



Iowa's Motus Wildlife Tracking Network

2025 Annual Report

Anna Buckardt Thomas
Iowa DNR Avian Ecologist

Riggs Wilson
Iowa DNR Wildlife Research Specialist



IOWA DEPARTMENT OF NATURAL RESOURCES

Table of Contents

Abstract.....	1
Introduction	1
What is Motus?	1
Full Annual Cycle Conservation	2
Why Motus in Iowa?.....	3
Motus Station Placement in Iowa.....	3
Strategic Station Placement	3
Station Placement Progress.....	4
Motus Tagging in Iowa.....	5
Wood Thrush	5
Iowa Motus Detections.....	8
Motus Detection Summary 2021-2025	8
2025 Motus Detection Summary	9
Iowa DNR Station Summaries.....	12
Partner Station Summaries	17
Literature Cited	23

Abstract

The Iowa DNR, with support from U.S. Fish and Wildlife Service grant funding, initiated a network of automated radio telemetry receiver stations as part of the Motus Wildlife Tracking System ([motus.org](https://www.motus.org)) in summer 2021. Between August 2021 and September 2022, an initial eight Motus stations were installed at DNR buildings across the state. Three additional stations were funded by partners and placed on County Conservation Board properties in fall 2022. Since then, the DNR and partners have continued to grow the station network each year, with 42 Motus stations across the state by the end of 2025. These stations are part of a hemisphere-wide coordinated wildlife telemetry system focused on understanding long-distance movements of small migratory wildlife species like birds, bats, and insects. Any wildlife tagged on the Motus system have the potential to be detected by Iowa's Motus receiver stations if they come within range. In 2025, Iowa Motus stations recorded 314 detections of 179 individuals from 20 bird species and one bat species. Since the beginning of the project in 2021, Iowa Motus stations have recorded a total of 924 detections of 480 individuals from 45 bird and 1 bat species. While most of these individuals were captured and tagged by licensed researchers outside of Iowa, the Iowa DNR collaborated with regional partners to tag Wood Thrush in Iowa during the summers of 2024 and 2025 and a U.S. Fish and Wildlife Service Grant is funding additional Wood Thrush Tracking in Western Iowa in 2025 and 2026 by researchers at Iowa State University.

Introduction

What is Motus?

The Motus Wildlife Tracking System is a collaborative global network of automated radio telemetry receivers and tagging projects. Motus was initiated in Ontario by Birds Canada in 2012 and has expanded globally since (Figure 1). Motus uses radio telemetry, which has three main components; transmitters, antennas, and receivers. The transmitters send out radio signals every few seconds and are placed on wildlife. Antennas are used to listen for the radio signals of nearby wildlife tagged with transmitters. Receivers interpret the radio signals heard by the antennas. Traditional wildlife telemetry requires every tagged individual to transmit a unique radio frequency, and for the receiver to be re-tuned to the frequency of each tagged individual a researcher is trying to find. The Motus system uses the same general components of radio telemetry, but the transmitters are digitally coded tags that allow for unique identification of thousands of individuals on a single radio frequency and the receivers are automated and set to listen only for Motus radio frequencies (Taylor et al. 2017).

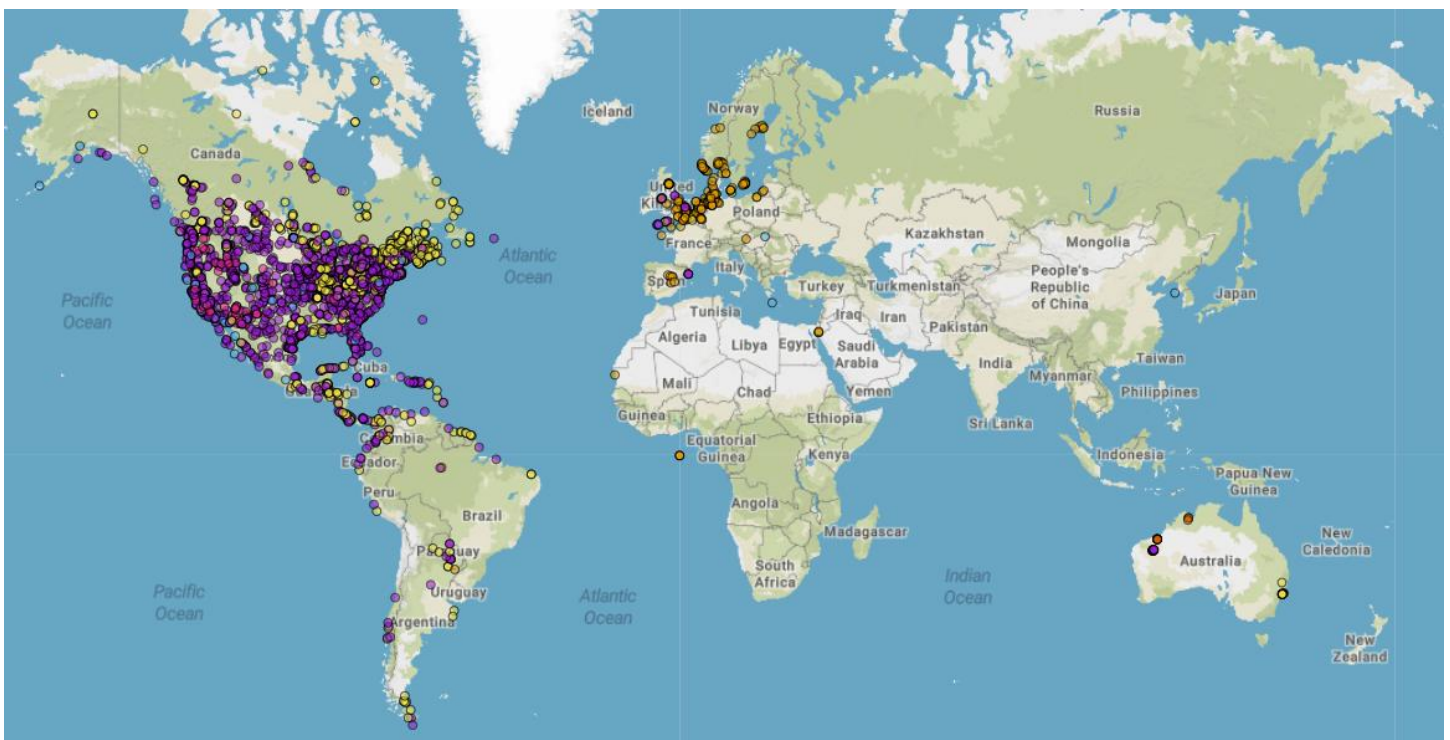


Figure 1. Motus Wildlife Telemetry System receivers (colored dots) across the globe as of December 2025.

