



STUDLAND COMMON TRANSECT REPORT 2022



| | | |
|-----------------------|------------------------------|-----------------------------|
| Team Leader: | Tani & Eric Read | |
| Transect Team: | Sue Bumfrey Helen Duckett | Keith Metcalf Ron Taylor |

Contents:

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

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-On-Sea Parish Council: | Graham Wells |
| 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 |

Section 1 – Introduction and Transect Background

This report summarises the findings of the weekly butterfly transects undertaken at Studland Common in 2022, 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.

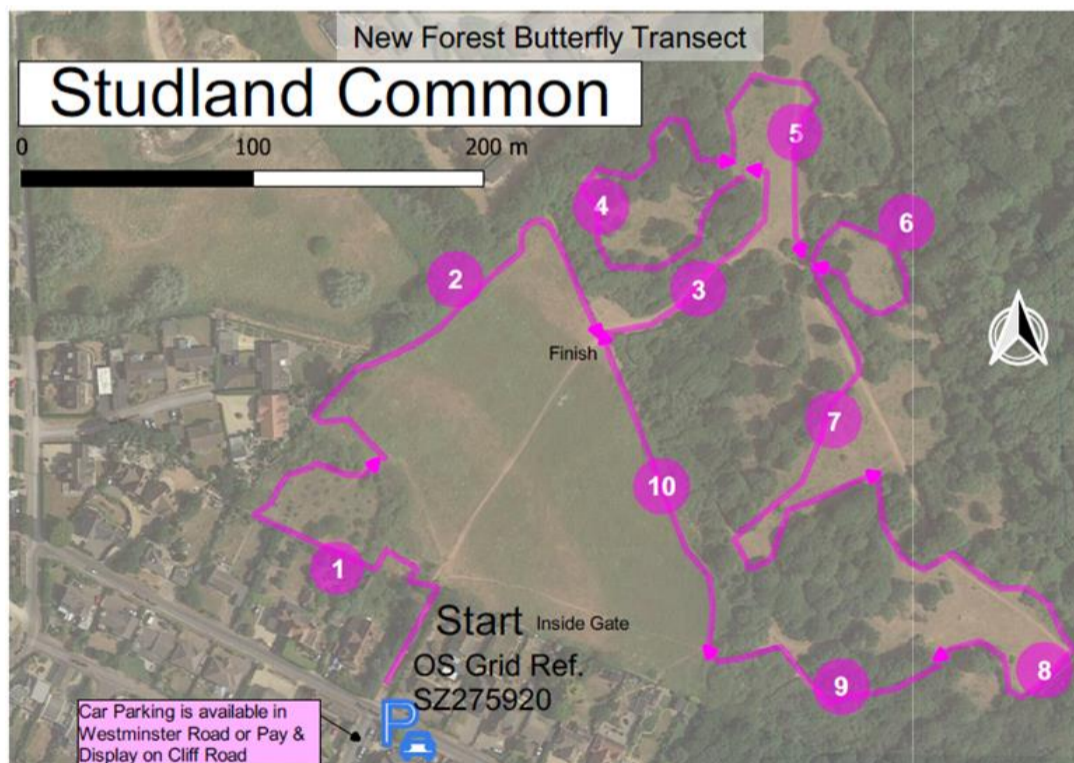
Monitoring walks have been carried out using the Fixed-route (Pollard Walk) transect methodology as promoted through the United Kingdom Butterfly Monitoring Scheme (UKBMS). This involves walking a fixed route each week during the recording season which runs for 26 weeks from 1st April to 30th September, 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.

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. Restorations have been carried out under the Higher Level Stewardship Agreement.

Transect Route



Section 2 – Season Highlights

2022 Weather

The winter was mild with a dry January and a very wet February, followed by a warm and settled Spring. April was dry and sunny with an average temperature. May, in general, was warm with an above average temperature and mostly settled but with some storms on the 18th. June was warmer, drier and sunnier than average with some occasional heavy rain showers. July's weather was dominated by prolonged dry spells and above average temperatures which broke records on the 18th and 19th. High pressure dominated the weather in the first half of August resulting in the maximum temperature being 4C higher than the average with more sunshine and less rain although there were some showers and storms. August was the fifth warmest since 1884. September was wet, the first month this year with above average rainfall and continued the trend of warmer than average temperatures for every month this year.

