

Western and Eastern Screech-Owl Survey Report 2024



Western Screech-Owl (left) and Eastern Screech-Owl (right), photos by Tyler Pockette

Overview and Thank You

This report summarizes the efforts of Montana Audubon, local landowners, and birders.

And we would like to extend a heartfelt THANK YOU to all of our wonderful volunteers, and anyone who reached out with owl sightings.

Background

Western and Eastern Screech-Owls are two closely related Screech-Owl species with converging ranges along the Missouri River in Montana. Both species are listed as Potential Species of Concern, and the Western Screech-Owl is listed on Montana's Species of Greatest Inventory Need List. The most recent Winter Breeding Owl survey occurred in 2014, targeting fourteen owl species including the Western and Eastern Screech-Owls. Both owls are small, secretive, nocturnal species with heightened vocal activity in the breeding season (February-May). To assess the presence of the species, surveyors will use callback recordings to evoke a vocal response from present owls.

Both Screech-Owl species nest in tree cavities, depending on old-growth trees in riparian areas, cottonwood groves, and conifer forests. With the increase in infrastructure in the last decade and the lack of recent population data on these two owl species, surveying efforts would contribute to a further understanding of how the populations are affected by habitat loss. Citizen science is vital for this survey because it allows researchers and land managers to receive more data on where, when, and how many owls are in specific locations. Answering these questions allows for conservation and land management decisions based on scientific research.

Surveys consisted of 10 stops within a Quarter-Lat-Long or QLL where volunteers played a pre-recorded playback call containing calls of both Eastern and Western Screech-Owls with periods of silence meant for passive listening. Although this survey targets Eastern and Western Screech-Owls, surveyors also recorded any incidental owl species they encountered during their survey.



Western Screech-owl, Photo by Bob Martinka

Results

Starting in March we hosted our first statewide survey of Eastern and Western Screech-Owls, where 19 volunteers were able to locate 8 Screech-Owls and 4 other owl species, totaling 42 owls observed across 19 survey routes.

Figure 1. Shows locations and species of owl detections by volunteers in 2024.

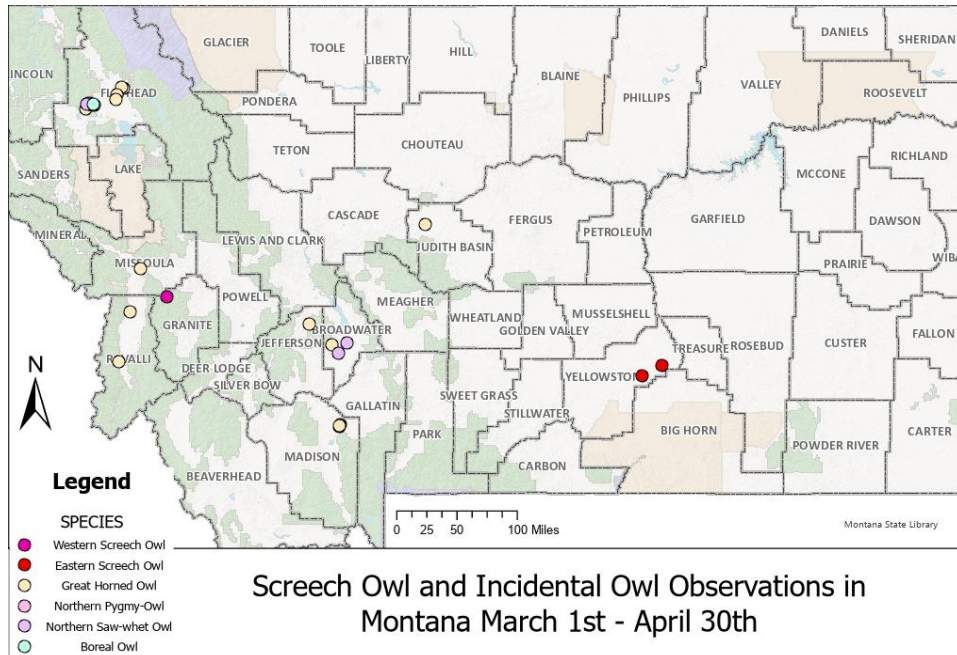
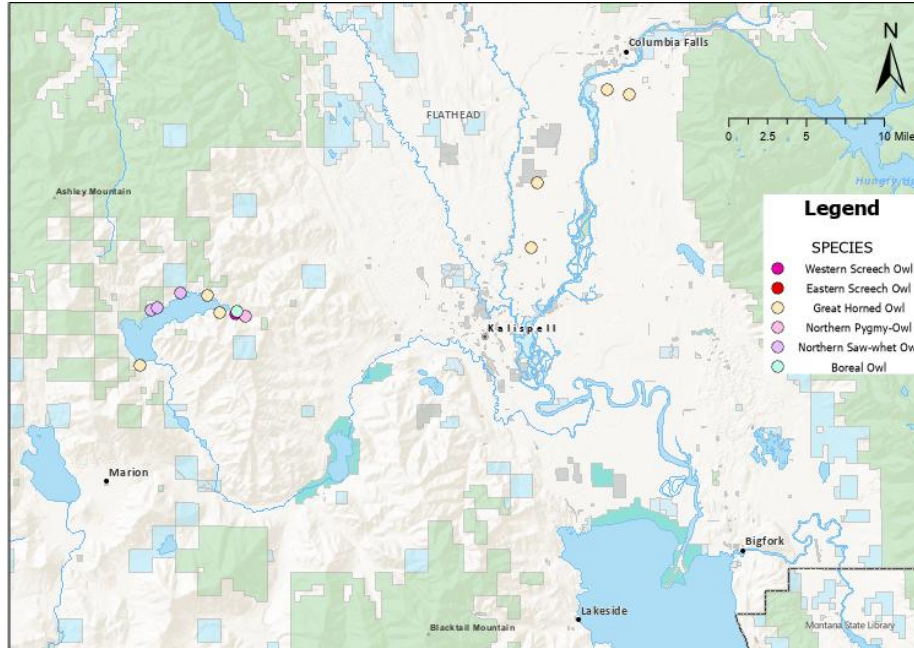