In the Western Hemisphere, Motus tags and receiver stations (Figure 2) operate on two frequencies, 166.38 and 434 MHz. Scientists register tags and stations in a centralized database operated by Birds Canada, allowing researchers across the globe to collaboratively learn about the movements of small wildlife like never before. A tagged animal can be detected by any Motus receiver station in the Hemisphere, allowing researchers to build point-by-point maps of migrations for animals like birds, bats, and insects. Although GPS tracking technologies exist and are capable of recording highly-accurate locations of wildlife in real time, these technologies are too heavy to be carried by small wildlife like many birds, bats, and insects. The Motus system, which uses tags as small as 0.2 grams, is particularly suited for learning about long-distance movements of small wildlife by leveraging the power of global collaboration.



Figure 2. Examples of Motus receiver stations in Iowa

Full Annual Cycle Conservation

Over 400 species of birds can be seen in Iowa, the majority of which are considered migratory, meaning their range shifts during different parts of the year. Of those, a large proportion are long-distance migrants, traveling thousands of miles each year between breeding and nonbreeding areas. For example, the Baltimore Oriole, a common forest bird in Iowa during the summer, may travel as far as northern South America for winter (Figure 3). Using a full annual cycle conservation approach recognizes that these migratory species face different population pressures, habitat needs, and threats in different parts of their range throughout the year, and aims to support them at all stages of their annual cycle.

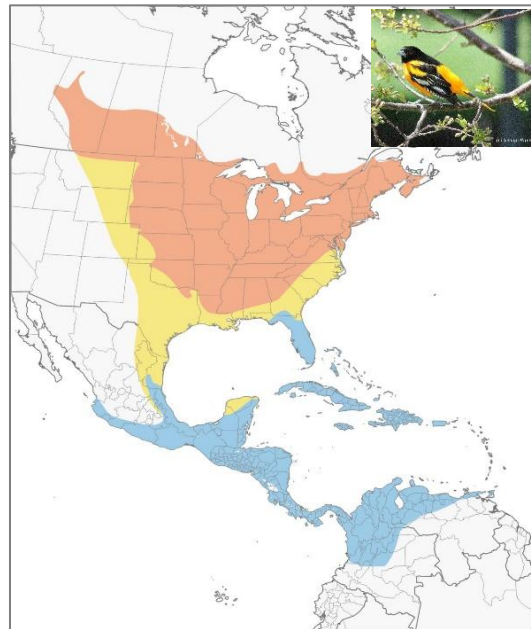


Figure 3. The annual range of the Baltimore Oriole. (Inset photo credit: Doug Harr).
Map credit: Cornell Lab of Ornithology, Allaboutbirds.org.

Scientists have documented a loss of 2.9 billion North American birds since 1970, with migratory birds declining by 28% over that time (Rosenberg et al. 2019) and research shows that bird populations are declining faster now than 20 years ago (Leroy et al. 2026). Habitat loss, outdoor domestic cats, collisions with windows, and other human-related threats are largely driving these declines. However, each species has its own unique population trend which coincides with the species-specific range, habitat and resource needs, and the unique threats each species faces. The migration period, while birds are highly mobile at a hemispheric scale, is the most difficult part of the annual cycle for biologists to understand. There are many questions surrounding the threats birds face during migration, their habitat needs, migratory connectivity, and what conservation actions can most help bird populations. Motus is one important tool that can help conservationists answer some of these important questions about migration and implement full annual cycle conservation to help stop and reverse the decline of North American bird populations.

Why Motus in Iowa?

Iowa is an important migratory corridor for North American birds. Its location in the heart of the Mississippi Flyway and between two major rivers contributes to its high use by birds during migration. In fact, Iowa sees some of the highest volumes of migratory birds of any state during fall migration (Figure 4). An estimated 868 million birds crossed through Iowa during the fall of 2021, and in some years that number reaches 1 billion (BirdCast- Cornell Lab of Ornithology).

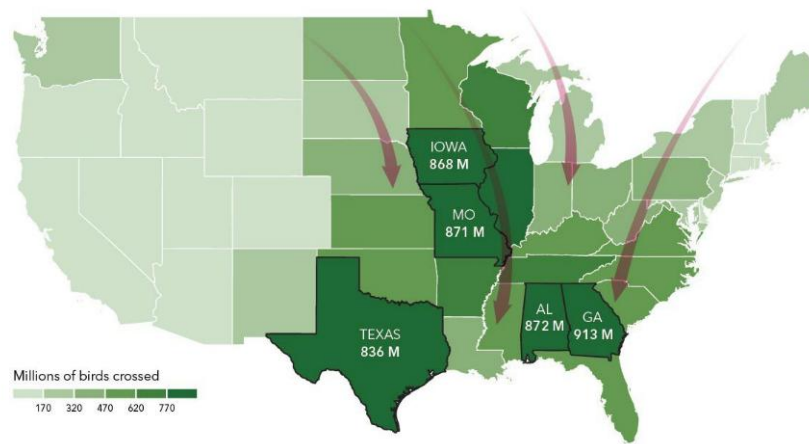


Figure 4. Cumulative estimates of the number of migratory birds passing through each state during fall migration 2021 based on radar data. The states with the highest volume of migratory birds are shown in dark green with Iowa seeing the 4th highest volume of birds. Credit: Allaboutbird.org, BirdCast.

By strategically placing Motus receiver stations across Iowa, we have the potential to contribute valuable migratory data for a large variety of species, including over 100 migratory bird and 6 bat species of greatest conservation concern. The data gathered by these Motus stations can help researchers understand aspects of the routes, timing, speed, and habitat use of migratory species which can be used to inform conservation action.

Motus Station Placement in Iowa

Strategic Station Placement

The DNR’s vision for Motus station placement in Iowa is to create an east-west fence of stations through the center of the state and to border the Mississippi and Missouri Rivers with stations. This would maximize detection of north-south migrating wildlife and improve understanding of wildlife use of the habitat corridors along the major rivers. Iowa’s station placement vision also aligns with the broader Motus vision for Midwestern States as created by the Midwest Migration Network. The Iowa DNR prioritizes station placement across the state according to the state vision yet, implementation is flexible to account for elevation, property ownership, and other practical constraints of placement. The DNR is nearing the realization of this station vision and once it is completed we will stop placing more DNR stations and will focus on providing technical support to partners who want to place stations of their own. Motus stations placed anywhere in the state are valuable, and we help support stations wherever funding and technical logistics allow.

Station Placement Progress

The initiation of the Motus network in Iowa was made possible by a U.S. Fish and Wildlife Service (USFWS) Competitive State Wildlife Grant (Missouri Division of Conservation, 2020) which funded 59 stations in eight Midwestern states (IA, IN, IL, OH, MI, MN, MO, WI) and three countries (Mexico, Costa Rica, and Colombia). This grant funded the equipment for seven of the Iowa DNR's stations and partially funded an eighth station. The first five of these DNR stations were placed between August and December of 2021, with two additional stations placed in spring of 2022, and one station placed in fall of 2022. Through additional partnerships and funding, the Iowa Motus network has grown to 42 stations by the end of 2025 (Figure 5, Figure 6).

