



**STUDLAND COMMON
TRANSECT REPORT
2021**



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Contents:

Section	Title	Page
1	Introduction	2
2	Transect Background and Season Highlights	3
3	Flight Periods	4
4	Weekly Indices	5
5	Species per Section	6
6	Annual Section Comparison Indices	7
7	Annual Species Variation	8
8	Moths recorded on Transect	9

Acknowledgements

Thanks go to the transect team, listed above, for their dedication in undertaking walks and identifying and recording the butterflies and moths seen throughout this year's monitoring period.

Many thanks also to those listed below for allowing walks to take place and for their support in producing this report.

Milford Conservation Volunteers: Keith Metcalf
Transect History: John French
Report Preparation: Bob Taylor/John French
Report Narrative: Tani Read
Image manager: Trevor Bumfrey
Moths Summary: Jacky Adams
Transect Map: Neil Smith
UKBMS Entry: Tani Read
Photography Courtesy of: Trevor Bumfrey (TB), Ron Taylor (RT) & Eric Read (ER)

Section 1 - Introduction

This report summarises the findings of the weekly butterfly transects undertaken at Studland Common in 2021, providing comparison with previous years' walks where possible. It is designed to provide feedback to the landowner and land managers who have allowed this transect walk to take place and to the volunteers who have carried it out. The transect, which was designed with advice and collaboration of the Milford Conservation Volunteers commenced in 2016.

Monitoring walks have been carried out using the Fixed-route (Pollard Walk) transect methodology as promoted through the United Kingdom Butterfly Monitoring Scheme (UKBMS). This involves walking a fixed route each week during the recording season which runs for 26 weeks from 1st April to 30th September, recording all butterflies within a 5m cube ahead of the walker. This produces an index for the numbers of each butterfly species seen, which may also be referred to in the report by various terms, such as 'count' or 'record'. Adopting this methodology means that it is possible to make a meaningful comparison of species indices and, over time, identify trends in their abundance. A more detailed analysis, together with the raw data, is available to Group Members and Landowners on request.

Transect walkers are also encouraged to record any moths seen on transect that they are able to identify in the field, in the same way as they do for butterflies. They may also record any other sightings of note which can be entered into UKBMS and are passed to the relevant conservation body.

2021 Weather

In summary 2021 was cool and changeable and cloudy. A poor spring and early summer certainly affected the later butterfly emergence and numbers.

After a warm spell in late March, April was a dry, sunny but a cold month, the frostiest on record. May was very changeable and very wet in the south, the wettest in the last 30 years and temperatures rarely reached 17c, making the timing of walks difficult. Apart from a warm and sunny spell at the beginning. June started cool and changeable and then turned warm and humid with numerous periods of rain nearly matching the May rainfall. July was also cool, changeable and cloudy with a few periods of sunny spells in the middle of the month and unusually for 2021 a very hot end. The heat wave did not last and the first half of August was mostly rather unsettled, with temperatures suppressed by day, and with regular falls of rain, It became much drier from mid-month, with quiet settled weather but largely unremarkable temperatures and dull skies. September was drier and more settled and quite warm before turning wet and chilly for the last four days of the month.

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



The orchard has been restocked and fenced. (ER)



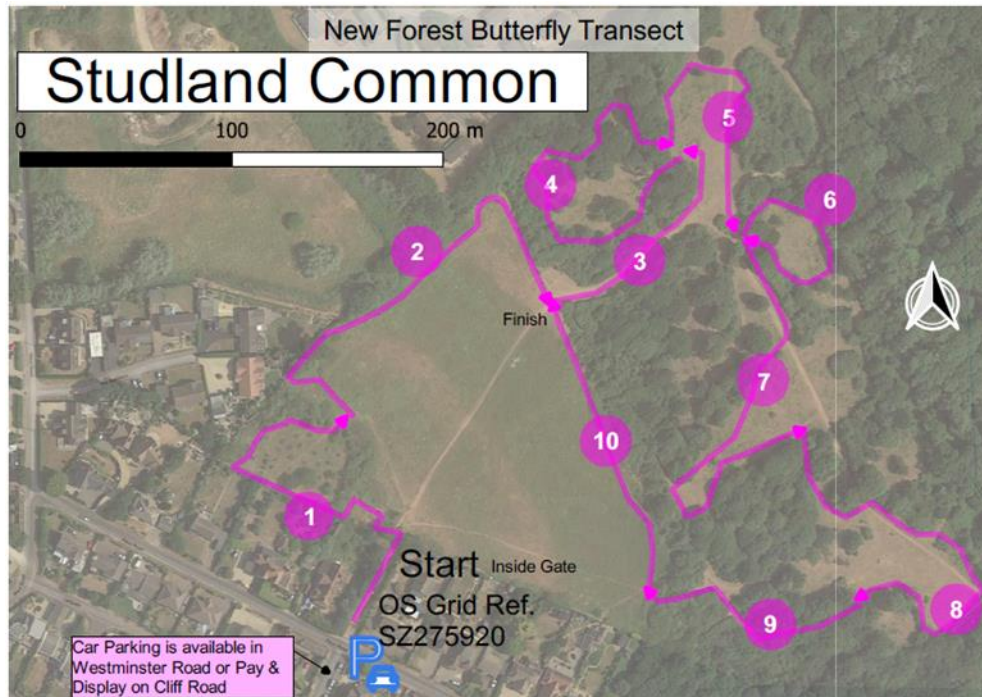
Section 9 (ER)

