



STUDLAND COMMON TRANSECT REPORT 2019



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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 2019. The transect, which was designed with advice and collaboration of the Milford Conservation Volunteers commenced in 2016.

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

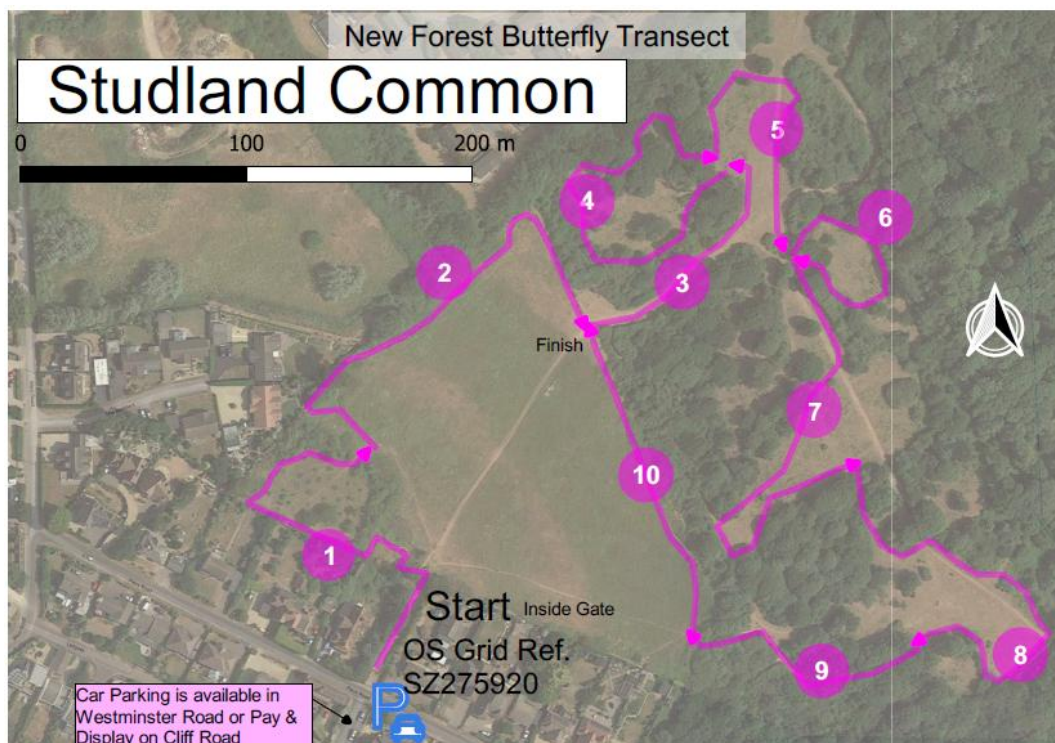
By adopting Butterfly Conservation terminology, the term 'index' is used throughout though, for most purposes, this is synonymous with 'count'.

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 & Supporting Narratives:	Tani Read
UK Weather:	Trevor Bumfrey
Image Manager:	Eric Read
Report Checking:	Jean Annell
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 10-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 were planted in the orchard in 2019.

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. There were no sightings of Purple Hairstreak in the oaks on the edge of the transect, (last reported 2017). Brown Argus were seen in the meadow in 2019, but not recorded on transect, one to watch for in 2020!

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 66% increase in total numbers over last year. The 2019 season has been our highest to date.

Generally, sightings were within the Hampshire flight periods although some flights were reported between broods. Large White appeared two weeks late. Orange-tip and Small Copper appeared one week early. Large White, Small White, Small Copper, Common Blue, Holly Blue, Red Admiral, and Small Heath appeared between brood flight periods. Painted Lady were recorded one week later than the normal flight period. The annual index was 1,395 with 22 different species.

'Browns' were the dominant species making up 68% of the annual index. Small Heath were recorded on transect for the first time.

Meadow Brown 581, Gatekeeper 246, Marbled White 84, Speckled Wood 34, Small Heath 7 and Ringlet 2.

'Whites and Yellows' were 12%, (5% less than 2018).

Large White 94, Small White 57, Brimstone 9, Orange Tip 3 and Green-veined White 1.

'Coppers, Hairstreaks and Blues' were 9%.

