

# Charles Darwin University Animal Ethics Committee

## Standard Operating Procedure: DPAW SOP 14.20 Hand Restraint of Wildlife

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# Standard Operating Procedure

## HAND RESTRAINT OF WILDLIFE

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Prepared for: Animal Ethics Committee

Version 1.1

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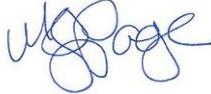
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# 1 Purpose

There are many situations where it is necessary to restrain wildlife by hand. Restraint is usually required to make observations, take measurements or to transport the animal. Many species of animals are capable of inflicting serious injury to themselves or those handling them, so it is important to be familiar with the correct handling and restraint techniques during the transfer of animals into appropriate handling bags and during animal processing.

For safe and effective handling, the animal handler must have detailed knowledge of the anatomy and physiology of the species being restrained; including the distance the limbs can reach to kick or strike, the degree of agility and speed (Fowler, 1978a).

This standard operating procedure (SOP) provides general guidelines for the hand restraint of wildlife.

# 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 all fauna survey and monitoring activities involving the hand restraint of wildlife undertaken across the State by Department of Biodiversity, Conservation and Attractions (hereafter Department) personnel. It may also be used to guide fauna monitoring activities undertaken by Natural Resource Management groups, consultants, researchers and any other individuals or organisations. All Department personnel involved in the hand restraint 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.

**Large mammal:** Any mammal weighing over 5500g.

**Medium bird:** A bird that requires two hands for restraint.

**Restraint:** Restriction of an animal's movement by hand (Sharpe *et al.*, 2007).

**Small bird:** A bird that can be restrained with one hand.

**Small/medium sized mammal:** Any mammal weighing up to 5500g.

## 4 Approved Methods

General advice on suitable hand restraint techniques is contained below, however, training and supervision from experienced personnel in animal handling is required before a person may be considered competent. There are many ways of restraining an animal. The methods described below are the most common.

As a general rule, handling should be kept to a minimum, and wherever possible, animals should be handled in bags and/or have their eyes covered.

### 4.1 One-handed hold

This method is suitable for small birds, amphibians, small to medium lizards, small bats, small rodents and small mammals. It involves the whole animal being restrained in a single hand. The thumb and index finger can be utilised to restrain the head.



*Figure 1: A bearded dragon restrained using thumb and index finger with the rest of the hand supporting the body. Photo: Christine Freegard/DBCA (left)*

### 4.2 Two-handed hold

This method is suitable for any medium-sized animal. It is a common method where both hands are used to hold the animal, usually one to restrain the head and the other to support the body and control the legs/tail. The head is held away from the body, and particularly the face, of the handler.



*Figure 2: A carpet python (left) restrained with one hand controlling the head and the other supporting the body and a varanid (right) restrained with one hand around the front legs and one hand around the back legs. Photo: Christine Freegard/DBCA (left) and Astrid Kendrick/DBCA (right).*



*Figure 3: A parrot (left) restrained with one hand controlling the head and strong beak, and the other securing the feet, wings and supporting the body; and a quenda (right) restrained with one hand holding the neck and head, and the other holding the back legs and supporting the body Photo: Vanessa Richter/DBCA.*

### 4.3 Three-finger hold

This method is suitable for small to medium mammals, reptiles and birds. It is used to restrain the head of an animal. The thumb and middle finger are placed on either side of the animal's head and the index finger placed on top of the head.



*Figure 4: The head of a carpet python restrained using a three finger hold. Photo: Christine Freegard/DBCA.*

### 4.4 Pistol grip

This method is a variation of the three finger hold and is suitable for small to medium mammals. This method is extremely good for pacifying agitated animals and allows easy exposure and measuring of the head. The ring and little fingers are placed under the chin, with the middle and index finger going over the head to cover the eyes and the thumb going behind the head to restrict head movement. This is best done while the animal is still in the bag and then exposing the head once the animal is restrained.

For smaller animals just the index finger over the head is adequate to cover the eyes.

