CBBS Bird Safety Protocol – 2020.03.25

Our objective is to minimize injury to, and mortality of, birds that we capture and handle during our monitoring projects*. The following principles guide us in this regard:

- 1. Nets are checked a minimum of every 30 minutes, or every 15-20 minutes during periods of colder or hotter temperatures, or during light mist, or otherwise deemed appropriate by the Bander-in-Charge (BIC), and left alone between visits. This minimizes injury rates, while maximizing capture rates.
- 2. Birds are placed in separate bags and kept near the bander. This may be in the shade if it is hot, or sometimes in weak sunlight during cooler temperatures. Birds that are extremely active in the bag, jumping and struggling constantly, will be elevated in priority.
- 3. When, in the judgement of the BIC, sustained winds or frequent strong wind gusts result in inefficient capture or endangers the safety of captured birds, all affected nets will be closed.
- 4. The nets are closed if mist or rain is heavy enough so that water droplets collect on the mesh of the net, if feathers stick to the fingers during extraction, or otherwise deemed appropriate by the BIC.
- 5. If a predator is noticed in the vicinity of a net the BIC may decide to: 1) check the net more frequently to deter predation, 2) raise the bottom panel higher than normal so that captured birds are not accessible, or 3) close the net.
- 6. Ambient air temperature should be above 0°C for the nets to be opened.
- 7. Birds will be kept in holding bags for the minimum amount of time necessary, and not to exceed one hour.
- 8. If the capture rate has the potential of exceeding the above, the bander will minimize the amount of data that is collected, focusing on just the basics of species, age and sex, in order to process birds more quickly. In extreme cases birds may be released at the net (unbanded if necessary) with only species and obvious age and sex recorded. Nets should be closed as emptied and re-opened only when the BIC feels it is safe to do so.
- 9. All "red flag" species (see list below) are identified with coloured pegs attached to their bags so they are processed first from that net run. These are birds that warrant closer monitoring (more prone to hypoglycemia, stress, hypothermia, net entanglement, tonguing). These species should also be a priority for extraction if there are multiple birds in a net. Birds that have been tangled badly or otherwise are suspected to be "in trouble," and are capable of flight, may be released at the net with only species and obvious age and sex recorded.
- 10. During breeding season, all birds suspected of being associated with a known nest site should be released in the vicinity of the net where they were captured.
- 11. Only the BIC may cut a net to help extract a badly tangled bird.
- 12. All hummingbirds are released immediately at the net and recorded in the day's data.
- 13. All volunteers are given as much independence to extract birds as the BIC deems appropriate.
- 14. Volunteers radio the BIC for help if an extraction appears to exceed their ability.
- 15. Trammel lines are kept taut.
- 16. Minor holes and tears in nets are repaired the same or next day. Nets sustaining major damage are replaced.
- 17. A recovery box, with the option of heat pack and sugar water, are available for birds that appear stressed (shivering, lethargic, cold, wet) or who don't fly immediately upon release (sometimes evidence of wing strain). If a heat pack is used it is wrapped in a small piece of fleece so that it does not directly contact the bird.
- 18. The use of the recovery box is recorded in the Injuries and Mortalities section of the Daily Log.
- 19. A bird first aid kit is kept in the banding box, including heat packs, sugar water, veterinarian blood stopper gel, and splinting material (tape, vet wrap, toothpicks). Blood stopper gel is applied to wounds that are bleeding. If a bird cannot be taken to AIWC (see below) or similar wildlife rehabilitation centre, broken legs are splinted in a flexed position (similar to a perching bird). Dislocated legs that have been reduced may also be splinted.
- 20. Injured or ill birds that are not immediately considered terminal but that cannot be released will be taken to the Alberta Institute for Wildlife Conservation (AIWC; ph: 403-946-2361), unbanded (unless a recapture).
- 21. If a bird is euthanised the only acceptable means is by cervical dislocation (see attached methods from New York State Department of Environmental Conservation 2004).

- 22. When a bird dies all normal data will be collected as well as suspected cause and any contributing factors. Record in the Notes field on the data sheet and bring forward to the Injuries and Mortalities section of the Daily Log.
- 23. In the event of a mortality or injury necessitating euthanasia, the body will be disposed of in a sanitary manner.

"Red flag" or "sensitive" species:

- American Robin
- Empidonax flycatchers
- House Wren
- Ruby-crowned Kinglet
- hummingbirds (always released at net unless additional first aid or holding is deemed necessary)
- any bird that was badly tangled, injured or shows signs of stress
- species listed under the Species at Risk Act (SARA)
- * In dealing with injuries refer to *First Aid For Birds Injured During CBBS Projects* available in the Documents section of the CBBS website.

