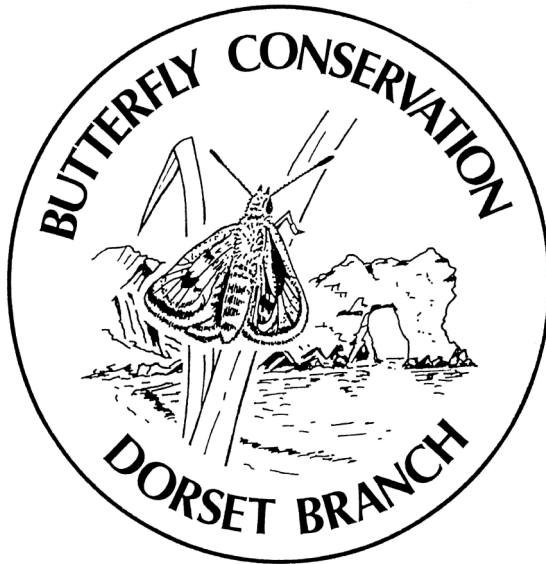


Newsletter No. 76

Summer 2014

Butterfly Report 2013



www.dorsetbutterflies.com



**Butterfly
Conservation**

Saving butterflies, moths and our environment

Chairman's Letter

From Jane Smith, Dorset Branch Chair

Welcome to the 2013 Butterfly Report. We are reverting to three newsletters per year, and will dedicate one of them to a butterfly report. It will only include a brief mention of moths, as the Dorset Moth Group are the specialists in this field, and Les Hill tells us he will be doing a full report on 2013 moths in due course.



We would have liked to print this in colour, but the cost is probative - three times as much as plain black. We believe you would rather we spent the money on conservation work. We have minimised the number of photos included, as these reproduce poorly without colour, but the online version available on the website will be in full colour.

The amount of work we undertake and organise to count butterflies is truly astonishing. Records come in from all sides, from a casual sighting while walking to work, to a timed count of a rare species, and all are equally important. We need to count butterflies and moths over a prolonged period of time so we can see how each species is faring, and target our work where it is most needed. Thanks to you all for every record you have sent in: we couldn't do it without you.

Please remember 2014 is our last recording year in this current cycle, so please send in lots of records, especially from our "white holes" (see page 6).

Here's hoping for an excellent butterfly year in 2014.

Jane Smith

Recording in 2013

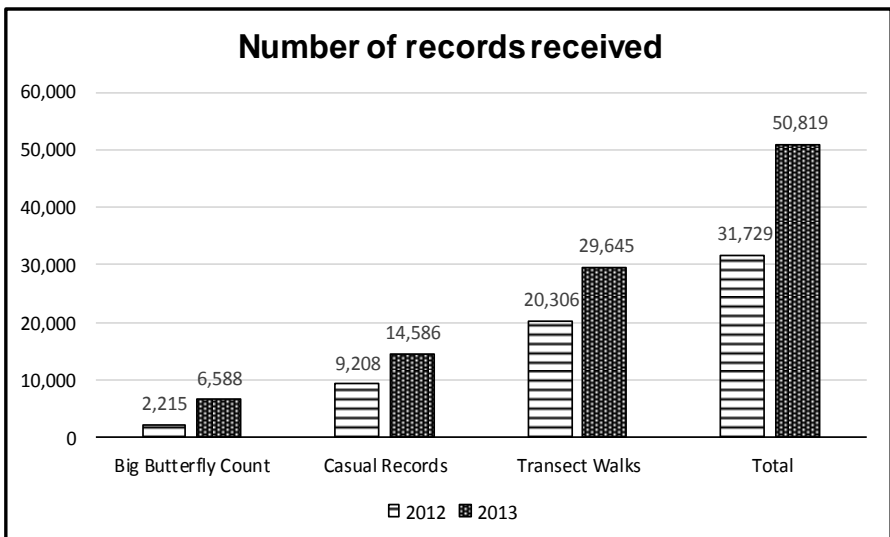
We have many different ways of organising the counting of butterflies, from casual recording to formal transect walks.

The quantity of data received, verified and analysed is huge, and very big thanks go to all those involved in the process, notably Bill Shreeves, Martin Raper, Nick Urch and Robin George.

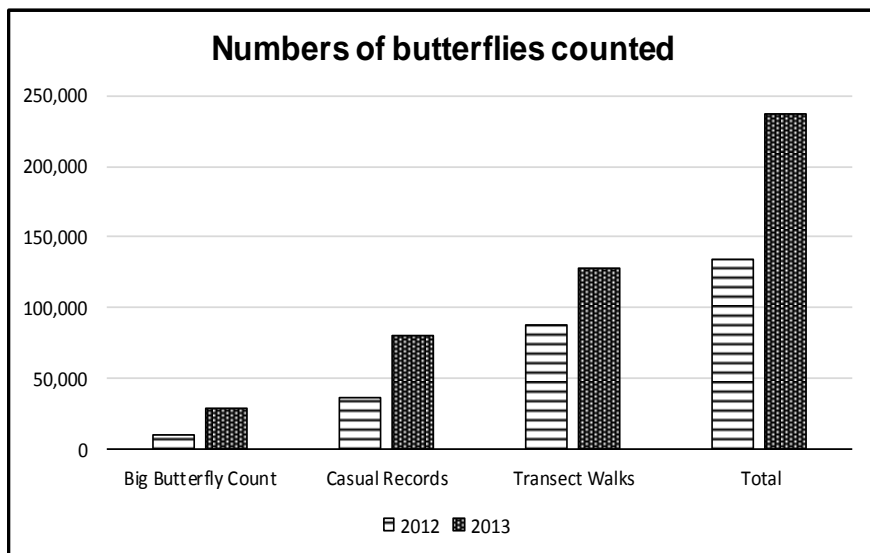
The following graphs show the number of records and butterflies counted, with 2012 given for a comparison.

