



Science and Delivery Committee Digest

Summer 2025

In this Issue

Project Updates	2
Publications & Resources	24
Upcoming Meetings, Workshops, Webinars, Trainings, and other Events.....	25
Opportunities for Partner Involvement.....	25

Project Updates

The AMJV Full Annual Cycle Team is Growing!

Written by Becky Keller, AMJV

The AMJV Full Annual Cycle Team (FAC) was reenergized in 2025 to include a focus on expanding our partnership outside the AMJV boundaries and to start working on more collaborative projects. Our new FAC Leadership Team, including Becky Keller, Anna Lello-Smith, Chris Kelly, Dave King, David Murillo Bustilo, and Mercedes Maddox, meets monthly to help steer the larger monthly FAC Team meetings and to co-lead on specific projects. We are currently working on 1) developing a Database of AMJV Partners and Projects (both existing and potential); 2) developing a database of native plants used by migratory birds across Latin America; and 3) narrowing down a list of projects that the AMJV FAC Team will focus on implementing over the few years. We are currently exploring ideas related to tagging priority species such as Kentucky Warblers, Eastern Whip-poor-wills, Chimney Swifts, and Worm-eating Warblers, better understanding migratory bird stopover hotspots and habitat needs in the eastern U.S. and Latin America, increasing the Motus network across the Americas, and expanding the effectiveness of our extensive network of partner organizations. Please reach out to [Becky](#) to join this vibrant group!



Worm-eating Warbler captured at Appalachian Conservation Institute in Spring 2025. Photo by Becky Keller.

Acoustic Monitoring at Late Successional Habitat Management Sites

Written by Amanda Duren, AMJV

As a component of a National Fish and Wildlife Foundation-funded project led by The Nature Conservancy and with funding support from American Forest Foundation, AMJV coordinated the installation of autonomous recording units (ARUs) on sites in Maryland, Pennsylvania and West Virginia that will be managed to accelerate the development of late successional forest characteristics. The project will also train new forestry practitioners to implement these practices, create a community of practice focused on management of this habitat, implement treatments on 530 acres of private and public lands, and monitor forest structure and carbon storage responses to these practices.

AMJV is developing a monitoring program to establish baseline data for habitat use by birds at project sites receiving late successional habitat acceleration treatments that will utilize both ARUs and citizen science data derived from eBird. In 2025 (year 1) of the project, 59 SongMeter Micro 2 ARUs were deployed across four project sites in three states (MD, PA, and WV). Sampling locations were randomly selected within LSH treatment areas and adjacent untreated control areas. All units were installed prior to May 15th and collected after June 15th to record data during the peak of breeding bird season. Units were installed at the Maryland project site prior to May 1st to capture additional information about bird use during migration. Vegetation data was collected at all sampling locations during June to allow for modeling of effects of forest structure on detection probability.



Pabodha Galgamuwe (TNC) installs an ARU at a project site on Dan's Mountain WMA in Maryland (Photo by A. Duren)

American Goshawk Bioregional Monitoring

Written by Richard Bailey, WVDNR

The American Goshawk has experienced a significant population decline across the eastern U.S. breeding range since 2000. Historically widespread before European settlement, goshawk populations suffered from extensive logging but rebounded as forests matured. However, recent observations indicate a dramatic contraction of their breeding range, particularly in the southern Northeast U.S., with no nesting goshawks found in West Virginia, Maryland, and very few in Pennsylvania in recent years.

Monitoring goshawks requires a collaborative regional effort, and a need exists to verify occupancy in known breeding territories, especially south of New York. By applying the U.S. Forest Service's Goshawk Bioregional Monitoring Design, this effort aimed to produce the first



Dan Rubianto (WVDNR/NRCS) and Jackson Helling (AMJV/NRCS) during surveys for American Goshawk.

regional products, including distribution maps, current occupancy estimates, and a monitoring protocol, to support conservation strategies and guide habitat management in the Northeast U.S.

In West Virginia, where breeding was last confirmed in 2009, WVDNR and USFS staff completed surveys in 6 sampling units in June and July. In the Seneca Backcountry, Monongahela National Forest, goshawks were detected at multiple points, including a pair. A nest search was initiated, but a nest tree was not located. In 2026, a similar protocol will be completed and augmented with autonomous recording unit deployment. West Virginia is, so far, the southernmost state with breeding season American Goshawk detections.

Monitoring Migration and Site Fidelity of Wood Thrushes in Central and Eastern Kentucky

Written by Mallory Miles, KDFWR



A Wood Thrush sports a new radio transmitter (Lotek nanotag).

Since 2024, the US Fish and Wildlife Service, multiple state agencies, and NGOs have participated in an effort to describe the movement of wood thrush (*Hylocichla mustelina*) using Lotek nanotags and the Motus Wildlife Tracking System. The wood thrush is a species of greatest conservation need experiencing steep population declines in Kentucky. A long-distance migrant, the wood thrush breeds in mesic, deciduous forests in Kentucky and winters in Central America. Migration routes and winter habitat were poorly documented prior to this multistate project.

In 2024, Kentucky Department of Fish and Wildlife Resources (KDFWR) staff deployed 26 Lotek nanotags on wood thrushes. An additional 16 tags were deployed in 2025. Capture efforts were concentrated around Cave Run Lake in the Daniel Boone National Forest and Shaker Village of Pleasant Hill. Capture efforts took place from mid-May to mid-July in both 2024 and 2025. To

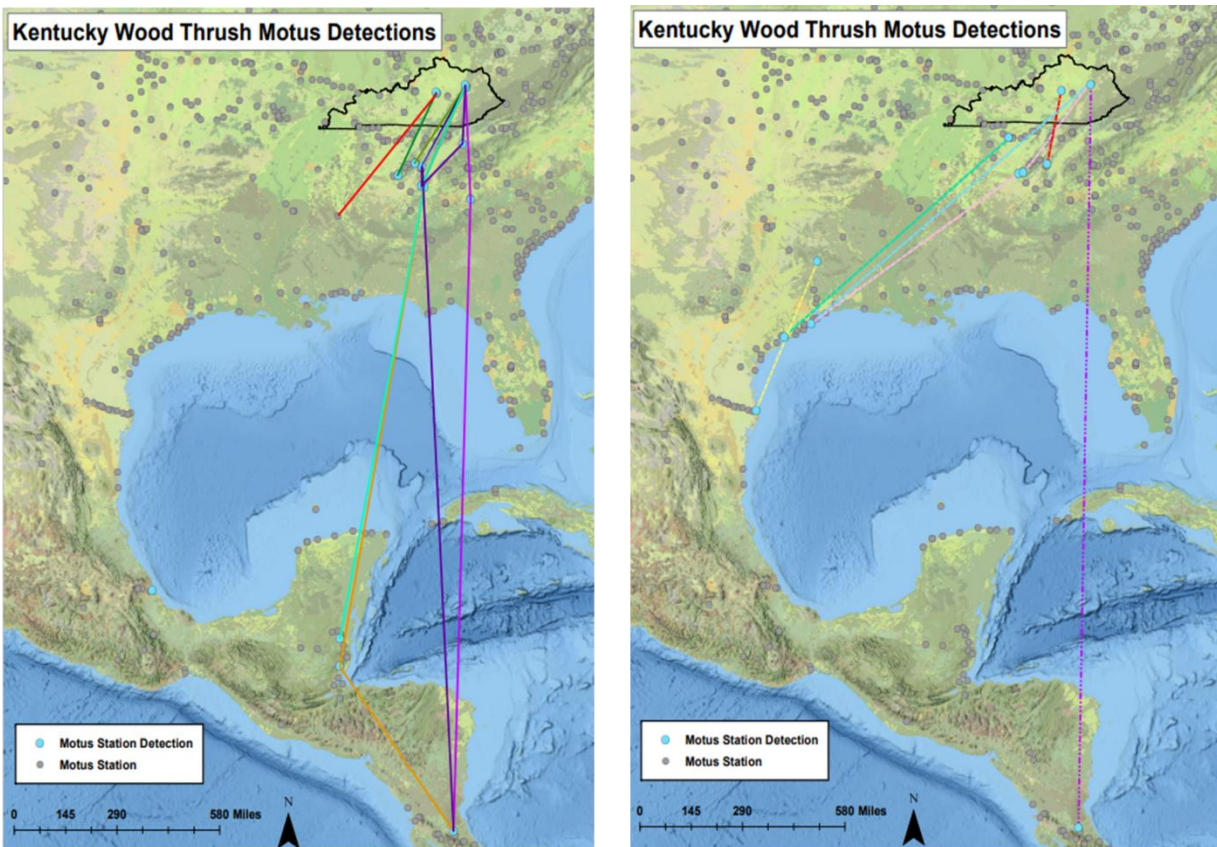
capture birds, KDFWR staff scouted the project area for wood thrushes calling from breeding territories. Two mist nets of 12m each were deployed perpendicular to each other within the presumed breeding territories. Acoustic playback was used to lure territorial males into the mist nets. Occasionally, a decoy wood thrush was used in addition to acoustic playback, but the effect of the decoy was unclear. Anecdotally, KDFWR staff observed that capture rates were highest near creeks in areas with moderate understory and canopy height. Low visibility due to the time