Common Blue 53, Small Copper 36, Holly Blue 25 and Green Hairstreak 4.

'Fritillaries, Admirals, and Tortoiseshells' were 6%.

Red Admiral 36, Peacock 32, Comma 10, Painted Lady 9(mass migration), Small Tortoiseshell 1 and Silver-washed Fritillary 1.(Of note: Painted Lady previous mass migration occurred in 2009.)

'Skippers' were 5%.

Small/Essex Skipper 70.

There continues to be good diversity in all sections. Section six had the lowest diversity of 8 and is a decrease of two from 2018. The small increase in the number of different species from 21 to 22 was due to no record of Large Skipper, Silver-washed Fritillary reappearing, and Small Heath, a new species for the Transect.

Part 3 - Flight Periods

2019 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												3	9	17	30	11											70
Brimstone	1	2	2				1	1										1				1					9
Large White					2							1	1		6	2	2			21	16	22	1	14	5	1	94
Small White				1			1							1	4	1		1	5		11	8	13	8	1	2	57
Green-veined White					1																						1
Orange-tip		2			1																						3
Green Hairstreak						3			1																		4
Small Copper			1	1	4		1	3									2		2	3	6	1	6	4	2	36	
Common Blue								2					4		2	6	17	7	4	5	1	2		3		53	
Holly Blue			1	3	3	3					1					5	2	4		1	1	1				25	
Red Admiral	1				1						1		1		3		2	1	2	1	2	1	2	14	3	4	36
Painted Lady													1							3	3			1		1	9
Small Tortoiseshell	1																										1
Peacock	9	5	2	1	6		3		2						3		1										32
Comma	6	1											1		1											1	10
Silver-washed Fritillary														1													1
Speckled Wood			2	2			2	2	2								1	2		2		1	3	7	8	34	
Marbled White												2	8	39	30	4	1										84
Gatekeeper													3	12	76	77	51	27									246
Meadow Brown									5	1	37	70	121	50	64	45	57	42	28	24	24	11	2			581	
Small Heath																5	1				1						7
Ringlet															2												2
DIFFERENT SPECIES	5	4	4	4	7	3	4	3	4	3	1	5	7	8	8	9	7	12	7	6	10	7	7	8	5	7	22
TOTALS - 2019	18	10	7	7	15	8	8	4	9	8	1	44	94	184	131	174	152	128	85	61	63	64	30	51	20	19	1395
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
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, most of the sightings outside the flight periods were between broods.

Small/Essex Skipper had a very short flight period of five weeks.

Both overwintering and second brood Brimstone were recorded. Large White and Small White appeared two weeks late. Both were also recorded one week later than the flight period. Orange-tip were recorded one week early.

Small Copper were recorded one week early and between the second and third brood. Common Blue second brood were two weeks early and finished one week early. Holly Blue had short flight periods of four and seven weeks with a single sighting between broods.

Red Admirals were present throughout. They were seen in both overwintering and an early annual brood. The species increased 200% from 2018.

Painted Lady was recorded from mid-season through to the end of the season. Peacock and Comma were seen in both the overwintering and annual broods. A single Small Tortoiseshell and a single Silver-washed Fritillary appeared within the normal flight period.

Speckled Wood slumped mid-season over a seven-week period. Numbers were stronger at the end of the season, but overall poor.

Marbled White had a short flight period of only six weeks but numbers were strong improving 300% on 2018 which was a poor season.