Section 2 – Transect Background and Season Highlights

Transect Description

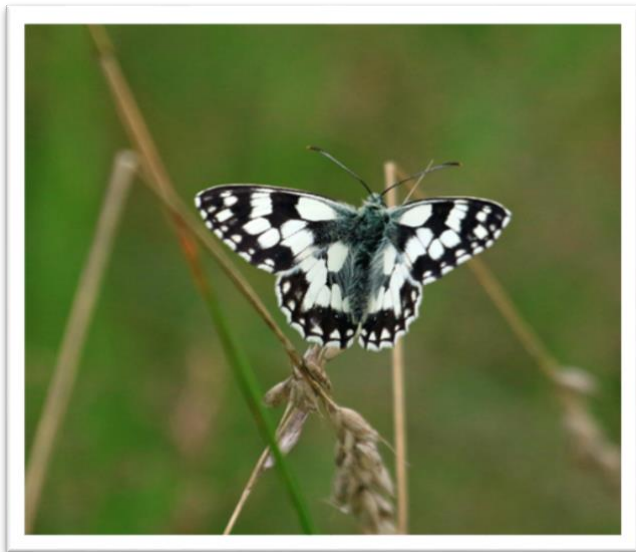
Studland Common Nature Reserve located in Milford On Sea is a designated Site of Importance for Nature Conservation. There are several habitats within this 6.92-hectare site, including meadow, orchard, scrub, woodland and a stream. The transect has been subject to a 10-year scrub management and grassland restoration project aiming for a 50/50 mix of scrub and flower-rich grassland from a 70/30 mix. Natural England funded the project for the Parish Council with the guidance of the New Forest Land Advice Service and Milford Conservation Volunteers. Restoration has been carried out under the Higher Level Stewardship Agreement.

Transect Route



2021 Highlights

- Annual count was the highest since recording began in 2016.
- Annual species diversity was 23 (a new high). 25 species have been recorded since 2016.
- Scrub management and grassland restoration continues and this has had a positive impact on the butterflies of Studland Common. Thanks to MCV and partners for their hard work.
- Valid records were submitted for the entire season with no zero counts despite unsettled, cool and wet weather. Many thanks to the transect team for this achievement!
- Brown Argus was recorded for the first time.
- Significant increase in annual index for Common Blue and Marbled White.
- Small Copper and Holly Blue numbers dropped significantly.



Marbled White (TB)



Meadow Brown (RT)

