

Australian Bushfire Disasters

The summer weather patterns of southeast Australia often include winds that blow from the dry desert interior. These dry northerly winds produce perfect conditions to dry out undergrowth and fan a fire. A hot spell in southeast Australia is usually followed by a cool change, causing the temperature to drop and the wind to change direction to come from either the south or west. If a fire is already burning, a significant wind change could make an already dangerous situation worse.

Fires raging through the eucalypt forests are fast moving and reach very high temperatures. The exploding trees and strong winds can cause spot fires up to 10 kilometers (six miles) from the fire front. If a fire is moving up a north facing slope it moves even quicker because it pre-dries and heats the fuel in its path. A spot fire occurs when burning bark and leaves become airborne and are carried ahead of the fire front. This endangers the lives of firefighters and makes the battle to stop a fire more difficult.

When the crowns of the trees form a canopy, the fire can race from tree to tree high above the ground. This is called a running crown fire. This type of fire sucks all the oxygen from the air to fuel the fire. The lack of oxygen causes anything alive on the ground below to be asphyxiated. It is particularly difficult to control a crown fire, as the flames are many metres (feet) overhead and can only be reached by high pressure hoses and water bombing.

A Geography of Australian Environments and Communities, page 129.

Ash Wednesday, 1983

Between April 1982 and January 1983 much of Victoria and South Australia experienced one of the driest periods on record. The condition that bushfire fighters dread was present: a combination of dry vegetation, very high temperatures, low humidity, and high wind gusts.

The temperature on Ash Wednesday (February 16 1983) peaked at 43 degrees centigrade (109 degrees F). By the end of the day 21,000 firefighters and support personnel were battling about 180 fires. At Upper Beaconsfield, Victoria, the speed of a wind change caught two firefighting crews unprepared. They were on a dirt road at the bottom of a gully only 50 seconds drive from the main road and relative safety. Then the wind changed direction. The fire crowned across the gully; it took 15 seconds for the fire to jump a distance of over 500 metres (1650 feet). The 12 crew members on board the trucks did not survive. They were killed by the speed and ferocity of the firestorm.

In total 550,000 hectares (1,375,000 acres) were burnt, 2500 homes were destroyed, 75 people died (47 in Victoria and 28 in South Australia), hundreds of people were injured and hundreds of thousands of livestock were destroyed.

A Geography of Australian Environments and Communities, page 130.

Ash Wednesday in Upper Beaconsfield

The wind change came as forecast but with a ferocity that no one could have imagined. Experienced firefighters tell you that with an evening wind change you can expect the temperature to fall, the wind speed to drop, and possibly some rain. This time there was no appreciable temperature decrease and the wind actually grew in strength. I could hear it roaring as it came around the hill, fanning the fire to new intensity.

The fire and windstorm we will never forget. Pieces of stick and ash, glowing red and white, were driven horizontally by the fierce wind. They found their way into the cab, which became unbearable hot and stifling and the flames around the truck reached up to the tray.

The crew then escaped to a cleared area where they waited, watching their township burn on the ridge above them. They were encircled by fires, waiting for the blaze to die down enough for them to break out.

This was the first view of the devastation which had been brought on the village. The church was a smouldering mess, the row of shops had completely gone and there were sporadic detonations as LPG bottles at the General Store exploded...some of us wandered around stunned by the devastation. Others tried frantically to get news of their families and homes.

John Milligan, Parkenham Gazette, 1992

New South Wales Bushfires, 1994

From mid-December 1993 to January 1994, coastal New South Wales experienced hot, dry winds blowing from central Australia. More than 800 fires broke out in an area stretching from Grafton on the north coast to Bega on the south coast, a distance of 825 kilometers (495 miles). The fires burnt out 800,000 hectares (2,000,000 acres) of land, four people lost their lives, 250 homes were destroyed and more than 20,000 people had to be evacuated from their homes.

The New South Wales fires were less intense than the Ash Wednesday fires but they lasted much longer. The New South Wales fires moved forward at an average of 3 kilometers (1.8 miles) per hour whereas in some instances the Ash Wednesday fires moved forward at a rate exceeding 30 kilometers (18 miles) per hour.

At one stage Sydney was nearly encircled by fire. Ninety percent of the Royal National Park in the city's south was burnt out. In the southern suburbs of Como and Jannali, 101 homes were destroyed and 94 were damaged. In the Blue Mountains, to the city's west, 45,000 hectares (112,500 acres) of National Park were burnt. More homes were destroyed as fire burnt through the Lane Cove and Ku-ring-gai National Parks in the city's northern suburbs. Planes were diverted from Sydney Airport because of the dense smoke. Firefighting crews from Victoria and South Australia went to New South Wales to help battle fires for the first time.

A Geography of Australian Environments and Communities, page 130.