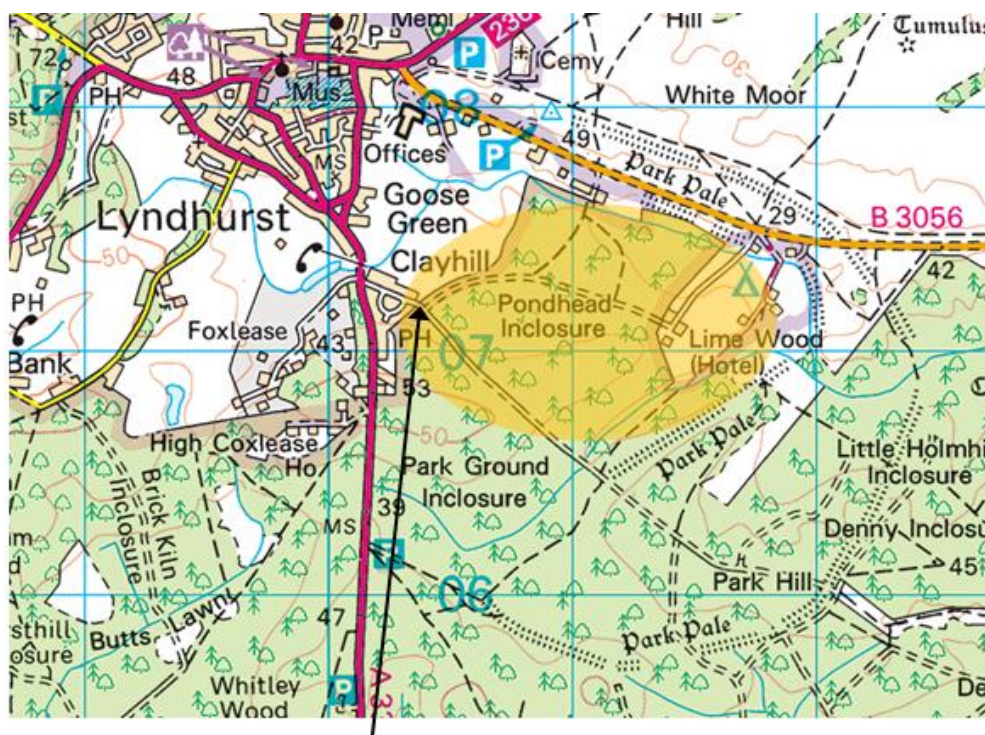


Team Leader:	Trevor Bumfrey	
Transect Team:	Maggie Adams	Sheila Green
	Sue Austin	Mike Green
	Linda Bradshaw	Phil Morgan

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Location:



Park at end of Beechen Lane

Part 1 – Introduction, Acknowledgements & Route

A) Introduction

The following report summarises the findings of the weekly butterfly transects undertaken by the New Forest Transect Group in Pondhead Inclosure during 2019. The route was established in 2012.

Pondhead Conservation Trust have been provided with the full data in order that they can complete their own more detailed analysis

In addition, comparisons are made with our results from previous years. Recording protocols are in accordance with UKBMS Guidelines.

