

WILD BIRDS

ASSESSMENT, FIRST AID AND HANDY TIPS

Dr Stacey Gelis BVSc (Hons) MACVSc (Avian Health)

INTRODUCTION:

Wild birds which are brought into care have in some way failed the test of fitness in the wild. They may have suffered an injury, become ill, be exhausted or be orphaned.

Trauma is probably the most common reason why birds need to be taken into care or need veterinary attention. These cases usually require veterinary assessment to see whether treatment is feasible and for this treatment to be instituted.

TO TREAT OR EUTHANASE:

This is an emotional issue with points of view on both sides. However, the welfare of the animal in question should always be the highest priority. The aim must always be to return these birds to the wild as quickly as possible. Once it has become clear that a wild bird cannot recover sufficiently to be released back into the wild, it should be euthanased. The only exception should be rare species which can be utilised in a properly managed captive breeding program, and which have a temperament suited to life in captivity. We must resist the temptation to turn these birds into pets (which is illegal in most circumstances anyway).

Injuries which would preclude successful release of a bird back into the wild may include:

- Incapable of adequate flight
- Loss of beak / inability to feed
- Visual impairment
- Wing, leg or foot amputee
- Imprinted birds
- Birds suffering from infectious or incurable diseases eg PBFD

There are some exceptions to the above list. For example, many pigeons will survive after foot or leg amputation, whereas amputee raptors over 200 g will invariably develop bumblefoot (pododermatitis) in the remaining limb and so should be euthanased.

Flight - impaired waterfowl can be released into protected, secured waterways where there are limited numbers of birds, islands to provide protection from predators and where supplemental feeding can be provided if necessary.

ORPHANED BIRDS

These are nearly always found in the vicinity of the nest with the parents sitting close by. These birds usually only need feeding for a few days before they can fly themselves and as such should not be taken away into care. They can either be left in place, or lifted up into a high box to protect them from predators. Parent birds will usually return to feed them.

If a chick must be taken into care, every effort must be made to avoid imprinting by human contact. This can be achieved by "crèche-rearing" chicks with others of the same or similar species. Chicks raised in groups are more likely to be psychologically well adjusted and suitable for release. The high risk of cross-infection must always be borne in mind.

An example of the above scenario is where young parrots are found on the side of the road, unable to fly. A percentage of these will be infected with Psittacine Circovirus or Psittacine Beak and Feather

Disease (PBFD) Virus, and possibly other secondary infections. Rearing these together with other young parrots may result in all the young contracting and developing the disease. Lorikeets and King Parrots, for example, which may be carriers of the disease (ie shed the virus but not show clinical signs of the disease) should in this author's opinion be reared totally separately from other parrots and cockatoos which are more susceptible to developing the disease.

Chicks reared for eventual release into the wild must be fed a diet which supports adequate growth and bone and organ development but must also mimic the natural food to which the bird will have to adjust in the wild. Hence insectivores should have insects or animal proteins as the basis for their diet. They do poorly on diets based on plant proteins or cereals. Piscivorous species require fish based products with vitamin E supplements. Carnivorous species require meat-based diets and granivorous species do best on cereal & plant-protein based products. There are now many commercially available hand-rearing mixes which can form the basis of the diet of most species brought into care, but our knowledge on the exact nutritional requirements of wild birds at different stages of growth is far from complete.

A further challenge is to wean these birds and to allow them to develop the feeding, predator avoidance and social interaction skills which would equip them with the necessary survival skills to live in the wild. Older teacher birds, soft release techniques and patience are all useful in achieving this!

EXHAUSTED BIRDS

These are either young birds or those pushed out of their normal habitat as part of the normal post-breeding dispersal pattern or have undergone migration and been affected by inclement weather (eg mutton bird mortalities along the east coast). There is some debate as to whether weak migrating birds are just part of nature's culling process for the species involved. If such birds are to be treated they should

Others suffer from starvation due to illness or injury, loss of suitable food and/or habitat or have been affected by pesticides or other poisons. If a raptor or other hunting bird is presented starving, appears physically undamaged but gains weight rapidly in care, then it should be assessed for blindness.

HANDLING BIRDS

Birds should be handled in a way that allows adequate restraint for examination and or treatment whilst protecting both the handler & patient. Remember that birds must be able to expand their chest to breathe as they lack a diaphragm. Those that are extremely ill or stressed are best handled as little as possible.