Section 3 - Flight Periods

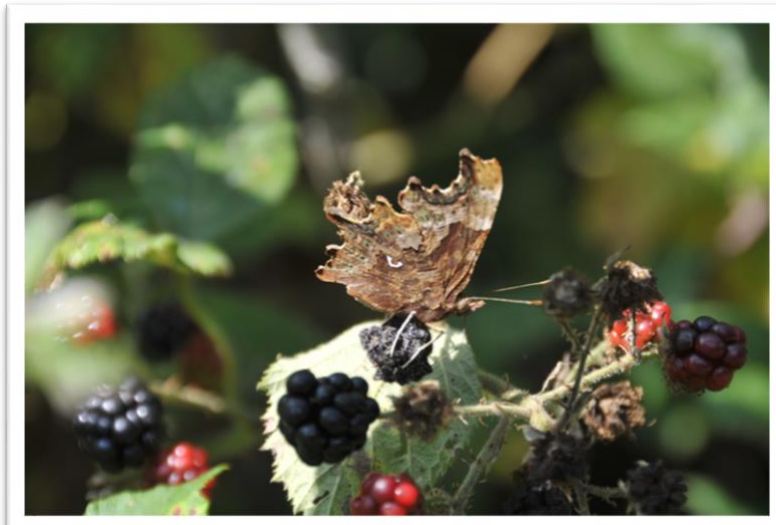
2021		Weekly Records																										TOTAL	Weeks Recorded
Week		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26		
Sun (%)		100	100	100	100	99	100	100	76	100	100	100	95	99	100	100	7	100	80	100	6	67	70	100	32	100	100		
Temp (°C)		14	13	13	13	13	13	14	13	19	19	23	19	18	20	22	22	25	20	19	19	21	20	21	21	21	21		
Small/Essex Skipper															4	27	17	50	1										
Large Skipper															3	3		2											
Orange-tip				3			1		3																				
Large White									1						9	2	7	15	10		14	20	14	9	8				
Small White		1				3									6	2	5	5	7	1	12	11	19	9	2	7			
Green-veined White																						1							
Brimstone		1				1	1	1											1						1				
Speckled Wood				1	1	1	1			1	8	3	1	2					4	2	10	3	13	11	6	7	5		
Small Heath													1				2												
Meadow Brown										1	13	28	53	71	151	56	160	79	63	38	54	39	29	13	13	8			
Gatekeeper															5	1	72	76	39	12	12	1	1	1					
Marbled White													2	13	90	53	39	3											
Silver-washed Fritillary															2														
Red Admiral											1		4		5	1	4	10	8	3	2	1	2	5	5	1			
Painted Lady											1						1		3		1			1					
Peacock		3	1	2		1		1	2								1		1					1					
Small Tortoiseshell											1																		
Comma															2	4	2	2	3						4	5			
Small Copper							1		1	1							1		1	2	1	2			3	2			
Green Hairstreak										1	1	1	2																
Holly Blue							1													2			3						
Brown Argus										1	1									1				1					
Common Blue										1	4	8	2	3		3	2	22	21	23	7	16	3	2	4	1	2		
TOTAL		2	3	2	6	2	6	4	1	9	17	28	32	67	88	303	143	364	218	164	73	115	94	79	50	43	30		
Weekly Species		2	1	2	3	2	4	4	1	6	7	7	4	7	3	11	11	12	11	14	7	9	10	8	10	8	7		
Week		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		
		Normal flight Period †					Inside Normal Peak Flight Period					Outside Normal Peak flight period					Outside Normal Flight Period												

† Normal Flight Period is derived from actual New Forest sightings from 2011 to 2018 and Hants Flight Periods by Alan Thornbury

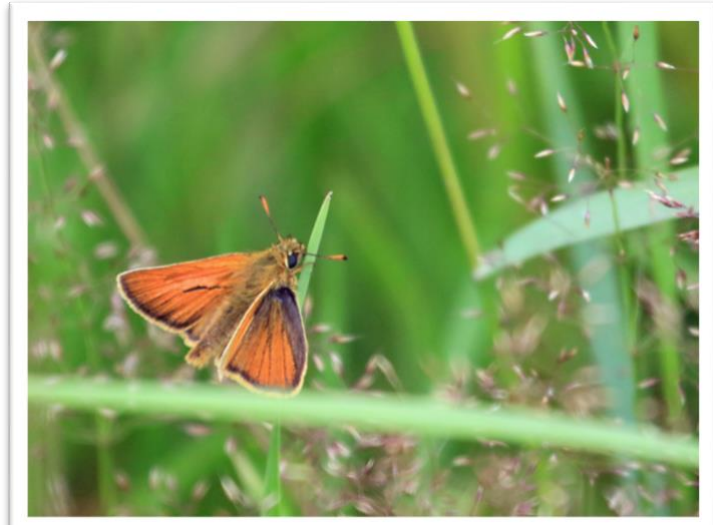
FAMILIES
Hesperiidae
Pieridae
Nymphalidae 'Browns'
Nymphalidae 'Aristocrats'
Lycaenidae

Flight periods are based on New Forest Transect Group historic data supplemented by Alan Thornbury's Hampshire Flight Chart.

Most species emerged later than the normal flight period by several weeks. Brown Argus showing between broods was probably due to emerging late as none were recorded in the first brood flight period.

