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Chapter 1: Handling and Housing

In 1 collection

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ABSTRACT

Rehabilitation of any injured wild animal is an honourable and laudable activity. However, in taking any animal into care, the rescuer accepts the responsibilities of 'ownership' for the animal, ensuring that all necessary treatment and care is provided to optimise its potential release back into the wild. It is vitally important, wherever possible, that one works closely with a local veterinary surgeon, who is prepared to aid and support when necessary (seeking additional support and advice themselves if needed). You may need to have access to appropriate veterinary services at all hours, which could mean using the services of more than one practice. It is thus worth proactively building relationships with your local veterinary practices, encouraging them to accompany you on rehabilitation courses and ensuring that all necessary resources and equipment are at hand before an incident occurs.

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Vulture Rehabilitation Manual

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Handling

For the average biologist or bird ringer, handling a vulture may be intimidating or even dangerous. Even ringers who are comfortable handling large eagles may find their hands full trying to process a vulture. There are several important differences in the best techniques used to process vultures versus other large raptors. The techniques detailed here have been refined over the past fifteen years of VulPro's experience working with vultures in southern Africa.

Vultures can be intimidating due to their size and their so-called 'aggressive nature'¹, so it is important to handle these birds with care and understanding. The primary concern when handling these threatened species is to avoid injury and stress to the bird, while also minimising risk of injury to the handler.

There is no need to ever use excessive force. Vultures are sensitive and respond well to calm and control, rather than forceful and aggressive handling methods. When cornered, any vulture will try to flee but may act aggressively if no avenue for escape is available. Following these protocols will minimize the risk of injury to both vultures and handlers.

Transportation

Transportation is potentially stressful for every bird and all care should be taken to keep the bird as calm as possible. **The binding of a vulture's feet, beaks, or wings is totally contraindicated and should never be done.** If the transportation of vultures will be a common procedure, purpose-built crates are recommended. VulPro uses wooden boxes large enough for the bird to stand but not large enough for it to open its wings. VulPro crates measure 800mm long x 750mm high x 460mm wide and are sufficient to transport all larger vulture species. VulPro crates have doors at one end which slide up so that there are no obstructions like door frames or hinges. The door can easily be slid up a small amount, whereupon the bird is observed before being carefully grasped by the neck. Once the bird is restrained, the door is removed to facilitate removal. Each side has several large ventilation holes which are then covered with shade netting to reduce light and keep curious fingers out of the vulture's reach. Each crate should be lined with a pre-cut swath of carpet. These carpets prevent the bird from sliding, are easier to clean than the crate itself, and are more shred-resistant than blankets. Carpets are preferred to blankets as they do not slide in comparison to blankets that can slide and bunch up resulting in the bird standing directly on the bottom and not on the blanket covering the inside bottom of the crate.

The inside surface of the crate should be sealed (e.g. varnished or painted), such that it can be effectively washed and then disinfected after each use. The cage should always be stored with the door removed, to ensure good ventilation so that fungal growth is avoided. Crates should also be stored indoors and not outside to protect the crates from the elements.

It is understood that it is not possible to always have a vulture-specific crate available. Make-shift crates or boxes can certainly be used. However, the most critical aspects of any transportation method are that the box reduces the risk of further injury to the bird and to handlers, minimizes stress, has ample ventilation and a stable temperature. Never transport birds in wire basket cages. Birds are at high risk of severe feather damage if they try to flap inside this style of container or rub their bodies against the sides. Once the bird is in the crate, it should always be kept in a shaded location, or at least in a place where a constant comfortable temperature can be maintained. Whilst in transit airflow will typically prevent overheating. Care must be taken once stationary as birds may rapidly overheat.

Housing

Temporary housing

These methods of temporary housing should only be considered if the bird is to be housed for a few hours, up to 3 days, until the bird can be transported to a licensed vulture rehabilitation facility or more suitable housing. If the

bird is to be housed longer than a few days, other arrangements must be considered. See the long-term housing section below.

