OUSEBURN FARM

BUTTERFLY & DRAGONFLY

SURVEY, 2019

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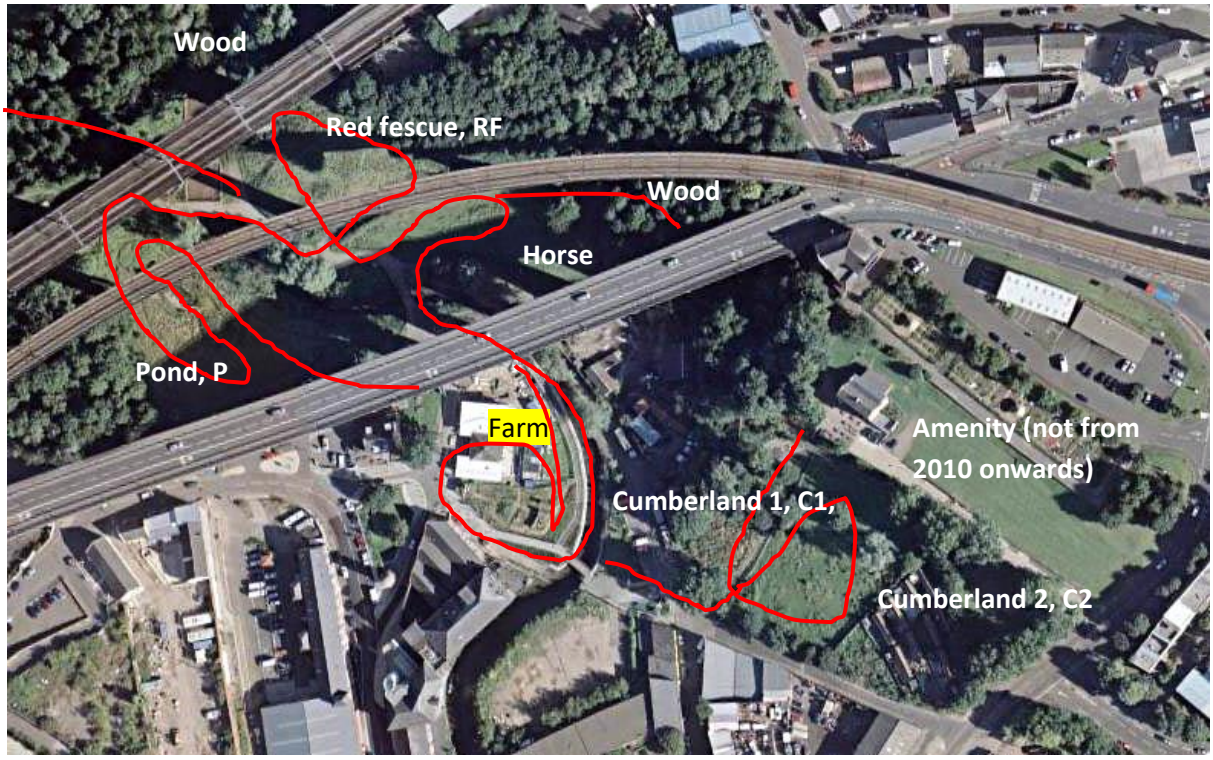
2019

Ouseburn Farm Butterfly, dragonfly and damselfly summary report 2019.

Butterflies, dragonflies and damselflies in and around the Ouseburn Farm were surveyed regularly in 2019 from late spring through to early autumn.

Similar surveys have been carried out in 2006 to 2018 (Jeffries, 2006 - 2018), making the 2019 survey the 14th survey since the farm re-opened. In 2019 nineteen walks were carried out, the first on the 14th February, the last on the 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 and large whites

Figure 1. The Farm environs, meadows and butterfly recording walk. The red line shows the approximate route used in 2019. The names used for each field are shown, consistent with previous reports, although the farm uses different names for some meadows.



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 in 2019, the same number as in 2018, compared to sixteen in 2017, fifteen in 2016, fourteen in 2015, thirteen in 2014, and fourteen in 2013.

