



Annual Report FY2013

1 August 2012 - 31 July 2013



Executive Summary



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FY2013 was a year of expansion for MRBO in terms of projects, partners, internship opportunities, and our overall scope as an organization. Our Grassland Bird Project, begun in partnership with the National Audubon Society in spring 2012, underwent enormous development throughout the year to become MRBO's largest field project. Surveys on seven private properties in 2012 became a regional project involving 18 private properties and 51 public properties in 2013, as well as expansion of monitoring outside of the breeding season. Working with Audubon, the Missouri Department of Conservation (MDC), and Partners for Fish and Wildlife, the overarching goal of the project is to inform management on grasslands across Missouri to increase the density and abundance of our declining grassland bird species.

MRBO's migration monitoring projects, which provided the initial foundation of the organization, continued at established sites while new sites were added. Migration monitoring primarily involves bird-banding, a method of study that can tell us a great deal about body condition and age and sex ratios within populations as well as habitat associations of hard-to-detect migrants. In Fall 2012, MRBO began investigating passerine migration on grasslands in addition to our typical forest/shrubland sites. Additionally, Spring 2013 marked the fifth year of operation at our original banding station at Grand Pass Conservation Area, where we have tracked thousands of migrants and incoming breeding birds.

These field projects result in separate, stand-alone reports and are summarized in this current document with links to more lengthy project reports and associated data tables. However, this Annual Report provides us with the primary mode of detailing our Education and Outreach efforts for the year. Education is one of the most important aspects of our organization, and we thank our MRBO members and donors for enabling MRBO to once again continue its education program in FY2013.

With assistance from all partners, contractors, members and donors, during the past year MRBO:

- ✂ provided internships for 7 college students and recent graduates
- ✂ employed four seasonal field technicians
- ✂ held trainings on bird monitoring, identification and surveying for approximately 60 volunteers in cooperation with the Missouri Master Naturalists
- ✂ hosted or took part in more than 50 education events
- ✂ banded more than 3,000 birds for data collection and educational demonstrations, and
- ✂ surveyed birds on thousands of acres of prairie.

All MRBO activities are conducted for the purpose of contributing to the conservation of Missouri's birds.

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www.mrbo.org



ON THE COVER: A beautiful day at Diamond Grove Prairie Conservation Area. Plus, Whip-poor-will, Philidelphia Vireo, Henslow's Sparrow, Sharp-shinned Hawk, Fox Sparrow.

MRBO's work is possible because of dedicated seasonal staff and volunteers.

Below left: educator Alie Mayes, MRBO Project Coordinator Veronica Mecko, and volunteers Sherry Leonardo and Michael O'Keefe.
Below right: Volunteer and education event facilitator Pat Perry assists Ethan at a banding demonstration.



Grassland Bird Surveys

Grassland birds are currently undergoing the most dramatic population declines of any guild in North America. With about 1% of native prairie remaining in Missouri, native and restored grasslands and working rangeland are necessary habitats in which to focus conservation efforts. MRBO has been conducting grassland bird monitoring since establishing our MAPS stations in 2011.

In May 2012, MRBO became further involved with grassland bird conservation when we implemented surveys on private lands in Missouri, Kansas, and Nebraska as part of the National Audubon Society's Prairie Bird Initiative (PBI). With Audubon and MDC, we developed an innovative approach to grassland bird surveys that is both statistically robust and conducive to elucidating habitat associations of species that tend to be patchily distributed (e.g., Henslow's Sparrow). In June 2012, we covered more than 8,000 acres of private grassland, with resulting data on bird density and abundance as well as target species' locations within the habitat.

Based on this methodology, in October and November 2012 we implemented transect surveys at Mora CA, Ionia Ridge CA, and Paintbrush Prairie during October and November. These migration/early winter surveys were very successful and indicated that transect methodology will be useful for assessing habitat use by grassland birds in the non-breeding season. One of the most exciting findings was high concentrations of Smith's Longspur, which were quite common during migration at these sites.

Throughout the winter of 2012-2013, we prepared to take the Audubon PBI surveys to an even larger scale. The collective vision of MRBO and our project partners evolved into a statewide effort to determine grassland bird population numbers throughout the entire state of Missouri, with a focus on the MDC's Conservation Opportunity Areas (COAs). COAs are large geographic areas in which there is some land in ownership by the MDC, Missouri Prairie Foundation, The Nature Conservancy, or other conservation group, plus likely opportunities to work with private landowners to create landscape-level habitat conservation. COAs are Missouri's best prospect for providing habitat that supports large amounts of birds and other wildlife. Work on public lands within the COAs complemented the continued commitment to conducting surveys on private lands where owners are interested in maintaining a partnership with the Audubon PBI.

In May and June 2013, MRBO staff and assistants conducted transect surveys on over 28,000 acres of publicly-managed grasslands in Missouri. This sample allowed us to directly describe bird populations on about 60,000 of land and clearly show which types of grassland habitat support the highest numbers of breeding species. This is especially important for birds like Henslow's Sparrow, Upland Sandpiper, and Bobolink that are showing population declines and are also good indicator species due to their specific habitat requirements. We documented over 8,000 individual grassland birds in our target group of 12 species, and an additional 3,500 non-target birds on public and private lands in Missouri. MRBO also conducted surveys on an more than 4,000 acres of private land in Nebraska and Kansas. All of the information collected was provided to landowners and managers, enabling them to make more informed management decisions for non-game grassland birds. This project will continue to expand in terms of both scope and data analysis in late 2013 and throughout 2014.



