

Charles Darwin University Animal Ethics Committee

Standard Operating Procedure:

Transport and Temporary Holding of Wildlife (DBCA, 09/2022)

Version No:	1.1
Date of Approval:	21/09/2022
Last Amendment:	N/A
Date for Review:	21/09/2025

Please note: this SOP has been developed for animal use in WA. Consideration should be taken to the specific conditions of the region in which your work is being conducted, and modifications to procedures made accordingly to ensure the best welfare of the animal and safety of the project participants. Any modifications required should be outlined in the project application. Consideration should particularly be given to the weather conditions of the Northern Territory and the presence of extreme hazards such as crocodiles.

Note: Temperatures specified in this SOP may not be relevant to Northern Territory conditions. The Charles Darwin University Animal Ethics Committee requires that you outline methods to alleviate any potential extremes of temperatures in your project application.

Item 4.2 Table 2 Modes of transport for movement of wildlife. Pressurised and non-pressurised aircraft are approved for the nature of carriers in the Northern Territory.

Item 5.4 g) With respect to holding times of animals, animals should be released as soon as possible. In addition, the time of animal holding, and release must be specified and justified in the project application.

Standard Operating Procedure

TRANSPORT AND TEMPORARY HOLDING OF WILDLIFE

Prepared by: Species and Communities Branch, Science and Conservation, Department of Biodiversity, Conservation and Attractions

Prepared for: Animal Ethics Committee

Version 1.1

October 2017



Department of **Biodiversity,**
Conservation and Attractions

Department of Biodiversity, Conservation and Attractions
Locked Bag 104
Bentley Delivery Centre WA 6983
Phone: (08) 9219 9000

www.dbca.wa.gov.au

© Department of Biodiversity, Conservation and Attractions on behalf of the State of Western Australia 2017

This work is copyright. You may download, display, print and reproduce this material with suitable acknowledgement. Requests and enquiries concerning reproduction and rights should be addressed to the Department of Biodiversity, Conservation and Attractions.

This standard operating procedure was prepared by the Species and Communities Branch, Science and Conservation Division, Department of Biodiversity, Conservation and Attractions.

Questions regarding the use of this material should be directed to:

Principal Zoologist
Species and Communities Branch
Department of Biodiversity, Conservation and Attractions
Locked Bag 104
Bentley Delivery Centre WA 6983
Phone: (08) 9219 9511
Email: fauna@dbca.wa.gov.au

The recommended reference for this publication is:

Department of Biodiversity, Conservation and Attractions (2017). *Standard Operating Procedure: Transport and Temporary Holding of Wildlife*. Perth, WA: Department of Biodiversity, Conservation and Attractions.

Disclaimer

The State of Western Australia and its employees do not guarantee that this publication is without flaw of any kind or is wholly appropriate for your particular purposes and therefore disclaims all liability for any error, loss or other consequence that may arise from you relying on any information in this publication.

Revision history log

Version	Date	Details	Author/Reviewer	Approval
1.0	2009	Document created	Christine Freegard & Vanessa Richter	March 2009
1.1	16/05/2017	Minor revision, helicopter added as a transport method and statement about min and max temperatures added.	Georgina Yeatman and Manda Page	August 2017

Approvals


Version 1.1


Approved by:  _____ Date: 17/08/2017

Dr Manda Page

Principal Zoologist, Species and Communities Branch, Department of Biodiversity, Conservation and Attractions

Version 1.0

Approved by:  _____ Date: 4.3.09
 Peter Orell
 Western Shield Zoologist, DEC Species and Communities Branch

Approved by:  _____ Date: 5-3-09
 Keith Morris
 Fauna Program Leader, Science Division

This document has been reviewed and endorsed by the Department's Animal Ethics Committee

Acknowledgments

This standard operating procedure was originally developed by Christine Freegard and Vanessa Richter, with contributions from Peter Orell, Peter Mawson, Claire Stevenson, Neil Thomas and Stephanie Hill.

Contents

1 Purpose	5
2 Scope	5
3 Definitions	5
4 Approved Methods	6
4.1 Temporary holding	6
4.2 Transport	6
5 Procedure Outline	7
5.1 Construction of temporary holding containers	7
5.2 Care during temporary containment	8
5.3 Cleaning and disinfecting temporary holding containers	8
5.4 Recording keeping for transport of animals	8
6 Level of Impact	8
7 Ethical Considerations	9
7.1 Biological and behavioural requirements of animals	9
7.2 Duration of transport	9
7.3 Injury and unexpected deaths	9
7.4 Spread of disease or parasites	9
8 Competencies and Approvals	10
9 Occupational Health and Safety	11
9.1 Driver fatigue	11
9.2 Containment of animals	11
9.3 Venomous or dangerous animals	11
10 Further Reading	11
11 References	11

1 Purpose

In most situations, animals that are trapped are released at their point of capture shortly after the required data is collected. In certain circumstances, such as translocation or the collection of live voucher specimens, the temporary holding and/or transport of live animals is required.

