

**ENGLAND Summary of changes table 2021.** Summary of species abundance changes in England from 2020 to 2021 and long-term (over the entire time series; no. yrs max = 46) and short-term (last 10-years) changes. Significance of trends: \* P < 0.05 (significant), \*\* P < 0.01 (highly significant), \*\*\*P < 0.001 (very highly significant). Red text has been used to highlight those species that had their worst year of the series in 2021, and blue text for those species that had their best year of the series in 2021.

| Species                         | Start Year | No. years with Index in 2021 | No. sites monitored in 2021 | 2021 rank | % change 2020-2021 | Series trend (%) | 10-year trend (%) |
|---------------------------------|------------|------------------------------|-----------------------------|-----------|--------------------|------------------|-------------------|
| Swallowtail                     | 1976       | 45                           | 16                          | 23        | -24                | 30               | 45                |
| Dingy Skipper                   | 1976       | 46                           | 637                         | 13        | -11                | -1               | 11                |
| Grizzled Skipper                | 1976       | 46                           | 404                         | 31        | -17                | -47***           | 1                 |
| Essex Skipper                   | 1977       | 45                           | 1078                        | 29        | 0                  | -22              | 19                |
| Small Skipper                   | 1976       | 46                           | 1918                        | 39        | -16                | -74***           | -12               |
| Lulworth Skipper                | 1992       | 30                           | 23                          | 20        | -13                | -75**            | -19               |
| Silver-spotted Skipper          | 1979       | 43                           | 74                          | 16        | -40                | 612***           | 36                |
| Large Skipper                   | 1976       | 46                           | 1917                        | 42        | -29                | -23              | 8                 |
| Wood White                      | 1979       | 43                           | 78                          | 24        | -16                | -82***           | 167*              |
| Orange-tip                      | 1976       | 46                           | 1736                        | 9         | -7                 | 25               | 42                |
| Large White                     | 1976       | 46                           | 2265                        | 37        | -34                | -32              | 45                |
| Small White                     | 1976       | 46                           | 2271                        | 19        | -32                | -12              | 92                |
| Green-veined White              | 1976       | 46                           | 2163                        | 42        | -32                | -21              | -3                |
| Clouded Yellow                  | 1979       | 43                           | 880                         | 22        | -65                | 676*             | 12                |
| Brimstone                       | 1976       | 46                           | 1864                        | 10        | -5                 | 28               | 69                |
| Wall                            | 1976       | 46                           | 679                         | 38        | 0                  | -88***           | 2                 |
| Speckled Wood                   | 1976       | 46                           | 2183                        | 23        | 11                 | 100***           | 9                 |
| Large Heath                     | N/A        | N/A                          | 8                           | N/A       | N/A                | N/A              | N/A               |
| Small Heath                     | 1976       | 46                           | 1602                        | 27        | -19                | -50**            | 72                |
| Mountain Ringlet                | N/A        | N/A                          | 2                           | N/A       | N/A                | N/A              | N/A               |
| Scotch Argus                    | 1995       | 27                           | 12                          | 19        | 40                 | -75***           | -21               |
| Ringlet                         | 1976       | 46                           | 2150                        | 23        | -4                 | 335***           | -11               |
| Meadow Brown                    | 1976       | 46                           | 2273                        | 26        | -17                | 0                | 18                |
| Gatekeeper                      | 1976       | 46                           | 2132                        | 37        | -11                | -46***           | 40                |
| Marbled White                   | 1976       | 46                           | 1365                        | 7         | -7                 | 76**             | 57                |
| Grayling                        | 1976       | 46                           | 261                         | 37        | -5                 | -58***           | -5                |
| Pearl-bordered Fritillary       | 1978       | 44                           | 131                         | 38        | -18                | -73***           | 2                 |