Partner organizations started funding and placing stations in the fall of 2022 and have continued since. Partner stations were made possible through funding and support from Pottawattamie County Conservation, Bremer County Conservation, Hardin County Conservation, the Prairie Rapids Audubon Society, the Gilchrist Foundation, Des Moines Audubon, Iowa Audubon, Iowa Ornithologists' Union, Dubuque County Conservation, Friends of Mines of Spain, Dubuque County Conservation Society, Dubuque Audubon, Lyon County Conservation, Wapello County Conservation, Madison County Conservation, Black Hawk County Conservation, The Friends of Hartman Reserve, Neal Smith National Wildlife Refuge, USFWS Migratory Birds -Midwest Region, Blank Park Zoo, the Loess Hills Preservation Society, Winterset Kiwanis Club, Friends of Ada Hayden Heritage Park, the City of Ames, Story County Conservation, Colo-NESCO Elementary School, Polk County Conservation, Linn County Conservation, Harrison County Conservation, Crawford County Conservation, Webster County Conservation, Friends of Webster County Conservation, Ann Smeltzer Charitable Trust, and a number of donations from individuals, including in memory of John Utter and Nancy Slife.

In July of 2023, the Iowa DNR received two generous donations from Musco Sports Lighting and Diane Crookham-Johnson, which will allow us to install an additional 20 stations across the state by 2028. IA DNR installed ten new Motus stations with this funding in 2024 and 2025. Placement of four of these stations were used as matching funds to help secure a U.S Fish and Wildlife Service grant worth \$250k (Iowa Department of Natural Resources, 2024). This grant allows the DNR to manage forest habitat and conduct bat and Wood Thrush Motus research along the Missouri River in 2025-2026.

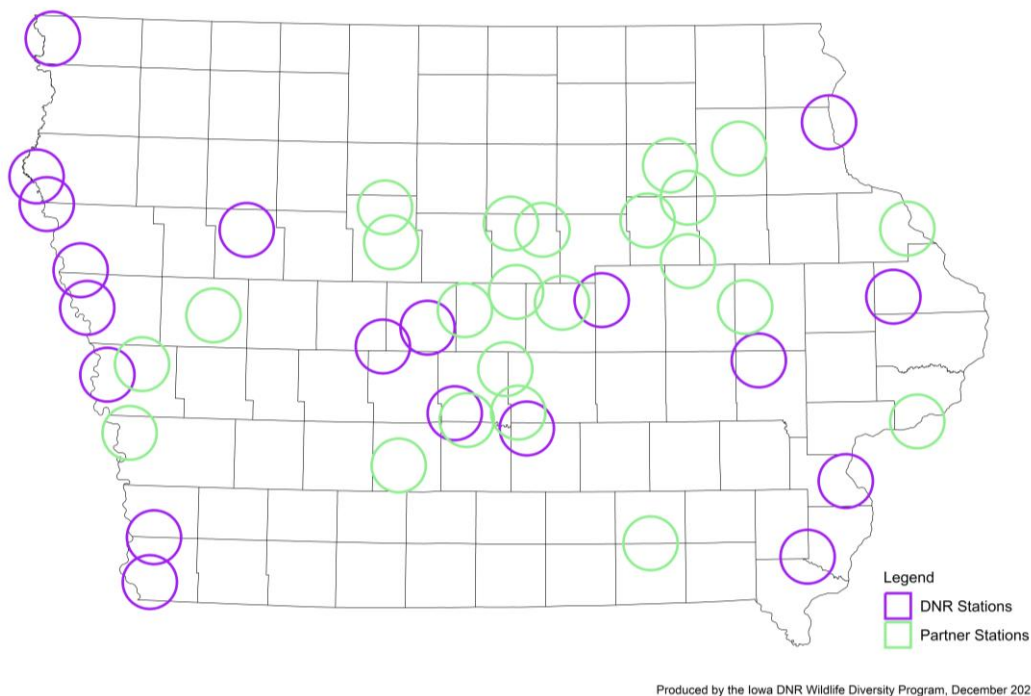


Figure 5. Motus stations in Iowa as of December 2025. DNR stations are in purple, partner stations are in green. Circles represent a 15-km radius around each station, the maximum detection range of most antennas.

Station placement thus far has generally followed the vision of an east-west fence through the center of the state and north-south fences along the rivers, but additional stations have been added based on local support. Stations in Iowa are dual-listening, meaning they operate on both the 166.38 and 434 MHz Motus frequencies, allowing them to detect any wildlife tagged on the Motus system in the Western Hemisphere. Antennas at each station are directional and generally oriented east and west in order to maximize detection of north-south moving wildlife.

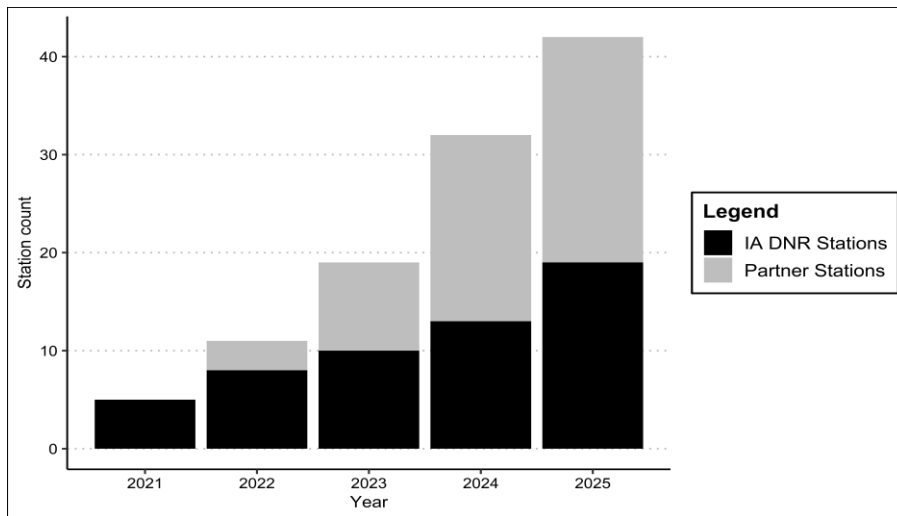


Figure 6. The number of Motus stations operational in Iowa in each year from 2021-2025. Black represents DNR stations, and gray represents partner stations.

Motus Tagging in Iowa

Wood Thrush

In 2024 and 2025, the Iowa DNR collaborated with the U.S. Fish and Wildlife Service and many other states and international partners on an effort to deploy Motus tags on Wood Thrush across their eastern North America breeding range and their nonbreeding range in Central America. Wood Thrush are a Species of Greatest Conservation Need in 25 states, including Iowa, and are considered a common forest bird in steep decline. By tagging Wood Thrush across their range and detecting them on the network of Motus stations throughout the year, we are able to learn about their migratory routes and timing, migratory connectivity, and annual survival. Project partners tagged over 1000 Wood Thrush in 2024 and 2025 across 25 states and provinces, Mexico, and several Central American countries.

