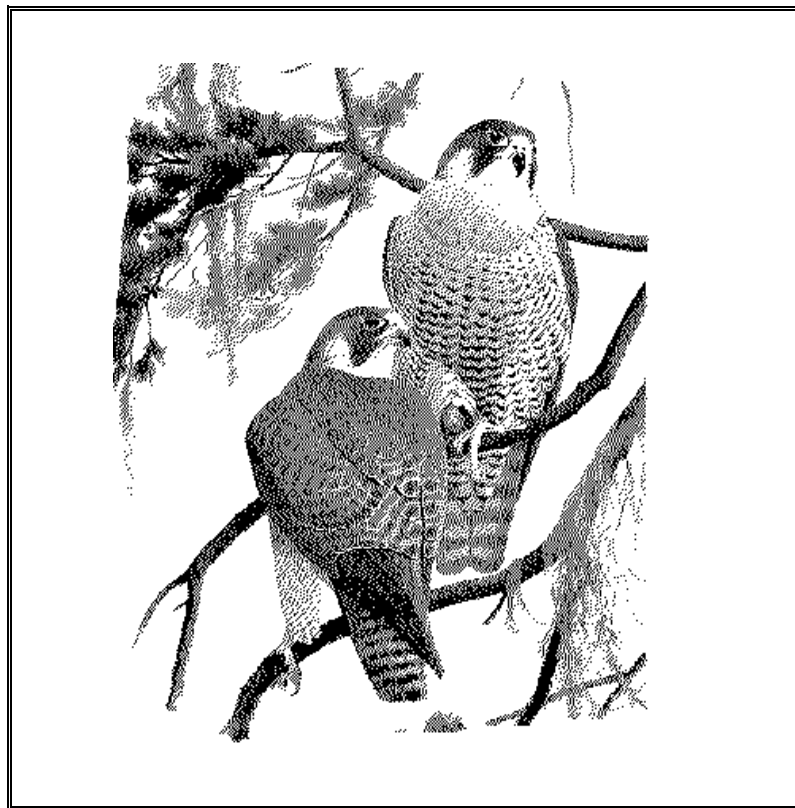


BIRD CARE & CONSERVATION SOCIETY
CARING FOR WILD BIRDS IN CAPTIVITY SERIES
(ADELAIDE AND ENVIRONS)

CARING FOR RAPTORS (Birds of Prey)
7th. edition

CONTENTS

1. INTRODUCTION
2. SPECIES
3. IDENTIFICATION
4. FIRST AID AND DIAGRAMS
5. FEEDING
6. HOUSING
7. RELEASE
8. HACKING
9. ADDITIONAL INFORMATION



Sharon K Blair

1. INTRODUCTION

Birds of prey are more difficult to manage than other species. These notes have been prepared to assist members who have not cared for them before.

Raptors are birds of prey that initiate a kill with their feet. When handling a raptor, have someone assisting you and use strong light gardening gloves to protect yourself from the talons (claws), and to protect the bird's feathers from damage that you may cause by handling.

A small towel or face washer that the bird can grip with its claws will help to prevent the bird from injuring its feet with its sharp talons risking a foot injury that may become infected, i.e Bumble Foot.

If you are grabbed by a bird's foot, moving will only cause the bird to grip tighter, remain still and have the person assisting you gently remove the talons. Covering the bird's head so that it cannot see will help to calm it.

A word of warning - owls often faint when handled. Do not panic, they will recover if left alone in a quiet place.

Do not make the mistake of thinking that a raptor doesn't mind being handled because it is quiet. These birds are quiet because they are terrified.

Do not handle more than absolutely necessary, do not take it to school, do not allow your children to handle it, do not even look at it more than you need to.

2. SPECIES

Several species of raptor are seen in Adelaide and environs. These fall into two groups, the nocturnal (night) birds and the diurnal (day) birds.

Some examples of the most commonly seen follow:

Diurnal (day birds):

Australian Kestrel
Australian Hobby
Black-shouldered Kite
Collared Sparrow Hawk
Brown Goshawk
Wedge-tailed Eagle
Whistling Kite
Little Eagle
Brown Falcon
Spotted Harrier
Marsh Harrier

Nocturnal (night birds):

Barn Owl
Southern Boobook

3. IDENTIFICATION

To determine the species, 'Birds of Australia Field Guide' by Simpson & Day, or the 'Readers Digest Complete Book of Australian Birds' is helpful.

4. FIRST AID

These birds are easily stressed, so on initial contact they should be placed in a warm dark room for at least half an hour before examination. Remember, if a thermometer placed next to bird does not read 30 degrees it is not warm enough.