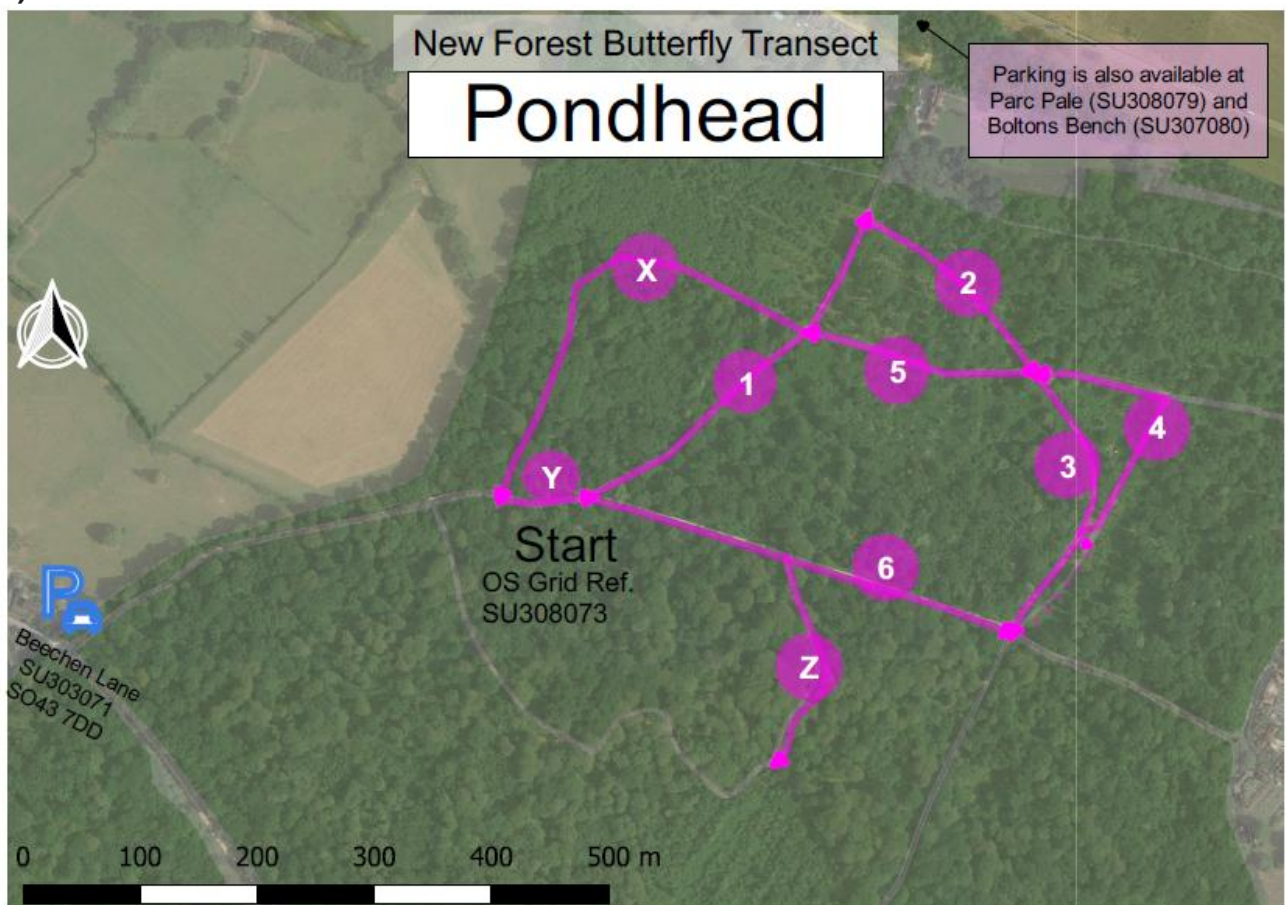
By adopting Butterfly Conservation terminology, the term 'index' is used throughout though, for most purposes, this is synonymous with 'count'. A more detailed analysis, together with the raw data, is available to Pondhead Conservation Trust, Group Members and Landowners on request.

B) Acknowledgements

This report was compiled by Bob Annell, with the assistance of Derek Hankinson, Trevor Bumfrey and checked by Jean Annell.

We are grateful for the support of Alan Stride, Zoe Cox & Christine Wilks from Forestry England, also the Pondhead Conservation Trust.

C) Transect Route



Part 2 - Overall Summary

The total abundance showed a small (5%) increase over 2018 but still significantly lower than the 2014 peak.

In common with other transects Painted Lady were observed in greater numbers than previous years. Silver-studded Blue were also recorded for the first time, presumably having found the way into the inclosure from the surrounding heathland. It was also a good year for Orange-tip.

Disappointingly, Pearl-bordered Fritillary were not recorded this year.

Small/Essex Skipper were observed in greater numbers compared to a small decline in Large Skipper.

Gatekeeper and Ringlet showed an increase in abundance compared to a decline in Meadow Brown