Stress management is a critical aspect to consider when housing compromised or injured birds. The bird should be kept in a quiet place, free from noise, onlookers, dogs or any other form of danger. Dim lighting is often beneficial. Patients must be provided with shade and water. A large, low bowl (10 litres or more) is sufficient. If the bird is not mobile, temperature control is far more critical, as it will not have the ability to move in and out of the shade as needed.

The size of the enclosure, garage, shed, etc, is also very important. At a bare minimum, the bird should be able to spread its wings fully, but it should not be longer than 10 metres so that if the bird flaps and tries to fly, it will not be possible to gain speed and/or height. All sharp points, sharp objects, and other dangerous items should be removed.

The material in which the enclosure is made is also important, as brick, chicken mesh, and welded mesh have the potential to injure their feathers and extremities. If there is no place with suitable material, it is acceptable to cover the internal surface with towel or shade netting.

Long term housing

Long-term housing considerations should be made if the bird is to be housed for more than a few days. One of the most important considerations is socialization. Vultures are social creatures and they need to see, hear, and interact with other vultures of their same species. VulPro has shown that social interaction greatly increases their wellbeing and improves the chances of a positive outcome. For this reason, it is very important to transfer any patient to a vulture rehabilitation facility if the duration of care is likely to exceed 3-4 days.

Enclosures

Enclosures should be constructed with strong but flexible materials to prevent the birds from injuring themselves when flying around the enclosures and impacting with the sides. Suitable material includes; diamond mesh with a grid size of 60 mm X 60 mm (or 40 mm x 40 mm) and lined internally with shade netting material, (which reduces the impact of the birds colliding with the perimeter fencing). A solid retaining wall should also be constructed around the perimeter of the enclosures, to a height of approximately 80 cm.

A suitable amount of shade has to be provided for the birds and this can be in the form of 90% shade netting or a solid roof, such as fiberglass (corrugated iron becomes very hot but if used, needs to be a suitable height above the birds). A portion of solid roof is recommended (typically 30-50%) for shelter from rain and other weather elements. Course sand or natural grass should be used as substrate, which ensures patient comfort and facilitates cleaning and maintenance. Smooth sand (e.g. building sand) is contraindicated, as it can result in pressure sores and bumble-foot.

Shade netting in strips on each long side of the enclosure should be used with 5m gaps between each long strip, from the top to mid height. The latter enables the birds to see the ends of the enclosure, this is particularly important inside a large (e.g. 40m long) enclosure. This helps prevent the birds from colliding into the ends of the enclosure, which would likely result in trauma, injury and potential death.

Enclosure furniture

Adequate perches and stumps need to be provided within the enclosures with at least one perch per bird plus a couple to spare. Vultures do not have feet that grip particularly well, so they require large, non-slip perches with plenty of space for landing. There should also be a wide range of perches and stumps of various diameters. This provides valuable gripping exercises for the birds. Irregular shapes and contoured surfaces reduce the risk of pressure sores or bumble-foot. Perches should be changed regularly before becoming smooth, which also predisposes the birds to bumble-foot. Perches should be erected at different heights with enough space around them to allow the birds to perch comfortably without their wings encountering adjacent structures. Avoid placing perches in the corners of enclosures as birds tend to touch the sides of the enclosure when landing close to the mesh, damaging their flight feathers.

Vultures love to bath and drink regularly, therefore fresh water is essential to their well-being. The water ponds / baths should be large enough to give the birds enough room to bath in, but shallow with a non-slip surface approximately 20 cm (8 inches) deep. Ponds should be placed at the lowest part of the enclosure (ensures water run-off) and be equipped with a suitable drainage pipe for easy cleaning and maintenance.

For colonial vultures (e.g. Cape Vultures), nesting cliffs should be constructed with 1 metre x 1 metre ledges for each breeding pair in an asymmetric style. The constructed cliff should be able to accommodate a group of

perching vultures (>10) as Cape Vultures breed in groups rather than in isolation.