| Small Pearl-bordered Fritillary | 1978       | 44                           | 143                         | 40        | 20                 | -62***           | -38*              |
| Silver-washed Fritillary        | 1976       | 46                           | 1013                        | 9         | 3                  | 288***           | 36                |
| Dark Green Fritillary           | 1976       | 46                           | 663                         | 1         | 10                 | 532***           | 62                |
| High Brown Fritillary           | 1978       | 44                           | 49                          | 27        | -13                | -64**            | 176               |
| White Admiral                   | 1976       | 46                           | 405                         | 44        | -24                | -62***           | 3                 |
| Purple Emperor                  | 1979       | 43                           | 124                         | 9         | 45                 | 136**            | 9                 |
| Red Admiral                     | 1976       | 46                           | 2250                        | 4         | 38                 | 288***           | 147               |
| Painted Lady                    | 1976       | 46                           | 2007                        | 17        | 408                | 97               | 469               |
| Peacock                         | 1976       | 46                           | 2206                        | 22        | -29                | 4                | 7                 |
| Small Tortoiseshell             | 1976       | 46                           | 2132                        | 36        | -29                | -79***           | -24               |
| Comma                           | 1976       | 46                           | 2082                        | 30        | -18                | 186***           | 4                 |
| Marsh Fritillary                | 1982       | 40                           | 148                         | 28        | 16                 | -62*             | 49                |
| Glanville Fritillary            | 1989       | 33                           | 10                          | 1         | 62                 | 145              | 4808*             |
| Heath Fritillary                | 1981       | 41                           | 42                          | 32        | 14                 | -91***           | 112*              |
| Duke of Burgundy                | 1979       | 43                           | 108                         | 30        | -34                | -35*             | 38                |
| Small Copper                    | 1976       | 46                           | 1850                        | 32        | -24                | -34              | 63                |
| Brown Hairstreak                | 1983       | 39                           | 170                         | 3         | 108                | -1               | 88*               |
| Purple Hairstreak               | 1976       | 46                           | 666                         | 30        | -43                | -29              | 143               |
| Green Hairstreak                | 1976       | 46                           | 686                         | 42        | -48                | -38*             | 113               |
| White-letter Hairstreak         | 1976       | 46                           | 323                         | 27        | -17                | -78***           | 202*              |
| Black Hairstreak                | 1995       | 27                           | 14                          | 3         | 62                 | 500**            | 4908**            |
| Small Blue                      | 1979       | 43                           | 304                         | 18        | -11                | -12              | 118*              |
| Holly Blue                      | 1976       | 46                           | 1814                        | 26        | -50                | 134              | 142               |
| Large Blue                      | N/A        | N/A                          | 4                           | N/A       | N/A                | N/A              | N/A               |
| Silver-studded Blue             | 1984       | 38                           | 122                         | 4         | 0                  | 6                | 202***            |
| Brown Argus                     | 1976       | 46                           | 1144                        | 27        | 3                  | 25               | 117               |
| Northern Brown Argus            | 1979       | 43                           | 47                          | 28        | 0                  | -58**            | 21                |
| Common Blue                     | 1976       | 46                           | 2011                        | 38        | -9                 | -17              | 36                |
| Adonis Blue                     | 1979       | 43                           | 191                         | 18        | 62                 | 114*             | -43               |
| Chalk Hill Blue                 | 1976       | 46                           | 302                         | 3         | 48                 | 1                | -24               |

**SCOTLAND Summary of changes table 2021.** Summary of species abundance changes in Scotland from 2020 to 2021 and long-term (over the entire time series; no. yrs max = 43) and short-term (last 10-years) changes. Significance of trends: \* P < 0.05 (significant), \*\* P < 0.01 (highly significant), \*\*\*P < 0.001 (very highly significant). Red text has been used to highlight those species that had their worst year of the series in 2021, and blue text for those species that had their best year of the series in 2021.

