

Uluru weather

Uluru is in the arid zone of Central Australia at 131 °E and 25°S, 500 metres above sea level. The climate around Uluru is extreme and difficult to predict.

Recording the weather

In 1991 the Bureau of Meteorology installed a weather station near Uluru - Kata Tjuta National Park Administration Centre. Park staff take daily readings, maintain records and equipment, and make regular reports to the bureau. The station measures rainfall, wind speed and direction, air temperature with maximum and minimum readings, soil temperature at 10, 20, 50 and 100cm depth, wet-bulb temperature (used to calculate relative humidity) and an evaporation reading.

Temperature

Temperatures are not moderated by the sea, which is many hundreds of kilometres away in any direction. Nor are temperatures often moderated by clouds, resulting in considerable heating of the earth's surface during the day and considerable cooling at night. This produces large daily temperature ranges.

The highest temperature recorded by the newly installed weather station was 45.5°C on 17 February 1992. Although higher temperatures have undoubtedly occurred, accurate, controlled recordings have not been possible. Between October and April, there is an average of 43 days above 40°C.

High summer temperatures often cause considerable stress to those moving about the Park. Activity is better in the early morning or late afternoon. The day/night temperature range is normally 15° - 25°C and occasionally over 30°C. Temperatures drop very quickly during and preceding storms. In winter the overnight minimums often fall below 0°C, followed by sunny days.



Frosts

Frosts are common during winter when high pressure systems move through the area combining cooler dry air with nocturnal radiation. The frosts cure the grasses, drying and preserving them. This dry fuel can feed wild fires that can ignite during the electrical storms early summer.

Rainfall

About 70% of the Australian continent is arid. Uluru is located roughly near the middle of the arid centre. The driest region in the arid zone surrounds Lake Eyre, further to the south, where the annual rainfall is only 120mm. At Uluru the long-term average annual rainfall is higher, about 307mm.

Seasonal and annual rainfalls are extremely variable throughout the region, and rain may fall at any time of the year. However, heavy rains are more likely between November and March. At this time of year large tropical depressions may move deep into the continent causing heavy flooding rains to sweep inland across the arid zone, leaving large areas of drenched country.

The average annual evaporation rate is high at approximately 280mm. In such a dry environment prolonged droughts may be frequent and extreme. The longest drought on record ended in 1965 and lasted six and a half years. The lowest recorded annual rainfall was 82mm in 1965 and the highest 935mm in 1974.

When rain comes the ephemeral (drought-evading) vegetation explodes into growth. Plants of this type only grow after rain and are mostly grasses and small plants which cover the ground in shrub and tree communities. They flower profusely, set seed and die as soon as the water dries up. The seeds lie waiting until the next deviant cyclone. Summer rains promote the growth of grasses and winter rains promote the growth of ephemeral flowers.

Humidity

The average relative humidity throughout the region is markedly lower than in coastal zones. Seasonally, humidity recordings are almost the inverse of temperatures. They are highest in winter and lowest in summer. Humidity in summer is highest at night. It has been measured in the Park at 3% on a summer day - that is low! The air is usually very dry, the humidity normally dropping as temperatures rise in the afternoon, which

contributes to efficient bodily cooling but requires the body to use a great deal of fluid. **Visitors need to drink enough water to replace that used when participating in a strenuous activity such as walking.**

Winds

Winds at Uluru come predominantly from the south-east. They are at their strongest during the spring from September to November.

At the top of the Uluru climb winds are invariably much stronger than at ground level. Wind speeds of up to 90km per hour have been recorded in the region. **Visitors must take care to avoid hypothermia when strong winds combine with cold weather, by ensuring suitable clothing is worn.**

Storms

The general flow of the weather is from west to east, though storms can and do occasionally come in from other directions, frequently steering from the north-west with an approaching change. Storm conditions and lightning are most common from October to February, but may occur at any time of year. Stormy weather is often preceded by strong, often dry and dusty winds from between north-east and west. Puffy stratocumulus clouds appear on the western horizon, amidst fairly hazy conditions, and make their way east, quickly covering the sky. About 10 minutes before a storm hits, the wind picks up and the temperature drops, this trend continuing with the passage of the storm.

The daily weather forecast is available at the Cultural Centre