Unless either,

the bird is bleeding, then gentle pressure must be applied until bleeding stops. Ferric chloride, shaving sticks, friar's balsam or pure aloe vera are often useful to stop bleeding,

or,

there are breathing problems. It is essential that you immediately check the mouth and throat to remove anything that may be restricting its breathing.

Points to check on Examination

Observe the bird before touching it to see how it is carrying its whole body. Note the carriage of the wings. They should be held evenly and level with the body. Drooping of one or both often indicates a break or dislocation. These must be strapped as soon as possible so that the bird does not compound the injury.

Look for flicking of the eyes. Check that the pupils are the same size and constrict with light and that there is no blood in the eyes.

In many head injuries the eyes flick from side to side. This often indicates concussion or other brain injury. If the eyes are flicking the bird needs to see a vet urgently so steroids can be administered and the swelling of the brain reduced.

Trichomoniasis- (a protozoan infection). This is a devastating disease of birds that is common in raptors. Its appearance and smell are both usually quite characteristic. Gently open the beak and check the mouth. It can look like a silvery slime or pale coloured cheesy lumps. Smell the mouth, it has a characteristic fishy smell and there is usually a secondary bacterial infection.

Never try to remove the lesions (cheesy lumps) as this will cause severe bleeding.

Nematode worms- These have also been seen in the mouth and crop of raptors, this disease can often be identified by the stringy slimy appearance of the inside of the mouth. The small lumps on the membrane inside the mouth will have a tiny white wriggling thread-like worm protruding. These require manual removal with tweezers which may have to be done several times over a few days.

Check for any other injuries. The bird's eyes should not have blood in them and be open, clear and the same size. The pupils should also be the same size. The third eyelid should not be covering the eye. Check for blood in the nose, and examine the beak to see if it is cracked.

One or both eyes missing or severely damaged will mean that the bird will not be able to judge distances or focus on prey and it will be unable to hunt successfully.

Examine the bird for fractures of the bones, some can only be determined by X-Ray.

Compound fractures (open fractures)- A piece of bone will have pierced the skin and be visible. The bone will generally be contaminated and infected making healing virtually impossible.

Fractures- If near or involving a joint, fractures and dislocations can mean the joint itself is involved. This will generally lead to arthritis and will compromise the use of the joint and flying ability will be severely impaired.

Loss of the use of a leg- A raptor needs both legs to hunt and can lead to foot infections (Bumble Foot) as the weight will not be distributed evenly.

Determine the species and sex of the bird (see table). The breast muscles should be rounded so that the keel does not feel sharp. Weigh the bird and compare the average weight for the species (see table below) to check its' general condition.

Check that there are 10 primary feathers, 10 secondary feathers and 12 tail feathers. The feathers should be smooth and even. Check that there are none missing or broken.

A bird should look symmetrical and move evenly in all respects.

5. FEEDING

Do not wait until night to feed a starving bird, even if it is nocturnal. Sick birds require feeding little and often, in some cases three times a day. There are many methods used to force feed a bird that cannot feed itself. One method is outlined below.

Give the bird a face washer to grip with its talons then wrap it in a towel to confine the wings and the talons, preventing injury to you or itself. Hold the wrapped bird firmly but gently between your thighs leaving your hands free. Tip the bird's head back gently with one hand and open the beak.

Place the food at the back of the bird's mouth and push gently it into the crop so that you do not cause any damage. Use a small syringe plunger, a pair of blunt plastic forceps or your finger to do this. Keeping the head tipped back, close the beak and gently stroke the neck until bird swallows. This is a similar technique to giving a dog a tablet.

Some birds will regurgitate food immediately unless care is taken at this stage. Pieces of food must not be too large and you should make sure that the bird swallows completely between each mouthful.

Force Feeding

Raptors rarely need force feeding, and may be left for up to 48 hours unless severely debilitated by disease or trauma.

Although raptors eat whole bodies including fur and feathers, it is best to avoid this initially. For the first three to four days or while the bird is very sick and weak feed easily digested food without bone, fur and feathers. Chicken breast meat, rabbit and beef heart are all nutritious. Starling and pigeon breast meat are also very nutritious but more difficult to acquire. The food can be dipped in a little egg yolk to make it slip down more easily.

If the patient is a pullus (baby) 1-10 days old, feed skinned mice or rats cut into tiny pieces. Use sharp scissors kept especially for this purpose. Fortify this with liquid calcium Sandoz (one drop per 50g body weight).