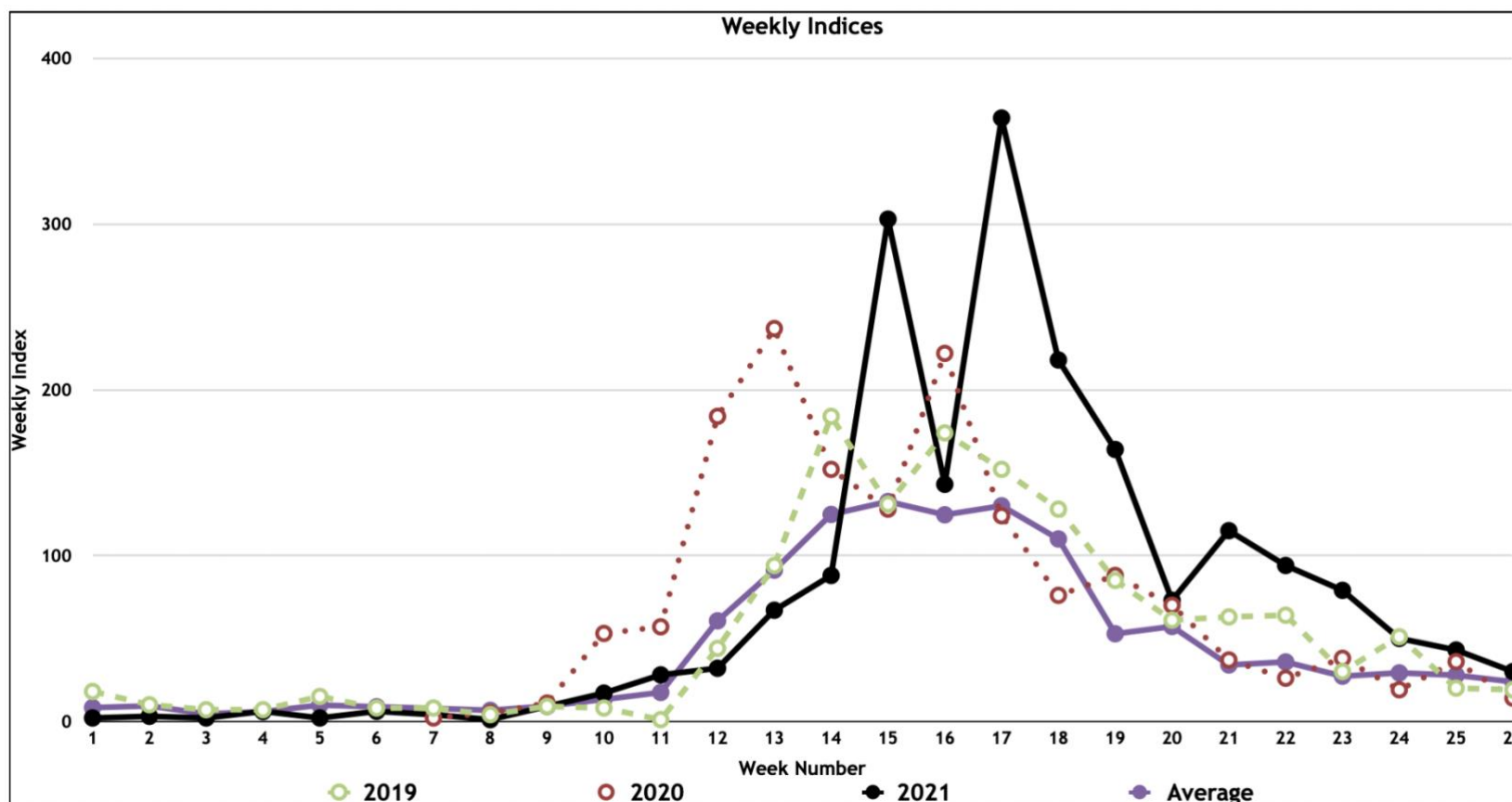


Comma (TB)



Small/Essex Skipper (RT)

Section 4 - Weekly Indices

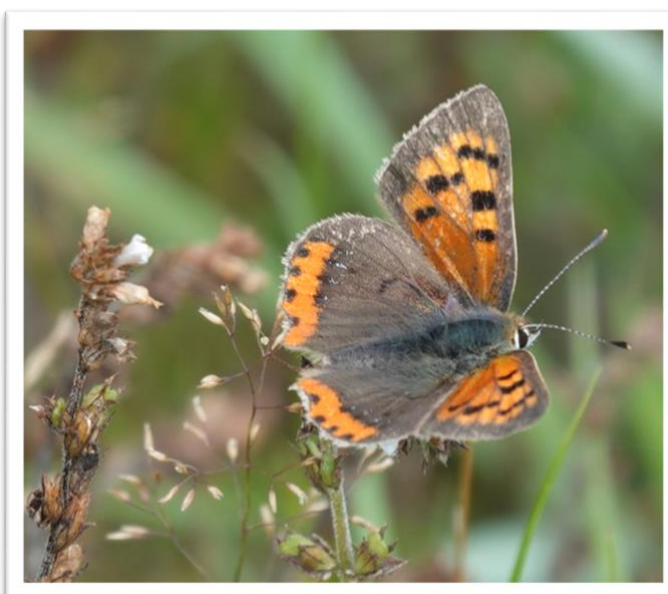


Weekly indices were consistent with prior year trends, albeit two weeks later. The second peak, unlike recent years, was higher. Marbled White peaked in Week 15 alongside very strong numbers of Meadow Brown. The highest peak in Week 17 was due to Small/Essex Skipper and Meadow Brown peaking alongside high numbers of Gatekeeper and good numbers of Marbled White.

