



Butterfly Conservation  
Dorset Branch  
Newsletter No 85<sup>5</sup>

# Dorset Butterfly Report for 2016



[www.dorsetbutterflies.com](http://www.dorsetbutterflies.com)



# Chairman's Notes

---

## From Nigel Spring, Dorset Branch Chair

It may seem strange to receive the 2016 Dorset Butterfly Report when we are much of the way through this year's season, with everyone very busy doing this year's transects, counting their garden butterflies and (as I write this) taking part in this year's Big Butterfly Count. A huge amount of work goes into the job of sorting out the data from all the different sources and it would be very difficult to produce this report any earlier. Thank you to everyone involved in the production of this – they are all volunteers and almost certainly take part in many other nature conservation activities too.

Quite apart from marvelling at the number crunching and the wonderful photos in this report, the main reaction I felt on reading it was 'wow! What a difference a year makes!' We are part way through a year when we have had one of the driest winter and springs on record, the sun has brought high temperatures and wonderful growth in the garden (if we have kept up with the watering!) and many butterflies have really flourished.

We won't find out exactly how the different species have fared on our various sites until all this year's records have been analysed, but many of them seem to have benefited greatly from the sunny dry



This is a copy of part of a page from the website taken on 16/7/16. You can see how the various species are already doing so much better this year. To see more go to the Recording page of the website and into 'Web sightings archive'.



Mating Marsh Fritillaries.

Photo: Dave Law

weather. Casual records submitted to the branch website are hugely up on last year - at over 100% at one point. This amazing statistic might of course be because more people are submitting records as our publicity machine becomes more effective and as people become more digitally literate (and the recording systems easier); and/or because people are getting out more in the warm dry weather

and noticing butterflies. But it does look as though this is going to be a very memorable year for some of our butterfly species.

On my local patch, Marsh Fritillaries had a record year, White Admirals too and Purple Hairstreak numbers have gone through the roof! As for the Meadow Browns, Marbled Whites, Ringlets and Gatekeepers, they are having a field day! All we need now is a good hatch of Peacocks, Red Admirals, Small Tortoiseshells and Commas to decorate all the Buddleia bushes and people really will remember this one as a butterfly summer.

In the meantime, enjoy reading this 2016 report - but if it begins to make you a trifle depressed, put it down, go outside into your garden or local reserve and revel in the butterflies this year!

*Nigel Spring*

Front Cover: Chalkhill Blue (left) and Silver-studded Blue.  
Photo: James Gould.

# Weather and Butterflies

---

**W**eather has a great effect on butterfly numbers. There are other factors: habitat loss, habitat management and use of pesticides, for example, but weather will always be having an effect.

Recent research\* by Butterfly Conservation, the University of East Anglia and the Centre for Ecology and Hydrology has taken an in-depth look at the effect of weather, especially non-normal weather, on the different stages through which butterflies go. This research was reported in the British Wildlife magazine\*\*. This article draws on both sources and is necessarily a rather crude representation of the detailed work carried out: you are encouraged to look at the

original text.

The research identified a difference between species with one brood per year (univoltine) and those with multiple broods (multivoltine). It must be remembered that in the UK butterflies spend the winter in different stages:

- 31 as a caterpillar
- 11 as a chrysalis
- 9 as an egg
- 5 as adults
- 1 (the Speckled Wood) as either caterpillar or chrysalis.



Speckled Wood. Photo: Penny Hawes.

\*“Sensitivity of UK butterflies to local climatic extremes: which life stages are most at risk?”. By O. McDermott Long; R. Warren; J. Price; T. Brereton, M. Botham & A. Franco. Journal of Animal Ecology, Volume 86, Jan 2017, pages 108-116.. Free online access: <http://onlinelibrary.wiley.com/doi/10.1111/1365-2656.12594/full>

\*\* “Butterflies”. By Nick Bowles and Richard Fox. British Wildlife Magazine, Feb 2017, pages 202-204. [www.britishwildlife.com](http://www.britishwildlife.com)

# Weather and Butterflies

---

It is also significant that butterflies are adults at different times of year - for example, the Orange Tip is out in April to June, while the Chalkhill Blue is on the wing during July and August.

The following findings applied to a varying number of species each time; the numbers of species involved has been left out for brevity.

**Univoltine** species suffer if:

- Winter is too warm.
- Summer is too cold.
- It is too wet during the chrysalis or caterpillar stage.
- It is too dry during the egg or adult stage.

But do well if:

- It is hot during adult life stage.

**Multivoltine** species suffer if:

- Winter is too warm.
- It is too wet for the adult stage during the first and second generations.
- There is drought for the second lot of caterpillars.

But do well if:

- It is hot during the adult life

stage

- It is dryer during the first egg stage.

The difference for multivoltine as opposed to univoltine species is that they seem to be more susceptible across all life stages.

Some of the possible reasons for this:

- Adult butterflies are bound to benefit from heat given their body temperature varies with the air temperature.
- Warm winters cause increases in diseases and fungal infections.
- If overwintering as an adult or caterpillar, a) unusual warmth might act as a cue for them to come out too early, only to be killed off by temperatures returning to being colder, b) it could be that the caterpillar foodplants could be killed off by being falsely encouraged to develop early.

It was observed that generalist species suffer more from out-of-the-ordinary weather than specialist species, especially when on the edge of their climatic

# Weather and Butterflies

---

range (as many butterflies in the UK are). Specialist species are more affected by other factors, such as habitat loss or degradation.

As it is pointed out in the British Wildlife article, the winter of 2015/16 was the third warmest since 1910 for the UK as a whole, and the warmest ever for England and Wales. This could suggest that the low butterfly numbers of

2016 were climate driven.

Whether climate change will benefit butterflies in the UK or not is still open to debate. They could potentially benefit from increasing temperatures, but warmer and wetter winters, plus extreme weather events could be detrimental. As usual, the answer is likely to be complex and nuanced.

---

## Thanks

---

**T**he Dorset Branch Committee sends its very grateful thanks to all of you who help in myriad ways:

- All of you who tramp round transect walks, record in your gardens or the wider countryside, do the Big Butterfly Count, fill White Holes, or send lots of records and photos to the website
- The verifiers of the results, including those received via the website, which are usually verified within 24 hours
- Those who help with the data input and analysis
- Transect walk organisers
- The stalwarts who go out and do practical conservation work
- Website and social media helpers
- People who man our stall at events
- Fundraisers etc. etc.....

