CODE OF PRACTICE

FOR THE WELFARE OF KANGAROOS MAINTAINED INTENTIONALLY IN CAPTIVITY

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1. Introduction

This Code of Practice for the Australian Capital Territory (ACT) has been prepared to provide guidelines for the welfare of kangaroos maintained intentionally in captivity, including minimum standards of accommodation, management and care.

In this Code of Practice, the term “kangaroo” refers to any members of the Macropodidae family of the super family Macropodoidea. The four naturally occurring species in the ACT are Eastern Grey Kangaroo (*Macropus giganteus*), Common Wallaroo (*Macropus robustus*), Red Necked Wallaby (*Macropus rufigriseus*) and Swamp Wallaby (*Wallabia bicolor*). A fifth species, the Brush-tailed Rock Wallaby (*Petrogale penicillata*) is considered to be extinct locally, although a captive population is maintained at Tidbinbilla Nature Reserve as part of the national recovery program for this species.

Animal welfare considerations are an essential part of the keeping of animals. This Code is based on established experience and current scientific knowledge. Practices once considered acceptable are now being reassessed and modified according to new knowledge and changing attitudes.

Relevant legislation is the *Animal Welfare Act 1992*, in relation to acts of cruelty on animals and Codes of Practice for management and control of animals, and the *Dog Control Act 1975,* in relation to a native animal being attacked by a dog. A *Code of Practice for the Humane Destruction of Kangaroos in the ACT* was approved under the provisions of the *Animal Welfare Act* in October 1994. The *Nature Conservation Act 1980,* provides for the protection and rehabilitation of native animals, including the issuing of licences to take, keep, kill, sell, import and export, and release from captivity in relation to native animals.

This Code of Practice has been specifically prepared to provide guidelines for the welfare of kangaroos held in captivity often within security fences constructed to protect assets and/or maintain public safety and for the purpose of public display/education. That is, kangaroos in enclosed open spaces surrounded by fences or other barriers to movement. Examples include kangaroos held within golf courses and the large enclosures at Tidbinbilla Nature Reserve.

Kangaroos may be intentionally held captive for a number of other reasons, namely scientific/research purposes, and rehabilitation following rescue of injured animals. The requirements for animals maintained in scientific/research facilities are outlined in *A guide to the use of Australian native mammals in biomedical research (Sections 1-3, 1990 and Section 4, 1995)*, developed by the National Health and Medical Council, and in the Commonwealth Government’s *Australian code of practice for the care and use of animals for scientific purposes (6th edition, September 1997).* Copies of these publications can be obtained from Commonwealth Government Bookshops. These documents have not been gazetted as Codes of Practice under the *Animal Welfare Act 1992.*

Wildlife rescue and rehabilitation services are governed by the *Nature Conservation Act 1980* and *Animal Welfare Act 1991.*

The basic behavioural, anatomical and physiological characteristics of kangaroos vary considerably between species and from other animals kept in captivity and this should be taken into account when applying this Code of Practice.

Kangaroos held in captivity have the following basic requirements:

- food and water for a balanced macropodid diet to sustain health and vitality;
- protection from extremes of climate;
- protection from predators and harassment;
- protection from disease, parasites and injury;
- space for free and natural movement;
- prevention of unsustainable reproduction; and
- maintenance of social hierarchy and social interaction.

Further advice on the welfare management of kangaroos in captivity should be obtained when required, from qualified advisers in the private and public sectors.

Those responsible for managing land which maintains kangaroos in captivity are required by the *Nature Conservation Act 1980* to hold a licence to keep a native animal. A condition of the licence issued for this purpose is that there be a Management Plan for the captive kangaroos, that has been approved by the Conservator of Flora and Fauna.

The development of a Management Plan provides both the licence holder and/or those responsible for managing land which maintains kangaroos in captivity, and the Conservator of Flora and Fauna, with an agreed framework for best practice management of captive kangaroos in the ACT.