During the summer of 2024, Iowa DNR staff tagged 27 Wood Thrush at nine sites across the state near existing Motus stations. In 2025, 10 tags were deployed across 6 sites. Wood Thrush were captured and tagged under Federal Bird Banding permits using targeted mist netting and audio lures (Figure 7). Tags were attached to the Wood Thrush with a leg-loop harness and were 3% or less of the bird's body weight so they do not impact the bird's daily activity or flight. The battery lifespan of each tag is at least 400 days, allowing us to track the Wood Thrush during their fall and spring migration routes throughout a full annual cycle.

Tagged Iowa Wood Thrush started their fall migration between September 20 and October 11 in 2024 (Figure 8). 23 of 27 tagged birds were detected during fall migration in 2024, and 16 of those birds were detected again during spring migration in 2025 (Figure 9). 14 birds (52%) were documented returning back to the area where they were tagged in 2024 for the 2025 breeding season, with the first returning on April 29, 2025. 22 tagged birds migrated south in 2025; 12 of those birds were tagged in 2024 (Figure 10). Wood thrush began migrating between September 22 and October 13 in fall 2025, and 8 birds left on October 7, 2025.



Figure 7. Left: A Wood Thrush fitted with a Motus tag. Right: A Wood Thrush caught safely in a mist net.

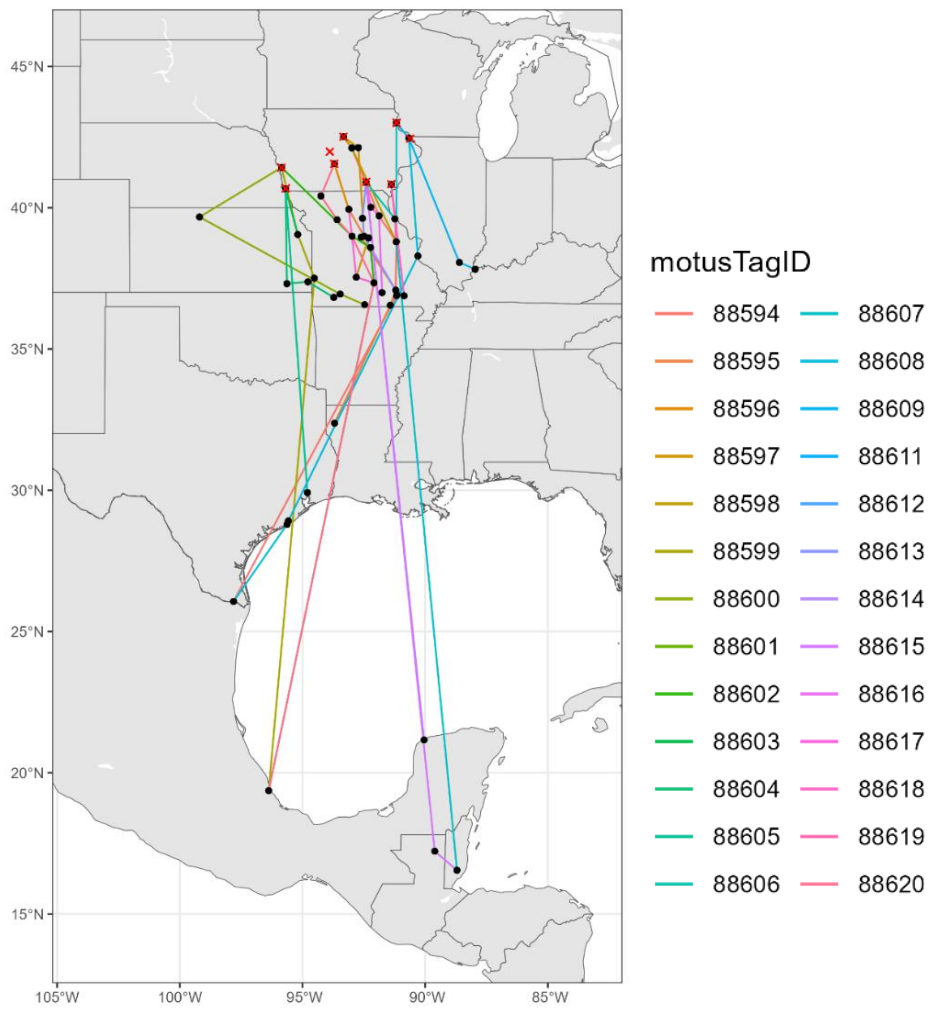


Figure 8. Map showing fall (southward) migration routes of Wood Thrush tagged in Iowa during 2024. Tagging locations are represented by the red x's, Motus receivers where Wood Thrush were detected are represented by the black circles, and individual migration pathways are shown in unique colors.

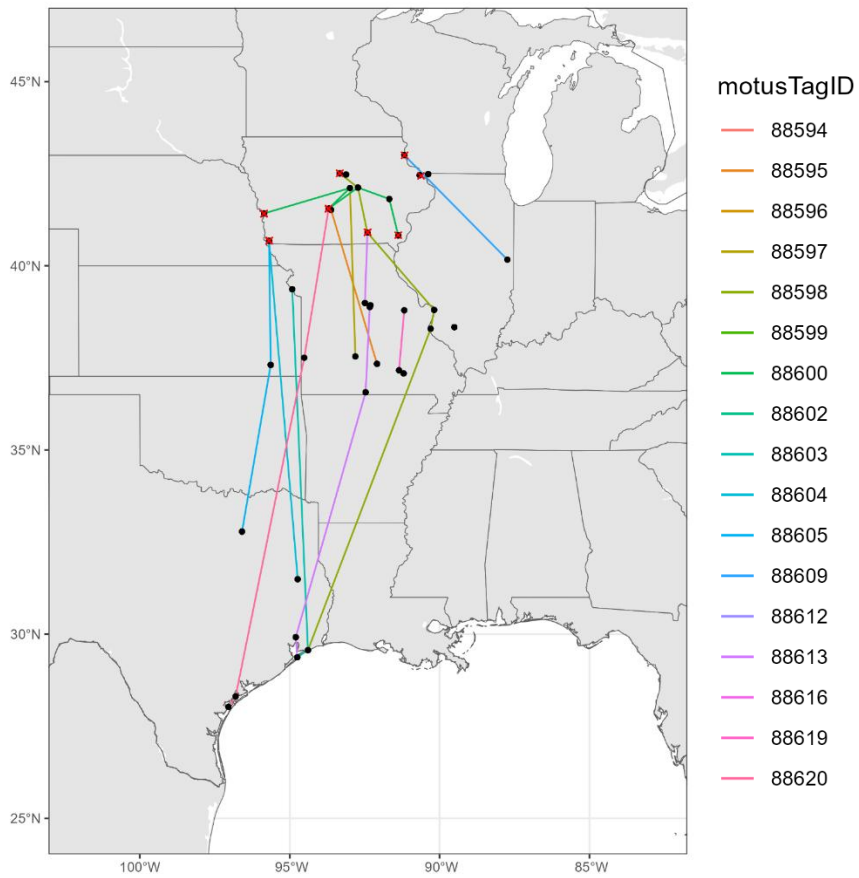


Figure 9. Map showing spring (northward) 2025 migration routes of Wood Thrush tagged in Iowa during summer 2024. Tagging locations are represented by the red x's, Motus receivers where Wood Thrush were detected are represented by the black circles, and individual migration pathways are shown in unique colors.

