



**West Midlands Region Annual
Review 2002**

Using Transect Data

Introduction

This first section of the Annual Review is mostly based on information gathered from the transect walking data. The processing of the data is carried out in several stages. The first is the transfer of data from paper to the Transect Walker software. This software is freely available from Butterfly Conservation's (BC) website (www.butterfly-conservation.org/features/transect_walker/). From this, individual transects can be analysed to note trends that can be related to changes in local habitat or to fluctuations in species numbers due to other factors such as weather. This data is then analysed together in the Regional Co-ordinator software. This forms the basis for much of the data that can be found in this section. This "Regional data" is then compared to the National Indices supplied by the "Butterfly Monitoring Scheme" (BMS). Currently about 130 sites scattered throughout the United Kingdom supply transect data annually to the BMS. The BMS indices are not strictly National Indices but rather BMS All-sites Indices, as BMS transects do not make up a statistically representative sample of the countryside in the United Kingdom, and indeed are heavily biased to nature reserves. However, weather factors have a major effect on fluctuations in butterfly numbers from year to year and these effects are likely to be similar on and off reserves, so for the sake of convenience the All-sites Indices are referred to here as National Indices. Regional trends have also been assessed where appropriate in a context of national range changes, identified through the Butterflies for the New Millennium survey (BNM). The regional data, collated by the West Midlands Branch of BC is based on 141,416 records since transect monitoring began in the region in 1982.

As you will see, this year has generally been quite "average" compared to the previous few years in terms of numbers of butterflies recorded. Our thanks go to all the recorders and their efforts with recording around the region. As this analysis proves, the great amount of data available provides valuable species information for the region.

Gloucestershire has been included in the analysis along with Herefordshire, Worcestershire, Staffordshire, Shropshire and the West Midlands County to increase the size of the data set.

West Midlands Region Annual Review 2002

First and Last Dates

Data is supplied from transects and from individual records. The preferred format for individual records is: Species, Date, Recorder, Quantity, Site, and Grid Reference.

Vernacular	Earliest Date	Site Name	Recorder	Latest Date	Site Name	Recorder
Small Skipper	10-Jun	St Wulstans LNR	Ann Bowker	04-Sep	Malvern Hills N	Colin Dolding
Essex Skipper	03-Jul	New Hawne Colliery	Dave White	26-Aug	Chaddesley Wood	Steve Harper
Large Skipper	24-May	Briar Hill Droitwich	Neil Gregory	27-Aug	Knapp & Papermill	Garth & Pam Lowe Neil and Corinna Gregory
Dingy Skipper	10-May	Pensnett Trad Estate	Richard Southwell	02-Jun	Wyre Forest, Pipe-line	
Grizzled Skipper	23-Apr	Honeybourne	Terry Knight	24-Jun	Honeybourne	Terry Knight
Swallowtail	22-Aug	Wych	Sue Young	22-Aug	Wych	Sue Young
Wood White	03-May	Haugh Wood S	Jeff Andrews	19-Aug	Wigmore Rolls	Guenter Petters
Clouded Yellow	01-Sep	Grafton Wood	Mike Williams			
Brimstone	07-Mar	Monkwood	Richard Southwell	19-Oct	Perry Wood	Phil Williams
Large White	28-Mar	Perry Wood	Phil Williams	12-Oct	Perry Wood	Phil Williams
Small White	19-Mar	Stourport	Mike Williams	06-Oct	Dinedor	Jeff Andrews
				06-Oct	Perry Wood	Phil Williams
Green-veined White	21-Mar	Perry Wood	Phil Williams	19-Oct	Perry Wood	Phil Williams
Orange-tip	16-Mar	Fradley	Mike Smith	15-Jun	New Hawne Colliery	Dave White
Green Hairstreak	06-May	Merry Hill	Richard Southwell	26-Jun	Malvern Hills N	Colin Dolding
Brown Hairstreak	15-Aug	Grafton Wood	John Tilt	14-Sep	Grafton Wood	Trevor Buckanll
Purple Hairstreak	10-Jul	Uffmoor Wood	David White	20-Sep	Uffmoor Wood	David White
White Letter Hairstreak	07-Jul	Perry Wood	Phil Williams	18-Aug	Perry Wood	Phil Williams
Small Copper	23-Apr	Melrose Meadow	Ian Duncan	02-Oct	Uffmoor Wood	David White
Small Blue	23-May	Grafton Wood	John Tilt	20-Aug	Grafton Wood	Cyril Johnson
Silver-studded Blue	29-Jun	Prees Heath	Jenny Joy	29-Jul	Prees Heath	Jenny Joy
Brown Argus	21-May	Honeybourne	Terry Knight	14-Aug	Trench Wood	David White
				14-Aug	Windmill Hill	Terry Knight
Common Blue	11-May	Common Hill	Jeff Andrews	19-Sep	Melrose Meadow	Ian Duncan
Holly Blue	26-Mar	Longdon School	Corinna Gregory	13-Sep	Perry Wood	Phil Williams
				13-Sep	Uni. to Selly Oak Canal	Neil Gregory
White Admiral	18-Jun	Monkwood	David White	31-Jul	Uffmoor Wood	David White
Red Admiral	26-Feb	Perry Wood	Phil Williams	09-Nov	Perry Wood	Phil Williams
Painted Lady	12-May	Walsgrove Hill	Richard Southwell	09-Oct	Tedsmere	Alan R Holder
Small Tortoiseshell	05-Mar	Perry Wood	Phil Williams	18-Dec	Perry Wood	Phil Williams
Peacock	28-Feb	Perry Wood	Phil Williams	09-Oct	Mons Hill	Jim Whitehouse
Comma	05-Mar	Perry Wood	Phil Williams	24-Oct	Lutley Gutter, Halesowen	David White
Small Pearl-bordered Fritillary	19-May	Coppett Hill	Wendy Innes	04-Jul	Wyre Forest E	Terry Higgins
Pearl Bordered Fritillary	01-May	Wyre Forest E	Terry Higgins	19-Jun	Wyre Forest E	Terry Higgins
High Brown Fritillary	23-Jun	Malvern Hills S	Digby Wood	26-Jul	Malvern Hills S	Digby Wood
Dark Green Fritillary	08-Jul	Wigmore Rolls	Guenter Petters	29-Jul	Bircher Common	Beryl Petters
Silver-washed Fritillary	26-Jun	Wyre Forest	Frank Lancaster	11-Sep	Wyre Forest E	Terry Higgins
Marsh Fritillary	01-Jun	Trench Wood	Terry Smith			
Speckled Wood	21-Mar	Perry Wood	Phil Williams	12-Oct	Perry Wood	Phil Williams
Wall	09-May	Tedsmere	Alan R Holder	08-Jun	Basford Hall	Richard Southwell
Marbled White	17-Jun	St Wulstans	Ann Bowker	16-Aug	Malvern Hills N	Colin Dolding
Grayling	15-Jul	Malvern Hills N	Colin Dolding	04-Sep	Malvern Hills N	Colin Dolding
Gatekeeper	12-Jul	University	Neil Gregory	10-Sep	Malvern Hills N	Colin Dolding
Meadow Brown	18-Jun	New Hawne	David White	23-Sep	Knapp & Papermill	Garth & Pam Lowe
Ringlet	12-Jun	Chaddesley Wood	Steve Harper	11-Sep	Windmill Hill	Terry Knight
Small Heath	19-May	Coppett Hill	Wendy Innes	11-Sep	Windmill Hill	Terry Knight

Species Accounts

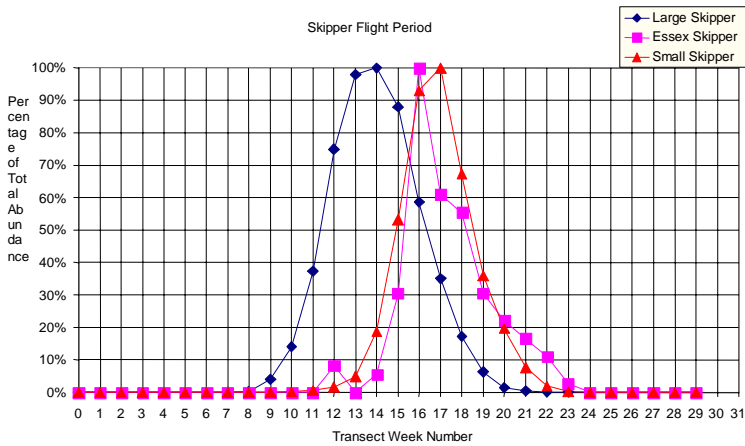
Introduction

The following analyses are derived from transects walked in the West Midlands Region in the following counties: Gloucestershire, Worcestershire, Herefordshire, West Midlands, Staffordshire and Shropshire. On the following pages there are several different types of graph shown:

1. **Flight Period Graphs:** these are shown for species which may be difficult to separate in the field due to the similarity of their physical appearance, but where the flight period may be of use in separating them. Where this is possible more use can be made of the data. Unfortunately in the case of Small and Essex Skipper there is considerable overlap in their flight periods making separation by flight period not very useful. However the Large Skipper can also easily be confused with these two species especially when in flight. In this case the main flight period is appreciably earlier than the other two skippers allowing for many to be separated this way.
2. **Log Collated Indices Graphs:** These show the Regional and National Indices (where available) for comparison for each species. "The method of calculating the collated annual index of abundance was calculated using the improved method of Moss & Pollard (1993), in line with revisions to analysis adopted in the Butterfly Monitoring Scheme (BMS). The original BMS analysis using Cochran's method calculated a simple ratio between total counts summed over all participating sites. The new method of Moss & Pollard applies a log transformation to site values, and has theoretical advantages in that it downweights the influence on the index of sites with very large counts (i.e. local 'noise'). Zero counts are handled comparably with non-zero counts." (Taken from Regional Co-ordinator Help file.) The left hand vertical axis relates to these data. Where not enough data is available from the paired sites a third style of chart is used.
3. **Log Site Total Count Average:** This data set is simply the total count of a species in a year divided by the number of sites on which it was seen. This figure is then logged to get a comparison to the National figures (where available). They are not directly comparable, but can be used for trend analysis. On these graphs the right hand vertical axis relates to this data.

Each Chart has some text indicating the salient points within the chart. These can then be compared with the recorder's own individual site data sets.

