

## BUSH FIRE SAFETY AND SURVIVAL

The following article is taken from a publication of the Queensland Fire and Rescue Authority Rural Fire Service. It no longer appears on their website.

Bushfires in Australia have claimed many lives - lives so tragically lost under circumstances that may have been easily avoided by a simple understanding of what to do in a bushfire. Most bushfire victims should have suffered no more than a few minor burns, nose and throat irritation and perhaps a slight headache. Instead, some die because they have either panicked or ignored taking a few basic safety precautions. A fear of fire is probably the most widely spread phobia of the human race. The unexplainable panic that arises when people are, or imagine they are, in danger of being trapped by fire has led to the abandonment of common sense. Panic, in most cases, has led to individual and multiple deaths when comparative safety was near at hand.

To avoid such tragedies, everyone who lives in, or visits the grass and bush lands that make up such a large percentage of our country should make themselves familiar with a few simple facts about the dangers of bush and grass fires. They should be aware of the rules of conduct that may greatly multiply their chances of survival.

Observe these three important rules when faced with a fire:

- always remain calm - don't panic;
- always protect yourself from radiant heat; and
- keep low and/or stay in cleared areas.

### **Radiated Heat**

Persons trapped in a fire experience heat effects from various sources, and each contributes to the risk of injury or death. Means of minimizing the effects of these individual sources of heat should be understood and applied if chances of survival are to be improved.

Radiated heat is the greatest killer. Only a small percentage of people who die in bushfires are, in fact, burnt to death. The majority collapse due to the effects of radiated heat before the flames actually reached them.

The temperature at the face of a low-intensity fire will be around 1000 degrees, and the heat level rises sharply as fire intensity increases. In a grass fire, a person would be subjected to the extreme radiated heat for about 30 seconds, but in high intensity bushfire, the danger period would be 3-4 minutes, or longer.

Protection from radiated heat is the major factor in survival in bushfires. No means of avoiding radiated heat should ever be rejected. At such times any idea of personal hygiene may have to be temporarily abandoned; rolling in the mud and slush of a pigsty may not be clean, but it is preferable to extensive skin grafts and perhaps fatal injuries from burns.

### **Wind-Borne Heat**

The main convection current rises above a fire, but air is heated as the wind blows the fire forward and this hot air has the effect of preheating objects in advance of the fire. The

feeling of heat or strong smell of smoke in the air is an immediate indication that the fire is near and time to take safety precautions before the real emergency occurs.

### **What to Do**

Body temperature will rise wherever there is a tendency to panic. Mental coolness (no panic) means physical coolness and this is important. Vigorous activities also cause the body temperature to rise, therefore it is important to conserve energy by deliberately controlling your actions.

Being trapped by a bush or grass fire generally occurs under one of three circumstances: on foot, in a vehicle, or in a house or building.

When fire threatens or appears to threaten, there is no cause or reason for panic. It is essential for the person to remain calm and assess the position and situation in a logical manner. Certain measures can be taken to improve your chances before fire arrives. If on foot, employ one of the safety measures listed:

- Stay with companions. Don't worry others by disappearing. Don't wander off alone.
- Never try to escape from an approaching fire by running uphill. Fire travels faster uphill. It is always better to move across the face of a hill out of the way of a fire.
- Don't panic as this drains your energy and affects your thinking.
- Run only when absolutely necessary and only if your chances of escape are clear.
- Seek shelter in a creek, waterhole, dam, in-ground earth tank, muddy area, or swamp at the side away from the fire. Wet or plaster the exposed parts of the body with mud to keep it moist. Do not climb into elevated tanks as this water heats rapidly and collapse can occur within a few minutes. (A person almost totally immersed in warm water 44C reaches a stage of collapse in approximately 3 minutes).
- If no water is available, take refuge behind a raised object (a rock, log, or tree stump) in a cleared area. A slight hollow in the ground is also sufficient in a bare area (e.g. wheel ruts).
- If there is no suitable safe location available, seek shelter in the barest area away from heavy quantities of fuel; cover exposed skin with dirt, or dust, or clothing, or any available protection; lie face downwards with boots towards the fire.