

New York State Short-eared Owl Winter Survey Guidelines

1) Depending on the size of the area to be surveyed, pick suitable habitat areas in advance to survey. Short-eared owls like to hunt low over grasslands/ fields, brushy areas near streams, and marshlands. Focus on areas that have not been recently mowed very low, although these can be used for foraging, especially if small and adjacent to more suitable roosting or foraging habitat. Use aerial photos, maps or scouting trips to prioritize likely spots if dealing with a large area. Necessary equipment: binoculars, map, datasheets, compass, watch, gps unit. “Night vision” optics have not been particularly useful for this species, in our opinion. Likewise, taped calls, either of short-eared owls or their prey, have also proved ineffective.

2) Arrive in the survey area at least two hours before dark. If possible, arrive even earlier, especially on overcast and/or stormy days, since short-eared owls can be seen flying during the daylight hours. Pick prominent, roadside vantage points to look for owls. Individually number and identify your survey points; plotting them out on a map would be very helpful. Position observers in different locations whenever possible. Check for owls in flight as well as owls perched on the ground, on fence posts, hay bales, and in trees in windbreaks, or even in backyard conifers. Listen for their calls: a bark-like call or a keee-ow call. The presence of wintering northern harriers is often a good potential indicator of the presence of short-eared owls.

3) Record number and location of owls and other species (e.g. northern harriers, rough-legged hawks) seen/heard, note the point observed from, time, and behavior (i.e. flying, perched, hunting, feeding, etc.) and direction headed (in degrees if possible) if moving. Get a gps location if possible, at a later time, like during the day so as not to disturb the owls. Record basic weather info (e.g. temperature, precipitation, wind, cloud cover, etc.). Fill in data sheets and maps as appropriate. It might be helpful to gps survey locations as well as to note the time in attendance.

4) Owl “emergence” in the afternoon is extremely variable, with birds sometimes not appearing until 10-15 minutes before dark. Therefore, we recommend that any given survey point/area be covered for the entire 2+ hour period. Coverage of multiple, potential owl areas will thus require additional days or additional personnel. If survey locations are very near to each other (within < 10 minutes), “jumping” back and forth between sites may be possible during the survey period. Repeated trips on additional nights will often be necessary to adequately confirm this species’ presence or absence. High winds, heavy precipitation and dense fog conditions often prevent owls from flying very much. If lighting allows, e.g. a full moon or streetlights, extended observations into the night is possible as long as owls can be seen, i.e. after dusk into the night. If owls are observed at a particular site, note carefully the duration they are at that particular site, the

behavior while at the site (e.g. perching, foraging, etc.), and where they head from the site. Often, owls will emerge from a nearby roost, fly or perch nearby briefly, then fly sometimes considerable distance to foraging areas. Appropriately stationing observers in subsequent nights farther out along these flight paths may reveal important foraging areas. Also, if owls are observed at particular sites, multiple observation days are recommended at these locations during the winter season, as numbers of owls often change over this time (e.g. often increase as season progresses).

5) Survey at least once a week from December through March. Due to the influence of weather and prey (e.g. vole) populations, short-eared owl occupancy dates and locations can vary considerably from year to year, even in good habitat. In some cases, for example, owls can show up at wintering sites as soon as early November, and linger into mid-April in New York. Especially in late winter, March –April, note any breeding or nest- building behavior observed.

Additional references:

Clark, R.J. 1975. A field study of the Short-eared Owl (*Asio flammeus*) Pontoppidan in North America. Wildl. Monogr. 47: 1-67.

Holt, D.W. and S. M. Leasure. 1993. Short-eared Owl (*Asio flammeus*). In *The Birds of North America*, No. 62 (A. Poole and F. Gill, Eds.). Philadelphia: The Academy of Natural Sciences; Washington, D.C.: The American Ornithologists' Union.

Johnsgard, P.A. 1988. *North American Owls Biology and History*. Smithsonian Institution Press, Washington and London.

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