Summary of Transect Indices by Week																										Highest Index	Totals	
Week	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		
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
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	1,211	
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	
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	1,395	
2020							2	5	11	53	57	184	237	152	128	222	124	76	88	70	37	26	38	19	36	14	1,579	
2021	2	3	2	6	2	6	4	1	9	17	28	32	67	88	303	143	364	218	164	73	115	94	79	50	43	30	1,943	
Average	8	9	5	6	10	9	8	7	9	13	17	61	91	125	133	125	130	110	53	57	34	36	27	29	28	24	1,153	



Small White (TB)



Small Copper (RT)

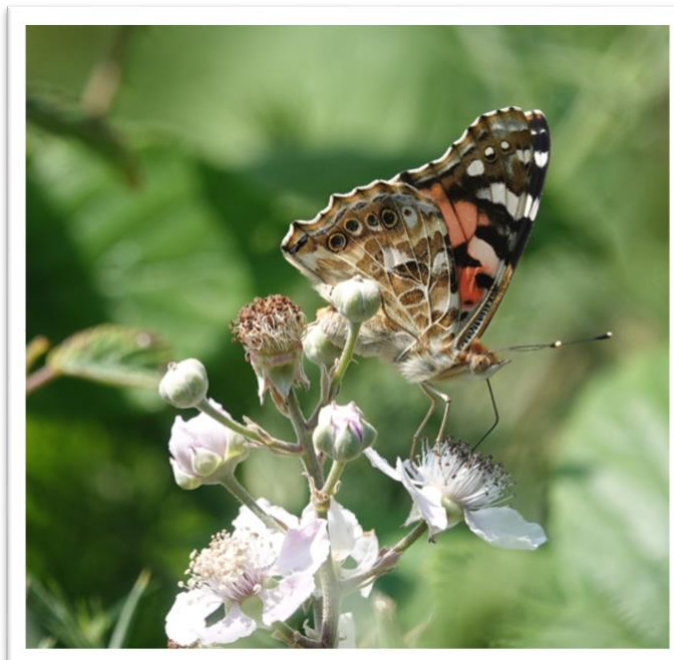
Section 5 - Species per Section

Species↓	Section→	S1	S2	S3	S4	S5	S6	S7	S8	S9	S10	Total	No. Sections
Small/Essex Skipper		12	32	4	3	14	3	14	3		14	99	9
Large Skipper		3	2		1			1	1			8	5
Orange-tip			3			1		2	1			7	4
Large White		35	23	3	4	10	7	7	13	1	6	109	10
Small White		26	20	5	6	10	3	2	9	2	7	90	10
Green-veined White				1								1	1
Brimstone			1	2		2	1					6	4
Speckled Wood		8	2	5	34	3	4	3	14	6	1	80	10
Small Heath									3			3	1
Meadow Brown		37	129	46	91	88	70	124	133	45	106	869	10
Gatekeeper		31	16	12	24	15	17	35	29	14	27	220	10
Marbled White		3	44	11	6	35	16	51	15	3	16	200	10
Silver-washed Fritillary						1			1			2	2
Red Admiral		25	5		6	1	10	3	2			52	7
Painted Lady		6								1		7	2
Peacock		3	1						1	1	7	13	5
Small Tortoiseshell			1									1	1
Comma		3	3	2	9	1	1	2	1			22	8
Small Copper			6	1		2	1	1	1	1	2	15	8
Green Hairstreak							1	3	1			5	3
Holly Blue		2		1		3						6	3
Brown Argus			3	1								4	2
Common Blue		4	53	2	1	18	6	13	11		16	124	9
Total		198	344	96	185	204	140	261	239	74	202	1,943	
No. Species		14	17	14	11	15	13	14	17	9	10	23	

The “Browns” dominate accounting for 71% of the annual index. “Whites & Yellows” 11%, “Coppers, Hairstreaks & Blues” 8%, “Skippers” 5% and “Fritillaries, Admirals & Tortoiseshells” 5%

