

Wildlife Animal Care Committee: Class Protocol #002

Wildlife Research Permits and Collection Licences

adopted 20 February, 2001

Class Activity: Recreational Bird Banding

Specific Activity

Live capture, marking, and release of individuals of various avian species

Objectives

- to live capture, mark, and release avian species, primarily songbirds and raptors for recreational or management purposes
- to determine aspects of dispersal, migration, behaviour, social structure, life-span, survival rate, reproductive success, and population status of migratory or resident avian species
- to gather population trend information on neotropical migrant populations in various habitats

Applicable Personnel

Persons holding a valid Wildlife Research Permit or Collection Licence and for migratory species, a federal Bird Banding Permit issued by the Canadian Wildlife Service.

Banding activities may occur individually or in conjunction with a recognized long-term banding observatory.

Species

Wide range of avian species

Applicable Geographic Range

Provincial

Methods

Various capture techniques are used, as described herein. Specific methods should be tailored to the intended species and attempts made to avoid non-target species.

Capture

Mist Net

- Fine mesh nets of differing gauge and length. Nets are made of thin 'invisible' threads (1" squares) and are mounted on wooden or aluminum poles at differing heights above the ground.
- Pulley systems may be used for raising nets into canopy locations.
- Once set, nets are checked regularly, at least every 30 minutes.
- Nets should not be set when ambient temperatures are below 0°C or above 27°C and should be checked more often when temperatures approach these thresholds.
- Used to capture songbirds. Occasionally, small birds of prey may be captured.

Bal Chatri

- A wire cage with monofilament nooses tied to the top and/or sides with a lure animal inside the cage.
- The size and shape of the cage differs depending on the species intended for capture and the lure animal used (domestic mice or pigeon).
- These traps are used predominantly during road trapping (drive until a bird of prey is sighted, then place the trap in a roadside ditch or in a field where it is visible to the raptor).
- Set traps should be monitored continuously.
- Species caught on Bal Chatris include:
 - Northern Harrier
 - Northern Goshawk
 - Cooper's Hawk
 - Sharp-shinned Hawk
 - Broad-winged Hawk
 - Red-tailed Hawk
 - Swainson's Hawk
 - Rough-legged Hawk
 - Ferruginous Hawk
 - American Kestrel
 - Other falcons, some owls, and shrikes

Hand Net

- Using a hand net to catch a flying raptor drawn in on a lure.
- Lures can be an imitation mouse on a fishing line or a live domestic mouse.

- The goal is to net the bird before it grabs the lure.
- Used for:
 - Great Gray Owls
 - Northern Hawk-Owls
 - Barred Owls
 - Northern Goshawks
 - Great Horned Owls.

Swedish Goshawk Trap

- Consists of a compartment that contains a lower lure cage and a separate upper section that captures and holds the raptor.
- A trigger mechanism causes doors to close on the top.
- This is a passive trap that is checked at least every 4 hours.
- Lure animals (pigeons or domestic mice) must be watered and fed daily in the traps and removed in situations of inclement weather, including stress due to temperature or precipitation.
- Used primarily for:
 - Northern Goshawks
 - Cooper's Hawks
 - Merlins
 - Great Horned Owls
 - Other species can be captured

Drop-lid or Drop Door Trap

- Two compartments similar to the goshawk trap.
- The trigger mechanism for the door differs slightly as it is attached to the flooring of the upper cage compartment.
- Lure animals are domestic pigeons or mice.
- As above, traps must be checked at least every 4 hours and lure animals must be fed, watered, and removed in situations of inclement weather.
- Used for:
 - Great Horned Owl
 - Barred Owl
 - Northern Goshawk
 - Cooper's Hawk

- Sharp-shinned Hawk
- Broad-winged Hawk
- Red-tailed Hawk;
- Other species can be captured

Dho Gaza

- a detachable/collapsible mist net (4" or 8" squares) suspended between two poles.
- When a bird hits the net, either the net detaches from the poles, or the poles collapse in on themselves.
- The trap must be attended at all times it is set and the ground around the trap should be cleared of debris before setting the trap.
- Different lures can be used to attract raptors to the nets:
 - a mechanized raptor decoy (usually combined with vocalization) or
 - a lure animal (domestic pigeon or mouse).
- A single net or two nets set in a V-shape are used.
- Used mainly for:
 - Merlins
 - Snowy Owls
 - Northern Goshawks
 - Great Horned Owls
 - Barred Owls
 - Long-eared Owls

Bow Net:

- 2 semicircular bows of light metal with netting strung loosely between them.
- Hinges and springs connect the 2 semicircles together at their bases.
- The lower half is fixed to the ground. When setting the trap, one half of the bow is pulled over the lower, stationary half and latched.
- A lure animal (domestic pigeon or mouse) in a cage is placed in the centre of the trap with a trigger mechanism over the cage.
- When set off by the raptor, the bow swings over the bird covering it with netting.
- If a live lure is used, the trap must be attended and the lure removed immediately following capture of the raptor.