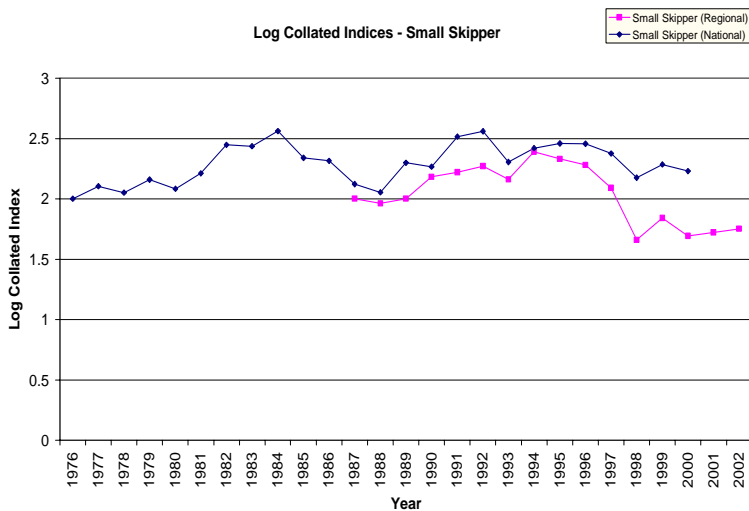
Skippers



This chart indicates the flight period for Large, Essex and Small Skipper derived from the Transect Data for all years walked.

Large Skipper has a distinctly earlier flight period than the other two species. It is noted that the Small and Essex skippers have a very similar flight period, which makes separating these two species tricky, but needs to be done for this analysis.

Small Skipper - BAP status: not listed

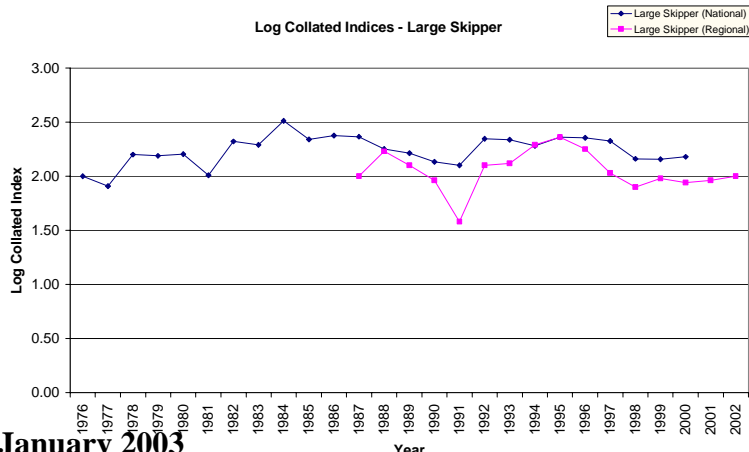


The fluctuations in the regional data show close agreement with those in the national data. This has only been an average year, but numbers have increased since the low of 1998. In 2002 there were increases at 6 sites, decreases at 5 and 12 showed no change.

Essex Skipper - BAP status: not listed

No separate National Index is available. There are Regional Indices for 2001 (2.00) and 2002 (2.38) only. The Regional Site Count Average Data is not sufficient to plot. In 2002 there was the earliest ever sighting on a transect (22nd July) as well as the latest ever (3rd September). There were increases at 5 sites and no change at 2. This species continues to spread and is a good species to look out for on transects in the coming years.

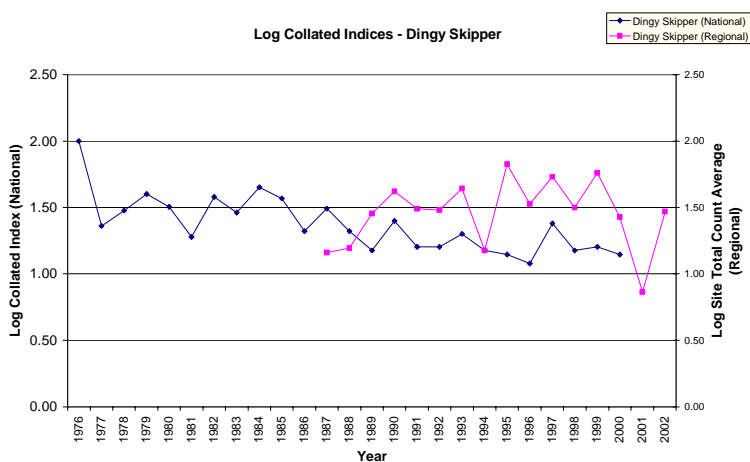
Large Skipper - BAP status: not listed



This has been an average year for this species. 6 sites showed an increased, 5 a decrease and 15 showed no change. There is reasonable synchrony between regional and national figures.

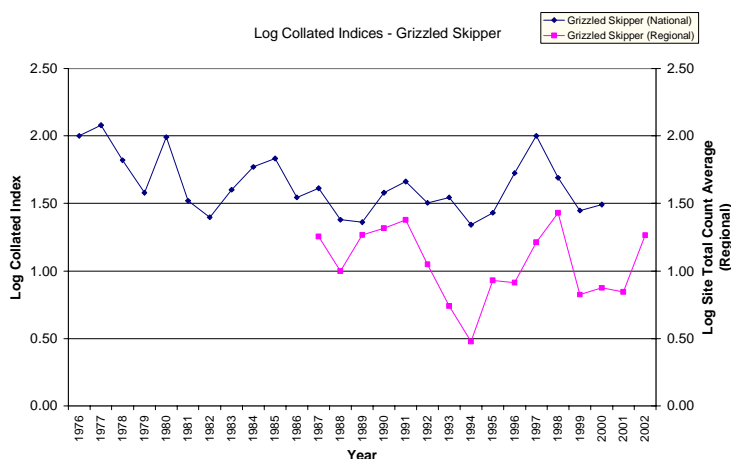
Dingy Skipper - BAP status: not listed

No Regional Indices available (note the right scale instead). Data comes from only 4 sites, hence the figures fluctuate greatly from year to year. The national picture shows a general downward trend.



Grizzled Skipper - BAP status: not listed

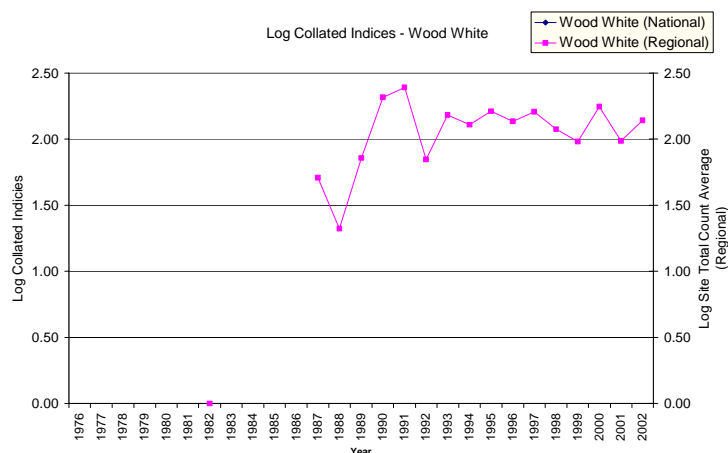
Data is insufficient to generate a Regional Index (note the right scale instead). This is recorded from 3 sites only, all of which had no change. This year seems to have been quite a good one with an increase over the previous few years. The regional picture appears to follow the national one.



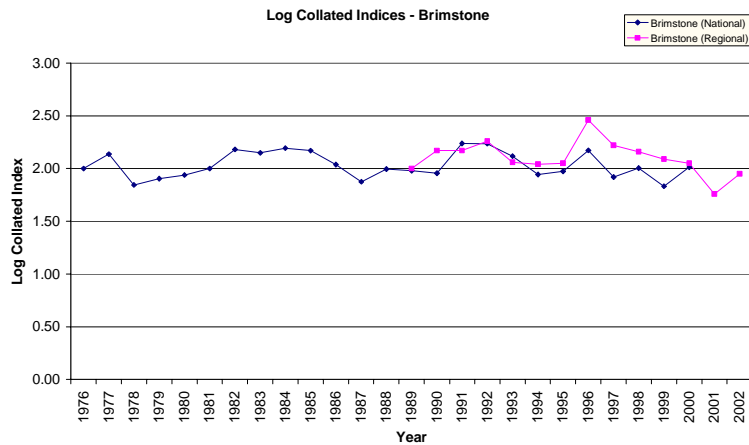
Whites

Wood White - BAP status: Species of Conservation Concern

No National or Regional Indices available (note the right scale instead). At the 5 sites, 2 showed an increase this year, although it seems only to be an average one compared to the last few years.

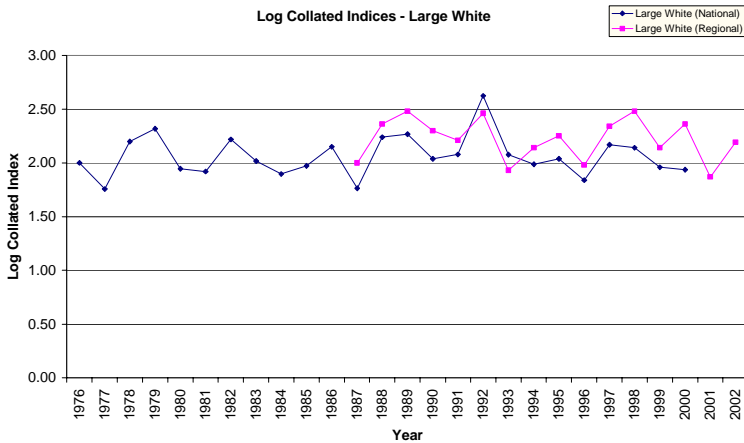


Brimstone - BAP status: not listed



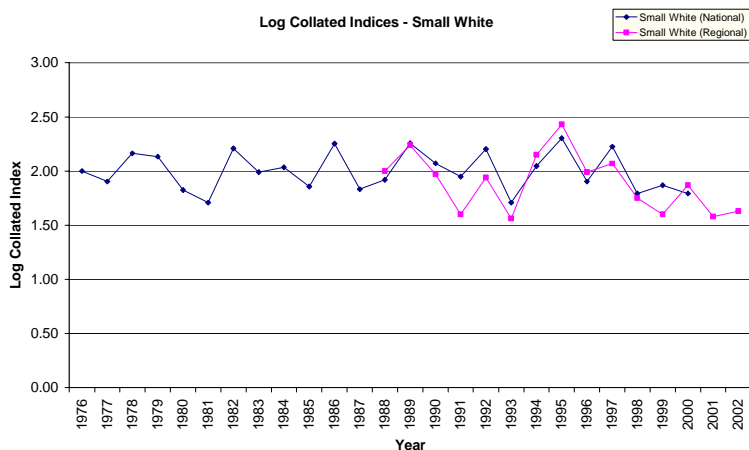
There is good synchrony between the regional and national indices. The regional indices suggest that there has been gradual decrease in numbers over the last 6 years. This decline has also been noted in other regions, for example woodlands in Kent (Brereton, pers. comm.). Foot and Mouth affected the data in 2001. 5 sites showed increases, 3 showed decreases and 15 showed no change.