of day or the presence of fine mist seemed to improve capture rates. Steep slopes and areas with high canopies made capture difficult, since wood thrushes often remained above the height of the mist nets.

Of the 42 tagged wood thrushes, 1 bird was female, 39 birds were male, and 2 birds could not be sexed. Two wood thrushes were hatch year birds, 26 were second year birds, and 14 were after second year birds.

Outside of the tagging season, ground tracking was performed to establish the timing of migration. In the fall of 2024, all tagged wood thrushes had departed from their breeding grounds by mid-October. In the spring of 2025, wood thrushes were observed returning to their breeding grounds by early May. Anecdotally, KDFWR staff observed high site fidelity, with many birds selecting breeding territories near their territories from the previous year.

In addition to ground tracking, wood thrush migration was monitored by the Motus Wildlife Tracking System. Transmissions from wood thrushes tagged in Kentucky were received by Motus stations in Texas, Alabama, Georgia, Belize, and Costa Rica.



Radio transmissions received by Motus stations as Wood Thrushes migrated south from Kentucky in the fall of 2024 (left) and north from Central America in the spring of 2025 (right). Solid lines indicate fall migration. Dashed lines indicate spring migration. Paths are vectors between detections.

As KDFWR and other partners continue to collect data from tagged wood thrushes, the agency hopes to develop a better understanding of the wood thrush's breeding site fidelity, stopover habitat, winter habitat, and migration mortality. This information will be used to reveal areas of critical habitat that should be targets for conservation action and to develop best management practices for the wood thrush.

Wood Thrush Tagging in West Virginia

Written by Katie Garst, Wildlife Management Institute and WVDNR



Katie Garst prepares to release a tagged Wood Thrush at the West Liberty University tagging site in Ohio County, West Virginia. Photo by Richard Bailey

As part of the Range-wide Wood Thrush Motus Project, West Virginia Division of Natural Resources (WVDNR) staff deployed Lotek nanotags on 17 Wood Thrushes in West Virginia in 2025. Tagging efforts began in mid-May, and the last tag was deployed on 11 July 2025. A total of 30 Wood Thrushes were tagged in West Virginia for the project during the 2024 and 2025 breeding seasons.

In 2025, tagging was conducted at New River Gorge National Park (3 birds), Fox Forest Wildlife Management Area (4 birds), and West Liberty University (10 birds). A total of 13 male Wood Thrushes were tagged across the three sites. Through collaboration with Dr. Matthew McKinney at West Liberty University, a WVDNR staff member was able to tag two female Wood Thrushes and

two juvenile Wood Thrushes of unknown sex that were captured during MAPS banding at West Liberty University.

Although 10 of the 13 male Wood Thrushes tagged in spring 2024 were detected south of their tagging sites during fall migration, just three of those birds were detected during the 2025 spring migration. The detections occurred at two sites along the coast of Texas and at one site in Tennessee. Only one of the birds tagged in West Virginia in 2024 was detected at its tagging site in 2025.

That Wood Thrush was a second year male when it was tagged on 29 May 2024 in Fox Forest Wildlife Management Area in Elkins, West Virginia. It was detected during fall migration in southwestern North Carolina and northeastern Georgia on 14 October 2024. During spring migration, it was detected near Nashville, Tennessee, on 19 April 2025. The bird was first detected by the Motus receiver at Fox Forest Wildlife Management Area on 22 April 2025. Through the use of a handheld antenna and a Lotek SRX1200 receiver on 21 May 2025, the bird was found to have returned to within 100 meters of the location where it was captured, tagged,

and released in the previous breeding season. The bird continued to be detected by the Motus receiver at Fox Forest Wildlife Management Area through 23 July 2025.

Expanding the Motus Network in the Southeast

Written by Garrett Rhyne, American Bird Conservancy

Motus, the tracking technology that uses automated radio telemetry to understand the movements of birds, bats, and insects across the Americas, relies on a growing network of receiver stations to detect these tagged animals as they move. Since 2024, the American Bird Conservancy (ABC) has taken the lead on coordinating, designing, and installing Motus receivers across the southeast, alongside state agency and organization partners.



Motus antennas on a fire tower overlooking Warm Springs Mountain Preserve (TNC) in Bath County, VA.

Most notably, ABC and southeastern states were awarded a Competitive State Wildlife Grant (CSWG) in 2023, which would fund 35 new stations and 20 upgrades to existing stations in the region, focusing primarily on the southern Appalachians. By 2026, this will mean an addition of stations in GA (12), AL (8), VA (6), NC (3), SC (3), KY (2), and FL (1). Alongside other grants and private funds, ABC has already installed and repaired 80 stations in the southeast since 2024. Many state partners have also tirelessly expanded and maintained station coverage, making the southeast no longer a gap in the network. Already, we are seeing results as these stations have detected hundreds of birds across many species, from Wood Thrush, to Eastern Whip-poor-wills, to Northern Saw-whet Owls. This data supports research projects from all across the Americas, and will help uncover the migration routes, connectivity, stopover regions, and phenology of many SGCN species. This public data can be explored at [Motus.org](https://motus.org), and stations part of the CSWG can specifically be viewed under the Southeast Motus Collaborative project [using this link](#).

As the network continues to grow, the ABC Motus team plans to direct more attention towards maintenance of the existing infrastructure and leveraging the new network to answer important full-annual cycle and local movement questions. This includes supporting local tag deployments, assisting partners in developing study designs and methods, and helping collaborate for funding opportunities.

