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## AUSTRALIAN BUSHFIRES

In the early months of most years, nature reminds Australians of just how fragile is their hold on the land. The brutal reminders can come in the form of floods, tropical storms, strong winds and bushfires. In some years different disasters are simultaneously buffeting different parts of the vast continent (almost equivalent to the area of the continental United States minus Alaska).

Australia is the world's worst continent for bushfires. In early 2009 Australia attracted international attention because of a collection of particularly bad bushfires in the southern state of Victoria. Foreign media found it hard to believe that a developed country like Australia could sustain such a tragedy. Not only was there an extensive loss of human life, but about 2,030 homes were also destroyed. The fires were among the worst disasters in Australia's two centuries or so of recorded history.

This article begins with an examination of some of the major controversies caused by the 2009 bushfires. It then broadens out the enquiry to look at how fires have shaped Australia, the impact of fires and humans and fires and animals, and then the pioneering development of fire fighting. It concludes with a note on Australia's ambivalence towards the environment.



### The current controversies

First, there has been the usual problem of most disasters: determining the precise number of victims. The current (March 30 2009) figure of 173 is a reduction from the earlier 210 figure for the total killed on "Black Saturday": February 7. The grisly job of determining victims (which is still not completed) means that specialists had to sift through wreckage of homes and vehicles as well as rugged bushland seeking victims. Some of the original calculations may have accidentally included the bodies of animals.

Second, what caused the fires? Certainly February 7 was the hottest day on record for the state. Therefore a bad day was expected – though no one accurately predicted just how bad. To what extent did arson contribute to the fires? Prime Minister Kevin Rudd – as adept at handling the media as his predecessor John Howard – joined the chorus of media commentators by calling this "mass murder". But the Victorian Police may be able to bring only a few (if any) charges of "murder" (manslaughter may be easier to prove). Arson is often more difficult to detect in rural settings than with a city building, where a "torch" is employed. For example, a

destroyed city building may be worth more in insurance payouts than when currently used. Additionally, a building may be under an historical preservation order, while a developer may want it demolished so that (say) an inner city apartment block can be built. Criminals can therefore play a role in city redevelopment.

About 30,000 bushfires are deliberately lit each year in Australia . The total number of bushfires is about 60,000 and so arson is responsible for about half of them. Bushfires cost about A\$1.6billion (about US\$1.2 billion) per year. Few arsonists are ever caught and even fewer are convicted. The average offender is a 28 year-old male, with limited education and social skills. Their motives are unclear. Criminologists are hesitant about making too many generalizations because so few people are ever convicted that the survey sample may be too small for proper analysis.

Third, is this further evidence of “climate change”? The current Labor Government – as distinct from its conservative predecessor - has explicitly accepted that climate change is underway and that dramatic action needs to be taken. Indeed, the aggressive climate change policy promises made in the November 2007 general election helped Labor achieve a dramatic result (even the Prime Minister John Howard lost his seat). The bushfires will add pressure on the government to introduce stiff climate change policies.

The irony, of course, is that Australia – though a heavy polluter on a per capita basis – represents only about 1 per cent of global gross national product. Australia’s climate is largely determined by factors well outside its control. Even if the Rudd Government were able to introduce the world’s best climate change schemes imaginable – and it is far from doing so – then it would still do little to protect Australia from the effects of the worst aggregate polluters, such as the US and China.

Finally to what extent were building regulations and town planning part of the problem? The Victorian State Government has established a Royal Commission to examine these and other matters relating to the tragedy and so it would be premature to make too many pronouncements.

Certainly Australia is currently doing a lot of soul searching on its town planning system and how community design can be improved. Medical researchers, for example, have speculated on how health can be affected by how locations are devised, such as the need to create “walkable communities” to encourage people to do more walking, more social interaction and less sitting solitarily at home in front of the television. In 2006 I was the facilitator for the Australian Government’s national consultation on how to build “communities for all ages” .