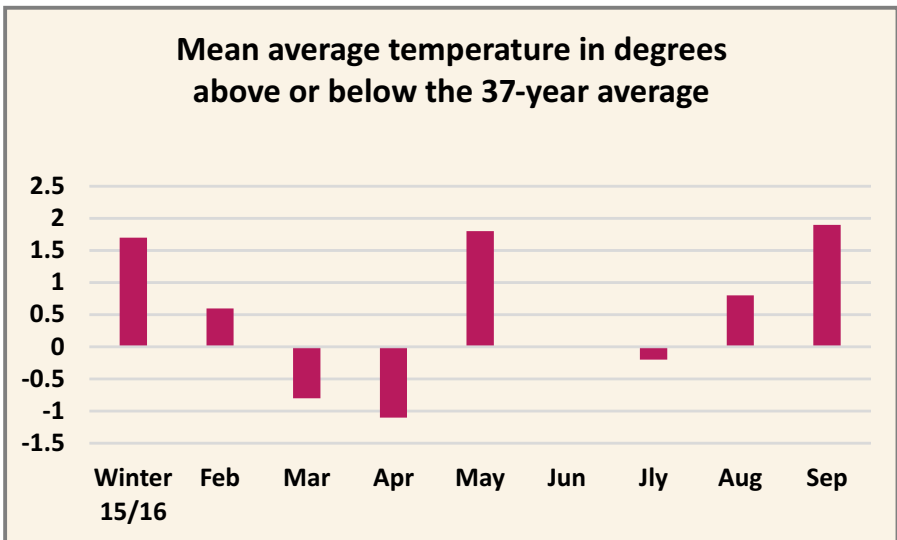
Goodness knows how many volunteer hours that adds up to, but we appreciate every one of them!

# Weather in 2016

**T**he weather strongly affects butterfly numbers, though not all species are affected in the same way - see the previous pages.

For the 2016 butterfly year in Dorset the Fontmell weather reports, gratefully received from Judy Westgate, show as follows.

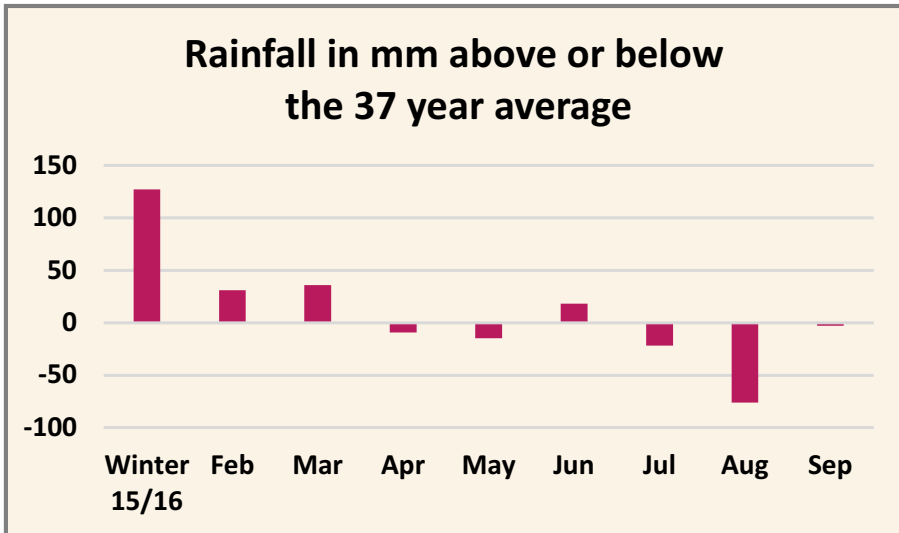
Rainfall was above average for the winter period and through to March. It was also higher in June, which is especially bad for double-brooded butterflies, as it means less butterflies in the second broods, which produce the generations needed for the following year, which have to survive the tough winter months.



Temperature. There were three months below the 37-year average (compared to five in 2015), while most months were above average especially May and September.

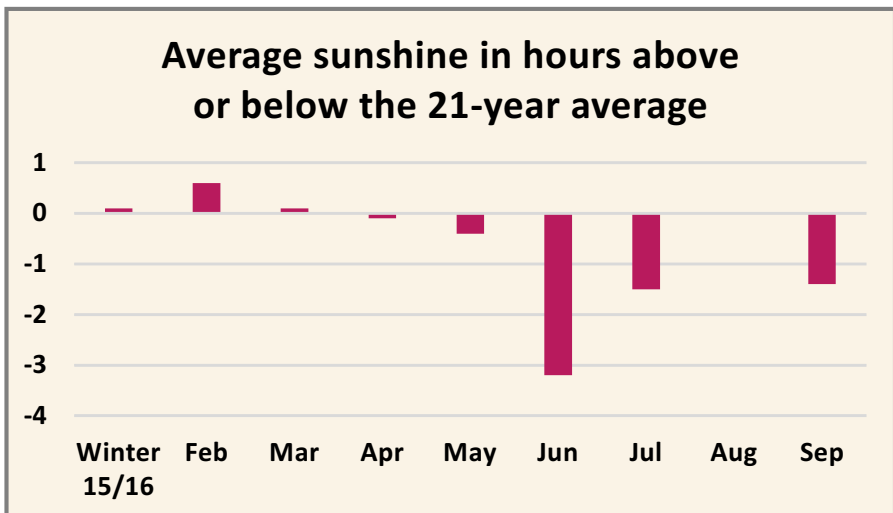
Other months were somewhat below average, with July and especially August being very dry (see graph on next page)

# Weather in 2016



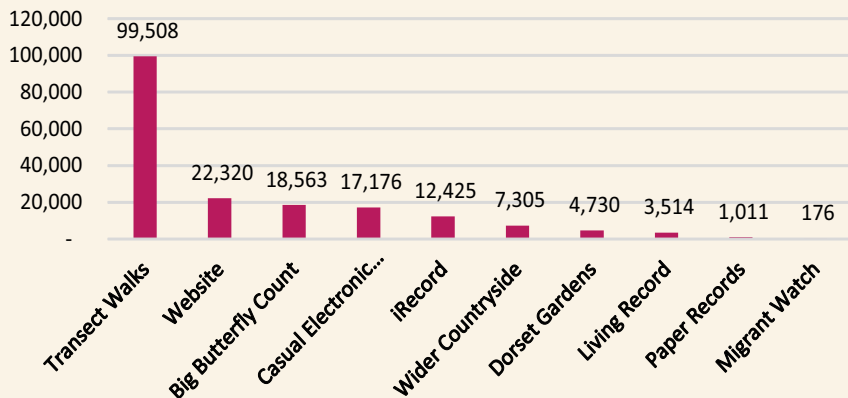
2016 was not a good year for sunshine with five months below average (compared to 4 in 2015). The months when adult butterflies are on the wing were

all below the 21-year average, except August, which could have significantly affected butterfly numbers.



# Butterfly Results - Sources

**Numbers of butterflies in 2016  
by record type**



**D**orset has a lot of schemes to encourage people to record butterflies, which are listed on the website. We also receive records from other national schemes, like Living Record and iRecord. Butterfly Conservation HQ send us the Dorset entries for the Big Butterfly Count and Migrant Watch.

Usually we receive records from the British Trust for Ornithology, but they had not been received in time to add to the graph above.

All types of data received show

lower totals in 2016 than the previous year. To take the two largest figures:

Transect Walks

- 2015 - 135,853
- 2016 - 99,508.

Website

- 2015 - 33,714
- 2016 - 22,320.

There can always be variation in recorder effort, but with the other data analysed on the following pages, 2016 was a bad year for butterflies.

