OUSEBURN FARM

BUTTERFLY & DRAGONFLY

SURVEY, 2015

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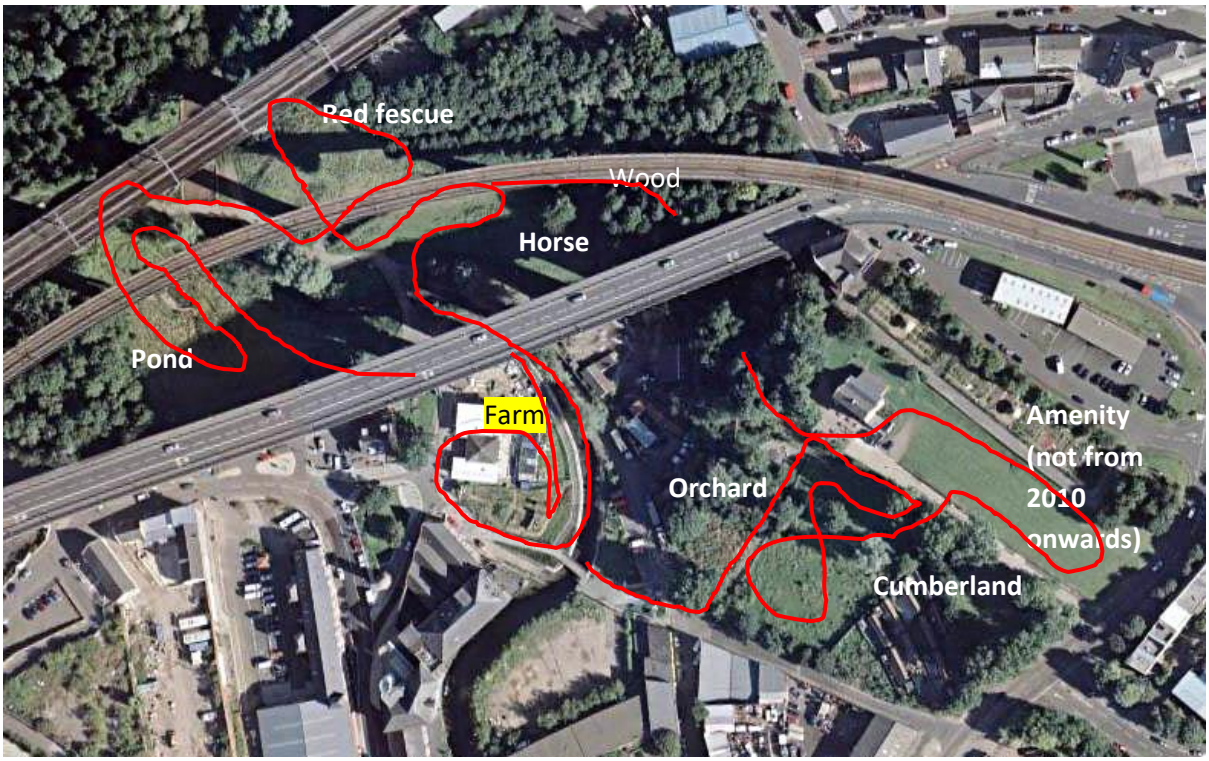
Ouseburn Farm Butterfly, dragonfly and damselfly summary report 2015.

Butterflies, dragonflies and damselflies in and around the Ouseburn Farm were surveyed regularly in 2015 from late spring through to early autumn.

Similar surveys have been carried out in 2006 to 2014 (Jeffries, 2006 - 2014), making the 2015 survey the 10th anniversary of the start made soon after the farm re-opened. In 2015 thirty two walks were carried out, the first on the 23rd February, the last on the 12thOctober. 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.The areas north of the Pond and Red Fescue meadows which had been fenced off during bridge repairs 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 2015. 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.

Fourteen species of butterfly were recorded, compared to thirteen in 2014, fourteen in 2013 and eleven in the poor summer of 2012.

