UK. There was no obvious reason for this, unlike for example in 2012 when a very wet summer hit many species. The summer of 2016 was relatively warm.

Once again no common blue, small coppers or wall browns were seen and have not been for at least three years

Speckled wood, large and small whites were all a sustained presence, the whites mostly around the Farm main site itself, the speckled wood in the dappled sun along woodland edges

Dragonflies and damselflies.

Damselflies and dragonflies were also recorded, four species of dragonflies but only one species of damselflies.

Like the butterflies overall numbers were low. The previous regular resident the blue tailed damselfly not seen at all. Again there is no obvious reason for these declines. The pond, which the main site for all species, remains in good health based on the abundance of milfoil pond weed, although reeds and sedges are beginning to encroach and water levels are often rather low exposing much of the side material.

No exuviae for any species were found this year

Counts of butterflies and dragonflies are given in two tables. Table 1 is simply the total of each species seen on each survey date. Table 2 presents data broken down for each section of the farm allowing comparisons between meadows.

References.

Jeffries, M.J. (2006) – (2015). 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 1. Total numbers of butterflies, burnet moths, dragonflies and damselflies counted during 2016. 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. Note on 4th July only the pond meadow was recorded.

	25th Feb	14th Mar	17th Mar	4th Apr	7th Apr	18th Apr	19th Apr	20th Apr	3rd May	4th May	5th May	9th May	17th May
Small skipper													
Large skipper (& unidentified skippers)													
Green veined white													
Small white									1		1		10
Large white													2
Orange tip										3	4	12	8
Unid. white								1	1	3		2	3
Small copper (none in 2016)													
Holly blue													
Common blue (none in 2016)													
Tortoiseshell				1			1	2	2	1		1	
Comma				1	1			2	1		1		
Peacock					1		1	1	2	2	3	1	
Painted Lady													
Red Admiral													

	25th Feb	14th Mar	17th Mar	4th Apr	7th Apr	18th Apr	19th Apr	20th Apr	3rd May	4th May	5th May	9th May	17th May
Small heath (none in 2016)													
Wall (none in 2016)													
Meadow brown													
Ringlet													
Speckled wood									1		1	4	6
Narrow bordered 5 spot burnet moth (none in 2016)													
Red darter dragonfly													
Migrant hawker dragonfly (none seen in 2016)													
Southern hawker dragonfly													
Broad bodied Chaser dragonfly													1
Blue tailed damselfly													
Azure damselfly													
Common Emerald damselfly													

Table 1 continued

	23rd May	6th June	21st June	24th June	4th July (pond)	14th July	19th July	27th July	23rd Aug	30th Aug	6th Sept	17th Sept	24th Oct
Small skipper							1	1					
Large skipper (& unidentified skippers)				1	1								
Green veined white							1	3					
Small white	6	2	1				1	3	3	2	2	4	
Large white	1			1			3	2	6	6	4	3	
Orange tip	7	4		1									
Unid. white	7	7	2	3		5	8	5	7	1	2	7	
Small copper (none in 2016)													
Holly blue	1												
Common blue (none in 2016)													
Tortoiseshell									1			1	
Comma								2					
Peacock						1						1	
Painted Lady												1	
Red Admiral												1	

	23rd May	6th June	21st June	24th June	4th July (pond)	14th July	19th July	27th July	23rd Aug	30th Aug	6th Sept	17th Sept	24th Oct
Small heath (none in 2016)													
Wall (none in 2016)													
Meadow brown				1	1	2	5	3					
Ringlet			1	2	4	5		2					
Speckled wood	4	2	2	3	5	8			3	1		3	
Narrow bordered 5 spot burnet moth (none in 2016)													
Red darter dragonfly								1	3	1			
Migrant hawker dragonfly (none seen in 2016)													
Southern hawker dragonfly					1				1				
Broad bodied Chaser dragonfly	1	3	4	3	1								
Blue tailed damselfly													
Azure damselfly		7	18	29	15	6	8	1					
Common Emerald damselfly													

Table 2. Numbers of butterflies, dragonflies, damselflies and burnet moths counted within individual sections of the farm, 2016. 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. Note on 4th July only the pond meadow was recorded.

