



Purnululu National Park

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Inscribed on the World Heritage List in 2003

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Purnululu (the Bungle Bungles) is by far the most outstanding example of cone karst in sandstones anywhere in the world. It owes its uniqueness to several interacting geological, biological, erosive and climatic phenomena.

These dramatically sculptured structures, unrivalled in their scale, extent, grandeur and diversity of forms anywhere in the world, undergo remarkable seasonal variation in appearance, including striking colour changes after rain.

The intricate maze of towers is accentuated by sinuous, narrow, sheer-sided gorges lined with majestic *Livistona* fan palms. The soaring cliffs are sculpted by seasonal waterfalls and pools.

Purnululu National Park, in the isolated east Kimberley region of Western Australia, was inscribed on the World Heritage List in 2003 because of its outstanding universal natural heritage values:

- as an outstanding example representing the major stages in the earth's evolutionary history
- contains superlative natural phenomena or areas of exceptional natural beauty and aesthetic importance.

The World Heritage Listed area for Purnululu National Park is almost 2,400km². Purnululu National Park is located 300 kilometres by road south of the nearest population centre, the small regional town of Kununurra.

There is an adjacent buffer zone to the north and west (the Purnululu Conservation Reserve) of almost 800 km², which is not part of the nominated area but which is managed to help protect the park's World Heritage values.

Famous for the 450 km² Bungle Bungle Range, Purnululu has been listed as an outstanding landscape that is an incomparable natural phenomenon. It reveals the story of its formation over hundreds of millions of years, and helps unlock the story of the earth's history.

Twenty million years of weathering have produced the eroded sandstone towers and banded beehive structures of the Bungle Bungle Range. Dark bands, formed by cyanobacteria, winding horizontally around the domes, contrast with the lighter orange sandstone. Cyanobacteria are single-celled organisms that represent some of the oldest life-forms on earth. These organisms have been found as fossils in rocks elsewhere in Western Australia in rocks that are believed to be up to 3500 million years old.

The cyanobacterial bands are up to several metres wide, yet only a few millimetres thick. The crusts help stabilise and protect the ancient and fragile sandstone towers.

The dramatically sculptured structures undergo remarkable seasonal variation in appearance, including striking colour transition following rain. The intricate maze of towers is accentuated by sinuous, narrow, sheer-sided gorges lined with majestic *Livistona* fan palms. These, and the soaring cliffs up to 250 metres high, are cut by seasonal waterfalls and pools, creating the major tourist attractions in the park.

The sandstone karst of Purnululu is of great scientific importance in demonstrating so clearly the process of cone karst formation on sandstone – a phenomenon only recognised by geomorphologists over the past 25 years and still not completely understood.

While sandstone towers and cliffs are known from other parts of the world, including some regions in Australia, the spectacular features of the Bungle Bungle Range are unrivalled in their scale, extent, grandeur and diversity of forms. They owe their existence and uniqueness to several interacting geological, biological, erosional and climatic phenomena.

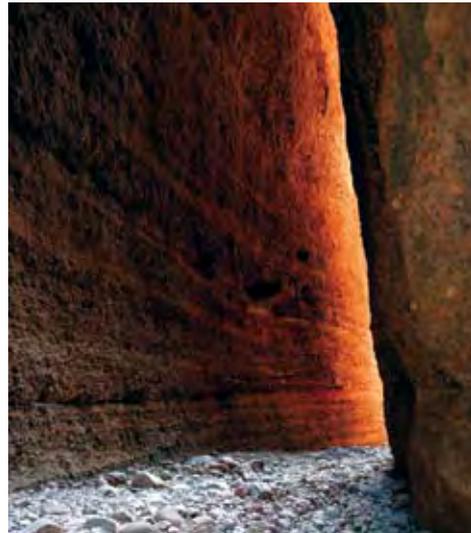


The park's domes, gorges and wet season waterfalls were almost unknown to the outside world until 1982 when aerial pictures of this outback jewel were released.

Purnululu National Park lies in a transition zone between the arid desert environments of central Australia to the south and, to the north, the monsoon savannah environments of northern Australia. The biological features of the park show adaptations to the aridity of the neighbouring desert environments and also to the rainfall-rich zone of the monsoon region. The Ord River, the major watercourse, creates a riverine ecosystem that is a vital resource for plants, animals and people. Mean annual rainfall is around 600 mm but the evaporation rate is very high, and runoff is rapid. Consequently, there is little permanent surface water.

The diversity of landforms, along with the park's location in a transitional climatic zone, supports a range of distinct vegetation communities, ranging from desert shrubs along the exposed plateaus of the Bungle Bungle Range, to the rainforest communities along Osmond Creek valley.

The Western Australian Government Department of Environment and Conservation is responsible for day-to-day management of the property, through the Purnululu Park Council in conjunction with local Aboriginal people.



title page: The fan palm *Livistona victoriae* is commonly seen throughout the park. The surrounding ridges show geological variations in the rock formation in the southern end of the Bungle Bungle Range from the domes in the northern end WA DEC

top strip: The huge amphitheatre of Cathedral Gorge is one of incredible natural beauty with its almost 360 degrees of vertical sandstone cliffs showing evidence of waterfalls that cascade down steep rock faces during the wet season WA DEC

top: The Bungle Bungle Range with its extraordinary array of banded sandstone domes covering 450 km² of the park. These dramatically sculptured natural formations are unrivalled in their scale, grandeur and diversity of form anywhere in the world John Baker & DEWHA

above: Echidna Chasm's narrow 200 metre walls join with the sun to yield striking colour variations of superlative natural phenomena WA DEC