



## Analysis of autumn 2011

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### Weather

According to the Met Office, 2011 will be remembered for its warm spring and autumn, compared with an “indifferent” (miserable?) summer – and a pronounced north-west/south-east gradient in rainfall, with Scotland wetter than average and south east England much drier.

Overall, with a mean UK temperature of 9.6 °C, it was the second warmest year since 1910 (only 2006 was warmer), and also ranked second in the Central England mean temperature series from 1659.

Figure 1 shows that overall the Central England mean temperature for July to December 2011 was 1.1 °C higher than the 30 year average (1971-2000). However this masks the fact that July and August were colder than average, September to December warmer. In fact, after the coolest summer since 1993, October was record-breaking, with temperatures widely exceeding 25 °C.

### Central England temperature (Jul-Dec) compared with 30 year average (Met Office)

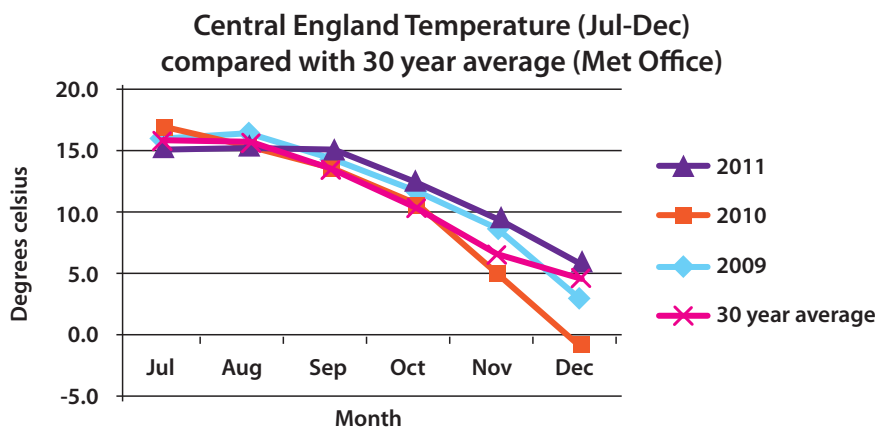


Figure 1: Average temperatures in Central England between July and December 2011 were 1.1 °C higher than the 30 year average (1971-2000).

Despite reports of drought, rainfall during autumn was actually close to average across the UK (Figure 2) however, this belies an uneven geographical distribution. In September, October and November, parts of south-east and eastern England had only half

the normal amount of rainfall, whereas western Scotland experienced one and a half times the normal amount of rain during September and October, and rainfall was equally high in north-west England in September and Northern Ireland in October.

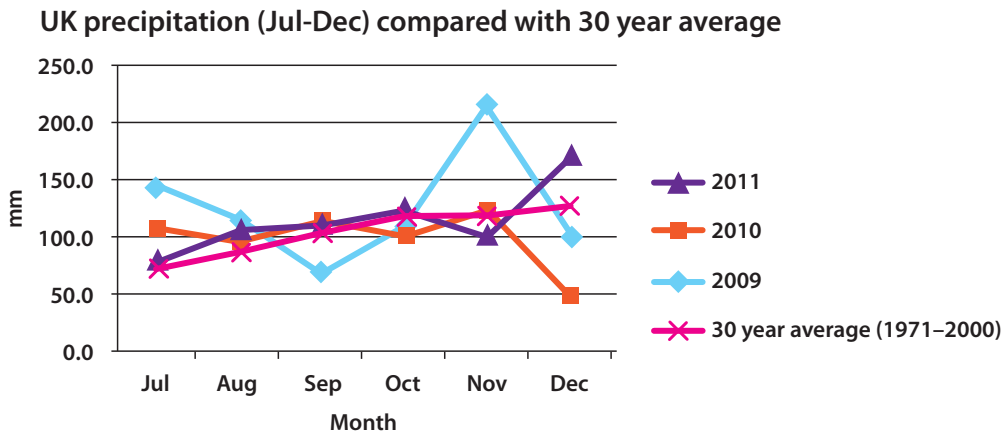


Figure 2: Average rainfall UK-wide between July and December 2011 was similar to the 30 year average (1971-2000).

## Events in 2011 compared to 2007

2007 is our benchmark year for Nature's Calendar autumn data when the mean temperature for July-December was only 0.04 °C above the 30-year average (1961-90).

### Classic autumn events (October-December)

On average, compared to 2007:

- Departing migrants left one day earlier
- Winter arrivals were six days later
- Events leading up to leaf fall were a little confusing: leaf first tint was four days earlier, full tint one day later, leaf fall four days earlier, and bare trees three days later.



Fieldfare

### Summer-autumn fruiting

Fruit ripening was three days earlier than in 2007. Early flowering in spring is likely to lead to earlier fruiting in

late summer and autumn, so the wonderfully warm weather we experienced last spring could account for early fruit ripening.

The results for leaf colour and fall are more difficult to interpret. It might be expected that the warm temperatures in September – November would lead to later leaf tint and leaf fall, but it is possible that drought could have led to earlier tinting and leaf fall. It's also possible that the very variable weather conditions across the country may account for high levels of variation within the data. Perhaps we need to record both first and last leaf fall to get a more accurate picture of what is happening! The results themselves are a little contradictory, with first tint earlier, but full tint later. It's also possible that some records are being skewed by increasing numbers of trees showing signs of disease, such as horse chestnut.



Oak full tint

## Recording

The number of records we received in autumn 2011 dropped considerably from the previous year, with 26,334 records compared to 31,438 in autumn 2010, 33,145 in 2009 and 33,978 in 2008. This is worrying as the fewer records we have, the less robust the dataset as a whole is for indicating real trends. For some tree species in particular, some leafing data looked a little anomalous, which might be due to a big drop in records for that species.

There is still far fewer data on autumn events than for spring, but the records you collect are part of a vital, gradually expanding picture, invaluable in helping us to build a long-term picture of changes in natural events in response to the climate, so please do continue to submit them, and encourage others to join in too.