Australian Animal Welfare Standards and Guidelines

Exhibited Animals Koala

Endorsed

Agriculture Ministers Forum (AGMIN)

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This document forms part of the Australian Animal Welfare Standards and Guidelines.

This document will be reviewed regularly.

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http://www.animalwelfarestandards.net.au

https://www.dpi.nsw.gov.au/animals-and-livestock/animal-welfare/exhibit

www.zooaquarium.org.au

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Introduction

Purpose

The principal purpose of this document is to describe standards and guidelines that ensure the welfare and security of *koalas* used for *exhibition purposes*.

This document promotes measures and conditions that, if implemented, would see exhibited *koalas* kept to the same standard throughout Australia.

The document considers a broad range of operational issues facing *facilities* that keep *koalas* for *exhibition purposes*. Failure to address these issues could result in adverse animal welfare and security outcomes.

Scope

These standards and guidelines apply to those people and industries responsible for the care and management of:

- koalas kept for exhibition purposes at facilities, i.e. for display, conservation, education and entertainment;
- koalas during their temporary removal from a facility; and
- koalas during their transport to or from a facility.

These standards and guidelines do not apply to:

- wild animals (i.e. free-living and not confined to a facility by an enclosure, a leash or by management practices);
- the keeping of animals solely for the purposes of feeding to other animals at the facility;
- feeding of wild animals;
- animals kept for animal competitions, horse racing and sporting events, wildlife farming and domestic animal farming;
- wildlife rehabilitation of animals that are not displayed to the public at the facility
- animals at pet shops; or
- circuses and mobile exhibitors.

These standards and guidelines should be considered in conjunction with other requirements for *animals* kept for *exhibition purposes*, and related Commonwealth, state and territory legislation for:

- animal welfare:
- exhibiting animals;
- pest control; and
- nature conservation.

Where legislation requires a higher standard than these standards, the higher standard will apply.

Interpretation

- Objective the intended outcome(s) of a section of the standards and guidelines.
- **Standards** the acceptable *animal* welfare and security requirements designated in this document. They are requirements that must be met under law with respect to *animals* kept for *exhibition purposes*.

The standards are intended to be clear, essential and verifiable statements. However, not all issues are able to be well defined by scientific research or are able to be quantified. Standards use the word "must". Non-compliance with one or more standards will constitute an offence under law.

They are presented in a box and are numbered consecutively with the prefix 'S'.

- Notes provide background and guidance on interpreting the standards and guidelines.
- **Guidelines** complement the standards by providing advice and/or recommendations to achieve desirable *animal* welfare and security outcomes. Non-compliance with guidelines does not constitute an offence under law.

They are numbered consecutively with the prefix 'G'.

Document organisation

These *taxon standards* contain standards and guidelines that apply to the keeping of a specific *animal* group for *exhibition purposes* at *facilities*. They are additional to the standards and guidelines in the *Australian Animal Welfare Standards and Guidelines*. *Exhibited Animals* – *General* which apply to all *animals* kept for *exhibition purposes* at *facilities*.

• Taxon standards must always be read in conjunction with the Australian Animal Welfare Standards and Guidelines. Exhibited Animals – General.

The Australian Animal Welfare Standards and Guidelines. Exhibited Animals – General contain the following sections:

- · Introduction;
- Definitions;
- · Responsibilities;
- · Security;
- Enclosures;
- · Dietary and water requirements;
- Health and wellbeing;
- · Reproductive management;
- Euthanasia;
- · Capture and restraint;
- Training;
- Interactive programs;
- Transportation; and
- Animal identification and records.

The same section headings are used in these *taxon standards*. An additional taxon preface section follows this Introduction. Where a section of these *taxon standards* does not include any standards or guidelines that are additional to those in the *Australian Animal Welfare Standards and Guidelines*. *Exhibited Animals – General*, the section includes the following statement: 'This section has been deliberately left blank'.

Definitions are given in the Definitions section of this document. These definitions are additional to those in the *Australian Animal Welfare Standards and Guidelines*. *Exhibited Animals – General* that also apply to these *taxon standards* unless otherwise stated. Defined words in this document are italicised.