- Used for:
 - owls
 - eagles
 - falcons
 - buteos
 - harriers
 - accipiters

Potter Trap

- A trigger cage with three compartments:
 - The centre compartment holds a lure animal (domestic mouse),
 - The two outer compartments have open doors that a bird can enter.
 - Once inside the cage a treadle on the floor is triggered, closing the door.
- Set traps should be checked at least every 4 hours.
- Used for American Kestrels and shrikes.

Lure Animals

- Two types of lure animals are approved for use in trapping birds for banding purposes: domestic mice and domestic pigeons.
- When not in use, pigeons and mice must be housed in appropriate cages and environmental conditions and maintained with appropriate care as per the *Alberta Animal Protection Act*.
- Lure animals may be used in the following traps:
 - Drop-lid
 - Bal Chatri
 - Hand Net
 - Dho Gaza
 - Bow Net
 - Potter
 - Swedish Goshawk
- Efforts must be made to ensure lure animals are neither injured during trapping procedures nor exposed to undue stress from proximity to predatory birds.

Nest-side Banding

- This involves banding nestlings prior to fledging.
- Songbird and shorebird nests are checked and nestlings of sufficient size are banded and returned immediately to the nest.
- Stick nests and cavity nests of raptors are visited in spring to determine occupancy. Disturbance must be minimized during these checks.
- Occupied nests are noted and left until the young are old enough to be banded (varies depending on species).
- Nestlings are collected in cloth bags and transported to ground level where they are processed, banded, and returned to the nest immediately.
- Completed nest data cards are submitted to Alberta Environment and Sustainable Resource Development.

Details of Anticipated Stress and Pain to Live Wildlife

Stress to captured birds may be MODERATE as they are measured, weighed, and banded. Thus processing time must be kept as short as possible.

Pain to captured birds should be NIL to LOW.

Stress to lure animals (pigeons and mice) may be HIGH when a bird of prey is attempting to catch it; however, generally this is of short duration. Pain to lure animals generally will be minimal. In most situations, the lure animal is untouched. Occasionally the lure animal may be killed or injured by the raptor. Traps in which this may occur must be attended continuously. If the lure animal is injured but not killed, it must be euthanized immediately. Stunning or decapitation may be used with mice; cervical dislocation with pigeons.

Handling

Mist Nets

- At least one person trained and certified in handling and banding live birds should be present whenever birds are being removed from the nets.
- Captured birds are extracted quickly but carefully so as to avoid damage to the bird and its plumage.
- Birds may be processed and released at the net site or placed in cloth bags for transport to a lab or a central data collection/banding area.
- Prior to processing, birds should be kept in relatively quiet dark conditions with minimal disturbance.
- Processing should be limited to determining species identification, sex, age, physical measurements, general health, weight.

- All handling and processing should be according to the methods and Code of Ethics approved by the Canadian Bird Banding Office.
- All birds should be banded and released at or near the capture site within 1-2 hours.

All other traps

- Live birds should be handled only by persons trained in suitable handling techniques.
- At least one such person should be in attendance whenever traps are set (those with live lure animals accessible to raptors) or checked (those with containment compartments).

Release

- Birds should be released at or near the capture site as soon as possible but no more than 1 hour (songbirds) or 2 hours (raptors) after capture.
- Release should occur in a manner and location such that the released bird can be observed to ensure that it can fly or, in the case of nestlings, that the bird has been accepted back into the nest.

Procedures

This handling protocol is appropriate for the following activities: attaching leg bands, taking basic body morphometrics done under authority of an Wildlife Research Permit or Collection Licence.

References

The above material pertaining to nets and traps is based on descriptions provided by Lisa Takats, Beaverhill Bird Observatory.

Additional information concerning federal permits, handling/banding procedures, national bird banding data, and a Banders Code of Ethics can be found by contacting the Canadian Bird Banding Office of the Canadian Wildlife Service.