# Transect Walks

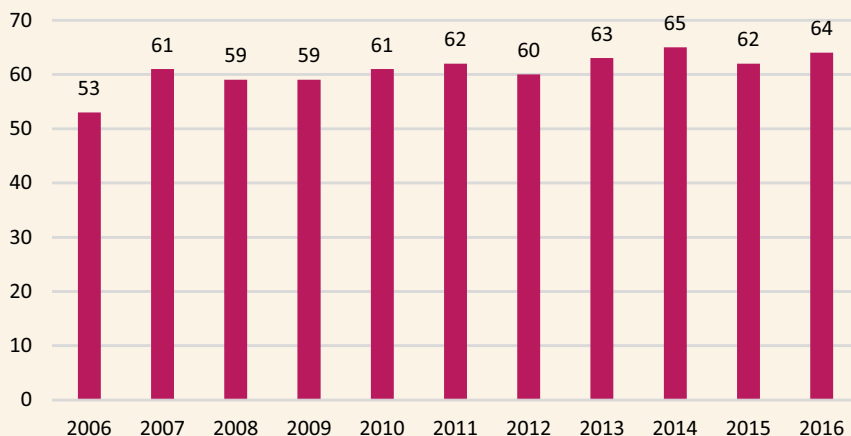
**T**he analysis in this report largely uses data from transect (butterfly

monitoring) walks, as these are done regularly, on the same sites and with set rules. The completeness of the transect data is therefore important and 2016 had very few walks missed, with eight sites missing no walks at all, so congratulations and

thanks to all our dedicated walkers.

We recorded on 64 transects. Added to the list was Ryewater Nursery, but lost from it was Deadmoor Common, and Stour Valley missed over half its walks and so did not qualify to be included in these statistics.

**Number of transect walks in Dorset**

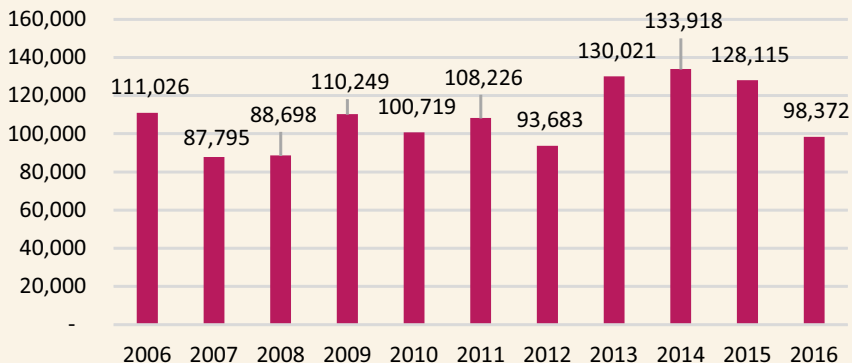


64 walks, ideally undertaken 26 times a year each, means a total of 1664 walks, so you can see how much volunteer effort is needed to keep them going. We are always in need of more

walkers; you only need to do as many walks in the season as you wish, and help can be given with butterfly identification. Please contact Bill Shreeves (see inside back cover) if you are interested.

# Butterfly count 2016

**Number of butterflies counted on all transect walks**



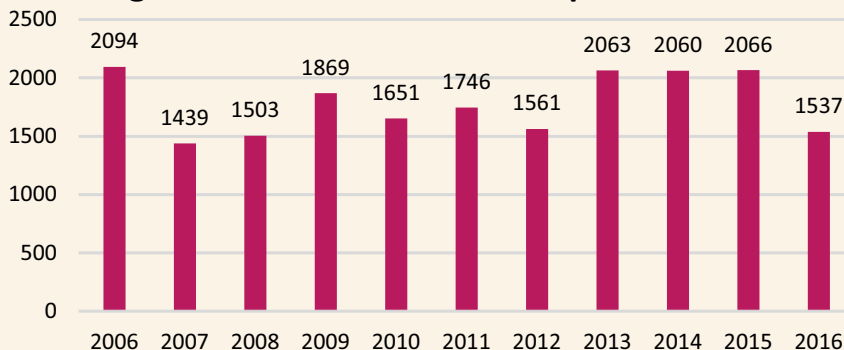
**T**he graph above tells its own story - the lowest number of butterflies counted since 2012, and only 2007 and 2008 were lower. This number, is not corrected for the

**Highest count  
Cerne Giant  
6,648  
butterflies**

number of walks involved.

The graph below is more accurate, as it is corrected. Unfortunately, it shows an even worse situation, with only 2007 and 2008 having lower numbers of butterflies on average.

**Average no of butterflies counted per transect walk**



# Species ups and down

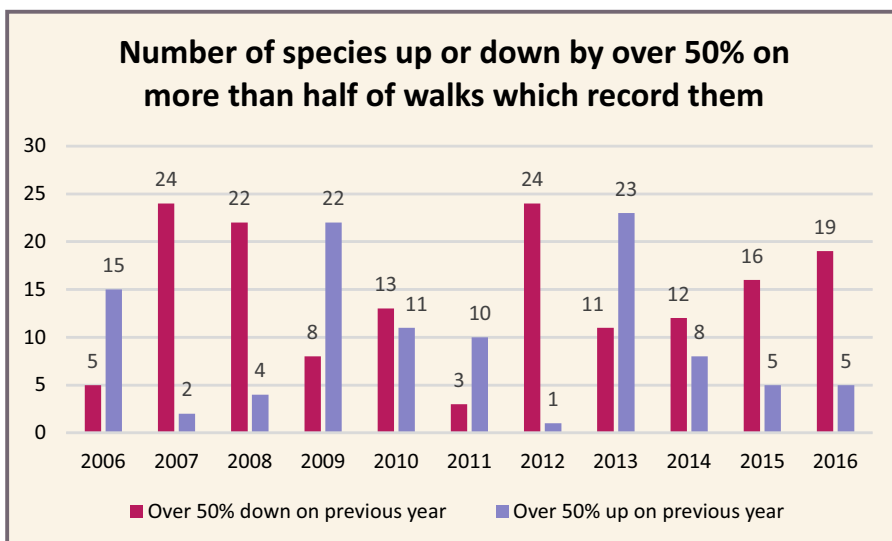
**L**ooking at how many species were not seen on a walk on which they were seen the previous year, also showed a depressing picture, with 185 down and 87 up.

The walks with the largest number of species which failed to turn up were Mude Valley, Ailwood, Corfe West and Fifehead with six species scoring this undesirable record.

On the other side: of species which turned up where they had been absent in 2015 (up from 0) the highest total was four, from both Mude Valley and Ferry Road

West. This makes 2016 the first year since 2012 when the number of species not turning up exceeded those that did.

Another way we look at how butterflies have fared is to investigate the number of species which have increased or decreased by more than 50% on over half the walks that record them. 2016 is the third year in succession when the numbers of species in decline exceeded those which increased. Fortunately it was not as bad as 2012 or 2007 and 2008.



# Winners

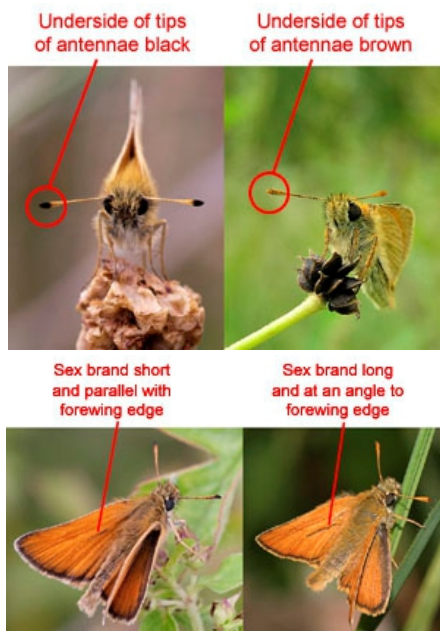
**S**o, we move on to which species did well or badly, and let's start with the "winners" in terms of species which gained over 50% (on 2015 results or annual averages) on over half their walks, of which there are five.