Large White - BAP status: not listed



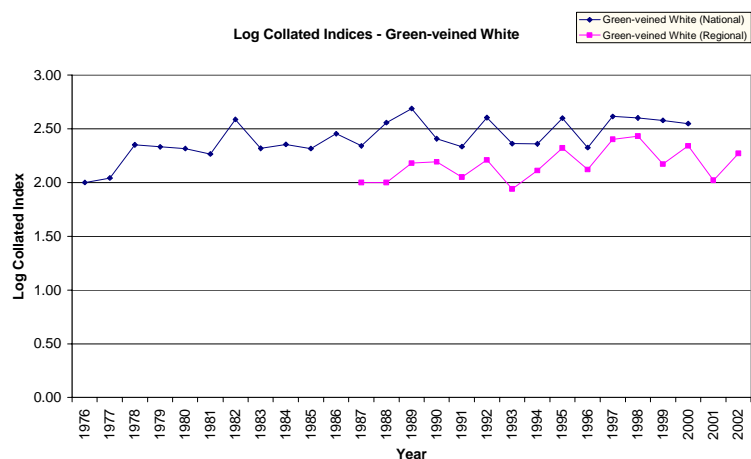
There is close agreement between the fluctuations in the regional and national indices. This year 15 sites showed an increase, 1 a decrease and 14 no change, indicating it to be a good year.

Small White - BAP status: not listed



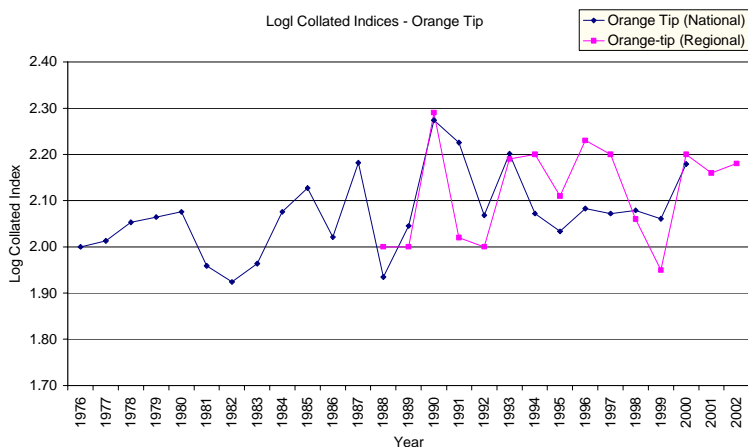
As for the last species there is close agreement between the fluctuations in the regional and national indices. Compared with the rest of the regional series it was a poor year. There were increases on 7 sites, decreases on 5 and no change on 15.

Green-veined White - BAP status: not listed



There is good synchrony between the regional and national indices for this variable species. This year was better than last. 11 sites showed an increase and 17 showed no change.

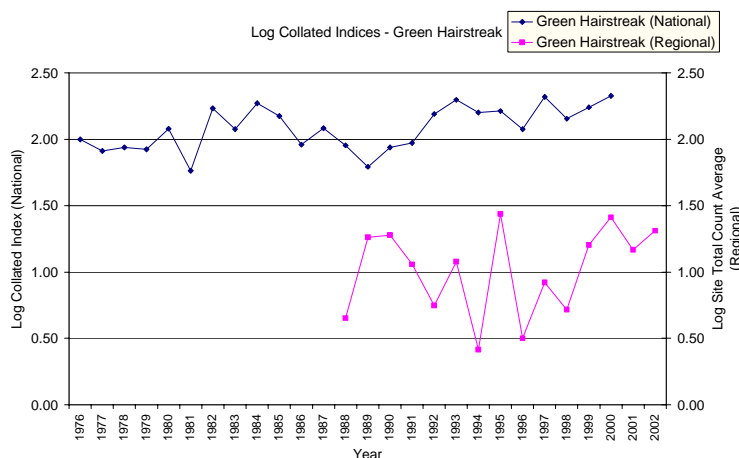
Orange-tip - BAP status: not listed



Fluctuations in the regional collated indices broadly follow those of the national indices. This year was a good year, showing some of the highest figures. There were increases at 4 sites, decreases at 4 and no change at 19. It was a difficult decision but the Orange-tip was chosen as this year's **Butterfly of the year** because relatively high numbers have been recorded over the past three years following three years of decline.

Hairstreaks

Green Hairstreak - BAP status: not listed

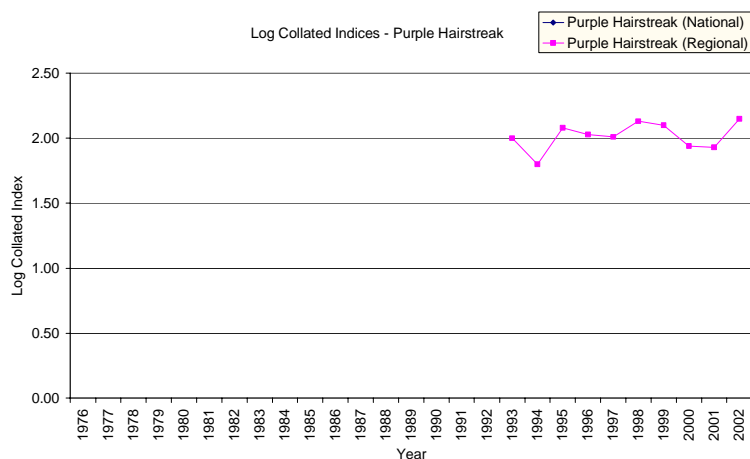


Data is insufficient to generate a Regional Index. Data for this species is limited to only 5 sites, with 2 new sites, 1 showing an increase, 1 a decrease and 3 with no change. The national indices from the BMS show a general increase over the last 14 years at monitored sites, although the BNM survey highlighted substantial declines in a number of English counties.

Brown Hairstreak - BAP status: Species of Conservation Concern

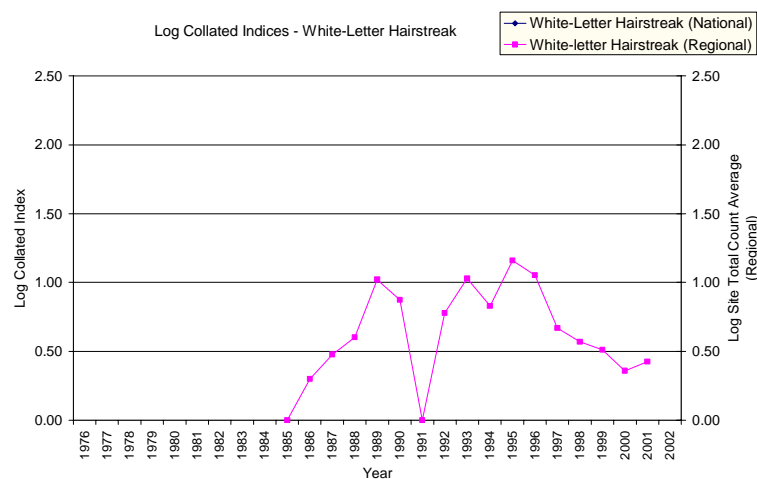
This species is only found at one site and no National Indices are available, as the species is poorly sampled by transects. It is a relatively stable species. 2002 had both the highest numbers recorded and the earliest ever sighting on the transect (15th August).

Purple Hairstreak - BAP status: not listed



Data is insufficient to generate a Regional Index. The highest numbers of the series were recorded in 2002. There was an increase in numbers recorded at 1 site, a decrease at 1 site, no change at 7 and it was not recorded at all at 1 site. The chart does indicate that this is a relatively stable species.

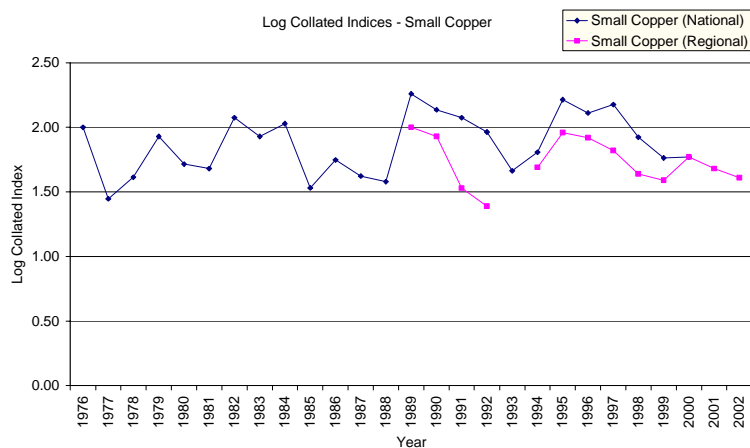
White Letter Hairstreak - BAP status: not listed



No National or Regional Collated Indices available for this butterfly, which is poorly sampled by the transect method (note the right scale instead). The chart shows a general decline over the last 6 years. This species gets the **Wooden Spoon** for the year because none were seen on any transect at all!

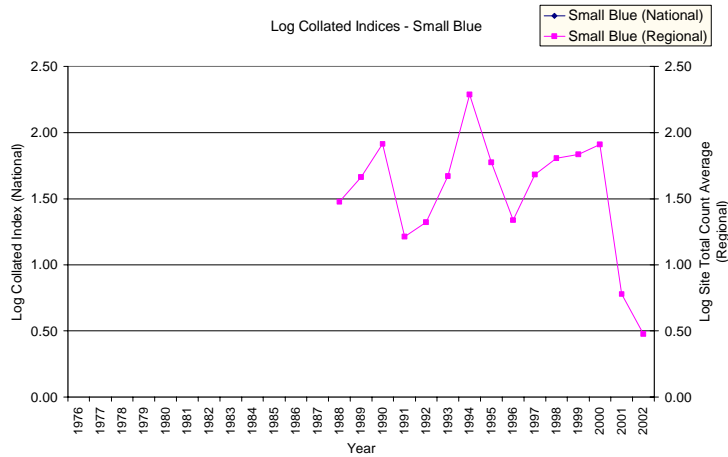
Blues

Small Copper - BAP status: not listed



There is a good degree of synchrony between the regional and national indices, showing the cyclical nature of the fluctuations in abundance of this species. At the moment it is in quite a trough. This species has 2 generations per year in the West Midlands, but in the years 1990, 1995, 1997, 1998 and 2001 it appears to have had a partial 3rd generation. These years mostly correspond to the years with the highest index values.

Small Blue - BAP status: Species of Conservation Concern



No National or Regional Collated Indices available (note the right scale instead). In 2002 there was the earliest ever sighting on a transect (23rd May) as well as the latest ever (20th August). This species was only recorded on 2 transects in 2002. There was an increase on one and no change on the other. This is not reflected on the chart because of fewer sites recording this species in 2002 than previous years.

