2025 OHIO AVIAN RESEARCH CONFERENCE

Saturday, November 22, 2025

Grange Insurance Audubon Center, Columbus, Ohio

OHIO BIRD CONSERVATION INITIATIVE

GRANGE INSURANCE Audubon CENTER

THE OHIO STATE UNIVERSITY
COLLEGE OF FOOD, AGRICULTURAL, AND ENVIRONMENTAL SCIENCES

Exhibitors & Supporters

Black Swamp Bird Observatory
Founded in 1992, Black Swamp Bird Observatory's mission is to inspire the appreciation, enjoyment, and conservation of birds and their habitats through research, education, and outreach.
https://www.bsbo.org/

Columbus Audubon
Columbus Audubon was founded in 1913 and, with nearly three thousand members, is one of the largest chapters of the National Audubon Society. We enjoy a unique partnership with the Grange Insurance Audubon Center. We welcome adults and children, novices and experts, members and potential members to our programs and is committed to equity, diversity and inclusion in all that we do.
https://columbusaudubon.org/

Grange Insurance Audubon Center
The Grange Insurance Audubon Center, located just south of downtown Columbus, provides environmental education and serves as a model of sustainable design. It anchors a major reclamation effort that transformed the former industrial Whittier Peninsula into the Scioto Audubon Metro Park. This project is part of a broader plan to expand public green space and revitalize the Scioto River corridor.
https://grange.audubon.org/

ODNR-Division of Wildlife
The Division of Wildlife's mission is to conserve and improve fish and wildlife resources and their habitats for sustainable use and appreciation by all.
https://wildlife.ohiodnr.gov/

OSU-School of Environment & Natural Resources
The School of Environment and Natural Resources creates science-based knowledge and fosters environmental sustainability through teaching, research and outreach. By integrating the natural and social sciences, we promote discovery and leadership through a comprehensive approach to better understand and address environmental and natural resource challenges locally, regionally and globally.
https://wildlife.ohiodnr.gov/

Schedule

8:00 - 9:00 Registration, poster set up, exhibitors

9:00 - 9:10 Welcome & announcements

9:10 - 10:10 Keynote presentation

Dr. Michael P. Ward, *University of Illinois Urbana-Champaign*
The disappearance of the whip-poor-will: Understanding and conserving a vanishing forest bird

15-minute break

10:25 - 12:15 Presentation session 1

Mark Shieldcastle, *Black Swamp Bird Observatory*
Avian response to experimental cattle grazing in Oak Openings Metropark

Ella Ezrin, *Oberlin College*
Fruit species diversity in avian diets of the eastern Midwest

Jess Dong, *The Ohio State University*
Patterns and drivers of temporal change in forest bird assemblages

Nenita Lapitan, *Audubon*
Bird-friendly maple

Dylan Darter, *The Ohio State University*
Survival and reproduction of Wild Turkey hens in Ohio, 2023-2025

12:15 - 1:15 Lunch + *mentor-mentee program*

1:15 - 2:15 Poster session

2:15 - 3:45 Presentation session 2

Gabriella A. Lindsey, *Winous Point Marsh Conservancy*
Seasonal dynamics and environmental drivers of West Nile Virus in Ohio

Joseph Lautenbach, *ODNR-Division of Wildlife*
Private lands conservation program benefits grassland birds

Ningzhu Bai, *The Ohio State University*
Spatial patterns of tick infestation on songbirds: implications for pathogen transmission

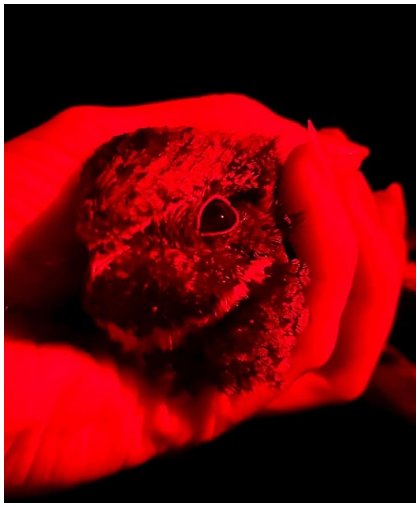
Christopher Tonra, *The Ohio State University*
Nuts for jays: Interactions between Blue Jays and nut-bearing trees in eastern hardwood forests

