

2025

Citizen Science Report



Common Nighthawk and Long-billed Curlew by Bob Martinka
Eastern Screech-owl by Peter Dudley

Thank you!

These projects would not be possible without all of our sponsors, partner organizations, and our dedicated volunteers.



**L.E.A.W. Family
Foundation**



Nightjars Pilot Year

In collaboration with Montana Fish, Wildlife, and Parks, and with support from the Tracy Aviary, we were able to launch our pilot year surveying for Common Nighthawks and collecting incidental observations of Common Poorwills in data deficient areas across Montana.

Second Year for Screech-Owl Surveys

This Spring marked the second year for our Screech-Owl project, where surveyors from all over the state conduct nighttime playback call surveys to record observations of Western and Eastern Screech-Owls, as well as any incidental owl species. This project is supported by the L.E.A.W. Family Foundation.

Long-billed Curlew Initiative

This effort is a joint project with the Blackfoot Challenge and the Confederated Salish and Kootenai Tribes biologists. 2025 marks the 13th year of the Long-billed Curlew Initiative, founded by the USFWS and the Montana Bird Conservation Partnership. The collaboration continues with the main goals of developing a conservation plan, identifying key parcels and areas for a conservation easement, empowering local organizations and community members to engage with landowners about conservation, and sharing findings and lessons learned across bird conservation networks. The Blackfoot Challenge organizes volunteer support and surveys around the Blackfoot Valley, and the Confederated Salish and Kootenai Tribes biologists conduct surveys in the Mission Valley.

All data collected for these three projects is housed in the state's database, and is managed by the Montana Natural Heritage Program.

This year we were fortunate enough to host a total of **221 citizen scientists**, including 87 Screech-owl volunteers, 58 Long-billed Curlew volunteers, and 76 Nightjar volunteers.



Welcome to Citizen Science!

Compared to 2024, we've gained **167 new volunteers** across all three of our projects in 2025.



Thank you to everyone who attended our trainings, tracked us down at tabling events, and put in the time and effort to gather data on these birds in need.

Across the three projects, citizen scientists were able to cover 167 survey routes, resulting in an estimated **1,287 miles surveyed.**



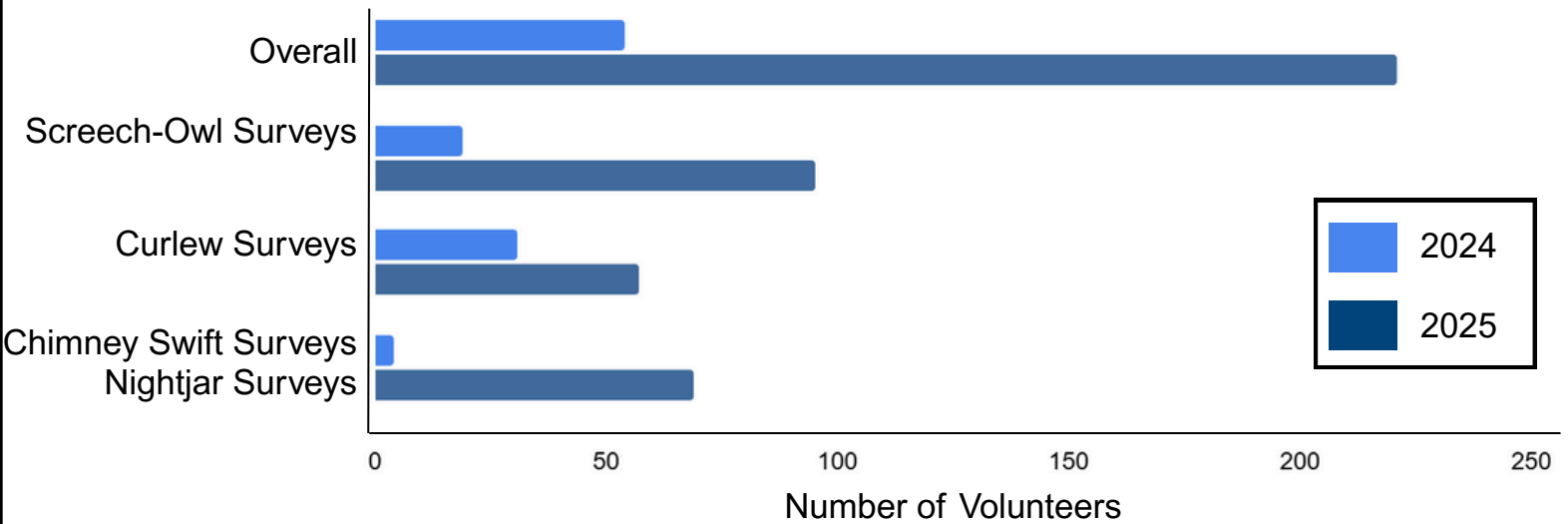
Across all 167 survey sites, **1,713 total target birds** were recorded.



