



STUDLAND COMMON TRANSECT REPORT 2018



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Location:



Parking in Westminster Road or nearby Pay & Display Car Park

Part 1 - Introduction, Acknowledgements & Transect Route

A) Introduction

The following report summarises the findings of the weekly butterfly transects undertaken by the New Forest Transect Group at Studland Common during 2018. This is the third year of recording along this route which was designed with advice and collaboration of the Milford Conservation Volunteers.

Recording protocols are in accordance with United Kingdom Butterfly Monitoring Scheme Guidelines.

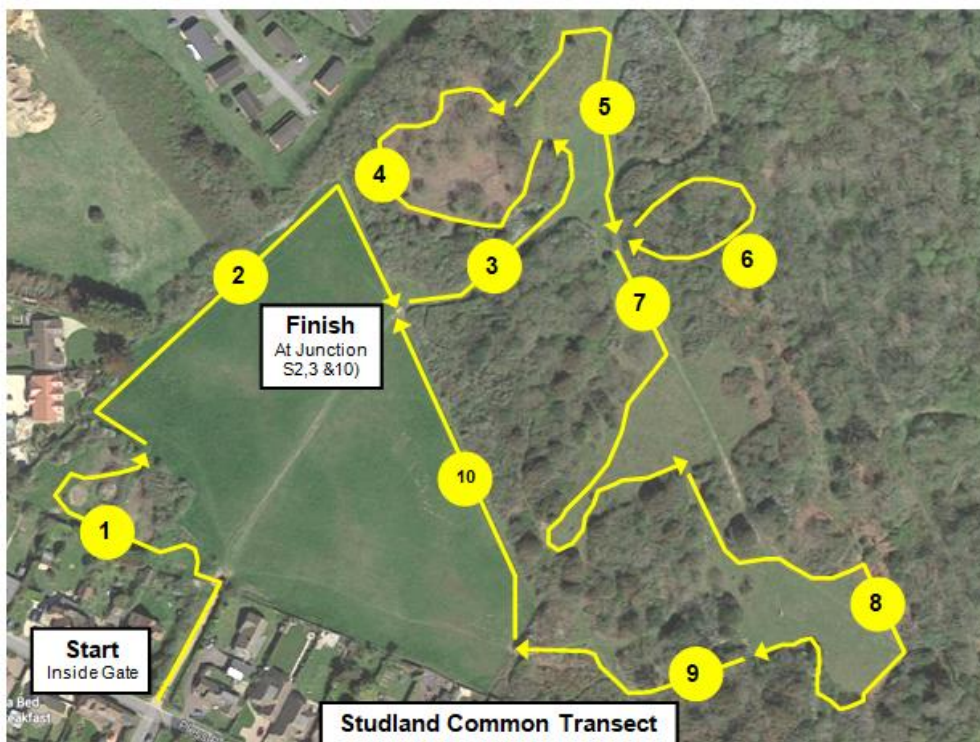
By adopting Butterfly Conservation terminology, the term 'index' is used throughout though, for most purposes, this is synonymous with 'count'.

A more detailed analysis, together with the raw data, is available to Group Members and Landowners on request.

B) Acknowledgements

Milford Conservation Volunteers:	Keith Metcalf
Hampshire Flight Chart:	Alan Thornbury
Transect History:	Derek Hankinson
Report Preparation:	Bob Annell
Overall Summary:	Tani Read
Supporting Narratives:	Tani Read
UK Weather:	Trevor Bumfrey
Report Checking:	John Levell
UKBMS Database Entry:	Tani Read

C) Transect Route



Part 2 - Overall Summary

Studland Common Nature Reserve located in Milford On Sea is a designated Site of Importance for Nature Conservation. There are several habitats within this 6.92 hectare site, including meadow, orchard, scrub, woodland and a stream. The stream is nearby but not on the transect and the woodland borders part of the transect.

The Parish Council, with the guidance of the New Forest Land Advice Service and Milford Conservation Volunteers started a ten year scrub management and grassland restoration project in 2012, which is being funded by Natural England. Restoration works are carried out under the Higher Level Stewardship Agreement. The aim is to achieve a 50/50 mix of scrub and flower-rich grassland from a 70/30 mix. As a result of the restoration work many more wildflowers have appeared in the cleared areas. These enhanced wildflower areas should gradually help increase invertebrate populations. Cattle grazing is continuing, and additional fruit trees are planned for the orchard.

The New Forest Transect Group and Milford Conservation Volunteers jointly undertake recording. There were no sightings of White-letter Hairstreak, which had been reported on the common in 2015 prior to the transect start. Purple Hairstreak were sighted in 2017 in the oaks on the edge of the Transect, but no sightings were reported in 2018.