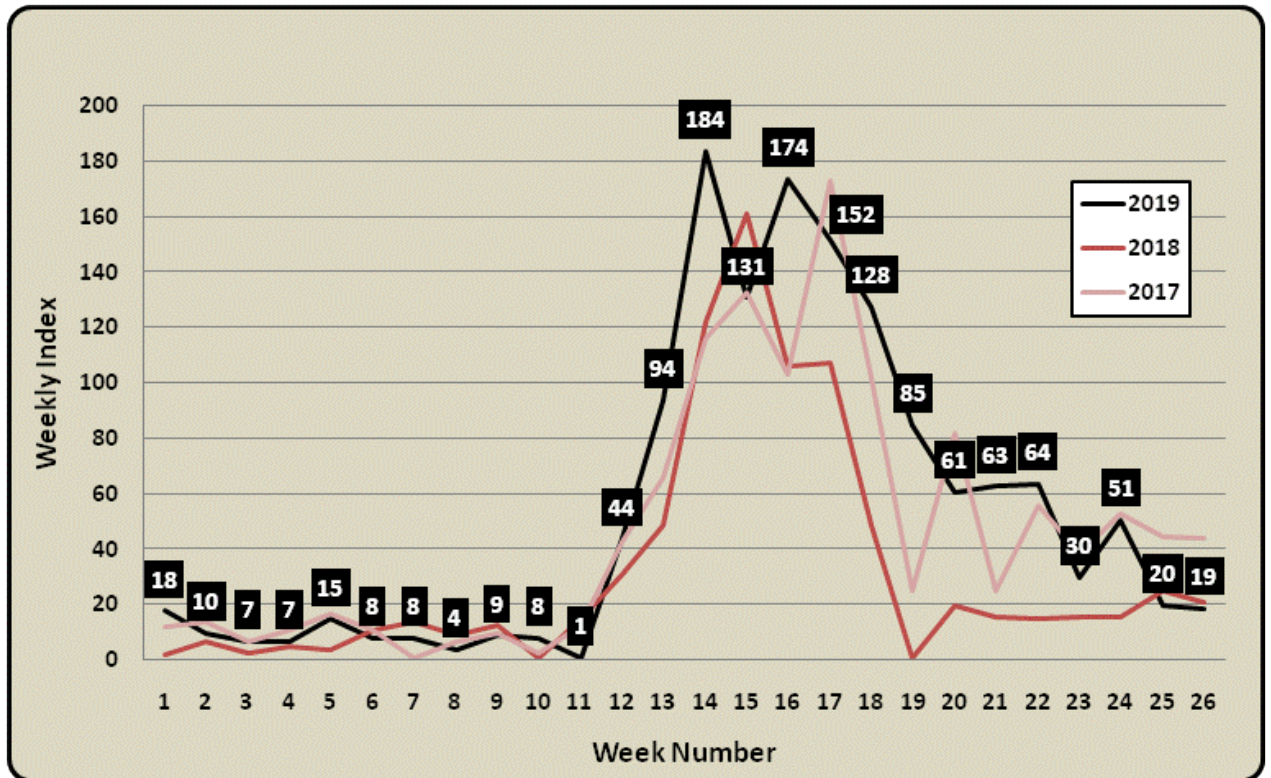
Gatekeeper had a short flight period finishing three weeks early. Meadow Brown were present throughout the normal flight period.

Small Heath second brood appeared three weeks early and only a single sighting during the second brood flight period.