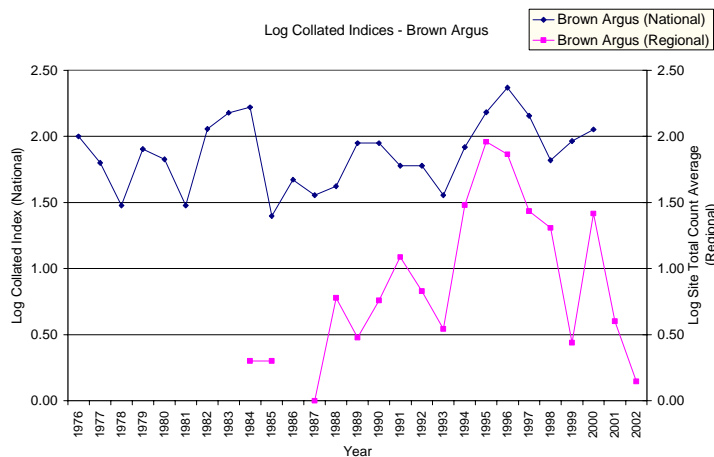
Silver-studded Blue - BAP status: Priority Species

No National Collated Indices available. Not enough data is available for a regional index because the species is only recorded on one site. In 2002 there was the earliest ever sighting on a transect (29th June). A peak count of 698 was observed this year!

Chalk-hill Blue - BAP status: Species of Conservation Concern

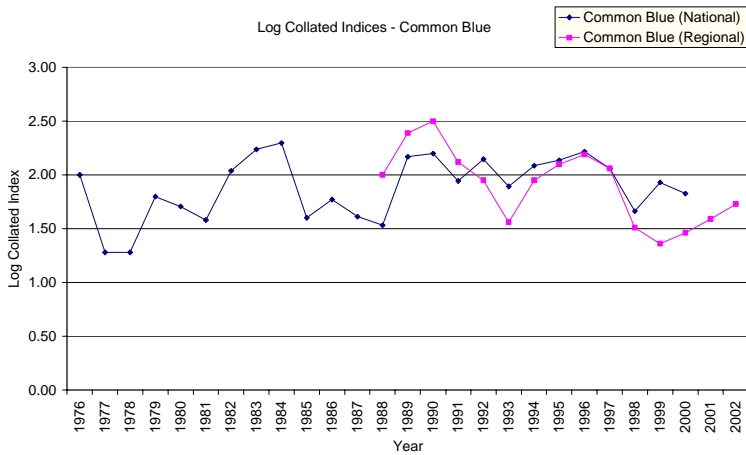
No BMS or regional indices are available. This species is only recorded from two West Midlands transect sites, and both showed a decrease. As part of a DEFRA research contract, UK trends of this species have been assessed by BC from 159 transect sites (with monitored sites located in 40% of occupied 10-km squares). There has been a significant increase across the UK since 1985, although over the last 10 years the population has been stable.

Brown Argus - BAP status: not listed



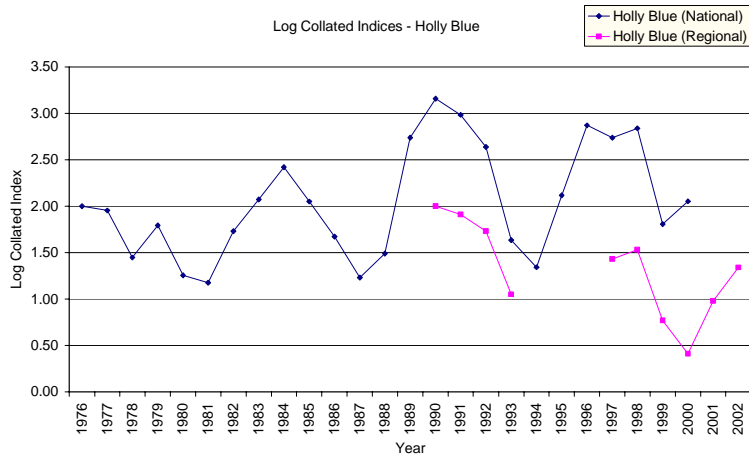
Data is insufficient to generate a Regional Index (note the right scale instead). In 2002 there was the earliest ever sighting on a transect (21st May). This species may have been lost from 1 site. Numbers recorded increased at 1 site, decreased at 2 and showed no change at 3. The regional picture shows a bad year with the 2nd lowest ever index of the series. Fluctuations in the regional indices correspond well with the national indices.

Common Blue - BAP status: not listed



There is good correspondence between the fluctuations of the two sets of indices. Regionally numbers have risen over each of the past three years from the low in 1999. There were increases at 7 sites, decreases at 2 and 13 sites showed no change. Numbers were still well below the previous highs in 1990 and 1996.

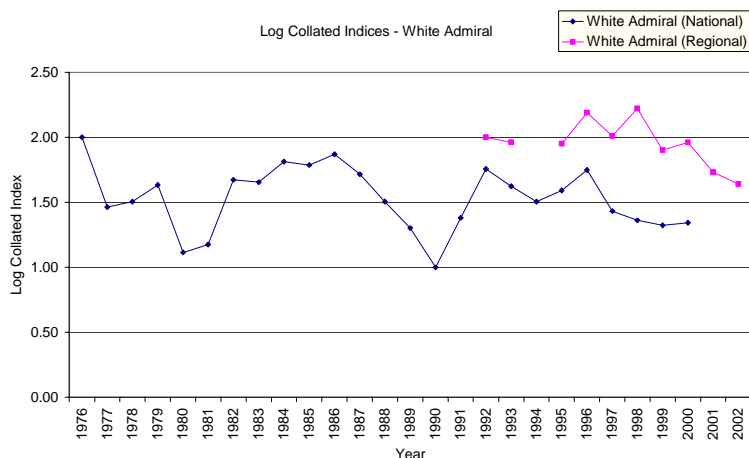
Holly Blue - BAP status: not listed



Fluctuations in the regional indices for this cyclical species correspond nicely with the national figures. Numbers recorded overall have increased over the past two years from the low of 2000. At the site level there were increases at 9 sites, decreases at two and no change at 14.

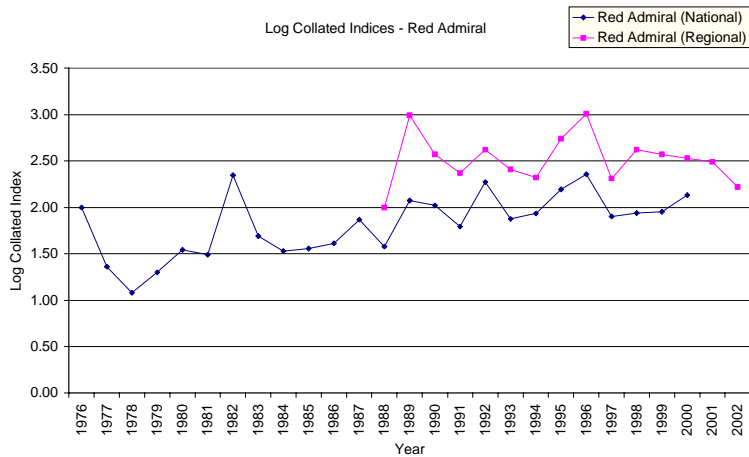
Nymphs

White Admiral - BAP status: not listed



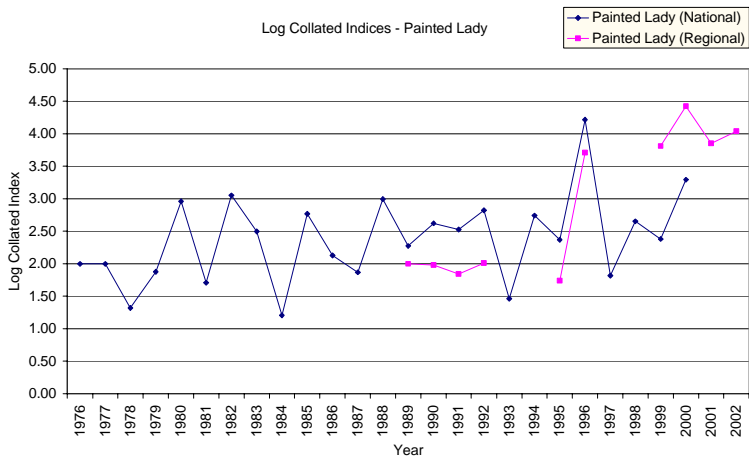
Data from the 8 sites from which this species is recorded indicate that it has had another poor year. 1 site showed an increase, 2 showed a decrease and 5 showed no changes. This species has been showing a general decline since 1998 and nearly had the wooden spoon!

Red Admiral - BAP status: not assessed



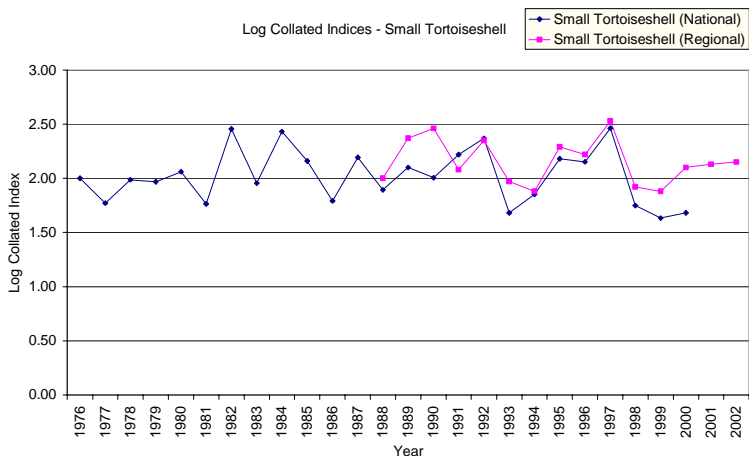
This species has populations boosted from migrants, which were poor this year. Only 2 sites showed an increase with 12 decreases and 9 no changes this year. This showed the 2nd lowest index ever for the West Midlands, whereas the National Indices have shown a general rise recently .

Painted Lady - BAP status: not assessed



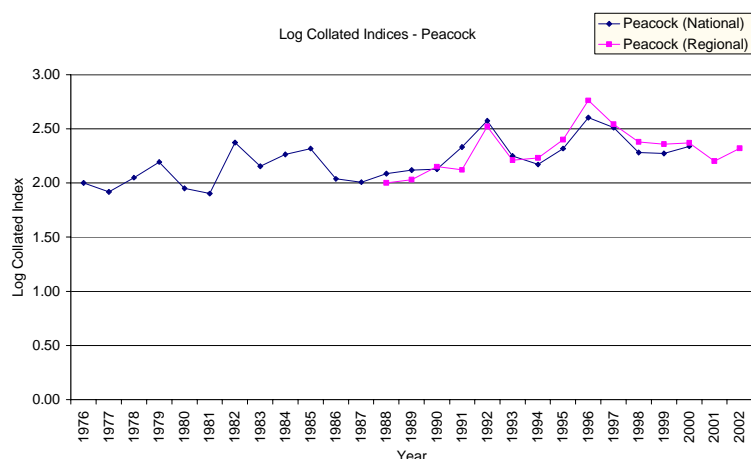
In 2002 there was the latest ever sighting on a West Midlands transect (9th October). This species, like other migrants shows great variability from year to year, with the last major invasion being in 1996. Although the chart shows an increase this year on those in the 90s, few were seen, with 3 site increases, 2 decreases and 15 with no changes.