Taxon preface

Koalas

The koala Phascolarctos cinereus is a marsupial and the only member of the Family Phascolarctidae. Koalas are highly specialised arboreal folivores that feed primarily on eucalypts including certain species of Eucalyptus, Corymbia and other closely-related genera in the Family Myrtaceae. Although occasionally koalas have been observed eating the foliage of a variety of non-eucalypt species these do not seem to be used significantly as food trees.

Utilisation of different eucalypts may be quite variable from one locality to another, and may change within localities from one season to another. It may also differ between individual *koalas*. A relatively small number of eucalypt species tend to be eaten regularly by the majority of *koalas* that have access to them, and these are regarded as 'preferred food trees' or 'primary browse species'.

Free ranging populations of *koalas* tend to be clustered around areas of 'core' habitat, i.e., areas with variable densities of preferred food trees but usually influenced by other environmental features such as soil fertility. Adults generally live in discrete home ranges which vary in size depending on both the sex of the individual (males tend to have larger home ranges) and the quality of the habitat in terms of access to primary browse species. Areas of core habitat tend to be occupied by the same animals on a year round basis, in a socially stable structure of essentially mutually exclusive home ranges with varying degrees of overlap.

Due to the low nutrient content of their diet, *koalas* have low body fat reserves and conserve energy by spending long periods asleep or resting. They are largely nocturnal but exhibit some activity during the day. Feeding typically occupies a total of about 1–4 hr, and around 19–20 hr of each day is spent sitting – resting or asleep. Social behaviour, grooming, and changing branches or trees occupy only a fraction of daily activity.

Successful captive management is contingent upon an understanding of *koalas* behaviour and ecology, provision of an appropriate diet of eucalypt browse, and recognition of sociobiological considerations that include the species' physiological imperative to be sedentary.

Definitions

Back young: a young marsupial which no longer enters the pouch but is still carried by or closely accompanies its mother and continues to suckle.

Browse: branches with leaves.

Independent koala: A *koala* at a stage of development where it is not dependent on parental care for its survival.

Koala: Phascolarctos cinereus – the only member of the Family Phascolarctidae.

Pouch young: a dependent young marsupial prior to first emergence and/or one which emerges intermittently but still spends some time within the confines of the pouch.

All definitions cover the singular, plural and all variations of the word.

1 Responsibilities

Objective

Operators and staff understand their responsibilities and collectively manage the facility to ensure the welfare, safety and security of animals.

General

Standards

S1.1 The *operator* must ensure that *proficient keepers* working with *koalas* have demonstrated skills and knowledge in identifying local and managed *koala* food trees.

Guidelines

G1.1 Staff involved in collecting koala browse should have a demonstrated ability to identify local and managed koala food trees.

2 Security

Objective

Animals are held securely to ensure their welfare and prevent pest establishment. Access by unauthorised persons and escape of *animals* is prevented.

This section has been deliberately left blank.



3 Enclosures

Objective

Enclosures are designed, constructed and maintained to ensure the welfare, safety and security of animals.

General

Standards

- S3.1 The *operator* must ensure *enclosures* with unclimbable e*nclosure* barriers have a minimum internal height of 1200 mm.
- S3.2 The *operator* must ensure *enclosures* with climbable *enclosure* barriers have additional security features such as a secure roof, sheet metal panel or other deterrents to prevent escape of the enclosed *koalas*.

Gates and Doors

Guidelines

G3.1 Hinges and locks should be external to the *enclosure* to avoid providing the *koalas* with a foothold which might aid their escape.

Drive-through Enclosures

Guidelines

G3.2 Vehicles should be kept a minimum of 2000 mm from trees and *koala* climbing structures.