This Code of Practice is based on knowledge and technology at the time of publication and may need to be revised in the light of future knowledge.

2. Basic Welfare Needs

2.1 Food

The quality and quantity of the diet of kangaroos should be adequate to maintain health and meet the requirements of growth, pregnancy, lactation and cold stress appropriate to the species and the environment. As a general guide, an animal should be offered quality food *ad libitum* or an allowance equivalent to 15% of its body weight each day. Where possible, natural forage should be available.

Kangaroos have a digestive system that requires similar nutrients and micronutrients to ruminant animals such as sheep. Kangaroos mainly feed at night on grasses and green herbage.

It is recommended not to feed kangaroos whole grain crops because some seeds have sharp husks which can cause abrasions to the animal's gums providing possible sites for necrobacilosis infections (lumpy jaw).

During winter or in drought conditions, when there is reduced vegetation growth, supplementary feeding of lucerne hay or commercially available macropod pellets may be required for kangaroos in enclosed open spaces.

During drought conditions supplementary feeding should be offered at least every third day and the kangaroo colony observed carefully for weak or recumbent animals which may need to be segregated for special treatment.

If supplementary feed is provided, measures should be taken to prevent contamination with faeces. Ideally food should be placed in troughs or elevated bins, but if food must be placed on the ground, this location should be moved regularly to avoid faecal contamination.

2.2 Water

Kangaroos require free access to an adequate supply of good quality water. Particular attention needs to be given to water supply during drought conditions.

Where dams or waterholes are the main water source of drinking water, measures should be taken to minimise faecal contamination.

An adequate supply of drinking water can be provided by the use of a plastic, concrete or galvanised iron trough with a ball valve.

Water requirements vary widely according to species, body weight, temperature and type of diet. As a guide, lactating kangaroos on dry summer pasture require up to 20 litres daily.

2.3 Protection from climatic extremes, predation and harassment.

2.3.1 Climatic Extremes

Kangaroos captive in enclosed open spaces should have access to shelter and shade to prevent cold stress or heat stress. Shrubs, trees or other shelter can minimise climatic stress.

If natural shelter is not available, alternatives such as a shelter shed with an open front end must be provided. Shelter should be sited to provide maximum protection from the prevailing weather conditions (wind, rain) and maximum shade in the summer.

2.3.2 Predation and harassment

Captive kangaroos must be kept in conditions which ensure freedom from predation and threats from harassment. Natural predators of kangaroos are dingoes and for smaller sized kangaroos, large domestic dogs, cats and foxes may pose a threat.

Fence lines and other barriers surrounding a captive kangaroo population should be monitored regularly to maintain the security of the kangaroos in the enclosed open space and to prevent the entry of dogs and other predators. Fencing must be robust and of special design that discourages jumping by kangaroos and/or dogs. Dogs may cause harm without actually breaching the perimeter fence and their barking along a fence can harass kangaroos and lead to stress-induced death or injury sustained during flight. Providing additional screening along a fence-line by planting dense vegetation can act as a further barrier.

3. Protection from disease and injury

Persons responsible for the care of kangaroos in captivity should familiarise themselves with the signs of ill health and the common diseases affecting kangaroos.

It is important to ensure that injured animals are adequately cared for in facilities appropriate to the species and nature of the injuries. Injured kangaroos should be handled by qualified personnel and where rehabilitation is not possible, the injured animals should be humanely killed in accordance with the 1994 *Code of Practice for the Humane Destruction of Kangaroos in the ACT*. It is ACT Government policy not to issue general licences for the keeping of injured or orphaned Eastern Grey Kangaroos as this species is abundant in the ACT.

There are two main diseases encountered with captive kangaroos:

- lumpy jaw - infections entering abrasions caused by coarse, sharp feeds such as oat awns; and
- coccidiosis or “black scours” - characterised by profuse black diarrhoea. Death can occur within two or three days. Medication with *Amprolium* at 125 ppm in a pelleted diet is effective in preventing this disease.