Eastern PIF and NBGI Meet Jointly, Grassland Collaborations & More

Written by Randy Dettmers, US Fish and Wildlife Service/ Eastern PIF Chair

Jim Giocomo, American Bird Conservancy/Eastern PIF Vice Chair

Pam Hunt, New Hampshire Audubon/EPIF Science Delivery Team Chair

The Partners in Flight Eastern Working Group (Eastern PIF) and the National Bobwhite and Grassland Initiative (NBGI) held a joint annual meeting at Clemson University in July 2025.

Eastern PIF – NBGI Collaboration

The meeting provided a forum for communication and cooperation between the two groups regarding shared interests in management of grasslands and other early successional habitats for at-risk birds. Several collaborative projects and opportunities for continued coordination were developed between the two groups.

Monitoring: Existing bobwhite monitoring collects data on co-occurring songbirds, but the species selected vary between states. The two groups identified a suite of songbird species that broadly overlap bobwhite in habitat and range. They will collaborate on implementing monitoring of this broader suite of species by all parties across states.

Management: The two groups will be developing a white paper that summarizes the overlap in habitat needs and response to management between bobwhite and selected songbirds.

Joint Ad-hoc Committee: this committee will facilitate ongoing coordination and collaboration between the two groups and track progress on joint projects.

For more information contact Jim Giocomo (jgiocomo@abcbirds.org).

Eastern Grassland Bird Business Planning – Northeast Pilot Project

Currently focused on the Northeast geography, this project seeks to develop estimates of the financial support and personnel capacity to stop declines of grassland birds in this region by: setting population goals, deriving habitat goals, understanding true costs of beneficial habitat management (e.g., costs of specific practices, personnel and landowner outreach capacity needed). Next steps for this project include revisiting assumptions underlying population and habitat objectives, continuing the development of a list of threats and strategies, recruiting additional partners in priority geographies, and estimating costs for different strategies. For more information contact Pam Hunt (phunt@nhaudubon.org).

Bachman's Sparrow Working Group's Initial Meeting

The newly formed Bachman's Sparrow Working Group held its initial meeting in conjunction with the Eastern PIF-NBGI meeting, with attendance from about 40 people participating either in person or virtually. The group used its time to develop the initial structure for the BACS

Working Group and key questions and tasks for committees to address. Some of the main topics included population status and understanding demographics, habitat use and impacts of fragmentation, response to habitat management, focal areas and landowner engagement, and Working Group management. Committees plan to meet on a quarterly basis, and the Working Group plans to meet annually. Contact EJ Williams (ewilliams@abcbirds.org) for more information or to get involved.

Migratory Stopover Conservation



Dr. Dwayne Estes presents a plenary talk on the ecology and conservation of Southeastern grasslands at the Eastern PIF-NBGI meeting.

A session was held to discuss next steps for improving existing mapping tools that identify high priority migratory stopover areas and steps for implementing specific conservation actions within those priority stopover areas. Activities will include (a) developing research projects to ground truth mapping tools and understand how birds are using the priority stopover areas (habitat use, food resources, etc.), (b) compiling existing information and develop BMPs for addressing specific threats and needs at different types of stopover areas (e.g., rural/urban), and (c) planning for a meeting (Spring 2026?) to further explore these topics

in more detail and connect interested partners. For more information, contact Becky Keller (bkeller@abcbirds.org).

Update on the Second Virginia Breeding Bird Atlas

Written by Sergio Harding, VDWR

The Second Virginia Breeding Bird Atlas project is a partnership between the Department of Wildlife Resources, Virginia Society of Ornithology (VSO) and Conservation Management Institute at Virginia Tech. Since the fall of 2023 it has also received assistance from the AMJV's Ashley Peele, who has worked on the Atlas since its inception and continues to provide project support via her participation in the Atlas Final Products Committee.

The Atlas is gearing up for publication on October 31 as a freely accessible website. The website is being developed by Crybaby Design, an experienced team which has worked extensively with natural resource organizations in developing their websites and other media. Their customers include Migratory Bird Joint Ventures, the Atlantic Flyway Shorebird Initiative and the North American Bird Conservation Initiative. The core component of the website will be Species Accounts for 203 species. These were drafted by two authors overseen by a Managing Editor. They highlight breeding evidence and occupancy and abundance models based on Atlas data, supported by narratives lending interpretation of the status and conservation

needs of individual species. The Species Accounts are essentially complete: they have been peer reviewed, their maps and figures have been finalized, and representative photos have been selected. The Atlas team is working to wrap up production of additional supporting content, including methodology and results.

Funding by the VSO has supported the work of the web developer, as well as the Managing Editor and Species Account author positions.

Peregrine Falcon Monitoring in the Mountains of Virginia

Written by Sergio Harding, VDWR

The Virginia Department of Wildlife Resource (VDWR) monitors natural cliff nesting pairs in the Virginia mountains. Six pairs were documented in 2025, the highest number since reintroduction efforts began in this region of Virginia in 1985. Three pairs nested in Giles County, 2 in Rockbridge County, and 1 in Dickenson County. Two of the pairs were at historic eyries, including one at a VDWR Wildlife Management Area and a new pair at a site that was last active in 1941. Three of the pairs nested along rivers.



Adult Peregrine Falcon at river site (left - photo by Dakota Taylor/DWR); Peregrine Falcon cliff site along river (right - photo by Sergio Harding/DWR)

We were able to confirm 10 banding-age or older young, of which at least 7 fledged, though the total number of young produced was likely higher. The nesting outcome at one of the sites was unknown. Banded adult birds were present at 2 of the sites, including one female with only a silver federal band (likely banded as a passage bird) and a female with Virginia bands. Based on a partial ID of the auxiliary bands of the latter bird, she was either hatched at one of two sites on the Eastern Shore or at the hi-rise building that VDWR monitors in Richmond. Of note is that no birds were documented at White Rocks at Cumberland Gap National Historical Park in Lee County (surveys by National Park Service). This is the first time since 2010 that a pair has not been documented to be present there.

Expansion of Merlin Breeding Range into Virginia

Written by Sergio Harding, VDWR

In recent decades, Merlins in eastern North America have expanded their breeding range southward from Canada. They first bred in New York and northern New England in the mid-1990s, with subsequent first breeding confirmations in Pennsylvania in 2006 and in West Virginia in 2009 (though there exists one previous breeding record 1888, per the Second Atlas of Breeding Birds in West Virginia). The Pennsylvania population currently stands at roughly 150 breeding pairs. In 2021, a pair of Merlins was documented nesting for the first time in Virginia. The birds nested in a suburban area in the town of Christiansburg in Montgomery County, using an old crow's nest and fledging 3 young. Following a nest failure in 2022 due to a depredation event on the breeding female, the pair has gone on to nest in the same area each year, fledging 3 young in 2023 and at least 3 young in 2024. In 2025 a second nest site was confirmed in southwest Virginia, over 100 miles from Christiansburg. A grounded juvenile bird was brought into the Southwest Virginia Wildlife Center of Roanoke in July. A follow-up visit by VDWR to the site where the bird was retrieved confirmed an adult and a second juvenile; like the Christiansburg site, this was a suburban site with residential homes, small woodlots and scattered tall trees. The presence of two breeding pairs separated by such a large distance increases the likelihood that there are additional pairs breeding in Virginia. As in more northerly states, expansion of the species as a breeder in Virginia may be facilitated by the rise of Merlins capable of nesting in more urban environments.