Part 3 - Flight Periods

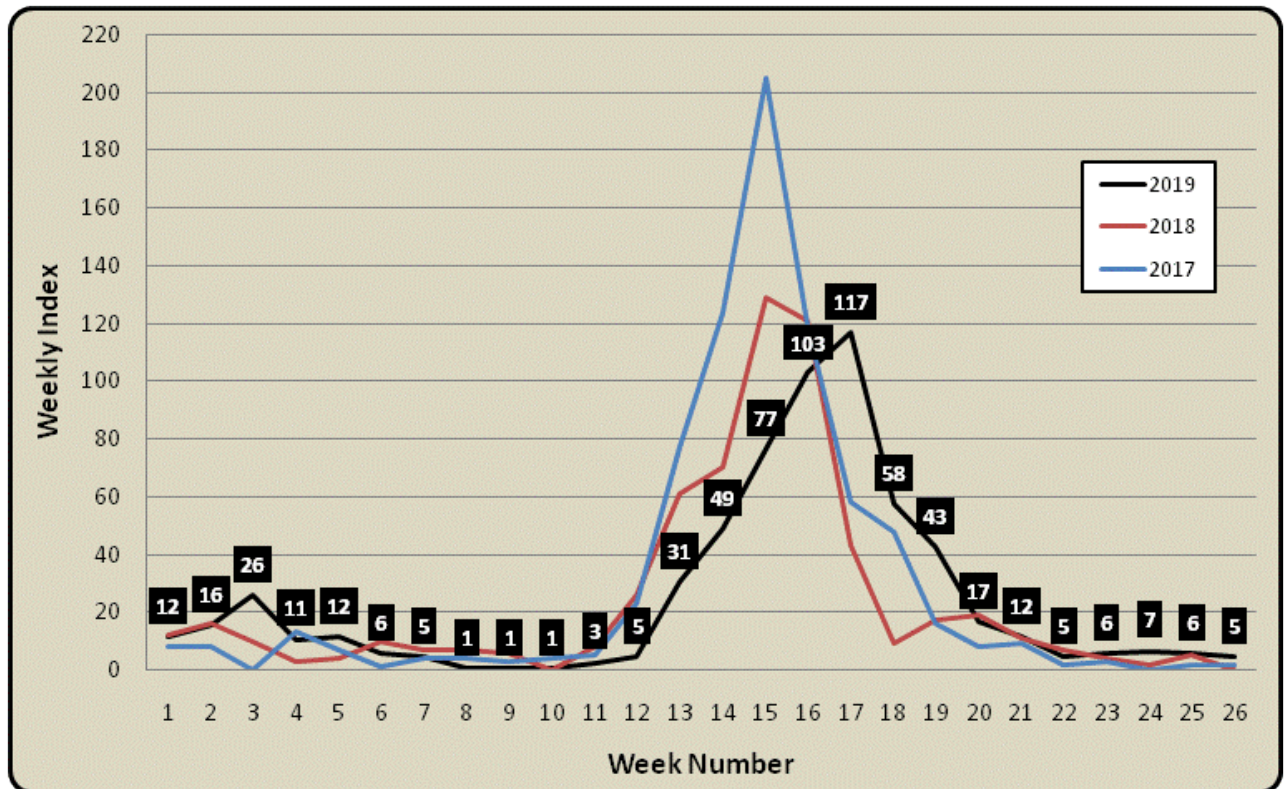
2019 Flight Periods																											Totals
Week Number	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	
Week Commencing	1/4	8/4	15/4	22/4	29/4	6/5	13/5	20/5	27/5	3/6	10/6	17/6	24/6	1/7	8/7	15/7	22/7	29/7	5/8	12/8	19/8	26/8	2/9	9/9	16/9	23/9	
Small/Essex Skipper													4		4	24	7		5								44
Large Skipper														11	7	2	11	8									39
Brimstone	2	10	19	7	9	3	5		1							2		1	3					1			63
Large White								1								6		1		2		1	3				14
Small White			2	1	2	1									2		2			2		2	1	1	1		16
Green-veined White																					1						1
Orange-tip		1	2	1	1	2																					7
Silver-studded Blue												1	1														2
Holly Blue																		2	1								3
White Admiral														1	1			2									4
Red Admiral																				1					1		2
Painted Lady													6	1							1						8
Peacock	8	3	1													1								1			14
Comma															1												1
Silver-washed Fritillary													2	6	6	5	14	4	3								40
Speckled Wood	2	2	2	2						1	3	1					10	9	4	3	4	2	1	4	4	5	59
Marbled White													1	1													2
Gatekeeper																8	50	21	23	12	5						119
Meadow Brown												4	16	20	18	4	15	3									80
Ringlet													1	8	38	51	8	7	4								117
DIFFERENT SPECIES	3	4	5	4	3	3	1	1	1	1	1	2	7	8	8	9	8	10	7	3	4	4	3	4	3	1	20
TOTALS - 2019	12	16	26	11	12	6	5	1	1	1	3	5	31	49	77	103	117	58	43	17	12	5	6	7	6	5	635
TOTALS - 2018	12	16	10	3	4	10	7	7	6	0	8	26	61	70	129	121	43	9	17	19	11	7	4	2	5	0	607
TOTALS - 2017	8	8	0	13	7	1	4	4	3	4	5	23	77	124	205	119	58	48	16	8	9	2	3	0	2	2	753
Hants Flight Periods Alan Thornbury													Transect record within normal Hants flight period										Transect record outwith normal Hants flight period				

It's not considered significant when a species is observed just outside its perceived normal flight period, as local weather conditions can influence the emergence dates. It's also noticeable that no observations were made during a large part of the expected flight period.