References

- American Veterinary Medical Association. 2013. AVMA guidelines for the euthanasia of animals, 2013 edition. Schaumberg, IL.
- DeSante, D.F., K.M. Burton, P. Velez, D. Froehlich, D. Kaschube, and S. Albert. 2018. MAPS manual 2018 protocol: instructions for the establishment and operation of constant-effort bird-banding stations as part of the Monitoring Avian Productivity and Survivorship (MAPS) program. Institute for Bird Populations, Point Reyes Station, CA. [Available from:
 - http://www.birdpop.org/docs/misc/MAPSManual18.pdf]
- Mackenzie, S.A. and M.A. Gahbauer. 2014. Guidelines for prioritizing bird safety during high capture events. *North American Bird Bander* 39:61-65. [Available from: http://www.nabanding.net/wp-content/uploads/2012/04/Mackenzie-and-Gahbauer.-Guidelines-for-prioritizing-bird-safety.pdf]
- New York State Department of Environmental Conservation. 2004. Best practices for nuisance wildlife control operators in New York State. Available from http://ny.nwctp.org/best-practices-for-wildlife-damage-management/tools-and-techniques/ [accessed 19 March 2020].
- Ralph, C.J. 2005. Body grasp technique: a rapid method of removing birds from mist nets. *North America Bird Bander* 30(2):65-70. [Available from:
 - https://okologia.files.wordpress.com/2010/11/ralph_removing_birds_mist_net_05.pdf]
- Smith, C.M., P. Duck and K. Symington. 2019. 2019 Ranger Creek MAPS station summary report, 1999-2019. Unpublished technical report. Bow Valley Naturalists, Banff, AB.
- Smith, H., J. McCracken, D. Shepherd, and P. Velez. 1997. The mist netter's bird safety handbook: a bird bander's guide to safe and ethical mist netting and banding procedures. Institute for Bird Populations, Point Reyes Station, CA. [Available from:
- https://www.birdpop.org/docs/pubs/Smith_et_al_1997_Mist_Netters_Bird_Safety_Handbook.pdf] Spotswood, E.N., K.R. Goodman, J. Carlisle, R.L. Cormier, D.L. Humple, J. Rousseau, S.L. Guers and G.G. Barton. 2011. How safe is mistnetting? evaluating the risk of injury and mortality to birds. Methods in Ecology and Evolution. doi: 10.1111/j.2041-210x.2011.00123.x.
- Wesbrook, M. 2016. Animal health care report: bird capture and handling in Jasper National Park, 1995-2016. Resource Conservation, Parks Canada, Jasper National Park, Jasper, AB.

Cervical Dislocation

This method is commonly referred to as "breaking the neck" but would more accurately be described as "snapping the spine." The goal is to quickly separate the spinal cord from the brain to provide a fast and painless death. The separation must take place at the base of the brain or within the upper third of the neck (the cervical spine area).

Cervical dislocation is used primarily for small to medium-sized birds (duck sized or smaller) and small mammals, such as mice and rabbits. To snap the spine of a pigeon or duck-sized bird, grasp the base of the bird's skull in one hand and its body (usually at the base of the neck) in the other hand. Pull hard and fast—twist your hands in opposite directions.

Another cervical dislocation technique for birds uses pliers or vise grips. For smaller birds (up to 11 oz., about the weight of a pigeon), hold the bird in one hand, and a pair of needle-nose pliers in the other. Place the open pliers over the bird's neck vertebrae (in the cervical spine area). Slide the pliers up the neck until they contact the head and are directly over the first and second vertebra in the top of the neck, which support the skull (the atlas and axis vertebra). Then close the pliers firmly and hold for 2–5 seconds.

For larger birds (12 oz.–3 lbs., the upper limit is about the weight of a gull): Hold the bird in one hand, and a pair of square-jawed vise grips in the other. Adjust the vise grips so its jaws will slide over the bird's neck but not over its head. Then slide the vise grips up to the base of the bird's head. With your other hand, pull the bird's body quickly, to snap its spine (separating the cervical vertebrae from the skull).

To snap the spine of a small mammal or larger bird, put it on a hard, flat surface. Hold a strong stick or metal rod firmly against the base of the animal's skull. Pull its body away from its head in a single, steady motion. Keep the stick in place, then bend the body over the head.