| Species                         | Start Year | No. years with Index in 2021 | No. sites monitored in 2021 | 2021 rank | % change 2020-2021 | Series trend (%) | 10-year trend (%) |
|---------------------------------|------------|------------------------------|-----------------------------|-----------|--------------------|------------------|-------------------|
| Dingy Skipper                   | N/A        | N/A                          | 6                           | N/A       | N/A                | N/A              | N/A               |
| Chequered Skipper               | N/A        | N/A                          | 5                           | N/A       | N/A                | N/A              | N/A               |
| Small Skipper                   | N/A        | N/A                          | 25                          | N/A       | N/A                | N/A              | N/A               |
| Large Skipper                   | N/A        | N/A                          | 5                           | N/A       | N/A                | N/A              | N/A               |
| Orange-tip                      | 1999       | 23                           | 128                         | 7         | -17                | 424***           | 120               |
| Large White                     | 1979       | 43                           | 145                         | 14        | 74                 | 111*             | 83                |
| Small White                     | 1979       | 43                           | 155                         | 18        | 5                  | 71               | 23                |
| Green-veined White              | 1979       | 43                           | 187                         | 32        | 7                  | -2               | -24               |
| Clouded Yellow                  | N/A        | N/A                          | 6                           | N/A       | N/A                | N/A              | N/A               |
| Wall                            | 1999       | 23                           | 26                          | 1         | 182                | 795***           | 693**             |
| Speckled Wood                   | 2001       | 21                           | 63                          | 3         | 20                 | 119**            | 157*              |
| Large Heath                     | N/A        | N/A                          | 27                          | N/A       | N/A                | N/A              | N/A               |
| Small Heath                     | 1979       | 43                           | 122                         | 4         | -9                 | 164***           | 87*               |
| Mountain Ringlet                | N/A        | N/A                          | 3                           | N/A       | N/A                | N/A              | N/A               |
| Scotch Argus                    | 1990       | 32                           | 26                          | 21        | -6                 | 5                | -50*              |
| Ringlet                         | 1996       | 26                           | 162                         | 3         | -2                 | 315***           | 40                |
| Meadow Brown                    | 1979       | 43                           | 168                         | 12        | 25                 | -3               | 42                |
| Grayling                        | 1990       | 32                           | 20                          | 26        | 91                 | -91***           | -65               |
| Pearl-bordered Fritillary       | 2002       | 20                           | 14                          | 2         | 7                  | 263***           | 194*              |
| Small Pearl-bordered Fritillary | 1979       | 43                           | 56                          | 1         | 62                 | 100**            | 176***            |
| Dark Green Fritillary           | 1979       | 43                           | 73                          | 12        | 17                 | 13               | 2                 |
| Red Admiral                     | 1980       | 41                           | 157                         | 21        | -71                | 812***           | 345               |
| Painted Lady                    | 1980       | 38                           | 136                         | 21        | 84                 | 122              | 877               |
| Peacock                         | 1995       | 27                           | 168                         | 13        | -48                | 240***           | 139               |
| Small Tortoiseshell             | 1979       | 43                           | 179                         | 33        | -46                | -59**            | -40               |
| Comma                           | 2006       | 16                           | 55                          | 11        | -13                | 183              | 174               |
| Marsh Fritillary                | 2006       | 16                           | 27                          | 8         | 132                | -72              | -20               |
| Small Copper                    | 1979       | 43                           | 128                         | 36        | 19                 | -43              | -33               |
| Purple Hairstreak               | N/A        | N/A                          | 8                           | N/A       | N/A                | N/A              | N/A               |
| Green Hairstreak                | 1990       | 32                           | 28                          | 17        | -4                 | 21               | 33                |
| Small Blue                      | N/A        | N/A                          | 13                          | N/A       | N/A                | N/A              | N/A               |
| Holly Blue                      | N/A        | N/A                          | 5                           | N/A       | N/A                | N/A              | N/A               |
| Northern Brown Argus            | 1981       | 41                           | 20                          | 6         | -9                 | 19               | 184*              |
| Common Blue                     | 1979       | 43                           | 110                         | 17        | -5                 | 50               | 8                 |

**WALES Summary of changes table 2021.** Summary of species abundance changes in Wales from 2020 to 2021 and long-term (over the entire time series; no. yrs max = 46) and short-term (last 10-years) changes. Significance of trends: \* P < 0.05 (significant), \*\* P < 0.01 (highly significant), \*\*\*P < 0.001 (very highly significant). Red text has been used to highlight those species that had their worst year of the series in 2021, and blue text for those species that had their best year of the series in 2021.