Gatekeeper and Ringlet were the highest recorded species, followed by Brimstone.

All of the above observations regarding flight periods are based on Alan Thornbury's Hampshire Flight Chart

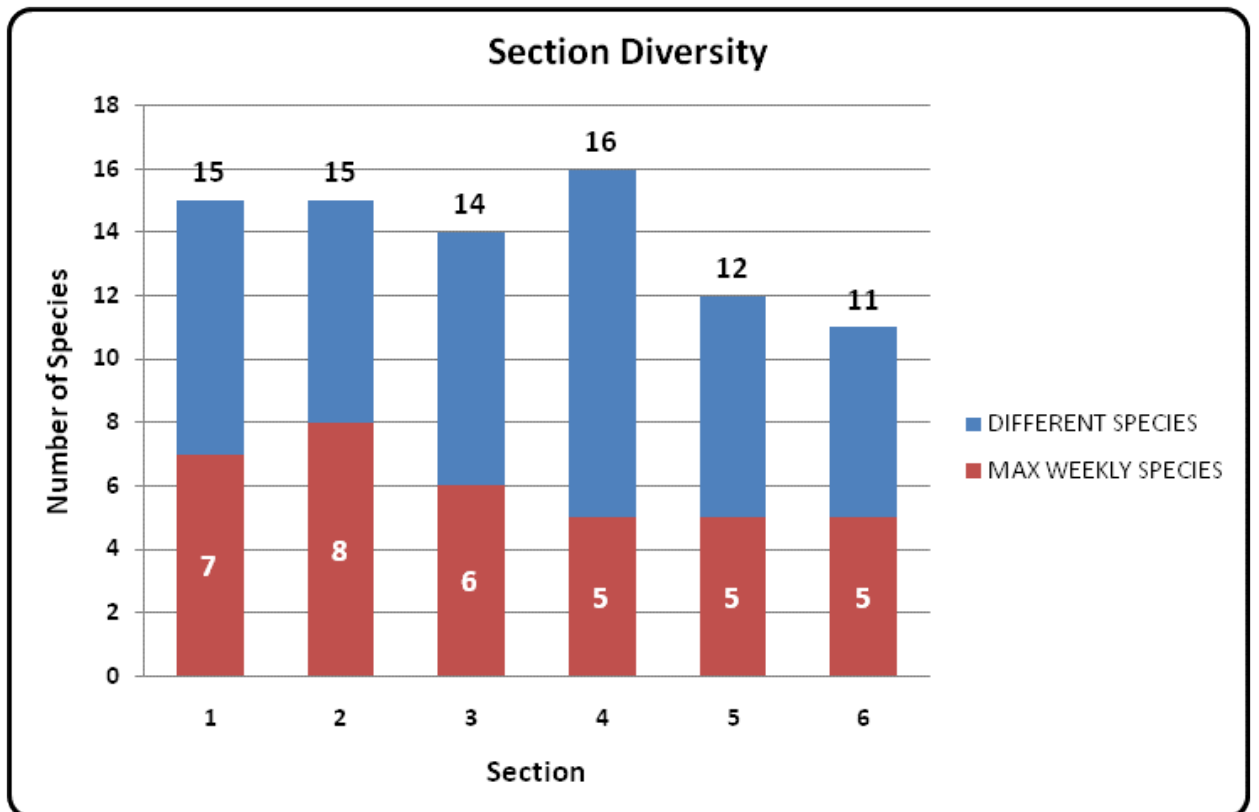
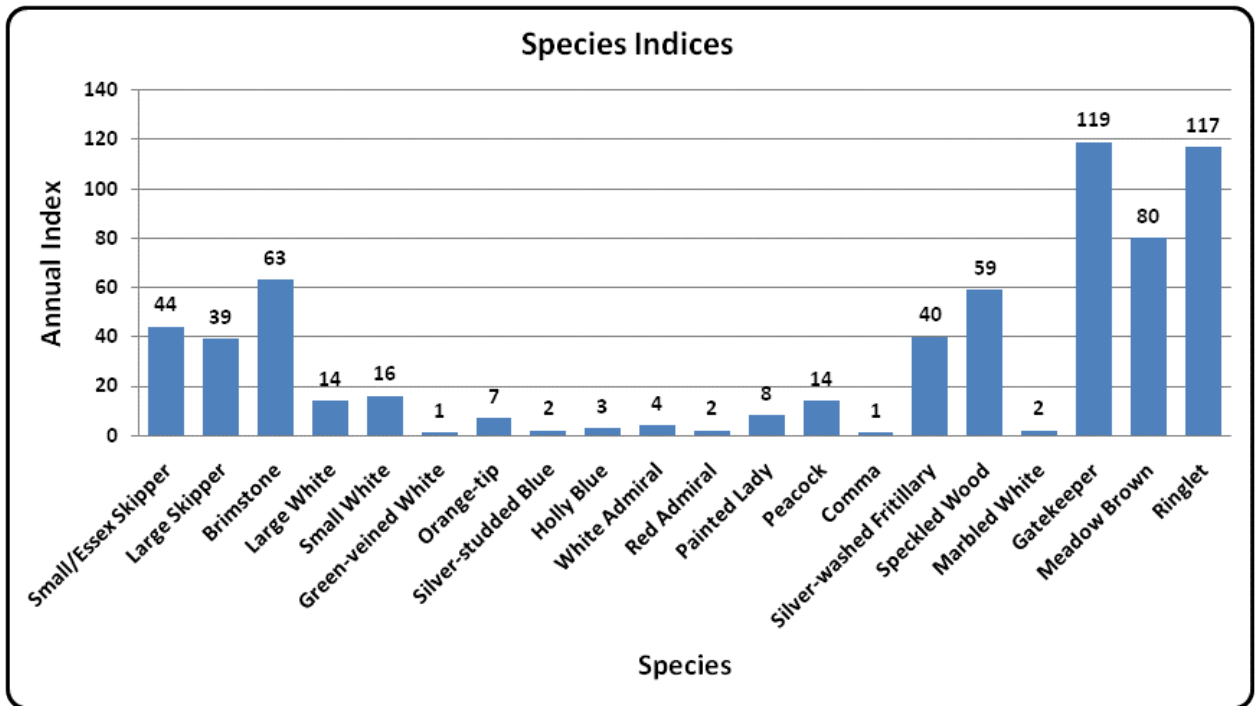
Part 4 - Weekly Indices