Ringlet were sighted in one week only.

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



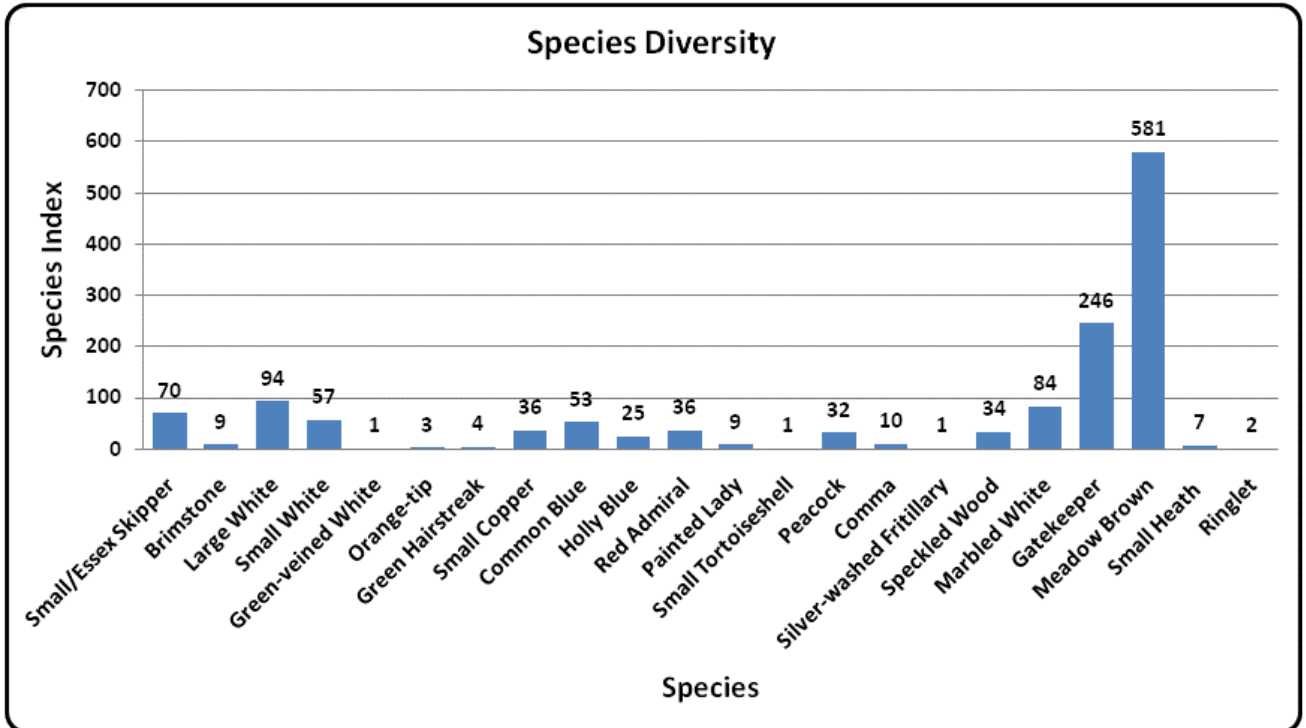
Weeks one, two and five had good numbers, although numbers were fairly static through the first 11 weeks then started to rise. Consistent with previous years.