Clinch Mountain WMA Variable Density Thinning

Written by Sean Barry, RGS & AWS

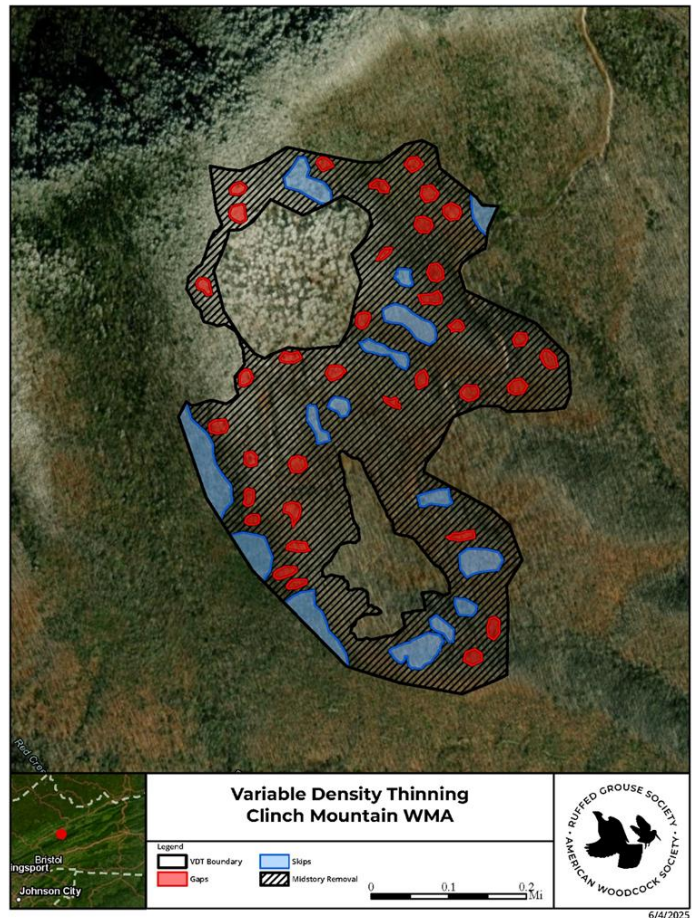
The Ruffed Grouse Society & American Woodcock Society (RGS & AWS) is performing 118 acres of late successional forest management to improve Cerulean Warbler habitat at Clinch Mountain Wildlife Management Area in southwest Virginia, where Cerulean Warbler abundance is currently very low. This work is funded by the National Fish and Wildlife Foundation and is being carried out in partnership with Virginia Department of Wildlife Resources, the Virginia Department of Forestry, Appalachian Mountains Joint Venture, The Nature Conservancy, the National Wild Turkey Federation, and many other partners.

The goal of this project is to accelerate the development of late successional habitat characteristics through active forest management. This includes uneven-aged management to establish heterogenous forest structure both vertically (multiple sizes of trees in one area) and horizontally (distribution of different canopy heights across the landscape), as well as practices to promote tree species with high wildlife value and important ecological roles within late-successional forests.

For this project, RGS & AWS is implementing a forestry practice called variable density thinning. This will involve three different management strategies on the same 118-acre project area: skips, gaps, and matrix. Skips are areas that receive no management aside from non-native invasive plant removal; the native forest is left to develop naturally. Gaps are areas in which the forest canopy is selectively thinned, creating canopy gaps that emulate the natural disturbance regime, which in this area would have been largely driven by single-tree mortality and localized wind events, creating canopy gaps generally less than a quarter acre in size. The matrix treatment is a midstory removal targeting tree species of low wildlife value. This treatment will increase light availability in the forest understory, establishing intermediate

sunlight conditions ideal for advance regeneration of oaks and red spruce. This includes red spruce planted by The Nature Conservancy through a separate project in 2022.

Along with other management actions at Clinch Mountain and other southwest Virginia state lands, this project represents a long-term multi-agency collaboration to improve habitat for all forest wildlife. This is primarily being done through a dynamic forest restoration block (DFRB) framework. This strategy uses large tracts of land as anchor points, typically public lands, and then conducts private landowner outreach around these anchor points. Initial assessments are conducted to establish baseline wildlife abundance and vegetative conditions. From there, prescriptions are crafted to implement treatments that will move the landscape toward desired future conditions. Throughout this timeframe, vegetative and wildlife monitoring continue to see if these treatments are moving the needle. This framework is useful for thinking about management in a way that is large enough for biological significance and small enough to achieve desired outcomes. RGS & AWS and partners are excited to perform this crucial work and look forward to seeing its benefits for Virginia's forests and wildlife!



Avian Acoustic Monitoring on Private Lands in West Virginia

Written by Dan Rubianto, WVDNR and USDA-NRCS

A new avian monitoring program using Audiomoth birdsong recorders on private lands has recently wrapped up its first recording season within the state. This collaboration between the West Virginia Division of Natural Resources (WVDNR), USDA Natural Resources Conservation Service (NRCS), and AMJV aims to address spatial and temporal data gaps to improve bird population status and abundance models for priority bird species in the state of West Virginia.

With assistance from NRCS partner biologists, 30 total AudioMoths were deployed as early as May 22nd, 2025 on 12 different NRCS landowner properties in the north and south areas of the state with retrieval of the last unit on September 19, 2025. Several AudioMoths were placed in areas where habitat management practices such as forest thinnings or clearcuts are planned in order to document pre- and post-treatment

avian species diversity. The remaining units were placed in areas not planned for habitat management implementation.

Of the 30 deployed AudioMoths, one unit located in Greenbrier County fell victim to a curious bear. This unit in particular recorded a total of 25.5 hours across three days.

Data analysis is planned to take place in the fall and winter through AMJV for the first recording season. Future direction of the avian monitoring project involves voluntary landowner participation using smartphone-based audio recording, bioacoustics monitoring protocols for regional NRCS programs, and working with universities to best analyze bioacoustics data.



AudioMoth unit on a private forest lot which fell victim to a curious American Black Bear in Greenbrier County, WV (photo by Dan Rubianto).

Tennessee River Gorge Trust Habitat Restoration Projects: A Brief Summary

Written by Austin Young; Tennessee River Gorge Trust

Since its founding in the early 1980s, the Tennessee River Gorge Trust (TRGT) has worked to conserve and protect the diverse ecosystems of the southern Cumberland Plateau. Focusing primarily on lands within Marion and Hamilton Counties, Tennessee, TRGT has successfully protected tens of thousands of acres. Recently, the organization has shifted from passive conservation to active ecological restoration, using scientific monitoring, habitat management, and restoration strategies to restore and reinvigorate imperiled habitats and native species.

After years of foundational work and organizational growth, TRGT has built the capacity to launch major habitat restoration initiatives across several target ecosystems. These efforts are guided by field observations that have identified remnant pockets of native biodiversity and high potential for ecosystem recovery. Currently, TRGT's projects focus on the restoration of three major habitat types and the rehabilitation of a severely degraded pollinator meadow.

1. Shortleaf Pine and White Oak Restoration

The southeastern U.S. once supported extensive forests dominated by Shortleaf Pine (*Pinus echinata*) and White Oak (*Quercus alba*), both of which are now in decline. These fire-adapted species are being crowded out by shade-tolerant trees, largely due to the suppression of natural wildfires. Although mature oaks and pines still exist on TRGT lands, regeneration is virtually absent. TRGT is addressing this by selectively removing encroaching shade-tolerant species and introducing prescribed fire to restore the forest's natural disturbance regime. These efforts are designed to promote oak and pine regeneration, restore wildlife diversity, and improve overall forest health.