We start off by dismissing two species!

The **Silver-spotted Skipper** only scores because it went up from zero to four at its only site, Fontmell Down, in North Dorset. In fact, numbers are not this low on Fontmell generally, but the butterflies have moved uphill, so they are no longer being counted on the transect. This might seem disappointing, but negative data helps us to identify what a species doesn't like about its habitat, so we can avoid it elsewhere. The Silver-spotted are still being recorded off the transect.

The **Essex Skipper** is excluded because it is not reliably identified a lot of the time. It would help if everybody

reporting butterflies via any method would look at any apparent Small Skippers and check they are not actually Essex Skippers. The best identifying factors are the antennae and the males' sex brands. In the pictures below, the Essex is on the left and the Small on the right.



Pictures courtesy of Peter Eeles

We appreciate that this is probably not feasible when you are doing a transect walk, but do what you can.

# Winners

So we have three real contenders for the Dorset Butterfly of the Year: the **Large White**, the **Small White** and the **Red Admiral**.

## The Small White

managed a grand total of 3,740 on all sites, compared to a peak of 10,143 three years before and a low of 1,809 in 2012. The highest count on a single site over the year was 194 at Wareham Walls.

The **Large White** gained a grand total of 3,373 on all walks on all sites compared to a peak of 6,594 in 2009 and a low of 1,228 in 2012. Durlston East made the highest score for one site with 419.

For the **Red Admiral**, a massive 2,490 were recorded, only beaten in the last 20 years by 2003 with 4,062 and 1996 with its amazing 6,691. It scored a big increase on 81% of its 64 sites, with Hethfelton getting the highest individual count of 225 on all its walks. The numbers were almost

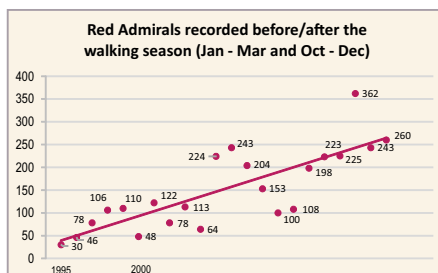
## Butterfly of the Year The Red Admiral



Red Admiral. Photo: Chris Rowland

certainly boosted by inward migration, but there would have been home-bred individuals as well.

While transects only run from April to September, the website keeps recording all year, so we can see what the numbers of **Red Admirals** were for the whole of 2016. Robin George dug back into the records and found a distinct upward trend of Red Admirals outside of the transect recording season.



# Losers

**In all there are 18 losers,** judged by being below the previous year or their annual average on over half the walks. This figure compares to 15 the previous year.

The full list (not in order of how bad their loss) is:

- Large Skipper
- Grizzled Skipper
- Clouded Yellow
- Green-veined White
- White-letter Hairstreak
- Small Copper
- Brown Argus
- Common Blue
- Chalkhill Blue
- Adonis Blue
- White Admiral
- Painted Lady
- Small Tortoiseshell
- Dark Green Fritillary
- Marsh Fritillary
- Wall Brown
- Grayling
- Small Heath



Grizzled Skipper and Small Tortoiseshell. Photo: Mark Pike

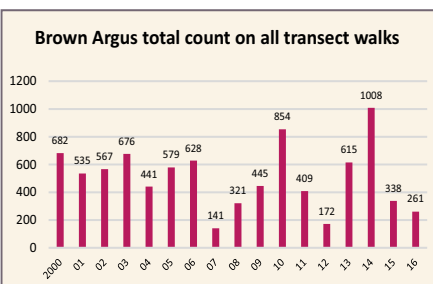
The following pages look in more detail at some of these species.



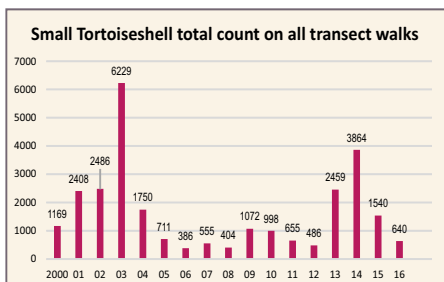
The South Dorset Area Meeting early in 2017 had a guest speaker: David Brown, Landscape Partnership Project Manager for the National Trust. He gave us the welcome news that the National Trust is to concentrate more on improving the environment in the future, recognising that nature reserves are limited in their effects and that improvements have to be made across the wider landscape. He also expressed their intention to work closely with local naturalists and volunteers. A full article on this will appear in our next Newsletter.

# Losers

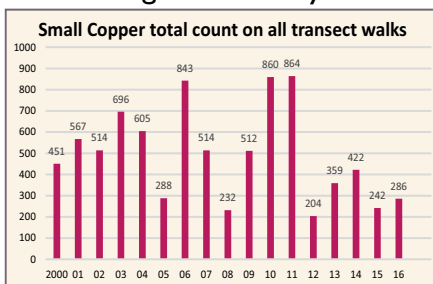
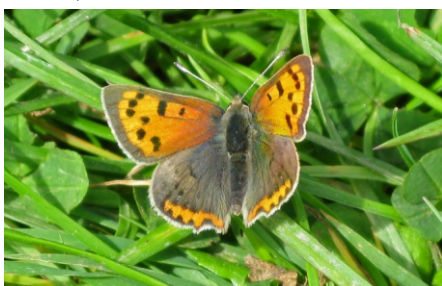
The graphs for the period since the start of the century show the story all too well for the three greatest 'losers'.



The biggest loser was probably the **Brown Argus**, probably handicapped in both broods by the low levels of sunshine.



The **Small Tortoiseshell** was unable to recover from its 2015 crash, but wasn't the lowest it had been during the last 16 years.



The **Small Copper** has done poorly for the last few years. It did have a good third brood in October, but this may not help in 2017.

Photos: Mark Pike (top) and Brian Arnold (centre and bottom)

# Losers

**T**he Chalkhill Blue continues to give us concern in Dorset.

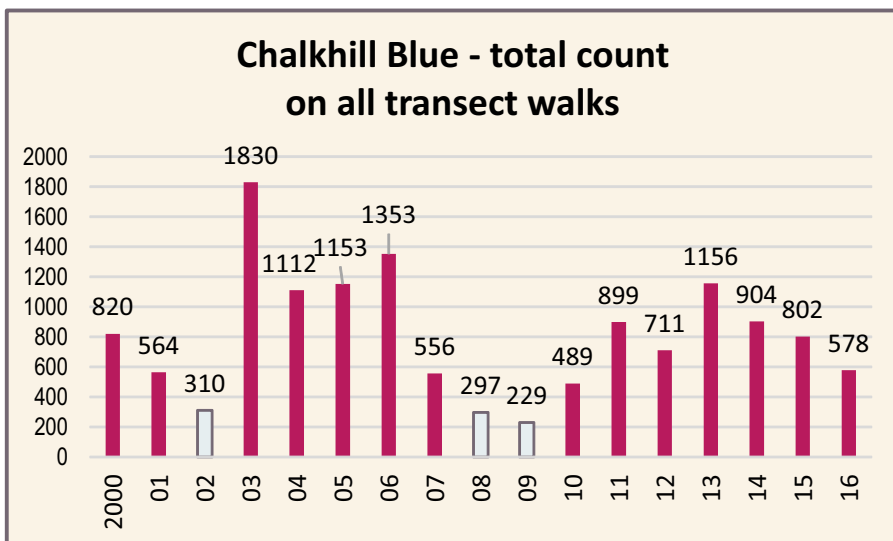
Nationally it has declined in distribution by 50% since 1976, but did relatively well between 2006 and 2014.