Enclosure hygiene and maintenance

Left-over food should be removed twice weekly, preferably two days after feeding as vultures tend to regurgitate if disturbed soon after feeding. Feathers, fur and castings should be removed regularly to prevent the potential build-up of pathogens or parasites, or of unsightly detritus. Perches or stumps that have decayed should be removed, burnt and replaced with new ones.

Water ponds and baths must be refilled every day and cleaned every second day. These ponds can simply be brushed and scrubbed out with a broom or scrubbing brush and clean water. Disinfectants should not be used for cleaning with the exceptions of Hibitane (Chlorhexidine) or F10. Use a hard broom, scrubbing brush or metal brush to clean, ensuring that any brush bristles which break off, are removed.

Feeding / Food preparation

Vultures should be fed twice a week on whole carcasses and bone fragments. Whole carcass feeding is ideal for vultures as this provides the birds with the natural nutritional requirements as gained if living in the wild. Bone chips no bigger than 10 cm must be provided to ensure adequate calcium intake, especially during the breeding season. These are best prepared manually, by smashing the ribcage, jaw bone, and spinal column from carcass remains with a mallet. Smaller vultures such as Palm-nut and Egyptian Vultures can be fed with day-old chicks if housed in separate enclosures but they do scavenge and will feed on whole carcasses if sharing enclosures with larger vultures. Some individuals dominate and will bully others, driving the subservient birds from food. Sufficient food should be provided to allow all birds to feed as their turn comes.

Toxins and drugs

All carcasses MUST be free from veterinary drugs, such as pain medication, antibiotics, anaesthetics used in darting and drugs used for euthanasia. Lead bullets should not be used to kill the animals as lead poisoning from fragments in meat is a common source of poisoning. You must know and trust the source of your carcasses and be aware of any prior drug treatments provided.

Below is a list of toxic drugs and toxins which might be encountered when choosing a carcass to feed to vultures.

The drugs and toxins below are deadly and must not be fed to vultures. This is not a comprehensive list. Contact VulPro with any questions regarding the safety of any veterinary drugs.

1. Barbiturates (used for euthanising animals e.g. Phenobarbitone (also known as Pentobarbital))
2. Potassium Monofluoroacetate – a natural toxin contained in some plants, e.g. Gifblaar *Dichapetalum cymosum* that may be ingested by livestock or game, causing death.
3. Non-steroidal anti-inflammatory drugs [NSAIDs] are used to treat a variety of ailments in many animal species but are lethal to vultures. Sodium Diclofenac (active ingredient of Voltaren) caused a 99.5% crash in the vulture populations in Asia. **There is currently only one safe NSAID for vultures – meloxicam (trade name – Metacam).** This drug was previously unavailable for large animals but is now in production and available.
4. Antibiotics (especially Tetracyclines or Penicillins)
5. Lead (the main source of lead is from carcasses shot with lead-containing bullets which fragment on impact into many small, often microscopic, pieces. Many vulture fatalities have been linked to lead ingestion. Occasionally livestock die from ingesting lead, especially from car batteries, which may then lead to secondary lead poisoning of vultures.
6. Livestock insecticide / parasiticide dips. Any animal recently dipped in organophosphates should not be accessible to vultures.
7. Other agricultural products that are deadly to vultures and should not be used in known vulture territory include: Strychnine, Aldicarb, Monocrotophos, Methamidophos, Diazinon and Ethylfenthion.

Regardless of the use of any parasiticide dip treatment, it may sometimes be necessary to skin the animals to prevent the spread of ticks to the birds, particularly if the carcass is heavily infested.

If an animal has been shot through the head, it is critical to remove the head and burn it to avoid lead exposure. Other toxic metals are occasionally used in bullets, e.g. zinc or iron, so all head-shot carcasses should have the head removed or should be avoided entirely. Bullets which are genuinely non-toxic may be left in carcasses intended for vulture consumption.