The bushfires have added a greater sense of urgency to this urban design quest. The communities most affected were characterized by two populations: first home buyers and “tree changers”. Many victims lived in the semi-rural locations because, with young families, they could

not afford to buy into the much more expensive inner-city Melbourne area. If they had had more money, they would have lived closer to work (and further from danger).

Meanwhile, at the other end of demographic spectrum, many Australians are living longer than ever before and may now spend some decades in retirement. Some of them are selling their expensive city homes and heading for the coast (“sea changers” – named after a favourite TV series on this subject). Others are selling up and moving out to the semi-rural locations (“tree changers”). Did these urban people fail to learn about how to cope with bushfires? Was there too little warning given on the need to leave? These issues will be examined by the Royal Commission. Another issue for the Royal Commission is the speculation that environmentalists made the communities even more vulnerable to bushfires by blocking stringent land-claiming schemes to reduce potentially flammable areas.

### ✓ **How fires have shaped Australia**

Australia - probably more than any other country - has been shaped by fire. 19th century visitors in their sailing ships (before the invention of steamships) could tell they were approaching Australia because they could often smell the bushfire smoke wafting out to sea. Fire has shaped the country’s landscape, flora and history. Some Australians have forgotten this legacy and over-estimate the skill of humans to somehow tame nature.

Australia is well known internationally for the risk of bush fires. They often occur naturally, where there is plenty of dry wood, leaves and forest to burn. Australian bushfires are particularly severe because eucalyptus tree leaves contain large amounts of oil that burn very quickly. Most bush fires occur between October 1 and March 31 each year. The areas particularly at risk are in the country’s southeast corner west of Adelaide in South Australia across to the Tasman Sea through Victoria, New South Wales and the Australian Capital Territory containing Canberra. Also at risk, broadly on the same latitudes, is Western Australia’s grain belt in the country’s south-west corner.

Heavy rains encourage vegetation growth. They are followed by a lack of rain and so the vegetation dries out. Lightning strikes and arsonists then provide the deadly spark. Ironically, nature sometimes needs bushfires because some plants require heat and smoke to release their seeds.

Vegetation often recovers quickly after a bushfire. For example, just over four weeks after the deadly firestorm that swept over Kinglake, north of Melbourne, among the many signs of life returning to area is the new growth appearing on some of the trees burnt by the February fire. After a year or so, signs of a fire on the natural environment will often have gone. Nature is back in its cycle again.

## ✓ Fires and humans

One of the controversial themes in Australian history arises out of the speculation over the Indigenous Peoples' use of fire to clear the land. There is a lack of evidence one way or another. On the one hand, Indigenous Peoples may have used fire to clear the land, trap prey and wipe out the mega-fauna. The giant animals – none of which have been seen by Europeans – did leave skeletal remains. In other words, Indigenous Peoples wiped out much of the continent's earlier environment.

On the other hand, to try to save the reputation of Indigenous Peoples as custodians of the ancient land, it could be argued that the mega-fauna had perished before they arrived. But that then creates another problems because they claim to have no ancient stories of their arriving in Australia – they have always been in Australia (and certainly geneticists have not been able to link them back to other Asian, African or American peoples).

As the Europeans moved across Australia in the 19th century, herding sheep and cattle, so they found a risk of bushfires and grass fires far greater than they knew from Europe. They arrived with European expectations of fires, for example, tame localized heather fires in Scotland. These provided no experience of what could happen in Australia. The Europeans were used to freezing temperatures, floods and storms. The harsh wind-driven bushfires charging rapidly across the countryside were completely new to them. The dry climate and low humidity along with the hot dry winds to fan flames all made rural life exposed to the risk of fires.

Probably in per capita terms, the worst bush fire since the Europeans first arrived occurred on "Black Thursday", on February 6 1851. About 12 people were killed in the fledging colony of Victoria (which had had only about 70 years of European settlement). The fire covered an area of 300 miles by 150 miles in southern Victoria. The smoke drifted across Bass Strait and conservative Christians in northern Tasmania thought that it was the end of the world and Jesus' Second Coming.