In 2013 the total number of butterflies counted was estimated at 237,476

The numbers of butterflies is only an estimate, as some recording forms do not call for exact numbers, but for bands, such as 2-9 butterflies. We have estimated the figures, using the lowest number in each band where used, so the reality will be higher.



Recording in 2013



“Casual records” (i.e. those not from transect walks, even though some of them are done under set conditions and therefore possibly not really “casual”) are received in a multitude of ways, including:

- Website (2,760 records; 22,720 butterflies in 2013)
- Garden Records
- Wider Countryside walks
- Big Butterfly Count
- iRecord and Living Record (1,128 records)

This 237,476 compares to 134,390 in 2012 - mainly due to the weather, but the number of recorders and records each recorder sent in was probably up this year as well.

2014 is a crucial recording year

For butterfly mapping purposes, the map of Dorset is broken up into squares of one kilometre, each referred to as a kilometre square (kms). Just how many kms there are in Dorset depends on how you count all the ones round the edge which are shared with the neighbouring counties, but we work on a figure of 2,921.

Butterflies all over the UK are counted in five-year periods and at the end of each five years, an atlas showing their distribution is published - so the data you send us is of national importance.

All the records we receive are mapped, and the results accumulated over the five-year cycle. Any kms in which no butterflies have been mapped shows blank on our map, and we call it a "White Hole". We say a hole is "filled" if just one species is recorded in it, though, of

course, we would ideally like more thorough coverage of all the species.

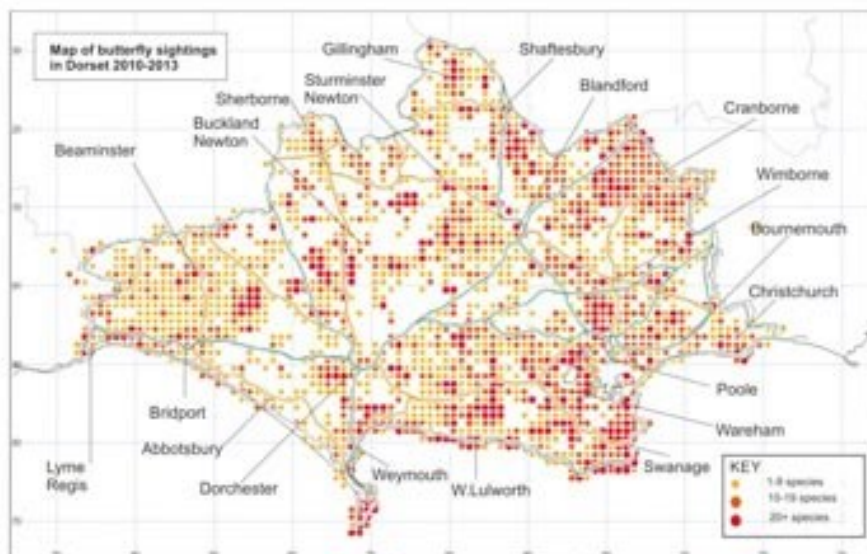
We have 941 White Holes to fill in 2014, and this is the last year of the current recording cycle, so we need you all to get out and count butterflies at every opportunity.

**2014 is the last year in
our current recording
cycle - with 941 white
holes to fill!**

The map on the next page gives you an idea of where the White Holes are - it is also on our website if you want to print it out at a larger size.

The website can also link you to a Google Earth version of the map, allowing you to zoom in and really orientate yourself. If you are not online and would like a copy of the map, contact Robin George (see back cover)

2014 is a crucial recording year



Transect Walks

One of the formal ways in which we count butterflies is via “transect walks”. These are butterfly counting walks at the same site, over the same route, undertaken every week between the beginning of April and the end of September. We have around 70 transect walks in Dorset, the longest running being Ballard Down, started

in 1976. Some of the analysis in this report will use transect data, as it is the best for comparisons across years.

We always need more people to help out with transect walks, many of which are shared out between a team of walkers, so you can choose how many you do. Contact Bill Shreeves if you can help.

Dorset Butterflies in 2013

INTRODUCTION

The most reliable form of butterfly monitoring for comparisons across time is the transect walk (see previous page) as these can be more reliably compared across a period of time.

In Dorset we choose to say butterflies on transects have done well if they are up on both last year AND the average for the walk over the years it has been walked by more than 50%. Similarly, we say they have done poorly if they are down on both measures by more than 50%.