Despite some weeks being very difficult weather-wise valid counts were recorded for every week in the season and surprisingly there were no zero counts. Overall there was a 31% decrease in total numbers. Given that this is only the third year of reporting it is difficult to draw any meaningful comparisons. Although total numbers dropped significantly, 2018 was better than 2016 (the first year of recording) by 13%.

Generally sightings were within the Hampshire flight periods although some flights were reported early. Small White and Red Admiral were three weeks early. Large White were two weeks early. The annual index was 839 with 21 different species.

'Browns' were the dominant species making 67% of the annual index. Ringlet were recorded on the transect for the first time.

Meadow Brown 347, Gatekeeper 141, Speckled Wood 53, Marbled White 21 and Ringlet 3.

'Whites' were 17% of the total count in 2018.

Small White 86, Large White 49, Brimstone 4, Green-veined White one and Orange-tip also one.

Coppers, Hairstreaks and 'blues' accounted for 7%.

Common Blue 25, Small Copper 21, Holly Blue 12 and Green Hairstreak two.

'Fritillaries, Admirals, and Tortoiseshells' were 5% of this year's total count

Comma 16, Red Admiral 12, Peacock 11, Painted Lady one and Small Tortoiseshell one.

Skippers were 4%.

Small/Essex Skipper 30 and Large Skipper two.

There continues to be good diversity in all sections although section three dipped to only six. The small increase in the number of different species from 19 to 21 was due to Large Skipper reappearing and Ringlet, a new species for the Transect. The dominant 'browns' decreased by 28%, while 'Fritillaries, Admirals, & Tortoiseshells' decreased by 78% from 2017. Red Admiral decreased from 80 to 12 total count, an 85% drop.

Part 3 - Flight Periods

2018 Flight Periods																													
Week Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	Totals		
Week Commencing	1/4	8/4	15/4	22/4	29/4	6/5	13/5	20/5	27/5	3/6	10/6	17/6	24/6	1/7	8/7	15/7	22/7	29/7	5/8	12/8	19/8	26/8	2/9	9/9	16/9	23/9			
Small/Essex Skipper															17	9	4										30		
Large Skipper														2													2		
Brimstone			1													2											4		
Large White					5	2	3	1						3	10	1	7	5		1	3	2	2		2	2	49		
Small White						3		3						1	13	12	8	6	2		4	4	8	5	13	2	2	86	
Green-veined White					1																						1		
Orange-tip					1																						1		
Green Hairstreak					1																						2		
Small Copper				1		1		1	1						1	3		2					1	1	3	6	21		
Common Blue								1	6							2	5	3	1			1			4	2	25		
Holly Blue					1	5	1	1							2	1						1					12		
Red Admiral					1									1	1							1				7	12		
Painted Lady																										1	1		
Small Tortoiseshell													1														1		
Peacock	2		2		1	1	2								2	1											11		
Comma		7		3										2		1	2								1		16		
Speckled Wood				1	1	1	2	1	1	1	1	2				2			1			8	6	3	7	2	12	1	53
Marbled White												1	2	13	5													21	
Gatekeeper															42	46	37	13			2	1						141	
Meadow Brown												14	28	44	69	79	34	48	23		5	2				1		347	
Ringlet															2	1												3	
DIFFERENT SPECIES	1	1	2	3	4	7	5	7	6	1	2	3	5	9	9	12	8	7	1	5	5	5	5	3	7	7	21		
TOTALS - 2018	2	7	3	5	4	11	14	9	13	1	15	31	49	122	161	106	107	49	1	20	16	15	16	16	25	21	839		
TOTALS - 2017	12	14	7	11	17	11	1	7	10	3	13	43	66	116	133	103	173	102	25	82	25	56	39	53	45	44	1211		
TOTALS - 2016	1	6	1	0	3	5	14	8	3	1	1	1	10	50	110	18	94	195	65	53	29	18	13	7	13	21	740		
Hants Flight Periods Alan Thornbury													Transect record within normal Hants flight period					Transect record outwith normal Hants flight period											

In the main all species were seen during their normal Hampshire flight periods, although a few flights started a couple of weeks early, and there were a few late sightings.

Small/Essex Skipper had a short flight period of just three weeks.

Both overwintering and second brood Brimstone were recorded. Large White appeared two weeks early, Small White were three weeks early. Both were also recorded one week later than the flight chart.

Small Copper were recorded throughout the season. The first and third broods were early.

