

## Standard Operating Procedures

### #AU 0026: Monitoring stress and injury in wild birds

#### Materials:

Bird holding bags  
Small box for holding  
Blankets  
Heat packs (i.e. hand warmers)  
Band removal equipment  
Plastic bags  
Markers  
Animal stress and injury checklist (Appendix A)

Canadian Wildlife Banding Permit is required for capture and banding of wild birds.

Birds are captured following procedures in SOP#002. They are first processed (see SOP #003) then banded following SOP#004. Blood samples will be taken following SOP#001. When banding wild birds, under rare circumstances, a bird may become unusually stressed, injured or may die. Additionally, birds that are already sick or injured may be captured during netting. As such, proper stress and injury monitoring are needed to make sure the most appropriate and humane course of action is taken. There is the potential for the bird to experience stress or to be injured. This Standard Operating Procedure (SOP) describes the acceptable method for monitoring birds for signs of stress and injury during banding and handling activities in the field. This SOP is designed to ensure that consistent methods are used to monitor birds for injury and stress. It applies whenever a bird shows signs of stress, is injured, is found injured, or is dead.

#### Procedure

Birds captured and handled as part of bird banding activities must be continuously monitored (using Appendix A attached) for signs of stress or injury. These include:

1. Closed eyes – eyes remain closed for >10-20 seconds while resting in a net or while held
2. Reduced movement – the bird is not moving or struggling, which can indicate stress or hypothermia. Note that some species remain passive during banding (e.g. alder flycatcher)
3. Wing drooping – wing is held in a lower than normal position, which can indicate wing strain, damage, broken wing, or dislocated shoulder
4. Inability to fly – when released, bird drops to the ground or cannot sustain flight to a perch; may indicate signs of injury listed in #3.
5. Abnormal leg position – leg may be broken, dislocated or strained
6. Imbalance or disorientation – bird is unable to properly maintain upright oriented body position
7. High respiration rate – open mouthed breathing or noisy breathing. This can be stress induced but may also indicate disease
8. Poor feather condition – feathers should be intact, parasite free and waterproof. Sustained feather puffing may indicate stress.
9. Messy vent – staining or clumping of vent feathers with droppings can be caused by illness or injury. Alone not a sign of stress but combined with other symptoms should be considered
10. Low pectoral muscle mass – indicates emaciation which indicates disease or injury
11. Rapid or slow heart beat – may indicate underlying disease; difficult to assess in small passerines with rapid heart rates

## Appendix A – Stress and Injury checklist - wild birds

12. Muscle tremors or catatonic state – stress may result in capture myopathy which can be reduced by quick handling time and ensuring adequate temperature
13. Bleeding – could indicate injury caused by a predator (most common cause), abrasion from net or handling (rarer)
14. Injury – puncture wounds, broken limbs, broken neck, open wounds, bleeding
15. Death – rarely dead birds are found in or near a net. Usually this is due to a predatory event. However, a bird may die during extraction from a net, while being handled, or while being held for recovery.

When a bird is encountered showing any of the signs of injury, stress or death listed above, the following procedure should be followed:

1. The PI must be notified immediately. As the bander in charge, the PI is responsible for decisions regarding health and welfare of stressed and injured birds
2. If the bird has not been banded, it will remain unbanded; if the stress or injury is a result of an improperly applied band (e.g. pinching) then the band should be removed using band removal pliers.
3. If the observed condition suggests the bird could recover, for example, if the origin appears to be handling stress, hypothermia, wing strain etc., then the bird should be placed in a quiet dark place for 30 minutes. This could be a bird bag or a small box. If the ambient temperature is low, a hand warmer should be placed near, but not touching, the animal. After 30 minutes, the bird should be checked to see whether alertness, body position, ability to fly has improved. If improved, the bird should be released. If the bird shows signs of partial recovery, then a recheck should occur in another 30 minutes.
4. If the bird cannot fly away or has a limb injury but is otherwise healthy, contact the veterinarian for assessment to determine if rehabilitation options should be sought.
5. If the bird is injured, is suffering and in pain and is not likely to respond to rehabilitation then the bird should be euthanized in accordance with SOP AU#0027: Bird euthanasia.
6. When a bird is found dead or dies during handling or recovery then it should be preserved for study skin preparation. Birds should be stored in a Ziploc bag labelled with location, date, species and any other information. Birds should be stored in the Biology Department in the freezer in CC408.

This report will include the date, species, band number, net or location found, name of personnel involved, bird status, probable cause, action taken, outcome and any other pertinent information. The PI will notify the veterinarian to discuss the event. Following an event in which a bird is stressed, injured, or there is mortality, the banding operation should be reassessed by the PI (bander in charge) and actions that will minimize the chance of a repeat event shall be instituted. A record of all stressed, injured or dead birds will be kept as part of all bird banding activities.

Created April 2018

AUACC

Adapted from Vancouver Island University Protocol

## Appendix A – Stress and Injury checklist - wild birds

Date:  
 Time:  
 Location:  
 Species:  
 Observers:  
 Bander in charge:

Indicate all parameters observed

| Parameter                              | Time: | Time: | Time: |
|--|-------|-------|-------|
| Closed eyes                            |       |       |       |
| Reduced movement                       |       |       |       |
| Wing drooping                          |       |       |       |
| Inability to fly                       |       |       |       |
| Abnormal leg position                  |       |       |       |
| Imbalance/disorientation               |       |       |       |
| High respiration rate                  |       |       |       |
| Poor feather condition/puffed feathers |       |       |       |
| Messy vent                             |       |       |       |
| Low pectoral muscle mass               |       |       |       |
| Slow/fast hear rate                    |       |       |       |
| Muscle tremors/catanoic state          |       |       |       |
| Bleeding                               |       |       |       |
| Injury                                 |       |       |       |

Description of Incident:

Outcome of Incident:

## **Appendix A – Stress and Injury checklist - wild birds**