3:45 - 4:00 Closing remarks

Keynote Presentation

The disappearance of the whip-poor-will: Understanding and conserving a vanishing forest bird





Dr. Michael P. Ward

Professor and Levenick Chair in Sustainability
College of Agricultural, Consumer & Environmental Sciences
University of Illinois Urbana-Champaign

Eastern Whip-poor-wills are an iconic species of eastern North American forests, yet their populations have declined rapidly in recent decades. This decline has prompted extensive research into the factors driving their losses. In this talk, I will present findings on how forest structure, food availability, wintering habitat, and nesting success influence the species' decline. I will conclude by discussing the actions likely needed to support the recovery of the species.

Dr. Mike Ward, originally from Jacksonville, Illinois, earned his Ph.D. from the University of Illinois at Urbana–Champaign in 2004. He is currently the Stuart L. and Nancy J. Levenick Chair in Sustainability in the Department of Natural Resources and Environmental Sciences within the College of Agricultural, Consumer, and Environmental Sciences at the University of Illinois, and an Ornithologist with the Illinois Natural History Survey. Dr. Ward's research focuses on avian ecology and conservation across the Midwest, as well as in Texas, Florida, Mexico, Costa Rica, Colombia, and Cuba. He is a global leader in the use of automated telemetry to study bird movements, including migration and behavioral ecology. He has published more than 100 peer-reviewed papers and received multiple awards recognizing his research excellence. In addition to his research, Dr. Ward serves on numerous technical committees dedicated to informing environmental management and conservation policy. His work seeks to understand the ecology and behavior of birds in both natural and human-altered ecosystems to guide conservation and management strategies.

Morning Session – Oral Presentations

Avian response to experimental cattle grazing in Oak Openings Metropark

Mark Shieldcastle

Black Swamp Bird Observatory

Considerable effort has been made in the Oak Openings Region to reestablish grasslands (prairie habitats); however, maintaining these areas presents challenges with many obstacles. Fire is heavily regulated and not always available in all locations or at the proper timing for plant effects and/or may cause potential negative effects to the fauna of the area. Mowing has been used as a surrogate to natural events in many instances but has multiple negative effects on the ecological community resulting in, at minimum, short-term detrimental results that require considerable assessment of use. Grazing, using non-native livestock, provides a potential management tool in the Oak Openings Region to open up monoculture stands of restored grass without the use of mechanical means. While considerable research has been conducted on range management (Saab et al. 1995; Valentine et al. 1988), little is known of the effects in the sensitive and rare Oak Openings grasslands.

This study is designed to provide management assessment of an experimental grazing program on the breeding avian community using the Oak Openings Region. Point counts were established on treated units and nearby control sites to assess avian use. Here we report on avian communities and comparisons to perceived quality habitats desired by management in the Oak Openings.

Fruit species diversity in avian diets of the eastern Midwest

Ella Ezrin, Jason Gleditsch

Oberlin College

Seed dispersal by animals is an essential mechanism within ecosystems that enhances plant community regeneration and resilience. The majority of animal-mediated seed dispersal is performed by animals that consume fruit produced by plants as part of their diet. As seed dispersers, birds are vital due to their ability to fly long distances, consume fruit without damaging the seeds, and movement between habitat types. The goal of this project was to better understand the role of birds in the dispersal of temperate plant species by determining the diversity of fruit in the diets of birds in the eastern Midwest. To do this, we identified seeds in bird fecal samples collected in Lorain County, Ohio and at Black Swamp Bird Observatory in northern Ohio and Powdermill Avian Research Center in western Pennsylvania. From these three locations, we collected over 1000 fecal samples. We then related the seed diversity in bird diets to land use and the native status of plants to determine the effects of human activity on the avian diet. We found a variety of fleshy-fruited plants, many of which are non-native to the area, in the diet of the local bird communities that varied across sites. With this information, we aim to better inform conservation initiatives in local parks and communities.

