



IOWA DEPARTMENT OF NATURAL RESOURCES

Wildlife Diversity News

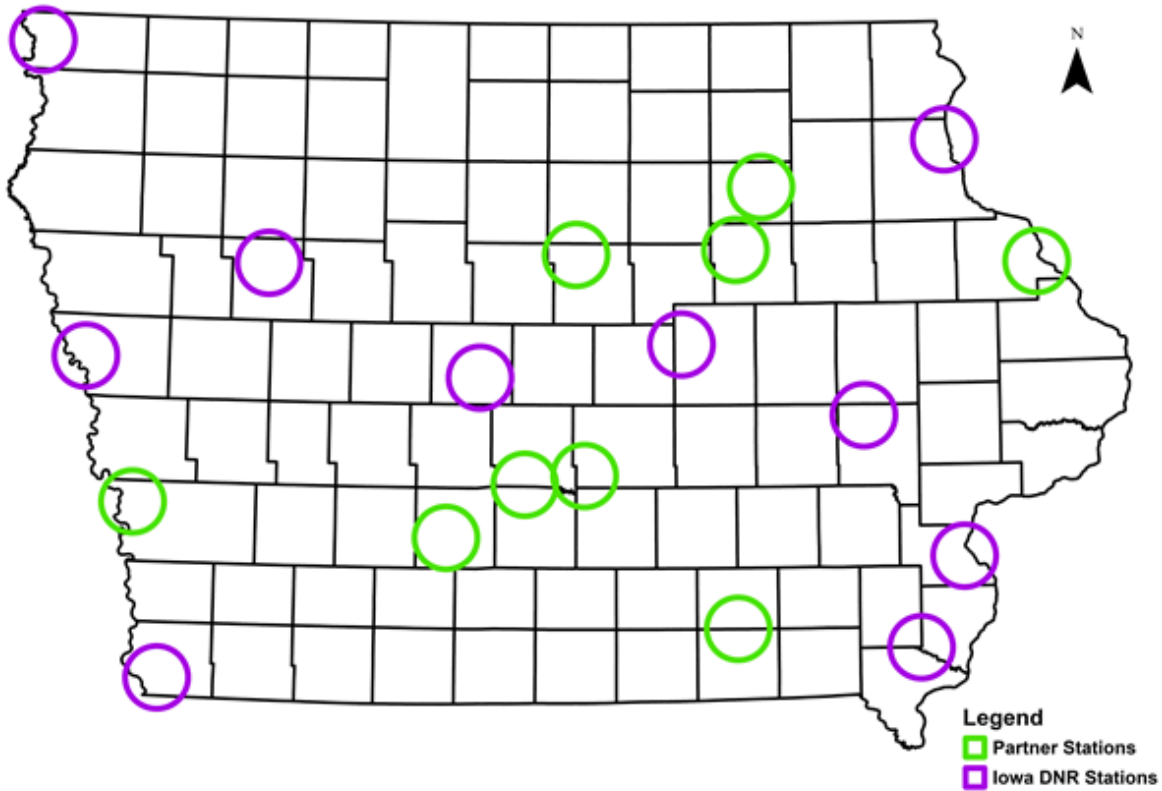
Conservation and Recreation

July 31, 2024

2023 Motus Wildlife Tracking Network Annual Report

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 in summer 2021. The Motus Wildlife Tracking System is a collaborative global network of automated radio telemetry receivers and tagging projects used to track small migratory wildlife (birds, bats, and insects). Thanks to the additional help of partners and donors, from 2021-2023, 19 Motus stations were installed in Iowa, both on DNR buildings and partner buildings. Any wildlife tagged on the Motus system have the potential to be detected by any of the receiver stations in Iowa if they come within range. From 2021-2023 Iowa Motus stations had a total of 315 detections of 198 individuals from 26 bird species. All of these individuals were captured and tagged by licensed researchers outside of Iowa, and were detected as they migrated through the state. In 2023, Iowa Motus stations recorded 249 detections of 151 individuals from 21 bird species. All Motus records are publicly explorable on motus.org and you can check out our full annual report [here](#).