Enclosure Furniture

Standards

- S3.3 The *operator* must ensure a minimum of two resting forks, one at least 1800 mm above the ground and one at least 1500 mm above the ground, are provided for each *independent koala* in an *enclosure*. A *holding enclosure* containing a single *koala* is exempt but must contain a minimum of two resting forks unless otherwise prescribed by a *veterinarian*.
- S3.4 The *operator* must ensure supports and branches in an *enclosure* provide sufficient traction for *koalas* to climb easily and safely.
- S3.5 The *operator* must ensure that climbable features inside or outside an *enclosure* do not facilitate *koala* escape, or entry by wild *koalas*.

Guidelines

- G3.3 The angle of resting forks should be a minimum of 45 degrees.
- G3.4 Enclosures should contain at least one vertical support per koala.
- G3.5 Horizontally aligned limbs used to connect the vertical supports should be a minimum height of 1200 mm above the ground.
- G3.6 Vertical supports should be no closer than 900 mm to the next vertical support.

Spatial Requirements

Standards

- S3.6 The *operator* must ensure an *enclosure* housing one or more *koalas* of the same sex meets the following minimum floor area requirements:
 - i. 9 square metres for a single koala; and
 - ii. an additional 3 square metres for each additional adult koala.
- S3.7 The *operator* must ensure a mixed sex *enclosure* provides a minimum of 25 square metres of floor area per male *koala* 30 months of age or older and an additional 3 square metres for each additional adult female *koala*.
- S3.8 The *operator* must ensure a *koala* in a fully enclosed *enclosure* can perch in the highest fork without being restricted by the ceiling of the *enclosure*.

Holding Enclosures

Standards

- S3.9 The *operator* must ensure *holding enclosures* provide sufficient height above the resting fork(s) to:
 - i. allow the koalas to sit upright; and
 - ii. provide clearance from enclosure barriers to allow the *koalas* to rest without contacting the barriers.

4 Dietary and water requirements

Objective

Animals are provided food and water of an appropriate quality and quantity to maximise their welfare.

Food

Standards

- S4.1 The *operator* must demonstrate access to a sustainable supply of fresh eucalypt browse from a minimum of five species of *koala* food trees including at least three which are a preferred or primary browse species before obtaining any *koalas*.
- S4.2 The *operator* must monitor food intake of *koalas* to ensure sufficient quantity and variety is provided to maintain the good health of each *koala* for which the *facility* is responsible.
- S4.3 The *operator* must ensure cut browse presented in *enclosures*:
 - i. is secured within reach of koalas sitting in the resting forks; and
 - ii. have the cut ends of the branches standing in water.
- S4.4 The *operator* must ensure *koalas* are provided with fresh browse in good condition from a minimum of 2 species of *koala* food trees per day.
- S4.5 The *operator* must ensure *koalas* are not denied access to suitable food for periods greater than one hour unless under the direction of a *veterinarian*.

Guidelines

- G4.1 Koalas should be provided access to browse at all times.
- G4.2 Koala browse provided should consist of both young and mature leaves.
- G4.3 To avoid potentially harmful contamination, harvested leaf should not be laid directly on the ground and should be hosed down with fresh water before being fed to koalas.
- G4.4 Methods used to keep browse in good condition include:
 - i. regular spraying;
 - ii. refrigeration;
 - iii. keeping the cut ends in water, and
 - iv. keeping the browse in shaded, sheltered and air conditioned areas.
- G4.5 Soil may be provided as mineral supplementation.
- G4.6 Facilities should be self-sufficient in provision of eucalypt browse from a managed or cultivated source.

Water

Standards

S4.6 The *operator* must ensure *koalas* have access to clean drinking water at all times unless under the direction of a *veterinarian*.

5 Health

Objective

The physical and psychological health of *animals* is maximised, and *disease* and *disease* transmission is prevented.

General

Standards

- S5.1 The *operator* must ensure each *koala* is weighed at least monthly as part of routine health monitoring. *Koalas* in *enclosures* that enable them to reach heights inaccessible to humans and *koalas* that are not dependent on cut browse for survival are exempt.
- S5.2 The *operator* must ensure that all *koala*s within an *enclosure* are able to simultaneously access shade at all times.

Guidelines

G5.1 Koalas in *enclosures* that enable them to reach inaccessible heights should be weighed opportunistically.