The year started with a strong showing of early spring Tortoiseshells, with a supporting cast of their relatives commas and peacocks coming out of hibernation, followed by the arrival of small and large whites along with the classic springtime orange tips in May. Tortoiseshell caterpillars were abundant on the nettles alongside the path at the foot of the pond meadow in May. High summer saw large skippers present from mid June to July, which is good news, having been barely recorded since 2012, although small skipper remain infrequent. Ringlet numbers have gone up in the last couple of years whilst meadow brown numbers have recovered somewhat after the grim summer of 2012. Overall the pond meadow remains the heart of the butterfly habitat, whilst the hill meadow (called red fescue meadow in earlier reports) has not fully recovered from the double whammy of 2012 cold summer and grazing impact. The meadow below the Cumberland Arms remains surprisingly poor, often seeming very exposed and windy.

Holly blues, common blues and small copper were not found, nor the wall brown. The loss of the wall brown is sad. This was seen regularly up to 2011 but has declined throughout the north in recent years (Le Fleming et al, 2014), following a similar alarming collapse in the south of the UK around the millennium

Dragonflies and damselflies.

Damselflies and dragonflies were also recorded, three species of dragonflies and three of damselflies.

Southern Hawkers, Broad bodied chasers and Azure damselflies had good years. The common emerald damselfly, first recorded in 2014 was found again on two dates, suggesting it has established at the pond. Twenty one individual southern exuviae (cast skins left behind when the adults emerge) were found around the pond, showing the site has become a strong breeding site for this colourful and approachable dragonfly.

Counts of butterfliesand 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) – (2014) . 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

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Le Fleming S., Lowther S., Waller I., Inglis S. And Norman R. Butterfly Summary. Butterfly Conservation, North east England Branch.

Table 1. Total numbers of butterflies, burnet moths, dragonflies and damselflies counted during 2015. 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.

	23rd Feb	10th March	19th March	2nd April	6th April	10th April	16th April	21st April	7th May	20th May	26th May
Small skipper											
Large skipper (& unidentified skippers)											
Green veined white										2	3
Small white							1	4		5	1
Large white											
Orange tip							2	3	8	2	6
Unid. white								3	3	1	5
Small copper (none in 2015											
Holly blue (none in 2015)											
Common blue (none in 2015)											
Tortoiseshell			2	2	17	13	8	13			1, 100+ cats
Comma		1		1	1	4	2	4			
Peacock				1	4	4	2	6	1		1
Painted Lady											
Red Admiral											

	23rd Feb	10th March	19th March	2nd April	6th April	10th April	16th April	21st April	7th May	20th May	26th May
Small heath (none in 2015)											
Wall (none in 2015)											
Meadow brown											
Ringlet											
Speckled wood								3	9	5	2
Narrow bordered 5 spot burnet moth (none in 2015)											
Red darter dragonfly											
Migrant hawker dragonfly (none seen in 2015)											
Southern hawker dragonfly											
Broad bodied Chaser dragonfly										5	1
Blue tailed damselfly											
Azure damselfly										7	6
Common Emerald damselfly											

Table 1 continued

	30th May	4th June	10th June	14th June	24th June	27th June	29th June	2nd July	3rd July	10th July	17th July
Small skipper							1			1	1
Large skipper (& unidentified skippers)			1 + 1 unid skipper	1	1		3	5 + 1 unid skipper	2	1 unid skipper	
Green veined white		1		1						1	1
Small white		3								2	3
Large white				1						1	
Orange tip	4	1	2								
Unid. white	7	1	1	2					1	3	1
Small copper (none in 2015											
Holly blue (none in 2015)											
Common blue (none in 2015)											
Tortoiseshell	10+ cats	1							1	3	1
Comma											1
Peacock											
Painted Lady											
Red Admiral									1		1