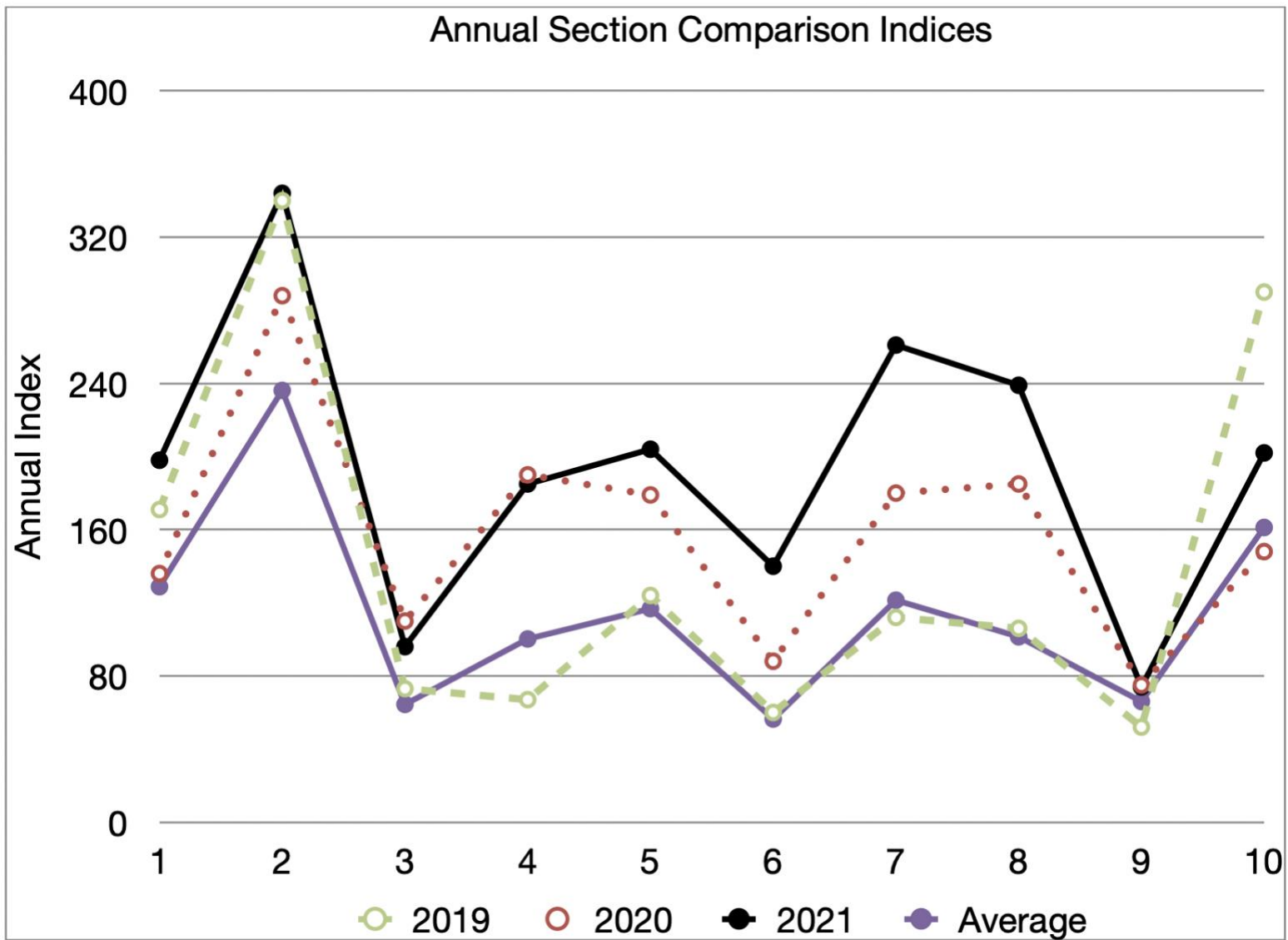


Common Blue (TB)



Painted Lady (RT)

Section 6 - Annual Section Comparison Indices



The pattern of counts by section has been consistent with previous years. Both Section 2 and Section 10 run alongside the meadow.

