

Foreword—*Western Shield* review

Western Shield has been one of Australia's most visionary and effective native fauna conservation programs. It also is one of the largest and boldest.

The program had its genesis in scientific research in the 1970s and 1980s that clearly demonstrated a link between predation by the European fox and the decline of small to medium size native mammals in the south-west of Western Australia. Further work showed that feral cats, too, were implicated in the decline of many species, especially in the arid zone.

While this research provided the science on which recovery measures could be based, there was one other key factor that came into play to enable *Western Shield* to be implemented on an operational scale.

This was Western Australia's 'natural advantage' - the toxin that occurs naturally in native plants of the genus *Gastrolobium* (the 'poison peas'). In the mid-1970s, Western Australian scientists discovered that the toxin in poison peas was almost identical to the commercially-manufactured pesticide known as 1080 (monosodium fluoroacetate). Because native animals in the south-west of Western Australia had evolved alongside the poison peas, they had developed a relatively high tolerance to its toxicity.

Implementation of *Western Shield* on a large scale also hinged on technical improvements such as cost-effective fox baits, captive breeding, translocation and management of threatened fauna, training of field officers, development of monitoring programs, risk management assessments and effective community education and communications.

Consequently, *Western Shield* is arguably the biggest example of an adaptive management program for the conservation of biodiversity at an operational scale in Australia. Scientific research and experience from field operations have created the synergy that has enabled the project to succeed.

This synergy was further strengthened with sponsorship by the private sector, particularly Alcoa World Alumina (Australia), Cable Sands (WA) Pty Ltd, Iluka Resources Ltd, the Australian Bush Heritage Fund, the TiWest Joint Venture and the Wind over Water Foundation.

The program already has had significant success: three native mammals—the woylie, quenda and tamar wallaby—have been removed from the threatened species list, many populations of native animals have recovered or been re-established in their former ranges, and the restoration of ecological processes has been initiated. However, not all species have responded so emphatically to fox control and further research is needed to better understand this.

An independent review of *Western Shield* was initiated as part of CALM's adaptive management approach. The review process included the appointment of three eminent scientists, selected for their complementary skills in conservation management and scientific disciplines.

It also involved the preparation of 12 papers covering all aspects of *Western Shield* that were presented at a forum to which representatives of key stakeholders, including community conservation groups, were invited. The Review Panel's report was released for public comment before being presented to the Minister for the Environment, Dr Judy Edwards MLA.

This special volume of *Conservation Science Western Australia* contains the Review Panel's report, the summary of public comments, and all 12 papers. It is important for conservation in Australia and elsewhere that programs such as *Western Shield* are well documented, and reviewed periodically, so that we can share what we have learnt as well as provide a benchmark against which to measure future change.

The Review Panel's report says:

'We believe that *Western Shield* is a world-class predator threat abatement program that is strategically targeted at the recovery of a wide range of threatened fauna'.

It is pleasing that the Panel believes that the success of the program has been a consequence of—among other things—'dedicated and competent staff'.

On behalf of CALM, I thank the members of the Panel: Hugh Possingham, Professor of Mathematics and Ecology, Director of the Ecology Centre, The University of Queensland (chairman); Peter Jarman, Emeritus Professor, Department of Ecosystem Management, The University of New England; and Allen Kearns, Deputy Chief, CSIRO Sustainable Ecosystems.

I also thank the authors and editors of the papers for their contributions to the review.

Our challenge now is to respond to the review's findings and ensure that *Western Shield* fulfils its potential to expand across larger areas of Western Australia and reverse the decline of much of our native fauna and ecosystems.



Keiran McNamara
EXECUTIVE DIRECTOR
Department of Conservation and Land Management
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