Patterns and drivers of temporal change in forest bird assemblages

Jess Dong, Stephen N. Matthews, Matthew B. Shumar, William E. Peterman

The Ohio State University

Preserving biodiversity is essential for ecosystem function, making its measurement and monitoring critical to understanding human impacts. β-diversity, which captures changes in species composition, offers key insights into community dynamics over time. While climate, land use/land cover (LULC), and topography are known to influence diversity independently, recent research suggests LULC can decouple climate effects, creating refugia. Spatial structure also mediates how ecological processes respond to environmental factors. This study analyzes two generations of Ohio breeding bird atlas data, collected 24 years apart, to assess how environmental change and spatial heterogeneity shape forest bird β-diversity over time. Using machine learning, we identified elevation variability, mean forest patch size, and total forest area as the most influential predictors of temporal dissimilarity. The smallest shifts in β-diversity occurred in landscapes with increased mean forest patches, larger total forest area, and varied elevation. Conversely, the greatest dissimilarity was observed in areas with significant forest loss and uniform elevation, particularly in regions dominated by agriculture and development. A geographically weighted regression model revealed that the influence of elevation variability, forest configuration, and climate on temporal dissimilarity varies spatially across the state. Our findings underscore that ecological-environmental relationships are not spatially uniform and that spatial structure can mediate climate impacts. By integrating ecological and spatial patterns, we highlight how landscape features can buffer biodiversity from regional climate pressures and identify areas most in need of conservation.

Bird-friendly maple

Nenita Lapitan[1], Marne Titchenell[2]

[1] *Audubon*, [2] *The Ohio State University-Extension*

Through the Bird-Friendly Maple program, Audubon supports producers who are committed to managing their sugarbush (a forest stand from which sap is harvested to produce maple syrup) in ways that benefit nesting and migratory birds. The majority of forest-dependent birds – whose populations have dropped by over 25 percent in the last 50 years – inhabit privately owned land. Maple producers voluntarily enroll in the program, and when they agree to implementing practices to improve habitat for birds as well as overall forest health, they earn certification. Consumers with an appetite for conservation should look for maple syrup containers with the Scarlet Tanager “seal of approval” indicating that the syrup comes from a sugarbush that is intentionally managed for birds and biodiversity. To date, Audubon has launched Bird-friendly Maple programs in Vermont, New York, and Connecticut, with multiple programs being developed in the Great Lakes region. In 2025, Audubon teamed up with The Ohio State University to explore developing the program in Ohio, with the sugarbush at Aullwood Audubon serving as a pilot demonstration site. Capstone students from OSU-School of Environmental and Natural Resources sampled vegetation and developed a set of management recommendations for the site.

Survival and reproduction of Wild Turkey hens in Ohio, 2023-2025

Dylan Darter[1], Megan Barnes[1], Mark Wiley[2], and Robert Gates[1]

[1] *The Ohio State University*, [2] *ODNR-Division of Wildlife*

With widespread concern over the perceived decline in Wild Turkey populations, we estimated annual survival (n=234) and fecundity (n=322) of radio-tagged Wild Turkey hens across three Ohio Division of Wildlife management districts (D3, D4, and D5) Ohio during 2023 – 2025. GPS and activity data loggers and mortality sensors allowed us to accurately detect nesting activity, nest fates, and mortality events. The annual survival rate spanning 365 days after hens were captured before winter flock breakup in late March was 0.668 combining years, management districts, and ages. Most hen mortality occurred during the nesting and brood-rearing seasons, with some mortality also occurring before and after the breeding season when hens were moving between winter and summer ranges. Annual survival (2023-2025) of hens captured as juveniles during 365 days after capture was higher (0.848) than for hens captured as adults (0.589; $P<0.001$). Annual survival did not differ between years or management districts with ages combined ($P>0.181$). Hens are legally harvested during spring and fall hunting seasons in Ohio (bearded only in spring). Only 2 of 121 (1.6%) hens were legally harvested during spring seasons and none of 110 hens were harvested during the 2023-2024 fall hunting seasons. Annual fecundity was 0.54 – 1.67 poults/hen across 3 years and 3 management districts. With average life expectancy of 2.1 years based on our observed juvenile and adult hen survival rates, ~0.5 poults/hen represented a level of productivity required to replace the hen population assuming an even sex ratio. Consequently, we found no demographic evidence of population decline for wild turkeys in Ohio during 2023-2025.