	30th May	4th June	10th June	14th June	24th June	27th June	29th June	2nd July	3rd July	10th July	17th July
Small heath (none in 2015)											
Wall (none in 2015)											
Meadow brown						3	1	3	2	6	18
Ringlet					3	1	5	15	12	16	11
Speckled wood	1	2	2	2	4	7	6	1	4	4	1
Narrow bordered 5 spot burnet moth (none in 2015)											
Red darter dragonfly									1	3	3 exuivae
Migrant hawker dragonfly (none in 2015)											
Southern hawker dragonfly		1 exuviae	1 new exuviae	4 new exuviae		2 new exuviae	8 new exuviae	2	2 + 2 new exuviae		3 new exuviae
Broad bodied Chaser dragonfly	5	4	3	1		2			1		
Blue tailed damselfly		1				2	1	1	1	1	4
Azure damselfly	11	54	41	33	51	38	36	51	39	37	28
Common Emerald damselfly										2	1

Table 1 continued

	22nd July cloudy, cool	29th July	3rd August	6th August	24th August	28th August	6th Sept	26th Sept	2nd Oct	12th Oct
Small skipper	1	1	1	1						
Large skipper (& unidentified skippers)										
Green veined white			2	6	4	1		1		
Small white	1	2	7	6		4	1	1	1	
Large white		2	3	14	8 + 40 cats	10 + cats	2	1	1	
Orange tip										
Unid. white	1	8	7	6	3		2	1	2	
Small copper (none in 2015										
Holly blue (none in 2015)										
Common blue (none in 2015)										
Tortoiseshell		1	1			2	1		1	
Comma	1	1	2	2	2		1			
Peacock					2	1				
Painted Lady						2				
Red Admiral					2	8	1			

	22nd July cloudy, cool	29th July	3rd August	6th August	24th August	28th August	6th Sept	26th Sept	2nd Oct	12th Oct
Small heath (none in 2015)										
Wall (none in 2015)										
Meadow brown	4	17	14	10	1					
Ringlet	5	2	2							
Speckled wood	2	2		2	1			10	5	
Narrow bordered 5 spot burnet moth (none in 2015)										
Red darter dragonfly	3	5	8	5	4	4				
Migrant hawker dragonfly (none seen in 2015)										
Southern hawker dragonfly	1	2		1		1	3			
Broad bodied Chaser dragonfly										
Blue tailed damselfly	5	2	1	1		3	2			
Azure damselfly	14	2	2	2						
Common Emerald damselfly										

Table 2. Numbers of butterflies, dragonflies, damselflies and burnet moths counted within individual sections of the farm, 2015. 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.

	23rd Feb	10th March	19th March	2nd April	6th April	10th April	16th April	21st April	7th May	20th May	26th May
Small skipper											
Large skipper (& unidentified skippers)											
Green veined white										P2	P2, RF1
Small white					F1		P1	RF1, H1, F1, W1		F5	F1
Large white											
Orange tip							H1, F1	P2, H1	P3, RF3, H2	P2	P2, RF 1, H2, F1
Unid. white								H1 C2 2	P1, H1, F1	P1	RF2, H2, F1
Small copper (none in 2015											
Holly blue (none in 2015)											
Common blue (none in 2015)											
Tortoiseshell			F2	P1, W1	P6, RF5, H3, F3	P7, RF4, H1, F1	P2, RF3, H1, F2	P6, RF2, H5			P1 = 100 CATS
Comma		P1		P1		P2, RF1, H1	P1, H1	P1, H1, W1			
Peacock				P1	P3, RF1	P2, H2	P2	P5, H1	P1		RF 1
Painted Lady											
Red Admiral											

	23rd Feb	10th March	19th March	2nd April	6th April	10th April	16th April	21st April	7th May	20th May	26th May
Small heath (none in 2015)											
Wall (none in 2015)											
Meadow brown											
Ringlet											
Speckled wood								P2, W1	P8, RF1	P1, RF1, W3	P1, RF1
Narrow bordered 5 spot burnet moth (none in 2015)											
Red darter dragonfly											
Migrant hawker dragonfly (none seen in 2015)											
Southern hawker dragonfly											
Broad bodied Chaser dragonfly										P5	P1
Blue tailed damselfly											
Azure damselfly										P7	P6
Common Emerald damselfly											