### 4.5 Tail grab

This method is suitable for macropods, snakes (caution is required with certain venomous and large muscular snakes), large lizards (with caution to avoid tails breaking off) and medium/large mammals. DO NOT use this hold for rodents as it may cause detachment of the tail sheath.

It involves grabbing the base of the tail where it is thick and muscular and lifting the animal off the ground directing the legs away from the handler (Fowler, 1978b). The animal can then be placed into an appropriate handling bag (refer to the Department SOP for *Animal Handling and Restraint using Soft Containment*). The animal should not be restrained in this manner for extended periods of time without supporting the body. Care should be taken to minimise the risk of spinal injury when using this technique.



Figure 5: A rock wallaby grasped by the base of the tail using the tail grip. Photo: Nicole Willers/DBCA (left) and Roger Groom (right).

#### 4.6 Scruffing

This method is suitable for small to medium rodents and small mammals. Using the thumb and index finger, the loose skin on the scruff of the neck is grasped. For medium sized animals the other hand is required to support the body. This technique is not suitable for species with delicate skin.

#### 4.7 Cupping

This method is suitable for most small birds, amphibians, small to medium lizards, small bats and small rodents. It involves the whole animal being enclosed in one or two hands. This technique is not suitable for species that may bite, sting or scratch hands.



Figure 6: A finch cupped in hands. Photo: Vanessa Richter/DBCA.

#### 4.8 Ringers hold

This method is suitable for small birds and can also be used on small rodents and mammals. This is generally a one handed bird restraint method which involves the animal being caged in the fingers with the head protruding between the thumb and index finger or between the index finger and middle finger. The non-dominant hand is usually used to hold the animal (FAO, 2007).

## 4.9 Reverse ringers hold

This is suitable for small birds, but only for those that do not have sharp beaks as the head is not properly restrained. It is a one handed bird restraint method in which the bird is grasped with its back and closed wings against the palm of the hand, with the head facing downward towards the handlers wrist (FAO, 2007).



Figure 7: A lorikeet held in one hand using the ringers hold (left); and a finch being restrained using a reverse ringers hold (right). Photo: Vanessa Richter/DBCA.

## 5 Procedure Outline

Personnel handling animals should be trained in the procedure as well as in contingency methods of restraint that may be required. Handling techniques are best demonstrated and learnt under supervision in the field. The specific handling characteristics of each taxonomic group, is beyond the scope of these guidelines. This SOP provides general advice only.

### 5.1 Determining the suitable method

Assess the animal to determine the most suitable hand restraint method. Determining the most suitable hand restraint method for a species will depend on a number of factors. The following are considerations which need to be taken into account prior to hand restraining an animal.

#### 5.1.1 Experience and abilities of handler

It is important to consider the experience and confidence of handlers with the species in question. Confident handlers are more likely to restrain the animals in an efficient manner that minimises stress.

It may be necessary to involve a number of personnel to restrain an animal or in the case of inexperience, have a back-up handler. The minimum number of people should be utilised to quickly and safely restrain the animal.

#### 5.1.2 Species involved

The species needing to be hand restrained will give an indication of the likely behaviours to be encountered (e.g. flight, attack) and relative agility of the animal. This will guide the kind of restraint required. The size of the animal will determine whether one hand, two hands, or more than one person is required for hand restraint. Table 1 summarises the most suitable hand restraint methods for different animal groups.

Table 1 A guide to suitable hand restraint methods for different animal groups. Note: Some techniques are not suitable for animals of a particular size. Where this is relevant, an appropriate size range has been included in brackets.