2. Woodland Bog Restoration



One of two woodland bogs that TRGT is managing for restoration. Photo Credit: Austin Young

Woodland bogs are among the rarest and most sensitive ecosystems in the region. They provide habitat for specialized plant species such as Virginia Chain Fern (*Woodwardia virginica*) and Sharp-scaled Mannagrass (*Glyceria acutiflora*), while also serving as crucial water sources for wildlife. However, declining surface water and severe encroachment from shade-tolerant species are degrading these ecosystems.

TRGT is restoring bogs by removing invasive trees, increasing sunlight exposure to the forest floor, reintroducing prescribed fire. This not only benefits bog-specific plant communities but also supports adjacent White Oak and Shortleaf Pine habitats on surrounding slopes.

3. Native Grassland Restoration

On a ~450-acre island managed by TRGT, former cattle grazing and farming operations have kept invasive plants at bay, creating a rare opportunity to reestablish native grasslands. These habitats support a wide range of wildlife, particularly pollinators and ground-nesting birds. Restoration plans include removing non-native species with selective herbicide treatments and planting native grasses and forbs to create self-sustaining grassland communities with high conservation value.

4. Pollinator Paradise Restoration



TRGT Staff and Southeastern Grasslands Institute using prescribed fire to restore a native meadow targeting pollinator habitat restoration. Photo Credit: Austin Young.

A degraded meadow in the Tennessee River Gorge is being restored using selective herbicide treatments, invasive woody plant removal, and prescribed fire. This project drastically improves pollinator habitat in the area and provides critical wildlife habitat in an otherwise closed-canopy forest. Further, this project promotes habitat connectivity, linking fragmented open ecosystems across the forested landscape.

In addition to habitat work, TRGT employs bird monitoring efforts including mist-netting surveys and participation in the Wood Thrush Motus tracking project. These efforts complement our restoration goals. TRGT is building a more resilient and biodiverse Tennessee River Gorge for future generations.

Pine Mountain Motus Station in Southeastern Kentucky

Written by Michael Patton

In June 2025, the Kentucky Department of Fish and Wildlife, Kentucky Natural Lands Trust, and American Bird Conservancy installed a dual-mode Motus station on a retired fire tower at Salt Trace Gap Preserve on Pine Mountain. Located in Harlan County, this is the first station of its kind in southeastern Kentucky. The project was funded through the C-SWG to support the installation of Motus stations across Appalachia.

Before installation, the fire tower required extensive repairs. Many of the original steps were missing or severely deteriorated, so new steps were cut and bolted to the metal stringers. Additionally, three floors of the tower were repaired to rise above the tree line and maximize the station's detection range. The new Motus station is hoped to detect tagged migrants and aid in future tagging projects near the station. The new Motus station is expected to detect tagged migrants and support future tagging projects in the surrounding area.



The Pine Mountain Motus station fire tower and the installation crew. Photo by Michael Patton.

Evaluating the Success of Forest Management on Sparta Mountain Wildlife Management Area

By Sharon Petzinger, NJDEP Fish & Wildlife's Endangered and Nongame Species Program

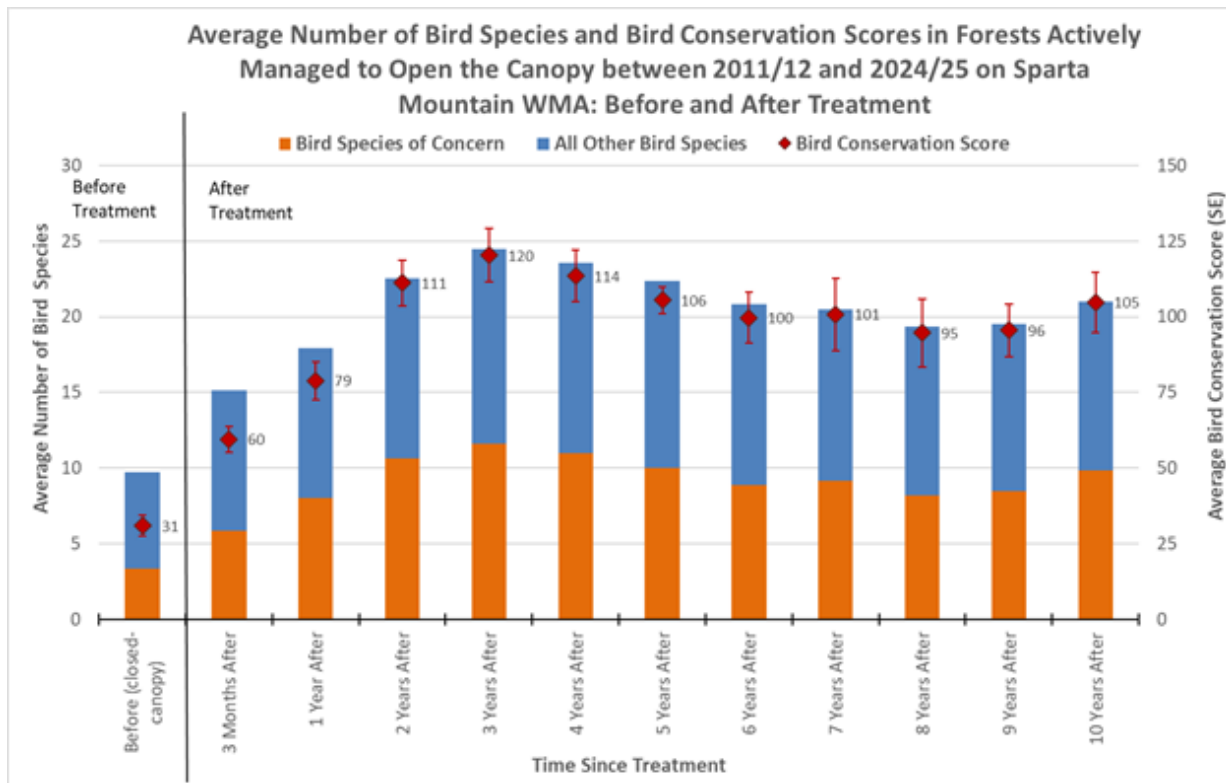
Was it successful? I am often asked this when discussing forest management on Sparta Mountain Wildlife Management Area. What is surprising, however, is how many interpretations there are to that question. Did we successfully complete the management according to the prescription, did the vegetation successfully regenerate with native plants, and/or did the number of bird species successfully increase in response to the management? While this is what the survey methodology was designed to answer, those skeptical of forest management demand more. Are the bird species responding to the management rare or declining? Is it source habitat? The list of questions goes on, and I do not have an unlimited supply of time, resources, or people to be able to answer them all. That said, I can use the bird species detected to better inform success in terms of the rare and declining birds by converting them to a conservation value and therefore determine success in terms of how the conservation value in each site has changed over time because of the management.

I came to this realization after reading the meta-analysis from Akresh et al. (2023). They assigned a conservation score for each bird species used in their analysis, which I thought was brilliant. Instead of replicating their scoring methodology, however, I developed a bird scoring system specific to NJ using the criteria to designate Species of Greatest Conservation Need in the 2025 NJ Wildlife Action Plan.