Raptors should be safely restrained by "casting" in a clean towel. They should be caught from behind, around the shoulders with the thumbs positioned over the back. The fingers are then moved so that the legs are restrained between the last 2 fingers on each side. The feet of many raptors can inflict serious injury and should be treated with caution. They can be restrained by taping into a ball bandage. Gloves are not advised when handling raptors as they lack the sensitivity required for correct finger positioning.

When handling parrots and cockatoos, it is the beak that one has to be wary of. Again, a towel is best dropped over the bird and the head grabbed on either side between thumb and forefinger or thumb and index finger, with forefinger resting on top of the head. The towel is then gently wrapped around the body to prevent wing flapping and scratching from sharp claws.

Waterfowl are generally easily handled, although some Black Swans can be aggressive. Swans should be approached confidently, the neck grasped with one hand, then the body encircled and restrained with the other arm. Many wading birds such as herons & darters can use their beaks to attack and may cause eye injuries. Their beaks should therefore be restrained as soon as possible and their tips covered with a soft material such as gauze swab, rubber or soft plastic. Safety glasses are a useful item when handling these species.

Small passerines have delicate wing & leg bones and must be handled carefully. A soft thin tea-towel allows adequate restraint whilst still maintaining digital sensitivity. Handlers may occasionally be scratched by sharp nails or pointed beaks, but these are usually of nuisance value only.

It is best to minimise the handling period as much as possible to decrease the stress experienced by an already scared and unwell patient. This stress can be fatal in small species.

FIRST AID:

By the time most wild birds come into care they will be suffering from a degree of shock, dehydration and possibly starvation.

75% of admissions to a rehabilitation facility are due to blunt trauma due to collisions with vehicles, windows or power lines or have been shot.

Traumatised birds are typically malnourished, anaemic, dehydrated, in pain and may have wounds infected by bacteria, maggots or other pathogens.

The aim of first aid is to allow recovery from shock, dehydration and starvation to allow adequate assessment of an animal to occur.

DEHYDRATION:

It can be difficult to accurately assess the degree of dehydration in birds. For practical purposes it is safe to assume that most birds taken into care suffer from 10% dehydration. This dehydration needs to be addressed, as well as the bird's daily maintenance requirements (approximately 50 mls/kg/day).

Therefore, a 100 gm bird requires 5mls/ day for maintenance (ie 50ml x 0.1kg = 5mls). If it is 10% dehydrated it will need an additional 10mls (ie 10% of 100gm = 10mls). The aim when rehydrating a bird is to provide all of its daily requirement (ie 5mls) plus HALF of its deficit ($\frac{1}{2}$ of 10mls =5mls) within the first 24 hours. In this example the total is 10mls. Over the next 48 hrs, the remaining fluid deficit plus the daily maintenance requirement is given.

In severely dehydrated and weak birds, or those with regurgitation or poor gut motility, these fluids are best given either intravenously or intraosseously, for quickest effect. Giving oral fluids in these cases can be ineffective due to poor absorption from the gut, or lead to aspiration and drowning in the case of very ill birds. Fluids can also be given under the skin (subcutaneously) when large volumes need to be given eg for maintenance. However, subcutaneous fluids are unsuitable for many seabirds as they have subcutaneous air spaces. These techniques usually require veterinary attention, but can be learnt with careful training. If oral fluids are the only option available for very ill birds, then only small amounts should be given at a time and the patients should be provided with heat and quiet.

The provision of oral fluids can be useful for mildly dehydrated birds which are strong enough to hold their heads up. Syringes attached to curved stainless steel crop needles or soft rubber or plastic tubing can all be used to deliver volumes of fluid (and moistened food mixes) to the crop or proventriculus. This technique is known as "crop feeding" or "crop gavaging". When using lengths of plastic tubing for this purpose, heating one end can allow the plastic to soften and be attached to the end of a syringe or funnel (for larger birds). The cut end which will go into the bird's mouth can have the edges smoothed by heating with a flame until the plastic just melts, or be filed smooth.

