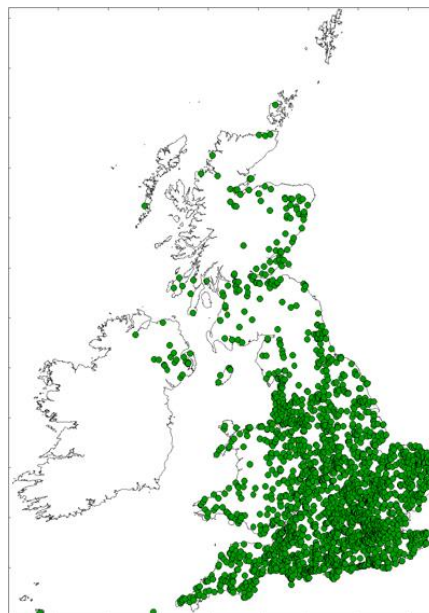


## Garden Butterfly Survey 2016 Results summary

The new Garden Butterfly Survey (GBS), run by Butterfly Conservation in association with retailer B&Q, got off to a great start in 2016. An amazing 58,000 sightings were reported online from 2,396 gardens, while surveys of a further 180 or so gardens were provided on paper forms\*.

Participants were spread right across the UK from the Isles of Scilly to Orkney, Kent to Co. Tyrone, as can be seen from the map (right). Nevertheless, there are plenty of gaps in the coverage, which will hopefully be filled by people taking part from 2017 onwards.

The aim of the survey is to assess butterfly numbers throughout the year in UK gardens, and ultimately to understand how important gardens are for our butterfly populations. So while we are grateful to all participants in 2016, we'd really like people to keep an eye out for butterflies right through the year and to enter records only from gardens. Sightings from other locations can be submitted to [other schemes run by Butterfly Conservation](#).



### Overall species results

Somewhat surprisingly, given its decline over recent decades, the Small Tortoiseshell was reported from the most gardens in the 2016 survey, being seen in 76% of gardens. Red Admiral came second (62% of gardens), then Small White (59%), Large White (55%) and Peacock (49%) (see table below left). The fact that Garden Butterfly Survey was launched this year (and therefore many participants only took part for some of the year) and the fact that 2016 was a poor year in general for butterflies may both have influenced these results, so it will be interesting to see how things differ in 2017.

The most abundant butterfly, on the other hand, was the Small White, with over 20,000 individuals recorded, close to a fifth of all the butterflies counted in GBS 2016. Some way behind, Large White was the next most abundant, followed closely by Small Tortoiseshell and Red Admiral (see table below right).

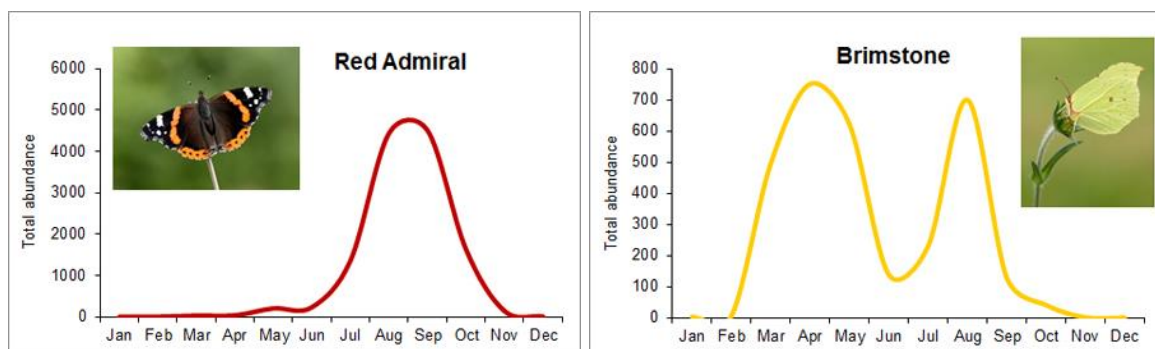
Species	% Gardens	Species	Total abundance
Small Tortoiseshell	76%	Small White	20,416
Red Admiral	62%	Large White	14,820
Small White	59%	Small Tortoiseshell	13,412
Large White	55%	Red Admiral	12,760
Peacock	49%	Peacock	7,170
Speckled Wood	39%	Holly Blue	5,265
Holly Blue	36%	Speckled Wood	5,092
Painted Lady	35%	Green-veined White	4,538

Comma	35%	Gatekeeper	4,203
Brimstone	34%	Meadow Brown	4,103
Orange-tip	28%	Brimstone	3,138
Green-veined White	26%	Orange-tip	2,895
Gatekeeper	25%	Painted Lady	2,842
Meadow Brown	24%	Comma	2,807
Ringlet	14%	Ringlet	1,591
Common Blue	9%	Common Blue	543
Small Copper	7%	Small Skipper	488
Small Skipper	6%	Small Copper	453
Large Skipper	5%	Large Skipper	386
Marbled White	3%	Marbled White	193

\* Records on paper forms have not yet been extracted and so the analysis and totals presented here are based on the records from the c.93% of gardens that were reported online. While we would prefer people to take part online at [www.gardenbutterflysurvey.org](http://www.gardenbutterflysurvey.org), where this is not possible we can accept paper records and these will contribute to future analyses.