This standard operating procedure (SOP) provides advice on the temporary holding and transport of wildlife using hard and soft containment methods.

2 Scope

This SOP has been written specifically for scientific and education purposes, and endorsed by the Department's Animal Ethics Committee. However, this SOP may also be appropriate for other situations.

This SOP applies to the transportation and temporary holding of wildlife by Department of Biodiversity, Conservation and Attractions (hereafter Department) personnel. It is of particular relevance to translocation of fauna for conservation purposes. It may also be used to guide transport and temporary holding of fauna undertaken by Natural Resource Management groups, consultants, researchers and any other individuals or organisations. All Department personnel involved in the transport and temporary holding of wildlife should be familiar with the content of this document.

Projects involving wildlife may require a licence under the provisions of the *Wildlife Conservation Act 1950* and/or the *Biodiversity Conservation Act 2016*. Personnel should consult the Department's Wildlife Licensing Section and Animal Ethics Committee Executive Officer for further guidance. In Western Australia any person using animals for scientific purposes must also be covered by a licence issued under the provisions of the *Animal Welfare Act 2002*, which is administered by the Department of Primary Industries and Regional Development. This SOP complements the *Australian code of practice for the care and use of animals for scientific purposes* (The Code). The Code contains an introduction to the ethical use of animals in wildlife studies and should be referred to for broader issues. A copy of the code may be viewed by visiting the National Health and Medical Research Council website (<http://www.nhmrc.gov.au>).

3 Definitions

Animal handler: A person listed on an application to the Department's Animal Ethics Committee who will be responsible for handling animals during the project.

Hard containment: Use of hard materials to contain the movement of animals to assist handling and restraint.

Soft containment: Use of soft materials to contain the movement of animals to assist handling and restraint.

4 Approved Methods

4.1 Temporary holding

There are many methods used to temporarily hold live animals (Table 1). The most suitable method will depend on the species being held and the duration of containment. Soft containment methods are used for short to medium duration trips and hard containment methods are used for longer duration trips where greater security of animals is required.

Table 1 Methods approved for temporary holding and transport of wildlife

Containment Type	Containment Method	Used For
Soft	Ziplock plastic bag	Small frogs and reptiles (short term only)
Soft	Calico bag	Small mammals, birds, frogs and reptiles
Soft	Heavy cotton, denim or synthetic (e.g. polar fleece)	Small to medium sized mammals
Hard	Plastic container (ventilated)	Frogs, tadpoles and frog spawn
Hard	Pet pack	Mammals (after first being contained within the appropriate soft containment bag) and medium to large sized birds (e.g. cockatoos)
Hard	Cage trap	Mammals (after first being contained within the appropriate soft containment bag)
Hard	Transportation box	Birds and small mammals

In some cases hard containment methods may be used to store multiple animals held in soft containment bags so that they may be stacked for transport whilst maximising ventilation. However, they must be restrained within the hard containment so that the bagged animals are not able to roll and suffocate each other or restrict air flow. In the case of pet packs the containment bags can be tied to the diagonal corners of a pet pack.

4.2 Transport

Animals may be transported on the ground, by water or by air depending on the circumstances and distance needing to be travelled (Table 2).

Table 2 Modes of transport for movement of wildlife

Transport Method	Situation Used
Vehicle	Short and medium distances (less than 12 hours duration)
Aeroplane (pressurised compartment)	Long distance or remote
Helicopter	Short and medium distances
Boat	Island to mainland or vice versa. Up or down rivers where road transport is less efficient.

Regardless of the mode of transport, temperature must be managed and, if possible, monitored. As a general rule, the temperature range should not exceed 25°C or fall below 15°C, but this is dependent on the species. There are a number of other things to consider for each of these modes of transport and these are outlined in the following sections.

4.2.1 Ground transport by vehicle

- (a) Animals must be in a covered space and well secured to prevent escape or movement about the vehicle during travel.
- (b) The temperature where the animals are held must not exceed 25°C. A temperature thermometer with multiple sensors is recommended so that the temperature where the animal is held can be monitored by the driver.
- (c) Some vehicles do not have floor insulation from the heat generated by the vehicle exhaust system and this can lead to heat stress and potentially death. The temperature must be monitored, and a false bottom can be used to insulate the vehicle.
- (d) Animals must not be placed in the boot or on the dash of a vehicle.
- (e) Never leave collected animals where they may be exposed to direct sunlight, get wet or get too hot or cold.