Recommended food for vultures

- Rats and mice (for smaller vulture species and vulture chicks, i.e. less than 4 months old) - Day-old chicks (for smaller vulture species only)

- Horse / donkey
- Cattle
- Pigs and piglets
- Goat
- Wild game
- Still-borne calves and foals
- Supplementary bone fragments should be provided in all the above diets

Do not feed adult chickens or any birds to vultures, due to the risk of spreading avian diseases.

Whole carcasses should always be the food of choice if the bird is healthy and able to feed itself. However, injured, malnourished and compromised birds may need assistance to get their full nutrient requirements. Weak and young birds (less than 6 months old) are given chunks of meat and bone from cow, pig, or wild game carcasses. Females during the breeding season, and growing birds especially, require a diet with an optimal Calcium to Phosphorus ratio (i.e. bone to muscle ratio, Ca:P ratio of 1.5:1).

It is advisable to prepare 2 litre Tupperware containers with meat when fresh carcasses are available. These tubs are then frozen until needed for feeding vulnerable birds. Pieces are cut only just before the meat is used (i.e. the night before or morning of feeding). Once the tub of meat is defrosted, it cannot be refrozen and should always be kept in the refrigerator until just before feeding. When previously frozen pieces of meat are offered, these are submerged in water, to ensure the patients remain well hydrated. Do not microwave frozen or cooled meat as this will result in the meat starting to cook, which is not suitable for the birds. Vultures only eat raw, preferably fresh meat.

Pieces are cut into thin slices which make assisted feeding, acceptance, and swallowing much easier. These pieces are offered to the birds with long tweezers. It is important to keep in mind that injured birds will be stressed by their surroundings as well as proximity to you. They should always be approached quietly and with a calm demeanour otherwise they are unlikely to feed from you. They may avoid the meat and tweezers at first or may attack the meat before they realize it is edible. Typically, once they appreciate it as food, they will readily eat from tweezers. Once a bird realizes that meat is inside the container, they are likely to self-feed from the container.

Record keeping

It is important to keep records of the history of each bird, the location it was found, injuries, and all treatment administered. This can aid and advise future medical efforts if the bird is taken to another facility. This information can also help build a case for anthropogenic injury; for example, prosecution of someone who laid poison or help make the case for the mitigation of power lines.

The most important data to record are:

- o Date received
- o Origin (GPS coordinates, if available)
- o Reason for admittance
- o Clinical presentations
- o Enclosure where housed and with which other birds, if any
- o Contact details of person who found the bird
- o Any food offered and feeding frequency / schedule
- o Drugs administered and schedule
- o Behaviour changes and improvement in condition (or lack thereof)
- o Physical condition (faeces, etc.) if relevant

✓ Check list: basic required rehabilitation equipment

1. Transportation
 - o Vulture-specific crates
 - o Carpets
 - o Disinfectant

2. Medical Equipment

Checklist of basic inventory to have on site for rehabilitation efforts:

- o silicone/plastic tubing around 30 cm long for oral tubing (IV fluid lines can be recycled for this purpose)
- o electrolytes (Darrow's and Ringer's lactate solution)
- o needles (23-21 gauge)
- o Intra-venous cannulas (Jelco® 18-20 gauge)
- o IV 'drip' sets