For a chick 10-15 days old, remove the mouse's head, tail and intestines and cut it into bite size pieces. At this age the bird should pick up food offered on a flat container.

Unless the baby bird is sick or starving to the point of death, force feeding is unnecessary. Most will take small morsels of food offered from forceps and will soon pick it up for themselves.

The table below gives some indication of how much food a raptor requires when force feeding.

Weight of raptor	Food required
500 grams and over	10%- 12% of body weight per day
Under 500 grams	15%- 20% of body weight per day
Under 250 grams	20%- 30% of body weight per day

If the Bird is Feeding Itself

Provide fresh, or freshly defrosted, pigeons, mice, rats, rabbits or day-old-chicks daily. Feed nocturnal birds in the evening, and diurnal birds in the morning.

Freeze pigeons for at least 6 weeks. This will reduce the risk of the raptor contracting any disease from them.

It is better to start by offering the bird brown mice or other natural prey that it will readily identify. Day-old chicks can be offered but provide a variety of whole bodies as listed above.

How Much to Feed

This varies with the individual so please contact the society's raptor co-ordinator for advice. The telephone number and email address are listed at the end of this document. In general terms if it is not too sick or scared to be interested in feeding the bird will decide how much it wants to eat. Always offer a little more than is eaten daily with any leftovers being discarded as fresh food is offered. The table below will give some guide.

Species	Food type	% of body weight
Little Eagle	Rats	15
Sea Eagle	Rats	5-10
Kestrel	Mice	25-30
Brown Falcon	Mice and rats	15-20
Southern Boobook	Mice and rats	15-20
Brown Goshawk	Rats	10-15

Different foods have different nutritional values and different calorie values. Day-old chicks have less nutritional value than mice or rats, therefore the raptor will need to be fed more.

A baby raptor should be fed until its crop is full. It will generally decide when it has had enough. Wait until the crop is completely empty (2-3 hours) before feeding again.

Contact the BCCS Raptor Co-ordinator for advice to prevent the imprinting of juveniles.

Feeding in General

Never feed wild mice, unless you can be sure they have not been poisoned and the body is in good condition indicating that the mouse was healthy before trapping.

Whole bodies are more easily chopped partially frozen, then warmed either by leaving them out to defrost, micro waving, or placing them on an upturned saucepan lid and steaming. Never feed frozen or partially frozen food. It will cause 'crop burn'.

Microwaving when used to defrost can also cause 'crop burn' as the inside of the food can become very hot and be unnoticed by the carer.

When fed whole bodies complete with bone, fur or feathers the bird should regurgitate a cast each day. This is a ball that looks almost like dry mammalian faeces and consists of the undigested bone, fur or feathers of their prey. The colour of the cast is determined by the colour of food eaten e.g. yellow, day-old chicks result in a yellow cast.

Emergency stocks of food are held at several locations. Contact the Raptor Co-ordinator to locate the supplier who is nearest to you. If food is required immediately, beef heart or meat or Wombaroo Insectivore as pellets can be substituted for the first 24 hours only.

6. HOUSING

Intensive Care Facilities

Hospital boxes similar to those used for other birds are appropriate for injured raptors, or raptors in shock, or raptors with leg problems that should not or can not stand.

The box should provide a warm, dark, quiet environment away from all household noise and activity. It should be large enough for the bird to stand fully erect and to lie fully extended across the box without danger of damaging feathers.

Remember any damaged feathers will have to moult out or be repaired before the bird can be released (this may mean holding the bird captive for up to 12 months).

The carer must always have easy access for examination, treatment, feeding and cleaning the bird.

If you do not have a hospital box, the following is offered as a substitute until you can get help.

For the first few hours, a strong cardboard box can be used. Make sure that it is the right size i.e. long enough to prevent damage to tail feathers. It must be dark and warm.

Unlike parrots raptors are not destructive and will not chew their way out. However they may get out of the top of the box so make sure that lid is fixed firmly. Place a towel in the bottom so that the bird can grip and maintain balance.

A hot water bottle or electric blanket (placed under the box) can provide an emergency heat source. Take care that the hot water bottle does not get cold. A constant heat of 28-30 degrees Celsius should be provided. Do not guess the temperature always use a thermometer.

Intensive Care Accommodation

When the bird recovers sufficiently to be removed from the hospital box, but is not yet strong enough for an aviary a wooden crate or purpose built box will be required.

Do not use a wire cage as this will damage the bird's feathers and cere.

Raptors are easily stressed and many do not adapt to captivity so keep the box completely covered and well away from noise, children, cats, dogs and any other disturbance. A sheet or towel can be placed over the box so the bird feels safe and can hide.