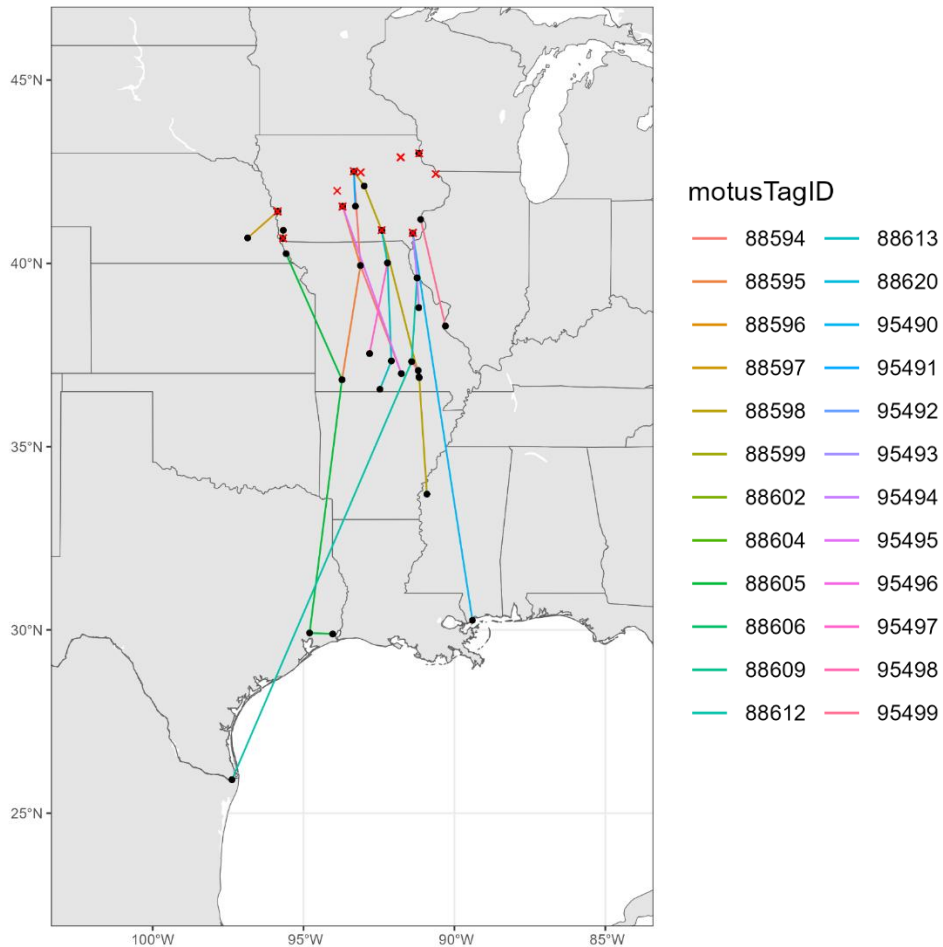


Figure 10. Map showing fall (southward) 2025 migration routes of Wood Thrush tagged in Iowa during summer 2024 and 2025. Tagging locations are represented by the red x's, Motus receivers where Wood Thrush were detected are represented by the black circles, and individual migration pathways are shown in unique colors.

Iowa Motus Detections

Motus Detection Summary 2021-2025

Motus stations in Iowa have been operational for as little as 1 and as many as 51 months. From 2021-2025, Iowa Motus stations had a total of 924 detections of 480 individuals from 45 bird species and one bat species.

Table 1 Total number of detections and detection rate (detections per month) for IA DNR stations since station start.

Station Name	Start Date	Total Detections	Detection Rate
Blackhawk Unit	04-2022	47	1.04
Boone WRS	09-2021	57	1.10
Broken Kettle -TNC	03-2025	8	0.80
Geode State Park	04-2022	51	1.16
Greene County - Rippey	11-2024	3	0.21
Hawkeye WMA	10-2021	80	1.57
Iowa DNR Headquarters	05-2024	14	0.74
Lake Pahoja - IA Ornithologists' Union/IA Audubon	10-2023	11	0.41
Maquoketa Caves State Park	03-2025	1	0.11
MO River Unit	09-2021	35	0.69
Mondamin Fire & Rescue Station	10-2025	0	0.00

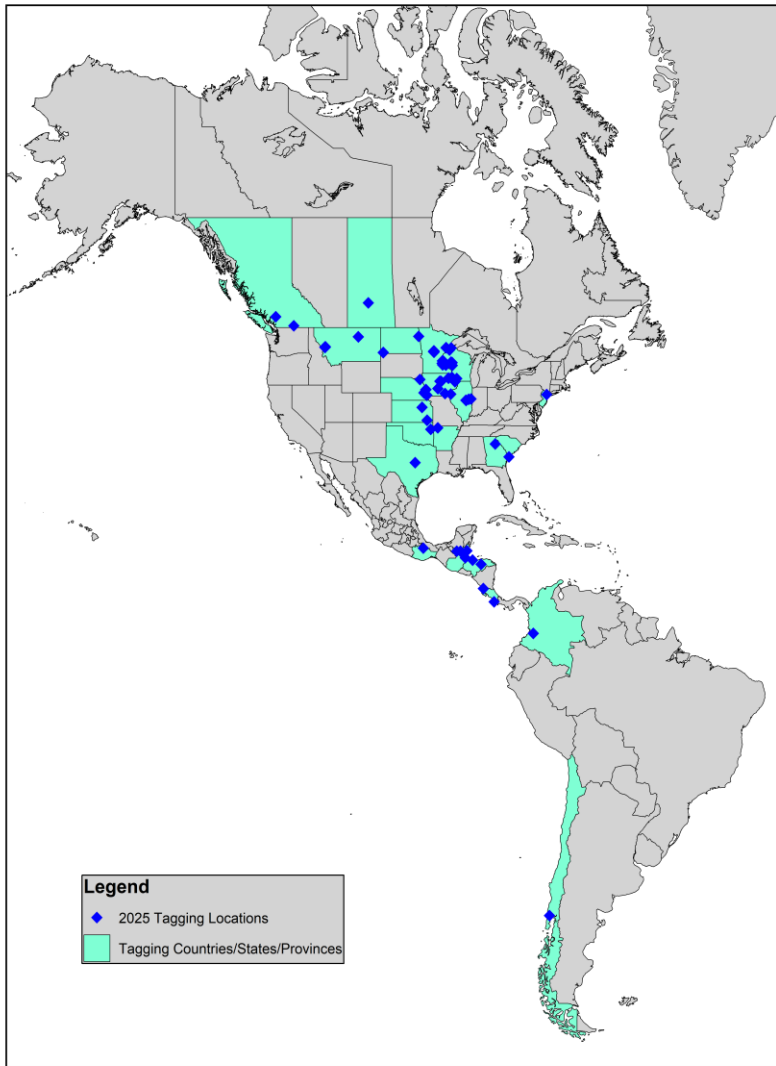
Station Name	Start Date	Total Detections	Detection Rate
Odessa Wildlife Unit	10-2021	46	0.90
Pikes Peak	10-2021	22	0.44
Red Rock Wildlife Unit	11-2024	4	0.29
Stone State Park	09-2025	1	0.33
Tabor Fire Station	09-2025	6	1.50
Union Grove State Park	09-2022	37	0.95
Waubonsie State Park	08-2023	32	1.14
Westwood CSD	11-2025	0	0.00