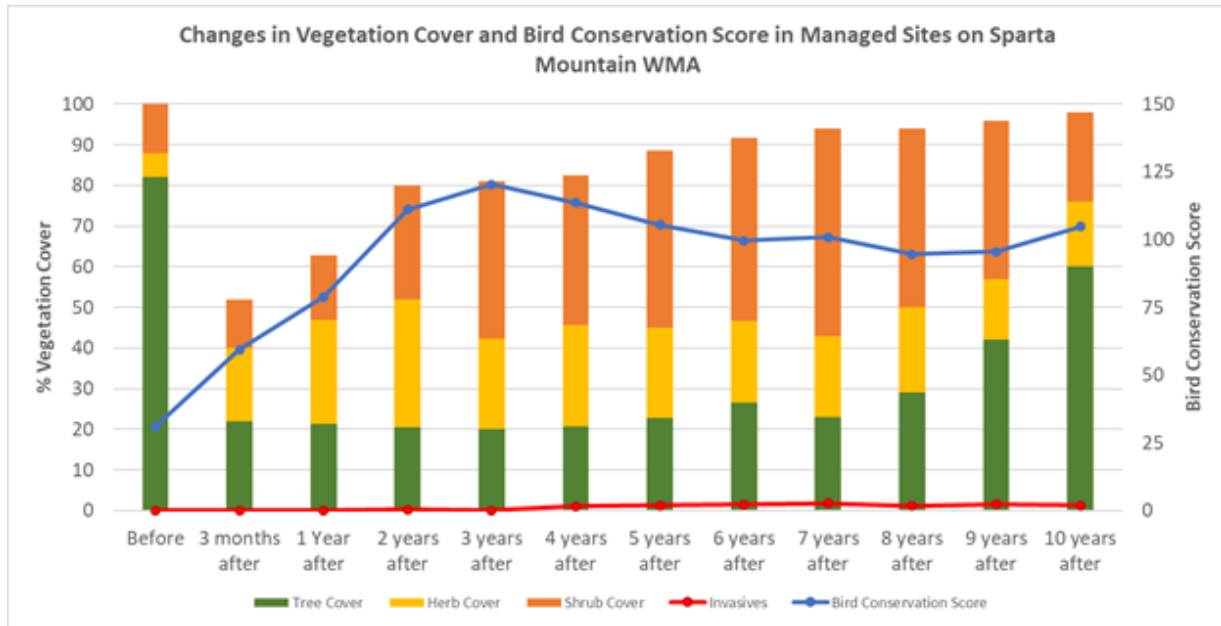
Converting bird species to conservation scores allows for a simpler way to differentiate the conservation need of the species detected. For example, a site containing 12 bird species that include state-listed and regionally declining birds like wood thrush, blue-winged warbler, and prairie warbler will have a higher overall conservation score than a site containing 12 bird species like robins, goldfinches, and ovenbirds, which have stable populations.

I piloted this idea using the managed sites on Sparta Mountain Wildlife Management Area and analyzed the bird conservation scores with paired T-tests, linear mixed-model tests, and correlation analyses. The bird conservation scores increased significantly ($P < 0.01$) three months after treatment compared to before treatment and continued to be significantly greater than before treatment each year after treatment for the next ten years ($P < 0.001$). Time and vegetation cover were the biggest factors influencing the increase in bird conservation scores, particularly in the first five years after treatment. This increase is significantly correlated with less tree cover and greater shrub cover ($P = 0.003$); the bird species increased in areas where the tree cover in the closed-canopy forest was reduced (correlation = -0.713) and continued to increase as the shrub cover increased over time (correlation = 0.873).

Using conservation scores instead of species richness is a more informative way to evaluate effects of management. The skeptics are still skeptical, but now instead of asking more questions about success, they are attempting to dismiss the results by discrediting me and the data. To me, that also demonstrates success for both the management and using the scores to evaluate the management.



Changes in the bird conservation scores, number of bird species and bird species of concern from before treatment through ten years after treatment.



Changes in the bird conservation scores and vegetation from before treatment through ten years after treatment.

Akresh, Michael E., David I. King, Savannah L. McInvale, Jeffery L. Larkin, and Anthony W. D’Amato. 2023. “Effects of Forest Management on the Conservation of Bird Communities in Eastern North America: A Meta-Analysis.” *Ecosphere* 14(1): e4315. <https://doi.org/10.1002/ecs2.4315>

Golden-winged Warbler and Cerulean Warbler Research on Private, Working Forests in West Virginia

Written by Julian Grudens and Christopher Lituma, West Virginia University

Research continued this summer for the Lituma lab and project collaborators, including the National Council for Air and Stream Improvement, Inc., the Sustainable Forestry Initiative (SFI), Weyerhaeuser Company, and Lyme Timber Company, on a multi-year National Fish and Wildlife Foundation funded project. This project intends to assess habitat associations of a suite of AMJV priority songbird species, including Golden-winged Warbler, Cerulean Warbler, and Wood Thrush. Specifically, findings will inform timber management practices on a ~100,000-acre ownership in the southern coalfields region where Cerulean Warblers are widespread, and across a ~250,000-acre ownership adjacent to the Monongahela National Forest, which supports a population of Golden-winged Warbler. Further, at least 24,100 acres will be considered for adaptive management for the previously mentioned species, through coordination with respective landowners (Lyme Timber Company and Weyerhaeuser Company), and SFI, which certifies these lands.

PhD student Julian Grudens led the research team from May through July 2025 to complete the first field season of his dissertation research for this project, completing over 400-point count surveys and associated vegetation structural surveys. Research objectives include understanding landscape-scale factors associated with occupancy and persistence of Golden-winged and Blue-winged Warblers in



Examples of regenerating clearcut harvests in the study area with documented breeding male Golden-winged Warblers.



Examples of regenerating variable retention harvests in the study area with documented breeding male Cerulean Warblers.

naturally regenerating hardwood clearcuts, including effects of different silvicultural practices, specifically “messy clearcuts”, and harvest timing within the shifting mosaic of a working forest. Additionally, for Cerulean Warblers, research will identify multi-scale drivers of habitat selection within variable retention harvests in a unique landscape also managed for carbon credits.

Research and analyses are ongoing. We recently presented preliminary results in July 2025 at the joint meeting of the Partners in Flight Eastern Working Group and National Bobwhite and Grassland Initiative’s Technical Committee. On Weyerhaeuser Company property, we documented Golden-winged Warblers on 32 naturally regenerating forest stands 3 – 14 years post-harvest, including sites occupied in previous years of monitoring, suggesting these harvests can support populations. We aim to identify and implement management practices and landscape configurations that improve occupancy. On Lyme Timber Company property, we were excited to document Cerulean Warblers at 89 point count locations, both within variable retention harvests and in closed-canopy mature forest reference areas. While these findings support a large body of research indicating benefits of some timber harvest practices for the

species, we also included larger (≥ 50 acre) harvests than previous work and will include population modeling with spatially explicit abundance maps under differing future management scenarios.

We look forward to learning more about these species and sharing additional findings following our 2026 field season. We appreciate the support of all our partners, also including the National Alliance of Forest Owners and American Bird Conservancy. Finally, thank you to our field technicians Jay Rossell, Nate Betteridge, and Michael Meecham.