- o syringes (60, 20, 10, 5, 2 and 1 mL, range for drugs and gavage)
 - o gauze
 - o VetWrap
 - o Elastoplast tape
 - o cotton wool
 - o scissors
 - o super glue
 - o F10® SC Veterinary Disinfectant spray, water-based
 - o F10® Germicidal Barrier ointment
 - o PluroGen PluroGel®
 - o Karbadust® or Frontline® powder
 - o Necrospray (or honey or other appropriate wound applications)
3. Drugs, listed by their active ingredient and, where relevant, trade names in brackets. Also see CHAPTER 10.
- o Atropine (Atropen®, others)
 - o Enrofloxacin (Baytril®)
 - o Amoxicillin-Clavulanate (Synulox®)
 - o Florfenicol (Nuflor®)
 - o Meloxicam (Metacam®, Mobic®)
 - o Corticosteroid
 - o Vitamin B
 - o Vitamin A
 - o Multivitamin (Catasol®)
 - o Probiotic Powder
 - o Dexamethasone Ointment
 - o Activated charcoal or carbon (CharcoAid®, others)
 - o Dexamethasone (Kortico® Injection)

MATERIALS TEXT

Suitable eye and face protection, gloves, a long-sleeved shirt, trousers and closed shoes are necessary when working with vultures. One of the best tables for processing vultures is a vulture crate covered with carpet for the bird's comfort (Fig. 1). Alternatively, a sturdy folding table measuring 1.5 x 0.7m will suffice. This allows easy access from all sides for the team to work on the bird. Catching and handling vultures may result in serious and sometimes permanent injuries. Pay particular care when holding the bird or replacing it on the ground to keep your face away from the beak.



Figure 1: A vulture crate used as a processing table. The work space has been covered in a soft carpet and displays the necessary tagging tools and personal protection gear.

ABSTRACT

Rehabilitation of any injured wild animal is an honourable and laudable activity. However, in taking any animal into

care, the rescuer accepts the responsibilities of 'ownership' for the animal, ensuring that all necessary treatment and care is provided to optimise its potential release back into the wild. It is vitally important, wherever possible, that one works closely with a local veterinary surgeon, who is prepared to aid and support when necessary (seeking additional support and advice themselves if needed). You may need to have access to appropriate veterinary services at all hours, which could mean using the services of more than one practice. It is thus worth proactively building relationships with your local veterinary practices, encouraging them to accompany you on rehabilitation courses and ensuring that all necessary resources and equipment are at hand before an incident occurs.

Catching vultures

- 1 Approach the bird in such a manner as to avoid scaring it away or causing unnecessary stress.



Vultures need to be approached quietly, confidently, and sympathetically; there is no need to 'rugby-tackle' them at all. It is recommended that no more than three persons should be involved in this capturing process. Any more create unnecessary stress for the birds and inhibit the capture process.

- 2 Once the selected vulture is within close reach, grab its neck from behind first, just below the jaw bone. Use your thumb and forefinger around the back of the neck from behind the bird's head.



Figure 2: The proper hand placement to stabilize a vulture head



Do not grab the head from the front as you can crush the trachea, potentially causing permanent and irreversible harm. **Do not** grab lower than the jaw bone as the bird can turn its head around and bite you. **Do not** grab higher as you will lose your grip and may cause injury to the head, especially the ears or eyes of the bird.

- 3 Reach your fingers around to be against but below the jaw bone with the pressure on the sides of the neck to avoid suffocating the bird by constricting the trachea.



You can be firm but not rough or too tight so as to avoid harming the bird. Great care should be taken with the hand holding the head. The head should always be held far enough away from your face and other body parts, as well as other people in your proximity. Vultures are extremely strong and can lunge and bite suddenly in defence, even when appearing calm. This can result in serious injury.

- 4 Once the head is secured, swiftly sweep your other arm around to hug the vulture just above the legs, enclosing the wings in the embrace.
- 5 Hold the bird with the legs below your arm but with the bird's legs stretched out downwards towards the tail, with your arm covering the thighs.



Make sure that your arm is covering the bird's legs just above the tarsus and not below, or the bird will be able to lift its legs and feet high enough to grab your arm in order to try and free itself, often causing injury to you. The bird should be held upright, its back against your chest, in the front and centre of your body. Both of your elbows should 'hug' the bird's wings from the sides to keep the wings closed and under control.



Figure 3: The proper way to hold a large vulture. The head is secured in one hand while the body, wings, and feet are restrained by 'hugging' the vulture.