Afternoon Session – Oral Presentations

Seasonal dynamics and environmental drivers of West Nile Virus in Ohio

Gabriella A. Lindsey[1], Brendan T. Shirkey[1], Megan E. Meuti[2], Laura Pomeroy[2], Jacqueline Nolting[2]

[1] *Winous Point Marsh Conservancy*, [2] *The Ohio State University*

West Nile Virus (WNV) is a mosquito-borne illness that can cause serious symptoms death in humans. In the United States, nearly 3,000 human deaths have occurred due to WNV since its introduction in 1999. However, birds are the natural host and primary reservoir of WNV. Migratory birds have especially been implicated in virus spread; however, it is unclear if annual reinitiation of WNV infections in temperate regions is driven by infected mosquitoes that survive overwinter in diapause or infected migratory birds returning to stopover and breeding grounds each spring. To better understand seasonal patterns of WNV transmission, The Ohio State University and Winous Point Marsh Conservancy are sampling birds and mosquitoes year-round at 16 sites across northern and central Ohio to determine the presence of both active WNV infections and WNV antibodies. Sites exist on a rural to urban gradient as environmental conditions, such as the urban heat-island effect and artificial light at night, could impact both bird and mosquito abundance and subsequently influence patterns in WNV outbreaks.

Private lands conservation program benefits grassland birds

Joseph Lautenbach, Christina Kuchle, John Kaiser, Nathan Stricker

ODNR-Division of Wildlife

The Scioto River Conservation Reserve Enhancement Program (Scioto CREP) is a partnership between the USDA Farm Service Agency and the State of Ohio that incentivizes landowners to convert agricultural land to permanent cover, primarily grassland. One of its stated goals is to increase grassland bird populations by 50% compared to croplands. We evaluated differences in grassland bird species richness, diversity, and density between Scioto CREP fields and nearby agricultural lands. Surveys were conducted using six-minute point-counts, recording all birds seen or heard within 100 m of each point. Species richness and diversity were compared using paired t-tests, and population density was estimated using distance sampling and the Distance package in R. Average grassland bird species richness was 146% higher in CREP fields (5.1; 95% CI: 4.4–5.9) than in croplands (2.1; 95% CI: 1.5–2.7). Diversity was 1.28 times greater in CREP fields (H' = 1.4; 95% CI: 1.16–1.56) than in croplands (H' = 0.6; 95% CI: 0.36–0.83). Estimated grassland bird density was 2.5 times higher in CREP fields ($\hat{D}$ = 2.5 birds/acre; 95% CI: 2.0–3.2) than in croplands ($\hat{D}$ = 0.7 birds/acre; 95% CI: 0.5–1.0). These results demonstrate that Scioto CREP fields provide significantly more suitable habitat for grassland birds than croplands. Continued promotion and expansion of Scioto CREP and similar programs within the Scioto River Basin will be critical for supporting Ohio's declining grassland bird populations.

Spatial patterns of tick infestation on songbirds: implications for pathogen transmission

Ningzhu Bai, Christopher N. Tonra, Risa Pesapane

The Ohio State University

Hard ticks (Acari: Ixodidae) were found to aggregate on specific regions of their vertebrate hosts, leading to potential competition for attachment sites and increased opportunities for pathogen transmission. While this phenomenon is well-documented in mammals, comparable research on birds, particularly songbirds (Order: Passeriformes), remains limited due to their small body size and typically low tick burdens. This study aims to characterize tick infestation patterns on songbirds by documenting the number, species, life stage, and feeding success of ticks across different body locations. Specifically, we will 1) identify the most frequently used body regions by ticks, 2) assess niche partitioning among tick species and life stages, 3) investigate co-feeding events with implications for non-systemic pathogen transmission, and 4) analyze factors influencing tick engorgement using a standardized engorgement scoring matrix. Our findings will advance our understanding of tick feeding on avian hosts and the role birds play in the dynamics of tick-borne disease transmission.