Comparing to 2024

This year we have experienced an exciting increase in the number of citizen scientists who have joined us in collecting data on these birds in need. The chart and table below shows the growth for each project. The data for each project goes into the state database, which then contributes to each species conservation status and the Statewide Action Plan.

2024 vs. 2025 Citizen Science Volunteers per Project



2024

54 Total Citizen Scientists
19 Screech-Owl Surveyors
31 Curlew Surveyors
4 Chimney Swift Surveyors

68 Total Survey Sites
19 Screech-Owl Sites
38 Curlew Sites
11 Chimney Swift Sites

118 Total Target Bird Observations
8 Screech-Owl Observations
92 Curlew Observations
18 Chimney Swift Observations

2025

221 Total Citizen Scientists
87 Screech-Owl Surveyors
58 Curlew Surveyors
76 Nightjar Surveyors

167 Total Survey Sites
58 Screech-Owl Sites
45 Curlew Sites
64 Nightjar Sites

1,713 Total Target Bird Observations
24 Screech-Owl Observations
67 Curlew Observations
1,603 Nighthawk Observations
19 Poorwill Observations

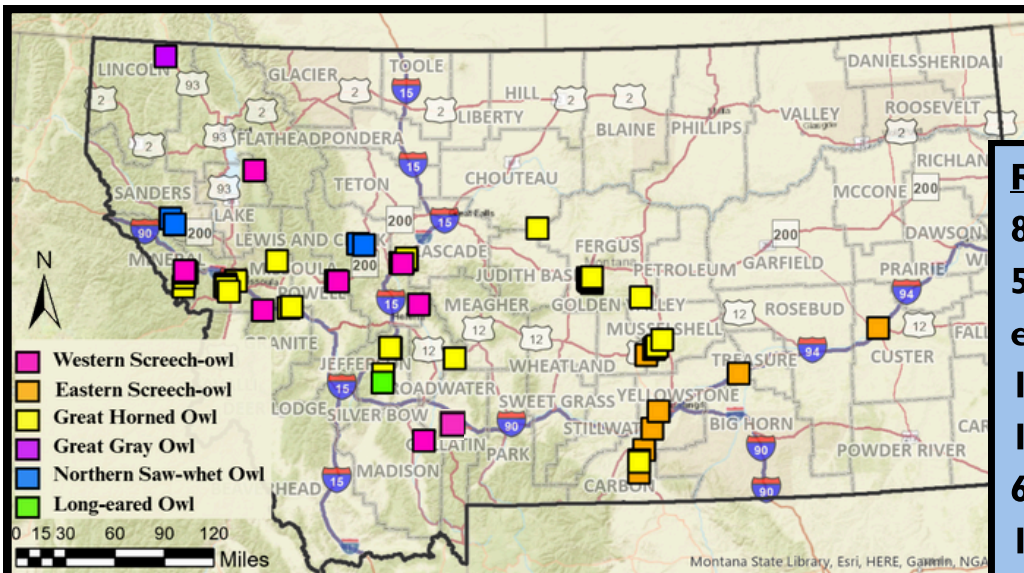
Screech-Owl Surveys

About Western & Eastern Screech-Owls

Western and Eastern Screech-Owls are two small and discrete owl species found in cottonwood groves, conifer forests, and riparian areas. They rely on old growth trees with natural cavities for nesting, which puts them at risk for potential habitat loss with ongoing urbanization. Screech-Owls are nocturnal and crepuscular, making them difficult to research. Resultingly, both are designated as a **Potential Species of Concern** in Montana. Western Screech-Owls are also a **Species of Greatest Information Need**, due to their significant level of data deficiency. These owls are nearly identical, with overlapping ranges on parts of the Missouri River, but can be differentiated by their calls.