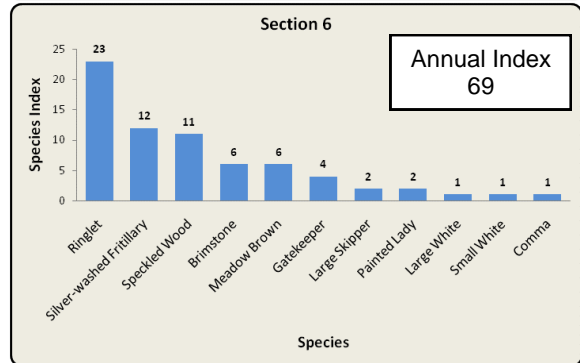
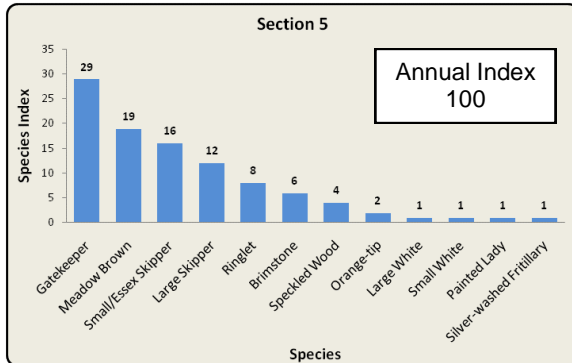
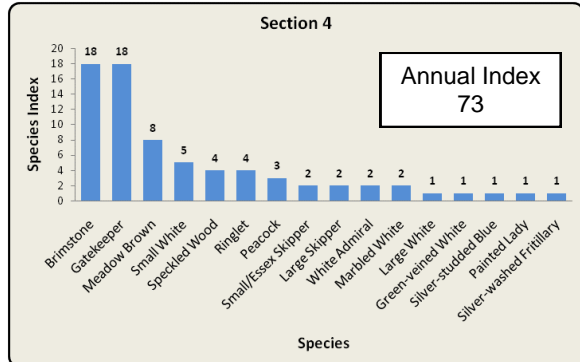
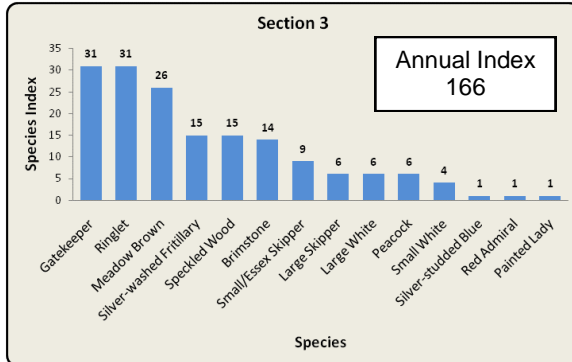
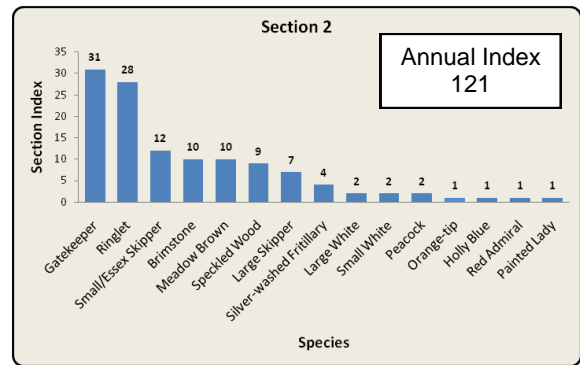
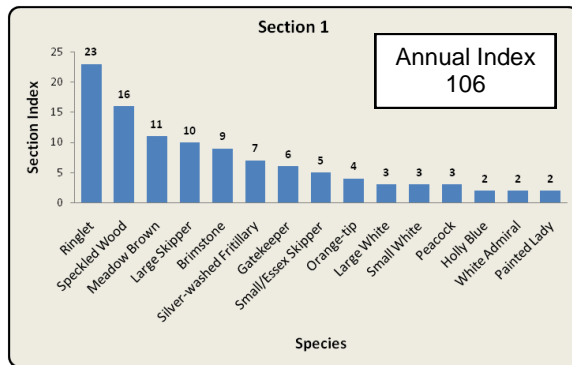
This year the peak abundance was seen in Week 17, two weeks later than the previous two years. This coincided with the emergence of Gatekeeper.

