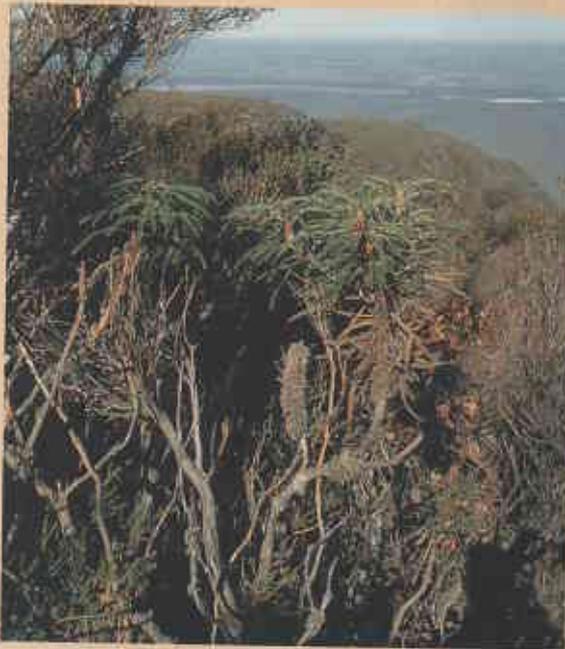




ENDANGERED



MOUNTAIN-TOP THICKETS OF THE EASTERN STIRLING RANGE

A biological survey of mountains in the south of Western Australia, began in September 1994. It was conducted from the Department of Conservation and Land Management's (CALM) South Coast Region office and was funded by the Australian Nature Conservation Agency (ANCA). Its aims were to assess the conservation value of specific mountain peaks and to quantify threats to their ecological communities.

The survey quickly identified the eastern Stirling Range Montane Thicket as a unique community, rich in endemic species (those which occur nowhere else). These included some stunning plants, such as the giant candles (*Andersonia axilliflora*), the critically endangered mountain dryandra (*Dryandra montana*) and the mountain bells (*Darwinia collina* and *D. squarrosa*). In all, seven threatened species occur in the community.

The introduced pathogen *Phytophthora cinnamomi*, which causes dieback and is apparently

spread by walkers, is widespread along the mountain peaks. The threat posed by this pathogen was obvious—many deaths were observed in seedlings regenerating from the fire that occurred in 1991. Particularly affected were species from the heath family, such as *Andersonia axilliflora* and an undescribed species of mountain paper heath (*Sphenotoma* sp.).

A. axilliflora was proposed for threatened status, but it soon became clear that the community as a whole was endangered, with major changes in structure and species composition evident. Species that were once abundant on the Bluff Knoll plateau were difficult to locate. The old 'skeletons' of the rare feather-leaved banksia (*B. brownii*) were visible, but only one population of seedlings was located. Formerly abundant Stirling Range endemics, such as the mountain banksia (*B. solandri*) and the Stirling

Range pixie mop (*Isopogon latifolius*), whose floral display was apparent on old photographs, were now patchy in distribution. The threat posed to *Dryandra montana* was already known, with only 19 individuals being located and the few seedlings found being dieback-affected. Despite extensive searching, only a single plant of *Persoonia micranthera* has been located. Positive recoveries for *Phytophthora* were obtained from dying specimens of both *Darwinia* species, although they are considered not to be highly susceptible to the fungus.

The impact of the disease on this ecological community, with extremely slow rates of seedling growth, appeared greater in more frequently burnt areas. In such areas, a sedge (*Lepidosperma* sp.) appears to be colonising gaps in the thickets created by the disease. In areas where there was a pre-fire abundance of *Banksia* and *Dryandra* species, as deduced from the presence of burnt 'skeletons', seedling numbers from species in the family Proteaceae were low.

by Sarah Barrett
Photos - Sarah Barrett

LANDSCOPE

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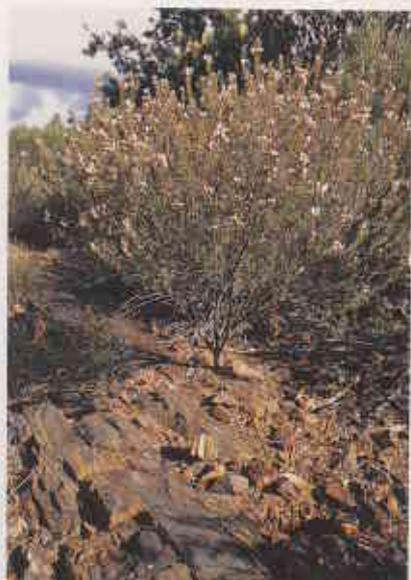
Shannon National Park is the home of the Great Forest Trees Drive, another nature-based tourist attraction for the south-west. Read the story on page 17.



The rugged Kimberley coast was the location of the first maritime LANDSCOPE Expedition. Read all about it on page 10.



A huge volunteer effort has helped with the renewal of the Montebello Islands and the eradication of feral animals. (See page 47.)



Science has long-known the relationship between plants and habitats. Now we are 'Prospecting for Plants' using landforms as a guide. (See page 23.)



One hundred years ago, two members of an expedition to the Great Sandy Desert became lost. Read what happened to them in 'Land of the Lost' on page 36.

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COVER

The scientific name of the little penguin (*Eudyptula minor*) means 'little diver'. The wings of these flightless seabirds have evolved into flippers for underwater propulsion. The little penguin is the smallest of the 17 penguin species. Penguin Island has the largest colony of little penguins on the west coast. See 'The Changing Face of Penguin Island' on page 28.

Illustration by Philippa Nikulinsky



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