About The Survey

Surveyors went out past sunset on a single night between March 1st and April 30th, driving to 10 roadside stops spaced a mile apart in areas of potential Screech-owl habitat. At each stop surveyors played a playback call, or a recording of both Eastern and Western Screech-owls, to evoke any calls from surrounding Screech-owls.



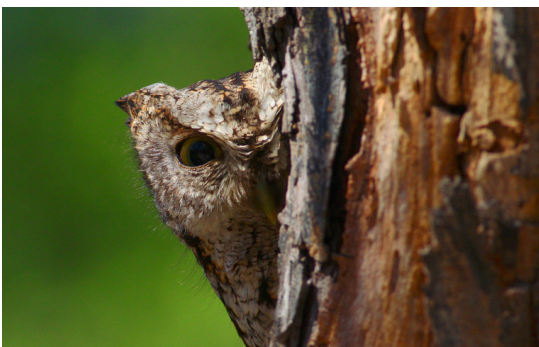
Results:

- 87 Citizen Scientists
- 58 Survey Routes
- est. 444 miles Surveyed
- 11 Western Screech-Owls
- 13 Eastern Screech-Owls
- 6 Owl Species Observed
- 14 Incidental Species Recorded

Figure 1. Map of incidental and target species detections in Montana between March 1st and April 30th.

Owl Species Detected:

- 13 Eastern Screech-owls
- 11 Western Screech-owls
- 48 Great Horned Owls
- 3 Long-eared Owls
- 1 Great Gray Owl
- 5 Northern Saw-whet Owls
- 81 Total Owls



Photos by Tyler Pockette and Bob Martinka

Long-billed Curlew Surveys

About Long-billed Curlews

America's largest shorebird and an icon of Montana's prairies, the Long-billed Curlew spends most of the year at its wintering grounds along the southern coastlines of North America, but migrates to the Northern Plains for the breeding season. These birds can be identified by their general football body shape, long downward curving bill, and their classic *cur-lee* call.

As Montana expands its infrastructure and agriculture, our grasslands and prairies continue to dwindle. Because of this habitat loss, Montana designates Long-billed Curlews as a **Species of Concern**, and contains the largest area of breeding habitat in the United States, making it one of the most valuable places to collect data on this species.

Results:

58 Citizen Scientists

45 Survey Routes

est. 225 miles Surveyed

67 Long-billed Curlews Observed

44 Incidental Species Recorded



About The Survey

Starting on April 8th, citizen scientists went out to three western Montana valleys in the early morning to conduct passive point count and habitat surveys for Long-billed Curlews. The survey window follows two vital stages for Long-billed Curlew breeding: staging (April 8-May 7), when pairs form; and nesting (May 8-May 31), when pairs lay and incubate eggs.

Each driving route consists of around 10 stops 0.5 miles apart, where surveyors pull over and silently scan with binoculars and listen for five minutes. At each stop, Long-billed Curlews and other bird sightings are recorded, as well as the habitat type, and land use type.



Photos by Bob Martinka

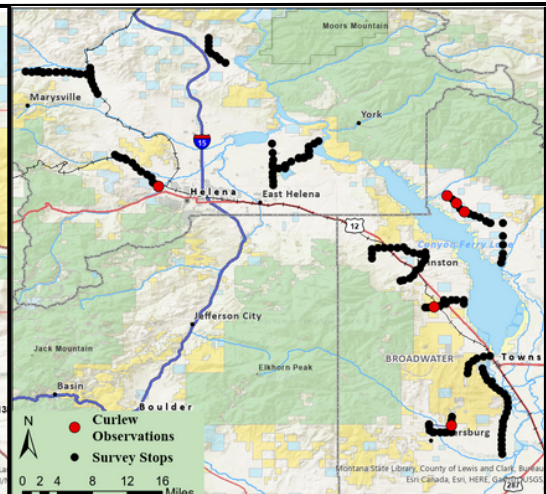
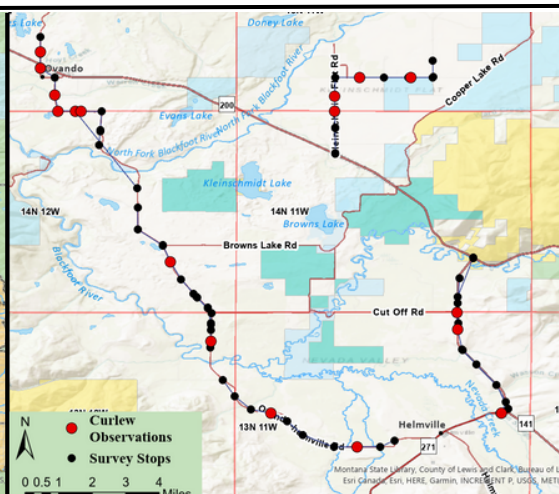
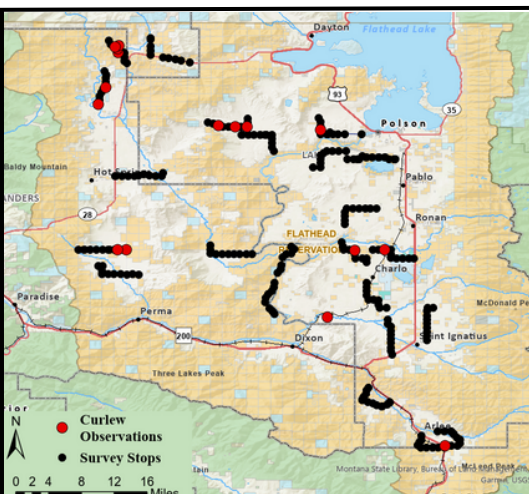