Red Admiral were poorly represented throughout. They were seen in both overwintering and an early annual brood. The low count of seven at the end of the season is possibly a consequence of continental migratory arrivals.

A single Painted Lady was recorded in late September and a single Small Tortoiseshell in late June. Peacock and Comma were seen in both the overwintering and annual broods.

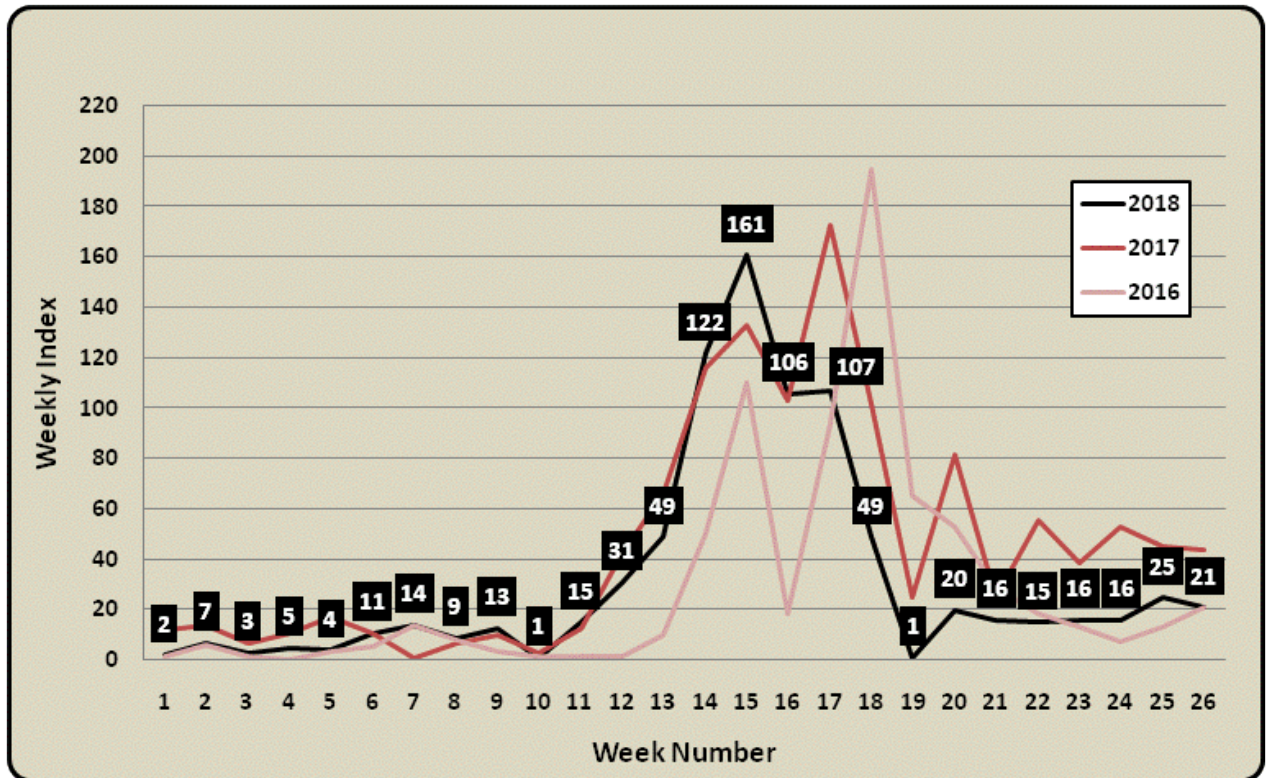
Speckled Wood slumped mid-season over a seven week period. Numbers were stronger towards the end of the season.

Both Meadow Brown and Gatekeeper had shorter flight periods than 2017. Meadow Brown finished three weeks earlier, excluding one late sighting outside the flight chart. Gatekeeper started one week later than 2017.

Marbled White had a very short flight period of only four weeks with poor numbers.

All of the above observations regarding flight periods are based on Alan Thornbury's Hampshire Flight Chart, www.purple-emperor.co.uk

Part 4 - Weekly Indices



With only three years of records it is difficult to draw meaningful comparisons, however, patterns are beginning to appear.

Numbers were fairly static through the first 11 weeks then started to rise. Consistent with previous years.