A greater number of butterflies were also recorded during the subsequent weeks compared to 2017 and 2018.

Part 5 - Species Overview

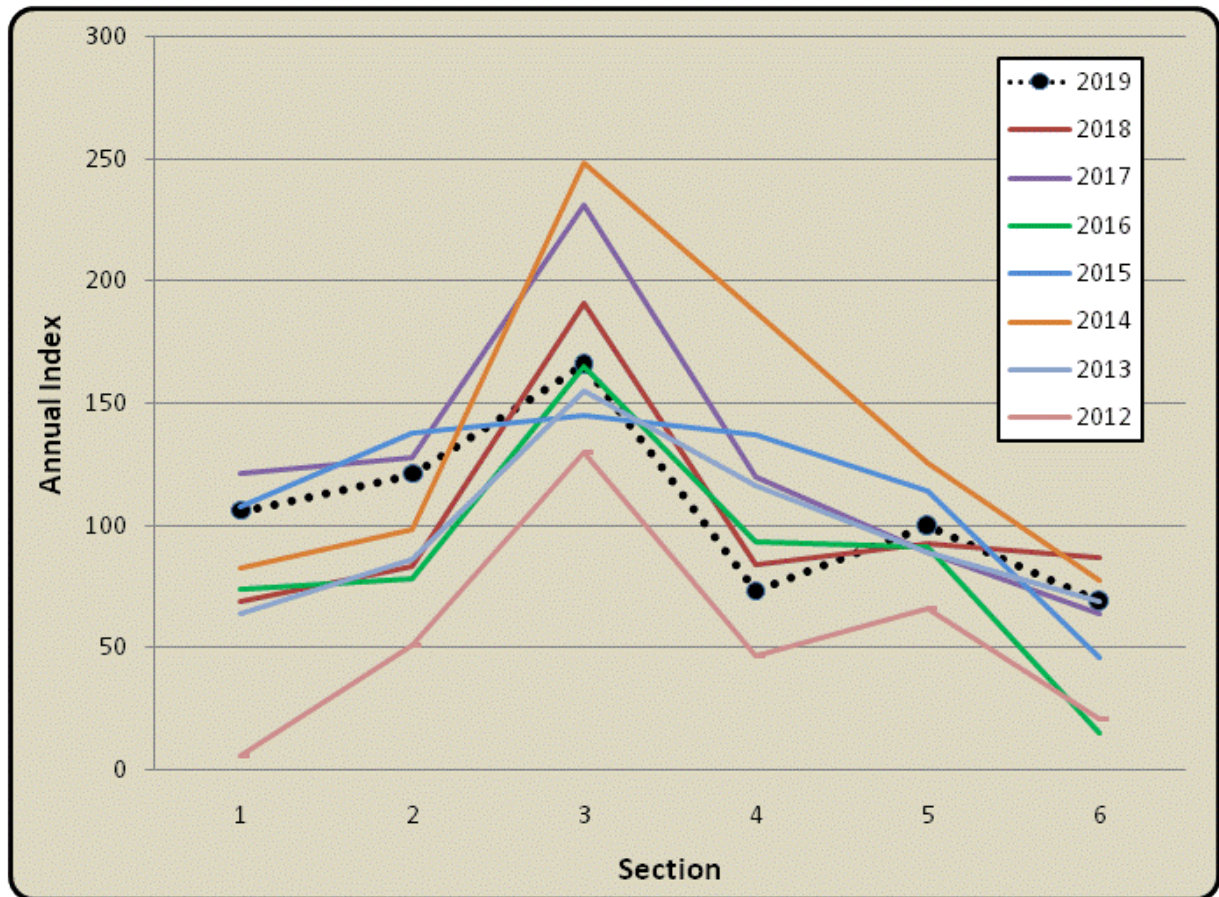


Part 6 - Species per Section



Sections X, Y and Z as shown on the map in Part 1 are not part of the formal transect, but are walked occasionally to give a fuller picture of butterfly status.

Part 7 - Annual Comparison Indices



2019 showed the same distribution pattern along the rides as previous years, but with a reduced discrimination in annual index between Sections 2, 4 & 3. Section 1 is a wide heavily used gravel ride. Section 2 is a wide grass ride which was disturbed by vehicles involved with the installation of a new fence early in the season. Section 3 remains the most prolific with woodland on one side and a cleared area on the other. Section 4 is a grass ride, Section 5 is a shady grass ride and Section 6 is another wide, heavily used, gravel ride.

Annual Species Diversity						
Year	Section					
	1	2	3	4	5	6
2012	6	11	16	14	9	8
2013	13	12	16	15	13	14
2014	13	13	18	16	16	17
2015	12	17	16	16	13	11
2016	13	13	14	14	11	8
2017	15	14	16	13	12	9
2018	11	13	16	14	13	11
2019	15	15	14	16	12	11

Part 8 - Annual Species Variation

Highest species counts/annum highlighted by red shaded box

↓ indicates decrease

↑ indicates increase

= indicates no change