Enrichment

Guidelines

- G5.2 Enrichment for koalas may be achieved by providing:
 - i. social groupings;
 - ii. dietary variations;
 - iii. natural branching;
 - iv. additional horizontal branches at variable heights;
 - v. behavioural conditioning; and
 - vi. interactive programs.

Quarantine

Standards

S5.3 The *operator* must ensure that newly acquired *koala*s undergo a minimum 30 day period of *quarantine*, unless advised otherwise by a *veterinarian*.

Guidelines

G5.3 Captive *koala*s that have had physical contact with *koala*s living in the wild should undergo a minimum 30 day period of *quarantine* before reintroduction to the captive colony.

6 Reproductive management

Objective

Animal breeding is managed to maintain the genetic integrity, sustainability and/or diversity of the species, to ensure the health and welfare of breeding animals and their offspring, and to minimise production of surplus animals.

Guidelines

G6.1 Koala introduction/mating should be supervised to avoid injury resulting from increased aggression.



7 Euthanasia

Objective

If an animal is to be killed, it is done humanely.

Guidelines

G7.1 The recommended method of *euthanasia* for *koalas* is barbiturate overdose.



8 Capture and restraint

Objective

Animals are captured, *restrained* and herded in a manner that ensures *animal* safety and minimises negative impacts on the *animal*.

Standards

S8.1 Koalas must not be grasped around the midsection.

9 Training

Objective

Animal training is humane and beneficial to the animal's welfare.

Guidelines

G9.1 Koalas should be conditioned to handling for daily husbandry and veterinary health checks.



10 Interactive programs

Objective

Animal welfare, safety and security are maintained during *interactive programs* so that people have a positive experience and have an enhanced appreciation of *animals*.

Standard

- S10.1 The *operator* must ensure written procedures for *interactive programs* utilising *koalas* are developed, maintained and implemented and include:
 - i. a general description of the interactive programs;
 - ii. risk assessment and risk mitigation for the activity;
 - iii. the behaviours, personality traits and other characteristics that indicate koalas are suitable for the activity;
 - iv. the signs and characteristics of koala stress to be monitored;
 - v. number and qualifications of staff required for the activity;
 - vi. an interactive handling timetable and koala rotation schedule to facilitate appropriate levels of interaction;
 - vii. what is required of human participants; and
 - viii. the withdrawal parameters for both human and koala participants.

Note - Withdrawal parameters for koalas in interactive programs include:

- aggression, including biting and scratching humans;
- ii. restlessness: and
- iii. listlessness.
- S10.2 The *operator* must ensure a *keeper authorised* by the *proficient keeper* responsible for the *interactive program* is present at all times during *interactive programs*.
- S10.3 The *operator* must ensure that only an *authorised keeper* places onto or removes a *koala* from their body, another person's body or a tree fork.
- S10.4 The operator must ensure a koala is not handled if it becomes unsettled.
- S10.5 The *operator* must ensure a *koala* is not touched or held by a visitor as part of an *interactive program* if the *animal*:
 - is not fully weaned and independent; or
 - ii. has pouch or back young.
- S10.6 The *operator* must ensure each *koala* used for *interactive handling* is weighed a minimum of fortnightly to confirm:
 - i. maintenance of body weight in mature adults; and
 - ii. appropriate rates of growth in juvenile or sub-adult individuals.
- S10.7 The *operator* must ensure the *interactive handling time* for each koala does not exceed 4 hours per day.
- S10.8 The *operator* must ensure that where *interactive programs* permit *koala*s to be held by visitors, individual *koala*s are not *handled* for more than:
 - i. 30 minutes in one day;
 - ii. 180 minutes in a seven day period; and

- iii. three consecutive days.
- S10.9 The operator must ensure records of *interactive handling times* for each *koala* are kept daily in a consistent format and retained on file for three years from the occurrence of the *handling* (see 12 *Animal* identification and records".