Animal Group	One-handed hold	Two-handed hold	Three-finger hold	Pistol grip	Tail grab	Scruffing	Cupping	Ringers hold	Reverse ringers hold
Birds	✓(small)	✓(medium to large)	✓	X	X	X	✓(small)	✓(small)	✓(small)
Amphibians	✓	✓	X	X	X	X	✓	X	X
Snakes	X	✓	✓	X	✓	X	X	X	X
Lizards	✓(small to medium)	✓	✓(small to medium)	X	✓(large)	X	✓(small)	X	X
Crocodiles	X	✓	X	X	✓	X	X	X	X
Turtles	X	✓	X	X	X	X	X	X	X
Bats	✓(small)	✓(medium to large)	✓	X	X	X	✓(small)	X	X
Macropods	X	✓	✓(small to medium)	✓(small to medium)	✓	X	X	X	X
Rodents	✓(small)	✓	✓(small to medium)	X	X	✓(small, 2 <sup>nd</sup> hand to support with large)	✓(small)	✓(small)	X
Mammals	✓(small to medium)	✓(small to medium)	✓(small to medium)	✓(small to medium)	✓(medium to large)	X	✓(small)	✓(small)	X

### 5.1.3 Normal flight-fight response

Different species of animals behave differently when threatened. Some will fight, some will flee and others will try to hide. These kinds of behaviours also apply to animals being restrained with some animals struggling excessively whilst others become submissive.

### 5.1.4 Defence mechanisms and delicate structures

Many animals have defence mechanisms or delicate structures which need to be considered when handling them such as:

- **Skin:** Skin is an important organ. Damage to the skin of an animal leaves it susceptible to possible bleeding and infection. Some species such as the Cane Toad secrete a toxic substance from their skin whilst other amphibians have very delicate skin that is permeable enough to allow the absorption of chemicals therefore clean, moist hands are required when handling.
- **Tail:** The tail of some reptiles (e.g. monitors, crocodiles) can cause injury if not restrained. A defence mechanism of some reptiles (e.g. skinks, geckoes) is tail autonomy which involves the dropping and later regrowing of the tail. The loss of the tail in some species results in a loss of the animal's fat reserves and therefore decreases their chance of survival. Some rodents and bandicoots have fragile tails that can be broken or the skin sheath removed if roughly handled or handled by the tail.
- **Feathers:** Damage to, severe loss or disruption of the feathers may impact the bird after release and reduce the ability to fly (Ministry of Environment, Lands and Parks RIB, 1998) as well as its ability to regulate its temperature.
- **Teeth/Beak:** Any animal with teeth and/or the ability to open its mouth widely is capable of inflicting a bite (Fowler, 1978b). Many species will try and bite to defend themselves and it is therefore important to have control of the head at all times.
- **Wings:** Some species of bird have wings which they may use as defence (e.g. swans, pelicans) and if a handler is hit, injury can result.
- **Talons/Claws:** For species whose claws/talons are their main defence (e.g. birds of prey), it is important to have control of these first.
- **Legs:** Some species utilise their powerful legs in response to being handled (e.g. Emu, macropods etc.). Legs cannot only cause injury to the handler but also to the animal if not controlled properly. For example macropods can traumatise their spines if allowed to kick out with their hind legs while being held by the tail (Fowler, 1978b). Some species such as storks and waders have long delicate legs which will require careful handling.
- **Venom glands:** Some species are venomous and use their venom to protect themselves (e.g. venomous snakes, cane toads, invertebrates).

### 5.1.5 Behavioural aspects

Wild animals are not conditioned to being handled and generally stress much faster than captive animals familiar with human presence. Wild animals should therefore be handled as efficiently as possible.

An animal's response to restraint may vary with the stage of life they are in (Fowler, 1978b). For example an animal in oestrus or with young may behave differently to being handled than at other times. Restraint should be avoided in animals which are pregnant, with young or breeding as they will have a decreased ability to cope with more stress (Sharp *et al.*, 2007).

Transporting and trapping animals changes their behaviour. These activities create high stress levels in animals and they should be given time to settle before carrying out additional restraint (Fowler, 1978b).

#### **5.1.6 Health status**

The health status of an animal will affect the way it is handled. Sick or injured animals may require the use of personal protective equipment such as gloves to protect the handler from disease. Injured animals will be treated with extra caution because of the increased chance of unpredictable behaviour.

## **5.2 Restraining the animal**

Animals should always be approached in a calm and quiet manner (Sharp *et al.*, 2007). The handler must know where and how to grasp the animal. When restraining an animal by hand, the force applied and technique should be appropriate for the species in question (Fowler, 1978b). The animal needs to be grasped firmly enough to prevent struggling, but gently enough to avoid the risk of suffocation or damaging limbs.