Small Tortoiseshell - BAP status: not listed



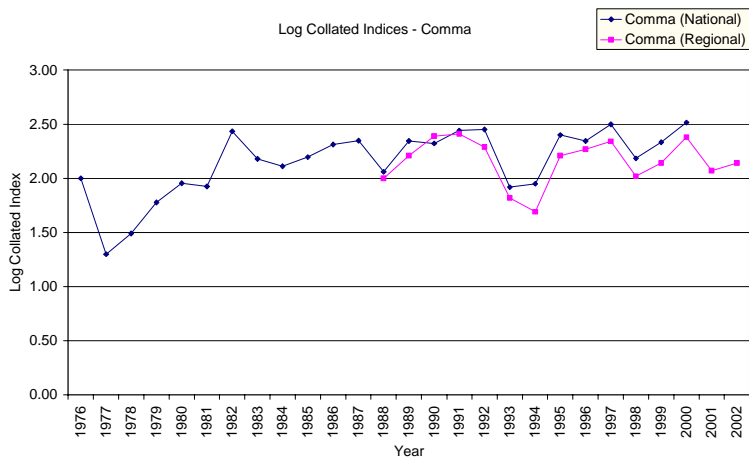
Fluctuations in the regional trend correspond nicely with the national trend with those of the national indices, with a gradual increase over the past 5 years. 6 sites this year showed an increase, 3 a decrease and 17 showed no change.

Peacock - BAP status: not listed



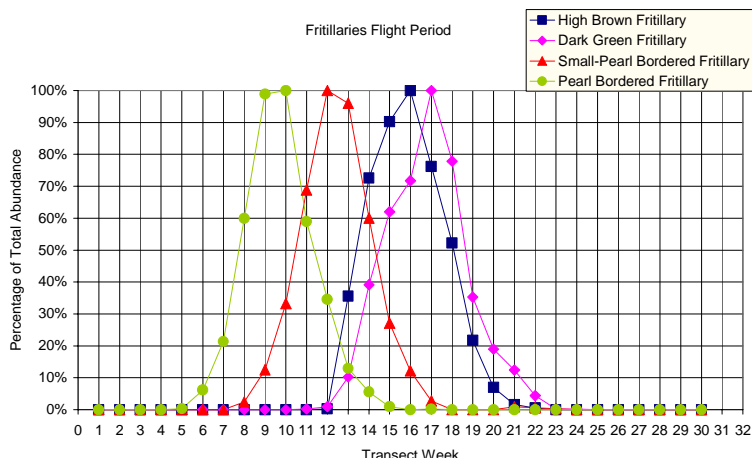
In 2002 there was the latest ever sighting on a transect (9th October). There is a high degree of synchrony between the fluctuations of the regional and national indices. The year was an average one with 6 sites showing increases, 5 decreases and 19 showing no changes.

Comma - BAP status: not listed



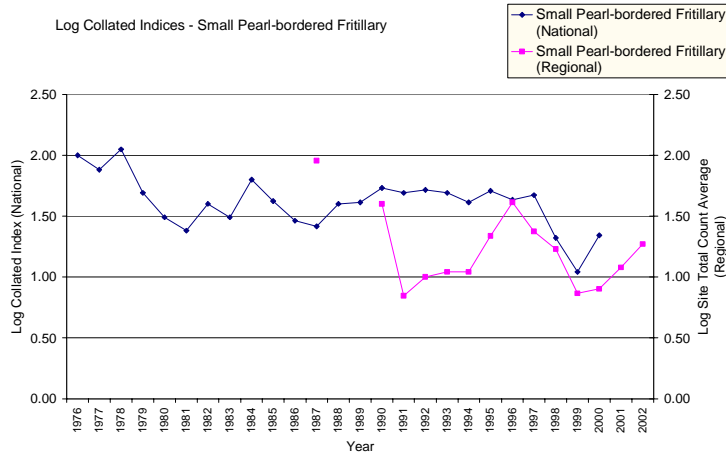
There is a high degree of synchrony between the fluctuations of the regional and national indices. This year was average for this species. There were increases at 9 sites, decreases at 7, and no change showing at 11.

Fritillaries



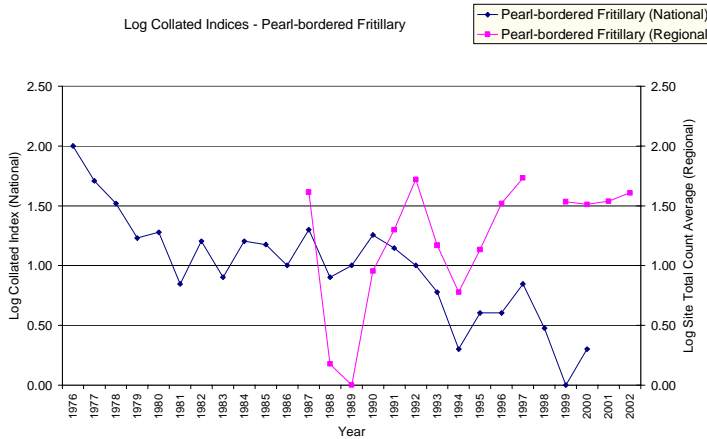
This chart shows the flight periods of various Fritillaries in the Region derived from the regional data, clearly showing a separate peak for each species.

Small Pearl-bordered Fritillary - BAP status: Species of Conservation Concern



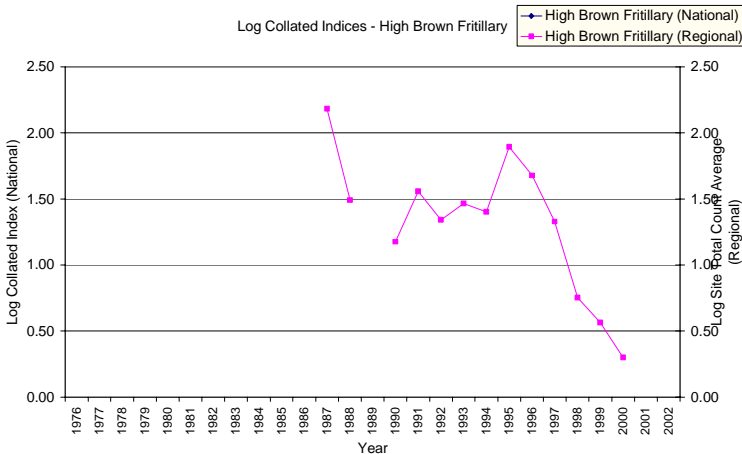
Data is insufficient to generate a Regional Index. This species is recorded from only 3 sites with one site showing an increase and 2 no change. It appeared to be a good year with numbers continuing to rise after the low of 1999. Fluctuations in the regional indices have followed those of the national indices in recent years. BC nationally collated data highlights alarming declines from monitoring sites over the last 15 years. The butterfly remains widespread in Scotland, where remarkably it is the 8th most common species!

Pearl Bordered Fritillary - BAP status: Priority Species



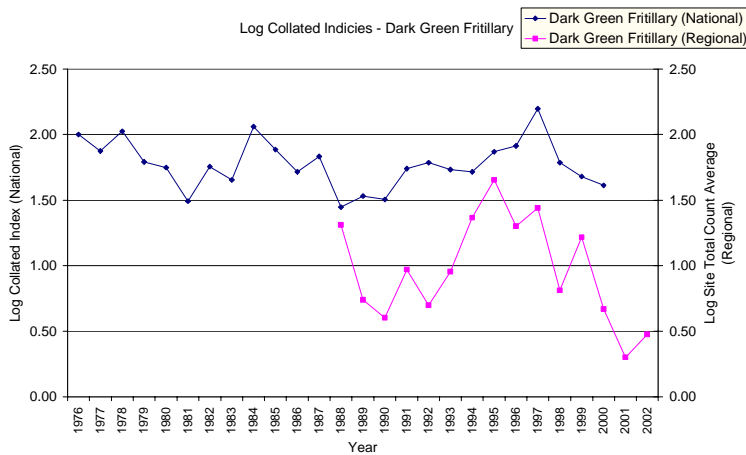
Data is insufficient to generate a Regional Index. This species is recorded on only 4 sites with 2 showing increases and 2 decreases this year. There has been a small increase over the past 4 years. There is some degree of correspondence between the fluctuations in the two sets of indices. We can be cautiously optimistic for this butterfly, which has undergone a massive UK range contraction in recent decades.

High Brown Fritillary - BAP status: Priority Species



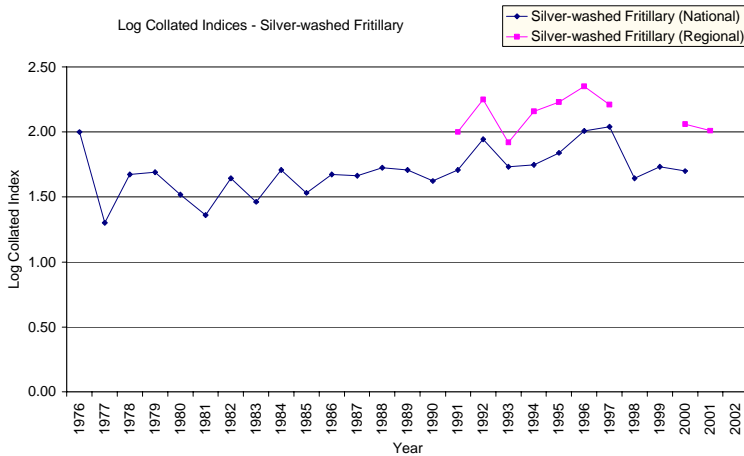
No National or Regional Collated Indices available (note the right scale instead). This species is recorded on only two sites and restricted to the Malvern Hills and Bircher Common and continues to show a sad decline despite much conservation effort.