| Species                         | Start Year | No. years with Index in 2021 | No. sites monitored in 2021 | 2021 rank | % change 2020-2021 | Series trend (%) | 10-year trend (%) |
|---------------------------------|------------|------------------------------|-----------------------------|-----------|--------------------|------------------|-------------------|
| Dingy Skipper                   | 2004       | 18                           | 25                          | 18        | -64                | 11               | -50               |
| Grizzled Skipper                | N/A        | N/A                          | 7                           | N/A       | N/A                | N/A              | N/A               |
| Essex Skipper                   | N/A        | N/A                          | 7                           | N/A       | N/A                | N/A              | N/A               |
| Small Skipper                   | 1984       | 38                           | 67                          | 37        | -26                | -1               | -78*              |
| Large Skipper                   | 1977       | 45                           | 59                          | 39        | -19                | -61***           | -21               |
| Orange-tip                      | 1978       | 44                           | 50                          | 6         | 12                 | 376***           | 28                |
| Large White                     | 1976       | 46                           | 83                          | 28        | -19                | -8               | 15                |
| Small White                     | 1976       | 46                           | 83                          | 24        | -39                | -45*             | 29                |
| Green-veined White              | 1976       | 46                           | 72                          | 30        | -26                | 154**            | -61               |
| Clouded Yellow                  | N/A        | N/A                          | 24                          | N/A       | N/A                | N/A              | N/A               |
| Brimstone                       | 1998       | 24                           | 36                          | 21        | -66                | 77*              | 62                |
| Wall                            | 1976       | 46                           | 51                          | 35        | 117                | -58***           | -43               |
| Speckled Wood                   | 1978       | 44                           | 81                          | 16        | 5                  | 241***           | 25                |
| Large Heath                     | N/A        | N/A                          | 4                           | N/A       | N/A                | N/A              | N/A               |
| Small Heath                     | 1976       | 46                           | 55                          | 14        | 82                 | 0                | -16               |
| Ringlet                         | 1983       | 39                           | 75                          | 18        | -22                | 271***           | -36               |
| Meadow Brown                    | 1976       | 46                           | 84                          | 31        | -19                | 10               | -31               |
| Gatekeeper                      | 1978       | 44                           | 76                          | 31        | -2                 | 31               | -37               |
| Marbled White                   | N/A        | N/A                          | 18                          | N/A       | N/A                | N/A              | N/A               |
| Grayling                        | 1976       | 46                           | 28                          | 30        | 142                | -95***           | -57               |
| Pearl-bordered Fritillary       | N/A        | N/A                          | 14                          | N/A       | N/A                | N/A              | N/A               |
| Small Pearl-bordered Fritillary | 1992       | 30                           | 15                          | 12        | 91                 | -74**            | -30               |
| Silver-washed Fritillary        | 1995       | 25                           | 22                          | 15        | 3                  | -55              | 35                |
| Dark Green Fritillary           | 1979       | 43                           | 36                          | 22        | 23                 | -83***           | 47                |
| High Brown Fritillary           | N/A        | N/A                          | 7                           | N/A       | N/A                | N/A              | N/A               |
| Red Admiral                     | 1976       | 46                           | 80                          | 15        | -42                | 171*             | 267*              |
| Painted Lady                    | 1977       | 44                           | 68                          | 25        | 46                 | 35               | 699               |
| Peacock                         | 1976       | 46                           | 77                          | 34        | -57                | -24              | 14                |
| Small Tortoiseshell             | 1976       | 46                           | 80                          | 29        | -52                | -27              | -22               |
| Comma                           | 1992       | 30                           | 67                          | 12        | -2                 | 252***           | 67                |
| Marsh Fritillary                | 1990       | 32                           | 16                          | 18        | 76                 | -62              | 15                |
| Small Copper                    | 1976       | 46                           | 65                          | 28        | 29                 | -48*             | 35                |
| Brown Hairstreak                | 2004       | 18                           | 1                           | 4         | 26                 | -28              | 4                 |
| Purple Hairstreak               | 2002       | 20                           | 16                          | 13        | -55                | -33              | 115               |
| Green Hairstreak                | 1993       | 29                           | 19                          | 10        | -45                | 417***           | 159               |
| White-letter Hairstreak         | N/A        | N/A                          | 9                           | N/A       | N/A                | N/A              | N/A               |
| Small Blue                      | N/A        | N/A                          | 8                           | N/A       | N/A                | N/A              | N/A               |
| Silver-studded Blue             | N/A        | N/A                          | 8                           | N/A       | N/A                | N/A              | N/A               |
| Holly Blue                      | 1999       | 23                           | 44                          | 12        | -44                | 36               | 255*              |
| Brown Argus                     | 1997       | 25                           | 18                          | 7         | 118                | 65               | 71                |
| Common Blue                     | 1976       | 46                           | 70                          | 32        | 62                 | -28              | -24               |

**NORTHERN IRELAND Summary of changes table 2021.** Summary of species abundance changes in Northern Ireland from 2020 to 2021 and long-term (over the entire time series; no. yrs max = 18) and short-term (last 10-years) changes. Significance of trends: \* P < 0.05 (significant), \*\* P < 0.01 (highly significant), \*\*\*P < 0.001 (very highly significant). Red text has been used to highlight those species that had their worst year of the series in 2021, and blue text for those species that had their best year of the series in 2021.

