

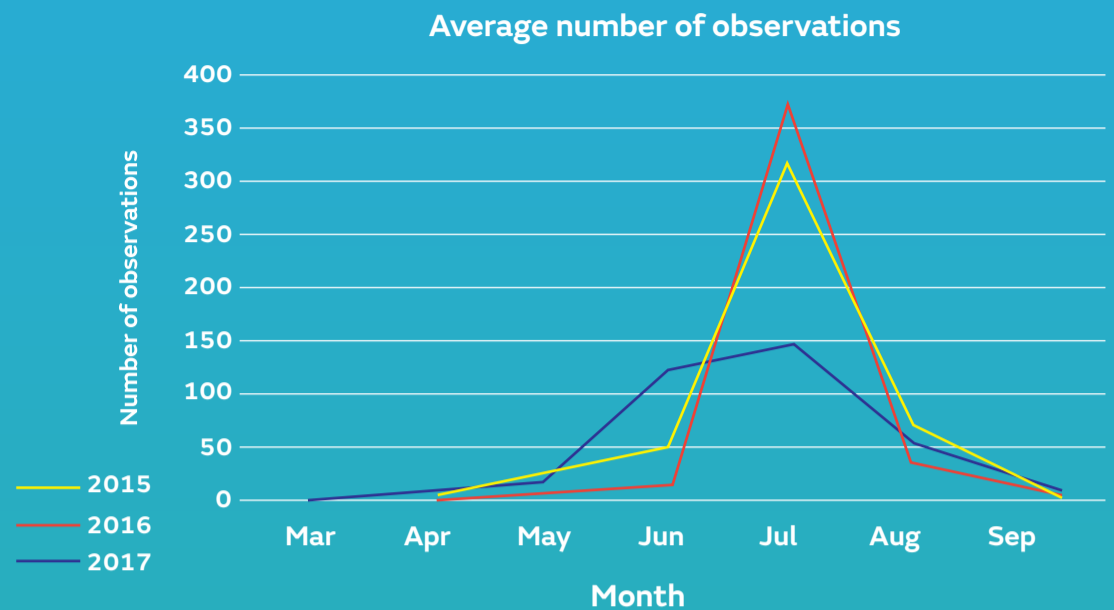
Butterflies at the Met Office

Volunteers from the Met Office began monitoring butterfly diversity in 2013 then with fortnightly surveys and weekly surveys from 2015. 66 transects have been conducted over the past three years, and we can now see how butterfly numbers have changed over time.

The graph to the right shows the average number of butterflies counted on a survey each month.

Every year there has been a peak abundance in July and the record number of butterflies seen was 467 in 2016. 2017 saw a dip in numbers, but the greatest species diversity was in 2017 where 24 different species were counted, compared to 21 in the previous two years.

Due to differences in survey methods, 2013 and 2014 counts have not been included. It is notable, however, that the diversity recorded was much lower, at 17 species in 2013.



Indicator species

Our Biodiversity Action Plan (BAP) aims to increase the biodiversity of flower-rich meadows to support identified 'Species of Principal Importance in England'. One method was to use a biennial cutting regime to encourage over-wintering butterflies such as the **Marbled White** and **skippers**. Evident in the graph, all three indicator species saw a dip in 2016 sightings, but have since recovered.



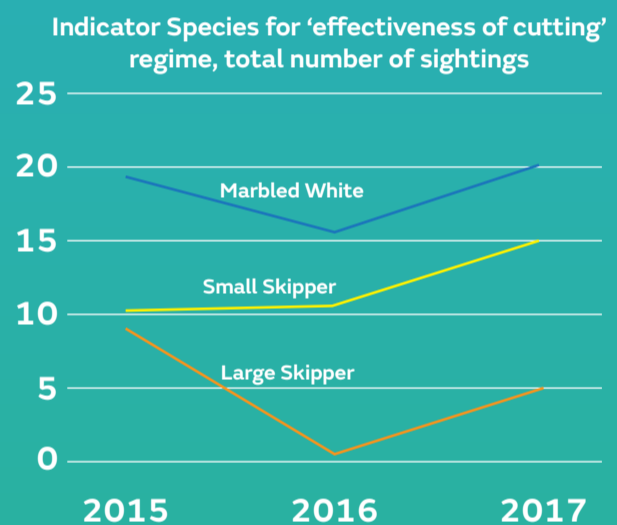
A Devon BAP indicator species for flower rich meadows – number of sightings has increased from 19 (2015) to 20 (2017).



Number of sightings has increased from 11 (2015) to 14 (2017).



Number of sightings has decreased from nine (2015) to five (2017).



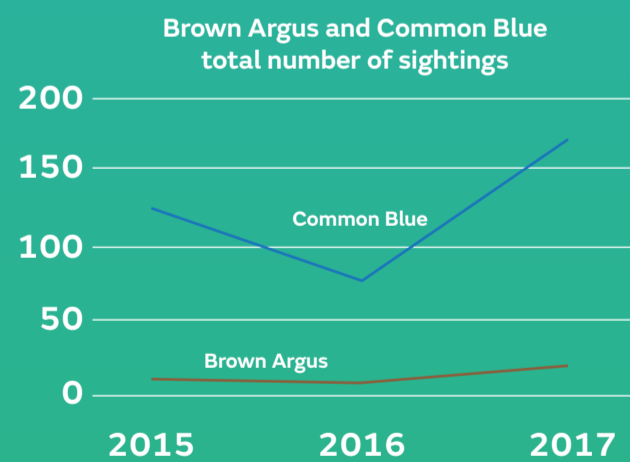
The **Brown Argus** is a target species of significance, while the **Common Blue** is a Devon BAP species. Both also saw a dip in sightings in 2016, and have since recovered.



Increase in sightings from 123 (2015) to 172 (2017).



Increase in sightings from 15 (2015) to 17 (2017).



Compared to national trends

The UK Butterfly Monitoring Scheme (UKBMS) issues an annual report outlining butterfly population trends in the UK. Over the last decade, **Marbled White** numbers have increased significantly, with a high in 2015, whereas the **Common Blue** is one of 10 species in the most severe long-term decline. Thus, it is positive to see our meadows supporting such a large number of Common Blues year on year.

Nationally, UKBMS butterfly numbers were up in 2016 (despite being lower than average), while 2017 was the seventh worst year on record – our general trend seems to agree with this. Regarding the decline in 2016 indicator species sightings, the effects of a predominantly cold April (2016) were felt by the **Marbled White** and the **Common Blue**, where both emerged later than in 2015. Moreover, the summer-flying **Small Skipper**, **Large Skipper** and **Brown Argus** all had poor years across the rest of England too - which may have been habitat management or weather driven.

References

1. Brereton TM, Botham MS, Middlebrook I, Randle Z, Noble D & Roy DB (2016) United Kingdom Butterfly Monitoring Scheme report for 2015. Centre for Ecology & Hydrology & Butterfly Conservation. Available online at: <http://www.ukbms.org/reportsandpublications.aspx>
2. Brereton TM, Botham MS, Middlebrook I, Randle Z, Noble D & Roy DB (2017) United Kingdom Butterfly Monitoring Scheme report for 2016. Centre for Ecology & Hydrology & Butterfly Conservation. Available online at: <http://www.ukbms.org/reportsandpublications.aspx>