Victoria tended to have major bushfires every fifth, sixth or seventh years (the time taken for the fuel to build up). About 50 people were killed in February 1926. 28 people were killed in early 1932. On "Black Friday" January 13 1939 71 people were killed. Only with the 1939 Royal Commission did European Australians officially accept that they had to go about fighting bushfires differently from how they did so in Europe.

Other states, though not hit as hard as Victoria, have also had bushfires. For example, on February 7 1967 a fire went through the suburbs of Hobart, Tasmania killing 62 people. During December 1993/ January 1994, there was the then largest fire fighting effort in Australian history to deal with 800 fires across NSW. Over 20,000 fire fighters were involved.

## ✓ **Animals die too**

Animals are always among the bush fires deaths. They cannot outrun the fires. In many other environmental tragedies, the apparent sixth sense of animals can often help save them. In China, for example, chickens suddenly jumping onto the roofs of rural homes often mean they can tell an earthquake is coming.

After the December 2004 Asian tsunami – which killed about 20,000 people – Sri Lankan wildlife officials could not find any dead animals. Giant waves washed floodwaters up to two miles inland at Yala National Park in the ravaged southeast, home to Sri Lanka's biggest wildlife reserve and hundreds of wild elephants and several leopards. But no dead animals were located. They apparently could tell something bad had happened out to sea and so they fled inland.

Australia had a similar phenomenon on Christmas Day 1974. Cyclone Tracy struck the frontier Northern Territory city of Darwin, killing about 65 people. Birds and animals could sense that something bad was on the way and so they fled. Indigenous people saw them go and so followed suit. Most (if not all) of the deaths were among the minority white population who were busy celebrating Christmas.

But the luck of the animals runs out in bushfires. They cannot outrun bushfires. For example at least one million sheep were killed on Black Thursday 1851. The sheer horror of the event is well captured in one of the country's most well known paintings, named after the event, by William Strutt (now in the State Library of Victoria).

## ✓ **Fire fighting**

Australian fire fighters are now recognized as one of the world's most expert. Fire fighting therefore has also been important for shaping the country's national characteristics. The country has thankfully not been invaded for two centuries but it has constant threats from fires. Fire fighting is a local government/ state government activity. The Australian Government - created by colonial federation in 1901 - may help with emergency financial relief after a fire but fighting the fire is a local and state government activity.

Throughout the 19th century, there was an official feeling that little could be done to fight bushfires except by individual local action. There could be no equivalent of today's early warning system. There were no weather forecasts and no way of spreading them quickly even if they had existed. Daily newspapers often took days to reach parts of each state. Local authorities could not impose fire bans because fires were an essential part of everyday living, such as in cooking and lighting the home. Therefore, before about 1900 there was no colony-wide system for fire fighting. Fires were an act of nature that had to be survived and endured.

But gradually public opinion forced more action by government. After major fires, there were occasionally calls for more government activity. Even if the fires were an inevitable act of nature, official steps could be taken beforehand to minimize the risk of fire.

The Berrigan Brigade in NSW claims to be the oldest brigade in Australia. The first official mention of it was in November 1900. A 1906 NSW law authorized local governments to form bushfire brigades throughout the state. During World War II, there were fears of bush fires damaging national security. Emergency bush fire committees were created to confront that risk. The NSW Rural Fires Act came into effect in September 1997. This arose from the investigation into the 1993/4 NSW bush fires. There is now – for the first time – a single rural fire service with a single chain of command. There are now about 69,000 volunteer fire fighters in about 2,400 brigades in 143 rural fire districts. They fight fires in about 90 per cent of the area of NSW and are responsible for about 1,200 towns and villages.

The fire fighters are supported by other organizations. For example, Australian Red Cross often provides the meals, cooking meals in community halls. In the event of an evacuation, Red Cross registration teams record the names of those who are re-located so that relatives can know that they are safe and that any missing persons are identified quickly. Bush fires can be an appalling tragedy but they can also bring out the best in local community spirit and bravery.