Peak numbers occurred early July in Week 14, due to Gatekeeper and Meadow Brown both peaking in that week, plus strong numbers of Small/Essex Skipper. Peak numbers have occurred earlier year on year, 2016 Week 18, 2017 Week 17 and 2018 Week 15.

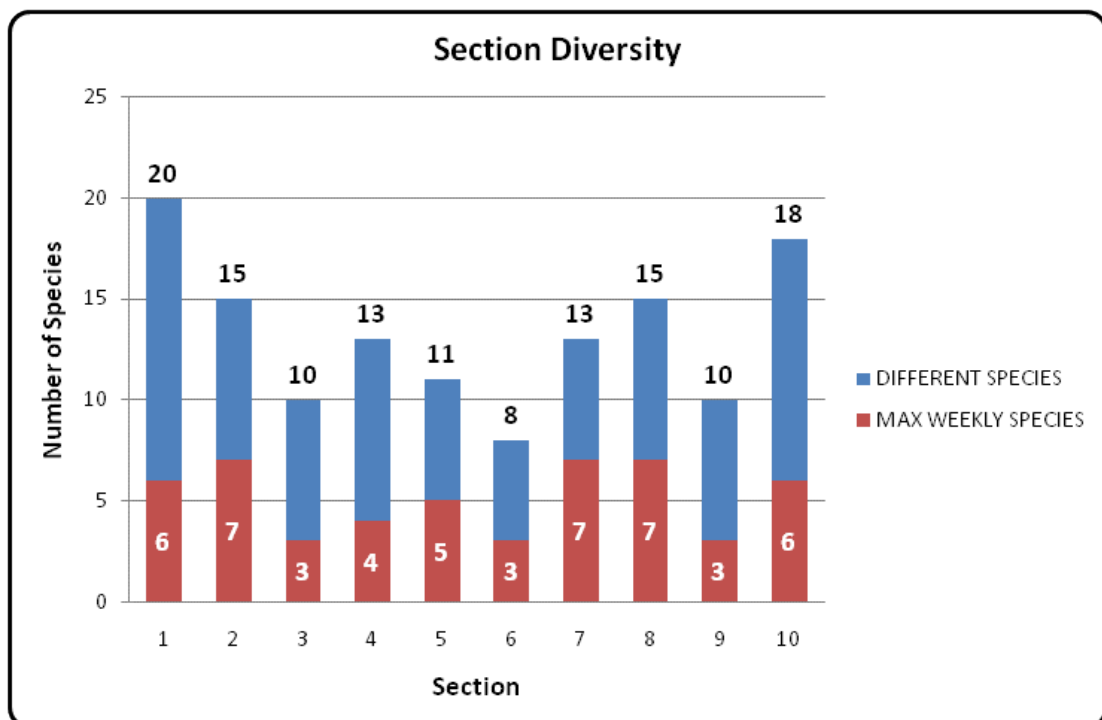
The maximum species diversity occurred in Week 18, four weeks after peak numbers.