New River Land Trust Using Birds and Bird Data to Inspire Conservation in Virginia

Written by Meg Schader, Land Trust Bird Conservation Initiative Program Assistant, Cornell Land of Ornithology

Sara Barker, Cornell Land Trust Bird Conservation Initiative Director, Cornell Lab of Ornithology
Grayson Davie, Conservation Coordinator, New River Land Trust

The whole business of land conservation is based on the willingness and excitement of landowners, says Grayson Davie, Conservation Coordinator at [New River Land Trust](#) (NRLT) in the Catawba Valley of Virginia. With their colorful plumage and interesting vocalizations, birds can inspire connections with nature and can also help landowners get excited about conservation. Thus, as part of a [Land Trust Bird Conservation Initiative small grant](#) project in 2023, NRLT set out to understand bird species occurrence on two large farm properties protected by conservation easements in an effort to build relationships with the landowners.



Volunteers Philip Lehman, Xavier Gitre, and Jonah Hutchinson conduct bird monitoring at a project site. Photo credit: Becky Keller

Through the grant, NRLT volunteers surveyed birds on the properties during the breeding season and fall migration period. NRLT staff then compared the bird data collected by their volunteers to the data available through the [Northeast U.S. \(NBHCI\) Priority Breeding Bird Mapping Tool](#), an interactive decision support tool that displays modeled [eBird Status & Trends](#) data in 13 states for 43 bird species.

Over the course of this project, to collect bird data in the field, NRLT staff conducted 26 site visits with colleagues from [Appalachian Mountains Joint Venture](#), a co-applicant on this grant, and seven volunteers from the Virginia Tech Bird Club and Blacksburg High School. Bird monitoring was

conducted along 350 foot transects on working farms, and data was recorded using [eBird](#), the online checklist program.

The study was designed by AMJV's Director of Migratory Connections and International Partnerships, Becky Keller. During monitoring visits, 87 bird species were observed, including common grassland birds like Eastern Bluebird, Song Sparrow, and Red-winged Blackbird—and some species in decline and

listed as Species of Greatest Conservation Need in [Virginia's State Wildlife Action Plan](#), such as Eastern Meadowlark and Grasshopper Sparrow.



An aerial view of Burke's Garden. Photo credit: Virginia Living

After comparing the Priority Breeding Bird Mapping Tool data with bird survey data collected in the field, NRLT found good alignment between the two data sources and feels comfortable referencing the Mapping Tool and using it with landowners, says Davie. NRLT has also started including bird data in conservation value assessments, which are used to prioritize land protection and acquisition projects.

Davie says that landowners often want to know what kinds of birds are on their property and how they can help improve the habitat for these species; bird data can open doors to these conversations and get

landowners interested in conservation. Building on the success of this 2023 project, NRLT is now partnering with the [Appalachian Trail Conservancy](#), the [Virginia Department of Wildlife Resources](#), and the [Center for Environmental Studies at Virginia Commonwealth University](#) to grow a landowner-conservation partnership in a rural community in southwest Virginia.

Supported by another [Land Trust Bird Conservation Initiative small grant](#) in 2025, project partners will connect landowners with technical service providers who can assist with conservation strategies through a series of community meetings, with emphasis on techniques that improve bird habitat in Burke's Garden, a unique high elevation valley with nine parcels totaling 6,693 acres in conservation easement.

Kentucky Natural Lands Trust Engaging Community Through Bird Programming

Written by Meg Schader, Land Trust Bird Conservation Initiative Program Assistant, Cornell Land of Ornithology

Sara Barker, Land Trust Bird Conservation Initiative Director, Cornell Lab of Ornithology

Greg Abernathy, Executive Director, Kentucky Natural Lands Trust

The power of partnership is key to [Kentucky Natural Lands Trust's](#) (KNLT) conservation efforts. Supported by a [Land Trust Bird Conservation Initiative small grant](#) in 2025, KNLT will raise awareness and appreciation for birds and wild places in Central Appalachia by fostering participatory science and research within an important migratory route and region of notable bird diversity.

The project is focused on southeast Kentucky along Pine Mountain in Central Appalachia in a region that is home to globally significant biodiversity considered vital to climate resilience and ecosystem health. Within the [Appalachian Mountains Bird Conservation Area](#), this geography is a conservation priority for forest birds (e.g., Cerulean Warblers, Canada Warblers, Black-throated Blue Warblers) and includes disjunct nesting populations of species typically associated with higher elevations in the Southern Blue

Ridge (e.g., Black-throated Blue Warblers, Chestnut-sided Warblers, Rose-breasted Grosbeaks) as well as birds associated with early successional habitats (e.g., Golden-winged Warblers).



Birders take in the views from Pine Mountain as they hike the Kentucky section of the Great Eastern Trail. Photo credit: Greg Abernathy, KNLT

Objectives for the grant partnership are threefold: engage local communities and schools in educational bird programming through warbler walks, bird workshops, and visual and digital communications; activate participatory science initiatives and grow ecotourism opportunities by establishing eBird hotspots along a birding trail; and expand bird monitoring and research collaborations with conservation partners. The initial step in achieving this goal was to install the first [Motus](#) tower in southeast Kentucky on Pine Mountain earlier this summer.

KNLT Outreach Coordinator Megan Falce says, “I am thrilled with KNLT’s opportunity to improve bird research in southeast Kentucky, an area of rich biodiversity and conservation priority, and engage our local community through bird-related participatory science, educational workshops, and programs. With the support of the Cornell Lab, we are fostering connections with the wildlands we protect and the surrounding communities.”

Identifying Priority Conservation Areas Using Bird Habitat Data in Pennsylvania

Written by Meg Schader, Land Trust Bird Conservation Initiative Program Assistant, Cornell Land of Ornithology

Sara Barker, Land Trust Bird Conservation Initiative Director, Cornell Lab of Ornithology
Kelsey Boyd, Stewardship Planning Program Manager, Natural Lands

Supported by a [Land Trust Bird Conservation Initiative small grant](#), [Natural Lands](#) is working to identify the most important land for conservation and restoration in eastern Pennsylvania through a parcel prioritization process. Natural Lands will incorporate data from the [Northeast U.S. \(NBHCI\) Priority Breeding Bird Mapping Tool](#) into this analysis to support declining bird species and inform strategic planning and subsequent conservation work. Natural Lands will also share this analysis with municipalities to call out the importance and benefits of birds and conservation in their communities. To put this analysis into practice, Natural Lands will create a bird habitat restoration plan at one of their nature preserves that will then be implemented after this grant period. Overall, this work will allow Natural Lands to better target land critical for conservation and bird habitat, showcasing the benefits of using birds as a part of the larger decision-making process and effectively using resources and staff expertise to have the greatest impact on environmental protection, wildlife habitat connectivity, and restoration.

This project is the next phase in an ongoing conservation planning project that is part of Natural Lands’ new strategic plan. After identifying priority parcels and corridors connecting priority landscapes based

on ecological information, Natural Lands will write assessment reports to help guide their conservation efforts over the next three to five years. Engaging municipalities and identifying a priority project will prepare Natural Lands to carry out land protection and support restoration projects that benefit birds, healthy ecosystems, and the larger community in the future.



Natural Lands will identify areas important to conserve or restore for bird species in decline, such as the Eastern Meadowlark. Photo credit: Bill Moses, courtesy of Natural Lands

“Natural Lands has a vested interest in improving habitat for wildlife, particularly critical bird species, across our preserves and the region more generally,” says Todd Sampsell, vice president of conservation. “This grant will allow us to take a more focused and strategic approach to this work, concentrating our efforts on areas that can best support habitat and additional priorities like climate change mitigation, and improving access to nature.”

