

# Spring data analysis 2013

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A quick poll of family and friends shows their memory of spring 2013 as being exceptionally cold and late, but followed by a warm, sunny summer. The data illustrates how nature responded to this. For most of the spring events we record, averages were later than the 2001 baseline for the first time in 12 years (as might be expected for the coldest spring in half a century). However, within this there was some variation, reflecting that March was the month that altered the recent trend.

## Weather

Taking a closer look at the weather, spring 2013 was the coldest for the UK since 1962 and the fifth coldest in a series since 1910. The mean temperature over the UK for March to May was 6.0°C, which is 1.7°C below the long-term (1981-2010) average. March was 3.3°C below the long-term average for the month, April was 1.1°C below, and May was 0.8°C below. In fact, the Hadley Centre's records for mean Central England Temperature, (a dataset that began in 1659), shows that there were only 11 years in the whole series in which the mean temperature for March was colder.

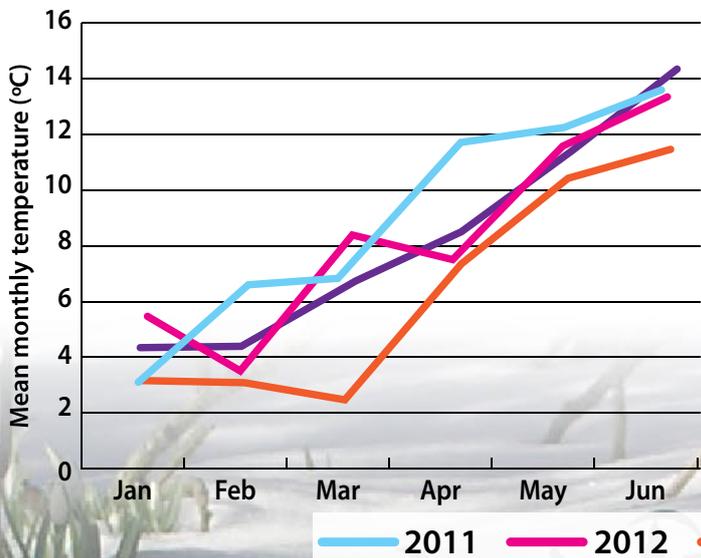
Spring was a little drier than the long-term average. March was a dry month in the north and west, while April was rather dry across much of England and Wales. May

was wetter than average for the UK overall. We had late season snow in some areas during late March and early April. Sunshine totals were close to normal, ending a run of six consecutive sunny springs from 2007 to 2012.

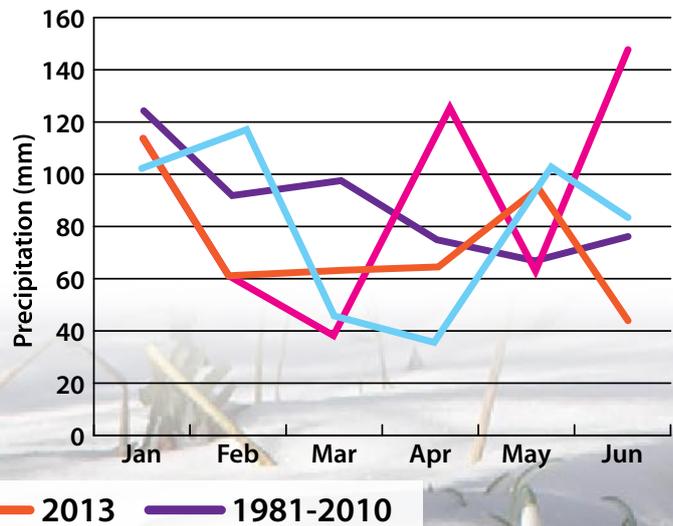
This followed a winter that was slightly colder than usual, (the mean temperature for December to February was 3.3°C, which was 0.4°C below the long term average), with February the coldest month. However, spells of notably mild weather occurred in late December and early January, with the cold weather affecting early December, mid to late January, and the latter part of February.

Winter was also slightly wetter than average, with December particularly wet, widespread snow in mid to late January, and further short-lived snowfalls in February.

Mean Central England Temperature (2011-13) compared with UK 30 year (1981-2010) average



UK monthly precipitation Jan-Jun 2011-13 compared with 30-year (1981-2010) average



# Phenological events



Blackcap: istockphoto

The majority of phenological events recorded by our volunteers were close to or later than those in the baseline year of 2001. This year was chosen as the baseline because temperatures in that year were closer to the 30 year average of that time (1961-1990).