There was a dip in numbers Week 15 and a second peak in Week 16. Numbers steadily declined to Week 20 then levelled out for three weeks before declining to the end of the season with a minor peak in Week 24.

Part 5 - Species Overview

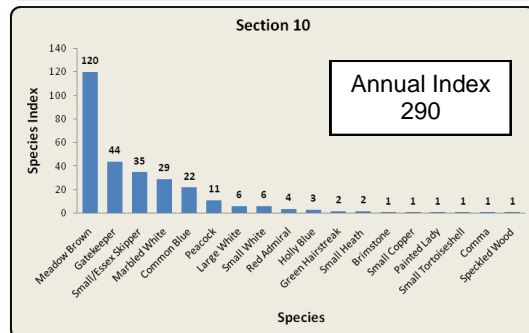
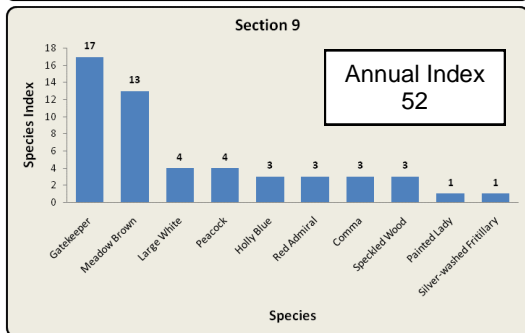
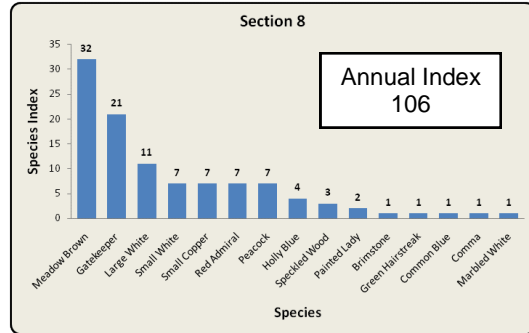
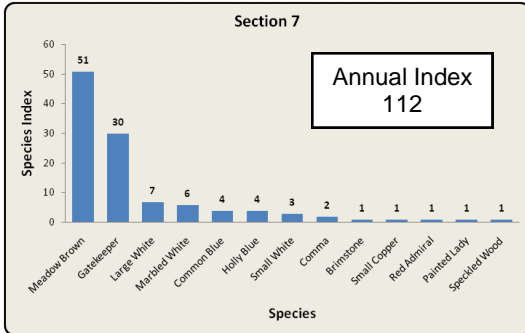
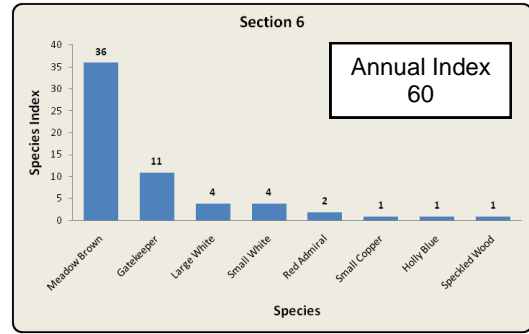
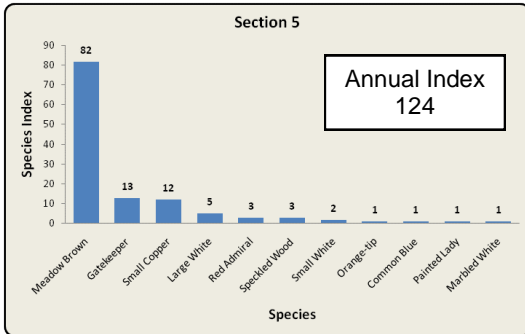
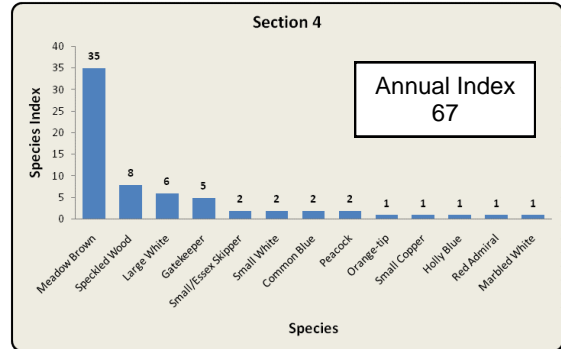
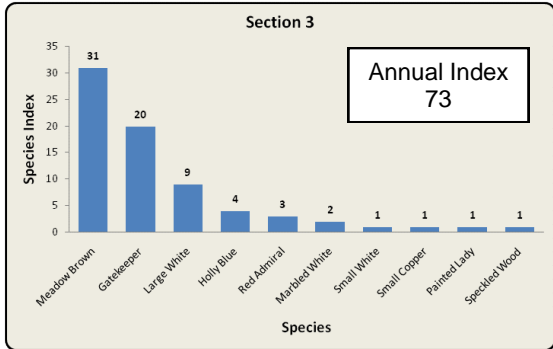
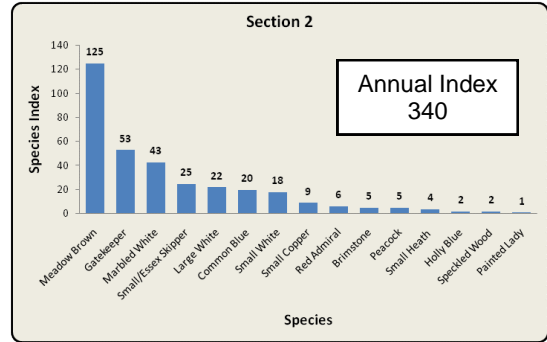
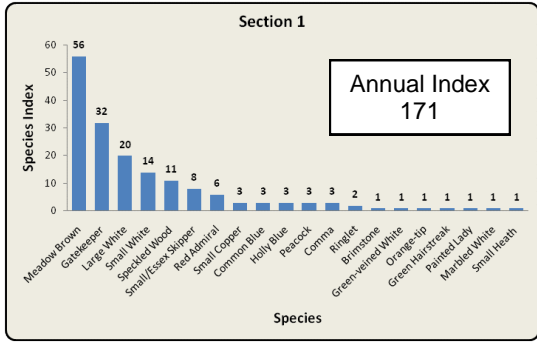