The summer of 2019 was a painted lady year, with very large numbers of these migrant butterflies coming in over the North Sea, including unusually large numbers this far north, with some present on the Farm over much of the summer. Red admirals also tended to coincide with the painted ladies so may be partly a migration in as well as some local individuals

Overall butterfly numbers remain lower than in the mid 2010s, but there is no evidence for any marked change in 2019. The speckled wood, first seen on site in 2008, is now one of the most abundant and can be found over a long flight period due to multiple broods; it was present from at least mid-April to mid-September. The mix of grassland and woodland edges suits it very well, the adults holding temporary territories along sun dappled woodland edges such as along the paths. Its arrival in 2008 followed a national trend as it expanded northwards into northern England. Meadow brown numbers continue to be low, perhaps related to the increasing closing up of the orchard trees in the pond meadow.

None of the very occasional species, small copper, holly blue, common blue, wall or small heath were recorded, and no burnet moths either. Holly blue come and go following annual boom and bust years, whilst the others are all only occasionally found on the site. The loss of burnet moths, found regularly in the mid 2000s and up to 15 individuals, is a shame. It re-appears occasionally but only ones and twos. The site may no longer support the food plant, birds foot trefoil, once grazing was restarted in later half of the 2000s. The moth remains abundant at nearby sites such as the grassy slope by Vale House in Jesmond Vale.

Table 1. The highest counts of selected butterflies made on any single site visits between 2013 and 2019. In all years the counts were made on a weekly basis from spring to early autumn, on sunny days so should be broadly comparable.

	2013	2014	2015	2016	2017	2018	2019
Small skipper	1	15	1	1	1	3	1
Orange tip	5	10	8	12	12	9	6
Ringlet	2	20	17	5	5	14	13
Meadow brown	14	18	18	5	5	3	5
Speckled wood	8	14	10	8	8	12	12
Comma	3	5	4	2	3	5	4

Dragonflies and damselflies.

Damselflies and dragonflies were also recorded, but only three species of dragonflies were seen, and the migrant hawker is likely to be a passing vagrant.

No damselflies were seen for the first time in ten years, continuing the decline of the last few years. This may be linked to the increasingly congested pond which is now half full of reeds and sedges which have established since its 2010 refurbishment. Plans are under way for a clean out and restoration; these sorts of rapid cycles of rise and fall are typical of small, artificial ponds.

Counts of butterflies and dragonflies are given in two tables. Table 2 is simply the total of each species seen on each survey date. Table 3 presents data broken down for each section of the farm allowing comparisons between meadows.

References.

Jeffries, M.J. (2006) – (2018). Ouseburn Farm butterfly & dragonfly surveys. Department of Geography & Environmental Sciences, Northumbria University, Newcastle upon Tyne. Copies of all the annual reports can be obtained from michael.jeffries@northumbria.ac.uk.

Table 2. Total numbers of butterflies, burnet moths, dragonflies and damselflies counted during 2019. 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.

	14th Feb	26th Feb	29th March	11h April	18th April	22nd April	30th April	12th May	21st May	7th June	20th June	27th June	4st July
Small skipper													
Large skipper (& unidentified skippers)											2	4	2
Green veined white									1		1		
Small white			1			1	2		1	1			1
Large white													
Orange tip					2	4	6	6	2	1			
Unid. white					2	6	4	5	4	4		1	
Small copper (none in 2019)													
Holly blue (none in 2019)													
Common blue (none in 2019)													
Tortoiseshell			1										
Comma		1	3	2	2	1	2			1			1
Peacock		1	3		1		1						
Painted Lady												2	5
Red Admiral												2	

	14th Feb	26th Feb	29th March	11h April	18th April	22nd April	30th April	12th May	21st May	7th June	20th June	27th June	4st July
Small heath (none in 2019)													
Wall (none in 2019)													
Meadow brown													
Ringlet												2	12
Speckled wood					4	13	8	1	4	2	3	3	5
6 spot burnet moth (none in 2019)													
Red darter dragonfly													
Migrant hawker dragonfly													
Southern hawker dragonfly (none in 2019)													
Broad bodied Chaser dragonfly									1	2	1	1	
Blue tailed damselfly (none in 2019)													
Azure damselfly (none in 2019)													
Common Emerald damselfly (none in 2019)													