We were fearful that butterfly numbers in 2013 would be very low, with 2012 having the wettest summer for 100 years: bad weather may mean butterflies cannot breed or lay eggs. The UK Butterfly Monitoring Scheme (UKBMS) actually recorded 2012 as having the lowest butterfly count per site ever

recorded, with 52 out of 56 species showing a decline and declared it “The worst since butterfly walks began 37 years ago”.

WEATHER

We were still pessimistic for the first six months of 2013, as all the months except July were below average for both warmth and sunshine (the average being taken over 34 years). July, however, was impressively above average for these factors, and April to August were comparatively dry months, and this seemed to do the trick for many of our butterflies.

WAS IT A GOOD YEAR FOR BUTTERFLIES?

One way we judge if it has been a good butterfly year is to look at how many times our transect walks were not walked, as this is often due to weather conditions not meeting the levels necessary.

Dorset Butterflies in 2013

This measure suggests 2013 was a good year, with the number of missed walks being the second lowest since 2006.

Another measure is the total number of butterflies counted on all transect walk records, which showed 2013 to be one of the best years for butterflies since at least 2006. Species which breed more than once in a year did particularly well, as they were able to catch up later in the season.

The total number of butterflies counted on transect walks was 130,021. This was the highest number in the whole 2006-2013 period.

A further indicator of a good year is how marginal species fared: these are species which appear and disappear

from walks from year to year. If it is a good butterfly year, the total of all species on sites which reappear (i.e. the previous year's count was zero) should be high and the numbers which disappear (not present this year though they were last year) should be low. On this indicator it was a good year, with 210 site species appearing and 106 disappearing.

2013 also stands out as a successful year because it had the highest number of species showing an increase of more than 50% of the previous year or their average: 23. It did not do so well if one looks at the numbers of declining species, with 11, compared to only three declining in 2011, eight in 2009 and five in 2006.

Dorset Butterflies in 2013

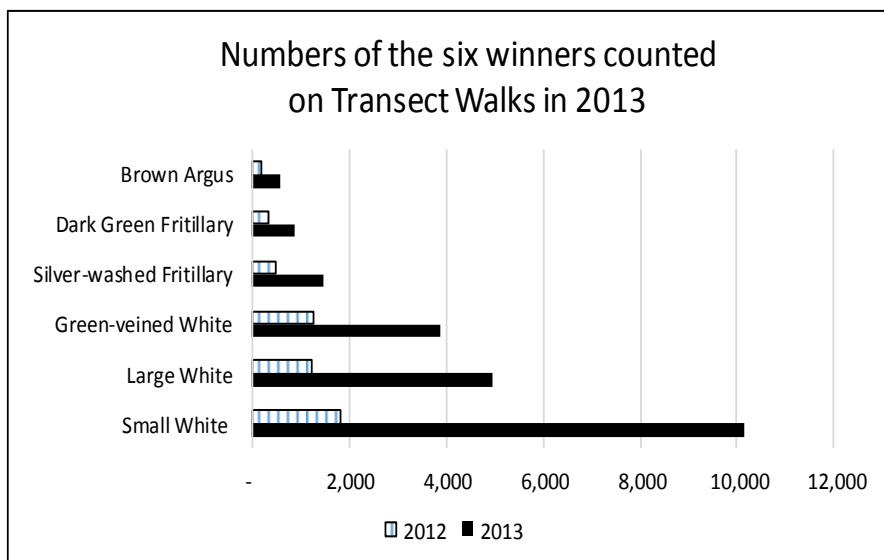
WINNING SPECIES

There were six winning species in 2013, where over half the sites showed increases of over 50% not just on 2012 (not hard!) but on their all-time annual average counts.

[db = double brooded]

- Small White (db)
- Large White (db)
- Green-veined White (db)
- Brown Argus (db)
- Dark Green Fritillary
- Silver-washed Fritillary

It is interesting to note that the four double-brooded species were amongst the worst performers in 2012, so they staged a miraculous recovery.



The graph above shows the numbers of each winning species counted in 2013 compared to 2012.

Dorset Butterflies in 2013

All three whites improved from being poorest performers in 2012 to best in 2013. The **Small White** had the most impressive results with 90% of its walks up by over 50% on 2012 and 75% of its walks up on annual averages. Both **Small White** and **Green-veined White** had records total counts, but **the Large White** was below 2009.

The Dorset Butterfly of the Year is the Small White.

So why did the **Small White** do so well? The very warm and sunny July enabled the very poor first brood in May to be transformed into very large second and third broods, with peak weeks in each of July, August and September. There is no convincing evidence of an inward migration in August/September swelling the

numbers. Huge counts of 100 on Hod Hill (July 20th), 85 at Durlston (Aug 18) and 100 on Hambledon (Sep 14) can be attributed to the natural tendency for the species to gather at key points.

The Small White is one of our few species which has not declined. This is despite their eggs being eaten by sparrows and up to two-thirds of their caterpillars being devoured by beetles and those spider-relatives, the harvestmen. Other caterpillars are eaten by tits and thrushes, and parasitized by cotesia wasps. In wet summers viruses take their toll. The pupae, in green and brown forms, are eaten by birds and are not protected by mustard poisons within them (derived from the plants they eat) like the Large White. In spite of all this they can survive and can fly over 160kms in a lifetime. It is fascinating to note that in

Dorset Butterflies in 2013

1939 they were introduced to Melbourne, Australia. It took them just 3 years - 25 generations - to reach the west coast of Australia some 1,850 miles away.