Handling animals does not always go as planned so it is necessary to be sensitive, responsive and adaptable. Prolonged, stressful restraint should not be performed. Other forms of restraint (e.g. anaesthesia) may be more suitable to help prevent injury to the animal and handler.

## **5.3 Assessing the comfort of restrained animals**

Handlers should be familiar with the normal behaviours of the species being restrained and knowledgeable about signs of stress and discomfort (NHMRC, 2004). Animals need to be constantly assessed throughout hand restraint to ensure they are placed under the least amount of stress as possible to reduce the risk of injury and other problems such as hyperthermia and capture myopathy.

The time the animal is restrained must to be kept to a minimum, with the animal being transferred into an appropriate soft or hard containment method as soon as possible (e.g. calico bag, cardboard box). Refer to the Department SOPs *Animal Handling and Restraint using Soft Containment* and *Transport and Temporary Holding of Wildlife* for further advice.

Personnel need to be aware of signs of stress in an animal when assessing the comfort of the animal being restrained. Table 2 lists signs of stress in different animal groups.

Table 2: Signs of stress in animals during hand restraint (Choy, 2009; N. Thomas, *pers. comm.* April 2009)

Animal Group	Signs of Stress
Birds	<ul style="list-style-type: none"> <li>• Vocalisation</li> <li>• Excessive struggling</li> <li>• Defecation</li> <li>• Increase in heart rate</li> <li>• Panting/heat stress</li> </ul>
Reptiles and Amphibians	<ul style="list-style-type: none"> <li>• Excessive struggling</li> <li>• Gaping of the mouth</li> <li>• “Swimming” in the air (turtles/tortoises)</li> <li>• Panting/heat stress</li> <li>• Self-biting</li> </ul>
Mammals	<ul style="list-style-type: none"> <li>• Vocalization</li> <li>• Clenching of teeth</li> <li>• Self-biting</li> <li>• Attempts to escape</li> <li>• Increase in heart rate</li> <li>• Panting/heat stress</li> <li>• Animal is limp or closes its eyes</li> <li>• Aggression</li> <li>• Urination/defecation</li> <li>• Excessive struggling</li> <li>• Cyanosis (bluing) of the nose and/or lips</li> </ul>
Macropods	<ul style="list-style-type: none"> <li>• Vocalisation</li> <li>• Attempts to escape</li> <li>• Teeth grinding</li> <li>• Excessive licking</li> <li>• Increase in heart rate</li> <li>• Panting/heat stress</li> <li>• Excessive salivating</li> </ul>

In assessing the comfort of a restrained animal, personnel will need to consider:

1. The animals breathing and whether the pressure you are exerting on the animal is too strong. Personnel must keep an eye on the heart rate and respiration of the animal. Gasping and cyanosis (bluing) of the nose and/or lips are obvious signs that too much pressure is being used.
2. Ensuring that the animal is not forced into awkward or unnatural positions that may cause injury. Exerting too much pressure on limbs can cause fractures or dislocations.
3. The surroundings, this includes what the animal can see, hear, smell and to a lesser extent, taste. Animal’s must not be exposed to excessive wet, heat (e.g. process the animal in the shade), bright light and loud or sudden noises. Handlers should not smoke or eat immediately prior or during hand restraint of animals.

## 5.4 Maintaining hygiene

Maintaining hygiene is very important and precautions must be taken to prevent the risk of cross infection between animals and from animals to humans. Sick or injured animals require higher hygiene considerations due to the possibility of zoonosis.

Personnel must take precautions to minimise the risk of disease transmission to protect themselves, their families and the public. All materials and equipment used in the capture, holding transport and manipulation of animals must be cleaned and maintained in a way that minimises the assessed risk of disease transmission. Contaminated equipment must be disinfected between animals and between locations where the equipment is used.

Refer to the Department SOP for *Managing Disease Risk in Wildlife Management* for further advice.