Dark Green Fritillary - BAP status: not listed



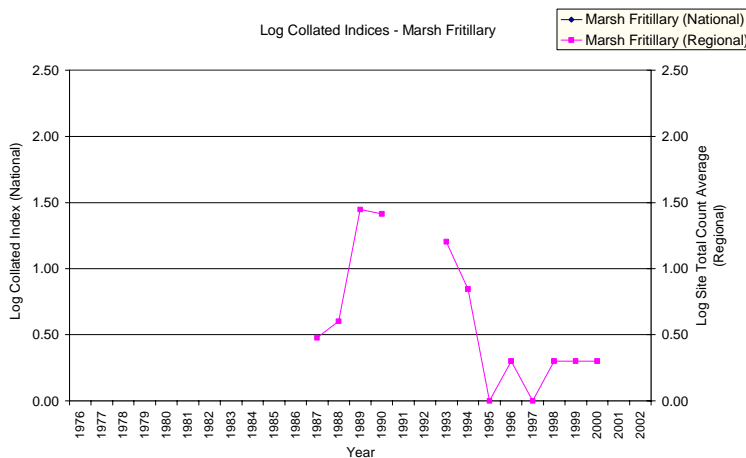
No Regional index available (note the right scale instead). This species is only recorded on 2 transects in the West Midlands, on one of which it showed an increase and on the other, no change. The indices indicate that this species has been shown to be in decline since 1997 nationally and 1995 regionally. This year showed a slight increase on the low in 2001.

Silver-washed Fritillary - BAP status: Species of Conservation Concern



In 2002 there was the latest ever sighting on a transect (11th September). The species was recorded on only 4 transects so no Regional Index could be calculated. 3 sites showed an increase and 1 no change.

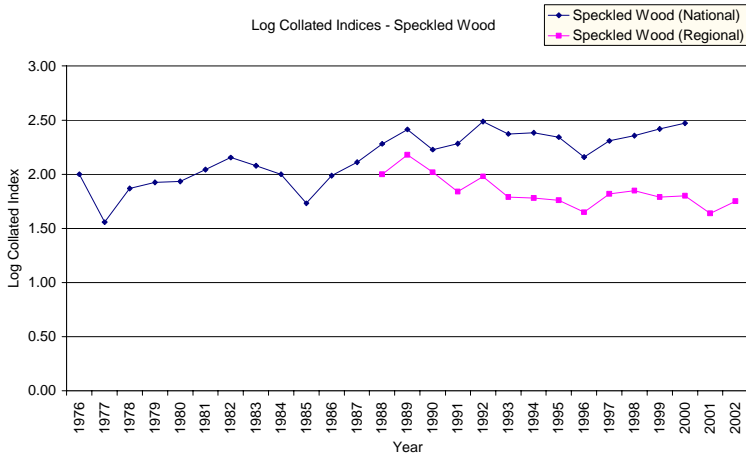
Marsh Fritillary - BAP status: Priority Species



No National or Regional Collated Indices available (note the right scale instead). This species was recorded on only one site this year, where no substantial change was recorded.

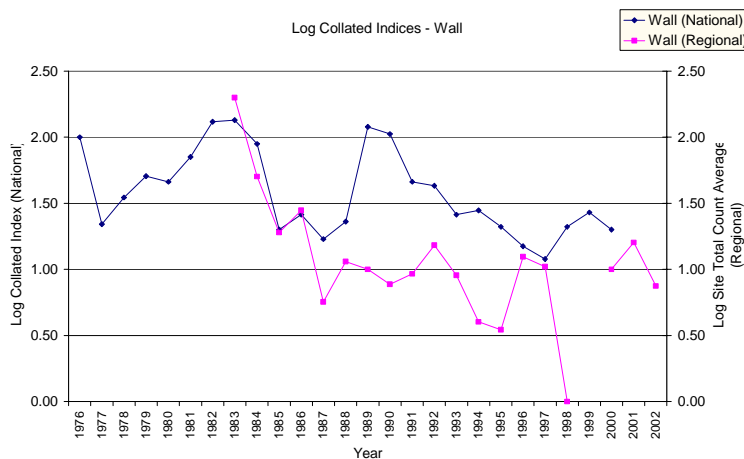
Browns

Speckled Wood - BAP status: not listed



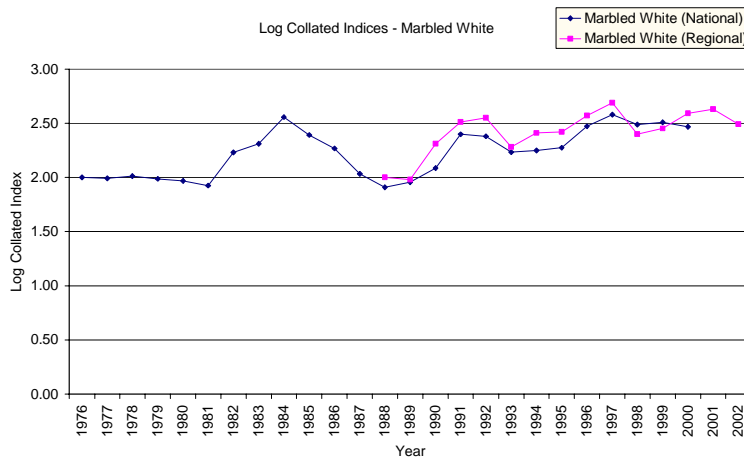
The general increases and decreases in the National Indices are reflected in the Regional Indices, except that the general regional trend shows stability rather than a general rise in recent years. This year has shown an increase at 7 sites, a decrease at 2 and no change at 17.

Wall - BAP status: not listed



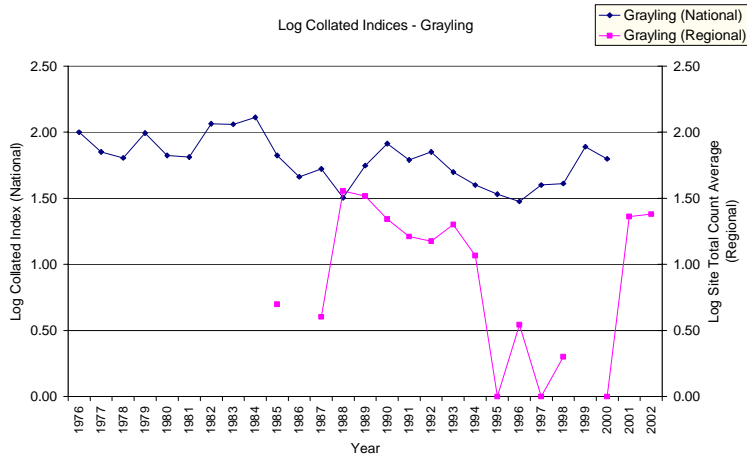
This species is recorded on only 2 transects this year. It has declined drastically from the national peak in 1989, generally reflected in the regional picture of this decline. It showed a decrease on 1 site and no change on the other.

Marbled White - BAP status: not listed



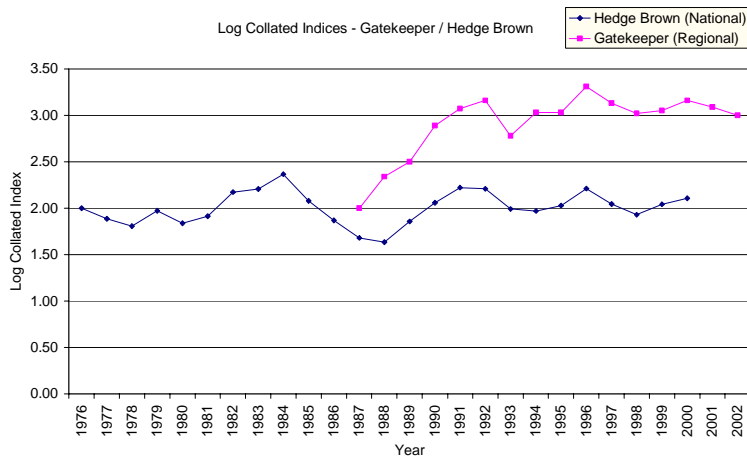
Fluctuations in the Regional Indices for this species correspond well with those of the National Indices. There were increases at 2 sites, decreases at 7 and the species was apparently lost from 1 site. Numbers recorded on transects have generally increased since 1989. However there was a drop in numbers from 2001 to 2002 resulting in 2002 being only just above average.

Grayling - BAP status: not listed



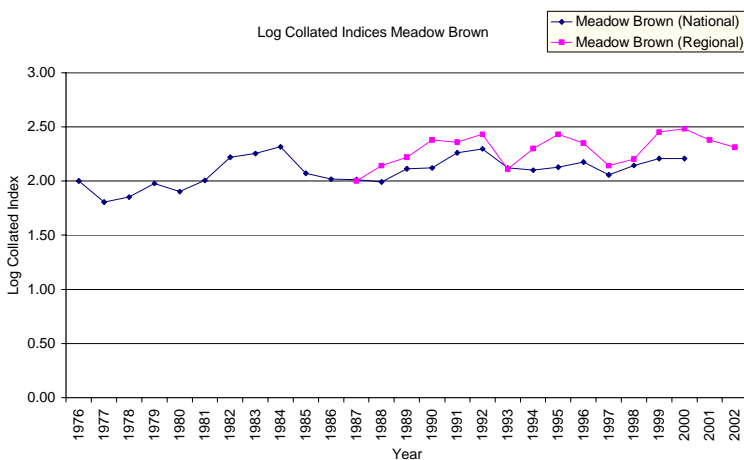
Data is insufficient to generate a Regional Index (note the right scale instead). This species can be found on one transect only. There was no apparent change from last year. In 2002 there was the latest ever sighting on a transect (4th September). Numbers have increased from the lows at the end of the 90s, which is reflected in the National Indices.

Gatekeeper / Hedge Brown - BAP status: not listed



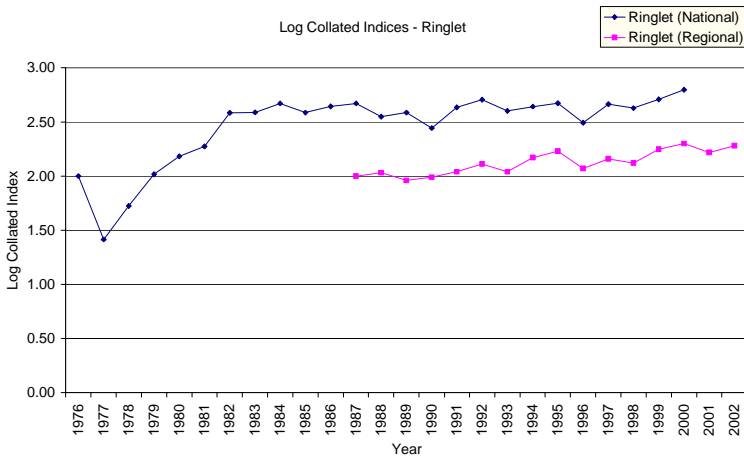
The fluctuations in the regional Indices for this species correspond well with those of the National Indices. However, there was a greater increase regionally at the end of the 80s. This year though was average, with the second consecutive drop in the Regional Index. There were increases recorded on 2 transects, decreases on 8 and 16 showing no change.