The technique for "crop gavaging" can be learnt by most people and can be perfected with a little practice. The bird is held upright with the neck gently stretched, facing the operator. The beak is held open with the fingers in non biting species, or the tip of the tube gently forced into the mouth of species such as parrots and cockatoos. A gag can be used for species with large sharp beaks eg larger seabirds. The feeding tube is then gently passed from the operator's right hand side, over the tongue and into the crop. If the tip of the tube is rotated or rocked back and forth it can often be felt through the bird's skin on the right hand side of the crop. The fluid is then gently expelled. If it comes out of the mouth, pull the crop tube out and wipe away excess fluid to stop the bird from choking. The reasons why problems are encountered with this method originate from poor technique and may include the following;

1. The bird is inadequately restrained and moves its head and neck during fluid administration.
2. The bird is too weak to keep the fluids down.
3. The crop tube/needle is not passed far enough down and doesn't reach the crop/distal oesophagus.
4. The fluid is expelled too quickly from the syringe.
5. Very rarely, the needle is inserted into the windpipe. In fact most "choking" episodes are due to regurgitation and subsequent aspiration of the fluid/food administered.
6. Too much fluid is administered. The amount of fluid that can be given at one time depends on crop size and hence age and species. For example most parrots, pigeons and seed eating passerines have well developed crops, whereas owls, gulls and ducks do not. Young being fed by their parents have proportionately larger crops than when they are mature. If unsure, it is best to administer small volumes at first, given more frequently over the day if necessary. This also applies to force feeding. The volume that can be administered can gradually be increased as the crop expands.

Types of fluids that can be used for oral fluid therapy include equal parts of lactated Ringer's (Hartmann's) solution and 5% dextrose, as well as commercially available rehydration solutions such as Spark Electrovet, Lectade, Vy-trate and even products such as Gatorade and Powerade. These should ideally be warmed to 38-40 degrees Celsius before being administered.

FOOD REQUIREMENTS:

The Basal Metabolic Rate of a passerine bird is 50-60% higher than that of non-passernines of the same body size. Also, the smaller the bird, the greater the percentage of its body weight it must eat daily in order to maintain body condition.

The following table sets out the feeding requirements of birds in relation to bodyweight:

WEIGHT	% OF BODY WEIGHT REQUIRED DAILY
100g - 200g	18 - 25
201g - 800g	11 - 19
801g - 1200g	7 - 11
4kg - 10kg	3.5 - 6

Where possible, birds should be offered food which is as close to their natural diet as possible. If they require force feeding, then foodstuffs similar in composition to their normal diet should be given. If birds are not self feeding they may need to be force fed many times daily. For example birds less than 200gm may require hourly feeding. For species with large crops and good digestive function, it may be possible to reduce this to 3 -4 times daily. Birds should be weighed at the same time each day to monitor progress. There are several products available commercially which are excellent force-feeding foods

Good quality hand rearing diets manufactured for the avicultural industry are all suitable for most inappetant adult granivores. They can also be used as a base for fruit eating species ie add mashed fruit and/ or vegetables to the commercial parrot hand rearing mixes.

For carnivores, one of the better products is Hills a/d diet - a soft canned food made for dogs and cats recovering from illness. This product can be easily mixed with water and fed by feeding tube to ill birds. Sick raptors should not be fed casting ie fur or feathers. They should be fed small meals of finely cut meat (including fat) until they can process larger food items.

Piscivores can be offered blended fish and squid with electrolytes or a 50:50 combination of Hills a/d and an oral rehydration solution. Seabird tablets should also be supplied as well as salt supplements after 10 days.

In addition to being force-fed, all birds should also be offered their natural diet to encourage eating. Under no circumstances should a sick bird be given more food if its crop has not been emptied from a previous feed as this will lead to fermentation of the food and likely toxæmia. Fluid however, should be given if possible until veterinary advice can be sought.

HOUSING:

As most birds are initially stressed and shocked when presented they should be housed in a secure, quiet, warm and darkened environment away from the sight and sound of potential predators or other stressors.

Birds have a higher metabolic rate than most similarly sized mammals. Hence, their core body temperature is much higher, usually between 40-42 degrees Celsius. They also have a high surface area to volume ratio, which increases as a bird's body size decreases. This leads to a high rate of heat loss, which is further exacerbated by any factor affecting the integrity of a bird's plumage eg feather loss, oiling, waterlogging etc.

Sick birds should be maintained at 25-30 degrees Celsius, day and night. Very sick birds can be heated to 35 degrees Celsius for the first 24-48 hours. Heat can be provided via a number of external heat sources such as infra-red or even standard incandescent light globes, although the latter can emit excessive light. External heat sources should be positioned to one side of the cage so that birds can come close if they need heat or move away if they feel too hot. Be careful that the patient cannot actually touch the heat source and burn itself, and that the heat source is not in close proximity to flammable materials. Keep all wiring out of reach of birds also.