4.2.2 Air transport by aeroplane or helicopter

- (a) Animals must be in a covered space and well secured to prevent escape or movement about the aeroplane or helicopter during travel.
- (b) Ensure that transportation by air is undertaken in accordance with International Air Transportation Association (IATA) *Live Animal Regulations*.
- (c) When transporting live animals by jet turbine helicopter, animals are to be placed in the cabin or if this is not possible then in a well-ventilated boot (free of other cargo), away from the heat of the jet engine exhaust and checked regularly. Secure boxes should allay any fear that pilots may have about animals escaping.
- (d) Do not stow animals in close proximity to exhaust gases or subject to radiated heat generated by the engine/s.

4.2.3 Boat transport

- (a) Animals must be in a covered space and well secured to prevent escape or movement about the boat during travel.
- (b) Animals must be stowed in a dry, well ventilated location. It is preferable to place the animals near the centre of the boat to provide for a smoother ride, particularly if experiencing rough sea conditions.

5 Procedure Outline

5.1 Construction of temporary holding containers

- (a) The containers must be designed, constructed and appropriately-sized for the purpose that they are being used.
- (b) The containers must be secure and escape-proof.
- (c) The container must provide adequate ventilation.
- (d) There must be adequate nesting or bedding material available appropriate for the species being transported.

5.2 Care during temporary containment

- (a) Limit exposure of animals to sudden movements, temperature extremes, noise, visual disturbance and vibration.
- (b) For most species, the temperature should be kept to below 25°C and above 15°C.
- (c) Food and water/moisture must be provided when necessary.
- (d) Ensure that animals are separated, except for pouch young.
- (e) Animals should be monitored frequently for signs of distress, although this needs to be balanced against the desirability of limiting disturbance.
- (f) Avoid unnecessary handling.
- (g) Administer tranquilising agents by skilled personnel where appropriate.
- (h) Ensure animals are not left where they may be accidentally trampled or forgotten.
- (i) Mammals transported in pet packs and cage traps should be secured in calico bags prior to placement in container. To prevent potential injury, the container size should ensure that an animal cannot roll around in it.

5.3 Cleaning and disinfecting temporary holding containers

Temporary holding containers must be cleaned and disinfected after each use. Advice on cleaning and disinfection is available in the Department SOP for *Managing Disease Risk in Wildlife Management*.

5.4 Recording keeping for transport of animals

- (a) Ensure that both suppliers and recipients of animals have satisfactory delivery procedures, with animals being received by a responsible person and appropriate paperwork is completed.
- (b) Label all temporary holding containers with the species, sex, date and capture site details upon containment of an animal. You may also need to further label containers with dangerous animals, e.g. "Caution Venomous Snake".
- (c) For translocations, ensure that a Translocation Proposal has been written in accordance with the Department *Corporate Guideline No. 36* and approved.
- (d) If animals are being transported interstate, then an export permit is required to be issued under the *Wildlife Conservation Act 1950*. Note that this permit will not be issued unless the State to which the fauna is being exported has approved the fauna entering that State. If animals are being received from interstate, then an import permit is required.
- (e) Animals being transported to the WA Museum must have accompanying specimen data. An animal without data is useless for nearly all purposes for which it may have been collected.

6 Level of Impact

The impact of temporary containment and transportation of wildlife is potentially high given the animals are completely dependent on those responsible for their welfare.

Transportation can cause distress due to confinement, movement, noise and changes in environment and personnel. The conditions and duration of the transportation must be managed to ensure that the impact on animal health and welfare is minimised.

7 Ethical Considerations

To reduce the level of impact of transport and temporary holding on the welfare of animals there are a number of ethical considerations that should be addressed. Department projects involving the transport or temporary holding of wildlife will require approval from the Department's Animal Ethics Committee.

7.1 Biological and behavioural requirements of animals

Consider both the biological and behavioural requirements of animals when subjecting them to containment or confinement for extended periods of time such as that required for transport.

In general animals are better able to cope with stress at low temperatures and low humidity. Transport should not occur if temperature cannot be maintained below 25°C.

The extent of any distress will depend on the animals' health, temperament, species, age and sex, the number of animals travelling together and their social relationships, the period without food and water, the duration and mode of transportation, environmental conditions, particularly extremes of temperature, and the care given during the journey (NHMRC, 2013).