2022 Highlights

The season had an encouraging start but numbers dropped significantly from mid-August due to the lack of rain coupled with the heat. Species diversity was average, no Small Heath, Small Tortoiseshell or Brown Argus were recorded. A single Clouded Yellow was seen, last seen on transect in 2016. Numbers peaked in Week 16 with the highest weekly index since records began this was due to Gatekeeper and Small/Essex Skipper peaking, a strong show of Meadow Brown and a good number of Marbled White. Large White, Small White and Red Admiral numbers were down. Small Copper had a very poor year with only four recorded. It was a good season for Small/Essex Skipper, Gatekeeper, Marbled White and Holly Blue each having their highest annual index. Valid records were submitted for the entire season thanks to the efforts of the recording team.

Clouded Yellow - Eric Read



Marbled White - Ron Taylor



Speckled Wood – Ron Taylor



Small/Essex Skipper – Eric Read



Large White - Trevor Bumfrey



Holly Blue - Trevor Bumfrey



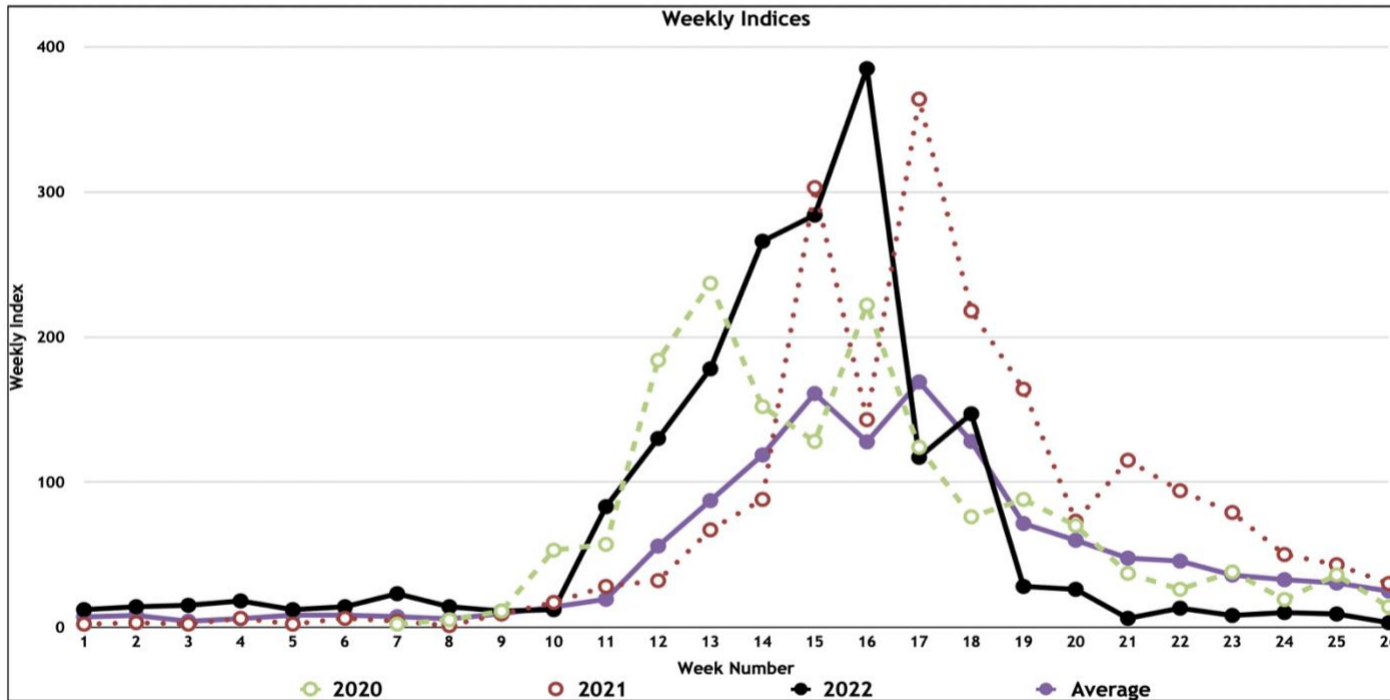
Section 3 – Weekly Flight Periods and Indices