Figure 2. Map of survey stops and curlew observations in the Mission valley.

Figure 3. Map of survey stops and curlew observations in the Blackfoot valley.

Figure 4. Map of survey stops and curlew observations in the Helena valley.

Nightjar Surveys

About Common Nighthawks & Poorwills

Common Nighthawks are diurnal bat-like fliers that are found in rural and urban open areas, grasslands, rocky outcrops, and sagebrush. They forage on the wing at sunset for flying insects. They are often detected by their nasally *peent* calls or by their impressive booming flight displays during the summer breeding season. Common Poorwills are often found roosting in shrublands and leaf litter, where they effortlessly blend in. Poorwills are detected primarily through their auditory *poorwhillip* call throughout the night. Montana lacks vital population and distribution data, classifying both birds as a **Species of Greatest Information Need**. Both species face similar threats from habitat loss and pesticide use, but Poorwills are less abundant than Nighthawks, designating them as a **Potential Species of Concern**.

About The Survey

Between June 1st and August 10th, surveyors travelled to sites across Montana to conduct their passive listening survey routes around sunset. Each route consisted of 10 stops, located at least a mile apart along routes in suitable habitat. To improve the accuracy of the data, a double-observer method was used, creating two independent data sets for each stop. At each stop, the surveyor(s) passively listened for any calls or visuals of Nighthawks or Poorwills along the roadside.

Photos by Bob Martinka



Results:

