

**Radcliffe Meteorological Station**  
 School of Geography - University of Oxford  
 Monthly Summary of Weather at Oxford for *March 2023*

		<b>Difference from long period mean</b>
Mean air temperature (°C)	7.6	1.8
Absolute maximum air temperature (°C)	15.9 (30 <sup>th</sup> and 22 <sup>nd</sup> )	-0.5
Lowest maximum air temperature (°C)	2.5 (8 <sup>th</sup> )	
Mean maximum air temperature (°C)	11.1	0.9
Absolute minimum air temperature (°C)	-2.6 (11 <sup>th</sup> )	0.7
Mean minimum air temperature (°C)	4.8	<b>2.3</b>
Absolute minimum grass temperature (°C)	-4.2 (15 <sup>th</sup> )	<b>3.1</b>
Mean minimum grass temperature (°C)	3.1	<b>3.2*</b>
Absolute minimum concrete temperature (°C)	-3.8 (11 <sup>th</sup> )	0.4
Mean minimum concrete temperature (°C)	3.7	<b>1.5</b>
Mean soil temperature at 30 cm (°C)	7.4	1.3
Mean soil temperature at 100 cm (°C)	7.5	
Highest daily rainfall (mm)	15.3 (31 <sup>st</sup> )	
Total rainfall (mm)	133.9	<b>92.5**</b>
Total bright sunshine (hours)	71.9	<b>-42.3</b>
Mean daily bright sunshine (hours)	2.3	
Mean wind speed (knots)	10.7	0.9
No. of rain days (0.2 mm or more rainfall)	27.0	<b>12.9*</b>
No. of wet days (1.0 mm or more rainfall)	20.0	
No. of days with minimum temperature less than 0°C	2.0	-5.1
No. of days with ground temperature less than 0°C	6.0	<b>-10.0*</b>
No. of days with fog at 0900 GMT	0.0	-1.7
No. of days with snow lying at 0900 GMT	0.0	-0.9

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**Bold** denotes anomalies in excess of **one** standard deviation above/below the long-term mean for March, while **bold** with an asterisk (\*) denotes two standard deviations above/below, and bold with two asterisks (\*\*) denotes three standard deviations above/below.

**Notes**

March 2023 was a record-breaking month at RMS Oxford, as we recorded the highest March monthly rainfall total (133.9mm) since records began in 1767. This replaces the previous record of 133.6mm from March 1862. The most rainfall recorded on a single day was 15.3mm (31st March), which isn't abnormally high for a winter storm, but there was a higher frequency of significant rainfall days across the month, with 6 days recording over 10mm of precipitation. Another record matched this month is the number of days on which rainfall occurred since 1881, with 27 of the 31 days this March receiving rainfall (over 0.2mm). This is joint with March 1917, which also had 27 rainfall days. The record-breaking rainfall this month is likely due to a sudden stratospheric warming (SSW) event in February that shifted the jet stream southwards and so brought more Atlantic low-pressure systems over the UK.

Other notable readings from March 2023 at RMS Oxford include that the total number of sunshine hours was one standard deviation lower than expected at this time of year. Temperatures also varied across the month, as March began with cooler than usual temperatures but recorded higher than usual temperatures in the second half of the

month. This has resulted in significantly warmer grass and concrete temperatures and 10 fewer ground frost days compared to the long-term station means.

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Sophie Harbord (13/04/2023)

**Radcliffe Meteorological Observer**