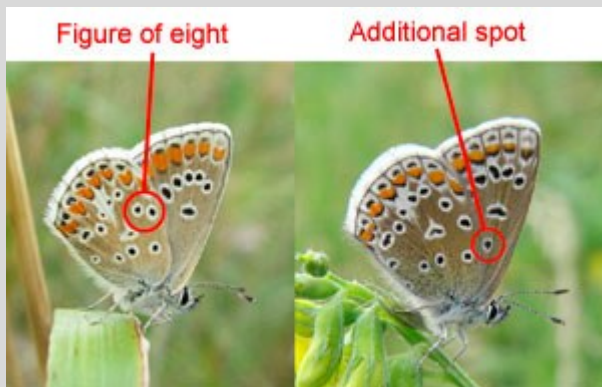
The **Brown Argus** did well, but is still not up to 2010 levels. Dorset's leading walk for this species shows how

the warm July creates a record second brood. Recent work has shown that the Brown Argus can show a lot more blue than used to be thought, and is thus easily confused with the female Common Blue. To be sure how to tell them apart, see the box below.

To tell the Brown Argus and Common Blue apart you need to see the underwings.

- A) The Common blue has a spot on the underside of the forewing which is absent in the Brown Argus.
- B) Two of the spots on the leading edge of the hindwing are relatively close in the Brown Argus, almost forming a figure of eight, while in the Common Blue they are further apart.

Thanks to the UK Butterflies website for allowing us to use their pictures.



Dorset Butterflies in 2013

Why the **Dark Green Fritillary** did so well, as a single-brooded species, in a year when the early spring was cool and sunless, is not so obvious. It is possible the dry April led to the bumper crop of hairy violets which was observed, so the caterpillars were able to feed well. There



Dark Green Fritillary.

Photo: Mark Pike

was a record count from our transect walks and this is the fourth successive year it has been in the “winner” category. Possibly the dry April may have enabled the

post-hibernation caterpillars to move and feed more effectively. North Dorset did especially well with Fontmell Down having the highest count (443) for the first time ever; Melbury Down recorded 255 and nearby Clubmens Down 43. In the south, Ballard Down had its best total since 1980: 37. An number of butterflies were recorded in gardens and far from their usual sites.

The **Silver-washed Fritillary** made a strong recovery from the previous year, though still below its walk totals for 2010 or 2006. It was frequently seen on buddleias in gardens.

Another welcome “winner” for 2013 was the **Silver-studded Blue**. This butterfly improved on its annual average on East Dorset (Sopley, Upton, Mannington and Slop Bog) and South Dorset (Studland, Ferry Road

Dorset Butterflies in 2013

and Tadnoll) walks. On Portland, however, although the Tout walk results improved on 2012, all sites remained below or little better than their annual averages.

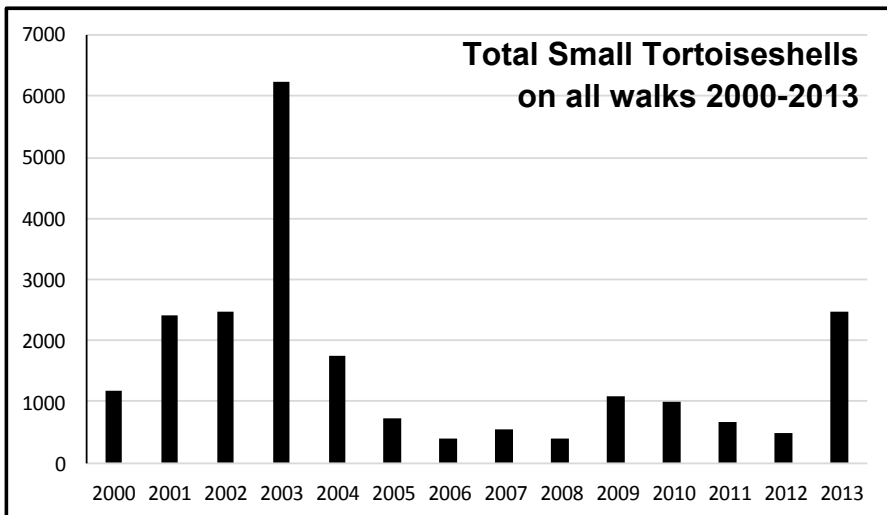
On over half the transect walks, a record 15 species increased by over 50% on their 2012 totals.

Seven of these did very well to recover, as they had been among the worst losers in 2013. These were the **Common Blue**, **Small Tortoiseshell** and **Small Copper** (all double-

brooded), the **Peacock** and **Brimstone** (these hibernate over winter as adults, but their caterpillars may have benefited from the warm July) and the **Large and Small Skipper**- these overwinter as caterpillars, so did well to survive a very cold March.

It is interesting to look in more detail at the **Small Tortoiseshell**, which reached its highest numbers since 2003.