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

| 2022 | | 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 (%) | 96 | 80 | 100 | 92 | 91 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 100 | 94 | 100 | 100 | 100 | 74 | 100 | 100 | 100 | 66 | 100 | 0 | 53 | 70 | 0 | | |
| Temp (°C) | 14 | 13 | 17 | 17 | 13 | 16 | 15 | 17 | 17 | 18 | 19 | 21 | 16 | 18 | 22 | 22 | 19 | 24 | 27 | 28 | 19 | 20 | 22 | 20 | 18 | 18 | | | |
| Small/Essex Skipper | | | | | | | | | | | | | | 11 | 47 | 75 | 87 | | | | 1 | | | | | | | 221 | 5 |
| Large Skipper | | | | | | | | | | | | | | 5 | | | | | | | | | | | | | | 5 | 1 |
| Orange-tip | | | 1 | 1 | | 1 | | 1 | | | | | | | | | | | | | | | | | | | | 4 | 4 |
| Large White | | | | | | 5 | | | | | | | | | 6 | 7 | 3 | 2 | 2 | 1 | | | | | | | | 26 | 7 |
| Small White | | | | | 11 | 2 | 1 | 1 | | | | | | | 3 | 2 | | 2 | 1 | 1 | | 1 | 2 | 2 | 4 | | | 33 | 13 |
| Green-veined White | 1 | | | | | | | | | | | | | | 1 | | | | | | | | | | | | | 2 | 2 |
| Clouded Yellow | | | | | | | | | | | | | | | | | 1 | | | | | | | | | | | 1 | 1 |
| Brimstone | | | 1 | 2 | | 2 | | | | | | | | | | 2 | | | | | | | | | | | | 7 | 4 |
| Speckled Wood | 1 | 2 | 5 | 1 | | 2 | 4 | 4 | 2 | | 1 | 1 | 2 | 1 | | 1 | 3 | | | | 1 | 2 | 2 | 6 | 2 | 3 | 46 | 20 | |
| Meadow Brown | | | | | | | | | 3 | 6 | 77 | 93 | 69 | 93 | 61 | 76 | 53 | 76 | 11 | 20 | 1 | 8 | | 1 | | | 648 | 15 | |
| Gatekeeper | | | | | | | | | | | | | | 1 | 62 | 176 | 52 | 63 | 13 | | 3 | | | | | | | 370 | 7 |
| Marbled White | | | | | | | | | | | 1 | 28 | 84 | 110 | 73 | 21 | | | | | | | | | | | | 317 | 6 |
| Silver-washed Fritillary | | | | | | | | | | | | | | | | 2 | | | | | | | | | | | | 2 | 1 |
| Red Admiral | | | | 1 | | | 1 | | | | 1 | | 2 | 4 | | | | | | | 2 | 1 | 2 | | | | | 14 | 8 |
| Painted Lady | | | | | | | | | | | | 1 | | | | | | | | | | | | | | | | 1 | 1 |
| Peacock | 9 | 12 | 7 | 6 | | 4 | 3 | 1 | | 1 | | 1 | 3 | 1 | | 2 | | | | | | | | | | | | 50 | 12 |
| Comma | 1 | | | | | | | | | | | 3 | 2 | 6 | | 1 | 1 | | | | | | | | | | | 14 | 6 |
| Small Copper | | | | | | | | | | | | | | | | 1 | | | | | 1 | | 1 | 1 | | | | 4 | 4 |
| Green Hairstreak | | | | | | | | 2 | | 3 | 1 | | | | | | | | | | | | | | | | | 6 | 3 |
| Holly Blue | | | 1 | 7 | 1 | 3 | 2 | 4 | 2 | | 2 | | | | | 2 | 1 | | 1 | | | 1 | | | | | | 27 | 12 |
| Common Blue | | | | | | 7 | 1 | 4 | 2 | 1 | 2 | 7 | | | 4 | 3 | 4 | | 3 | | 1 | 1 | | | | | | 40 | 13 |
| TOTAL | 12 | 14 | 15 | 18 | 12 | 14 | 23 | 14 | 11 | 12 | 83 | 130 | 178 | 266 | 284 | 385 | 117 | 147 | 28 | 26 | 6 | 13 | 8 | 10 | 9 | 3 | 1,838 | | |
| Weekly Species | 4 | 2 | 5 | 6 | 2 | 6 | 7 | 7 | 4 | 4 | 6 | 8 | 7 | 9 | 7 | 15 | 8 | 5 | 5 | 5 | 4 | 5 | 5 | 4 | 4 | 1 | 21 | | |
| 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