2016 is the fifth consecutive year in which the Chalkhill has been a loser in Dorset. Looking at the chart below, the three lowest years are not comparable, as one of the walks with the biggest numbers of Chalkhills was not walked, so being down to 578 is



Chalkhill Blue. Photo: Mel Bray

very concerning. The effect of Tout Quarry not being included in the results is shown by the fact that 200 of the 578 counted in 2016 were on this site.



The three bars with no colour indicate years in which Tout Quarry on Portland was not walked.

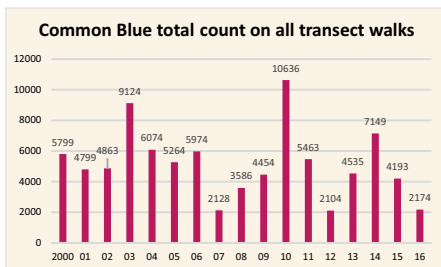
# Losers



Common Blues. Photo: Brian Arnold.

**T**he **Common Blue** was down on its annual averages. The top site was Ballard Down, near Swanage, where 244 were recorded.

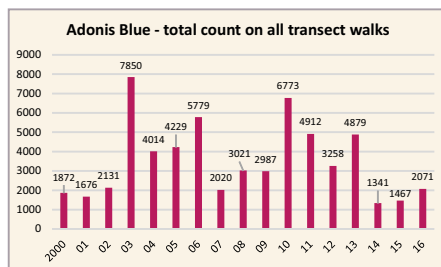
It is likely that this double-brooded butterfly was hit badly by lack of sunshine.



As can be seen from the chart at the foot of the previous column, the count has been lower: in 2007 and 2012.

Nationally, it has gone down over the long term, but remained fairly stable recently.

The **Adonis Blue** was down on annual averages, though up on 2015. The top site was Ballard Down, near Swanage, where 1,305 were counted during the season. Large numbers were also seen at Durlston, Fontmell and Clubmens Down.



Adonis Blue. Photo: John Woodruff

# Losers

**T**he **White Admiral** had a very poor count on walks, though not as bad as 2001, in Duncliffe Wood, where they have been missing since 2005.

2002, 2012 and 2013. This is a species that stays up in the tops of the trees a lot, so it may be that lack of summer sunshine means it is out of sight of the walkers. The top site was Rooksmoor with nine.

Numbers were very low at Piddles Wood (north Dorset) and at Stubhampton, where the total count was only four, and one of those was caught by a spider!



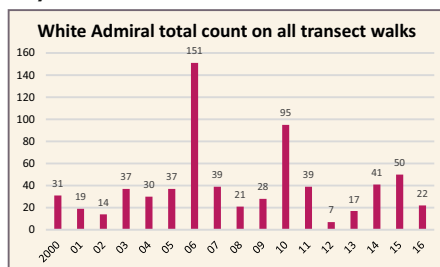
White Admiral in spider's web.  
Photo: Gordon Cryer.

This bad news was balanced by two pieces of good news. A specimen was seen and



White Admiral. Photo: Derek Yeomans

The second piece of good news was one seen in his Lytchett Matravers garden by Howard Richings, who managed to get a shot of a silhouette through a leaf, but no more. This species has not previously been recorded anywhere near that area.



It is interesting to look at the White Admiral figures in relation to the weather patterns during its development.

# Losers

---

Egg laying back in July the previous year may have been retarded by poor temperatures and lack of sunshine.



White Admiral eggs.  
Photo: Mark Pike

The tiny hibernating caterpillars would have been out between October 2015 and March 2016, and possibly did not do well in the warm and wet winter.

The caterpillars would then have been growing during June, with rain above average and sun well below. These are conditions that



White Admiral caterpillar. Photo: Bob Eade

research by Dr. Pollard has shown causes mature caterpillars to grow slowly and be badly predated.

Finally, the chrysalis would have formed in July, with below average sunshine and temperature, again detrimental to its welfare.



White Admiral chrysalis.  
Photographer unknown

All this suggests the poor showing of White Admirals in 2016 may have been related to the weather conditions at its various stages.

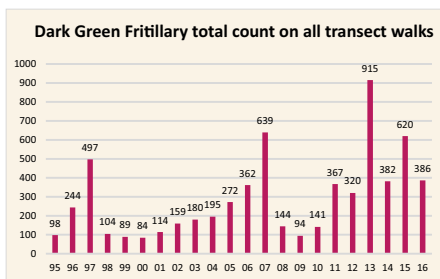
# Losers



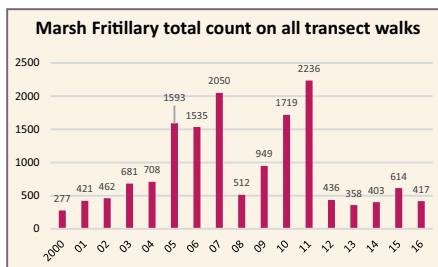
Dark Green Fritillary.  
Photo: Lawrie de Whalley

The **Dark Green Fritillary** reached a record high in 2013 but it is now heading downwards again. It probably needs a warm March/April for the caterpillars to come out of hibernation and start feeding on hairy violets, but in 2016 the weather did not oblige.

Melbury Down came out as the top site again, with 165.



The **Marsh Fritillary** remained at the low count level which it has retained since the dramatic crash of numbers in 2012.



Two chalk sites did well:  
Clubmens Down (81) and Cerne top at 124.



Marsh Fritillary. Photo: Richard Belding

Worries about the plunge down to five on Hod Hill provoked a meeting between Butterfly Conservation and the owners of the site, the National Trust. It concluded that the grazing regime needs altering, and that the North and East ramparts need to be recorded in future.

# Losers

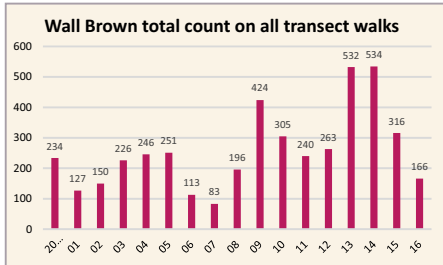
**The Wall Brown** has suffered a very rapid decline in numbers since the record highs of 2013-14, but it is still at better levels than the lows of 2001-2 and 2006-7. Earlier declines followed successive wet summers but 2016 was exceptionally dry: possibly the poor sunshine may have been a factor.



Wall Brown. Photo: Betty & Tony Rackham.

The better weather late in the summer meant that several October sightings came into the website but, like the Small Copper, it is far from clear that third broods are very helpful, as they rarely succeed in producing later stages capable of getting through the winter, which may be why Walls are doing so badly in Europe.

