

Alberta Wildlife Animal Care Committee Class Protocol #006

Wildlife Research Permits or Collection Licences

Adopted 11 February 2005

Class Activity: Call Playback for Owls

Specific Activities

Species-specific call playbacks, with appropriate taped vocalizations

Objectives

To minimize disturbance and potential adverse effects on individual owls surveyed using call playback. Playback may increase the risk of predation, disrupt foraging and courtship, and/or draw females off a nest. As a result, this activity must have some limits on its use.

Primary Contact/Authority

Director of Wildlife

Applicable Personnel

- Project leads must be Wildlife Technicians, Wildlife Biologists, or Naturalists with appropriate avian experience and, in the case of endangered owls, species-specific experience and a detailed understanding of the legal and regulatory protections provided to the species.
- Project team must include at least one experienced field person with established search images of the species intended for census and be familiar with the species' biology, behaviours, and preferred habitat.

Species

Various owls, including:

- Burrowing owl (*Athene cunicularia*)
- Great-horned owl (*Bubo virginianus*)
- Barred owl (*Strix varia*)
- Great gray owl (*Strix nebulosa*)
- Long-eared owl (*Asio otus*)
- Boreal owl (*Aeoglius funereus*)
- Northern saw-whet owl (*Aegolius acadicus*)
- Northern pygmy owl (*Glaucidium gnoma*).

Applicable Geographic Range

Provincial

Methods

It is well known that owls use a variety of vocalizations to communicate among individuals and perhaps among species. They identify themselves, claim territories, attract the opposite sex, maintain pair-bonds, and pairs track their whereabouts within the territory. Youngsters use other vocalizations to express alarm or to solicit food from attending adults. Call playback involves audio broadcast of taped calls in order to solicit behavioural or vocal response from owls in the vicinity. A series of broadcast sites is sampled along a designated transect.

In general, the methods as outlined in Takats et al. (2001) will be adopted. Specific guidelines relating to duration and repetition interval of call playback are primary to the potential negative effects on owls and must not be exceeded. In addition there are specific procedures included in the text below that apply to burrowing owls in Alberta due to their threatened status. General status of the other owl species can be found at:

<http://srd.alberta.ca/FishWildlife/SpeciesAtRisk/GeneralStatusOfAlbertaWildSpecies/GeneralStatusOfAlbertaWildSpecies2010/SearchForWildSpeciesStatus.aspx>

Call Playback

Every reasonable effort should be made to avoid unnecessarily disturbing sensitive species such as Burrowing Owls or their habitat.

Timing

As a census technique, call playbacks should be conducted during the primary breeding season for the species of concern. **Specific to burrowing owl, the survey period is limited to 15 May to 31 July since most owls have migrated to breeding grounds by this time and have settled on territory.**

- Surveying is not recommended during periods of precipitation or when winds are greater than 20 km/h (as determined by a hand-held anemometer).
- Surveys for most species are generally conducted in the evening from 30 minutes after sunset until midnight, as call rates are high during this time for most species. However, for **burrowing owls surveys generally are done in the morning, starting at daybreak, and should be complete before 14:00 to avoid the heat waves and wind associated with the afternoon.**
- Avoid using call playback if there is direct evidence of predators in the vicinity.
- Listening sites should be no less than 1.6 km apart for most species. **For Burrowing Owls, they should be no less than 600m and no more than 800m apart.**
- Tapes containing calls of multiple species can be used to survey different species at the same time. However, the combined effects on individual species response are not well documented and single species inventory is preferred.

Procedure

- Upon arriving at a site, the observer selects a suitable vantage point and waits five minutes to allow owls to recover from any disturbance that may have occurred as the observer traveled to the survey point.
- After the five-minute recovery period, taped primary calls are played using a Johnny Stewart Game Caller™, or equivalent, over another five-minute period. **Note that for Burrowing Owls, ONLY the two-note coo coooo call of territorial males should be used.** The Caller is rotated over 360° from a fixed point during the course of the five-minute call period, allowing calls to be broadcast around the entire circumference of the survey circle.
- After the five-minute call playback period, the observer spends another five minutes scanning the surrounding landscape for owls.
- In total, each survey lasts 15 minutes. If no owls are detected, the observer continues to the next survey point and repeats the call playback.
- If for any reason the call playback period is repeated, total disturbance period should not exceed 30 minutes. If the 15-minute call playback sequence cannot be completed in less than 30 minutes, then the activity should be discontinued and postponed for 24 hours at that specific site.

Evaluation

If there is any severe disruption to the habitat or to the owls in the area during the census, the operation is to be halted and all activities reviewed. If corrective factors cannot be identified, the operation is to be discontinued.

The Fish and Wildlife Division requires that all data for wildlife surveys completed under the authority of a research permit be submitted for input into the Fisheries and Wildlife Management Information System (FWMIS). Information on FWMIS and electronic load forms that are needed for this database can be obtained from biologists at Fish and Wildlife Division offices.

Communications

- All members of the team should understand the inherent risks associated with fieldwork.
- Communications may be necessary with the local community and/or landowners regarding general location of call playback activities.

Acknowledgments and References

- 1) Takats, L.D., C.M. Francis, G.L. Holroyd, J.R. Duncan, K.M. Mazur, R.J. Cannings, W. Harris, and D. Holt. 2001. Guidelines for Nocturnal Owl Monitoring in North America. Beaverhill Bird Observatory and Bird Studies Canada. 2001. 26p. <http://www.bsc-eoc.org/download/Owl.pdf>

- 2) Draft - Sensitive Species Inventory Protocols. May 2004. Fish & Wildlife Division, Alberta Sustainable Resource Development. Pp. 59-64.

- 3) Inventory Methods for Raptors. 2001. Standards for Components of British Columbia's Biodiversity No.11, Ministry of Sustainable Resource Management, Environment Inventory Branch for the Resources Inventory Committee.

Last Modified: Jan 28, 2005