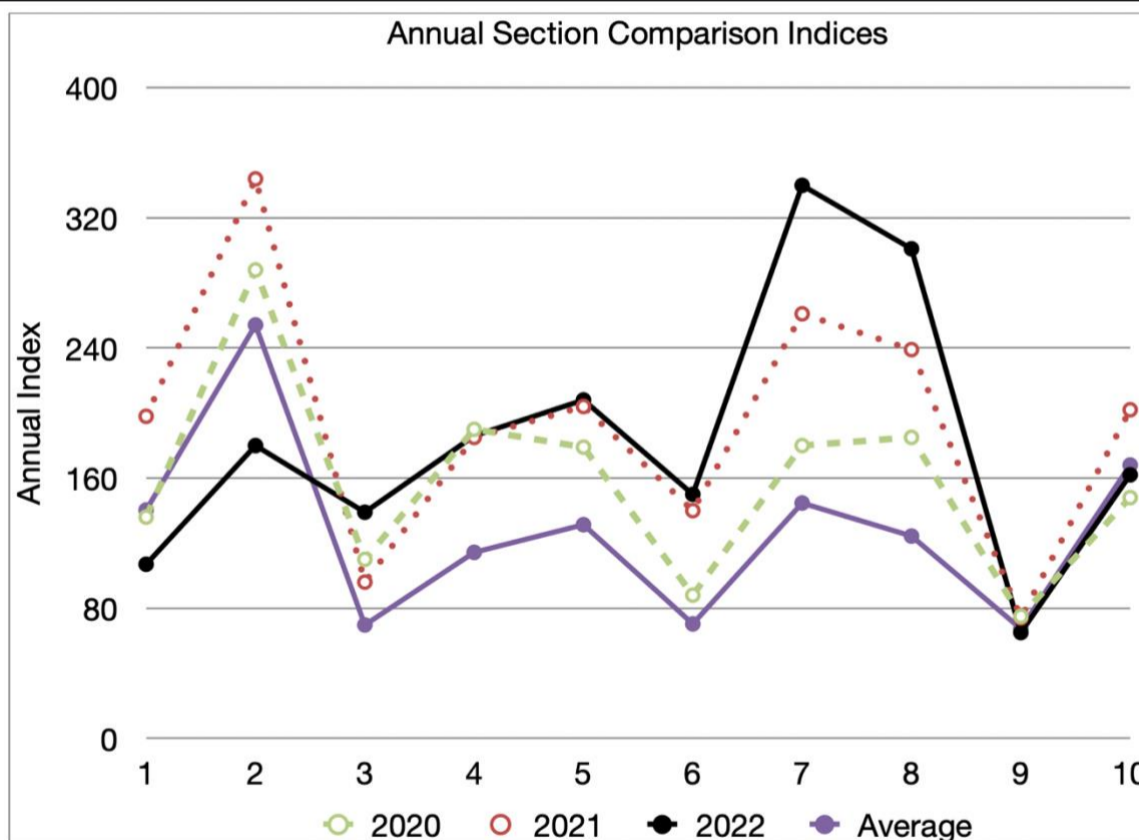
| FAMILIES |
|---------------------------|
| Hesperiidae |
| Pieridae |
| Nymphalidae 'Browns' |
| Nymphalidae 'Aristocrats' |
| Lycaenidae |



| 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 | | |
| 2022 | 12 | 14 | 15 | 18 | 12 | 14 | 23 | 14 | 11 | 12 | 83 | 130 | 178 | 266 | 284 | 385 | 117 | 147 | 28 | 26 | 6 | 13 | 8 | 10 | 9 | 3 | 1,838 | | |
| Average | 7 | 8 | 4 | 6 | 8 | 8 | 7 | 6 | 9 | 14 | 19 | 56 | 87 | 119 | 161 | 128 | 169 | 128 | 71 | 60 | 48 | 46 | 36 | 33 | 30 | 25 | 1,285 | | |