Nuts for jays: Interactions between Blue Jays and nut-bearing trees in eastern hardwood forests

James R. Wright[1], Stephen N. Matthews[1,2], Leila Wilson[2], Christopher N. Tonra[1]

[1] *The Ohio State University,* [2] *US Forest Service-Northern Research Station*

Seed-dispersal mutualisms between scatter-hoarding animals and nut-bearing trees strongly influence the structure of eastern North American hardwood forests, with Blue Jays (*Cyanocitta cristata*) serving as important long-distance dispersers of acorns and other nuts; as oak forests decline and American chestnut (*Castanea dentata*) reintroduction approaches, understanding this mutualism is essential for effective management. We examined how avian seed-hoarders shape both oak decline and chestnut restoration by evaluating each stage of the dispersal process for white oak (*Quercus alba*), black oak (*Q. velutina*), and chestnut, and by assessing how mast abundance affects jay abundance and survival. Field experiments in southeastern Ohio showed that jays prefer black oak acorns over chestnuts, and chestnuts over white oak acorns—with black oak preference intensifying in late fall—suggesting chestnuts may serve as an important alternative resource in years of black oak mast failure. Jays provided directed dispersal for black and white oaks, though extensive rodent pilferage (>80%) limited overall effectiveness, and while dispersal distances were shorter than in fragmented landscapes, they still indicate strong potential for seedling colonization. Overwinter jay survival was largely unaffected by mast or weather, and long-term regional datasets showed winter jay abundance increased with red oak mast and decreased with prior-year white oak mast, while breeding abundance was unrelated to mast. Collectively, these findings demonstrate the dynamic, species-specific nature of bird–tree mutualisms and highlight their importance for forest management and restoration planning.

Poster Presentations

Understanding fine-scale habitat use of Slate-colored Juncos (*Junco hyemalis*) in residential areas

Rain Carman, Jacob Morgan, Kelly Williams

Ohio University

Since 1970, anthropogenic changes in land use have contributed to the loss of 2.9 billion birds across North America, with a 28% loss in migratory bird species. Habitat loss, fragmentation, and degradation are key factors driving these declines, particularly in areas like Ohio where most land is privately owned. While many bird species have been observed in urban/suburban environments, there are still knowledge gaps in our understanding of how birds use residential areas within urban and suburban areas, especially during the overwintering period. We used manual radiotelemetry to quantify overwinter habitat use of Slate-colored Juncos (*Junco hyemalis*; n = 16) during the winter of 2025 around one urban site in southeastern Ohio. We determined how Juncos used habitat patches including green space (trees and shrubs), field/lawn, buildings, and other impervious surfaces, and estimated home range sizes and habitat selection ratios. We expected that Juncos would avoid impervious surfaces and select habitat patches with greater amounts of green space. Using integrated resource selection functions to evaluate habitat selection, we found that Juncos selected tree/shrub cover, used field/lawn proportionally, and avoided impervious surfaces. Determining how birds use urban and suburban areas during the non-breeding period will provide management recommendations for private landowners to maximize the benefits of residential areas as overwintering habitat. Landowners can better support overwintering Juncos by increasing native tree/shrub cover and addressing sources of bird mortality.

An assessment of the role of bird perches in woody plant establishment in prairies of the Midwest

Lindsey Dewey, Ryan McEwan

University of Dayton

Prairie habitats face significant threats from invasive species and habitat fragmentation. Habitat fragmentation often limits the range of wind-dispersed seeds, making animal-mediated dispersal, particularly by birds, essential. Birds disperse seeds of both native and invasive plants, often concentrating them at forest edges and beneath perches. We hypothesized that seed dispersal by birds would be greater in edge habitats, that artificial perches would accumulate more seed rain, that birds are facilitating the spread of invasive woody species into open prairie habitats, and that generalist bird species are primarily responsible for invasive seed dispersal. To test these hypotheses, we deployed bird perches and seed rain collection baskets, along with trail cameras, at two sites in southwestern Ohio. Bird droppings were collected every two weeks, and trail cameras monitored four perches which were used to identify bird species. Seeds were identified to species, and data on dispersal distance and perch versus non-perch deposition was recorded. Preliminary results indicate that distance from the forest edge had no significant effect on seed deposition up to 50 meters. However, we found strong support for our second hypothesis, as over 90% of bird droppings were collected in baskets placed beneath perches. Additionally, our findings suggest that birds are dispersing more woody invasive species than native prairie plants, with seasonal variation influencing the composition of dispersed seeds. These findings suggest that time of year and perch presence are the two greatest factors that affect seed dispersal by birds, with implications for restoration and invasive species management.