Species	2012	2013	2014	2015	2016	2017	2018	2019	Diff 2018-2019	
Small/Essex Skipper	24	56	67	35	28	18	2	44	+42	↑
Large Skipper	13	5	68	16	24	14	48	39	-9	↓
Brimstone	21	68	81	86	49	37	69	63	-6	↓
Large White	15	49	18	30	11	12	20	14	-6	↓
Small White	3	19	49	13	21	13	39	16	-23	↓
Green-veined White	10	14	20	1	18	6	10	1	-9	↓
Orange-tip	5	4	1	1	0	1	1	7	+6	↑
Green Hairstreak	1	0	0	0	0	0	0	0	0	=
Small Copper	0	2	0	0	4	1	0	0	0	=
Silver-studded Blue	0	0	0	0	0	0	0	2	+2	↑
Common Blue	0	2	6	0	0	0	2	0	-2	↓
Holly Blue	6	3	6	18	9	2	2	3	+1	↑
White Admiral	5	1	6	7	9	27	5	4	-1	↓
Red Admiral	8	1	9	8	4	9	25	2	-23	↓
Painted Lady	0	0	0	1	0	0	2	8	+6	↑
Small Tortoiseshell	0	1	0	0	0	0	0	0	0	=
Peacock	0	6	26	27	5	2	0	14	+14	↑
Comma	1	11	12	4	1	4	4	1	-3	↓
Pearl-bordered Fritillary	8	2	6	4	0	0	5	0	-5	↓
Silver-washed Fritillary	17	38	34	9	27	84	54	40	-14	↓
Speckled Wood	21	36	37	32	14	39	67	59	-8	↓
Marbled White	2	1	3	7	2	0	1	2	+1	↑
Gatekeeper	57	52	108	170	74	145	72	119	+47	↑
Meadow Brown	104	96	86	124	90	197	104	80	-24	↓
Ringlet	88	112	178	95	126	141	77	117	+40	↑
TOTALS	409	579	821	688	516	753	607	635	+28	↑
DIFFERENT SPECIES	19	22	20	20	18	19	19	20	+1	↑

The difference in abundance from 2018 to 2019 has been included for interest, but due to the nature of transect recording, care must be taken when drawing any conclusions. This is especially true when low numbers have been recorded.