Section 4 – Section Species and Comparison Indices

| Species↓ | Section→ | S1 | S2 | S3 | S4 | S5 | S6 | S7 | S8 | S9 | S10 | Total | No. Sections |
|--------------------------|----------|------------|------------|------------|------------|------------|------------|------------|------------|-----------|------------|--------------|--------------|
| Small/Essex Skipper | | 5 | 35 | 10 | 13 | 27 | 14 | 48 | 35 | 1 | 33 | 221 | 10 |
| Large Skipper | | 2 | 3 | | | | | | | | | 5 | 2 |
| Orange-tip | | | | 1 | | 1 | | | | 1 | 1 | 4 | 4 |
| Large White | | 5 | 6 | | 4 | 3 | 1 | 1 | 2 | 1 | 3 | 26 | 9 |
| Small White | | 12 | 4 | 5 | 2 | 6 | | 3 | | | 1 | 33 | 7 |
| Green-veined White | | 1 | | 1 | | | | | | | | 2 | 2 |
| Clouded Yellow | | | | | | 1 | | | | | | 1 | 1 |
| Brimstone | | 1 | 1 | | 1 | 1 | | 1 | 1 | 1 | | 7 | 7 |
| Speckled Wood | | 8 | 4 | | 14 | 2 | 1 | 4 | 10 | 2 | 1 | 46 | 9 |
| Meadow Brown | | 31 | 74 | 53 | 72 | 73 | 72 | 82 | 100 | 26 | 65 | 648 | 10 |
| Gatekeeper | | 20 | 21 | 22 | 40 | 43 | 37 | 75 | 82 | 7 | 23 | 370 | 10 |
| Marbled White | | 9 | 22 | 30 | 20 | 44 | 17 | 103 | 54 | 8 | 10 | 317 | 10 |
| Silver-washed Fritillary | | | | | | | 1 | 1 | | | | 2 | 2 |
| Red Admiral | | 1 | 1 | 4 | 4 | | 1 | 2 | | 1 | | 14 | 7 |
| Painted Lady | | | | | | | | | | 1 | | 1 | 1 |
| Peacock | | 2 | 5 | 2 | 2 | 2 | 2 | 3 | 6 | 7 | 19 | 50 | 10 |
| Comma | | 3 | | 2 | 4 | 1 | 1 | | 2 | 1 | | 14 | 7 |
| Small Copper | | | 1 | 2 | | | | | 1 | | | 4 | 3 |
| Green Hairstreak | | 2 | | | | | | 1 | 1 | 2 | | 6 | 4 |
| Holly Blue | | 2 | | 3 | 3 | 3 | 1 | 6 | 4 | 5 | | 27 | 8 |
| Common Blue | | 3 | 3 | 4 | 7 | 1 | 2 | 10 | 3 | 1 | 6 | 40 | 10 |
| Total | | 107 | 180 | 139 | 186 | 208 | 150 | 340 | 301 | 65 | 162 | 1,838 | |
| No. Species | | 16 | 13 | 13 | 13 | 14 | 12 | 14 | 13 | 15 | 10 | 21 | |

