



M & Macombe

Managing Kangaroos — Striking A Balance

by Keiran McNamara

The kangaroo is recognised around the world as a symbol of Australia, yet large numbers are killed as agricultural pests in what critics label 'the greatest commercial slaughter of wildlife in the world'. How are our kangaroos managed, and what does the future hold for them?

THE killing of kangaroos is a focus of attention for many conservation and animal welfare groups in Australia, Europe and the U.S.A., yet to talk of 'the kangaroo' is an over-simplification. The superfamily Macropodoidea includes 48 species of kangaroos and their relatives, 22 of which occur, or used to occur, in W.A.

Commercial exploitation of kangaroos dates back at least to 1843 in W.A.; today the kangaroo industry operates within a management program administered by the Department of Conservation and Land Management. Three species are killed

commercially — the red kangaroo *Macropus rufus*, western grey kangaroo *M. fuliginosus* and euro *M. robustus*.

The dual aims of the kangaroo management program are to maintain populations of harvested kangaroos over their natural ranges and to contain their deleterious effects on pastoral and agricultural activities. The present program started in 1970/71 following what was considered to be excessive harvesting of red kangaroos in the four years from 1967 to 1970, when more than one million were killed.

For each of the three species annual quotas are set in consultation with the Commonwealth Government. Average annual harvests since 1970 have been 151 000 red kangaroos, 24 000 grey kangaroos and 5 000 euros, and the 1986 quotas are 180 000, 50 000 and 10 000, respectively.

Wildlife Research Centre

Advice to the Minister for Conservation and Land Management on quotas is one of the roles of the State Kangaroo Management Advisory Committee, which includes representatives of pastoral and agricultural interests, the kangaroo industry and conservation organisations, as well as government departments.

The management program and its monitoring system draw heavily upon research conducted over 15 years by Dr Bob Prince, of the Department's Wildlife Research Centre.

An essential element of the management program is monitoring of kangaroo populations. This is done largely through a comprehensive system of records providing information on how many kangaroos are taken, where they are taken, sex ratios in the harvest, and average weights. These data are analysed to detect long-term trends in the distribution and abundance of the harvested species.

Another component of the program is that kangaroos are fully protected in large areas of the State, in national parks, nature reserves and State forests.

Western grey kangaroo (*Macropus fuliginosus*) (left).

An inspector checks tags (above).

Wildlife officers checking a shooter's licence (right).

In summary, the Department's primary concern is the conservation of kangaroos. At the same time, the Department is responsive to the needs of primary producers whose livelihood is affected when kangaroo numbers are excessive. The need for damage mitigation is met largely through the controlled culling of kangaroos by a commercial industry. The industry is therefore the tool of management, aimed at keeping kangaroo numbers within limits tolerable to landholders.

How Many Kangaroos Are There?

It is often stated that there are more of the large kangaroo species now than before European settlement of Australia. This is not true for all areas, and such generalisations must be viewed with caution. There is evidence, however, that the combined effects of dingo control and provision of water and pasture have allowed numbers to increase, at least in the sheep pastoral areas.



There has been much argument over kangaroo numbers, with many critics of the kangaroo industry claiming in the past that the harvested species were being shot into extinction.

The advent of the aerial survey technique has allowed this 'numbers argument' to be investigated. The technique involves two experienced observers counting kangaroos in a 200 m strip either side of an aircraft flying at a fixed speed and height. The raw counts provide an index of kangaroo abundance; when corrected using factors determined experimentally to take account of the kangaroos present but not seen by the observers, the raw counts are converted into estimates of absolute numbers. The accuracy of these estimates is often questioned, and scientists are continuing to investigate the effects of factors such as temperature and habitat type on counting efficiency.

At the very least, however, the technique provides a useful guide to population numbers, and, when repeated, it allows population trends to be monitored over time. The monitoring of population trends, rather than absolute numbers, is what is important in the management program.

There have been two large-scale aerial surveys of kangaroos in W.A., in 1981 and 1984. The first indicated that there were about one million red kangaroos and 430 000 grey kangaroos, compared with 1984 estimates of two million and 680 000 respectively. Populations are known to increase in response to good seasonal conditions, as these results indicate. On the other hand, droughts can result in heavy mortality in kangaroo populations. Aerial surveys in W.A. provide a back-up to the system of records outlined earlier, so kangaroo populations are being monitored by two independent methods. Further aerial surveys are planned.