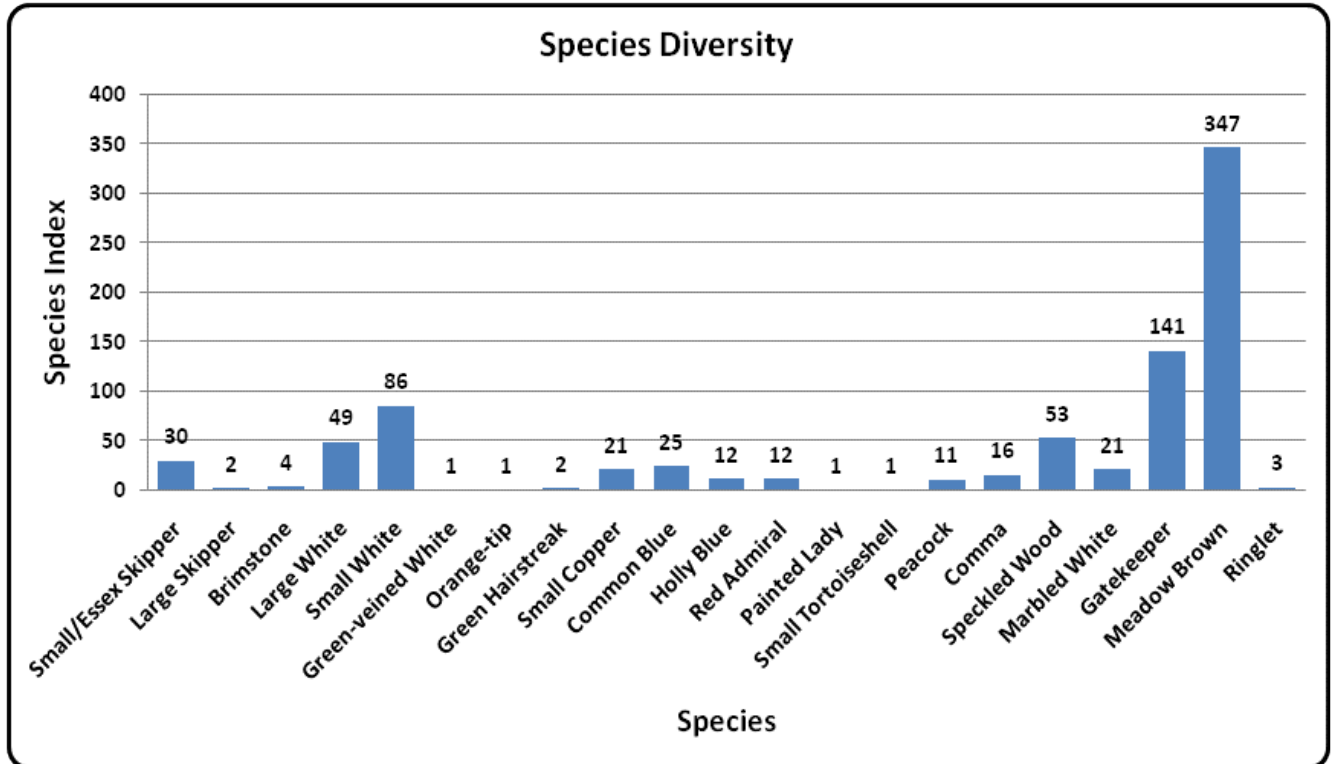
Peak numbers occurred early July in Week 15. Mainly due to Gatekeeper emerging. In 2016 the peak occurred in Week 18, and in 2017 Week 17.

The maximum species diversity occurred the following week, Week 16. In previous years the maximum diversity has coincided with the peak in numbers.