Annual Section Indices								Average Excl Current Year	Change 2021 v Average	Change 2020-2021
Section↓	Year→	2016	2017	2018	2019	2020	2021			
1		79	166	92	171	136	198	129	69	↑
2		129	250	174	340	288	344	236	108	↑
3		30	49	60	73	110	96	64	32	↓
4		60	118	66	67	190	185	100	85	↓
5		91	129	61	124	179	204	117	87	↑
6		28	61	45	60	88	140	56	84	↑
7		142	101	72	112	180	261	121	140	↑
8		43	105	68	106	185	239	101	138	↑
9		72	70	61	52	75	74	66	8	↓
10		66	162	140	290	148	202	161	41	↑
Annual Index		740	1,211	839	1,395	1,579	1,943	1,153		↑

Section 7 - Annual Species Variation

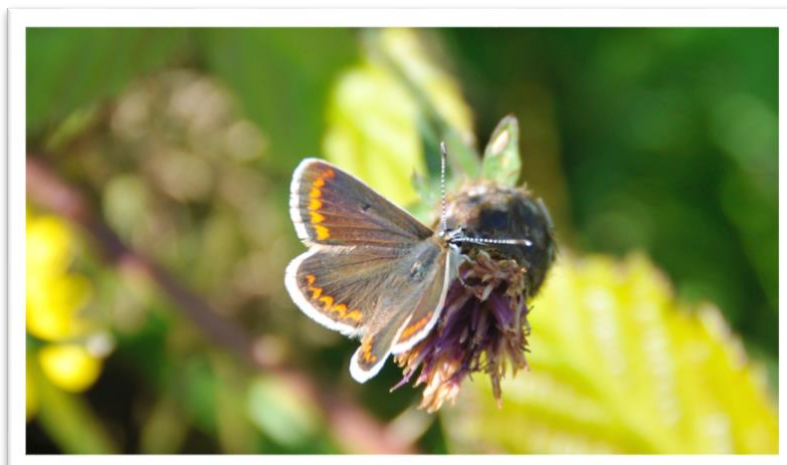
Highest species counts per annum highlighted by red shaded box.

↓ indicates decrease ↑ indicates increase ↔ indicates no change

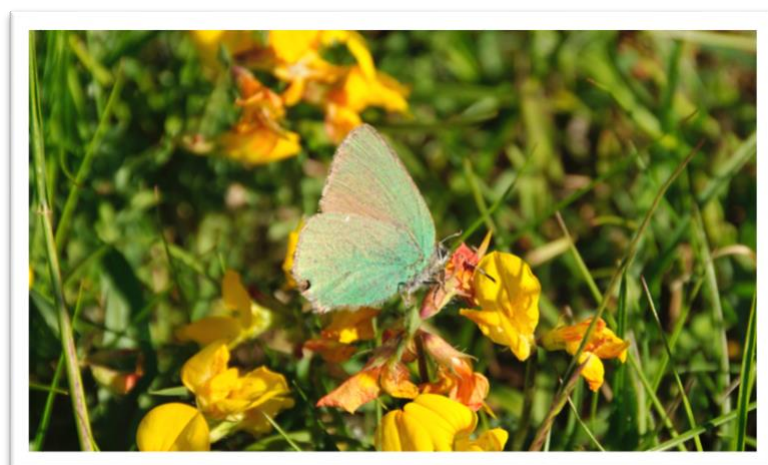
Annual Indices							Average Excl Current	Change 2021 v Average	Change 2020-2021	
Species↓	Year→	2016	2017	2018	2019	2020				2021
Essex Skipper			1					1	-1	↔
Small/Essex Skipper		22	31	30	70	49	99	40	59	↑
Large Skipper		4		2			8	3	5	↑
Orange-tip		1	1	1	3		7	2	6	↑
Large White		60	48	49	94	68	109	64	45	↑
Small White		29	57	86	57	57	90	57	33	↑
Green-veined White		1	1	1	1		1	1	0	↑
Clouded Yellow		1						1	-1	↔
Brimstone		3	2	4	9	3	6	4	2	↑
Speckled Wood		42	96	53	34	42	80	53	27	↑
Small Heath					7	7	3	7	-4	↓
Ringlet				3	2	11		5	-5	↓
Meadow Brown		227	396	347	581	857	869	482	387	↑
Gatekeeper		160	235	141	246	298	220	216	4	↓
Marbled White		104	63	21	84	84	200	71	129	↑
Silver-washed Fritillary		1			1		2	1	1	↑
Red Admiral		37	80	12	36	13	52	36	16	↑
Painted Lady		1	2	1	9	1	7	3	4	↑
Peacock		10	52	11	32	9	13	23	-10	↑
Small Tortoiseshell		1	1	1	1	1	1	1	0	↔
Comma		8	53	16	10	10	22	19	3	↑
Small Copper		14	30	21	36	30	15	26	-11	↓
Green Hairstreak		2	2	2	4		5	3	3	↑
Holly Blue		7	25	12	25	21	6	18	-12	↓
Brown Argus							4	0	4	↑
Common Blue		5	35	25	53	18	124	27	97	↑
Total		740	1,211	839	1,395	1,579	1,943	1153	790	↑
Different Species		22	19	21	22	18	23	20	3	↑
Max. Weekly Species		12	14	12	12	13	14	13	1	↑

Downs: No Ringlet were recorded in 2021. Gatekeeper, Small Copper and Holly Blue all showed a significant drop in number.