| Species                  | Start Year | No. years with Index in 2021 | No. sites monitored in 2021 | 2021 rank | % change 2020-2021 | Series trend (%) | 10-year trend (%) |
|--------------------------|------------|------------------------------|-----------------------------|-----------|--------------------|------------------|-------------------|
| Dingy Skipper            | N/A        | N/A                          | 2                           | N/A       | N/A                | N/A              | N/A               |
| Cryptic Wood White       | 2009       | 13                           | 15                          | 11        | -47                | 25               | 3                 |
| Orange-tip               | 2007       | 15                           | 29                          | 13        | -47                | -13              | 74                |
| Large White              | 2006       | 16                           | 39                          | 9         | 144                | -56*             | -52               |
| Small White              | 2006       | 16                           | 37                          | 8         | 138                | -64**            | -4                |
| Green-veined White       | 2005       | 17                           | 43                          | 10        | 60                 | 9                | -53               |
| Clouded Yellow           | N/A        | N/A                          | 4                           | N/A       | N/A                | N/A              | N/A               |
| Wall                     | N/A        | N/A                          | 2                           | N/A       | N/A                | N/A              | N/A               |
| Speckled Wood            | 2007       | 15                           | 40                          | 2         | 21                 | 62               | 44                |
| Large Heath              | N/A        | N/A                          | 3                           | N/A       | N/A                | N/A              | N/A               |
| Small Heath              | 2004       | 18                           | 20                          | 9         | 29                 | -38              | 40                |
| Ringlet                  | 2006       | 16                           | 43                          | 10        | 28                 | 54               | -45               |
| Meadow Brown             | 2009       | 13                           | 43                          | 10        | -2                 | -40              | -15               |
| Grayling                 | N/A        | N/A                          | 6                           | N/A       | N/A                | N/A              | N/A               |
| Silver-washed Fritillary | N/A        | N/A                          | 9                           | N/A       | N/A                | N/A              | N/A               |
| Dark Green Fritillary    | N/A        | N/A                          | 12                          | N/A       | N/A                | N/A              | N/A               |
| Red Admiral              | N/A        | N/A                          | 37                          | N/A       | N/A                | N/A              | N/A               |
| Painted Lady             | N/A        | N/A                          | 35                          | N/A       | N/A                | N/A              | N/A               |
| Peacock                  | 2006       | 16                           | 40                          | 6         | -25                | 35               | 869*              |
| Small Tortoiseshell      | 2010       | 12                           | 43                          | 3         | -57                | 46               | 189               |
| Marsh Fritillary         | 2004       | 18                           | 14                          | 8         | -15                | 89               | 234               |
| Small Copper             | 2005       | 17                           | 29                          | 9         | -26                | -33              | 137               |
| Purple Hairstreak        | N/A        | N/A                          | 1                           | N/A       | N/A                | N/A              | N/A               |
| Green Hairstreak         | N/A        | N/A                          | 3                           | N/A       | N/A                | N/A              | N/A               |
| Holly Blue               | N/A        | N/A                          | 12                          | N/A       | N/A                | N/A              | N/A               |
| Common Blue              | 2005       | 17                           | 23                          | 10        | -6                 | -25              | -19               |