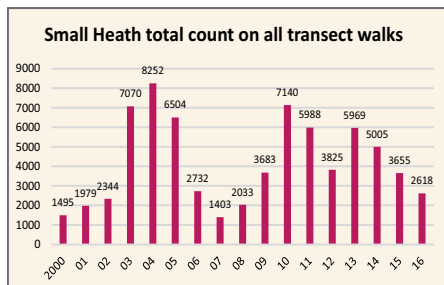
The top site was Bindon Hill, in Purbeck, with 68.



The **Small Heath** has been steadily declining on walks since 2013, though it still has to sink further to reach the levels of 2007-8 or 2000-2002. The top site was Cerne Giant with 484.

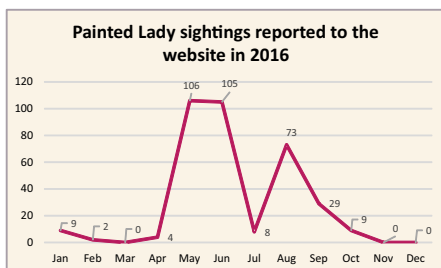


Small Heath. Photo: Penny Hawes.



# Regular Migrants

**T**he **Painted Lady** started the year outside the walk season, with a remarkable count of nine in January followed by two in February. These early migrants may have bred, producing the high numbers in May/ June.



That the high numbers did not continue is possibly due to below average sunshine and temperature in July, hampering egg laying or survival. The figures above came from the website, not transect walks.

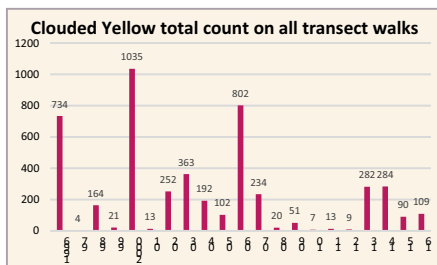
We are now seven years away from the last big Painted Lady year. On transect walks, we saw big numbers recorded in 1996 (a huge 18,311); 2000 (798); 2003 (3,123) and 2009 (5,035). The years in between varied from 48 to 805, but have been low since 2010.

The **Clouded Yellow** numbers counted on walks were slightly above 2015. The last big Clouded Yellow year was 2006. Our website records the first two in March in Southbourne which were freshly emerged: they are known to breed in the area, but only two were reported in June/July. There were 43 in August, 38 in September and 34 in October. Southbourne produced 6 in November/December, the last on 29 December.

On transect walks, the top site was Ryewater Nursery with 12.



Clouded Yellow. Photo: Charlie Steadman



# Non-regular Migrants

---

**T**he only unusual migrant recorded was one **Long-tailed Blue**. this was seen but not photographed on 12 September at Boscombe Cliffs, near the Portman Ravine, by Michael Skelton.

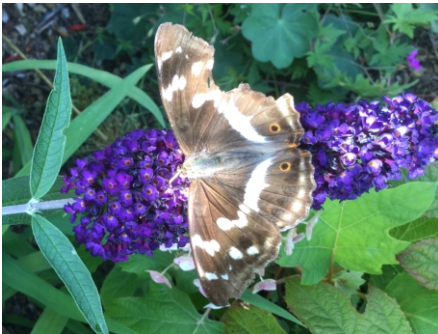


Long-tailed Blue.  
Photo: Patrick Jefferies 2015.

There may have been a sighting by Jon Bellamy of a Map butterfly: a first brood on 5 June, near Ulwell, Swanage. This would probably have been the descendant of some accidental releases in 2014.

## Strangest Record of 2016

---



Purple Emperor. Photo: Edward Brett.

**D**orset's oddest record for 2016 was a female Purple Emperor seen and photographed in a St. Ives (near Ringwood) garden by Edward Brett's family. There is no known colony anywhere nearby, so how it came to be here is a complete mystery.

Other Purple Emperors have possibly been seen: at Ashmore Woods in late May and near Bradpole on 23 August, but the dates do not fit the usual flight times of the species and no photo was taken of either.

# Garden Butterflies

**W**e have been receiving records within our Garden Butterflies

scheme for 10 years now and 2016 saw a larger than ever number of gardens recorded: 165.

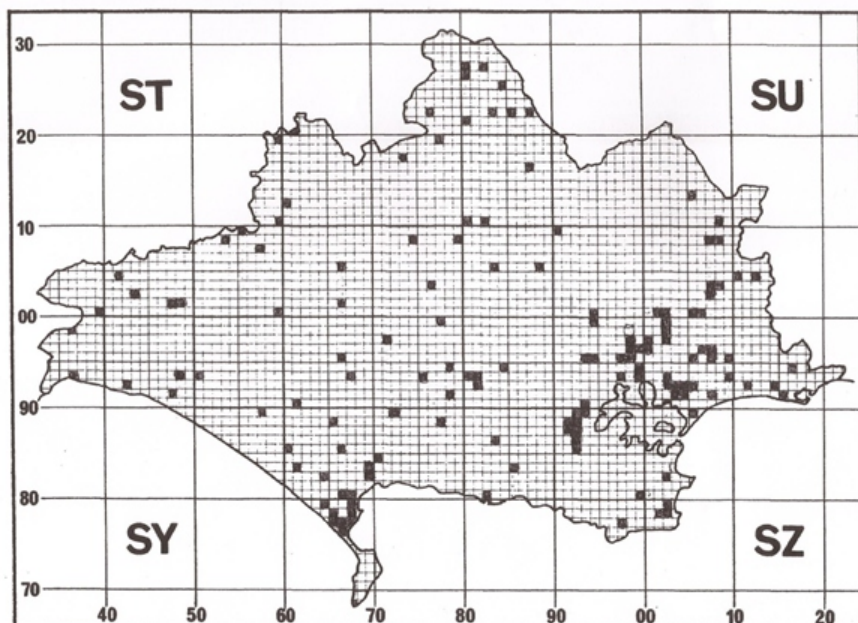
form only called for noting that a species was out.

The number of species recorded across all gardens in 2016 was 34; the highest ever was 37 in 2010.

This is a substantial increase on the usual 115-120, due to the start of a national scheme making it possible to enter records online. This new version also enabled butterfly numbers to be recorded for the first time, which should give us some useful data as the years go by. Previously the

The spread of gardens which reported sightings can be seen in the map below, so if your garden is in one of the areas without a black square, please think of sending us your sightings. To do this online use:

[www.gardenbutterflysurvey.org](http://www.gardenbutterflysurvey.org)



# Garden Butterflies

---



Small Copper. Photo: Chris Becker

**D**orset gardens do get some uncommon butterfly visitors. In two out of the ten years a garden has boasted a White-letter Hairstreak, while Small Blues have been around in six of the ten years and Adonis Blue in five.

White Admirals have occurred in seven out of ten years and Dark Green Fritillaries have appeared

every year since 2009. 2016 saw a lot of third-brood Small Coppers turning up in gardens after the transect walking season had ended. This was echoed by the website, which received records of 22 in October and even one in November, reported to be in pristine condition.

