

# Analysis of autumn 2013

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Thanks to everyone for a great recording effort last autumn - for the first time in a while, the number of records we received rose compared with the previous year. In autumn 2013 we received a total of 32,470 records compared with 30,347 in autumn 2012. This has reversed the worrying downward trend in record numbers, but we still need to do a lot more to reach previous levels - in 2007 we received more than 60,000 records. The more records we receive, the more robust the dataset as a whole is for indicating long-term trends in seasonal events.

To study change in seasonal events, we compare each year's autumn averages with those of 2007, chosen as our benchmark year for its closeness in terms of weather to the 30-year average for 1961-90. It is therefore useful to compare the weather in autumn 2013 with the same 30 year averages, and in summary, last autumn was certainly warmer and drier and followed a warm, sunny summer.

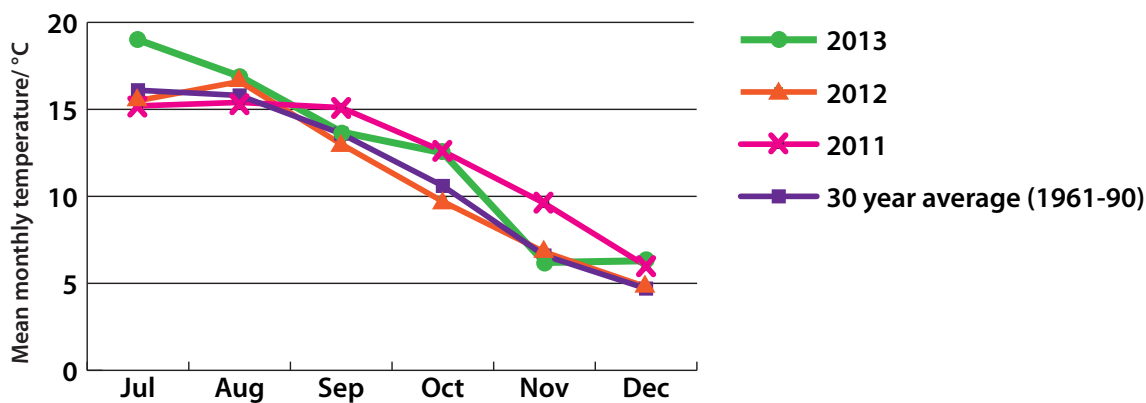
Looking at the Central England Temperature, all months from July to October were warmer on average in 2013 than the 30-year average, with July 2.2 °C warmer, August 1.1 °C warmer, September closer to the average at 0.1 °C warmer, and October 1.9 °C warmer. November, by contrast, was 0.4 °C cooler (See Figure 1).

The previous winter, 2012-13, was cold, and in particular

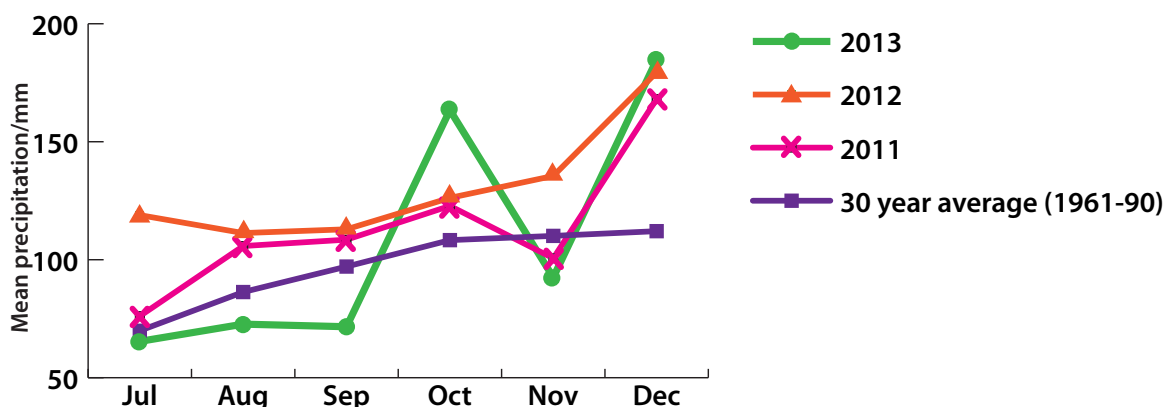
there was a very cold snap in March, so that spring felt late. However, once spring and summer arrived they were memorably good, with warm, dry weather. There was a prolonged heat wave from 3 to 22 July, when high pressure was established across the UK, bringing fine, warm, sunny weather: in fact, overall, it was the sunniest summer in the UK since 2006. September opened with fine summery weather but then became more unsettled and stormy towards mid-month, with more typical autumn temperatures for the second half. October was mostly unsettled but, with an airflow frequently from the Atlantic, temperatures were mild. November saw some cold, wintry weather from mid-month.