## The garden butterfly year 2016

The year started well with butterflies on the wing in early January and even a small arrival of migrant Painted Ladies from Africa courtesy of the extremely mild winter. After this early excitement, however, many butterfly species seemed to be in low numbers during spring. The Red Admiral, which we thought would benefit from the mild winter, was missing from most GBS gardens (see chart below left) and numbers of the common white butterflies, particularly the Large White, were very low. One species that bucked this trend spectacularly was the Brimstone, which emerged from hibernation in excellent numbers (following a very good year in 2015) and had been recorded in more GBS gardens than any other butterfly by the end of April (see chart below right). Peacock also fared well, but by May its numbers were on the wane and Holly Blue and Orange-tip were dominating GBS counts, with sightings of Small White starting to pick up.

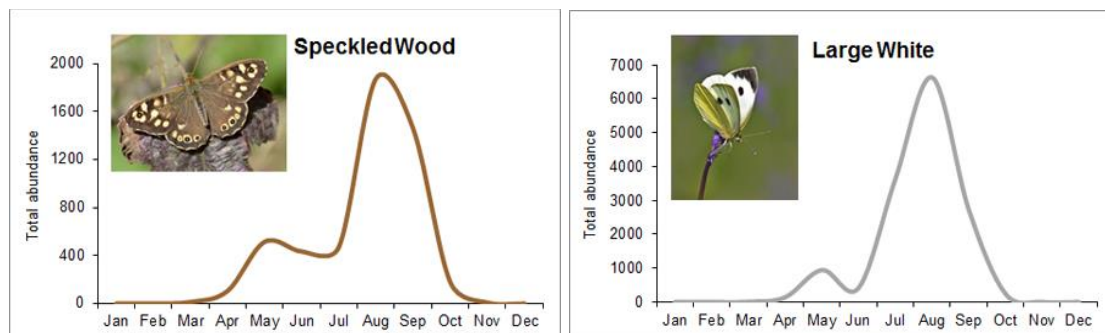


June is a strange month for butterfly enthusiasts. On the one hand there is the excitement of many summer butterflies, including many of our rarer species, starting to emerge, but on the other, the overall abundance of butterflies drops, particularly in gardens, as the spring broods of many common species come to an end. The total abundance of butterflies reported on the GBS website for June 2016 was less than half that of May and less than a quarter of the July

total. There was, however, a decent immigration of Painted Lady butterflies in June, which reached GBS gardens in North Wales, the Isle of Man and the island of Gigha on the west coast of Scotland.

The weather through much of July and August was favourable for butterflies in many parts of the UK, but the numbers seen remained stubbornly low. As 2016 is the first year of GBS, we cannot make any direct comparison with previous years, but many participants commented on the scarcity of butterflies in their gardens. While numbers of common species were increasing steadily, from the low levels recorded in the spring and early summer, it wasn't until the end of August and beginning of September that people saw a big increase in garden sightings.

Speckled Wood was one species that showed a major increase in late August, suddenly appearing in gardens where it had not been seen all year (see chart below left). Red Admiral showed the same pattern, and having been unusually scarce until then, the Large White also surged in numbers (see chart below right), alongside the Small White and Green-veined White. Painted Lady numbers increased again in this late summer/early autumn period, accompanied by another immigrant butterfly the Clouded Yellow. Three-quarters of all Clouded Yellow sightings in GBS 2016 took place in August and September.



The warm weather of September (it was the second warmest September in the UK since 1910!) maintained garden butterfly sightings, at least of the most common species. Indeed, although far fewer than in August, slightly more butterflies were counted for GBS in September than in July. However, it was clear even on these warm autumn days, that populations of most butterflies were disappointingly low and that 2016 was likely to prove a poor year overall.

Red Admirals provided the vast majority of GBS sightings later in the autumn and through to the end of the year. In November, for example, 82% of all the butterflies reported online were Red Admirals, and the last GBS sighting of 2016 was of a Red Admiral on the Isle of Wight on New Year's Eve.

Overall, garden butterfly numbers seem to have been poor in 2016, which initially appears puzzling. Although we know that butterfly numbers have declined generally in the UK since the 1970s and that many species are now threatened with extinction, numbers of common species usually increase during warm summers such as we had in 2016. More research is required, but there is growing evidence that warm winters are detrimental to many of our common butterflies. So, the poor butterfly numbers in 2016 may owe much to the very mild winter of 2015/16, which was the warmest in England and Wales, and the third-warmest for the UK as a whole, since records began in 1910.

Thanks once again to all the GBS 2016 participants. It will be very interesting to see how 2017 differs, but we'll only be able to track the fortunes of butterflies in UK gardens if you take part in the [Garden Butterfly Survey](#).