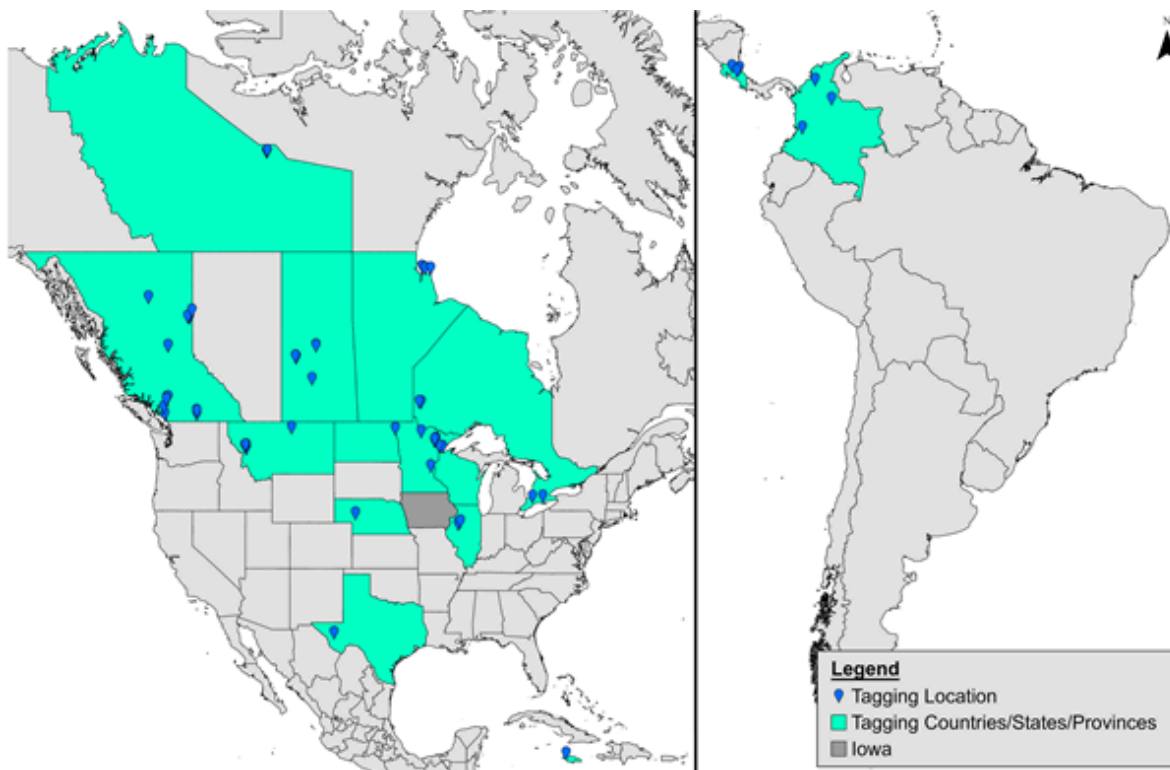
Motus stations in Iowa as of December 2023. DNR Stations are in purple (10), partner stations are in green (9). The circle radius is 15 km which is representative of the typical Motus station detection distance.

Species Detected at Iowa Motus Stations in 2023

Virginia Rail	Common Nighthawk
Sora	Eastern Whip-poor-will
Short-billed Dowitcher	Veery
Stilt Sandpiper	Sprague's Pipit
Franklin's Gull	Ovenbird
Black Tern	Swainson's Thrush
American Kestrel	Golden-winged Warbler
American Redstart	White-throated Sparrow
Mourning Warbler	Chestnut-collared Longspur
Bank Swallow	Barn Swallow
Tree Swallow	

To conserve migratory species, it is important to understand their ecology across their full annual cycle, including migration. Iowa's Motus stations allow us to gain a better understanding of the species that migrate through our state by documenting migratory routes, timing, and habitat use. These data will be very helpful as we improve conservation efforts for migratory species that utilize Iowa, allowing us to make better-informed natural resource management decisions. The vision for Motus station placement in Iowa is to create an east-west fence through the center of the state and to border the Mississippi and Missouri Rivers with stations, maximizing our ability to detect north-south migrating wildlife and our understanding of wildlife use of the habitat corridors along the major rivers. This scenario would require 42 stations.

We have continued expanding the Motus network in Iowa and as of July 2024, there are 25 stations in the state. We extend our gratitude to our donors and partners, as these efforts would not be possible without their assistance.