One question we have to ask about the Small Tortoiseshell is whether these high



Dorset Butterflies in 2013

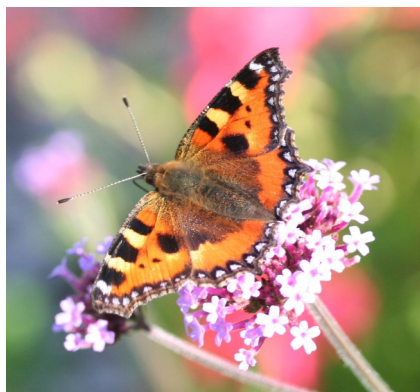
numbers were due to a magnificent build-up in their later summer broods, or could there have been a migration? The walk data suggests a massive response to the warm July, with the caterpillars feeding up and turning into adult butterflies very rapidly. Migrations cannot be ruled out, especially as when they occur, it is usually via a steady flight of one at a time. Sudden accumulations are much more likely, however, as the species fly one to two

kilometres a day honing in on good egg-laying sites.

Another data source we can turn to is our website, which has the benefit of records all year, not just April to September, albeit the recording methodology is uncontrolled. January, February and March only showed seven records between them, but April soared to 56, suggesting the cold March kept more butterflies in hibernation. Again, there is a strong August peak of 505.

The **White Admiral** improved on its all time low in 2012, but 80% of its sites were well below their usual average.

Walls achieved their best Dorset count in the last 14 years, but 56% of the sites were still below average.



Small Tortoiseshell.

Photo: Lyn Pullen

Dorset Butterflies in 2013

LOSING SPECIES

We look at “losers” as being those where their numbers are more than 50% below their average on a majority of walks.

The biggest loser in 2013 was the **Wood White**. None were recorded on any of the Powerstock or Kingcombe walks, with just one recorded at Powerstock off the walk routes. The only other place they sometimes turn up is on the Lyme Regis undercliff.

The **Small Pearl-bordered Fritillary** is also looking close to extinction in Dorset. There were no records this year from the walk at Stonebarrow, near Charmouth. It is many years since the species was seen at Powerstock, though there seems to have been an artificial introduction of Pearl-bordered Fritillaries, not undertaken by us, which has caused some confusion.

The **White-letter Hairstreak** showed up well on the walks, but this was only because Milldown and Wimborne St Giles had sightings for the first time ever. In reality, only 6kms have recorded the White-letter Hairstreak in the current recording period, compared to 42 in the last one. Full details are on the News page of the website - you need to be looking for these butterflies in late June/July. ***Please see if you can help us fill this recording gap.***

Marsh Fritillary has been doing well on chalk sites in recent years, so they are not doing too badly overall—only 53% below their average. They were probably handicapped by the atrocious weather in March meaning their caterpillars did not receive the sunshine they need to develop quickly and thus outpace their parasites.

Dorset Butterflies in 2013

Small Blue has had many successive “good” years, so this was their first relapse, being 56% below their average on a majority of sites where they are present.

Holly blue had 60% of their sites below average. They are a butterfly which has regular boom and bust cycles, so they may be in their second year of a downward turn, affected by weather and parasitic wasps.

Both the **Grizzled Skipper** and **Green Hairstreak** had 62% of their sites below average, and are “losers” for the second year running. Neither was able to benefit from the good weather in July as both would have been in chrysalis stage by then.

More serious is the state of the **Chalkhill Blue**, which had been below its annual averages for many years now. Apart from some high counts on Portland, which we

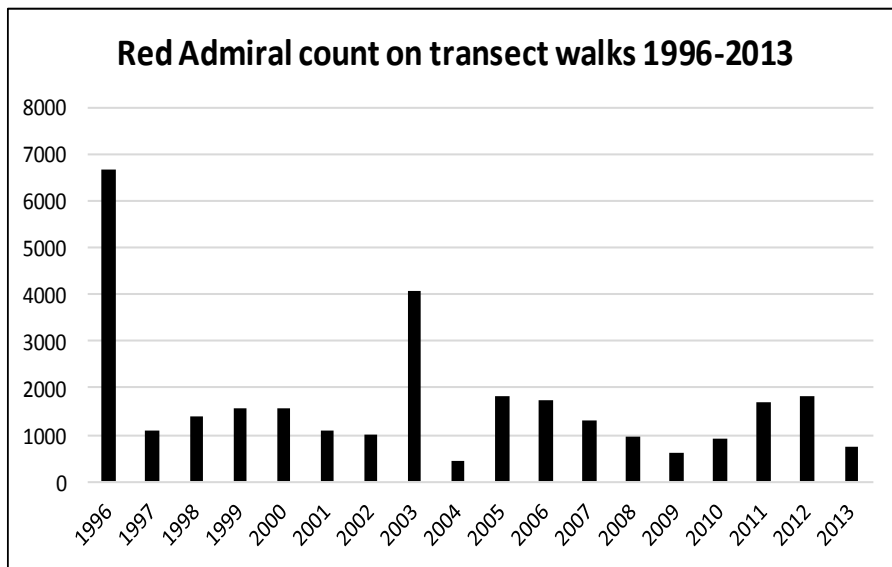
cannot explain, its situation looks critical. It is doing poorly in Purbeck and the north and central chalk downs, with a zero count on the Cerne Gian walk for the first time. On most sites, the once much rarer Adonis Blue is doing better than the Chalkhill.