Table 2 Total number of detections and detection rate (detections per month) for partner stations since station start.

Station Name	Start Date	Total Detections	Detection Rate
Ada Hayden Heritage Park	03-2024	6	0.27
Albion-Marshall County Conservation	01-2024	20	0.83
Blank Park Zoo -Des Moines Audubon	07-2023	32	1.10
Bremer County Conservation	11-2022	55	1.45
Calkins Nature Area- Hardin County Conservation	10-2022	20	0.51
Colo-Nesco/Story County Conservation	06-2024	5	0.28
Hartman Reserve -Black Hawk County Conservation	07-2023	27	0.90
Hitchcock Nature Center	09-2022	69	1.73
McFarlane Park -Black Hawk County Conservation	09-2024	17	1.13
Mines of Spain -Dubuque County Conservation	06-2023	54	1.74
Nahant Marsh Education Center	04-2025	0	0.00
Nancy Slife Memorial Station at HCCB HQ	06-2024	3	0.16
Neal Smith NWR	11-2023	8	0.32
Pammel State Park - Madison County Conservation	12-2023	6	0.25
Pioneer Ridge- Wapello County Conservation	09-2023	40	1.48
Polk County Conservation - Chichaqua	11-2024	4	0.29
Siggelkow Park -Black Hawk County Conservation	09-2024	1	0.07
Smeltzer Trust Learning Farm	10-2025	0	0.00
Volga State Rec Area	09-2025	0	0.00
Webster County Conservation - Kennedy Park	09-2025	0	0.00
Wickiup Hill Learning Center	09-2024	5	0.31
Willow Lake Nature Center	05-2024	13	0.65
Yellow Smoke	08-2024	8	0.47

2025 Motus Detection Summary

















In 2025, Iowa stations had 314 detections of 179 individuals from 20 bird species and one bat species, with some individuals detected at more than one station and/or during both spring and fall migration. 81 individuals were detected in spring and 116 individuals were detected in fall. The top three most detected species in 2025 were Wood Thrush (94 individuals), Swainson's Thrush (19 individuals), and Semipalmated Sandpiper (10 individuals). All species detected in 2025 are shown in Table 3. Iowa Stations detected tagged wildlife from 34 different projects in 2025. Detected animals were tagged in the United States (AR, GA, IA, IL, KS, MN, MT, ND, NE, NJ, OK, SC, TX, WI), Canada (BC, SK), Belize, Chile, Colombia, Costa Rica, Guatemala, Honduras, and Mexico (Oax) (Figure 11).








Produced by the Iowa DNR Wildlife Diversity Program, December 2025

Figure 11. The origin of wildlife detected at Iowa Motus stations in 2025. The states (U.S. and Mexico), provinces (Canada), and Countries (Caribbean and Central and South America) where birds detected in Iowa were tagged are highlighted in aquamarine. Exact tagging locations are shown as blue diamonds.

Table 3 Summary of species detected by Iowa Motus stations in 2025.

			
Hoary Bat	Lesser Yellowlegs	Semipalmated Sandpiper	Franklin's Gull
Individuals Detected: Spring - 0 Fall - 1 Total - 1	Individuals Detected: Spring - 0 Fall - 2 Total - 2	Individuals Detected: Spring - 10 Fall - 0 Total - 10	Individuals Detected: Spring - 2 Fall - 3 Total - 5
			
Ring-Billed Gull	Least Tern	Northern Saw-whet Owl	Common Nighthawk
Individuals Detected: Spring - 1 Fall - 0 Total - 1	Individuals Detected: Spring - 0 Fall - 5 Total - 5	Individuals Detected: Spring - 3 Fall - 2 Total -	Individuals Detected: Spring - 0 Fall - 4 Total - 4
			
Gray Catbird	Brown Thrasher	Black-billed Cuckoo	Bobolink
Individuals Detected: Spring - 1 Fall - 0 Total - 1	Individuals Detected: Spring - 0 Fall - 4 Total - 4	Individuals Detected: Spring - 0 Fall - 3 Total - 3	Individuals Detected: Spring - 0 Fall - 1 Total - 1
			
Rusty Blackbird	Swainson's Thrush	Veery	Gray-cheeked Thrush
Individuals Detected: Spring - 0 Fall - 6 Total - 6	Individuals Detected: Spring - 5 Fall - 14 Total - 19	Individuals Detected: Spring - 0 Fall - 1 Total - 1	Individuals Detected: Spring - 1 Fall - 0 Total - 1

			
Wood Thrush	Yellow-rumped Warbler	Northern Waterthrush	Sprague's Pipit
Individuals Detected: Spring - 45 Fall - 66 Total - 94	Individuals Detected: Spring - 1 Fall - 0 Total - 1	Individuals Detected: Spring - 4 Fall - 3 Total - 7	Individuals Detected: Spring - 1 Fall - 0 Total - 1
	TOTAL		
Harris's Sparrow			
Individuals Detected: Spring - 7 Fall - 1 Total - 7	Individuals Detected: Spring - 81 Fall - 116 Total - 179		

Iowa DNR Station Summaries

Station: Blackhawk Unit

Sac County

Start Date: April 2022

2025 detection rate: 0.75 detections/month

2025 Blackhawk Unit Detections		
Species	Individuals Detected	Total Detections
Black-billed cuckoo	1	1
Franklin's gull	1	1
Least tern	1	1
Semipalmated sandpiper	2	2
Swainson's thrush	3	3
Wood thrush	1	1

Station: Boone WRS

Boone County
Start Date: September 2021
2025 detection rate: 0.5 detections/month

2025 Boone WRS Detections		
Species	Individuals Detected	Total Detections
Gray-cheeked thrush	1	1
Wood thrush	4	4
Yellow-rumped warbler	1	1

Station: Broken Kettle - TNC

Plymouth County
Start Date: March 2025
2025 detection rate: 0.8 detections/month

2025 Broken Kettle – TNC Detections		
Species	Individuals Detected	Total Detections
Franklin’s gull	1	1
Harris’s sparrow	4	4
Least tern	3	12