The summer was also the driest for the UK since 2003, though there were some notably wet days, particularly in July and August, with localised heavy downpours. Autumn was also dry, with the exception of October, which for England was provisionally the wettest October since 2000. It was the driest summer for the UK since 2003. However, October was a wet month; for England it was provisionally the wettest October since 2000. The St Jude's Storm of 28 October brought heavy rain and damaging winds to southern parts of England and Wales. November saw near or below average rainfall for most areas (see Figure 2).

**Fig 1. Central England temperature Jul-Dec 2013 compared with 30 year average**



**Fig 2. Mean monthly precipitation Jul-Dec 2013 compared with 30 year (1961-90) average**



# Events in Autumn 2013

On the whole autumn events were considerably later than in the benchmark year of 2007. This may be a combination of the late spring, impacting on flowering and then fruiting, and then a mild autumn, impacting on the timing of leaf tinting and fall.

On average:

- Departing migrant birds left one day earlier
- Winter birds arrivals were nine days later; abundant, late fruit crops in Scandinavia may account for later arrival of redwing and fieldfare to this country.
- First leaf tint was on average nine days later than in 2007, and full tint 10 days later, with leaf fall five days later and the average date for trees being fully bare nine days later. On average, all these events relating to leaf tinting and fall were later than in any year since 2007, due to the mild autumn. Tinting was particularly late in beech, oak, rowan and sycamore.

## Summer-autumn fruiting

Fruiting was late, as expected, but abundant. Tree fruit was ripe an average of 13 days later than the benchmark year of 2007. Dates for bramble and blackthorn fruit ripe were, respectively, 14 and 11 days later than the 2007 benchmark.



Later fruiting may be attributable to the cold snap in March delaying flowering, but this was then followed by very good conditions for fruit formation during the summer, with nine out of 16 species showing the highest fruiting scores since 2001. This was in stark contrast to 2012, when fruiting scores for many species were the lowest recorded since 2001.

Species	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013
Ash	3.8	3.5	4.1	4.1	3.3	4.0	3.0	3.7	3.2	4.1	3.4	2.9	4.3
Beech	2.3	3.4	3.2	3.5	3.6	3.5	3.5	2.2	3.6	3.4	4.1	2.2	4.0
Blackthorn	3.5	3.2	3.6	3.5	3.1	3.6	3.6	2.1	3.5	3.6	3.8	2.3	3.0
Bramble	3.4	3.8	3.8	4.0	3.9	3.9	3.8	3.6	3.8	3.8	3.6	3.1	4.1
Dog rose	3.8	3.7	3.8	3.4	3.8	3.8	3.6	3.7	3.6	3.8	3.7	3.3	3.9
Elder	3.8	3.6	3.7	3.8	3.8	3.8	3.6	3.5	3.7	3.8	3.7	3.1	3.9
Field maple	3.4	3.2	3.4	3.6	3.6	3.5	3.7	3.1	3.5	3.6	3.8	2.9	3.7
Hawthorn	3.7	3.8	3.8	4.0	3.9	3.9	3.9	3.8	3.9	4.0	4.1	3.5	3.9
Hazel	2.2	2.7	2.8	3.0	3.0	3.2	3.4	2.3	3.3	3.3	3.5	2.4	3.1
Holly	3.3	3.6	3.6	3.7	3.9	3.7	3.6	3.3	3.8	3.8	4.0	2.8	3.7
Horse chestnut	3.4	3.4	3.4	3.6	3.6	3.5	3.4	2.9	3.2	3.3	3.3	2.3	3.4
Ivy	4.1	4.0	4.1	4.1	4.1	4.2	4.1	4.0	4.2	4.1	4.2	4.0	4.2
Oak (pedunculate)	2.8	3.0	3.0	3.3	3.3	3.7	3.1	2.8	3.0	3.3	4.0	1.9	4.1
Oak (sessile)	2.6	2.9	2.9	3.1	3.2	3.6	3.1	2.9	2.9	3.2	3.8	2.0	4.0
Rowan	3.8	3.8	3.7	3.9	3.9	3.9	3.8	3.8	4.2	3.9	4.1	3.4	4.3
Sycamore	3.5	3.4	3.5	3.7	3.5	3.7	3.9	3.1	3.8	3.6	3.8	3.1	4.0

**Table 1: Mean annual fruiting scores from 2001-2013. This records the amount of fruit or seeds on a tree or shrub. Coloured boxes indicate the years with the highest fruiting scores for each species.**

1 = no fruit, 2 = meagre, 3 = moderate, 4 = good crop, 5 = exceptional

## Recording

The records we collect are used internationally by scientists researching ecological responses to environmental change. There is still far less data on autumn events than for spring, but the records you collect are part of a vital, gradually expanding picture, and are invaluable. Please do continue to submit them, and encourage others to join in too.