The **Duke of Burgundy** also seems to be in serious trouble. It is only being recorded on one of its north chalk sites, and its numbers on most of its central chalk sites are looking fragile.

The Silver-spotted Skipper continues at its last remaining colony at Fontmell Down in North Dorset, but both the numbers counted and the amount of the site it occupies are limited.

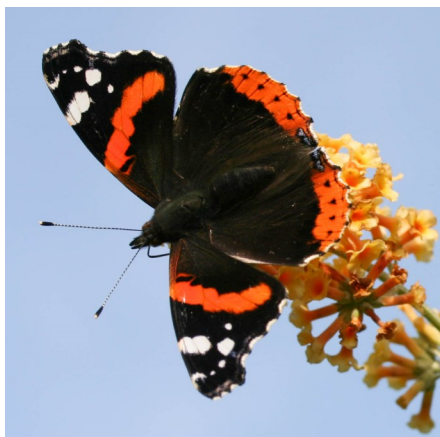
We have three regular migrant species in this country: the **Red Admiral**, the **Painted Lady**, and the **Clouded Yellow**.

Dorset Butterflies in 2013



Red Admiral was a loser, judged by sightings on walks, with 61% of sites well below average. The website, however, has the advantage of including results from every month of the year, and shows what an all-year species this has become. There was not a month in which one was not reported, and the best month was October, with 150. The third best was November, with 78, though we have to acknowledge that people are

more likely to view these late sightings as unusual and therefore make the effort to



Red Admiral. Photo: Lyn Pullen.

Dorset Butterflies in 2013

send them in. These later months may have seen late inward migration, but there is also evidence of some reverse migration.

Painted Lady had another poor year on the walks, though some were recorded on the website in the first week of January. The total number counted on walks was 111, and the website recorded 51 in August.

Unusually, the Painted Lady was out-performed by the **Clouded Yellow**, with 282 being recorded on walks. This is the best figure since 2006, which had 802. The website showed a steep rise in August and they went on into September (43), October (81) and even November (11). It is possible that this final surge was a late migration.



News of rare migrants which reached us from various sources included the **Julia Heliconian**, **Long-tailed Blue**, **Pale/Berger's Clouded Yellow**, **Large Tortoiseshells**, **Swallowtails** and **Monarchs**. More detail of these sightings and thoughts about them were included in the previous newsletter (number 75).

Garden Recording

INTRODUCTION

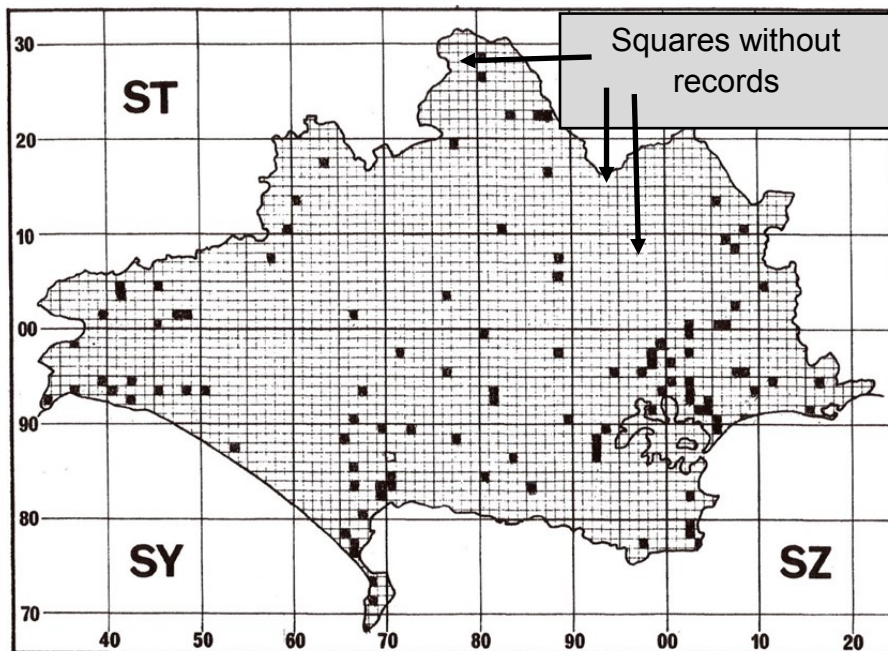
Adrian Neil looks after the collation of results for garden recording in Dorset, and was kept very busy in 2013 with results from 113 gardens.

We are trying to ensure we have at least one garden recording in every 10 km square in Dorset, and there are three gaps, as shown on the map below, so contact

Adrian if you can help.