Disentangling the roles of neural and peripheral androgen signaling in paternal care in birds

David Duffey[1], Josephina Fornara[2], Kimberly Rosvall[2]

[1] *The Ohio State University*, [2] Indiana University—Bloomington

Androgens play an important role in regulating suites of traits, from reproductive physiology to parental behavior. Androgens affect these traits by binding to androgen receptors (ARs) expressed in neural and peripheral tissues. However, it remains unclear how independent versus coordinated androgenic signaling across tissues shapes the phenotype. We used pharmacological agents to strategically block ARs in free-living male tree swallows (*Tachycineta bicolor*) during the chick-rearing period, when males regularly provision offspring. We accomplished this using subcutaneous implants containing either flutamide (FLUT), which blocks ARs throughout the brain and body, or bicalutamide (BICAL), which cannot cross the blood-brain barrier and thus acts on ARs in the periphery but not the brain. We measured the effect of each treatment on the frequency of male provisioning visits in order to test three non-mutually exclusive hypotheses: (1) If paternal care is sensitive to androgen signaling in the brain, FLUT males should provision differently than BICAL and placebo males; (2) If paternal care depends on androgen signaling in the periphery, BICAL and FLUT males should provision differently than placebos; (3) If paternal care depends on coordinated androgen signaling between the brain and body, BICAL males should provision differently than FLUT and placebo males. Preliminary results support our final hypothesis, suggesting coordinated androgen signaling in the brain and body plays an important role in orchestrating the phenotype of paternal males.

Breeding and nest success of Bobolink in a reclaimed site

Ray Jalbert[1], Daniel Toth[2], Mariamar Gutierrez[3]

[1] *Conservation Legacy*, [2] Summit Metro Parks, [3] National Park Service

Cuyahoga Valley National Park (CVNP), located within Summit and Cuyahoga counties, is within the Lower Great Lakes/St. Lawrence Plain Bird Conservation Region. The region is recognized as one of the most important areas of grasslands in the Northeast by the North American Bird Conservation Initiative. Bobolink (*Dolichonyx oryzivorus*) are a declining grassland obligate bird species that have lost two-thirds of their population and are expected to continue to decline. Declines are due primarily to habitat degradation and land-use change – grasslands are converted into working-lands that facilitate ecological traps. Reclaimed habitats can be a means to mitigate these negative effects. Good quality habitat supports strong site fidelity and a sustained breeding population. Our goal is to describe the Bobolink breeding population in an 80-acre reclaimed grassland, known as the Coliseum, which is the only known breeding site of Bobolink within CVNP. The purpose of this study is to understand how Bobolink are using the Coliseum site and surrounding areas during migration and the breeding season. During spring 2025, we conducted a pilot season of color banding (n=15) adults within Coliseum. We will develop a citizen science volunteer program to resight color banded individuals to determine annual adult return rates and survival. In addition, we will determine nest success, local hatch year survival, dispersal patterns, and habitat use through nest monitoring, color banding and radio tagging adults and nestlings. We expect that the Coliseum site provides a high-quality site for breeding Bobolink.

Finding the effects of anthropogenic disturbances on bird diversity in three sites of northern Ohio

Ella Kavanaugh, Micaela Tahta

Oberlin College

Human land use may influence bird diversity and foraging patterns as they may change food availability, create edge effects between forest patches and developed land, and impact habitat composition. Many studies have been done to understand the impact of anthropogenic disturbance through fragmentation on bird diversity, with forest-dependent species showing more sensitivity to changes in the forest composition, while generalist species increase as the land gets more fragmented. Our research aims to expand upon the diversity of birds and other factors that affect them in three sites that vary in land use and human disruption. To determine the influence of anthropogenic activity, we focused on how the variation of bird diversity across our sites relates to invertebrate diversity. For this, we conducted point counts during the morning and collected invertebrates using combination traps from June to August of this year. Our study found that the diversity of bird and invertebrate species varied across the three parks. Based on our results, we concluded that the influence of human activity on insect diversity induced differences in the bird community composition of our sites. With this analysis, we aim to contribute to a longer-term research question addressing the impact of anthropogenic activity on bird diversity through its effect on insect diversity.