Station: Geode State Park

Henry County
Start Date: April 2022
2025 detection rate: 1.33 detection/month

2025 Geode State Park Detections		
Species	Individuals Detected	Total Detections
Common nighthawk	1	1
Northern saw-whet owl	2	2
Rusty blackbird	1	1
Semipalmated sandpiper	2	2
Wood thrush	10	10

Station: Greene County -Rippey

Greene County
Start Date: November 2024
2025 detection rate: 0.25 detections/month

2025 Greene County -Rippey Detections		
Species	Individuals Detected	Total Detections
Gray-cheeked thrush	1	1
Wood thrush	2	2

Station: [Hawkeye WMA](#)

Johnson County

Start Date: October 2021

2025 detection rate: 1.67 detections/month

2025 Hawkeye WMA Detections		
Species	Individuals Detected	Total Detections
Brown thrasher	1	1
Hoary Bat	1	1
Semipalmated sandpiper	1	1
Swainson's thrush	2	2
Veery	1	1
Wood thrush	14	16

Station: [Iowa DNR Headquarters](#)

Polk County

Start Date: May 2024

2025 detection rate: 0.5 detections/month

2025 Iowa DNR Headquarters Detections		
Species	Individuals Detected	Total Detections
Wood thrush	6	6

Station: [Lake Pahoja - IA Ornithologists' Union/IA Audubon](#)

Lyon County

Start Date: October 2023

2025 detection rate: 0.42 detections/month

2025 Lake Pahoja Detections		
Species	Individuals Detected	Total Detections
Franklin's gull	2	2
Harris's sparrow	2	2
Ring-billed gull	1	1

Station: [Maquoketa Caves State Park](#)

Jackson County

Start Date: March 2025

2025 detection rate: 0.11 detections/month

2025 Maquoketa Caves State Park Detections		
Species	Individuals Detected	Total Detections
Lesser yellowlegs	1	1

Station: MO River Unit

Monona County

Start Date: September 2021

2025 detection rate: 1.0 detections/month

2025 MO River Unit Detections		
Species	Individuals Detected	Total Detections
Bobolink	1	1
Common nighthawk	1	1
Franklin's gull	2	2
Harris's sparrow	3	3
Least tern	2	2
Lesser yellowlegs	1	1
Swainson's thrush	1	1
Wood thrush	1	1

Station: Mondamin Fire & Rescue Station

Harrison County

Start Date: October 2025

2025 detection rate: 0.0 detections/month

2025 Mondamin Fires & Rescue Detections		
Species	Individuals Detected	Total Detections
NA	NA	NA

Station: Odessa Wildlife Unit

Louisa County

Start Date: October 2021

2025 detection rate: 1.67 detections/month

2025 Odessa Wildlife Unit Detections		
Species	Individuals Detected	Total Detections
Northern saw-whet owl	3	3
Northern waterthrush	2	2
Rusty blackbird	2	4
Swainson's thrush	3	3
Wood thrush	10	10

Station: Pikes Peak

Clayton County

Start Date: October 2021

2025 detection rate: 0.33 detections/month

2025 Pikes Peak Detections		
Species	Individuals Detected	Total Detections
Wood thrush	4	4

Station: Red Rock Wildlife Unit

Marion County
Start Date: November 2024
2025 detection rate: 0.17 detections/month

2025 Red Rock Wildlife Unit Detections		
Species	Individuals Detected	Total Detections
Franklin's gull	1	1
Semipalmated sandpiper	1	1

Station: Stone State Park

Woodbury County
Start Date: September 2025
2025 detection rate: 0.33 detections/month

2025 Stone State Park Detections		
Species	Individuals Detected	Total Detections
Franklin's gull	1	1

Station: Tabor Fire Station

Fremont County
Start Date: September 2025
2025 detection rate: 1.5 detections/month

2025 Tabor Fire Station Detections		
Species	Individuals Detected	Total Detections
Franklin's gull	1	1
Swainson's thrush	1	1
Wood thrush	4	4

Station: Union Grove State Park

Marshall County
Start Date: September 2022
2025 detection rate: 0.33 detections/month

2025 Union Grove State Park Detections		
Species	Individuals Detected	Total Detections
Wood thrush	4	4

Station: Waubonsie State Park

Fremont County
Start Date: August 2023
2025 detection rate: 1.58 detections/month

2025 Waubonsie State Park Detections		
Species	Individuals Detected	Total Detections
Least tern	2	2
Wood thrush	17	17

Station: Westwood CSD

Woodbury County
Start Date: November 2025
2025 detection rate: 0.0 detections/month

2025 Westwood CSD Detections		
Species	Individuals Detected	Total Detections
NA	NA	NA

Partner Station Summaries

Station: Ada Hayden Heritage Park

Story County
Start Date: March 2024
2025 detection rate: 0.08 detections/month

2025 Ada Hayden Heritage Park Detections		
Species	Individuals Detected	Total Detections
Wood thrush	1	1

Station: Albion-Marshall County Conservation

Marshall County
Start Date: January 2024
2025 detection rate: 0.75 detections/month

2025 Albion-Marshall County Conservation Detections		
Species	Individuals Detected	Total Detections
Hoary Bat	1	1
Northern waterthrush	1	1
Hoary Bat	1	1
Northern waterthrush	1	1
Semipalmated sandpiper	1	1

Station: [Blank Park Zoo – Des Moines Audubon](#)

Polk County

Start Date: July 2023

2025 detection rate: 0.33 detections/month+

2025 Blank Park Zoo - Des Moines Audubon Detections		
Species	Individuals Detected	Total Detections
Brown thrasher	1	1
Least tern	1	1
Semipalmated sandpiper	1	1
Wood thrush	1	2

Station: [Bremer County Conservation](#)

Bremer County

Start Date: November 2022

2025 detection rate: 1.33 detections/month

2025 Bremer County Conservation Detections		
Species	Individuals Detected	Total Detections
Black-billed cuckoo	1	1
Brown thrasher	1	1
Lesser yellowlegs	1	1
Semipalmated sandpiper	1	1
Swainson’s thrush	1	1
Wood thrush	11	12

Station: [Calkins Nature Area - Hardin County Conservation](#)

Hardin County

Start Date: October 2022

2025 detection rate: 0.42 detections/month

2025 Calkins Nature Area Detections		
Species	Individuals Detected	Total Detections
Northern waterthrush	1	1
Wood thrush	4	4

Station: [Colo-Nesco/Story County Conservation](#)

Story County

Start Date: June 2024

2025 detection rate: 0.08 detections/month

2025 Colo-Nesco/Story County Conservation Detections		
Species	Individuals Detected	Total Detections
Semipalmated sandpiper	1	1

Station: Hartman Reserve -Black Hawk County Conservation

Black Hawk County
Start Date: July 2023
2025 detection rate: 1.08 detections/month

