



## Australia has an ancient history of fire

Fires have been a feature of the Australian continent since it broke away from the Gondwanan landmass 50 million years ago.

Since that time most eucalypt forests and woodlands, as well as banksia woodlands, and heathlands and grasslands, have evolved to be dependent on fire in all sorts of ways.

Older Gondwanan vegetation communities however, like the Lilly-Pilly, Sassafras, Olive Berry and Myrtle Beech-dominated rainforest valleys of Gippsland and the Otways, don't like fire at all.

Aboriginal people have long been aware of this relationship of fire to bush regeneration. They learnt to live with, and manage, fire.

We have also now learnt a lot about fire, and our management of fire is impressive, but we can do better. There is a clear need for more science-based research. In particular, flora and fauna monitoring should take place before and after management burns, so the short and long-term effects of fire can be better understood.

There may also be a need for enlightened planning controls where people live in fire-prone areas, and there is a clear need for more community education about fire.

### How frequent have bushfires been in the past?

Because fire records in the early days of European occupation are unreliable, and pre-European fire history is also uncertain, a clear answer to this question is not easy.

We do know, however, that great fires like the 2003 alpine fire have occurred before.

Most notable were the 1939 Black Friday fires, which incinerated vast areas of eastern Victoria, the Dandenongs and the Otways, and the Black Thursday Fire of 1851, which caused so much smoke that the sun was darkened as far away as Tasmania.

Since 1900 there have been significant fires in Victoria in 1905, 1906, 1912, 1914, 1919, 1926, 1932, 1939, 1942, 1943, 1944, 1952, 1962, 1965, 1968, 1969, 1972,



Spot fires in Grampians-Gariwerd National Park, January 2006.  
Photo: courtesy Parks Victoria

1977, 1980, 1983, 1985, 1997, 1998, 2002, 2003, 2005 and 2009.

### How much control burning is done in national parks?

Between 2002 and 2005, some 95,200 hectares of land managed by Parks Victoria was control burned, most in national parks. This is close to one third of all control burns on Victorian public land.

More burns happen outside parks mainly because fuel reduction burns tend to be planned around towns, where they are most likely to help protect people and assets, and this land is most often State forest or other Crown land.

### What limits the number of control burns?

Safety, mainly. There are very few days each year when weather or ground fuel conditions allow a deliberate burn in bushland.

### Who decides where management burns go?

Decisions about when and where to burn are made across all public land, including national parks, on the

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basis of agreed regional fire plans. They are prepared by DSE in consultation with land managers and the CFA. There is a submission period for the general public and plans are revised every ten years.

### Do many control burns escape?

Between January 2001 and winter 2005 there were 2151 prescribed burns on public land in Victoria, and 12 (much less than one per cent) were considered significant escapes.

### Were cows effective in reducing alpine fires?

No. Though cattle can reduce the length of grass in a heavily grazed river flat, in the high country fire is mainly spread by flammable shrubs, which cows don't eat.

Research over time has shown that alpine grazing practices can sometimes cause the spread of these shrubs.

The 2003 fire burnt through almost every grazing licence area in the high country, and the same happened in 1939, when there was even more grazing. (See [www.cowpaddock.com](http://www.cowpaddock.com))

### What type of land burns most easily?

There is no simple answer to this question, as many things affect the spread of bushfires. Timber harvesting, for example, can change tall, old ferny forests into younger, drier forests, which are more flammable.

And pine plantations, often located near towns, are extremely flammable.

National parks often include rugged timbered mountainous country, which is very vulnerable to lightning strikes, and therefore quite bushfire prone. But this, though frightening at times, was the situation long before parks were proclaimed.

### How does fire affect parks?

Though fire can cause suffering for people, and for native animals, generally speaking occasional fires are good, in the long term, for most Australian ecosystems.

Indeed many plants, and some birds and animals, depend on fire for reproduction or survival.

The ways in which different plants, different birds and animals, and different vegetation communities respond to fire is very complex, and can depend on the time of year, fire frequency and fire intensity.

### What about global warming?

The CSIRO predicts that global warming will result in more frequent and more intense bushfires in Victoria. Days of very high to extreme fire danger are likely to increase by 4–25% by 2020 and 15–70% by 2050.

### When lightning strikes

On 8 January 2003, a swathe of lightning strikes along the drought-affected north-western slopes of the Great Divide caused 87 fires. Quick responses from fire crews extinguished or controlled most of them, but some nine lightning-induced blazes could not be contained.

About half of these started inside the Alpine National Park, and half outside the park in state forest.

In the following 59 days, the fire burnt through more than a million hectares of north-eastern Victoria, including 470,000 hectares of national park and 507,000 hectares of State forest.

The fire also caused considerable damage to farms and stock, and in the mammoth effort to contain the fire one firefighter was to lose her life.

At the time it was one of the largest and fiercest fires in memory in Victoria. It was also one of the most well-documented.

Throughout the fire, aerial photography and satellite imaging measured the progress and the intensity of the blaze over the two-month period.

In some instances measurements and photographs were also taken on the ground. Eighty kilometres of transects through grazed and ungrazed areas of the high plains, for example, showed that cattle grazing had no significant effect on the presence or intensity of the fire.

While this extensive monitoring is valuable, and a great improvement on previous levels of information, much of it is compromised by the lack of pre-fire and post-fire flora and fauna studies.

Nevertheless, the implementation of reports by the Emergency Services Commissioner on this fire, and the Prom fire of 2005, greatly assisted in the management of fire in 2006.

National parks are the jewels in the crown of our conservation estate. Understanding fire and other ecological processes is the key, along with adequate resourcing, to the proper protection and management of these special places into the future.