# Wider Countryside Scheme

**T**he Wider Countryside Scheme (WCS) aims to survey butterflies at random, to give a better idea of how butterflies are doing generally, not just at special places. Dorset does very well to maintain 56 WCS walks, with some help from the British Trust for Ornithology, and came top nationally in 2016.

Numbers of butterflies recorded have stayed in the same range for four years now - between 7,000 and 8,000 each year.

Species gained within the scheme in 2016 were Brown Hairstreak and Dark Green Fritillary, whilst species 'lost' were Chalkhill Blue, Small Blue and Clouded Yellow.

The most common butterflies in

2016 judged by the percentage of walks on which they were counted were:

- Meadow Brown 96%
- Large White 94%
- Small White 94%
- Gatekeeper 90%
- Red Admiral 90%.

The most common reckoned by the numbers counted were:

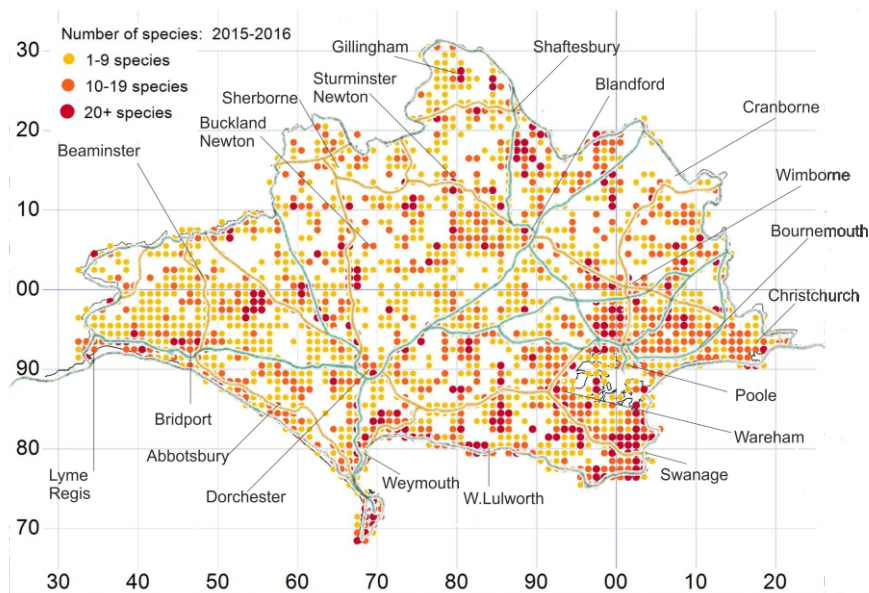
- Meadow Brown 2,159
- Gatekeeper 717
- Small White 597
- Large White 580
- Ringlet 468.

Species doing well in 2016 were the Red Admiral, Lulworth Skipper and Grayling, whilst those doing badly were the Brimstone, Common Blue, Peacock and Comma.



Female (left) and male Gatekeepers. Photo: James Gould

# White Holes



**D**orset terms kilometre squares in which no butterflies have been reported during the five-year recording cycle as 'white holes', as this is how they look on the map. The map above shows the results for 2015 & 2016, and at first glance looks like we're doing well. A bit of number crunching, however, shows:

- 64% of squares have at least one record, but
- Only 40% have six or more species reported
- Only 44% have had five or more species reported.
- 10% have only one or two species reported.

If you go to the website, you will find the map above, which you can make bigger. You can also view the white holes via Google Earth, which gives you a really good idea of what areas near you need searching. There is also a document listing the squares by their grid references if that is easier for you. You can see on the opposite page that we only managed to cover 81% of the squares in the last recording cycle. Please help us improve this in 2017.

# New Dorset Butterfly Atlas

---

**W**e are delighted to announce that our new Atlas showing the distribution of Dorset's butterflies since 1970 has been published on the website. We are still working on further analysis and will soon be putting up flight-time charts for each species, which will be a great improvement on relying on charts in books which may be out of date and not specific to Dorset. Go to: <http://dorsetbutterflies.com> and follow the link from the recording tab.

There is a page for each species giving a distribution map for 2010-2014. This is followed by tables showing distribution trends for two 15-year periods (1970-1984 and 2000-2014) and two five-year distribution trends (1995-1999 and 2010-2014). Both analyse the change in distribution and the species' ranking in the 47 Dorset species.

The work was carried out by Bill Shreeves, aided by Robin George, Bernard Franklin and Lyn Pullen.

This was a complex exercise because the depth of recording varies enormously and some species, such as the Hairstreaks and Essex Skipper, are under-recorded.

The percentage of kilometre squares recorded over the years is interesting:

## **15-year periods:**

1970-84	90%
1980-94	98%
1990-04	91%
2000-14	92%

## **Five-year periods:**

1995-99	85%
2000-04	63%
2005-09	67%
2010-14	81%

There is more background information on the website.

A printed version of the Atlas has been discussed but it is not immediately apparent that we have the volunteers to produce it. Let Bill Shreeves know if you could help (see contacts inside back cover).

# Atlas - Top Long-term winners

**T**he four species which are shown by the Atlas to have done well over the period covered, in that they increased their range by over 50% (measured in kilometre squares) are:

- Essex Skipper
- Comma
- Ringlet
- Silver-washed Fritillary

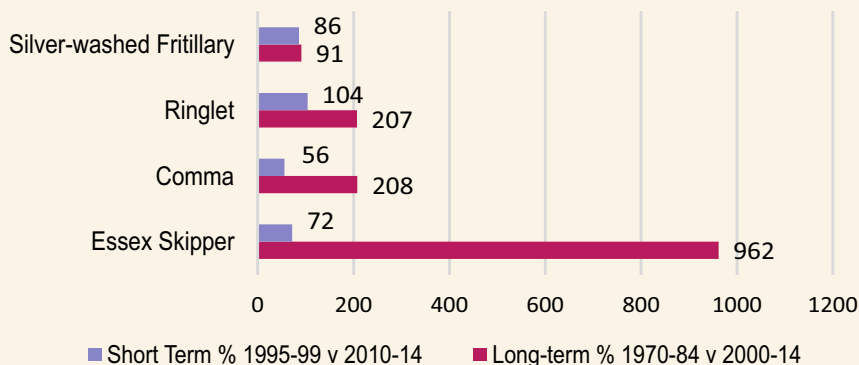
The periods compared were (long-term) 1970-84 v 2000-14 and (short term) 1995-99 v 2010-14. These results fit well with the national picture, where

all four have also expanded their ranges north and east.



Ringlets (one an aberration).  
Photo: Chris Rowland.

## Species with over 50% expansion between the 15-year periods and between the 5-year periods



# Atlas - Long-term winners

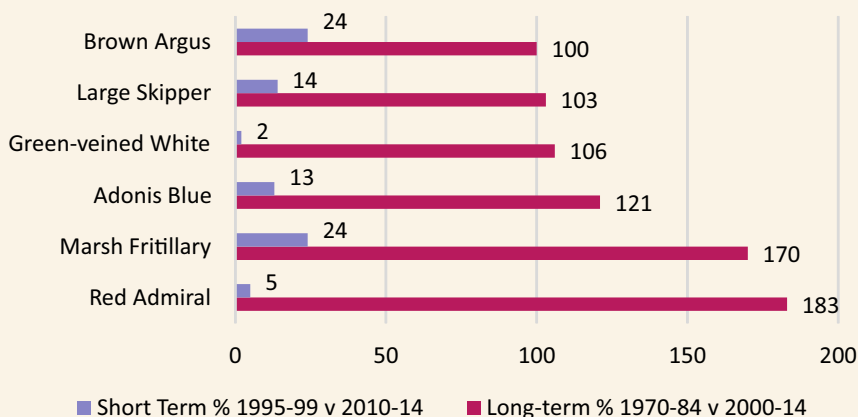
**T**here is further good news, in that six species had over 100% expansion comparing the 15-year periods and some increase comparing the two five-year ones. These can be seen listed in the graph below.

