



Fiery learning

by **Rhianna King** and **Liz Moore**

In January 2005, 28,000 hectares of forest in the Perth hills were burnt by the single biggest bushfire in the northern jarrah forest since the Dwellingup fires of 1961. Since then, the area has become a study site for teachers and their students looking at the importance of fire for biodiversity.



The effects of the January 2005 deliberately-lit wildfire in the Perth hills were widespread (see 'Perth hills under fire', *LANDSCOPE*, Winter 2005). For almost seven days, much of the Perth metropolitan area was blanketed in smoke. Almost 1500 firefighters from what was then the Department of Conservation and Land Management, the Fire and Emergency Services Authority, the Forest Products Commission, WA Police and volunteers assisted with the fire suppression operation.

Because the fire was in the forests immediately east of Perth, nearby

communities had to be prepared to protect their homes or evacuate. The rest of the State looked on as orchards, fencing, farm buildings and pine plantations were damaged and sections of the Munda Biddi Trail and Bibbulmun Track were burnt. The erosion of soil bared by the winter rains resulted in silting of streams and deterioration of the water quality of Perth's catchments.

An event to learn from

The proximity of the fire to Perth city—and its size and intensity—was unlike any previously experienced in WA.

It was clear early on that the fire would present many learning opportunities for agencies involved in fire suppression and biodiversity science. It also became clear to the Department of Environment and Conservation's (DEC's) Senior Project Officer, Liz Moore, and the Perth hills EcoEducation team, that WA teachers and their students could also learn valuable lessons. So, as the green shoots began to sprout and the bush began to regenerate, the seed was being sown for 'Fire, a force of life'—the newest of DEC's EcoEducation programs.

Hands on

'Fire, a force of life' is a program offering professional learning days for teachers, resources for the classroom and hands-on excursion activities. It was designed for Years 10, 11 and 12 to develop learning in the curriculum areas of Science, Society and Environment, and English. The full-day excursion is based at the Perth Hills National Parks Centre in Mundaring (see pages 18–19) close to the wildfire site. Activities are hands on, giving students an insight into the impact of fire on biodiversity in forest ecosystems; the interrelationships between fire, plants and animals; and the role of science in sustainable forest management.

Students are taken on a tour of part of the wildfire-affected area (the fire's actual perimeter was about 160 kilometres) and they do sampling work in quadrats set up in areas burnt by the fire to assess changes in the biodiversity. Photos taken at set points help to illustrate the changes to the plants and animals in the months following the fire. Students use biological and geographical field techniques to examine the impact



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Main During a professional learning day for teachers, Liz Moore (standing) checks a quadrat in the area burnt by the 2005 wildfire.

Inset The fringed lily (*Thysanotus manglesianus*) is one of the species that has resprouted in the burnt area.

Photos – Rhianna King/DEC

Left The wildfire in the Perth hills burnt through 28,000 hectares.

Photo – Ron D'Raine



on biodiversity of fuel reduction fires. They also learn about the practices employed by Aboriginal people on the land for the thousands of years they were its primary managers. This is done with consideration to the way plants and animals have adapted to fire. The students can then continue their learning back in the classroom with the student resources provided by EcoEducation.

The programs aim to encourage interest, debate and understanding in school communities about the science and challenge of fire management, including fuel reduction burns, as we are all directly or indirectly affected by wildfires. The programs provide students and teachers with the information to make up their own minds about fire management. It seems at the end there is one thing everyone agrees on—the complexity of the issue!

Above A student uses photos to compare the landscape in the months after the fire on the 'Fire, a force of life' excursion.

Photo – Liz Moore/DEC

Above right DEC Regional Fire Coordinator Rob Towers (left) uses a leaf litter gauge with teachers to measure the amount of fuel on the forest floor.

Right An area in the Perth hills where a fuel reduction burn was carried out.

Photos – Rhianna King/DEC



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