	25th Feb	14th Mar	17th Mar	4th Apr	7th Apr	18th Apr	19th Apr	20th Apr	3rd May	4th May	5th May	9th May	17th May
Small skipper													
Large skipper (& unidentified skippers)													
Green veined white													
Small white									F1		F1		P3, W1, H2, F4
Large white													RF 2
Orange tip										W1, P1, H1	P4	W1, P5, H4, C2 2	P3, RF2, H1, F1, C2 1
Unid. white								W1	P1	W1, F1, C1 1		H2, F2	W2, P1
Small copper (none in 2016)													
Holly blue													
Common blue (none in 2016)													
Tortoiseshell				P1			P1	P2	P2	H1		C1 1	
Comma				P1	P1			P2	P1		F1		
Peacock					P1		W1	P1	P2	P2	P3	P1	
Painted Lady													

	25th Feb	14th Mar	17th Mar	4th Apr	7th Apr	18th Apr	19th Apr	20th Apr	3rd May	4th May	5th May	9th May	17th May
Red Admiral													
Small heath (none in 2016)													
Wall (none in 2016)													
Meadow brown													
Ringlet													
Speckled wood									W1		P1	W4	P3, W3
Narrow bordered 5 spot burnet moth (none in 2016)													
Red darter dragonfly													
Migrant hawker dragonfly (none seen in 2016)													
Southern hawker dragonfly													
Broad bodied Chaser dragonfly													P1
Blue tailed damselfly													
Azure damselfly													
Common Emerald damselfly													

Table 1 continued

	23rd May	6th June	21st June	24th June	4th July (pond)	14th July	19th July	27th July	23rd Aug	30th Aug	6th Sept	17th Sept	24th Oct
Small skipper							P1	P1					
Large skipper (& unidentified skippers)				P1	P1								
Green veined white							P1	P2, F1					
Small white	P1, RF3, F1, H1	P1, W1	P1				F1	F3	F3	F2	F2	P1 F3	
Large white	W1			P1			P1, RF1, W1	F2	P1, F4, W1	F6	F4	F2, W1	
Orange tip	P5, RF1, H1	P3, W1		P1									
Unid. white	P1, RF1, H2, FI, C1 1, C2 1	P2, RF2, H2, C2 1	P1, H1	RF2, F1		P2, RF1, C2 2	P1, RF3, H1,, F1, C1 1, C2 1	P5	P2, RF3, H1, W1	F1	F2	RF3, F2, W1, C2 1	
Small copper (none in 2016													
Holly blue	RF1												
Common blue (none in 2016)													
Tortoiseshell									F1			W1	
Comma						P1		P2					
Peacock												W1	
Painted Lady												W1	

	23rd May	6th June	21st June	24th June	4th July	14th July	19th July	27th July	23rd Aug	30th Aug	6th Sept	17th Sept	24th Oct
Red Admiral												W1	
Small heath (none in 2016)													
Wall (none in 2016)													
Meadow brown				RF1	P1	P2	P5	P2, RF1					
Ringlet			P1	P2	P4	P5		P2					
Speckled wood	RF1, W3	P1, W1	P1, W1	P2, C2 1	P5	P4, RF1, H1, W1, C2 1			W3	P1		P1, W2	
Narrow bordered 5 spot burnet moth (none in 2016)													
Red darter dragonfly								P1	P3	F1			
Migrant hawker dragonfly (none seen in 2016)													
Southern hawker dragonfly									P1	P1			
Broad bodied Chaser dragonfly	P1	P3	P4	P3	P1								
Blue tailed damselfly													
Azure damselfly		P7	P18	P29	P15	P6	P8	P1					
Common Emerald damselfly													

Photographs from the 2016 season

Small tortoiseshells were early spring show offs

Commas also made their debut in early spring

Orange tips are classic spring butterflies. The exquisitely dappled females often go overlooked

Here a male orange is doing a courtship dance over a female

Large and small whites also get overlooked but have their own beauty, especially on the right flower

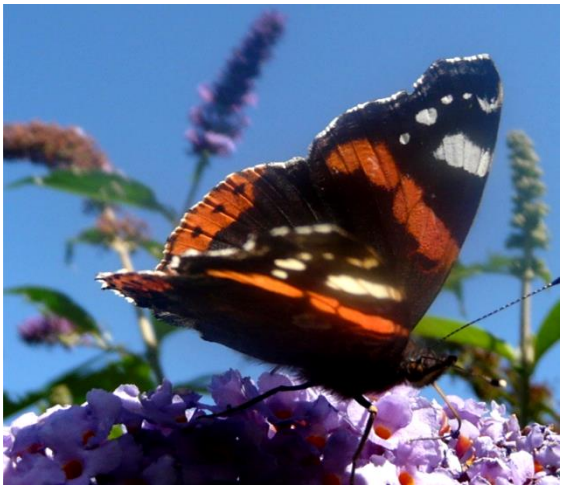
Large skippers were very scarce this summer

As were small skippers....

....and meadow browns. Here is the first recorded on the farm on 23rd June

Even ringlets, who had a good year in 2015, were scarce. This one is typically skulking in the grass

Red admirals put on a late show



Speckled woods were around all summer

The orchard trees are growing fast

The horse meadow is now heavily grazed

The red fescue meadow sward is also short by the end of the summer

Earlier in the summer the red fescue hill is much more flower rich

There were some nice surprises though, a bee orchid in the orchard. Their exotic flowers are particualarly good looking against the concrete bridge towers