All birds should have a perch, otherwise tail and wing feathers will be damaged and will have to regrow and feet can become covered in faeces and become infected. If the bird is able to stand but is unable to perch well, provide a stable log to make it easier so that the tail feathers (and feet) are up off the ground to prevent them from damage and soiling from dragging through faeces.

Tail feathers should be protected by inserting them in an envelope cut to fit the tail feathers and attached with paper tape. Also place a strip of paper tape on the end of the envelope to reinforce the bottom. This can be easily removed before release.

Intensive Care Aviary

Once the bird no longer requires a hospital box, it may still need to be caught for examination or force feeding. In this case it should be housed in a fully enclosed purpose built or modified aviary, away from visual or auditory disturbance and with maximum protection from extremes of climate. The ideal intensive care aviary is described below.

The aviary can be constructed of fibro with part of the roof enclosed. The rest of the roof may be made of wooden slats placed slightly apart so that sunshine can enter. Shade cloth could also be used to prevent it from becoming too hot.

It should be built in a position that will not allow it to become damp and mildewed. Ideally it should be 3 metres in length, width and height and have no projections that could injure the bird. The floor may be grass or a mixture of small pebbles over a concrete base. If using grass, provide some pebbles as it is thought that raptors use them to aid digestion in the same way granivores use grit.

Supply a few perches of natural branches of different diameters to prevent diseases of the foot that can occur in captive raptors. These should be placed in the aviary so the bird can hop from one to another if it is unable to fly. Perches must also be placed in positions that give you easy access to the patient.

Provide a shallow bathing facility like a large heavy pot plant base **unless** the bird is strapped and must be kept dry.

These suggestions are ideal for a raptor. If you suddenly need to house one you will probably have to improvise but try to make your aviary as suitable as possible.

Some Suggestions for Improvising

Cover the inside wire of the aviary with shade cloth, wheat bags, old sheets, brush or wooden slats (placed slightly apart) to prevent damage to cere and feathers in panicking birds.

Release Aviary

This should be as large as possible but as a generalisation the minimum size should be 6 metres long, 4 metres wide and 3 metres in height to allow maximum flight room.

A Wedge-tailed Eagle needs an aviary about 10 metres long, 4 metres wide and 3 metres high. For smaller species of raptor, it should be at least 1.5 metres long, 1.5 metres wide and 2 metres high.

The aviary should be positioned so that the bird is not exposed to direct summer sun or winter winds and storms.

All raptors need perches and hides where they can shelter and feel safe. Many species like to bathe, so provide shallow bathing facilities. A birdbath is ideal.

Walls should be constructed of vertical wooden slats and/or shade cloth.

The aviary should be fully enclosed on three sides and part of the roof. This will give protection from the elements and a secure hiding spot yet will permit the bird to bask in the sunlight if it wishes.

It is important that birds have somewhere to hide. Visual stress can be severe.

Never use wire cages or aviaries to accommodate raptors as damage to the cere (nostrils) can occur when they panic. This can damage the baffles needed by the bird to breathe whilst flying at high speeds to catch prey.

Wire also damages the feathers. Raptor feathers must be perfect before release to allow the bird to fly perfectly. Cardboard boxes should be used short term until you receive help or advice.

For Orphaned Baby Raptors

An artificial nest of sticks should be provided, not soft bedding. Sticks exercise the bird's legs which is essential for healthy development. The temperature of the nest should be maintained at 25C. Always check bird's cloaca (vent) frequently to make sure it is not blocked by faeces. See the section on hacking further on.

7. RELEASE

A raptor should not be released if it has more than four broken (mid shaft) feathers on either wing unless they have been repaired (imped).

Imping needs to be undertaken with accuracy and care. It is important that the correct feathers are used. It is simply shaping and gluing the donor feather onto the broken feather using imping needles, which are bamboo, fibre glass splinters or fine sewing needles.

If the raptor in your care needs feathers repaired so that it can be released contact the raptor co-ordinator to arrange this.

If the raptor is a juvenile, it must be hacked before release. This process must begin as soon as the baby bird can pick up chopped food i.e. within a few days.

Bird Care flight aviaries and hacking facilities are available at Reeves Plains so these birds must be transferred to be prepared for release if you do not have the correct accommodation.

Sick or injured birds must be totally recovered before release. Muscles must be toned so the bird must have received sufficient exercise to develop the strength it will need to survive in the wild.

Research has shown that healthy wild raptors successfully catch prey only once in seven attempts. If the bird is not 100% fit, do not release it as it will be unable to survive.