Aerial surveys are not used to estimate euro populations, however, because of the hilly habitat occupied by the species.

Using aerial survey results from across the continent, as well as other data, it has been demonstrated conclusively that red and grey kangaroos are widespread and abundant. Most people now accept that these species are not in danger of extinction and, as a consequence, the 'kangaroo debate' has now turned largely to other issues.

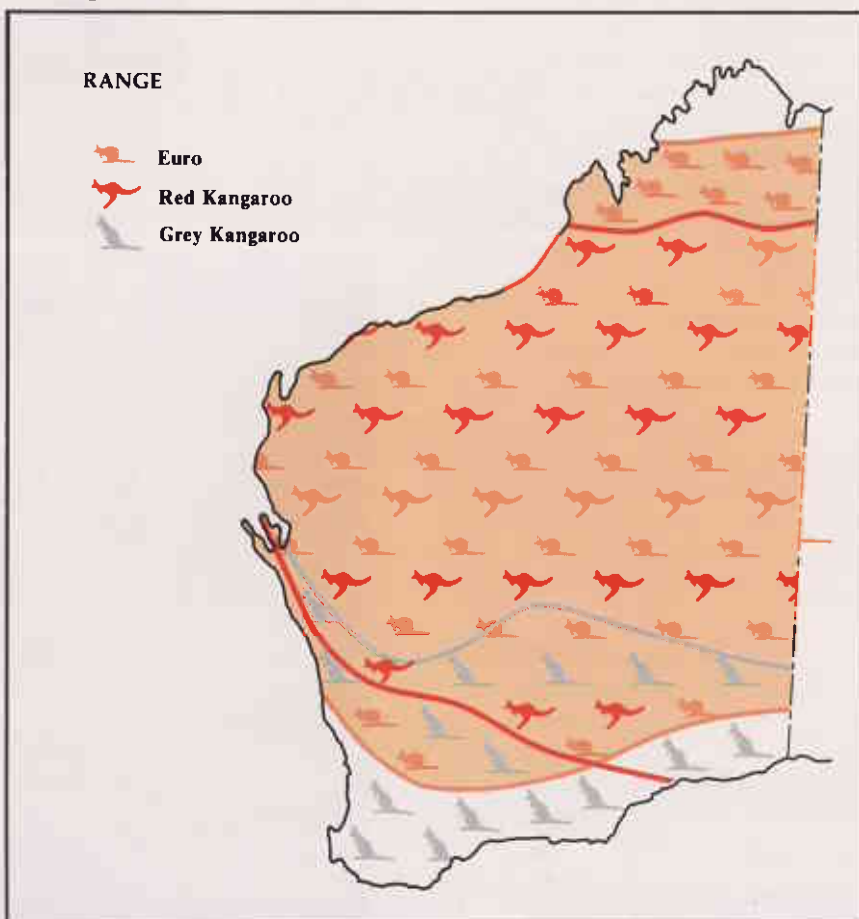
An inspector examines kangaroo tracks under a fence.



Impact on Agriculture

Kangaroos have long been regarded as agricultural and pastoral pests and have been killed in large numbers for this reason for more than a hundred years. Their destruction has in the past been a legal requirement in many areas. Their 'pest' status is now being subjected to greater scrutiny, however, and increasingly the question is being asked: 'Does the amount of damage caused justify the killing of such large numbers of kangaroos?'

The distribution in W.A. of the Western Grey, Red and Euro species of kangaroos.





Euro (*Macropus robustus*).

Cliff Winfield

Most landholders accept reasonable numbers of kangaroos on their properties, but they will not tolerate what they consider to be excessive numbers, particularly in times of drought. Furthermore, perceptions vary widely, and what is a problem to one landholder might be acceptable to another.

Damage mitigation is the basis of the management program. Field investigations supported by the practical experience of landholders, show that kangaroos do compete with livestock for food and water, as well as damage crops and fences, but the degree of damage varies widely according to factors such as seasonal conditions and kangaroo population levels. Pastoralists often argue that spelling paddocks from grazing by livestock is virtually a waste of time because kangaroos concentrate on the spelled pasture.