- 6 If the bird struggles, simply 'hug' the bird tighter and use your elbows to prevent the wings from escaping your grip.



One person can do this alone, but it is advisable for a second person to back up the catcher should a wing

escape, for example. The wings are powerful so if they do break free it is extremely difficult to keep holding the bird and this will require a second person to help get the wings back into position. It is important to bring escaped or open wings into the appropriate position quickly as extensive flapping may also lead to injuries to the bird or handler.

- 7 Once the bird is secure, move to stand in the shade to prevent the vulture from overheating.

Processing vultures

8

Always minimise the duration of vulture restraint. To facilitate this, prepare all necessary equipment and ensure staff are readily available, prior to restraint of the first patient.

Organization, preparation, and communication are important within the team processing the vulture. Have all equipment out, ready, and in a shaded quiet location.



'Processing' includes any handling of a vulture: including placement of patagial tags and or rings or leg bands, fitting tracking devices, taking blood or other biological samples, or conducting medical treatments.

- 9 Place working surfaces in the shade to reduce the risk of the bird overheating.



The environmental conditions in which you are working are critically important to consider **before** any work begins.

In southern Africa, it is most likely that any handling of vultures will be conducted in warm environments, yet sudden changes in temperature or precipitation must be planned for.

- 10 If the bird begins to overheat (i.e. the handler feels the bird's body temperature increasing or the bird begins to pant), rapidly cool the bird down by spraying cool water on its neck, collar bone, and legs by means of a spray bottle and a light spray to the bird.



A bird which suffers from overheating (hyperthermia) will have a reduced chance of recovery. An increase in body temperature exceeding four degrees above the normal range will almost invariably be fatal.

- 11 Complete vulture processing within 20 minutes per bird. The absolute maximum processing time should not exceed 35 minutes.



Handling of wild animals results in high levels of stress hormones to circulate in the bird's bloodstream. Although a protective function of sorts, prolonged increases in these hormones can be very dangerous due to physiological changes. It is not uncommon for wild birds to die from the stress of handling. This is compounded if the bird in question is already in a compromised physiological state. It is therefore crucial to keep handling to a minimum and consider postponing procedures (where possible) if the bird appears overwhelmingly stressed.

- 12 Minimize the amount of time a bird spends in a horizontal position, either on its back or sternum. If the handler becomes tired, the bird can be handed over to another handler.



A bird restrained on its back will suffer a 10-60% reduction in respiratory volume and so this should be avoided, unless there is no alternative. It is less stressful for the birds to be held upright. This is the position that should be used when conducting initial exams and when giving medication. The handler is less likely to become tired if seated. This position should be adopted where possible. There are circumstances when one person will not be able to hold the bird throughout processing and treatment. In such circumstances, the patient may be restrained on a low table preferably lying on its sternum).

Processing vultures on a table

- 13 When working with a bird on a table, depending on what you are doing, start with the bird on its sternum.



For this type of vulture processing, you need three to four people and **under no circumstances should the bird be tied, taped or bound in any way**. This is unnecessary and can cause injury to the bird.

- 14 Have one person hold the head (see above on how to hold the head), another person hold both legs and the third person secure and hold the wings against the bird's body (Fig. 4). In the case that you want to stretch out the bird's wing, the fourth person can do this while the third person keeps the bent wing secure. The person holding the legs should hold one leg in each hand or should at least always keep one finger between the legs.



Vulture legs do not have much muscle tissue separating skin from bone. Significant injury to the legs can occur if they are rubbed together.



Figure 4: A vulture being processed on its sternum. Each team member secures a body part while a separate member processes the vulture. One team member holds the head, another secures the feet, while another secures the wings.

15



It is not advisable to cover the vultures' eyes as they prefer to observe what is happening and will on occasion panic if unable to see their surroundings. This reaction varies between species and individuals. In some cases, visual seclusion is preferred although care must be taken to avoid corneal injury. Vultures thermo-regulate through the bare skin on their head, neck and legs.