The total abundance showed a small (5%) increase over 2018 but still significantly lower than the 2014 peak.

In common with other transects Painted Lady were observed in greater numbers than previous years. Silver-studded Blue were also recorded for the first time.

It was a good year for Orange-tip.

Small/Essex and Large Skipper were recorded in similar numbers this year, compared to last year which was dominated by Large Skipper. As is always the case with these species, identification issues may have affected the numbers recorded.

Ringlet and Gatekeeper showed an increase in abundance compared to a decline in Meadow Brown. A trend that was observed in other transects.

Appendix 1 - Weather

Southern England Weather Oct 2018 - Sept 2019

October 2018 experienced close to average rainfall with a wider than normal variation between max and min temperatures due to the clear skies. November was warmer than average with average rainfall.

December, January and February temperatures were higher than average with cold days at the end of January and the beginning of February. January and February had more sunshine than normal with February being the second warmest on record. December rainfall was close to average with January and February much drier than average.

March and April were warmer than average with May close to the average temperature. Sunshine was slightly higher than average. March was very unsettled and wetter than average with April and May drier.

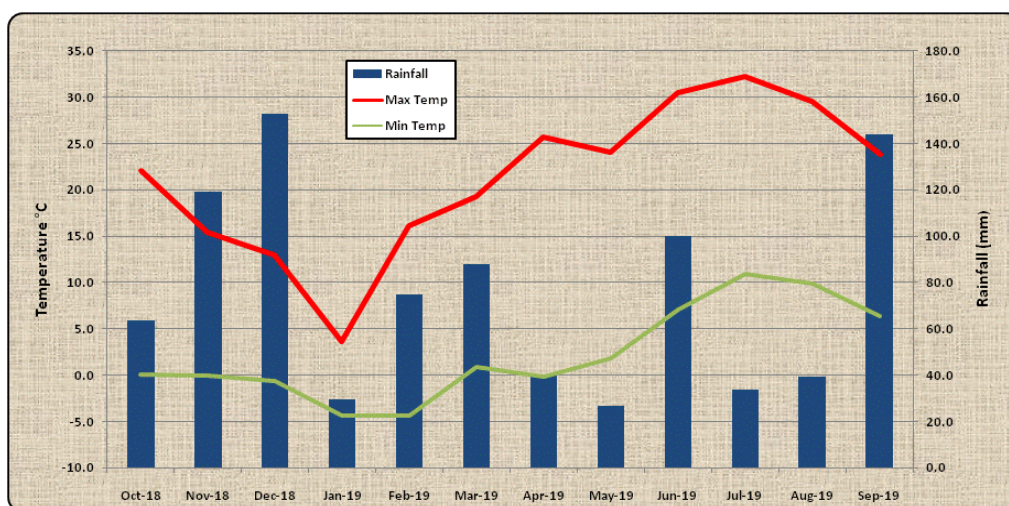
June was cooler and wetter than average, with July more settled and warmer than average. August was again wet but with some long sunny and warm periods. Sunshine levels were lower than average in June but increased through July and August.

September started wet but settled to give a warm and sunny month.

This was the twelfth warmest and seventh wettest summer since 1910.

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

Local Weather - Southampton



<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	S	NE	SE	NE	S	E	NW	SE	SW	SW	E	NE
Wind Force	1	1	1	1	3	1	1	1	4	3	1	1	3
Temperature °C	16	15	22	18	13	16	17	18	22	17	17	21	23
% Sun	100	83	100	100	88	100	100	96	100	97	47	94	100

Week No	14	15	16	17	18	19	20	21	22	23	24	25	26
Wind Direction	NE	SW	NE	SW	SW	W	W	W	SW	NW	NE	SE	SW
Wind Force	1	1	1	1	1	2	1	1	1	1	2	1	2
Temperature °C	21	22	21	23	21	21	19	21	22	18	19	19	18
% Sun	72	100	93	64	62	87	74	84	93	100	100	100	57

Appendix 2 - Photographs



Brimstone – Trevor Bumfrey



Marbled White – Trevor Bumfrey



Painted Lady – Trevor Bumfrey



Ringlet – Trevor Bumfrey



Silver-studded Blue (m) – Trevor Bumfrey



Speckled Wood – Trevor Bumfrey



Keeled Skimmer – Trevor Bumfrey



Bluebells – Trevor Bumfrey



Greater Stitchwort – Trevor Bumfrey