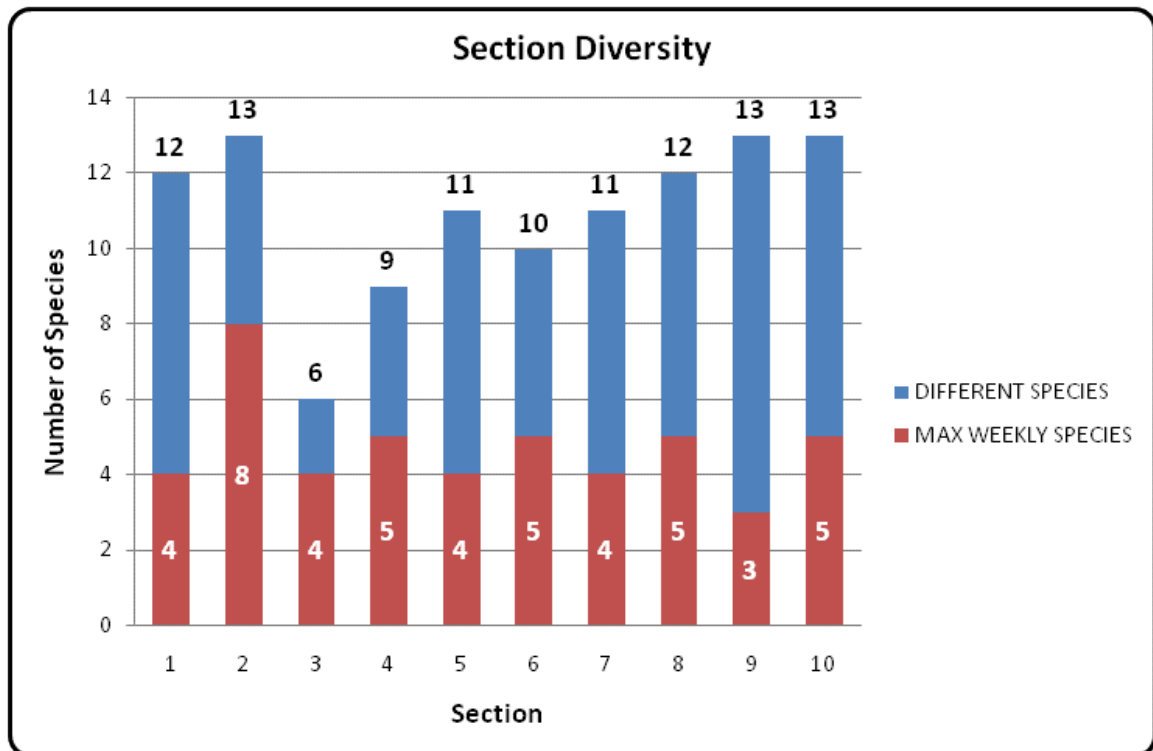
Unlike last year numbers did not crash immediately after the peak, however, by Week 19 numbers had plummeted. Then numbers increased to slightly higher levels than the start of the season but remained fairly static for the rest of the season.

Unlike 2017 no minor peak occurred later in the season.