Ups: Marbled White and Common Blue showed a significant increase in number. Brown Argus was recorded for the first time on transect. Orange-tip and Green Hairstreak reappeared on transect this was primarily the result of a delayed start to the recording season in 2020. (Normal flight periods for these two species occur early in the season.) 23 different species were recorded during the season out of a total of 25 species recorded to date.



Brown Argus (RT)



Green Hairstreak (ER)

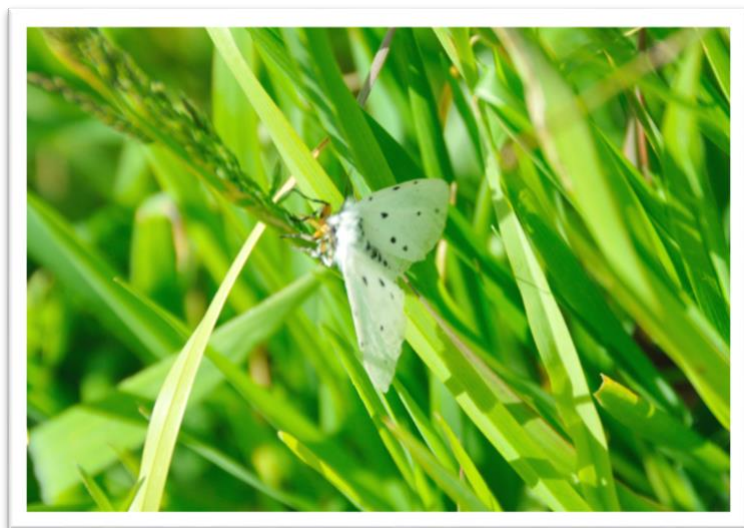
Section 8 - Moths recorded on Transect

Transect walkers are encouraged to record any moths seen within their standard transect 'cube' that are distinctive enough to be identified in the field. The records below provide an insight into moth species that are around during the daytime, including a number that will be missed or under-represented through more traditional methods of moth recording.

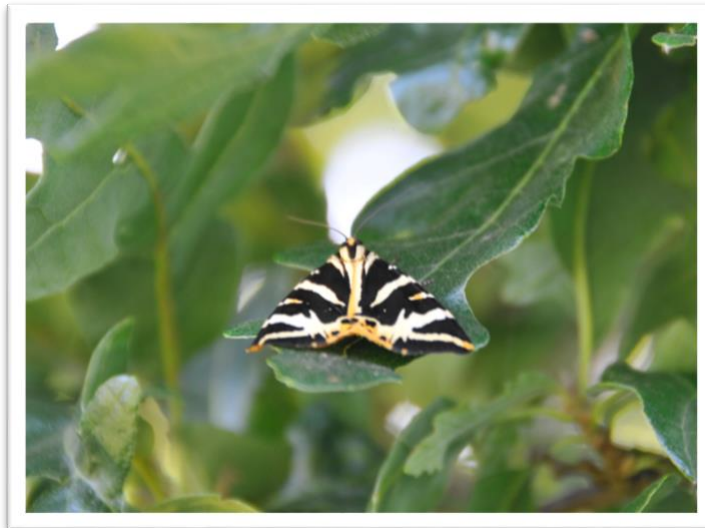
Unlike butterflies, this is not a comprehensive record of the moths that are in the area. Many more moth species are likely to be present but either not seen as they are not active during the day or not recognised as they may be too small or not distinctive enough to be identified accurately during a transect walk.

Given that the numbers of moths spotted on individual transects is generally quite low, an overview report, collating data from all NFTG transects, is also produced to give context to sightings and provide sufficient data to identify trends in more common species seen in the daytime. The overview report is available on request for further background information and a list of references used in compiling this section.

Species	2018	2019	2020	2021
Six-spot Burnet	20			1
Yellow Shell	1			
Common Carpet	1			1
Brimstone Moth	1			1
Muslin Moth				1
Jersey Tiger	1			2
Cinnabar		4	3	10
Mother Shipton	1			
Silver Y	1			18
Small Yellow Underwing	1			1



Muslin Moth (ER)



Jersey Tiger Moth (ER)