Impact

The impact of kangaroos on agricultural and pastoral production is real, even though it has not been accurately quantified. Our knowledge in this key area is incomplete and research by the CSIRO and other bodies is continuing.

A related issue is the extent to which commercial shooting

actually fulfils its stated objective of damage mitigation. While seasonal conditions rather than shooting control overall kangaroo numbers, shooting - through local, short-term reductions in abundance - effectively and immediately mitigates pastoral damage. Landholders appreciate that the management program is for culling not extermination, and provides for the continuation of kangaroos on their land.

Animal Welfare

An issue of growing importance to the community is whether the shooting of kangaroos causes unnecessary pain and suffering. Some critics suggest that cruelty is rife. On the contrary, licensed professional shooters are generally expert marksmen who operate efficiently and humanely. Poor marksmanship and cruelty seem more likely outside the industry, among amateur and illegal shooters.

A Code of Practice for the Humane Shooting of Kangaroos has been developed as a cooperative effort among Commonwealth and State wildlife authorities, in recognition of the obligation to ensure that appropriate standards of humane conduct are applied to the shooting of kangaroos. The Code is being implemented in W.A. as a

condition on shooters' licences. Essentially it requires that kangaroos be shot in the head, thus maximising the likelihood of consistently achieving a sudden and painless kill.

Ethical Arguments

An increasing number of conservation and animal welfare groups base their opposition to the kangaroo industry on ethical or philosophical arguments. These proponents of 'animal rights' argue that wild animals have a right to exist free from human interference. Some hold the view that it is wrong to kill any wildlife, while others can accept killing if it is shown to be necessary, but they vigorously oppose commercialisation of wildlife.

National and international attention has been directed towards kangaroos for many years. In 1971 a House of Representatives committee reported on the conservation and commercial exploitation of kangaroos, and in recent years a Senate Select Committee on Animal Welfare has been investigating the subject.

In between, the Commonwealth Government has imposed an export ban, then subsequently lifted it, and there has been increasing national coordination of, and interest in, State kangaroo management programs.

Because the kangaroo industry relies heavily on exports, conservation and animal welfare groups have taken their case overseas. The European Parliament has been investigating an import ban, while the U.S. Government has lifted its earlier import ban. The U.S. Government, however, retains the red, eastern grey and western grey kangaroos on the

threatened list under its Endangered Species Act, despite evidence that they are not threatened with extinction.

The debate has become divisive and confrontational, but there is more common ground than many people realise. Conservation and animal welfare groups generally agree that the commercially harvested species are not in any danger of extinction, that there is a need to reduce numbers in certain circumstances, and that shooting, which must be done humanely, is the only practical means available at present. There is disagreement, however, over the level of culling, who should do the culling, and whether commercial use should be made of culled kangaroos.

Where do we go from here? There is a need for continuing research in a number of areas, but equally important is a need for dialogue between the various interest groups. Also, government agencies must be accountable to the public for their kangaroo management programs.

The current approach to kangaroo management in W.A. is based on scientific knowledge and sound practical experience. It has worked well over many years: kangaroos remain widespread and abundant while relief is available to those who make their living from the land. The Department of Conservation and Land Management strives for a sensible balance among the various needs and interests involved in this complex issue.

Some people say there must be a better way to manage kangaroos, but no-one has formulated a practical, generally acceptable alternative where kangaroos come into conflict with primary producers. The current approach is not perfect in every respect, and the Department is constantly seeking to improve its management program. There is concern, however, that loss of the existing industry will, in the absence of a viable alternative, lessen control over kangaroo shooting and lead to increased cruelty. ☹

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Red kangaroos (*Macropus rufous*)



Landscape

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COVER

Moonrise on wheat stubble.
Cover photo by Cliff Winfield.



Southern Brown Bandicoot drinking Shannon Waters.

*The more outstanding a natural
environment, the greater the
number of its potential uses, the
more heated is the debate about its
management.*

*This principle holds true in
Western Australia as much as in
Queensland's Daintree Forest
and Tasmania's Farmhouse Creek.*