Part 5 - Species Overview

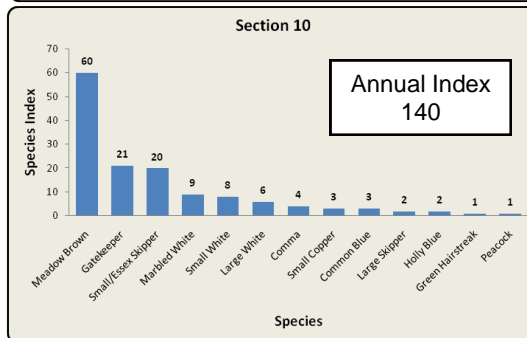
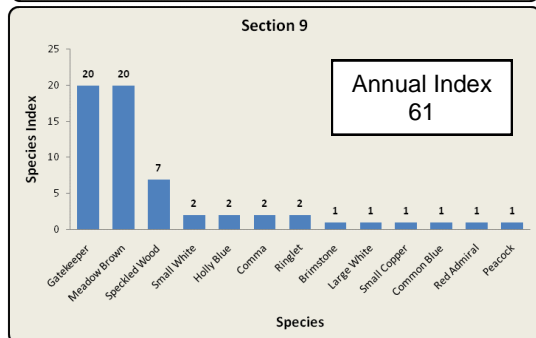
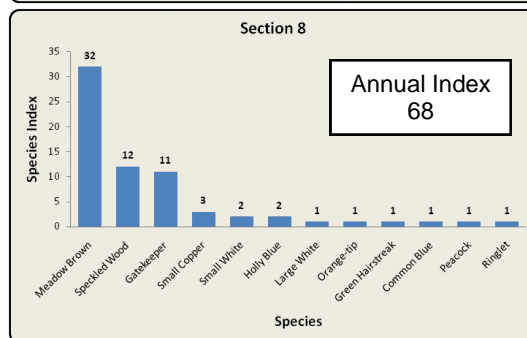
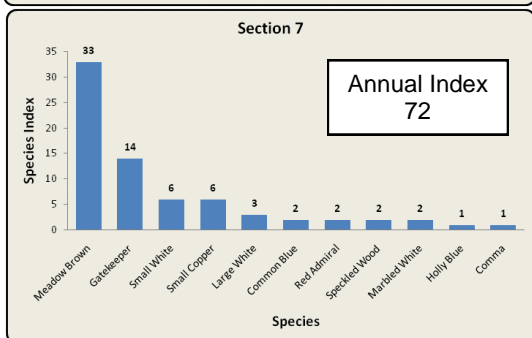
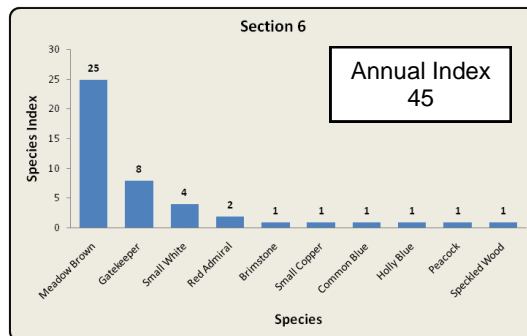
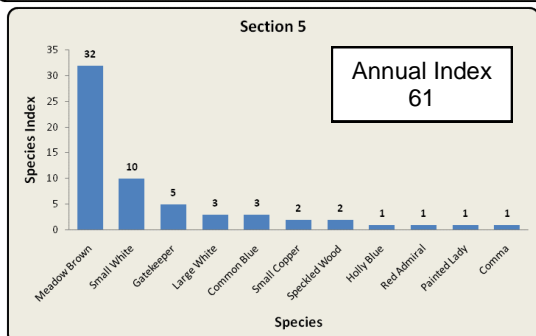
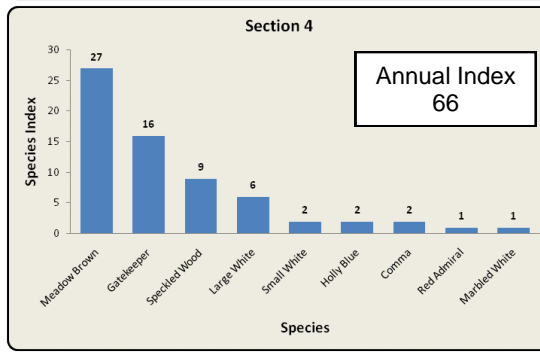
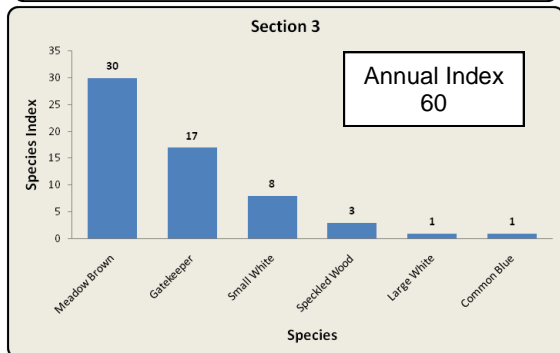
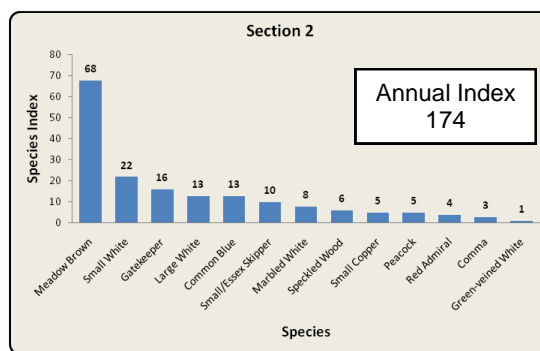
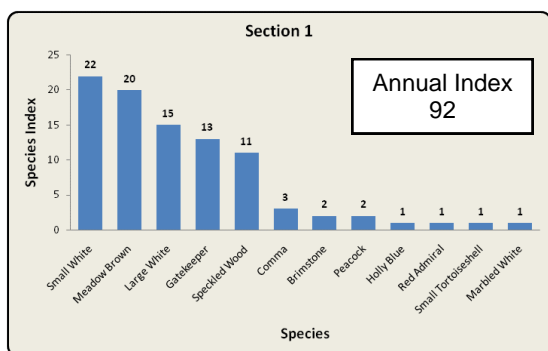


There were 21 different species in 2018, up two from 2017, due to Large Skipper appearing again. And Ringlet, a new species for the Transect. The wider countryside species dominate especially Meadow Brown and Gatekeeper.