Table 2 continued

	30th May	4th June	10th June	14th June	24th June	27th June	29th June	2nd July	3rd July	10th July	17th July
Small skipper										P1	C2 1
Large skipper (& unidentified skippers)			P1 & C2 unid skip	P1	P1		P3	P4, RF1 & P1 unid skip	P2	P1 unid skip	
Green veined white		P1		P1						H1	P1
Small white		F3								F2	F3
Large white				P1						F1	
Orange tip	P1, RF2, F1	P1	P1, RF1								
Unid. white	P1, RF2, H2, F1 C2 1	P1	C2 1	H1, W1					RF1	P1, RF1, W1	P1
Small copper (none in 2015)											
Holly blue (none in 2015)											
Common blue (none in 2015)											
Tortoiseshell	P10+ cats	F1							P1	P2, H1	P1
Comma											P1
Peacock											
Painted Lady											
Red Admiral									P1		P1

	30th May	4th June	10th June	14th June	24th June	27th June	29th June	2nd July	3rd July	10th July	17th July
Small heath (none seen in 2015)											
Wall (none in 2015)											
Meadow brown						P3	P1	P2, C2 1	P1, C2 1	P4, C2 2	P8, RF 5, C2 5
Ringlet					P3	C2 1	P3, H1, C2 1	P7, RF1, W1 C2 6	P7, C2 5	P11, W2, C2 3	P10, C2 1
Speckled wood	P1	P1, W1	W2	P1, W1	W4	P2, W5	P4, H1, F1	W1	P1, RF1, W2	P2, W2	P1
Narrow bordered 5 spot burnet moth (none in 2015)											
Red darter dragonfly									P1	P3	P3 exuvlae
Migrant hawker dragonfly (none in 2015)											
Southern hawker dragonfly		P1 exuvlae	P1 exuvlae	P4 exuvlae		P2 exuvlae	P8 exuvlae	P2	P2 + 2 exuvlae		P3 exuvlae
Broad bodied Chaser dragonfly	P5	P4	P3	P1		P2			P1		
Blue tailed damselfly		P1				P2	P1	P1	P1	P1	P4
Azure damselfly	P10, RF1	P54	P41	P33	P51	P38	P36	P51	P39	P37	P28
Common Emerald damselfly										P2	P1

Table 2 continued

	22nd July cloudy, cool	29th July	3rd August	6th August	24th August	28th August	6th Sept	26th Sept	2nd Oct	12th Oct
Small skipper	P1	C2 1	P1	P1						
Large skipper (& unidentified skippers)										
Green veined white			P2	P3, H3	P2, H1, C2 1	P1		RF1		
Small white	P1	F2	P2, F1, C2 1	RF1, F5		P1, H1, F2	F1	F1	F1	
Large white		C2 1, H1	P1, RF2	P3, RF2, H2, C1 1, F6	F7 + 40 cats, C2 1	P3, F7 + cats	P1, F1	F1	F1	
Orange tip										
Unid. white	F1	RF4, H1, C2 2, W1	P3, H2, C2 2	P2, RF2, C2 2	H1 C2 2		P1, H1	P1	F1, W1	
Small copper (none in 2015										
Holly blue (none in 2015)										
Common blue (none in 2015)										
Tortoiseshell		C2 1	C2 1			C2 1, F1	F1		F1	
Comma	P1	P1	P2	P1, C2 1	P1, H1		F1			
Peacock					F2	F1				
Painted Lady						P1, F1				
Red Admiral					H2	P5, RF1, F2	P1,			