Table 2 continued

	16th July	23rd July	18th August	23rd August	17th Sept	15th Oct
Small skipper	1	1				
Large skipper (& unidentified skippers)						
Green veined white	1	3	2	1		
Small white	7		1			
Large white	2				2	
Orange tip						
Unid. white		15	2	9	5	
Small copper (none in 2019)						
Holly blue (none in 2019)						
Common blue (none in 2019)						
Tortoiseshell	2	1				
Comma	4	3				
Peacock			2			
Painted Lady				2	2	
Red Admiral	1				2	

	16th July	23rd July	18th August	23rd August	17th Sept	15th Oct
Small heath (none in 2019)						
Wall (none in 2019)						
Meadow brown	4	5				
Ringlet	9	1				
Speckled wood	6	1	3	2	5	
6 spot burnet moth (none in 2019)						
Red darter dragonfly			1			
Migrant hawker dragonfly				1		
Southern hawker dragonfly (none in 2019)						
Broad bodied Chaser dragonfly						
Blue tailed damselfly (none in 2019)						
Azure damselfly (none in 2019)						
Common Emerald damselfly (none in 2019)						

Table 3. Numbers of butterflies, dragonflies, damselflies and burnet moths counted within individual sections of the farm, 2019. 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.

	14th Feb	26th Feb	29th March	11h April	18th April	22nd April	30th April	12th May	21st May	7th June	20th June	27th June	4st July
Small skipper													
Large skipper (& unidentified skippers)											P 2	P 3, RF 1	P 2
Green veined white									W 1`		P 1		
Small white						P 1	P 1, F 1		P 1	H 1			F 1
Large white													
Orange tip					W 1, C2 1	W 1, C2 1	P 3, RF 1, W 1, F 1	P 1, RF 2, H 2, C2 1	RF 1, H 1	P 1			
Unid. white					RF 1, C2 1	P 1, H 2, W 3	P 1, H 1, F 2	P 2, RF 1, H 1, C2 1	RF 1, H 2, F 1	P 2, RF 1, F 1		RF 1	
Small copper (none in 2019)													
Holly blue (none in 2019)													
Common blue (none in 2019)													
Tortoiseshell													
Comma		W 1	P 1, RF 1 F 1	P 2	P 2	P 1	RF 1, F 1			F 1			F 1
Peacock		W 1	P 2, W 1		P 1	P 1	P 1						
Painted Lady												P 1, RF 1	P 4, W 1
Red Admiral												P 1, W 1	

	14th Feb	26th Feb	29th March	11h April	18th April	22nd April	30th April	12th May	21st May	7th June	20th June	27th June	4st July
Small heath (none in 2019)													
Wall (none in 2019)													
Meadow brown													
Ringlet												P 1, RF 1	P 9, W 3
Speckled wood					P 3, W 1	P 3, RF 1, W 9	P 3, RF 1, W 4	P 1	P 1, RF 1, W 2	W 2	P 2, W 1	W 3	P 1, W 4
6 spot burnet moth (none in 2019)													
Red darter dragonfly													
Migrant hawker dragonfly													
Southern hawker dragonfly (none in 2019)													
Broad bodied Chaser dragonfly									P 1	P 1, H 1	P 1	P 1	
Blue tailed damselfly (none in 2019)													
Azure damselfly (none in 2019)													
Common Emerald damselfly (none in 2019)													