If, for whatever reason, the head is covered, monitor the body temperature (normal temperature 40-41°C (104-105.8°F)).

16 If the body temperature increases, the head and neck should be sprayed with water with a light spray from a spray bottle and the procedure completed as soon as possible).

17 Also monitor the vulture's heart rate.



Normal resting heart rate is 80-100 beats per minute, and should never exceed 200 beats per minute while restrained.

18 **Never tape or tie the beak closed under any circumstances.**




Vultures often regurgitate in defence or through stress and they need to be free to do this. If their beak is taped closed they can choke on their own regurgitation.


19 During regurgitation, the person holding the head should simply tilt the head to one side and allow the bird to regurgitate freely.

 Never close the beak when a bird tries to regurgitate as this will lead to choking.

- 20 Ideally, place the bird on the table or crate with the head over one side of the table so that the head can be tilted to one side and slightly below the level of the table, allowing regurgitation to land on the floor rather than on the workspace.

 Place a plastic sheet or tarpaulin on the ground below the area where the head extends over the crate or table so that regurgitated material can be removed before another vulture is processed.

- 21 If you need to turn the bird around onto either its back or sternum, communicate this to the team members so that all turn the same way.

 Often the person holding the head will have a preference. You cannot keep turning the bird's head around 360°, but 180° is tolerable.

Always make sure the bird is comfortable. A bird that struggles is likely to be uncomfortable in some way and a change in position should be considered.


21.1 Allow the person who is holding the head to dictate the direction of the turn.

21.2 *The person holding the legs:* be careful not to cross the legs over each other.

21.3 *The person securing the wings:* assist with the actual turning and lifting process but keep the wings together on either side of the bird.

- 22 *The person restraining the head:* keep the beak clear from other personnel, to avoid bite injuries, especially during the tagging process. Retain control of the head throughout the entire task until the bird is released or somebody else takes over.

- 23 Now with the bird on the table, secured by three to four people by holding the bird as already mentioned above, begin processing.

 **No binding should be used under any circumstances, i.e. taping the bill closed, taping the wings, or taping or tying the bird to the table.** The faster you work and process the bird, the better, but take care to avoid fast movements especially near the bird's head (unless eyes are covered). Speed and efficiency in processing depends on preparation and co-ordination of the team.

Releasing

- 24 When choosing the release site and direction, consider that birds in general prefer to take-off against the wind.



Vultures, when given the opportunity will time their take-off to coincide with a thermal or an increase in wind strength, making the take-off easier.

- 25 Release a bird from a crate at ground level, and not from an elevated site such as the back of a vehicle.



Pulling a bird out by a wing or the tail is unacceptable, as is tilting a crate to encourage a bird to exit. Give the bird time to leave the crate of its own accord.

- 26 When releasing a vulture, lower your body (Fig. 5), bringing the bird's feet to ground level, slowly allowing the bird to stand.



Figure 5: Preparing to release the vulture. The handler is going onto her haunches to bring the vulture to ground level.

- 27 Then release your grip on his entire body and neck at the same time, stepping away to give the bird some space (Fig. 6).



Figure 6: Releasing a vulture. Release the head and body simultaneously and step back slowly, allowing the vulture to decide where to move next.



Be careful never to drop or throw the bird down, nor allow the bird to fall prior to lowering it gently to ground level.

- 28 When releasing the bird or placing it back inside the enclosure, remain still and allow the bird to walk or fly away from you, rather than panicking it, in which case it may take off, flying into stationary objects / fences.



Do not force the bird to move.

- 29 Allow the bird time to recover but monitor it for any unusual behaviour that could be a sign of heat exhaustion or injury from handling.



The bird will decide for itself what to do next; it might fly off, run or drink water. Never force the bird to move or fly after the handling. Simply monitor and interfere only as a last resort if the bird appears not to be fit for release.