	22nd July cloudy, cool	29th July	3rd August	6th August	24th August	28th August	6th Sept	26th Sept	2nd Oct	12th Oct
Small heath (none in 2015)										
Wall (none in 2015)										
Meadow brown	P4	P6, H 6, C2 5	P9, RF4, C2 1	P5, RF3, C2 2	H1					
Ringlet	P5	P2	P2							
Speckled wood	P2	RF1, H1		P1, RF1	H1			P9, F1	P2, W3	
Narrow bordered 5 spot burnet moth (none seen in 2015)										
Red darter dragonfly	P3	P5	P7, RF1	P5	P4	P4				
Migrant hawker dragonfly (none seen in 2015)										
Southern hawker dragonfly				P1		P1	P2, F1			
Broad bodied Chaser dragonfly										
Blue tailed damselfly	P5	P2	P1	P1		P3				
Azure damselfly	P14	P2	P2	P2						
Common Emerald damselfly										

Photographs from the 2015 season

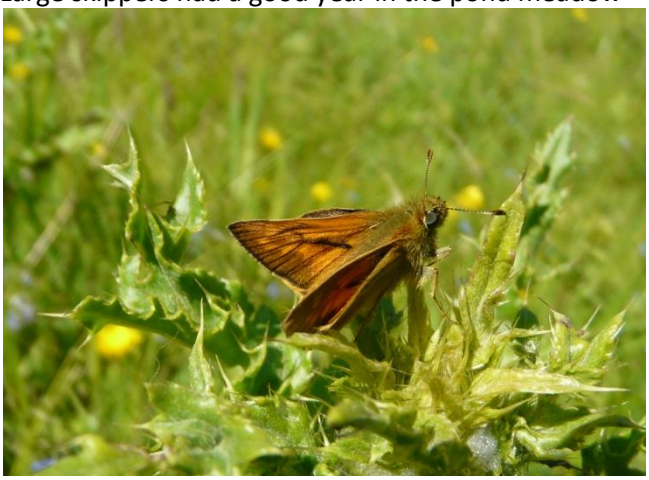
A battered but perky springtime peacock out of hibernation

Comma on the buddlea by the polytunnel

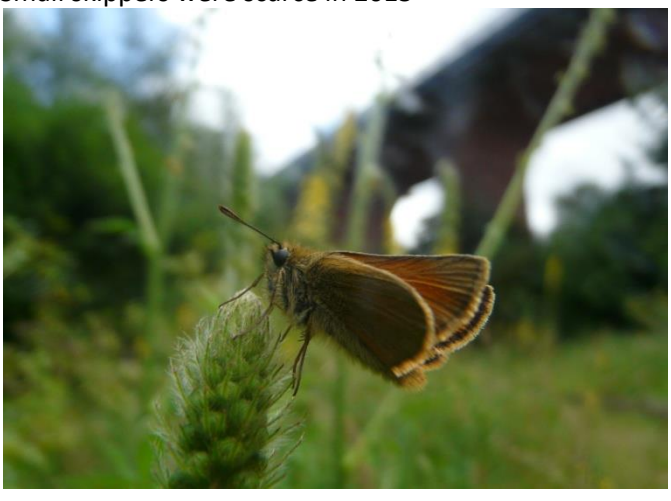
Late summer red admiral

Painted lady on cabbage netting. Not many of these migrants in 2015 but this one visited the farm

Large skippers had a good year in the pond meadow



Small skippers were scarce in 2015



Large white caterpillars on the Farm enjoying the natsurtiums

Small white

A male orange tip attracted by an abandoned rubber

Early summer tortoiseshell catarpillars on nettles in the pond meadow

A smart fly: the Banded General, *Sratiomys potamida*

Another smart fly, The Great Pied ly *Volucella inflata*.

Azure damselflies hanging round the pond

Broad bodied chaser dragonfly

Common emerald damselfly on the pond

Hill meadow, the sward remains low and grazed but flower rich

Cumberland meadow

Pond meadow, showing the orchard planting beginning to grow

Broad bodied chaser exuviae

Recently emerged southern hawker with nearby exuviae

Southern hawker exuviae

Four southern hawker exuviae on sedges in the pond