Table 3 continued

	16th July	23rd July	18th August	23rd August	17th Sept	15th Oct
Small skipper	RF 1	P 1				
Large skipper (& unidentified skippers)						
Green veined white	H 1	P 2, H 1	P 2			
Small white			F 1			
Large white	RF 1, F 1				F 2	
Orange tip						
Unid. white	P 2, RF 1, H 2, W 1, C2 1	P 3, RF 1, H 3, W 3, F 4, C2 1	P 1, C2 1	P 2, RF 1, H 1, W 1, F 3, C2 1	RF 1, F 4	
Small copper (none in 2019)						
Holly blue (none in 2019)						
Common blue (none in 2019)						
Tortoiseshell	H 1, F 1	H 1				
Comma	P 2, RF 1, W 1,	P 2, H 1				
Peacock			P 2			
Painted Lady				P 2	F 2	
Red Admiral	H 1				F 2	

	16th July	23rd July	18th August	23rd August	17th Sept	15th Oct
Small heath (none in 2019)						
Wall (none in 2019)						
Meadow brown	P 2, RF 1, W 1	P 5				
Ringlet	P 7, W 2	P 1				
Speckled wood	P 3, W 3	W 1	P 3	P 1, W 1	P 4, F 1	
6 spot burnet moth (none in 2019)						
Red darter dragonfly			P 1			
Migrant hawker dragonfly				P 1		
Southern hawker dragonfly (none in 2019)						
Broad bodied Chaser dragonfly						
Blue tailed damselfly (none in 2019)						
Azure damselfly (none in 2019)						
Common Emerald damselfly (none in 2019)						

2019 photos

Comma on Blackthorn blossom in March

Peacock sunning itself in February. The early individuals are fresh out of hibernation

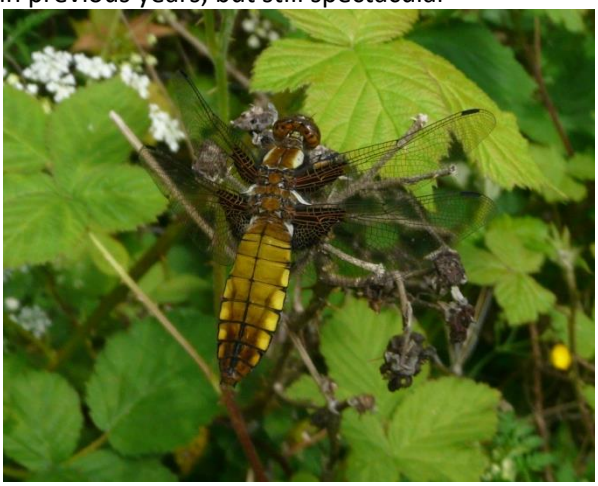
Orange tip on water cress by the pond

Orange tip, underside

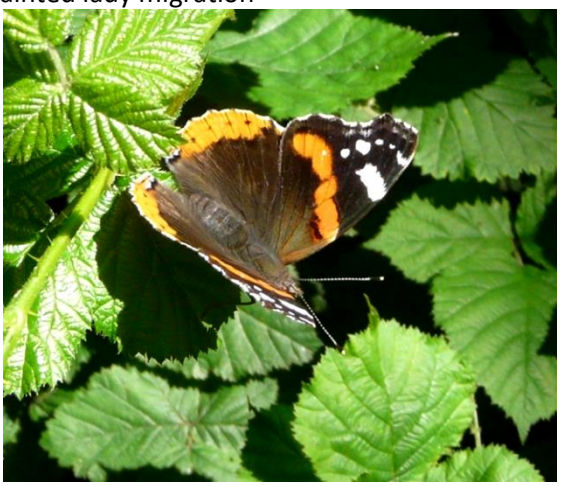
Perky large skipper, on its look-out perch on giant hogweed leaf. The males intercept any insects that encroach

Small white

Broad bodied chaser dragonfly. Not so many as in previous years, but still spectacular



Red admiral, maybe coming in with this year's painted lady migration



Speckled wood. Now one of the most abundant butterflies and present from April through to September

Pond meadow in summer. The orchard trees now dominate the space

Hill (= red fescue) meadow in summer

Horse meadow

Cumberland 2 meadow.

Cumberland 1 meadow.

The pond in July 2012, two years after renovation, with clear water and extensive aquatic submerged plants.

The pond in July 2019, largely covered in duckweed with reeds and sedges encroaching at the far end.