Before-after study of BirdDivert bird-safe treatment at a university building

Moshe Koval[1], Kathy Smachlo, Anne Marie Thomas[2]

[1] *Cleveland State University,* [2] *Cleveland Institute of Art*

BirdDivert, a bird-deterrent glass application that reflects UV light, has become a popular option for treating large glass facades for bird safety. While shown to be effective in wind-tunnel testing, there is little information on the real-world efficacy of this product. We compared the number of detected bird collisions at a local university building before and after BirdDivert was applied. Further studies are needed to determine efficacy of this product under various conditions.

Improving marsh bird monitoring with acoustic recording

Rachel Mansfield[1], Volker Bahn[1], Brendan Shirkey[2]

[1] *Wright State University,* [2] *Winous Point Marsh Conservancy*

Widespread wetland loss has caused declines in many wetland bird populations. Secretive marsh birds are challenging to monitor with traditional methods, but conservation depends on accurate population data. My research uses rapidly evolving acoustic technology and AI-driven approaches to improve the detection probability of secretive marsh birds by (1) integrating autonomous recording units (ARUs) with human-conducted surveys to develop an optimal joint survey protocol, and (2) using these improved species inventory data to better understand relationships between wetland bird occurrence, habitat characteristics, and wetland restoration. We deployed 95 autonomous recording units across wetlands in Ohio and Michigan. ARUs were paired with traditional point counts to compare detection rates and evaluate monitoring design. We will use integrated datasets to estimate relative abundance which will be associated with wetland characteristics. The addition of acoustic recorders to monitoring programs has the potential to increase detection probability, reduce survey limitations, and provide data-rich insights into bird–habitat relationships. Our project linking acoustic and traditional survey data to habitat characteristics closes critical knowledge gaps and will produce actionable information that can guide monitoring programs, wetland management and conservation planning for secretive marsh birds.

Nest-site selection and breeding success of American Robins in an urban university campus

Diego Masson[1], Mariela Gantchoff[1], Alex Jahn[2]

[1] *University of Dayton,* [2] *Oregon State University*

Urban environments create unique nesting challenges and opportunities for avian species, including the American Robin (*Turdus migratorius*). To describe nesting patterns and success within a highly modified landscape, we surveyed 40 robin nests across an urban university campus in Dayton, Ohio during spring-summer 2025. For each nest, we recorded substrate type, nest and tree height, nest orientation, timing and incubation, and nest outcome. Nests were found both on natural and artificial substrates, with Crataegus sp., Quercus macrocarpa, and Ulmus sp. being the most frequently used tree species. A subset of nests (10%) was located on buildings or other human-made structures. Mean nest height was 4.2 ± 1.6 m, and mean supporting tree height was 8.8 ± 3.2 m. Nest orientation was highly variable (range = 20–300°, mean = 107°), suggesting minimal directional preference. Overall nesting success (i.e., at least one fledging) was high (80%), with 32 of 40 nests achieving that outcome. These results suggest that robins exhibit flexibility in nest-site selection within urban landscapes, using both vegetation and built structures. The high success rate indicates that urban green spaces can provide suitable nesting habitats despite high surrounding human activity and disturbance. Continued monitoring will help clarify how microhabitat features and human activity influence reproductive success in urban robin populations.

Post-fledging ecology of juvenile American Kestrels in southern Ohio

Alaina McLaughlin[1], Cheryl Dykstra[2], Ann Wegman[3], Kelly Williams[4], Christopher N. Tonra[1]

[1] *The Ohio State University,* [2] *Raptor Environmental,* [3] *Cincinnati Museum Center,* [4] *Ohio University*

The decline of the American Kestrel (*Falco sparverius*) is a significant conservation issue in North America, particularly in agricultural regions like Ohio where habitat fragmentation and land-use change have intensified. Although breeding adults are often the focus of kestrel monitoring efforts, juvenile survival during the post-fledging period may represent a more critical bottleneck influencing population viability. We monitored populations of kestrels in southern Ohio and applied Lotek nanotags to 91 near-fledging juveniles from 2023-2025. Kestrels tagged within range of a functioning Motus tower were detected multiple times per day until dispersal or mortality occurred. In addition, we used a handheld receiver to manually search for each bird at least every three days. In 2025, we recorded land-cover variables at each kestrel location using standardized vegetation-sampling methods and compared them to randomly generated control points. Most juveniles remained within 0.5 km of their natal nest in the first weeks after fledging and frequently associated with siblings or other young kestrels. Juvenile kestrels were detected most often in trees (over 52%) and on powerlines (over 36%), highlighting the importance of vertical structure as critical habitat within their post-fledging range. In predominantly agricultural landscapes where tree cover is sparse, vertical structures likely provide essential perching and foraging opportunities that influence fledgling success. Understanding how environmental structure supports young kestrels during this vulnerable life stage informs more effective nest-box placement and habitat management strategies that strengthen kestrel recruitment and long-term population stability.