There were 22 different species in 2019, up one from 2018, due to no Large Skipper sightings, a single Silver-washed Fritillary appearing again and Small Heath, a new species for the transect. The wider countryside species dominate especially Meadow Brown and Gatekeeper.



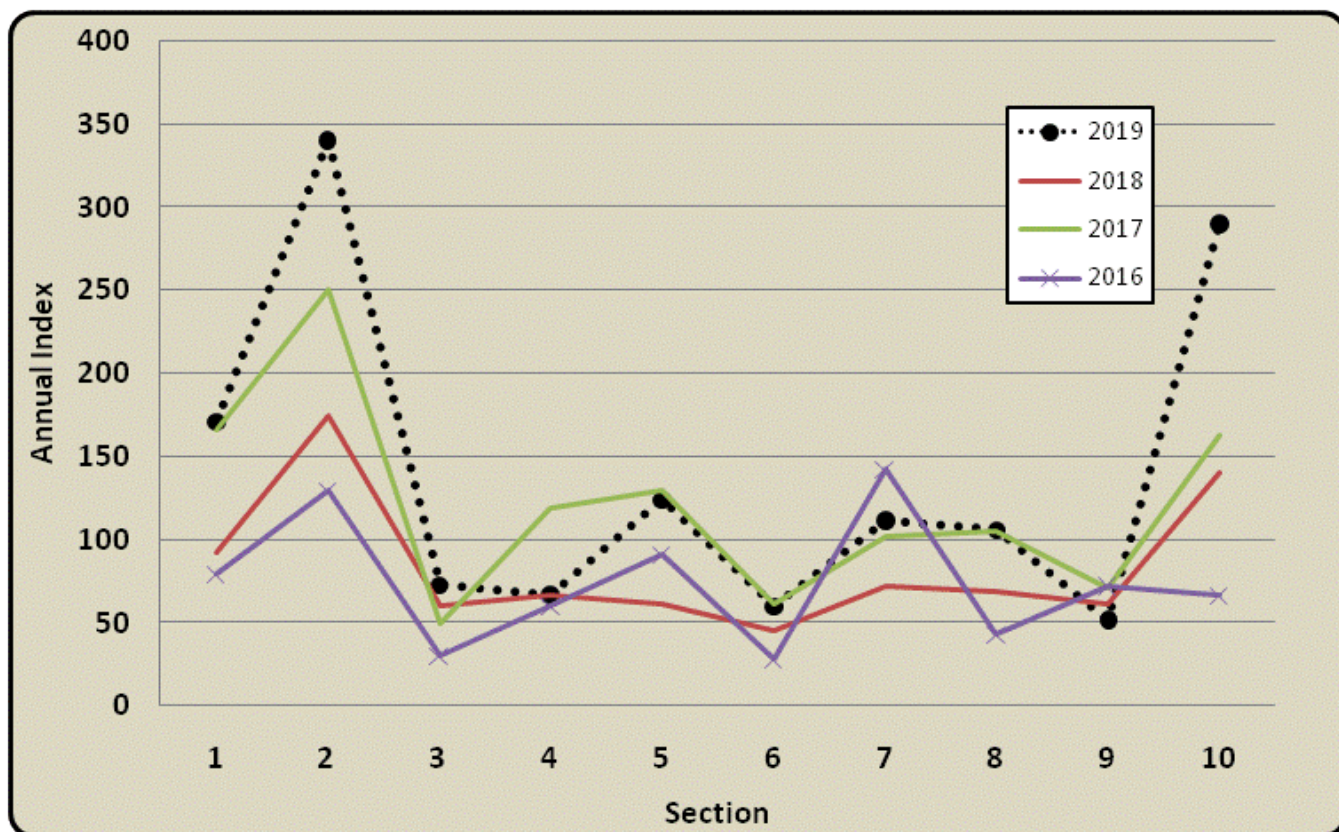
Diversity remains good in all sections. Five sections had their highest diversity since records began in 2016. Sections 6 and 9 were down from 2018. Maximum weekly species in Section 7 improved from four to seven, nearly double.

Part 6 - Species per Section



Highest Section Index for 2019 was in Section 2. Meadow Brown was the dominant species in all but Section 9 where Gatekeeper was dominant.

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
2019	20	15	10	13	11	8	13	15	10	18

Indices were highest since records began in 2016. Sections 2 and 10 show the highest numbers, dominated by Meadow Brown. Both sections run along the meadow. Section 1 and 10 had significant increases in species diversity.

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

Section1 – Green-veined White, Orange-tip, Green Hairstreak, Small Heath (new to the transect), Ringlet

Section2 – Painted Lady, Small Heath

Section 3 – Painted Lady

Section 4 – Orange-tip, Small Copper

Section 5 – Orange-tip

Section 7 – Brimstone, Painted Lady

Section 8 – Brimstone, Painted Lady

Section 9 – Painted Lady, Silver-washed Fritillary

Section 10 – Small Tortoiseshell, Small Heath

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	2019	Diff 2018-2019	
Essex Skipper	0	1	0	0	0	=
Small/Essex Skipper	22	31	30	70	+40	↑
Small & Essex Skipper Total	22	32	30	70	+40	↑
Large Skipper	4	0	2	0	-2	↓
Clouded Yellow	1	0	0	0	0	=
Brimstone	3	2	4	9	+5	↑
Large White	60	48	49	94	+45	↑
Small White	29	57	86	57	-29	↓
Green-veined White	1	1	1	1	0	=
Orange-tip	1	1	1	3	+2	↑
Green Hairstreak	2	2	2	4	+2	↑
Small Copper	14	30	21	36	+15	↑
Common Blue	5	35	25	53	+28	↑
Holly Blue	7	25	12	25	+13	↑
Red Admiral	37	80	12	36	+24	↑
Painted Lady	1	2	1	9	+8	↑
Small Tortoiseshell	1	1	1	1	0	=
Peacock	10	52	11	32	+21	↑
Comma	8	53	16	10	-6	↓
Silver-washed Fritillary	1	0	0	1	+1	↑
Speckled Wood	42	96	53	34	-19	↓
Marbled White	104	63	21	84	+63	↑
Gatekeeper	160	235	141	246	+105	↑
Meadow Brown	227	396	347	581	+234	↑
Small Heath	0	0	0	7	+7	↑
Ringlet	0	0	3	2	-1	↓
TOTALS	740	1211	839	1395	+556	↑
DIFFERENT SPECIES	22	19	21	22	+1	↑