Guidelines

G10.1 By virtue of their low nutrient diet and requirement for extended periods of rest and sleep, *koalas* pose a unique challenge to structuring *interactive programs* that do not compromise wellbeing. Increases in *animal* vigilance or physical activity coupled with interruption of resting, sleeping or feeding opportunities all place demands on the *koala*'s limited energy budget. For these reasons, *operators* are subject to more stringent limitations on the duration of individual *koala* participation in *interactive programs* and more rigorous documentation of *koala handling* than may be required for other taxa.

11 Transportation

Objective

Animal welfare, safety and security are maintained during transport.

Standards

- S11.1 The *operator* sending a *koala* must ensure *independent koalas* are *transported* individually. *Independent koalas* with dependent offspring are exempt.
- S11.2 The *operator* sending a *koala* must ensure *transportation* containers are of a sufficient size to allow the *koala* to maintain a normal resting posture without being in contact with the container's sides or roof.
- S11.3 The *operator* sending a *koala* must ensure fresh browse is placed in the container with the *koala* during *transportation* unless otherwise advised by a *veterinarian*.
- S11.4 A person must not remove a *koala* from the container or *handle* a *koala* in transit unless it is essential for the wellbeing of the *animal*.
- S11.5 The *operator* sending a *koala* must ensure that for journeys over 30 minutes the *transportation* container is fitted with a minimum of one vertical support or *resting* fork.

Guidelines

- G11.1 Each container should be fitted with at least one vertical support or resting fork per *independent koala*.
- G11.2 Koalas should not be subjected to temperatures greater than 25°C or less than 10°C during the transport.
- G11.3 A container used to transport *koalas* for more than two (2) hours should have a leak-proof base.
- G11.4 Containers should have minimum dimensions of 550 mm x 450 mm x 600 mm.

Note - Additional *transport* requirements apply to *koalas* being *transported* internationally: DEWHA (2009) *Conditions for the Overseas Transfer of Koalas* (Effective from April 2009). Australian Government Department of the Environment, Water, Heritage and the Arts, Canberra. < http://www.environment.gov.au/biodiversity/ trade-use/publications/export-conditions/index.html >

12 Animal identification and records

Objective

Animal identification methods and animal records enable monitoring of welfare of animal collections and inform approved management programs.

Animal Identification

Guidelines

- G12.1 A passive integrated transponder (PIT) is the recommended method of individual permanent identification for koalas.
- G12.2 The standard location for PIT insertion in *koalas* is in the dorsal midline (or slightly to the left), between the scapulae or behind the left ear.

Records

Standards

- S12.1 The *operator* must ensure the weight of individual *koalas* is recorded monthly in accordance with Clause 5.1 of these standards.
- S12.2 The *operator* must ensure the *handling* of each *koala* is recorded. These records must include:
 - i. date of handling;
 - ii. handling time;
 - iii. the keeper who handled the koala;
 - iv. purpose of handling the koala; and
 - v. any adverse behaviours of the koala before, during and after handling.

Appendix 1

Food trees utilised to feed captive koalas in different Australian states

Species from the genera *Corymbia*, *Eucalyptus* and *Lophostemon* (Family Myrtaceae) ultilised by *koalas* as food trees include (but are not limited to) those shown in the table below. As botanical taxonomy is dynamic, some species names are shown with recent synonyms.

An asterisk denotes a preferred or primary browse species.

State and territory names are abbreviated in the table as follows:

- A Australian Capital Territory;
- N New South Wales;
- Q Queensland;
- S South Australia;
- T Tasmania;
- V Victoria;
- W Western Australia.