Although both the 15-year periods covered about the same number of kilometre squares, a big part of the gains was probably due to the much higher recorder effort in the latter period, but this must still be a positive result.



Red Admirals.  
Photo: Richard Howard

## Species with over 100% expansion between the 15-year periods and some increase between the 5-year periods.



# Atlas - Long-term losers

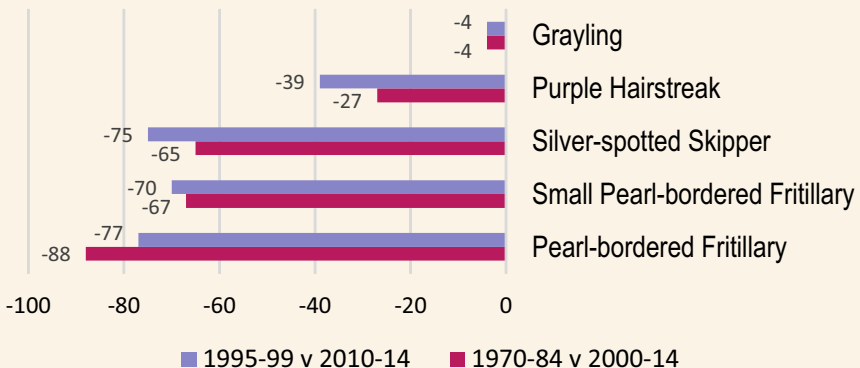
**T**he five species with the worse declines as revealed by the Atlas analyses are shown below.

It is no big surprise to see the **Pearl** and **Small Pearl-bordered Fritillaries** as the biggest losers in the 15-year comparisons. Pearl-bordereds are now extinct in Dorset and Small Pearls reduced to one known colony, as is the Silver-spotted Skipper.

The **Purple Hairstreak's** apparently disastrous decline, however, is almost certainly due to under-recording. For example for the first atlas covering 1970-84, Jeremy Thomas searched for eggs across a large section of central Dorset and found that every square did have this butterfly. No researches on this scale have since been attempted.

The **Grayling** losses have been much smaller and are mainly due to the elimination of all the non-

**Species with the greatest declines both between the 15-year and 5-year periods**



# Atlas - recent declines

**S**even species expanded their ranges in the 15-year period comparisons but went into decline over the two shorter periods: 1995-99 and 2010-14.

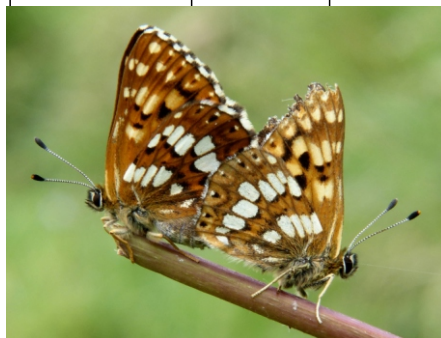
The **Chalkhill Blue**, **Duke of Burgundy**, **Wood White** and **Brown Hairstreak** are in serious trouble.

**Lulworth Skippers** have changed their emergence period and have been difficult to survey.

**Holly Blue** are just as unfortunate, because they naturally go through a boom and bust cycle, and our calculations happened to hit a period when they were not doing so well.

**Wood White** has nearly gone extinct in Dorset and the **Duke of Burgundy** has vanished from most of its northern chalk colonies; the western colonies are now part of a Butterfly Conservation habitat restoration plan, and will hopefully be saved.

	Long-term comparisons	Short-term comparisons
Holly Blue	+194	-30
Brown Hair-streak	+171	-25
Grizzled Skipper	+80	-3
Wood White	+75	-29
Duke of Burgundy	+10	-29
Lulworth Skipper	+5	-11
Chalkhill Blue	+4	-40



Duke of Burgundy mating.  
Photo: Richard Belding

# Butterfly Conservation

---

**T**his Butterfly Report is put together by the Dorset Branch of Butterfly Conservation, which



Saving butterflies, moths and our environment

**Butterfly  
Conservation**

is one of 32 branches of this UK organisation, dedicated to saving butterflies, moths and the environment.

Our website, through which you can contact us is [www.dorsetbutterflies.com](http://www.dorsetbutterflies.com). It includes an excellent programme of walks and talks.

The national website is [www.butterfly-conservation.org](http://www.butterfly-conservation.org)

You can help us by:

- Joining the society
- Donating
- Helping with practical conservation work
- Recording butterflies
- Helping behind the scenes with computer work and fundraising

Please note: the opinions expressed in this newsletter are not necessarily those of the society or the branch.

All material in this magazine © Butterfly Conservation Dorset Branch

Butterfly Conservation. Company limited by guarantee, registered in England (2206468). Registered Office: Manor Yard, East Lulworth, Wareham, Dorset BH20 5QP.

Charity registered in England and Wales (1254937) and in Scotland (SCO 39268)

# Dorset Branch Who's Who

---

## **President**

### **Brian Dicker**

Wincanton. 01963 32453  
b\_dicker@btinternet.com

## **Chair & Reserves Manager**

### **Nigel Spring\***

Sherborne. 01963 23559 or  
07981 776767  
nigelspring@yahoo.co.uk

## **Secretary, Garden Records & Wider Countryside Survey**

### **Adrian Neil\***

Preston, Weymouth  
01305 832937  
adrian.neil@madasafish.com

## **Treasurer**

### **Georgie Laing\***

Weymouth. 01305 766712  
georgie\_laing@yahoo.co.uk

## **Membership & Branch Liaison**

### **Mrs Robin George\***

Gillingham. 01747 824215  
rab.george@which.net

## **Records**

### **Bill Shreeves\***

Shaftesbury. 01747 852587  
w.shreeves@btinternet.com

## **Website**

### **Lyn Pullen\***

Winfrith Newburgh. 01305 853946  
dorsetbutterflies@btinternet.com

## **Newsletter**

### **Jane Smith\***

Sherborne. 01935 814029  
jane\_mary@btinternet.com

## **Health & Safety**

### **Keith Howland\***

Pimperne  
keithhowland1@hotmail.co.uk

## **Committee Member**

### **Richard Norman\***

Sturminster Newton. 01258 472887  
richard@bagber.co.uk

## **Committee Member**

### **Stephen Brown**

Dorchester. 07748 730399  
estherandsteve@btinternet.com

## **Meetings**

### **Arthur Bryant**

Shaftesbury. 01747 228252

## **Conservation**

### **Richard Belding**

Dorchester. 01305 264868  
rbelding601@gmail.com

\* denotes Committee Member



Brown Hairstreak  
Andrew Cooper