These focal heat sources are not suitable for birds which are unable to move. More sophisticated purpose-built hospital cages with thermostats, fans and humidity control can also be purchased for those with more forgiving budgets and allow more exact control of a bird's environment. Humidicribs acquired from human hospitals who are updating can be a useful source of good intensive care accommodation. Care must be taken to observe the sick birds and look for signs of overheating. These may include panting, stretching of the body and holding the wings out from the body.

In general, heat pads manufactured for the horticultural industry or for dogs and cats do not generate enough heat for sick birds, but can be used in an emergency.

Other points to consider in housing sick birds may include the following:

- Most birds feel more secure when they can look down on people or predators so consider hanging cages higher rather than placing them at ground level.
- Subdued lighting minimises stress whilst allowing birds to feed.
- Hanging a blanket/cover over the cage removes visual stresses. However, it also makes observation of the birds more difficult.
- Birds may benefit from being able to see other birds of similar species (not predators).

- Cages which are easy to clean are an advantage eg. solid, smooth surfaces,
- Doors made of wire mesh are more likely to cause feather damage than are wire bars. Consider perforated perspex cage front, removable floor trays etc, doors hung on bayonet hinges so they can be lifted off for cleaning and disinfecting.
- Providing natural vegetation or substrate in the cage may help make the birds feel more secure and relaxed, and hence aid recovery.
- Perching is important for many birds. Natural branches will suffice for most perching birds. Raptors should be provided with thick wood or even brick perches covered in artificial turf, old carpet, blankets or towels. They should also have a tail guard applied to protect the tail feathers during confinement. This can be made from a strong manila envelope, thick plastic, cardboard or even X-ray film. The film is cut to fit the distal two thirds of the tail, folded around the tail, sealed with staples or tape and fixed to the tail with tape or a cable tie around the central two tail feathers.
- Waterfowl should have access to bathing facilities if they are to be kept in confinement for more than 48 hours. This helps to maintain waterproofing and general plumage condition and helps stop foot problems from developing. Water birds denied bathing opportunities are also more prone to cloacal (vent) infections as they are unable to defaecate naturally in water.
- Waterfowl enclosures should have soft substrates such as soft rubber matting, clean sand or lawns.
- Seabirds pose particular problems as they are not adapted to spending extended periods on their feet. Try soft substrates and minimise their time in care
- Be aware of some species' increased disease susceptibilities when kept in captivity eg raptors and seabirds are very prone to developing aspergillosis, a respiratory fungal infection. Therefore avoid organic substrates such as hay or straw, minimise stress, maintain good airflow and institute a prophylactic treatment program with a suitable antifungal under veterinary instruction eg itraconazole.

OTHER MEDICAL CONSIDERATIONS:

Veterinary attention should be sought for all major injuries. In the meantime, wounds need to be treated with saline or antiseptic solutions and bleeding stopped. Limbs which are obviously broken should have soft supportive bandages applied to prevent further injuries until veterinary attention can be sought.

Wild birds brought into care have an unknown history and should be considered as potential sources of infection to other birds which are placed close by.

35-65% of wild birds carry parasitic burdens. They may tolerate these when healthy but following trauma and the stresses of captivity these parasites can become significant. All wild birds coming into care should be assessed for parasites or prophylactically be dosed with a suitable anthelmintic such as ivermectin (Ivomec) or moxidectin (Cydectin) at 200-800 ug/kg orally for intestinal nematode worms and praziquantel (Droncit) at 10-20 mg/kg. Fenbendazole (Panacur 25) dosed at 100 mg/kg orally is an alternative anthelmintic but should be used with caution in pigeons and moulting birds.

Pigeons and doves, as well as some raptors and parrots, may need to be treated with anti-protozoal medications such as ronidazole (Ronivet S; Turbosole); carnidazole (Spatrix Tablets) or metronidazole (Flagyl Suspension). These all require veterinary prescription.

External parasites such as lice and mites can be treated by applying any one of a number of commercially available bird pesticide sprays.

A veterinary examination will help to pick up any viral, bacterial, fungal or other parasitic diseases which may need to be treated.