Fighting city fires also has a long and troubled history. Cities used to be just as dangerous for fires as was the bush. Many buildings were made out of wood and so caught fire. People lived in cramped conditions and so flames could easily jump from one building to another. 19th century theatres were lit by gas (itself a fire hazard). People were allowed to smoke pipes and so could accidentally set light to the place. Homes were illuminated by candles (often homemade) and these were a fire hazard. For example, on a summer night the window might be open and a sudden change in the wind could rustle the curtains and suddenly they would be alight. Many children were burned to death by a fire that caught on the window drapes. Similarly, the crinoline dresses of fashionable 19th century women could brush up against a candle which would set their dress ablaze.

Fire fighting in the city was a difficult process. For many of the early years of European settlement, water supply in cities was inadequate. Fire fighting locally was not co-ordinated. News of a fire was often slow in reaching a fire brigade and the team could only respond as fast as the horse-drawn vehicle could move. Sydney's Metropolitan Fire Brigade – one of the world's oldest and largest - was established on February 14 1884.

## ✓ **Australia's ambivalence towards the environment**

Australia enjoys an enviable international image partly based on its rural locations and stunning environment. Yes: it is a wonderful country with much to see. It is the world's oldest continent and its Indigenous Peoples are the world's oldest continuous civilization.

But under all the glamour there is a curious ambivalence. The bushfires have been a reminder just how dangerous that environment can be. There is a deeper ambivalence towards the environment. First, while all the main locations are named after distinguished Britons (and some Frenchmen), Australia also has a “map of misery” : some of the locations are named by Europeans to reflect how they felt at the time. There are 45 “Mount Miserys” dotted around Australia, a Mount Carnage, Mount Destruction and Cape Grim. There are also Useless Loop, Hell’s Gate and Lake Massacre. Even Captain Cook got into the act – he named Cape Tribulation in northern Queensland in his frustration with his ship’s navigational problems.

Second, most Australians have little direct personal link with the rural sector. The European colonization of Australia began in 1788, shortly Captain Cook’s visit. Some early pioneers made a lot of money out of farming and mining. But in terms of the bulk of the population, most people from around 1900 onwards (at least) lived in urban settings. Australian writers and poets romanticized the bush. But they hardly went there. It was essentially a marketing decision: other countries also had big cities like Melbourne and Sydney. Australia’s unique selling point – in literary terms - was the bush. That remains the case today, with only a small – though important – percentage of the population growing food or mining. Most Australians are insulated from the rural environment.

Bushfires are therefore a reminder of the pleasantness and comparative safety of living in the city – despite its crime and grime. Of course, this may now start to change if the speculation over climate change is correct and Australia’s environmental situation – like that in the rest of the world – becomes more fraught.

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1. Australia’s true size is much larger than appears on most maps because those maps use the Mercator projection. Flemish cartographer Gerardus Mercator (1512-94) devised a world map format that expanded the northern hemisphere and reduced the southern hemisphere, thereby distorting the true size of Latin America, Africa and Australia.
2. Discretion was needed in the photographic/ television coverage of the bodies because heat can do appalling things to a body. If fire and heat linger around a body they shrink and distort the muscles so that the corpse suggests that the victim had actually been fighting off the flames.
3. Rowan Callick “Mystery of a Deadly Act”, The Australian, February 14 2009, p 21.
4. Keith Suter The Report on the Findings and Recommendations of the National Speakers Series: A Community for All Ages – Building the Future, Canberra: Department of Health and Aging, June 2006
5. Geoffrey Blainey Black Kettle and Full Moon: Daily Life in a Vanished Australia, Melbourne: Viking, 2003, p 75
6. Mark Whittaker and Amy Willesee “Is this Paradise?” HQ magazine (Sydney), December 2001, pp 97-99