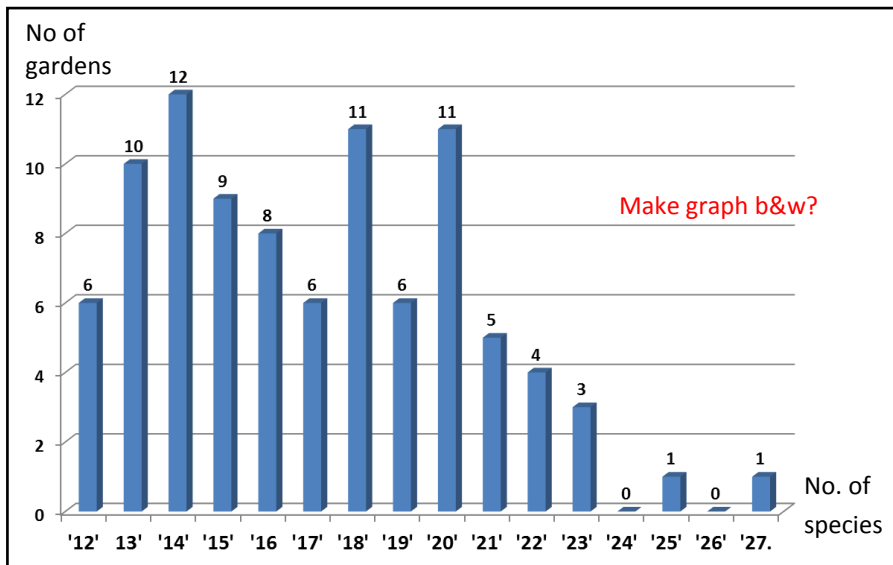
Dorset provides more garden recording than any other county in the UK

Our records are sent into the national garden recording scheme run by Dr Margaret Vickery, for whom we provide about 10% of the total results.



Map showing location of garden recording

The graph below shows how many species were seen in each garden.



Top honours go to Dot Emblen in Sutton Poyntz, with 27 species, followed by Colin Nunn in Worth Matravers with 25.

Species which appeared in 2013 which did not the previous year were Adonis Blue, Green Hairstreak and Brown Argus.

Species lost in 2013 were the Marsh Fritillary and the Holly Blue.



Holly Blue. Photo: Mark Pike.

The top five garden butterflies judged by the percentage of gardens which recorded were:

- Small White (99.1%)
- Red Admiral (96.4%)
- Large White (95.5%)
- Small Tortoiseshell (92.9%)
- Peacock (92.9%)

The same species came top in 2012, though the order as Red Admiral top, followed by Small White, Large White, Small Tortoiseshell and Peacock.

Species which improved

Species which did better in 2013 than 2012 judged by the percentage of gardens which recorded were:

- Small Copper (44% compared to 40%)
- Silver-washed Fritillary (34% from 31%)
- Clouded Yellow (40% from 33%).

Species which declined

- Marbled White (26% down from 31%)
- Wall Brown (21% down from 25%)
- Gatekeeper (84% down from 91)

Low species

Butterflies of which there were only one or two sightings in gardens reported:

Ordinary species

- Essex Skipper
- Green Hairstreak
- Purple Hairstreak

Priority species

- Lulworth Skipper
- Grayling
- White Admiral



Marbled White.

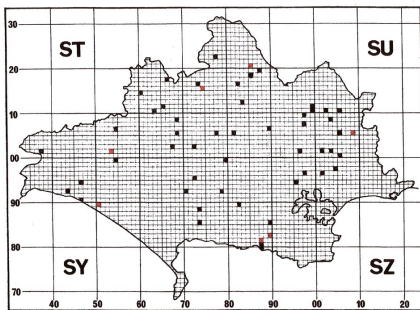
Photo: Brian Dicker

Wider Countryside Recording

INTRODUCTION

The Wider Countryside Squares (WCS) surveys take place across the UK. The purpose is to record butterflies in the country as a whole, not in special places such as butterfly reserves, to obtain a true picture of how they are doing. The kilometre squares (kms) are selected at random to avoid bias.

2013 RESULTS



Map of the WCS squares in Dorset

Dorset counts more WCS squares than any other county except Sussex: we both managed 51 in 2013.



There are usually a few squares needing new walkers and they only need to be walked two or three times a year. Adrian Neil looks after the WCS recording for Dorset, so contact him if you are interested.

The total number of butterflies counted in WCS in 2013 was 8,134 - a vast improvement on the 4,481 of the previous year (from 47 squares). They comprised 37 species out of a possible 45 in Dorset. The total number of species seen by all walks in the UK was 45.

The top WCS butterflies were:

By number of squares in which found:

Equal 1st Meadow Brown
Equal 1st Large White
Equal 1st Small White
4th Small Tortoiseshell
5th Gatekeeper

By total number of Butterflies:

1 Meadow Brown
2 Small White
3 Large White
4 Gatekeeper
5 Small Tortoiseshell

Notable changes between 2013 and 2012 included:

- Gatekeepers found in only 65% of kms, down from 94%.
- Common Blue found in 42% of kms, up from 17%.

- Small Skipper found in 37%, up from 14%.

Species recorded in 2013 which were not seen in 2012:

- Brown Argus
- Purple Hairstreak
- Silver-studded Blue
- Clouded Yellow

Not seen in 2013, though they were in 2012 were Chalkhill Blue, Small Blue and Dingy Skipper.

There were also three species of which only one was seen on all WCS walks: the Adonis Blue, Grayling and White Admiral.



Small Tortoiseshells were seen in 90% of squares compared with under 50% in 2012

Weymouth Relief Road

By Georgie Laing



Photo: John Elliott

The sides of Weymouth's relief road, built for the 2012 Olympics, were landscaped with butterflies in mind, thanks to Phil Sterling. For the last two years Butterfly Conservation volunteers have been monitoring the site to see whether the butterflies have moved in—and they have!