Species (recent synonym)	Common name/s	Utilisation by state							
E. acmenoides	White mahogany		N						
E. amplifolia	Cabbage gum		N						
E. amygdalina	Black peppermint						Т		
E. bancrofti	Orange gum	Q							
E. baxteri	Brown stringybark				V	S			
E. blakelyi	Blakely's red gum			Α					
E. botryoides	Bangalay or southern mahogany		N		٧				
E. camaldulensis *	River red gum	Q	N		٧	S		W	
E. camphora	Broad-leafed Sally		N						
E. canaliculata *	Large-fruited grey gum	Q	N						
E. citriodora (Corymbia)	Lemon-scented Gum	Q	N						
E. cneorifolia	Kangaroo Island mallee					S			
E. conica	Apple box				٧				
E. crebra	Narrow-leaved red ironbark	Q	N						
E. cypellocarpa	Mountain grey gum				٧				
E. deani	Mountain blue gum	Q							
E. delegatensis	White-top or gum-topped stringybark						Т		
E. dives	Broad-leaved or blue peppermint			Α					
E. drepanophylla	Grey ironbark	Q							
E. dunnii	Dunn's white gum	Q						W	
E. eugenioides	Thin-leaved stringybark		N						
E. eximia (Corymbia)	Yellow bloodwood		N						
E. exserta	Queensland peppermint	Q							
E. fastigata	Brown barrel				٧				
E. globoidea	White stringybark		N						
E. globulus *	Tasmanian blue gum		N	Α	V	S	Т		
E. goniocalyx	Long-leaved box				٧			W	
E. grandis	Flooded or rose gum	Q			V				
E. gummifera (Corymbia)	Red bloodwood		N						
E. haemastoma	Scribbly gum		N						

E. henryi (Corymbia)	Large-leaved spotted gum	Q						
E. lehmannii	Bushy yate or Lehmann's mallee					S		
E. leucoxylon	Yellow or South Australian blue gum				V	S		
E. longirostrata *	Large fruited grey gum	Q						
E. macrorhyncha	Red stringybark				٧			
E. maculata (Corymbia)	Spotted gum	Q	N					
E. maidenii (E. globulus	Maidens gum		N					
ssp.)	S							
E. major	Grey gum	Q						
E. mannifera	Mottled gum		N	Α				
E. melliodora	Yellow box	Q		Α	٧			
E. microcorys *	Tallowwood	Q	N					W
E. moluccana *	Gum-topped or grey box	Q	N					
E. nicholii	Narrow-leaved black peppermint	Q	N	Α	٧	S		
E. nortonii	Mealy bundy			Α				
E. obliqua	Messmate or brown-top stringybark		N		V	S	Т	
E. oblonga (E. globoidea)	Narrow-leaved stringybark		N					
E. ochrophloia	Yapunyah	Q						
E. ovata *	Swamp gum *				٧	S	Т	W
E. paniculata	Grey ironbark		N					
E. parramattensis	Drooping red gum		N	7				
E. pauciflora	Cabbage or weeping or snow gum						Т	
E. pellita *	Large-fruited red mahogany	Q						
E. pilularis	Blackbutt	Q	N					
E. piperita	Sydney peppermint		N					
E. platypus	Moort or round-leaved moort					S		
E. polyanthemos	Red box			Α				
E. populnea	Poplar or bimble box	Q						
E. propinqua *	Small-fruited grey gum	Q	N					
E. punctata *	Large-fruited grey gum	Q	N		٧	S		W
E. radiata	Narrow-leaved peppermint				٧			
E. resinifera	Red stringybark or red mahogany	Q	N					
E. robusta *	Swamp mahogany or swamp messmate	Q	N		V	S		
E. rossii	Scribbly gum		N					
E. rubida	Candle bark			Α	V	S		
E. rudis	Flooded or swamp gum or moitch			-				W
E. saligna	Sydney blue gum	Q	N		V	S		ļ · ·
E. scoparia	Wallangarra white gum	_	N	Α	Ť			
E. seeana	Narrow-leaved grey or n-l red gum	Q		-				
E. sideroxylon	Red ironbark or mugga	Q	N					
E. signata (E. racemosa)	Scribbly gum	Q	<u> </u>					
E. tereticornis *	Forest red or Queensland blue gum	Q	N		V	S		W
E. viminalis *	Ribbon or manna or white gum	Q	N	Α	V	S	Т	•
Lophostemon confertus	Brush or pink or Queensland box	Q	•	, `	ļ ,		<u> </u>	
Lopnosternon contentas	Drugit of plink of Queenstand box	Q						