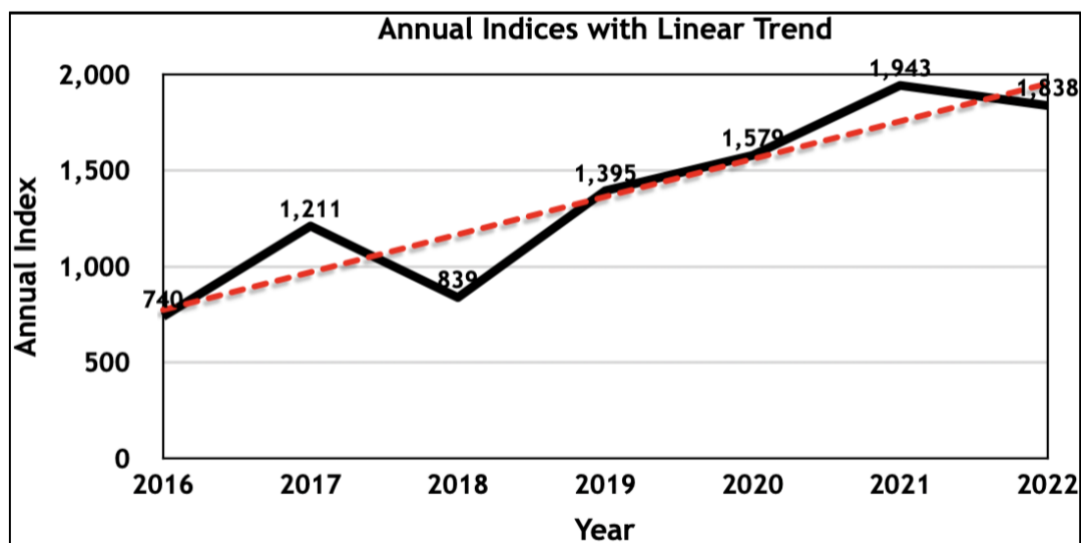


| Annual Section Indices | | | | | | | | Average Excl Current Year | Change 2022 v Average | Change 2021-2022 |
|------------------------|-------|------------|--------------|------------|--------------|--------------|--------------|---------------------------|-----------------------|------------------|
| Section↓ | Year→ | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | | |
| 1 | | 79 | 166 | 92 | 171 | 136 | 198 | 107 | 140 | -33 ↓ |
| 2 | | 129 | 250 | 174 | 340 | 288 | 344 | 180 | 254 | -74 ↓ |
| 3 | | 30 | 49 | 60 | 73 | 110 | 96 | 139 | 70 | 69 ↑ |
| 4 | | 60 | 118 | 66 | 67 | 190 | 185 | 186 | 114 | 72 ↑ |
| 5 | | 91 | 129 | 61 | 124 | 179 | 204 | 208 | 131 | 77 ↑ |
| 6 | | 28 | 61 | 45 | 60 | 88 | 140 | 150 | 70 | 80 ↑ |
| 7 | | 142 | 101 | 72 | 112 | 180 | 261 | 340 | 145 | 195 ↑ |
| 8 | | 43 | 105 | 68 | 106 | 185 | 239 | 301 | 124 | 177 ↑ |
| 9 | | 72 | 70 | 61 | 52 | 75 | 74 | 65 | 67 | -2 ↓ |
| 10 | | 66 | 162 | 140 | 290 | 148 | 202 | 162 | 168 | -6 ↓ |
| Annual Index | | 740 | 1,211 | 839 | 1,395 | 1,579 | 1,943 | 1,838 | 1,285 | -447 ↓ |