A riot of colour now greets travellers when the yellow blanket of kidney vetch blooms on the cuttings and bridleway on the ridgeway. This is important as the caterpillar food plant of the Small Blue.

In 2013:

- 25 visits were made
- 20 species recorded
- 621 individual records

3 species showed large increases from last year

- Small White (144 recorded)
- Common Blue (213)
- Small Tortoiseshell (79)

8 new species were recorded

Species list:

- Large Skipper (new)
- Clouded yellow (new)
- Brimstone (new)
- Large White
- Small White
- Green-veined White (new)
- Orange-tip (new)
- Small Copper (new)
- Small Blue
- Brown Argus
- Common Blue
- Adonis Blue (new)
- Red Admiral
- Painted lady
- Small Tortoiseshell
- Peacock (new)



Small Blue Photo: John Elliott

- Wall
- Marbled White
- Gatekeeper
- Meadow Brown
- Ringlet (2012 only)



We will continue monitoring in 2014 and are hoping to design a formal transect (butterfly monitoring walk). More volunteers are needed to help with the recording. The majority of the area to be monitored is either along a path which overlooks the road, or is off the road, along the old road, now cut off to traffic.

If you would like to help or would like a more detailed report of the records please contact Georgie Laing (georgie_laing@yahoo.co.uk)

Moths in 2013 - from Bob Steedman

2013 was a year of two halves, up to the middle of June was dire, with one the poorest periods on record. From June onwards it proved an excellent year for moths, as it was for butterflies and other insects, thanks to the tremendous summer we all enjoyed.

The latter half of 2013 was notable for the number of migrants with the common Silver Y appearing in abundance. However the normally abundant indigenous species, the Large Yellow Underwing, eventually appeared in reasonable numbers but below average. It seems the poor Summer of 2012 has taken its toll.



Crimson Speckled

2013 was notable for a wide variety of Footman species including the scarce Dotted Footman; also Tiger moth species were very much in evidence. Other notable species included Crimson Speckled, Rosy Underwing, Dewick's Plusia, White Satin, Goat Moth, Antler Moth , Brindled Ochre, Pine Hawk-moth, and the list goes on.



Palpita vitrealis



Blackneck



Mocha



Dewick's Plusia

Photos: Barbara Steedman and Martin Cade

This is a short note to let you know about the 2013 moth season. In due course Les Hill will be writing up something in detail, which we will tell you about on our website.

Dorset Branch Who's Who

www.dorsetbutterflies.com

PRESIDENT:

Brian Dicker *

Sunnydene, Higher Holton, Wincanton,
Somerset, BA9 8AP 01963 32453

b.dicker@btinternet.com

CHAIRMAN:

Jane Smith *

32 King's Road, Sherborne, DT9 4HU
01935 814029

jane_mary@btinternet.com

VICE CHAIRMAN & CONSERVATION OFFICER:

Richard Belding *

28 Manor Rd, Dorchester, DT1 2AU
01305 264868

rbelding601@gmail.com

SECRETARY, GARDEN RECORDS & WIDER COUNTRYSIDE SURVEY:

Adrian Neal *

15 Littlemoor Road, Weymouth, DT3 6LA
01305 832937

adrian.neil@madasafish.com

TREASURER:

Allan Higgin *

6 Firsde Road, Corfe Mullen, BH21 3LS
01202 691710

allanhiggin@aol.com

MEMBERSHIP & BRANCH LIAISON:

Mrs Robin George *

Clarence House, Cemetery Rd,
Gillingham, SP8 4BA .
01747 824215

rab.george@which.net

RECORDS:

Bill Shreeves *

Little Garth, 5 Butts Mead, Shaftesbury,
SP7 8NS.

01747 852587

w.shreeves@btinternet.com

NEWSLETTER:

Guy Freeman

freeman_g@hotmail.co.uk

MOTH CO-ORDINATOR:

Bob Steedman *

23 Sopwith Crescent, Merley,
Wimborne, BH21 1SH 01202 884671

sopwith@tiscali.co.uk

SALES STALL:

Kathie & Richard Clarke

24 Pound Lane, Shaftesbury, SP7 8RZ.
01747 853236

WEBSITE CO-ORDINATOR:

Lyn Pullen *

Cobblers Cottage, 20 High Street,
Winfrith Newburgh, Dorchester, DT2 8JW
01305 853946

cobblers@btinternet.com

DISPLAY CO-ORDINATION:

Bridget de Whalley *

2 Longmead Cottages, Winterborne
Stickland, DT11 0LZ 01258 880524

BandL.deWhalley@btinternet.com

RESERVES MANAGER:

Nigel Spring *

346 Mundens Lane, Alweston,
Sherborne, DT9 5HU.
01963 23559 or 07981 776767

nigelspring@yahoo.co.uk

HEALTH & SAFETY:

Keith Howland *

keithhowland1@hotmail.co.uk

MEETINGS:

Arthur Bryant

9 Mannington Road, West Moors,
BH22 0JE

01202 892816

arthurbryant@onetel.com

** Branch Committee Member*