76 Citizen Scientists

64 Survey Routes

est. 618 miles Surveyed

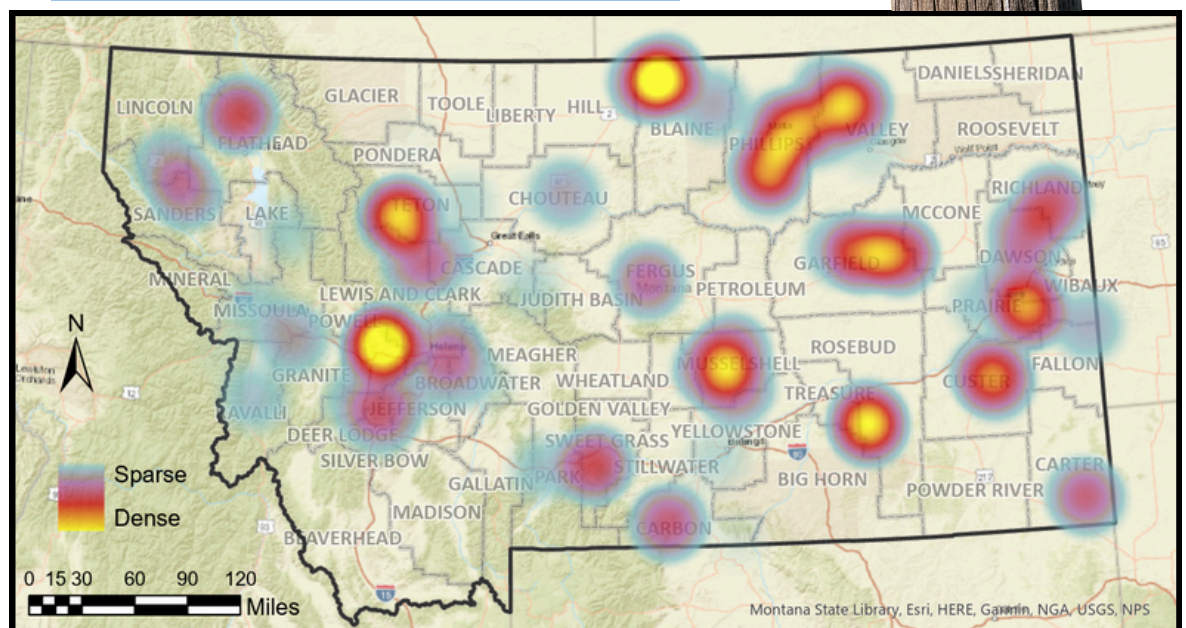
1,603 Nighthawks Detected

19 Poorwills Detected

50 Incidental Species Recorded



Figure 5. Heat map distribution of 1,603 Nighthawks detected during passive listening surveys in Montana between June 1 and August 10.



What's Next?

How Is The Data Used?

After each survey is conducted, all paper data sheets and Survey123 forms are submitted to Montana Natural Heritage Program's statewide database, and is checked for any potential errors.

Each survey dataset is sent to all project partners, and used to generate reports and inform volunteers, sponsors, and the public on how the project went.

The data adds to the understanding of the distribution and population size of each species.

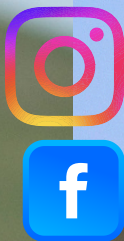
Updated conservation statuses contribute to Montana Fish, Wildlife, and Parks Statewide Wildlife Conservation Action Plan, forming plans for action to conserve species in need.

Looking Towards 2026

Stay tuned to our eNewsletter, website, and social media accounts for updates on our future citizen science projects. We hope to continue projects like these in future years, which would not be possible without all of our citizen scientists who donate their time and effort. In addition to our citizen scientists, these projects would not be possible without Montana Fish, Wildlife, and Parks, the Tracy Aviary, the L.E.A.W. Family Foundation, the Blackfoot Challenge, the Confederated Salish and Kootenai Tribes, and the Montana Natural Heritage Program.

If you'd like to learn more about each project's results, please see our individual project reports by clicking the picture of each target species below.

If you have any questions, reach out to Gwynne Rohde at gwynne@mtaudubon.org.



Screech-Owl Citizen Scientists

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Beth Hill
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Boo Curry
Brooke Tucker
Casey Zacney
Catherine Frazer
Chelsea Klocke
Cindy Holder
Cindy Stillwell
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Deborah Gay
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Don Jackson
Don Skaar
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Dustin Gage
Ed Tyanich
Elaina Graham

Ellie Brown
Emalee Pollock
Haley Schwarz
Jack Marshall
Jackie McKennan
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Janice Johnson
Jasmin Langford
Jeff Olsson
Jennifer Pentrack
Jennifer Swica
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Jessica Callahan
Jill Leblow
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Julee Shamhart
Julie Ferrin
Justin Kim
Karen Olson
Keilin Huang
Kelli Schneider
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Lauren Smith
Leslie Marty
Libby Langston

Lisa Bruno
Lori Booth
Lydia Waner
Mary Collins
Megan Parker
Meghan Mutch
Melissa Moser
Kelly Rumney
Patty Schupp
Phillip Blundell
Rebecca Barkley
Ren Schillinger
Renee Penewell
Renee Verbeck
Richard Hildner
Robert Penewell
Robyn Horgdal
Ryan Schwochert
Samantha Yonan
Sandy Kratville
Sarah Boggs
Sarah Halvorson
Sarah Rumney
Shalon Hastings
Steve Barkley
Steve Kratville
Susie Wall
Suzanne Hildner
Tim Olson
Tracy Cook
Willa Zhang

Long-billed Curlew Citizen Scientists

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Chris Ebeling	Judy Sweeney	Sandy Shull
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Nightjar Citizen Scientists

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Beth Hill

Beth Waterbury

Bill Milton

Boo Curry

Cailin Morgan

Canaan Bontadelli

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Chelsea Klocke

Cienna Semsak

Crystal Brown

Daniel Solomon

Dave Boggs

Deb Tyanich

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