Migrant birds produced mixed results for 2013. Blackcap was seen earlier than the baseline year by seven days, but spotted flycatcher and chiffchaff were five and seven days later respectively. All others were three days either side of the 2001 baseline. This meant that the average for all migrant birds was the same as the baseline year 2001, compared with recent years when it has been four or five days earlier, (2011 having been nine days earlier).

Song thrush was first heard 21 days earlier than in 2001, but this is less early than other years when it has been up to 43 days early. Other bird breeding behaviour was variable but the general trend was later than 2001, when in recent years the average has been earlier.

Insects were first seen on average three days later than in 2001, though bumblebee was a massive 27 days later. Amphibians were also affected by the long cold spell in early spring, with frogspawn five days later than usual, and tadpoles 11 days later.

Grasses flowered on average one day later than 2001, but in previous years they have been up to 17 days earlier.

Budburst was on average three days later than usual when in previous years it has been up to 16 days earlier. By contrast, ash was three days early, and elder 11 days early (though this is less early for both species than in previous years).

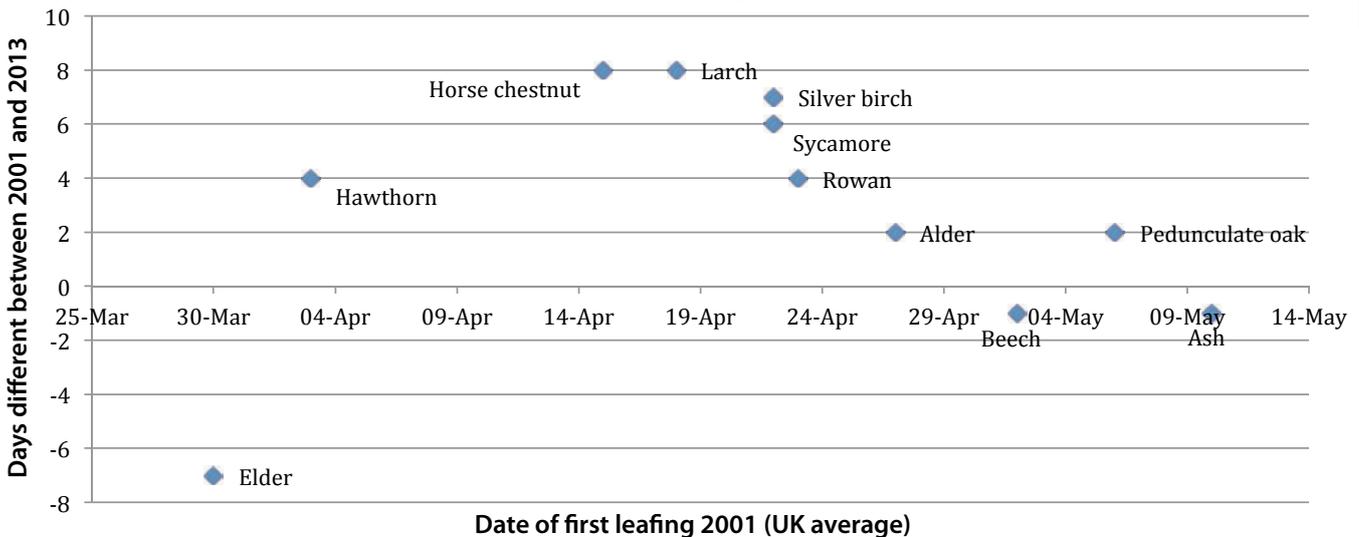
First leafing was on average two days later than the baseline, compared with up to 17 days earlier in previous years, and the first date of lawn cutting was three days later than the baseline, compared with up to 19 days earlier in recent years.

A closer look at the breakdown of records shows that events that occur earlier in the season were less likely to have been affected by the cold conditions in late winter/early spring, while many events traditionally recorded in March were more likely to be late, given that March was particularly cold. As the season progressed, average dates moved nearer to the benchmark, reflecting the fact that April and May, while colder, were still closer to the average than March. This can be seen in the graph below, which compares first leafing average dates in 2013 with the 2001 date. The cold temperatures in March may also explain the lateness of bumblebee sightings – average date 22 April compared with 26 March in 2001.

Red-tailed bumblebee: WTPL/Pete Holmes



Comparison between date of first leafing (UK average) in 2001 and 2013



The total number of observations was 48,792 compared with 54,133 in spring 2012. The trend in number of observations has been steadily downwards over the last five years. Please help by continuing your good work and spreading the word to others – we need your records now more than ever. [naturescalendar.org.uk](http://naturescalendar.org.uk)