Figure 2. Shows a cluster of owls in Flathead county, indicating an owl hotspot west of Kalispell around Ashley Lake containing six species and nine individual owls around the lake.



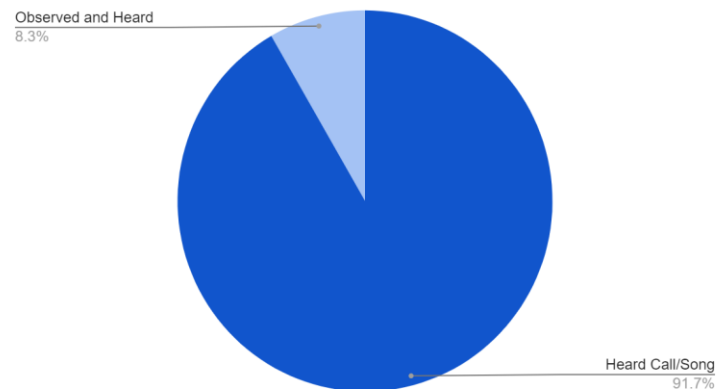
Species and Habitats

The six owl species observed include Western Screech-Owl, Eastern Screech-Owl, Great Horned Owl, Northern Saw-whet Owl, Northern Pygmy Owl, and Boreal Owl. During the surveys, volunteers also recorded the habitat type at any owl detections. The most common habitat types included Cottonwood, Riparian, and Conifer, but also consisted of Sparse, Juniper, Suburban, Lake, Dense Woods, and Open Forest.

What did the playback call do?

Playback calls are audio recordings of a species vocalization, in this case we used a single playback call for every survey regardless of region containing both Eastern and Western Screech-Owl. They are used to evoke a vocal response from the recording’s target species. Owls are notoriously discrete and hard to see, and Screech Owls are no exception to that. During this survey every owl observation was observed by sound to some degree, with a few observations also seeing an owl.

Owl Detection Method



What's Next?

Looking towards the 2025 Screech-Owl season we are excited to continue these surveys statewide in Montana. These surveys would not be possible without our dedicated volunteers, and we will once again be looking for volunteers on this project. Keep an eye out on our eNewsletter and social media accounts for updates on this project!

This past year was the pilot year for this project, and we hope to improve it for future years. Presently this includes creating maps of some of the routes with designated stops to make the surveys more accessible to volunteers.

Thank you to all who volunteered for this project in 2024! If you have any questions about this report or how to volunteer for this effort please contact Gwynne at gwynne@mtaudubon.org.