Meadow Brown - BAP status: not listed



Fluctuations in the Regional Indices correspond well with those of the National Indices. There is evidence from the indices of an approximately 5-yearly cyclical pattern of increases followed by decreases. Numbers have dropped over the past 2 years from the all-series high of 2000. There were increases recorded on 4 sites, decreases on 11 and no change on 12.

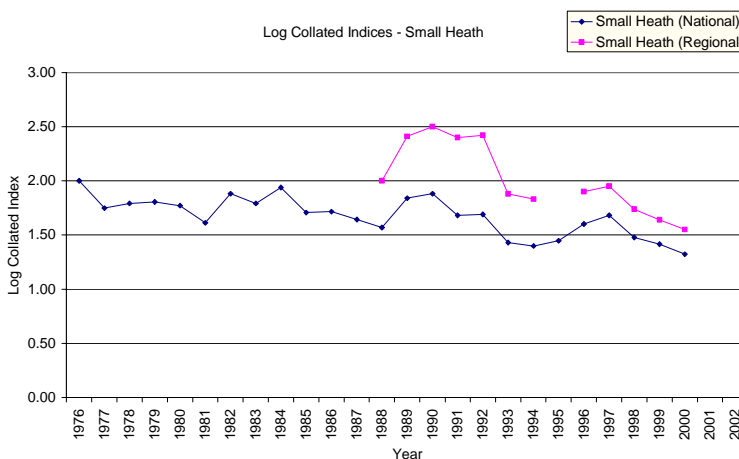
Ringlet - BAP status: not listed



There is fairly close synchrony between the fluctuations in the Regional and National Indices. Regionally there has been a general increase in the Index since 1987. 2002 produced the second highest Index of the series. In 2002 there was the latest ever sighting on a transect (12th September). There were increases at 7 sites, decreases at 3 and no change was recorded at 16.

Heaths

Small Heath - BAP status: not listed



This species continues to show decline in the region and this corresponds well with the national picture from BMS data. Data recently collated by BC from 388 UK Small Heath transect sites shows a mean annual decline from 1991-2000 of 4.4% per annum (Brereton pers. comm.). If the trend continues, this would equate to 66% over 25 years, and the species would qualify as a BAP Priority! This year showed a decrease at 1 site but no change at 6. The limited data from 7 sites did not generate a Regional Index this year.

Total Transect Counts for 2002 – A sum of counts over the weeks walked

Vernacular	Total Count		
Ringlet	14897	Pearl Bordered Fritillary	238
Meadow Brown	13114	Painted Lady	183
Gatekeeper / Hedge Brown	10004	Narrow-bordered Five-spot Burnet	176
Speckled Wood	7495	Chalk-hill Blue	120
Green-veined White	6341	Grizzled Skipper	108
Silver-studded Blue	4108	Latticed Heath	106
Peacock	3780	Essex Skipper	76
Large White	2523	Small Pearl-bordered Fritillary	68
Small Tortoiseshell	2442	Green Hairstreak	65
Small Skipper	2281	Burnet Companion	44
Large Skipper	2155	High Brown Fritillary	34
Small White	1941	Wall	30
Marbled White	1921	Grayling	24
Common Blue	1722	Cinnabar	24
White Admiral	1604	Speckled Yellow	20
Orange-tip	1452	Six-spot Burnet	16
Brimstone	1266	Brown Argus	14
Wood White	1100	Dingy Skipper	14
Comma	1042	Silver Y	12
Holly Blue	444	Dark Green Fritillary	12
Purple Hairstreak	432	Small Blue	8
Small Heath	377	Five-spot Burnet	6
Silver-washed Fritillary	287	Small Yellow Underwing	4
Red Admiral	266	Vapourer	4
Small Copper	255	Common Heath	4
		Brown Hairstreak	2

Moths

The value of recording day flying moths while walking butterfly Transects is presently very much under-appreciated. The Transect Walk methodology gives a mechanism for recording these species in more detail than recording on a casual basis. As can be seen from the Species Changes table, very few day-flying moth species are recorded on Transects in the Region. People are encouraged to record moths on their Transect as this could potentially provide a very valuable data set for monitoring changes in these species. Below is a full list of species that can currently be analysed within the Transect Walker Software. Those in bold represent species likely to occur in West Midlands Transects and which are readily identifiable. The code in the brackets refers to the national status of the species, so Argent and Sable and Drab Looper are two species of importance that could benefit from being recorded.

Argent & Sable (Nb), Beautiful Yellow Underwing (Common), Black Mountain Moth (Na), Black-veined Moth (RDB1), Bright Wave (RDB1), Broad-bordered Bee Hawk-moth (Nb), Broad-bordered White Underwing (RDB3), **Burnet Companion** (Common), Chalk Carpet (Nb), **Chimney Sweeper** (Common), Cistus Forester (Nb), Clouded Buff (Local), **Common Heath** (Common), **Drab Looper** (Nb), **Five-spot Burnet** (Local), Four-spotted (Na), **Humming-bird Hawk-moth** (Migrant), Jersey Tiger (Nb), Lace Border (Na), **Latticed Heath** (Common), Least Minor(RDB3), Little Thorn (Nb), Marbled Clover(RDB3), **Mother Shipton** (Common), **Narrow-bordered 5-spot Burnet** (Common), Narrow-bordered Bee Hawk-moth (Na), Netted Mountain Moth (RDB3), Rannoch Looper (Na), Scarce Forester (Na), Scarce Vapourer (RDB2), Scarlet Tiger (Local), Scotch Burnet (RDB3), Shoulder-striped Clover (RDB3) , **Silver Y** (Migrant), **Six-spot Burnet** (Common), Slender Scotch Burnet (RDB3), Small Argent & Sable (Common), Small Dark Yellow Underwing (Na), Small Purple-barred (Local), **Small Yellow Underwing** (Common), **Speckled Yellow** (Common), Straw Belle (RDB3), **The Cinnabar** (Common), The Forester (Local), **The Vapourer** (Common), Transparent Burnet (Na), Wood Tiger (Local), Yellow Belle (Local)

2002 Species Changes

This data set is derived from the BC's Regional Co-ordinator software (Regional Population Changes) for all sites and is defined in the help file as:

“For each species, and each year, this option gives the number of sites at which the annual index has increased/decreased by >20% and >50%, and the number of sites at which extinctions and colonisations have taken place. An extinct site is classified as one where the annual index of a species is 0 for three successive years. A colonised site is where the species is recorded for the second successive year with an annual index of >5, after 3 previous years of annual index=0.”

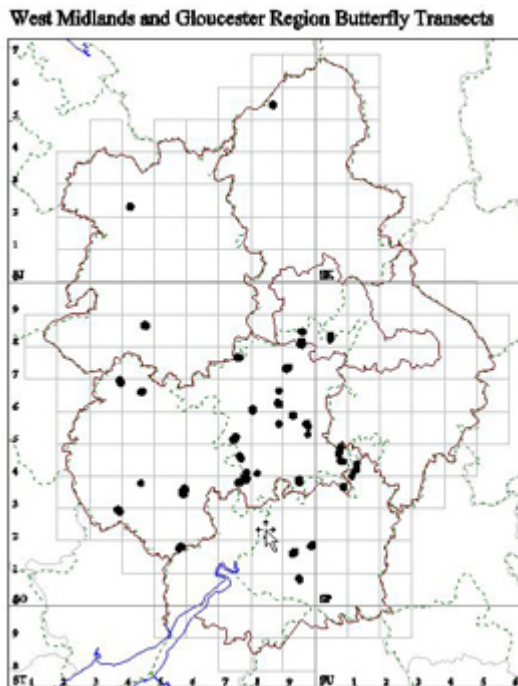
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Species	Sites	Site Extinctions	Sites Colonisations	Sites with 20-49% Inc.	Sites with 20-49% Dec.	Sites with > 50% Inc.	Sites with > 50% Dec.	Sites No Change
Small Skipper	23				3	6	2	12
Essex Skipper	7					5		2
Small/Essex Skipper	7		1	2		2		3
Large Skipper	26			3	4	3	1	15
Dingy Skipper	4							4
Grizzled Skipper	3							3
Wood White	5			1		1		3
Clouded Yellow	1							1
Brimstone	23					5	3	15
Large White	3			2	1	13		14
Small White	27			1	2	6	3	15
Green-veined White	28			2		9		17
Orange-tip	27				1	4	3	19
Green Hairstreak	5	2		1	1			3
Brown Hairstreak	1							1
Purple Hairstreak	13	1		1	1	4		7
White-letter Hairstreak	1							
Small Copper	17	2			3	4	4	6
Small Blue	2			1				1
Brown Argus	6	1		1	1		1	3
Common Blue	22			1		6	2	13
Chalkhill Blue	2				1		1	
Holly Blue	25			1	2	8		14
Duke of Burgundy	1				1			
White Admiral	8				1	1	1	5
Red Admiral	23				3	2	9	9
Painted Lady	2				2	3		15
Small Tortoiseshell	26			1	1	5	2	17
Peacock	3				3	6	2	19
Comma	27			1	3	8	4	11
Small Pearl-bordered Fritillary	3					1		2
Pearl-bordered Fritillary	4			1		1		2
Dark Green Fritillary	2					1		1
Silver-washed Fritillary	4					3		1
Marsh Fritillary	1							1
Speckled Wood	26			3	2	4		17
Wall	2						1	1
Marbled White	17	1		1	4	1	3	8
Grayling	1							1
Gatekeeper	26			2	7		1	16
Meadow Brown	27			1	9	3	2	12
Ringlet	26			3	3	4		16
Small Heath	7						1	6
Six-spot Burnet	2					1		1
Five-spot Burnet	1							1
Narrow-bordered 5-spot Burnet	1							1
Latticed Heath	1				1			
Speckled Yellow	1							1
The Cinnabar	2							2
Silver Y	3	1				1		2

Transect Summary

Location of Transects

The map shows the location of the Butterfly Transects for the Region (Gloucestershire, Worcestershire, Herefordshire, West Midlands County, Shropshire and Staffordshire) where grid references are supplied and full weekly data has been entered into the Transect Walker software.



Produced from MapMate software.