All raptors should be banded before release so we can learn their movements in the wild and determine the success of their release. The societies Raptor Co-ordinator can refer you to one of our banding team members.

Always try to release raptors where they were found providing they can be released within two weeks and the bird was not found in the middle of the road or any other inappropriate location. Release after feeding, and when the weather forecast is favourable.

Diurnal (day) birds should be released in the early morning after feeding, nocturnal (night) birds in the early evening after feeding.

Avoid releasing in the breeding season into the established territory of other raptors, magpies and ravens.

8. HACKING

Hacking is providing an artificial nest for orphaned nestling raptors.

It is always better to hack the orphaned nestlings in the area they have been found. Prey species are usually abundant at the time that the orphans are ready to fledge. In 1998 eight Barn Owls were orphaned from one nest and six in another. If these had been transported out of the area that was experiencing an upsurge of prey species the chances of survival would have been slim.

A city backyard or the local park is not a suitable site for a hackbox. A site where there is no sign of human activity i.e. cars, houses, people, and domestic animals is required.

Baby raptors should be placed in the hackbox as soon as they can pick up food, this should be encouraged from **the day of arrival**. A healthy orphan will snatch food from forceps immediately they realise that it is food. The food should be held lower and lower until it is on the bottom of the container being used to house the nestling and it will soon learn to pick it up (usually in only two or three days).

Whole bodies (chicks/mice) should be left with them always as they will begin to eat unaided sooner than expected.

To prevent imprinting in those few critical days approach the bird draped in a sheet. Hand puppets in the shape of a bird can be used with forceps when offering food.

It is critical that the bird does not associate humans with food. It is very easy to rear a healthy raptor but it can also be very easily imprinted and therefore unreleasable.

Hacking is most successfully achieved if a group of raptors of the same species is done together. It is rarely successful if done with only one bird and it is also generally pointless to hack a bird that has already fledged. **Orphans should always be placed in the hack box weeks before fledging.**

Hacking is why it is important for records to be kept of rescued orphans so those rescuers can co-operate with one another when preparing for release. The bird's welfare should always be of paramount importance.

A shallow bathing facility provided whilst birds are closed in the hack box helps to keep their feathers in good condition and promotes preening.

The hack box should be opened just before fledging when the birds would normally be hopping from branch to branch. The bathing facility at the site provides extra encouragement for the newly released birds to return.

The birds need to return after fledging for feeding and bathing during those critical few weeks when supplementary food should be left at the site. (Young raptors normally return near to a natural nest site for food provided by the parent birds when they have fledged and until they are fully independent.)

If they stray too far on their first flight they will rarely find their way back.

The local birds such as magpies soon learn that food is being left so enough should be provided to allow for this. It is also helpful to place the food at the hack site very, very early tying it down to make it harder for the local birds to steal it. Food should be left at dawn for diurnal birds and dusk for nocturnal birds.

The hack box we use is approximately 2.5 metres square; it is on stilts and is built of wooden slats placed slightly apart.

It has a chute at the back so that the rehabilitator can drop food down it unseen by the birds, and the front can be lowered into a platform upon which the food can be tied and a bathing facility can be placed at release.

Before placing the nestlings in it a nest of sticks is woven together copying those used by raptors in the wild.

Ants can be a nuisance when leaving food at the hack site. This can be addressed by placing something that can hold water under the stilts when the box is built or by greasing the stilts.

It is vital to have some vegetation such as larger trees, near the hack site so the birds can fly to them when released. They will also sit in the trees observing the hack box to see if it safe to approach to feed or to bathe.

The above description of the hack box we use will give you some idea of what should be provided and why. It may be necessary to improvise in some cases when a hack box is not available at the site from which it is best to release the birds.

9. ADDITIONAL INFORMATION

Some raptors seem to prefer living in pairs, and it is better not to house different species together. The Raptor Co-ordinator can assist arranging this for long term or permanent captives.

It is my personal opinion that crippled adult raptors and crippled juvenile raptors should not be kept in captivity. These birds are very easily stressed and often do not settle. I see little animal welfare advantage in keeping them captive and in some cases it is extremely inhumane to do so.

If anything about the bird is not normal, you need help. Make a phone call immediately to the author who can be contacted on:

(08) 8264 6696, mobile 0419 857 031 or email skblair@iname.com

The current Raptor Co-ordinator can be contact through the committee of the Bird Care and Conservation Society of SA Inc or the Society's directory.

Copyright © 2000 Sharon Blair All rights reserved.