

Radcliffe Meteorological Station

Oxford University Centre for the Environment

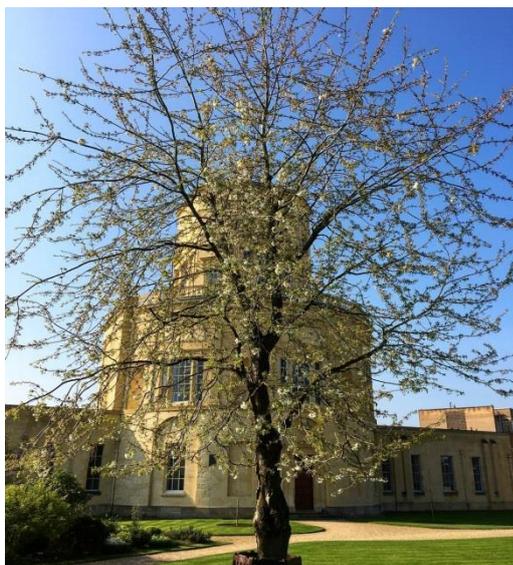
The Weather at Oxford in 2017

Globally, 2017 was in the top three warmest years on record, and the warmest non-El Nino year. The global temperature was 1°C above pre-industrial records. In Oxford, 2017 was the joint 4th warmest year, with a mean annual air temperature of 11.1°C (1.2°C above our 202-year mean). In particular, February, March, May and June were significantly warmer than average, with a combination of higher maximum and minimum temperatures recorded across the months.

After a warmer-than-average December in 2016, **January** felt quite chilly, and was the coldest at RMS since 2010. With regards to our long term mean, the average temperature of 3.8°C was exactly average. Ground temperatures were below average. It was also slightly rainier than normal (64.1mm total rainfall), but still well within the norm for the time of year.



February was much warmer than average. The mean air temperature of 6.4°C was 2.2°C above the long term average, and the highest temperature of 15.6°C was 2.9°C warmer than the average and is in the top 15 highest absolute temperatures in our 200-year record. Minimum temperatures were also higher than usual, and there was only one day when the overnight temperature fell below 0°C, compared to a long term average of 9.6 days.



Above average temperatures continued into **March**, which was the joint-second warmest March in our record (9.3°C). This was due to a combination of a high mean maximum temperature (13.7°C; fifth warmest on record) and a high mean minimum temperature (5.7°C; third warmest on record). All temperature metrics were at least one standard deviation above the mean.

April was characterised by a lack of April showers, with only 5.4mm of rain falling over the whole month. This was perhaps due to a very low number of rainy days: five, compared to a long term average of 13.5. Maximum temperatures were also above average for this time of year; the absolute maximum temperature of 24.1°C was the warmest April high since 2011, and the eighth warmest on record.

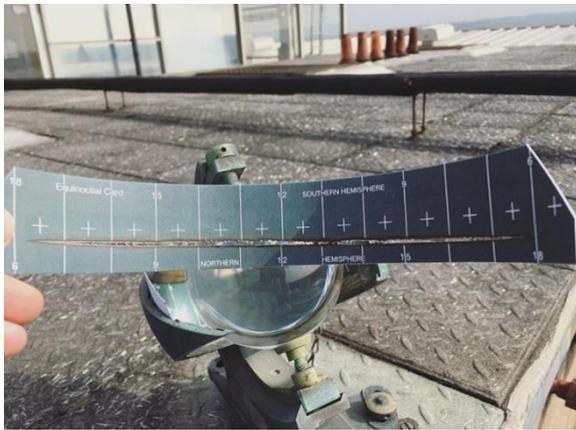
May was also characterised by above average temperatures in nearly all variables. The mean air temperature of 14.0°C was 2.4°C above the long term mean, and the fourth warmest on record. Again, this was due to a combination of a high mean maximum temperature (19.2°C; joint fourth warmest) and mean minimum temperature (9.3°C; joint fifth warmest)

Warm temperatures followed us into **June**, which was the warmest since 1976 and the joint fourth warmest on record.

