## It's heart-wrenching': 80% of Blue Mountains and 50% of Gondwana rainforests burn in bushfires

Guardian Australia analysis reveals the frightening amount of world heritage area burned in Australia's ongoing fire crisis

Supported by

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The unprecedented bushfires could affect the diversity of eucalypts for which the Blue Mountains is recognised. Photograph: CPOA Brett Kennedy/Commonwealth of Australia/PA

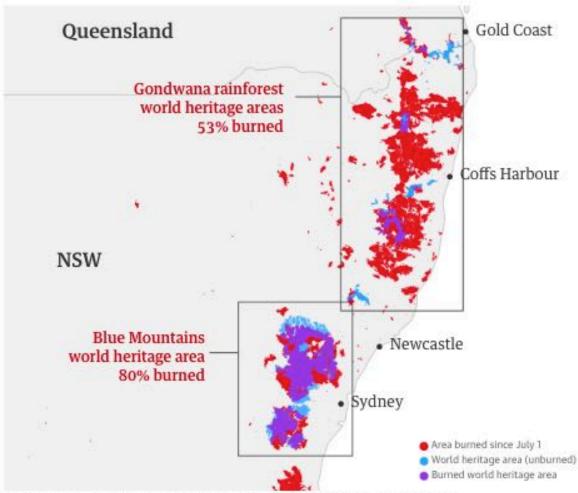
At least 80% of the Blue Mountains world heritage area and more than 50% of the Gondwana world heritage rainforests have burned in Australia's ongoing bushfire crisis.

The scale of the disaster is such that it could affect the diversity of eucalypts for which the Blue Mountains world heritage area is recognised, said John Merson, the executive director of the Blue Mountains World Heritage Institute.

The data is based on a Guardian Australia analysis of areas burned in New South Wales and Queensland and was confirmed by the NSW government.

## World heritage areas burned

Showing where fire agency maps of burned areas and world heritage areas overlap



Guardian graphic. Source: EMSINA and Geoscience Australia, Department of Environment.

Guardian Australia reported in December that 20% of the Blue Mountains world heritage area had been affected by fire in the early months of the crisis.

Four times that amount has now burned in what Merson said were fires of a scale that "has never happened before".

"This is totally, totally unique. As everybody keeps saying, it's unprecedented," he said.

The Blue Mountains world heritage area covers one million hectares of national

park and bushland and is dominated by temperate eucalypt forest.

The area is renowned for the diversity of its vegetation and is home to about a third of the world's eucalypt species.

While most are fire-adapted and can regenerate, many of the species depend on long intervals between fires, Merson said.

"We had a very large fire in 2013. It's only six years after that," he said.

"The eucalypts can be very badly reduced in diversity if fires come through in too short and intense intervals. Their numbers will virtually collapse."

He said the full impact on tree species and wildlife would not be known until more assessments were done as fire grounds became accessible.

But there are concerns about the effect on breeding and feeding habitats for species including the spotted-tail quoll and the brush-tailed rock-wallaby.

The fires have also burnt swamp communities that release water slowly and are important water resources. They flow into streams that feed into Sydney's water supply and provide water for wildlife.

It was revealed this week that a rescue mission by NSW fire crews was able to save the only known natural grove of Wollemi pines, so-called "dinosaur trees" that fossil records show existed up to 200m years ago.

Merson said the fires had entered areas that had not burnt previously and the need for the rescue mission was indicative of the intensity of the fires in the region.



https://youtu.be/-E7maflvbE4
Prehistoric Wollemi pines saved by firefighters from Australia's bushfires – video

"This is climate change in its most fundamental form," he said.

"This is right in our face. We're living it."

Further north, the fires have devastated parts of the Gondwana rainforest world heritage area, a collection of reserves of subtropical rainforest that span 366,500 hectares across NSW and Queensland.

Guardian Australia used newly released data which combines all burned areas in NSW and Queensland since 1 July 2019, and calculated the area of overlap with world heritage areas.

This analysis shows 53% of the Gondwana rainforest area has burned.

Guardian Australia spoke to Mark Graham, an ecologist with the Nature Conservation Council of NSW, in December.

Graham is based in the Bellinger Valley near some of these fires.

He said since December there had been "significant, additional fire in areas that hadn't burned" in Barrington Tops, and that most of the Gondwana areas have taken a "massive hit".

"It's heart-wrenching. It's disturbing. It's frightening."

Graham said his area had experienced some rain in recent weeks but there were now concerns that sediment washed into the Bellinger River has affected the food sources for the critically endangered Bellinger River snapping turtle.

A spokesman for the NSW Department of Planning, Industry and Environment said understanding the impact of the fires on both world heritage areas was a priority.



Record-breaking 4.9m hectares of land burned in NSW this bushfire season

"Analysis will improve as the forests becomes safe to enter and the smoke clears, enabling accurate satellite and aerial imagery to help guide our assessment and on work on ground," he said.

He said both regions contained a mixture of forest types, some of which was adapted for fire, but others that were more sensitive to fire, such as dense rainforest.

Jess Abrahams, the nature campaigner for the Australian Conservation Foundation, said climate change was hitting Australia's world heritage areas "very hard". "We have witnessed consecutive years of devastating coral bleaching on the Great Barrier Reef, while global heating has been described as a catastrophic risk to the Wet Tropics and Shark Bay world heritage areas," he said.

"It's really upsetting to see how much of the Blue Mountains world heritage area has been burnt.

"This is a place many Australians know and love. It has significant Indigenous cultural values and is home to a number of rare and threatened species."