Bird Surveys in the 1st Season Following Hurricane Helene

Written by Chris Kelly, North Carolina Wildlife Resources Commission

Hurricane Helene struck western North Carolina with a punch on September 27, 2024 impacting several hundred thousand acres of forested land with blowdown, landslides, and flooding. In May and June, 2025, North Carolina Wildlife Resources Commission’s mountain bird crew set out to assess impacts of the hurricane on bird communities and habitats. With such large areas impacted, we narrowed our assessment down to locations where we had pre-existing avian datasets. We approached our work well aware that this first season after the hurricane may not be representative of how the bird community will look over the next few years. This is because many of the long distance migrants have extremely high site fidelity and will be coming back from the wintering grounds to their former territories only to find them unrecognizable. Furthermore, some of these species have restricted ranges or very specific habitat requirements that the remaining forest no longer meets. With that caveat, our early observations highlight that the birds did return but were shifting throughout the season in attempts to find suitable nest cover. For example, during a visit in early May, overall Cerulean Warbler numbers were higher than usual, and more individuals were detected at monitoring points on the upper end of the transect than usual. However, during a mid-May visit, no Cerulean Warblers were detected at the upper end of the transect and overall numbers were down, suggesting individuals had moved on in search of suitable habitat beyond the range of the survey points.

Having only seen photos of some of these sites prior to our surveys, it was honestly hard to look at the areas Helene hit the hardest. Forest disturbance is natural and important for so many species, including forest-dwelling bird species, some of which bring their fledglings to young forest and openings. But Helene was an incredibly powerful storm and, unfortunately, some of western NC’s most sensitive ecosystems, high quality mature forest, and robust forest bird populations were in its crosshairs. In fact, the storm struck the dead center of North Carolina’s largest Cerulean Warbler population, which was



Forest blowdown in an important area for Cerulean Warblers. Forest disturbance is natural and needed, but biologists wonder if this degree of canopy loss may exceed a threshold for certain area sensitive forest species. (Chris Kelly)

small to begin with. Species like Veery, Wood Thrush, Worm-eating Warbler, and Blackburnian Warbler—species dependent on mature, intact forest or closed canopy—are likely to decline in this area. The response of Cerulean Warblers remains to be seen, as this species *can* use thinned forest stands. We anticipate a surge in Chestnut-sided Warblers, Hooded Warblers, and Indigo Buntings. Ironically, one species that would greatly benefit from this type and scale of disturbance, the Golden-winged Warbler, does not occur in the mountain drainage with the most severe blowdown. Whatever happens, we will be watching and listening for many years to come.

Wood Thrush Nanotagging in Western NC for Rangewide Study

Written by Chris Kelly, North Carolina Wildlife Resources Commission

The Wood Thrush is a priority species in 25 U.S. states and Canada and is a Species of Greatest Conservation Need in North Carolina. This year, NCWRC joined the Rangewide Wood Thrush nanotagging project. Bird conservation partners from North America and Central America are participating in this hemispheric research and conservation project across the Wood Thrush’s breeding and nonbreeding ranges. The objective is to better understand migratory connections, routes, timing, and survival across their full life cycle. This understanding is essential in order to better understand the species’ conservation needs throughout its range and to improve the design of targeted habitat management actions. In May and June 2025, the mountain bird crew banded 22 Wood Thrushes in Jackson, Transylvania, and Buncombe Counties and fitted 11 of those with nanotags that communicate with the Motus Wildlife Tracking Network. Motus detections can start painting a more granular picture of a Wood Thrush’s annual travels. By supplementing this with ground tracking, we found that, as of late September 2025, a few of the tagged Wood Thrushes are still active on their territories! One was even spotted on a trail camera visiting a water source.



Wildlife Diversity Technician Clifton Avery with a nanotagged Wood Thrush. (Tom Ward)

Publications & Resources

Publications

[Bayly et al. 2025](#). Wetter and more forested nonbreeding areas result in later departures but a faster spring migration in *Vermivora chrysoptera* (Golden-winged Warbler). *Ornithological Applications*

[León et al. 2025](#). Appalachian-breeding *Vermivora chrysoptera* occur at very low densities in mid-elevation forests and agroforestry systems throughout the Andes and isolated massifs of northern Colombia. *Ornithological Applications*

[Johnson et al. 2025](#). North American bird declines are greatest where species are most abundant. *Science*.

[Kramer et al. 2025](#). Spatial and temporal migratory connectivity of two sympatrically breeding wood-warblers with geographically discordant population trends. *Journal of Avian Biology*.

[Masto et al. 2025](#). Citizen science generates reliable migration chronologies to supplement professional surveys for waterfowl habitat management. *Ornithological Applications*

[Piratelli et al. 2025](#). Bird–window collisions: A comprehensive dataset for the Neotropical region. *Ecology*. The dataset compiles 4,100+ records from 11 Latin American countries.

Resources

- Video of newly envisioned [PIF Science Approach to Calculating Population Estimates](#) - Adam Smith of Environment and Climate Change Canada recently gave this presentation at the 2025 Canadian Society of Ornithologists conference in Saskatchewan. This new methodology is currently being submitted for peer-review.
- Video from Cornell’s Birds of the World Webinar: [Estimating Abundance and Trends for the World’s Birds using eBird data](#) with Tom Auer
- The Network for Landscape Conservation is pleased to present an ongoing webinar series, [Landscape Conservation in Action](#). The webinars showcase a wide-ranging set of experts in the field of landscape conservation to share practical reflections, insights, and stories on the “how to” of landscape conservation. Like landscape conservation in practice, these webinars aim to be diverse in scope and approach, and our hope is that they deepen the opportunity for exchange, learning, and dialogue across landscape conservation initiatives throughout North America.
- Penn State Extension offers a free digital newsletter from the Forestry and Wildlife Team: <https://extension.psu.edu/forestry-team-sign-up>, videos about a multitude of forestry and wildlife

topics: <https://extension.psu.edu/forestry-videos>, and lots of great forestry and wildlife articles and publications: <https://extension.psu.edu/resources-for-woodland-owners-and-managers>

- [AMJV's Outreach Toolkit](#) offers guidance and resources for conservation professionals to effectively communicate with the public about managing Appalachian forests for the birds and other wildlife that depend on them.

Upcoming Meetings, Workshops, Webinars, Trainings, and other Events

- **AMJV Fall Management Board Meeting** will be held in Blacksburg, VA on December 3rd (full day) and 4th (half day). The meeting is open to all, and a virtual attendance option will be available.
- The **Southern Appalachians Highlands Conservancy (SAHC)** has a plethora of wonderful events scheduled throughout the fall. [Click here for a full schedule of upcoming SAHC events](#)
- The **81st Annual Northeast Fish & Wildlife Conference** will be held on **Tuesday, April 7 – Friday, April 10, 2026** at the **Greenbrier Resort** in White Sulphur Springs, West Virginia. The conference host is West Virginia Division of Natural Resources.

Opportunities for Partner Involvement

- Email [Becky Keller](#) if you'd like to join the AMJV Motus Team or the AMJV Full Annual Cycle Team
- Email [Todd Fearer](#) if you want to join the Cerulean Warbler Technical Group or AMJV Monitoring Team.