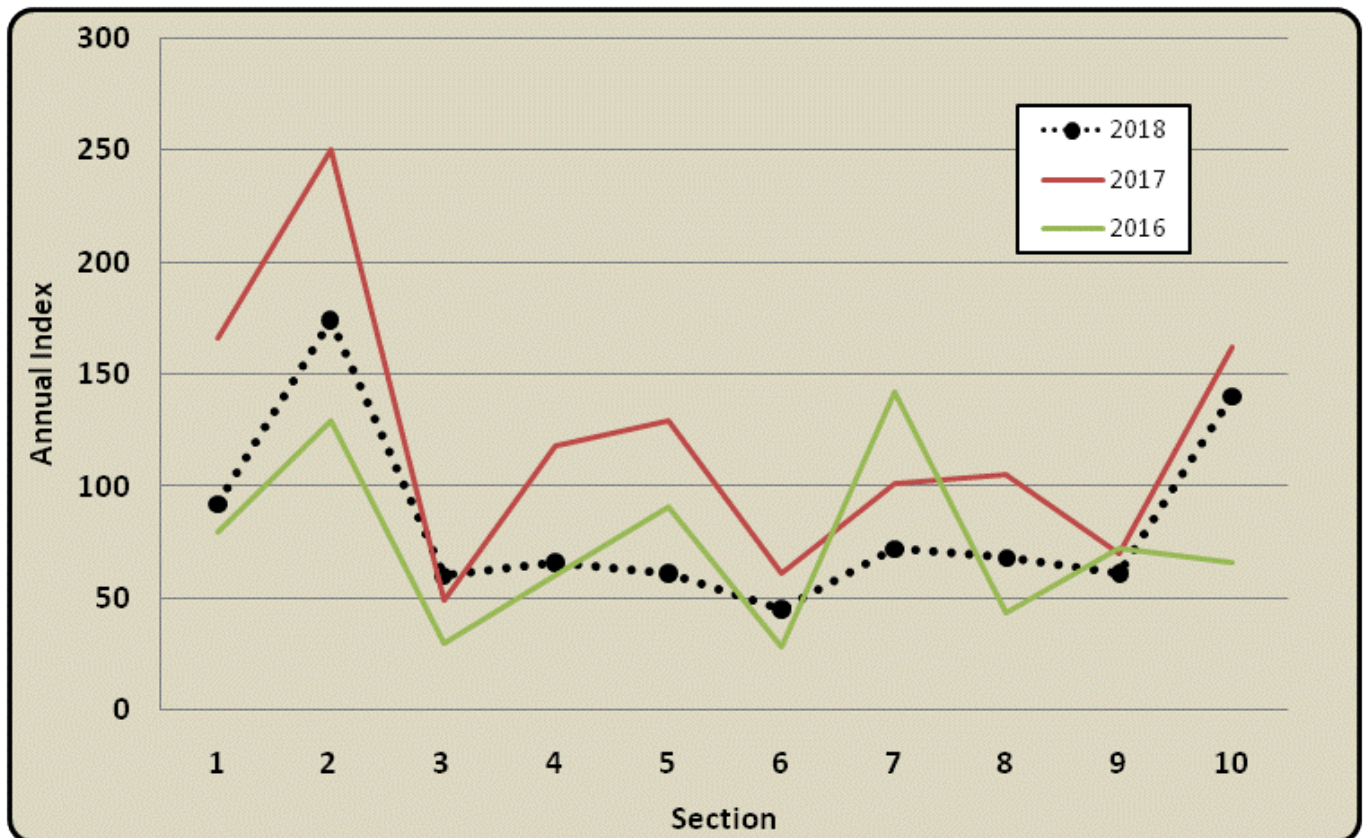
Diversity remains good in almost all sections. Several sections dropped slightly. Section 3 fared the worst with diversity down to six. Sections 9 & 10 rose slightly. Maximum weekly species were in the main slightly lower, only Section 6 improved.

Part 6 - Species per Section



Highest Section Index for 2018 was in Section 2 with most sections being dominated by Meadow Brown. Small White was tops in Section 1 and Gatekeeper equalled Meadow Brown in Section 9.

Part 7 - Annual Comparison Indices



Annual Species Diversity										
Year	Section									
	1	2	3	4	5	6	7	8	9	10
2016	10	14	11	10	12	10	9	11	12	14
2017	14	14	10	10	14	10	14	12	11	12
2018	12	13	6	9	11	10	11	12	13	13

Section 2 and 10 show the highest numbers, dominated by Meadow Brown. Both sections run along the meadow.

Diversity in Section 6 dropped by 40%.

