

Huge Australian bushfires ignited rare plant growth

• 11:27 19 September 2011 by [Wendy Zukerman](#)

Rare plants are springing up in an Australian park ravaged by bushfires – plants that had never been recorded there before the fire. The astonishing revival is providing new insights into the way ecosystems recover from fire damage.

Over 90 per cent of Kinglake National Park in Victoria was damaged by bushfires in a [February 2009 disaster that also claimed 173 lives](#). "Very few areas were unaffected by the fire, leaving minimal refuge for flora and fauna," says [Richard Francis](#), a botanist at Abzeco, an ecological science consultancy based in Melbourne, Australia.

Now Francis and colleagues have completed a two-year survey of the 330,000-hectare park and found that the fires not only stimulated dormant seeds to grow but also attracted previously unknown plants to the region. More than 60 plant species never before recorded in the park have flourished since the fires, including blue-spike milkwort (*Comesperma calymega*) and tufted lobelia (*Lobelia rhombifolia*).

In addition, plants that had been under threat before the bushfires are now germinating prolifically. These include round-leaf pomaderris (*Pomaderris vacciniifolia*), silky golden-tip (*Goodia lotifolia* var. *pubescens*) and swamp bush-pea (*Pultenaea glabra*).

Francis says the seeds of these species were buried in the soil but could not grow because mature plants such as rough tree ferns (*Cyathia australis*) were outcompeting them. But when the fires decimated the mature flora, exposing the ground beneath to heat, smoke and more light, the underdogs were able to thrive. Seeds are thought to be stimulated by [chemicals in the smoke](#) and ultraviolet light, he says.

The new plants also attracted several bird species that had rarely, if ever, been recorded within the park. According to Karl Just, also of Abzeco, very large congregations of white-browed woodswallows (*Artamus leucorhynchus*) could be seen gliding through the sky for months after the fire. The red-capped robin (*Petroica goodenovii*), which normally lives in open scrub and low-density woodland, was also recorded in forested areas for the first time.

But is this a long-term change? Probably not. "It's likely that these species will be gradually outcompeted once more," says Francis. Already, some of the rare plants that proliferated in the first year after the fire have begun to retreat as ferns, trees and wet forest shrubs have started growing back.

"These forests were portrayed as destroyed, but they weren't," says [David Lindenmayer](#), a fire ecologist at the Australian National University in Canberra. "All the plants are there in the soil seed bank and will remain so after the parent plants die."