2025 Hartman Reserve- Black Hawk County Detections

Species	Individuals Detected	Total Detections
Brown thrasher	1	1
Gray-cheeked thrush	1	1
Semipalmated sandpiper	1	1
Swainson’s thrush	3	3
Wood thrush	7	7

Station: Hitchcock Nature Center

Pottawattamie County Conservation
Start Date: September 2022
2025 detection rate: 2.25 detections/month

2025 Hitchcock Nature Center Detections

Species	Individuals Detected	Total Detections
Common nighthawk	1	1
Franklin’s gull	1	1
Gray-cheeked thrush	1	1
Harris’s sparrow	2	2
Least tern	2	2
Lesser yellowlegs	1	1
Semipalmated sandpiper	1	1
Sprague’s pipit	1	1
Wood thrush	17	18

Station: McFarlane Park – Black Hawk County Conservation

Black Hawk County
Start Date: September 2024
2025 detection rate: 1.08 detections/month

2025 McFarlane Park -Black Hawk County Conservation Detections

Species	Individuals Detected	Total Detections
Brown thrasher	1	1
Northern waterthrush	1	1
Rusty blackbird	1	3
Semipalmated sandpiper	1	1
Swainson’s thrush	2	2
Wood thrush	7	7

Station: Mines of Spain – Dubuque County Conservation

Dubuque County
Start Date: June 2023
2025 detection rate: 2.25 detections/month

2025 Mines of Spain -Dubuque county Conservation Detections

Species	Individuals Detected	Total Detections
Hoary Bat	1	1
Northern saw-whet owl	3	3
Northern waterthrush	4	4
Rusty blackbird	2	2
Semipalmated sandpiper	2	2
Swainson’s thrush	5	5
Wood thrush	10	11

Station: Nahant Marsh Education Center

Scott County
Start Date: April 2025
2025 detection rate: 0.0 detections/month

2025 Nahant Marsh Detections

Species	Individuals Detected	Total Detections
NA	NA	NA

Station: Nancy Slife Memorial Station at HCCB HQ

Hardin County
Start Date: June 2024
2025 detection rate: 0.17 detections/month

2025 Nancy Slife Memorial Station at HCCB HQ Detections

Species	Individuals Detected	Total Detections
Wood thrush	2	2

Station: Neal Smith NWR

Jasper County
Start Date: November 2023
2025 detection rate: 0.25 detections/month

2025 Neal Smith NWR Detections

Species	Individuals Detected	Total Detections
Franklin’s gull	1	1
Ring-billed gull	1	1
Wood thrush	1	1

Station: Pammel State Park -Madison County Conservation

Madison County
Start Date: December 2023
2025 detection rate: 0.08 detections/month

2025 Pammel State Park Detections		
Species	Individuals Detected	Total Detections
Least tern	1	1

Station: Pioneer Ridge -Wapello County Conservation

Wapello County
Start Date: September 2023
2025 detection rate: 1.17 detections/month

2025 Pioneer Ridge Detections		
Species	Individuals Detected	Total Detections
Black-billed cuckoo	1	1
Brown thrasher	2	2
Gray catbird	1	1
Northern waterthrush	1	1
Swainson’s thrush	2	2
Wood thrush	7	8

Station: Polk County Conservation – Chichaqua

Polk County
Start Date: November 2024
2025 detection rate: 0.17 detections/month

2025 Polk County Conservation - Chichaqua Detections		
Species	Individuals Detected	Total Detections
Brown thrasher	1	1
Ring-billed gull	1	1

Station: Siggelkow Park – Black Hawk County Conservation

Black Hawk County
Start Date: September 2024
2025 detection rate: 0.08 detections/month

2025 Siggelkow Park Detections		
Species	Individuals Detected	Total Detections
Gray-cheeked thrush	1	1

Station: Smeltzer Trust Learning Farm

Webster County
Start Date: October 2025
2025 detection rate: 0.0 detections/month

2025 Smeltzer Trust Learning Farm Detections		
Species	Individuals Detected	Total Detections
NA	NA	NA

Station: Volga State Rec Area

Fayette County
Start Date: September 2025
2025 detection rate: 0.0 detections/month

2025 Volga State Rec Area Detections		
Species	Individuals Detected	Total Detections
NA	NA	NA

Station: Webster County Conservation – Kennedy Park

Webster County
Start Date: September 2025
2025 detection rate: 0.0 detections/month

Kennedy Park Detections		
Species	Individuals Detected	Total Detections
NA	NA	NA

Station: Wickiup Hill Learning Center

Linn County
Start Date: September 2024
2025 detection rate: 0.25 detections/month

2025 Wickiup Hill Learning Center Detections		
Species	Individuals Detected	Total Detections
Semipalmated sandpiper	1	1
Wood thrush	2	2

Station: Willow Lake Nature Center

Harrison County
Start Date: May 2024
2025 detection rate: 0.33 detections/month

2025 Willow Lake Nature Center Detections		
Species	Individuals Detected	Total Detections
Common nighthawk	1	1
Franklin’s gull	1	1
Harris’s sparrow	1	1
Least tern	1	1

Station: Yellow Smoke

Crawford County
Start Date: August 2024
2025 detection rate: 0.42 detections/month

2025 Yellow Smoke Detections		
Species	Individuals Detected	Total Detections
Common nighthawk	2	2
Semipalmated sandpiper	1	1
Swainson’s thrush	1	1
Wood thrush	1	1

Literature Cited

Iowa Department of Natural Resources. 2025. Breeding and Migratory Ecology of At-risk Birds and Bats withing Restored Woodlands of the Missouri River Corridor. Grant Proposal, U.S. Fish and Wildlife Service, Competitive State Wildlife Grant (C-SWG) Program.

Leroy, F, MA Jarzyna, and P Keil. 2026. Acceleration Hotspots of North American Birds’ Decline are Associated with Agriculture. *Science*, 391(6788), 971-921.

Missouri Department of Conservation. 2020. Broadening the Motus Wildlife Tracking Network and Tracking SGCN Movements in the Midwest and Neotropics. Grant proposal, U.S. Fish and Wildlife Service, Competitive State Wildlife Grant (C-SWG) Program.

Rosenberg, KV, AM Dokter, PJ Blancher, JR Sauer, AC Smith, PA Smith, JC Stanton, A Panjabi, L Helft, M Parr, and PP Marra. 2019. Decline of the North American avifauna. *Science*, 366(6461), 120-124.

Taylor, PD, TL Crewe, SA Mackenzie, D Lepage, Y Aubry, Z Crysler, G Finney, CM Francis, CG Guglielmo, DJ Hamilton, RL Holberton, PH Loring, GW Mitchell, D Norris, J Paquet, RA Ronconi, J Smetzer, PA Smith, LJ Welch, and BK Woodworth. 2017. The Motus Wildlife Tracking System: a collaborative research network to enhance the understanding of wildlife movement. *Avian Conservation and Ecology* 12:8.