Window Pain: A Survey of Avian Window Collisions on Ohio University's Athens Campus

Molly Murphy, Biz Savitski, Kelly Williams

Ohio University

Approximately one billion birds die each year as a result of collisions with windows. Most birds see and use ultraviolet light for foraging and orientation, which can lead to collisions with highly reflective windows, especially windows that reflect green space. During the fall and spring semesters of 2023-2025, we monitored 17 buildings on campus by walking building perimeters in search of dead birds. We recorded species, location and date for each bird mortality. We found 72 dead birds along the perimeter of 15 of the 17 buildings. Ping Recreation Center and Heritage Hall had the highest number of mortalities. During fall semesters, birds from the family Parulidae had the highest number of mortalities, whereas birds from the family Turdidae collided most frequently during spring semesters.

Identifying buildings with high avian mortality from window collisions will help us to prioritize and recommend preventative measures. Our study aims to raise awareness of this preventable conservation issue and highlight the actions that individuals and institutions can take to prevent avian mortalities.

Fear generalization in Black-throated Blue Warblers (*Setophaga caerulescens*)

Greyson Poutas[1], James Mouton[1], Scott Sillett[2]

[1] *The Ohio State University,* [2] *Smithsonian Institution*

Although behavior is often considered to be the most flexible phenotypic trait, individual animals often express remarkably consistent behaviors across time and contexts. For example, when facing danger, some individuals consistently react boldly while others may always be fearful, resulting in consistent individual differences (CID) in risk-taking behavior. These behavioral patterns have important implications for an individual's fitness, population dynamics, and species' persistence. Yet, research on how CID in fear responses generalize across different dangerous contexts remains scarce, limiting our understanding of the evolution of risk-taking behavior and fear. Here, we propose to assess adult females' responses to three types of danger: a predator that threatens adults, a nest predator, and humans in a breeding population of migratory Black-throated Blue Warblers (*Setophaga caerulescens*). To assess an individual's fear of predation, we measure latency to return to incubate after presentation of an adult predator and a nest predator. To measure fear of humans, we approach the nesting female and record the distance between the observer and the bird when it flies away. This allows us to examine whether CID in fear responses generalize across distinct predator types and if fearfulness towards predators correlates with fear of humans.

Stopping the spread: Can native birds control the invasive spotted lanternfly?

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Invasive insects threaten biodiversity across the globe. Insectivorous birds can provide natural biological control, but their efficacy depends on the interaction between their foraging behaviors and the morphology and biology of their would-be prey. We used a field experiment to explore the potential for birds to control the spotted lanternfly (*Lycorma delicatula*), a species whose invasive spread throughout North America has recently reached Ohio. This species possesses red hindwings indicative of the anti-predator defensive compounds they sequester from host plants. In summer 2025, we recorded bird attacks on paper-and-clay lanternfly models in uninvaded southwest Ohio, where birds are presumed naïve, and in invaded southeastern Pennsylvania, where birds are experienced. We also compared attack rates across models with different wing color and position and placed on different tree species. Predation rates were significantly higher in Pennsylvania, where the species is established and predators are experienced. There were no differences in attack rates across model type or among tree species in Ohio, but Pennsylvania models with their red hindwings obscured were attacked at greater rates. Interestingly, in Pennsylvania attack rates were lower on models located on trees that host feeding adult lanternflies, potentially suggesting that birds avoid lanternflies found on trees from which they may sequester defensive compounds. Together these results suggest that the potential for birds to control the spread of this invasive species is mediated by both bird behavior and prey morphology and may shift over time as birds become familiar with the insect as a novel food source.