Section 5 – Annual Species Variation

| Annual Indices | | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 | Average Excl Current | Change 2022 v Average | Change 2021-2022 |
|----------------------------|-------|------------|--------------|------------|--------------|--------------|--------------|--------------|----------------------|-----------------------|------------------|
| Species↓ | Year→ | | | | | | | | | | |
| Essex Skipper | | | 1 | | | | | | 1 | -1 | ↔ |
| Small/Essex Skipper | | 22 | 31 | 30 | 70 | 49 | 99 | 221 | 50 | 171 | ↑ |
| Large Skipper | | 4 | | 2 | | | 8 | 5 | 5 | 0 | ↓ |
| Orange-tip | | 1 | 1 | 1 | 3 | | 7 | 4 | 3 | 1 | ↓ |
| Large White | | 60 | 48 | 49 | 94 | 68 | 109 | 26 | 71 | -45 | ↓ |
| Small White | | 29 | 57 | 86 | 57 | 57 | 90 | 33 | 63 | -30 | ↓ |
| Green-veined White | | 1 | 1 | 1 | 1 | | 1 | 2 | 1 | 1 | ↑ |
| Clouded Yellow | | 1 | | | | | | 1 | 1 | 0 | ↑ |
| Brimstone | | 3 | 2 | 4 | 9 | 3 | 6 | 7 | 5 | 3 | ↑ |
| Speckled Wood | | 42 | 96 | 53 | 34 | 42 | 80 | 46 | 58 | -12 | ↓ |
| Small Heath | | | | | 7 | 7 | 3 | | 6 | -6 | ↓ |
| Ringlet | | | | 3 | 2 | 11 | | | 5 | -5 | ↔ |
| Meadow Brown | | 227 | 396 | 347 | 581 | 857 | 869 | 648 | 546 | 102 | ↓ |
| Gatekeeper | | 160 | 235 | 141 | 246 | 298 | 220 | 370 | 217 | 153 | ↑ |
| Marbled White | | 104 | 63 | 21 | 84 | 84 | 200 | 317 | 93 | 224 | ↑ |
| Silver-washed Fritillary | | 1 | | | 1 | | 2 | 2 | 1 | 1 | ↔ |
| Red Admiral | | 37 | 80 | 12 | 36 | 13 | 52 | 14 | 38 | -24 | ↓ |
| Painted Lady | | 1 | 2 | 1 | 9 | 1 | 7 | 1 | 4 | -3 | ↓ |
| Peacock | | 10 | 52 | 11 | 32 | 9 | 13 | 50 | 21 | 29 | ↑ |
| Small Tortoiseshell | | 1 | 1 | 1 | 1 | 1 | 1 | | 1 | -1 | ↓ |
| Comma | | 8 | 53 | 16 | 10 | 10 | 22 | 14 | 20 | -6 | ↓ |
| Small Copper | | 14 | 30 | 21 | 36 | 30 | 15 | 4 | 24 | -20 | ↓ |
| Green Hairstreak | | 2 | 2 | 2 | 4 | | 5 | 6 | 3 | 3 | ↑ |
| Holly Blue | | 7 | 25 | 12 | 25 | 21 | 6 | 27 | 16 | 11 | ↑ |
| Brown Argus | | | | | | | 4 | | 4 | -4 | ↓ |
| Common Blue | | 5 | 35 | 25 | 53 | 18 | 124 | 40 | 43 | -3 | ↓ |
| Total | | 740 | 1,211 | 839 | 1,395 | 1,579 | 1,943 | 1,838 | 1285 | 554 | ↓ |
| Different Species | | 22 | 19 | 21 | 22 | 18 | 23 | 21 | 21 | 0 | ↓ |
| Max. Weekly Species | | 12 | 14 | 12 | 12 | 13 | 14 | 15 | 13 | 2 | ↑ |

| FAMILIES | 2016 | 2017 | 2018 | 2019 | 2020 | 2021 | 2022 |
|---------------------------|------|------|------|------|-------|-------|-------|
| Hesperiidae | 26 | 32 | 32 | 70 | 49 | 107 | 226 |
| Pieridae | 95 | 109 | 141 | 164 | 128 | 213 | 73 |
| Nymphalidae 'Browns' | 533 | 790 | 565 | 954 | 1,299 | 1,372 | 1,381 |
| Nymphalidae 'Aristocrats' | 58 | 188 | 41 | 89 | 34 | 97 | 81 |
| Lycaenidae | 28 | 92 | 60 | 118 | 69 | 154 | 77 |



Note: Species count is misleading as it includes Small/Essex Skippers as a separate species. From 2023 season this will be corrected to show two species only where they have both been explicitly recorded separately. Please ignore trends, averages and changes for the individual species. Due to the difficulty in separately identifying the two species from 2023 these will be calculated only at a single Small/Essex Skipper Total level.

Section 6 – 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 NFBTG 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.

| Species | 2018 | 2019 | 2020 | 2021 | 2022 |
|----------------------------------|-------------|-------------|-------------|-------------|-------------|
| Six-spot Burnet | 20 | | | 1 | 15 |
| Yellow Shell | 1 | | | | |
| Common Carpet | 1 | | | 1 | |
| Clouded Border | | | | | 1 |
| Brimstone Moth | 1 | | | 1 | |
| Muslin Moth | | | | 1 | |
| Jersey Tiger | 1 | | | 2 | |
| Cinnabar | | 4 | 3 | 10 | 1 |
| Mother Shipton | 1 | | | | |
| Silver Y | 1 | | | 18 | 2 |
| Small Yellow Underwing | 1 | | | 1 | |
| | | | | | |
| Total | 27 | 4 | 3 | 35 | 19 |
| Number of species | 8 | 1 | 1 | 8 | 4 |
| | | | | | |
| Total Species (2018-2022) | | | | | 11 |