## 5.5 Preventing Injuries to animals and handlers

Many animals do not tolerate physical restraint and therefore there is an increased potential for injury to the animal or handler. If the potential for human or animal injury reaches an unacceptable level the animal should not be handled. If handling the animal results in excessive stress to the animal (or handler) then all attempts to restrain the animal should be stopped at once. It may also be necessary to limit all attempts to measure the animal (recording ID and sex only) and immediately releasing the animal to reduce the likelihood of injury to the animal or handler.

Where animals are restrained by hand, injury to animals and handlers can be prevented or minimised by:

- Using personal protection equipment.
  - Long sleeve clothing: to reduce the risk of cuts and scratches to the arms and legs.
  - Goggles/face mask/safety glasses: to protect eyes from animals with long beaks (e.g. storks) or animals which secrete substances (e.g. cane toad) etc.
  - Gloves (leather): can be useful for animals with sharp claws, teeth and spines or venom glands. Their use is a personal choice as they can decrease tactile sensation.
  - Ear plugs: can protect ears in situations where personnel are exposed to loud/excessive noise for long periods of time (e.g. working with cockatoos).
- Knowing the correct restraint techniques (e.g. proper training, being able to respond to different situations when dealing with angry animals, prevents strains injuries to handler).
- Utilising as many people as required to safely restrain an animal with minimal stress.
- Limiting the time the animal is restrained.
- Using alternatives methods of restraint (e.g. anaesthesia) if an animal is excessively resisting hand restraint.

If an animal is injured during hand restraint, superficial wounds should be treated with a topical antiseptic (e.g. Betadine<sup>®</sup>) (refer to the Department SOP for *First Aid for Animals*). If an animal is seriously injured, refer to the flowchart in the Department SOP for *Humane Killing of Animals under Field Conditions* to make the decision on whether or not to euthanase or seek veterinary care.

## 6 Level of Impact

Wild animals are far more susceptible to stress and injury during hand restraint. There is a high level of impact on animals during hand restraint.

It is important to be aware that improper restraint, especially of frightened or stressed animals, can lead to the following impacts:

- Hypothermia
- Hyperthermia
- Stress
- Shock
- Capture myopathy
- Physical injury and pain.

Table 2 outlines signs that an animal is stressed during hand restraint.

## 7 Ethical Considerations

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

### 7.1 Handling time

Hand restraint is stressful for animals and so it is essential that handling time is kept to a minimum. Animals should be transferred into holding bags as soon as possible.

### 7.2 Restraint techniques

Personnel must be aware and experienced in proper restraint techniques for the species they are handling and be able to respond to different situations that may arise when dealing with struggling and stressed animals. If hand restraint is not possible due to excessive struggling which compromises the health of the animal or risks of injury to the handler or animal other forms of restraint (e.g. anaesthesia) should be applied or the restraint aborted.

### 7.3 Capture myopathy

Capture myopathy is a concern when hand restraining animals. It is a condition associated with the capture and handling of many species of mammals and birds that results in degeneration of skeletal and/or cardiac muscle (Shepherd *et al.*, 1988). The condition can result in sudden death but death may occur weeks after capture as a result of complications including abnormalities to posture and gait and increased susceptibility to predation (Abbott *et al.*, 2005)

Prevention of the condition through efforts to minimise stress to animals is better than treatment options. Records of animals suspected to be suffering from capture myopathy need to be provided to the Department's Animal Ethics Committee for annual reporting requirements. Any animal that dies from capture myopathy must be sent for autopsy and a

copy of the report provided to the Department's Animal Ethics Committee with an Unexpected Animal Death Report filled in.

#### 7.4 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.

#### 7.5 Pouch young

Ejection of pouch young is common in some members of the Potoroidae and Peramelidae families. Persons that may encounter members of these families during handling must be familiar with the Department SOP for *Care of Evicted Pouch Young*.

Records need to be kept on orphans, their care and fate for annual reporting requirements of the Department's Animal Ethics Committee approved projects.