Transect Details

Transect	Recorder	County	Started	Principal Habitat	Conservation Status
Bircher Common	Guenter and Beryl Peters	H	1993	Bracken	
Blackminster	Terry Knight	W	2000	Mixed edges	
Briar Hill Droitwich Spa	Neil and Corinna Gregory	W	2001	Mixed edges	Wildlife Trust
Castlemorton Common	Ian Duncan	W	1998	Marshy grasslands	SSSI
Chaddesley WoodNew	Steve Harper	W	1989	Mixed Woodland	
Cleeve Prior	Terry Knight	W	1984	Broadleaved	LNR
Common Hill	Jeff Andrews	H	1992	Dry grassland	SSSI
Coppett Hill	Wendy Innes	H	2000	Bracken	LNR in AONB
Crickley Hill Country Park	David Perkins	G	1996	Dry grassland	SSSI CS
Croft Farm	Colin Dolding	H	2000		
Ewyas Harold Common	Sue Young	H	1999	Bracken	
Grafton Wood	John Tilt	W	1998	Mixed Woodland	SSSI
Haugh Wood South	Jeff Andrews	H	1982	Mixed Woodland	
Haugh Wood North	John Pembridge	H	1987	Woodland	
Honeybourne	Terry Knight	W/G	1998	Bare ground	
Knapp and Papermill Reserve	Garth and Pam Lowe	W	1984	Neutral Grassland	SSSI
Lineover Wood	Paul Arnold	G	1991	Broadleaved	SSSI AONB
Malvern Hills North	Colin Dolding	W	1999	Dry grassland	
Malvern Hills South	Digby Wood	W/H	1987	Bracken	SSSI
Melrose Meadow	Ian Duncan	W	2001	Neutral Grassland	SSSI
Miserden	David Perkins	G	1988		CS
Monkwood 1	Claire Turner	W	1986	Broadleaved	SSSI
Monkwood 2	David White	W	1996	Broadleaved	
Mons Hill	Jim Whitehouse	WM	1988	Mixed	

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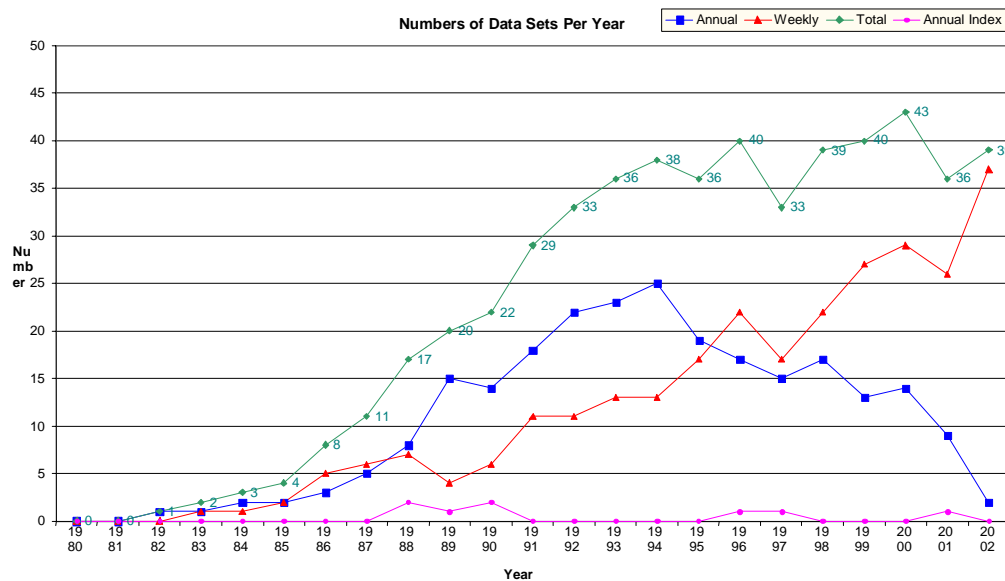
New Hawne Colliery	David White	WM	1999	Bare ground	
Prees Heath*	Jenny Joy	S	1983	Bare ground	
Prestbury	Ron Hatton	G	1992	Dry grassland	
Rodborough Common	Mathew Oates	G	1993	Grassland	
St Wulstans LNR	Ann Bowker	W	2002	Acid grassland	LNR
Tedsmere	Alan Holder	S	2001	Neutral Grassland	
Trench Wood	David White	W	1987	Woodland	SSSI
Uffmoor Wood	David White	W	1996	Broadleaved	
University to Selly Oak Canal	Neil Gregory	WM	2001	Bare ground	
Wallbrook Wood, Aconbury	Jeff Andrews	H	1999	Mixed Woodland	
Warley Wood	Michaela Hinton	WM	2002	Woodland	
Westhope	Anne Dyer	S	2001	Dry grassland	SSSI
Wigmore Rolls	Guenter and Beryl Peters	H	2000	Mixed Woodland	
Windmill Hill	Terry Knight	W	1982	Dry grassland	SSSI
Wyre Forest East	Terry Higgins	W/S	1984	Broadleaved	
Wyre Forest West	Frank Lancaster	W	1988	Broadleaved	

*Regularly since 1991

Data Status– On Transect Walker Software

County	All known Transects ever	Total Years of data	Years of Full Weekly data		Years of Annual Summary data only		Years of Annual Index data only		No data available or data lost	
			Count	Percentage	Count	Percentage	Count	Percentage	Count	Percentage
Gloucestershire	22	138	27	19.6%	86	62.3%	0	0.0%	25	18.1%
Herefordshire	12	83	46	55.4%	28	33.7%	0	0.0%	9	10.8%
Shropshire	14	46	17	37.0%	1	2.2%	0	0.0%	28	60.9%
Staffordshire	5	6	0	0.0%	5	83.3%	0	0.0%	1	16.7%
West Midlands	15	120	6	5.0%	50	41.7%	5	4.2%	59	49.2%
Worcestershire	32	290	181	62.4%	75	25.9%	3	1.0%	31	10.7%
Total	100	683	277	40.6%	245	35.9%	8	1.2%	153	22.4%

Indicated graphically on the chart below is the number of data sets per year throughout the region in terms of: Full weekly data, Years of Annual data and Years of Annual Index on Transect Walker Software:



Peak Numbers per Transect in 2002

Species	Max Index		Max Weekly Count	
	Transect	Index	Transect	Count
Small Skipper	New Hawne Colliery	448	New Hawne Colliery	127
Essex Skipper	Briar Hill, Droitwich Spa	14	Briar Hill, Droitwich Spa	6
Small/Essex Skipper*	Crickley Hill	34	Crickley Hill	12
Large Skipper	New Hawne Colliery	249	New Hawne Colliery	82
Dingy Skipper	Rodborough Common	85	Rodborough Common	20
Grizzled Skipper	Honeybourne	42	Honeybourne	8
Wood White	Wigmore Rolls	339	Wigmore Rolls	53
Clouded Yellow*	Rodborough Common	1	Rodborough Common	1
Brimstone	Monkwood 1	250	Grafton Wood/Monkwood 1	30
Large White	Malvern Hills North	355	Croft Farm/Malvern Hills North	34

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Small White	Malvern Hills North	265	Briar Hill, Droitwich Spa	35
Green-veined White	New Hawne Colliery	464	New Hawne Colliery	85
Orange-tip	Uffmoor Wood	86	Castlemorton Common	29
Green Hairstreak	Croft Farm	67	Croft Farm	21
Brown Hairstreak	Grafton Wood	1	Grafton Wood	1
Purple Hairstreak	Monkwood 1	143	Monkwood 1	31
White-letter Hairstreak		#N/A		0
Small Copper	Malvern Hills North	87	Malvern Hills North	14
Small Blue	Grafton Wood	3	Grafton Wood	2
Silver-studded Blue		#N/A	Prees Heath	698
Brown Argus	Rodborough Common	219	Rodborough Common	27
Common Blue	Knapp and Papermill	215	Knapp and Papermill	42
Chalkhill Blue	Rodborough Common	199	Rodborough Common	47
Adonis Blue*		#N/A		0
Holly Blue	Malvern Hills North	66	Malvern Hills North	15
Duke of Burgundy	Rodborough Common	30	Rodborough Common	10
White Admiral	Monkwood 2	67	Monkwood 2	14
Red Admiral	Crickley Hill/Tedsmere	14	Crickley Hill	5
Painted Lady	Croft Farm	26	Croft Farm	8
Small Tortoiseshell	Croft Farm	606	Croft Farm	63
Peacock	Uffmoor Wood	511	Uffmoor Wood	100
Comma	Uffmoor Wood	114	Uffmoor Wood	44
Small Pearl-bordered Fritillary	Wyre Forest East	28	Wyre Forest East	12
Pearl-bordered Fritillary	Haugh Wood South	57	Wyre Forest West	23
High Brown Fritillary	Malvern Hills South	5	Malvern Hills South	3
Dark Green Fritillary	Rodborough Common	14	Rodborough Common	4
Silver-washed Fritillary	Wyre Forest West	83	Wyre Forest West	28
Marsh Fritillary	Rodborough Common	3	Rodborough Common	3
Speckled Wood	Uffmoor Wood	1145	Uffmoor Wood	120
Wall	Crickley Hill	9	Crickley Hill	6
Marbled White	Windmill Hill	428	Windmill Hill	156
Grayling	Malvern Hills North	24	Malvern Hills North	10
Gatekeeper	New Hawne Colliery	628	New Hawne Colliery	243
Meadow Brown	Knapp and Papermill	824	Trench Wood	206
Ringlet	Haugh Wood South	1622	Haugh Wood South	476
Small Heath	Malvern Hills North	144	Crickley Hill	26
Large Heath*		#N/A		0
Six-spot Burnet*	Crickley Hill	6	Crickley Hill	4
Five-spot Burnet*	Crickley Hill	3	Crickley Hill	3
Narrow-bordered 5-spot Burnet*	Briar Hill, Droitwich Spa	68	Briar Hill, Droitwich Spa	29
Latticed Heath*		#N/A	University to Selly Oak	23
Speckled Yellow*	Crickley Hill	3	Crickley Hill	7
Common Heath*		#N/A	Crickley Hill	2
The Vapourer*		#N/A	University to Selly Oak	2
The Cinnabar*	Crickley Hill	1	Crickley Hill	1
Silver Y*	Briar Hill, Droitwich Spa	5	Briar Hill, Droitwich Spa	5
Burnet Companion*		#N/A	University to Selly Oak	10
Small Yellow Underwing*		#N/A	University to Selly Oak	2

* Not included in the analysis

Recording on the Transects

At present there are a few Transects where there is no walker(s), including Perry Wood, Shelfheld Coppice, Bredon Hill. If you would like to walk one of these transects or set up your own please contact Neil Gregory as soon as possible.

References

A lot of useful references are available and can be obtained by contacting Neil Gregory.

Acknowledgements

All-sites collated indices are produced by the Butterfly Monitoring Scheme run by the Centre for Ecology and Hydrology Monks Wood, Huntingdon and are used with permission. Our thanks go to all the recorders for all their hard work in 2002, BC Conservation Office, DEFRA and to Ian Duncan with help with this review. Transect Walker (1.3) and Regional Co-ordinator (1.33) software have been developed and made available thanks to DEFRA research funding to Butterfly Conservation.

Neil Gregory, January 2003
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