Species were seen for the first time in the following sections were:

Section1 – Brimstone

Section2 – Green-veined White, Common Blue

Section 3 – Common Blue

Section 6 – Brimstone, Common Blue

Section 8 – Orange-tip

Section 9 – Brimstone, Common Blue, Ringlet (new to the transect)

Section 10 – Large Skipper, Green Hairstreak, Holly Blue

Part 8 - Annual Species Variation

Highest species counts/annum highlighted by red shaded box

↓ indicates decrease

↑ indicates increase

= indicates no change

Species	2016	2017	2018	Diff	
				2017-2018	
Essex Skipper	0	1	0	-1	↓
Small/Essex Skipper	22	31	30	-1	↓
Large Skipper	4	0	2	+2	↑
Clouded Yellow	1	0	0	0	=
Brimstone	3	2	4	+2	↑
Large White	60	48	49	+1	↑
Small White	29	57	86	+29	↑
Green-veined White	1	1	1	0	=
Orange-tip	1	1	1	0	=
Green Hairstreak	2	2	2	0	=
Small Copper	14	30	21	-9	↓
Common Blue	5	35	25	-10	↓
Holly Blue	7	25	12	-13	↓
Red Admiral	37	80	12	-68	↓
Painted Lady	1	2	1	-1	↓
Small Tortoiseshell	1	1	1	0	=
Peacock	10	52	11	-41	↓
Comma	8	53	16	-37	↓
Silver-washed Fritillary	1	0	0	0	=
Speckled Wood	42	96	53	-43	↓
Marbled White	104	63	21	-42	↓
Gatekeeper	160	235	141	-94	↓
Meadow Brown	227	396	347	-49	↓
Ringlet	0	0	3	+3	↑
TOTALS	740	1211	839	-372	↓
DIFFERENT SPECIES	22	19	21	+2	↑

Most species dropped in numbers compared to 2017. Red Admiral fared the worst, dropping by 85%, followed by Peacock 79%, Comma 70%, Marbled White 67%, Holly Blue 52%, Speckled Wood 45%, Gatekeeper 40%, Small Copper 30%, Common Blue 29% and Meadow Brown 12%

Small/Essex Skipper and Large White were roughly level with 2017. There were seven species which had less than 5 in total numbers. Large Skipper, Brimstone, Green-veined White, Orange-tip, Green Hairstreak, Painted Lady and Ringlet. Three species which had zero counts (present in previous years) were Essex Skipper (2017), Clouded Yellow (2016) and Silver-washed Fritillary (2016).

The only species to have a significant increase was the Small White 29%

Appendix 1 - Weather

Unsettled weather in winter carried on into spring with some unseasonably cold spells which delayed the start of the growing season. The summer was dominated by warm and sunny weather. Comparisons are based on weather in southern England.

October – December 2017

October was warmer (+1.6°C) and drier (32%) than normal. November brought cooler conditions but still drier (65%) than average. December was wetter (132%) than average with more sun but close to average temperatures.

January – March 2018

January was warmer (+1.9°C) than average but with close to average sun and rain. February was cold and dry with more sunshine (159%) than average. March was dull, cold and very wet (173%).

April – June 2018

The wet spell carried on into April (147%), although it was warmer with less sunshine. The temperature picked up in May (+2.3°C) with increased sunshine (134%) and average rainfall. June was very dry (13%), warm (+2.3°C) and sunny (132%).

July – September 2018

July was very warm (+3.5°C), sunny (148%) and dry (54%). August was again warm (+1.4°C) with average sunshine and rainfall. September had close to average temperature, although it was sunnier (119%) and drier (71%) than average.

<http://www.metoffice.gov.uk/climate/uk/summaries>

Local Rainfall (mm) - Southampton

2017			2018								
Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep
42.6	48.9	120.2	96.9	45.5	137.2	104.0	66.0	3.0	34.9	85.0	43.0

<http://www.southamptonweather.co.uk/wxhistory.php>

Transect Weather

Week No	1	2	3	4	5	6	7	8	9	10	11	12	13
Wind Direction	E	SE	SE	SW	SE	SW	NW	SE	S	SW	N	SW	S
Wind Force	4	3	1	3	4	2	4	2	2	1	2	4	3
Temperature °C	13	13	19	16	14	20	19	19	22	22	19	19	24
% Sun	100	100	100	80	100	100	100	97	100	0	28	100	100

Week No	14	15	16	17	18	19	20	21	22	23	24	25	26
Wind Direction	E	S	SW	S	S	NW	SW	SW	SW	E	SW	S	SW
Wind Force	5	2	3	3	4	1	3	3	3	1	4	4	1
Temperature °C	25	24	23	25	25	18	22	22	17	21	20	20	16
% Sun	100	100	100	100	100	90	30	100	100	34	100	97	100

Appendix 2 - Photographs



Common Blue – Eric Read



Common Blue – Keith Metcalf



Small Skipper – Eric Read



Small Skipper – Keith Metcalf



Green Hairstreak – Eric Read



Peacock – Eric Read



Silver Y – Eric Read



Marbled White – Keith Metcalf



Devils-bit Scabious – Keith Metcalf



Harebell – Keith Metcalf