#### 7.6 Spread of disease or parasites

Personnel must be aware of the possibilities of transferring disease or parasites from animal to animal as well as from one location to another if handling animals at multiple sites. Good hygiene practices should be maintained to reduce the risk of spreading pathogens between animals and sites. Refer to the Department SOP for *Managing Disease Risk in Wildlife Management* for further advice.

## 8 Competencies and Approvals

Department personnel, and other external parties covered by the Department's Animal Ethics Committee, undertaking projects involving hand restraint 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 hand restraint 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 hand restraint 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
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
General skills/experience	Relevant knowledge of species biology and ecology	Personnel must be able to correctly identify the likely species to be encountered at the site/s being studied. Familiarity with the biology and ecology of the target species will assist in selecting the most appropriate techniques. This knowledge may be gained by sufficient field experience and/or consultation of field guides and other literature.  Estimated total time in field: Min 1 year involved in similar projects
Animal handling and capture experience	Experience in handling the target (or similar) species	Personnel should be confident at handling the range of species expected to be captured. This experience is best obtained under supervision of more experienced personnel.  Estimated total time in field: Min 2 year involved in similar projects.

## 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 Animal bites, stings and scratches

Care should be taken when handling animals to avoid bites, sting or scratches. All inflicted injuries (even superficial ones) should be appropriately treated as soon as possible to ameliorate possible allergic reaction, prevent infection and promote healing.

To improve safety, field personnel should be aware of the treatment for snakebite and carry appropriate pressure bandages. Personnel should also have up-to-date tetanus vaccinations. Department personnel must not handle bats unless fully vaccinated against Australian Bat Lyssavirus.

If Department personnel or volunteers are injured, please refer to the Department's Health and Safety Section's 'Report a Hazard, near-miss or incident' intranet page, which can be found at [http://intranet/csd/People\\_Services/rm/Pages/ReportingHazards,Near-MissesandIncidents.aspxZoonoses](http://intranet/csd/People_Services/rm/Pages/ReportingHazards,Near-MissesandIncidents.aspxZoonoses).

## 9.2 Zoonoses

There are a number of diseases carried by animals that can be transmitted to humans (i.e. zoonoses such as Toxoplasmosis, Leptospirosis, Salmonella). All personnel must take precautions to minimise the risk of disease transmission to protect themselves, their families and wildlife populations.

Advice on minimising disease risk is contained in the Department SOP for *Managing Disease Risk in Wildlife Management*

## 9.3 Allergies

Some personnel may develop allergies when they come in contact with animal materials such as hair and dander. Personnel known to develop allergies should wear gloves when handling animals and long sleeved pants/shirt.

People with severe allergies associated with animals, with immune deficiency diseases or on immunosuppressant therapy should not engage in the handling of wildlife.

## 9.4 Personal Protective Equipment

Safety gear should be worn when required. Such equipment might include leather/latex gloves, goggles/face shields, safety clothing (long sleeved shirt, pants, overalls) or ear plugs (if working with bird species capable of loud noise for prolonged periods of time).

## 9.5 Manual handling

Manual handling is an integral part of working with animals and the risk of injury (muscular sprains/strains) is increased if the animals are not handled frequently. Care must be taken to minimise the risk of physical injury which may be caused from lifting, carrying, holding or restraining an animal (UWA, 2002). Personnel must be trained in the appropriate manual handling techniques for the hand restraint of animals.

Further advice is available to Department personnel by accessing the Health and Safety Section's intranet page [http://intranet/csd/People\\_Services/rm/default.aspx](http://intranet/csd/People_Services/rm/default.aspx)

## 10 Further Reading

The following SOPs have been mentioned in this advice and it is recommended that they are consulted when proposing to undertake any activities involving hand restraint of wildlife.

- Department SOP *Hand Capture of Wildlife*
- Department SOP *Animal Handling and Restraint using Soft Containment*
- Department SOP *Transport and Temporary Holding of Wildlife*
- Department SOP *Care of Evicted Pouch Young*
- Department SOP *First Aid for Animals*
- Department SOP *Managing Disease Risk in Wildlife Management*
- Department SOP *Humane Killing of Animals under Field Conditions*

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## 11.1 Personal Communication

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