The mean minimum temperature of 12.9°C was the warmest on record, 0.3°C above the heatwave summer of 1976. The absolute maximum temperature of 32.5°C on June 21st was only beaten by the June of 1976, when temperatures reached 34.3°C.



The GTC ducks enjoy a visit to RMS



July 2017 was another warmer than average month. The temperature remained at or above 10.6° for the entire month for only the second time in our records, drawing with July 2010 with the highest absolute minimum temperature. Meanwhile, the maximum temperature peaked to 32.2°C on the 6th of July, which was the 11th highest absolute maximum July temperature we have recorded.

In contrast, **August** was a particularly average month. The temperature dipped to 8.9°C on the 13th and the 31st of the month, but otherwise remained above 9°C. The maximum temperature of 27.6°C was achieved on the 28th of August. Total rainfall was close to the long term mean. There were no have any extremely wet days (the maximum daily rainfall recorded was 11.7 mm), although there were nearly four more wet days than the long term mean.

While temperatures in **September** were also particularly average, we recorded the fifth most rain days in our record, tying with 1896 and 1935. At 21 days, this was the largest number of rain days since 1974. Of these, 12 days were classified as wet days, with 1.0 or more mm of rainfall. Despite this, the monthly total rainfall was 60.7 mm, only an insignificant 1.3 mm above the annual mean.



October was an historic month as we switched our mercury thermometers to a digital system. In order to comply with new UN regulations, the Met Office has begun the process of removing all mercury thermometers from observing sites. We have been provided with non-mercury replacements for the soil thermometers, and a data logger to record dry bulb and maximum air temperature. We unfortunately were unable to record a large amount of temperature data during this period due to teething issues.



In mid October, storm Ophelia caused some interesting (and terrifying) skies across Oxford



We said goodbye to Callum (right) and the mercury thermometers (left) in October

This year had the eighth sunniest **November** on our record, experiencing 99.6 hours of sunlight in total. In all other respects, however, it was a fairly average month, with temperature metrics all lying within one standard deviation from the November mean. Total rainfall was slightly lower than average, although this was not significant. Rather neatly, we recorded the highest maximum air temperature (15.4°C) on the 1st, and the lowest maximum air temperature (4.1°C) on the 30th.

December showed the return of snow to Oxford, to the delight of many. This was the first snow to settle at RMS since 2012. Most snow fell overnight on the 9th and the morning of the 10th, leaving 6.5cm on the ground. By the 13th much of this had melted following warmer temperatures. While temperatures felt cold compared to the unusually warm December of 2016, they were not significantly different from the long term average.



RMS news

Goodbye mercury!

As detailed in our monthly reports, in October we switched from mercury thermometers to digital and alcohol replacements, in order to comply with the Minamata Convention on Mercury. Mercury thermometers have been used throughout the history of RMS, so it was an historic day. Now the teething problems are out of the way, we are enjoying the ability to look back through the diurnal cycle of temperature on our Vaisala data logger.

Observer news

In October we said goodbye to observer Callum Munday, who has moved on to pastures new (but still in and around Oxford). Callum had been a Radcliffe observer for almost 3 years, and will be missed!

But it was not all sad news, as we welcome new observer Emma Howard to the fold. Emma is studying for a PhD in African climate science with station director Richard Washington. She hails from Australia, and enjoys knowing exactly how cold it is on any given day.

RMS to hit your screens soon

RMS will be featuring in a BBC4 documentary with physicist Helen Czerski on 'Temperature' in the coming months. Much of the first episode was filmed at RMS, and observer Amy Creese was interviewed. Hopefully she made the cut!

Social media

We have continued our foray into the world of social media. We now have Instagram ([rms_oxford](#)), where we post lovely images of the weather station alongside some interesting weather facts! Our new year's resolution is to take better care of our Twitter account too, so follow [@RMS_Oxford](#) for all your Oxford weather needs.



The annual report was written by RMS observers; Amy Creese and Emma Howard. We would like to thank Roger Brugge for quality checking our recordings each month, and Phil Johnson from the Met Office for all his help with instrument changes this year.