Capture techniques, such as driving, trapping, drugging or anaesthetic darting, are stressful to kangaroos and pose a significant risk of injury, capture myopathy (stress induced muscular dysfunction), shock and other post-capture complications that may result in the death of the animal. Capture, when necessary, should be undertaken by professional wildlife managers preferably using anaesthetic darting as this substantially reduces risks.

4. Management Plans

Licensees and managers of land which maintains kangaroos in captivity, intentionally or unintentionally, have a legal and ethical responsibility to attend to the welfare of kangaroos under their control, including control of population size. The ACT Government requires managers of land containing kangaroos in captivity to hold a licence to keep the kangaroos and to develop a management plan which must be approved by the Conservator of Flora and Fauna.

The following issues should be addressed in a management plan:

4.1 Purpose of the captive population

Maintaining a particular species of kangaroo in captivity may have implications for its conservation. Therefore the specific conservation reason(s) for keeping the species should be articulated in the management plan.

4.2 Animal welfare, husbandry and veterinary needs

Reputable publications (see list appended) containing material relevant to the housing and care of kangaroos are to be available on-site. Species specific considerations must be addressed and detailed requirements outlined in the management plan, including fencing, diet, and veterinary care.

Enclosures must be designed and constructed to ensure the physiological and behavioural needs of kangaroos are met whilst protecting them from predators, harassment, temperature extremes and precipitation.

Fencing should meet the objectives of the enclosed population in terms of height, construction materials, security, and exclusion of potential predators

and competitors. Fencing should also facilitate management activities and reduce risk of injury to captive animals.

The nature and availability of veterinary care should be specified and veterinary treatment monitored.

4.3 Qualifications, experience and training of staff

The responsibility of care and management of kangaroos in enclosed areas should be undertaken by staff qualified for, and experienced in, animal husbandry, preferably native animals. The management plan should detail staff development mechanisms, or other arrangements such as access to qualified veterinary surgeons, to achieve this objective.

4.4 Monitoring techniques

The specific techniques used to monitor the health and well-being of the kangaroos, and the conditions in the enclosure should be outlined. Identification details of individuals, methods and frequency of inspection and veterinary examination, and method of capture prior to examination should also be included in the management plan.

4.5 Management of population size and sex ratio

Steps should be taken to control the fertility of any captive population of kangaroos in order to maintain sustainable populations with a sex ratio consistent with the objectives of the enclosed population. Long term population control should employ fertility control methods rather than culling surplus animals.

4.6 Gene pool management

Where captive animals are permitted to breed in isolation, genetic drift may lead to chance changes in the genetic constitution of the colony and, over time, combine to produce a population which differs from the wild population. Guidelines for the maintenance of genetic variability and prevention of deleterious effect of inbreeding should be developed in a management plan.

4.7 Record keeping and contribution to official “Studbooks” where appropriate

Maintenance of good records is an important aspect of management and can be used to determine the probability of genetic variation and to plan breeding

programs which maximise retention of genetic variability within a captive colony.

A summary of techniques for managing captive kangaroo populations and assessment of their relevance for the ACT is outlined in the ACT Kangaroo Advisory Committee's report "Kangaroos in Captivity in the ACT (August 1996).

4.8 Predator control programs

Control of predators is particularly important for managing captive animals. This is further addressed in section 2.3.2 of this Code.

4.9 Closure of a captive colony

Management plans must cater for the eventuality that a colony may one day have served its purpose and mechanisms for dealing with the captive kangaroos should this situation arise, must be detailed in a management plan.

Further reading

ACT Kangaroo Advisory Committee (1996) *Living with Eastern Grey Kangaroos in the ACT. - Rural Lands*, First Report to the Minister for the Environment, Land and Planning, Publications and Public Communication, ACT, Canberra (February).

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