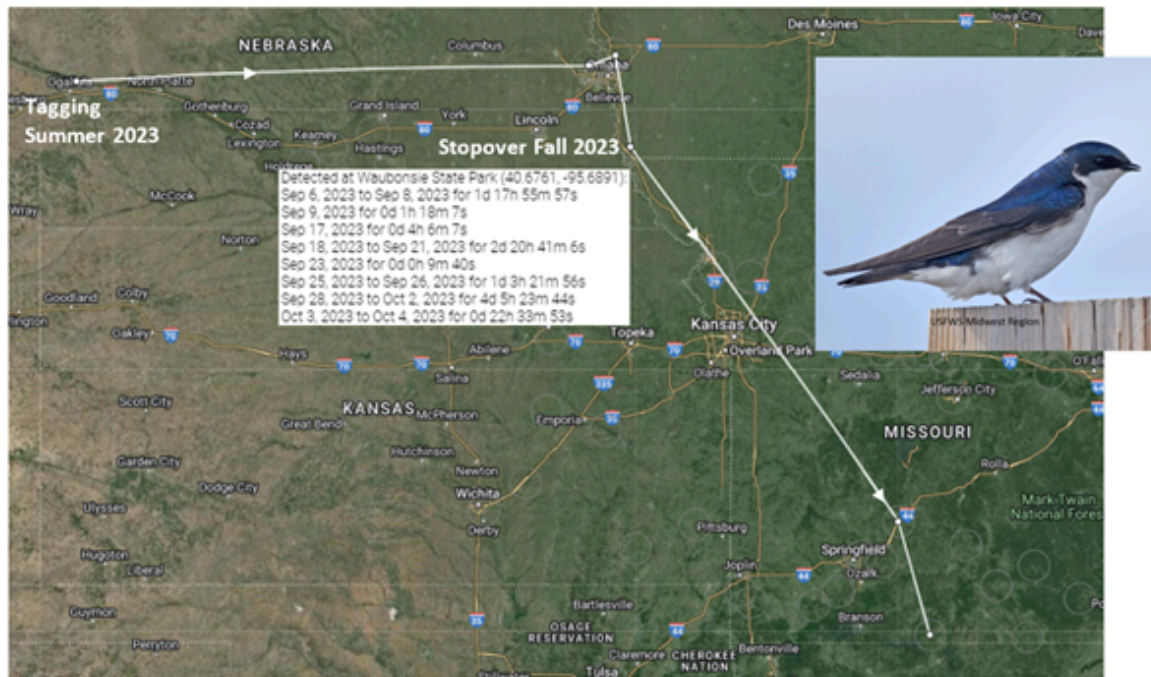


The origin of birds detected at Iowa Motus stations. Detected birds were tagged in the United States (IL, MN, MT, WI), Canada (BC, MB, NT, ON, SK), Colombia, Costa Rica, and Jamaica.

Detection Highlights

2023 was an exciting year for the Motus Network in Iowa, with a variety of bird species detected by Iowa stations during spring and fall migration periods. Some

birds were detected at multiple Iowa stations on the same day, allowing us to understand how fast they were traveling. Other individuals were detected at Iowa stations during both spring and fall migration, telling us about their full annual cycle. Birds detected in Iowa were often detected by stations in other states and countries as well, helping researchers build a point-by-point picture of the migration of these individuals. Although every Iowa detection is fascinating and biologically important, here is one bird detected in Iowa in 2023 that really stood out.



Detection locations and predicted flight paths of Tree Swallow 47355. Map from motus.org.

Tree Swallow 47355 was tagged on June 12, 2023 near Ogallala, NE. It was detected during a fall migratory movement in Omaha, NE and Lewis and Clark State Park in IA on September 6th, before making its way south to Waubonsie State Park that same day. The Tree Swallow was then detected repeatedly for many hours and days in a row, making an apparent migratory stopover. It stayed near the station at Waubonsie State Park for 29 days, from September 6th to October 4th. As we began speculating whether the tag had fallen off or the swallow had been predated, it continued moving south, and was detected at two stations in Southern MO on October 6th and 7th.

Many migrating birds rely on stopover habitats to rest and refuel during their long journeys between breeding and nonbreeding areas. Habitat and food resources are critical to the survival of birds during migration, and as we saw in this example, Iowa is likely supporting many birds during stopovers of varying lengths, highlighting the importance of healthy habitats.

Fall bird migration is starting, so keep an eye out for detections on Iowa Motus stations between August and October.