7.2 Duration of transport

Temporary containment should be of the shortest duration possible. Animals must be released within 24 hours of capture unless justification can be provided and is approved by the Department's Animal Ethics Committee.

Live animals collected for the museum must be lodged for processing as soon as possible. If this cannot be achieved then the animals should be examined and released or euthanased if appropriately trained personnel are available.

7.3 Injury and unexpected deaths

If injury, unexpected deaths or euthanasia occur then it is essential to consider the possible causes and take action to prevent further deaths. For projects approved by the Department's Animal Ethics Committee, adverse events such as injury, unexpected deaths or euthanasia must be reported in writing to the AEC Executive Officer on return to the office (as per 2.2.28 of The Code) by completing an *Adverse Events Form*. Guidance on field euthanasia procedures is described in the Department SOP for *Humane Killing of Animals under Field Conditions*. Where disease may be suspected, refer to the Department SOP for *Managing Disease Risk in Wildlife Management* for further guidance.

7.4 Spread of disease or parasites

Transport and re-use of equipment (e.g. handling bags) as well as the transport of animals pose the risk of also transporting novel diseases and parasites. Animals showing signs of disease or ill health must not be translocated. Good hygiene practices should be maintained

to reduce the risk of spreading pathogens or parasites between sites (see the Department SOP for *Managing Disease Risk in Wildlife Management*).

8 Competencies and Approvals

Department personnel, and other external parties covered by the Department's Animal Ethics Committee, undertaking transport and temporary holding of wildlife require approval from the committee and will need to satisfy the competency requirements detailed in Table 3. This is to ensure that personnel involved have the necessary knowledge and experience to minimise the potential impacts of transport and temporary holding on the welfare of the animals. Other groups, organisations or individuals using this SOP to guide their fauna monitoring activities are encouraged to also meet these competency requirements as well as their basic animal welfare legislative obligations.

It should be noted that details such as intensity of the study being undertaken will determine the level of competency required and Table 3 provides advice for basic monitoring only.

Table 3 Competency requirements for Animal Handlers of projects involving transport and temporary holding of wildlife

Competency category	Competency requirement	Competency assessment
Wildlife licences	Licence to take fauna for scientific purposes (Reg 17) OR Licence to take fauna for educational or public purposes (Reg 15)	Provide licence number
Translocation permits and approvals	Approved Translocation Proposal AND/OR Import or export permit	Provide copy of permit and translocation approval as required.
Formal training <i>Note: Suitable levels of skills/experience can substitute for formal training requirements</i>	Department Fauna Management Course or equivalent training	Provide course year
Animal handling and capture experience	Depending on the proposed study, personnel may be required to have training and experience in the chosen method of hand capture for the target (or similar) species	Personnel involved in transport and temporary containment of wildlife should be familiar with the normal behaviour patterns of the species that is to be retained. They should be familiar with the most appropriate containment methods for the species of interest to the project. This experience is best obtained under supervision of more experienced

Competency category	Competency requirement	Competency assessment
		<p>personnel.</p> <p>Estimated total time in field: Min 2-5 years involved in similar projects</p>

9 Occupational Health and Safety

Always carry a first aid kit in your vehicle and be aware of your own safety and the safety of others as well as the animals when handling.

A job safety analysis is recommended prior to undertaking any monitoring which involves hand capture. This safety analysis should include the following considerations.

9.1 Driver fatigue

Driver fatigue is a concern when animals are being transported for translocation by road. Often drivers have been involved in trapping the animals and therefore may have worked long hours and had interrupted sleep. There are also long distances involved in some translocations which increase the risk of driver fatigue. Appropriate measures, such as regular rest stops or back-up drivers, should be utilised to minimise the risk of driver fatigue.

9.2 Containment of animals

It is important that the animals do not escape during travel and cause problems for the driver/pilot during transport. It is also important that the containers for the animals are stowed securely so that they do not move during transport.

9.3 Venomous or dangerous animals

Ensure containers holding venomous or dangerous animals are escape proof and clearly labelled, "Danger – Venomous Animal".

10 Further Reading

The following SOPs have been mentioned in this advice and it is recommended that they are consulted when proposing to undertake transportation and temporary containment of wildlife.

- Department SOP *Animal Handling and Restraint Using Soft Containment*
- Department SOP *First Aid for Animals*
- Department SOP *Managing Disease Risk in Wildlife Management*
- Department SOP *Humane Killing of Animals under Field Conditions*

11 References

NHMRC (2004). *Australian code of practice for the care and use of animals for scientific purposes* (7th ed.) Canberra, ACT: National Health and Medical Research Council, Commonwealth of Australia .