In line with the highest annual indices to date most species increased in numbers compared to 2018. Species with highest indices since records began were Small/Essex Skipper 133%, Brimstone 125%, Large White 92%, Small Copper 71%, Common Blue 112%, Holly Blue 108%, Painted Lady 800% (mass migration), Gatekeeper 74%, Meadow Brown 67% and Small Heath new to the transect. Other species with significant increases from 2018 were Red Admiral 200%, Peacock 191% and Marbled White 300%.

Three species had significant declines compared to 2018, Small White 34%, Comma 38% and Speckled Wood 36%.

There were six species which had less than five in total numbers. Green-veined White, Orange-tip, Green Hairstreak, Small Tortoiseshell, Silver-washed Fritillary and Ringlet. Three species which had zero counts (present in previous years) were Essex Skipper (2017), Large Skipper (2018), and Clouded Yellow (2016).

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.

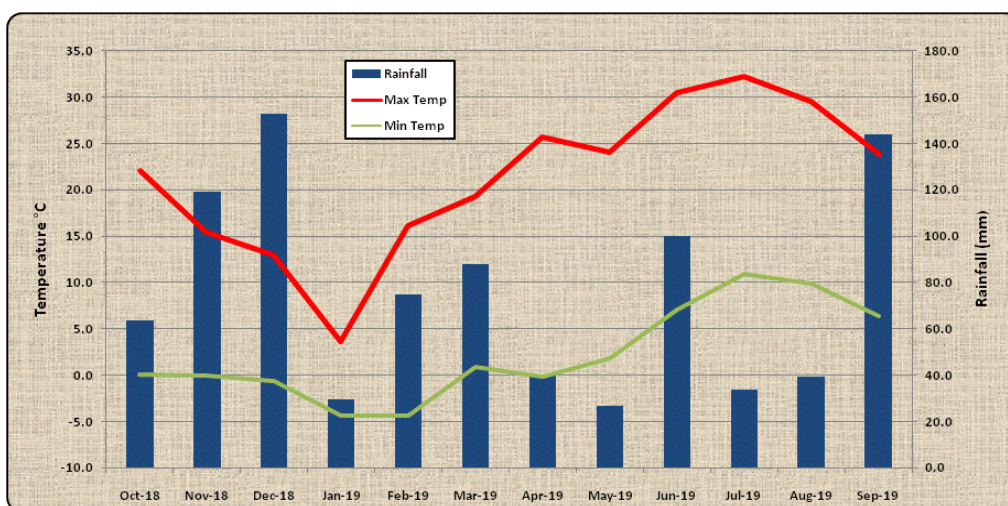
June was cooler and wetter than average, with July more settled and warmer than average. August was again wet but with some long sunny and warm periods. Sunshine levels were lower than average in June but increased through July and August.

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	SE	SW	S	E	SE	E	SW	S	SW	SW	SW	NE
Wind Force	3	1	3	1	2	3	4	3	2	3	4	3	4
Temperature °C	15	14	20	20	14	17	16	16	23	17	16	16	23
% Sun	100	100	100	100	97	69	100	100	100	91	82	100	100

Week No	14	15	16	17	18	19	20	21	22	23	24	25	26
Wind Direction	NE	SW	S	E	S	SW	E	SE	NE	SW	SE	NE	SW
Wind Force	2	3	3	2	2	4	4	1	1	3	1	2	4
Temperature °C	22	22	20	26	22	22	20	23	26	19	21	20	18
% Sun	85	100	100	100	100	100	100	100	28	95	100	100	52

Appendix 2 - Photographs



Comma – Eric Read



Green Hairstreak – Helen Duckett



Small Skipper – Ron Taylor



Common Blue – Trevor Bumfrey



Marbled White (f) – Ron Taylor



Silver-washed Fritillary (f) – Ron Taylor



Meadow Brown (f) – Eric Read



Small White (m) – Trevor Bumfrey



Small Copper – Ron Taylor



Small Tortoiseshell - Helen Duckett