Cattle graze on a well-managed native prairie in Kansas.



A LeConte's Sparrow documented during fall surveys.

For detailed information on the methodology and 2013 results of the Grassland Bird Project, please see MRBO's reports to:

[Missouri Department of Conservation](#)
[Missouri Natural Heritage Foundation](#)

For background information on project development, please see the [report to the National Audubon Society 2012](#).



Our thanks to 2013 Breeding Season surveyors Nic Salick (left) and Josh Smith (center), here with Ethan at Denison Prairie.

Migration Monitoring



MRBO operated several different bird-banding stations with the goal of tracking migration during our FY2013. We are still experimenting with fall station sites that will allow us to most accurately assess the timing, condition, and habitat use of migrants moving through Missouri.

✂ **Fall 2012** saw another interesting, successful migration monitoring season here in central Missouri. We continued tracking migration at our established site at Van Meter State Park (VANM), and also set up pilot sites at Hi-Lonesome Conservation Area (HILO) in Benton County, and the MRBO home office site (HOME) outside of Marshall. A third pilot site was established at Grand Pass Conservation Area (GP93) in an area of early-successional willow and cottonwood growth where the infamous Flood of '93 had scoured the habitat within the levees.

The establishment of a new site at HILO was the first phase of a much larger project in which we will monitor bird use of restored prairies throughout the year. Most conservation monitoring programs direct attention to the breeding season, but to really conserve birds, we need to provide quality habitat throughout their migratory and wintering periods as well. Our initial results indicate that migration monitoring in grasslands may be effectively conducted by banding. Some species that are elusive during migration were captured at Hi-Lonesome, including LeConte's Sparrow, Grasshopper Sparrow, Marsh Wren, and Savannah Sparrow.

The initial results of Fall 2012 indicate that while VANM remains a well-used site for migrating birds, other sites have the potential to provide good study locations as well. Our Marshall Home site, for instance, resulted in a larger number of birds per 100 net hours than any of the other stations, suggesting that the Home property may warrant further study as a migration stopover site. The relatively low number of captures (and birds per net hour) at HILO reflects our need to improve and refine our methods for studying prairie birds; grassy habitat is far more difficult to capture birds in than forest or early-successional habitat. However, the effort is worth it: several species of secretive sparrow will only be documented in migration via mist-netting. Finally, our GP93 site provided a very different habitat with which to compare results from VANM. These sites are in close proximity to each other, but contain extremely different vegetation structure and plant diversity.

✂ MRBO got its start in 2009 as a migration monitoring station at Grand Pass Conservation Area (CA), and this station has run every spring since. **Spring of 2013** was an extremely unusual year due to abnormal weather conditions. A cool, wet spring gave way to snow on May 3rd, followed by a cold weather front sustained just north of Grand Pass for several days. May 6th-10th at the Grand Pass banding station were marked by an event we hardly ever see in the center of the country: a true migrant fall-out. A fall-out occurs when there is a proverbial "perfect storm" of conditions having to do with geography and weather. For instance, such events are quite common on the Gulf Coast and the Great Lakes – if migrating birds hit a weather front as they are about to cross a large body of water, they will "fall out" of migration and simply pile up on the coast. There is little geography in Missouri to cause this, but in early May the weather front to our north caused just such an event. In just a few days, we banded more than 300 birds and observed several hundred more.

The five years of data collected at Grand Pass from 2009-2013 indicate that the CA's riparian zone is an extremely important migration corridor, and especially critical as stopover habitat during adverse conditions. The habitat provided at Grand Pass is doubly important given that the land surrounding the CA and on the other side of the Missouri River is almost completely deforested and devoted to agricultural uses, with the exception of a few well-managed private marshes located north of the River. Thanks to the Missouri Department of Conservation's management practices, the Missouri River corridor at Grand Pass will always be available to our migrating songbirds.

Please read more about spring migration in the [2009-2013 Migration Monitoring at Grand Pass CA Report](#) and fall migration in the [Winter 2012 Newsletter](#).



Education & Outreach

During FY2013, MRBO hosted and/or worked with partners to implement more than 50 education events that reached approximately 2,000 people across Missouri. Here are highlights from each season during the year.

Fall 2012

- ✚ **Flying WILD Facilitators Workshop at Runge Nature Center, Jefferson.** In August, MRBO's Dana Ripper and Ethan Duke initiated and attended a training by National and Missouri Flying WILD Coordinators to receive Facilitator status – which means that we can now host trainings to certify other educators in this excellent curriculum.
- ✚ **Columbia Audubon Nature Sanctuary, Columbia.** More than 300 2nd grade students were treated to birds in the hand as MRBO provided a banding station during Columbia Audubon's Band With Nature childrens' event.
- ✚ **Second Grade Field Day, Centralia.** MRBO provided banding demonstrations to eight classes that cycled through fun, informative stations.
- ✚ **Cole Camp Prairie Day.** With the Missouri Master Naturalists Hi-Lonesome Chapter and the Missouri Prairie Foundation, MRBO staff captured and displayed prairie birds to more than 100 attendees of Prairie Day.
- ✚ **Northern Saw-whet Owls at Powell Gardens.** Botanist extraordinaire Alan Branhagen hosted MRBO and 25 visitors to learn about the distribution of Saw-whet Owls in Missouri and to experience the capture of two owls!



Winter 2012-2013

- ✚ **Burroughs Audubon Library, Blue Springs:** Over the course of the winter, over 100 adults and children attended banding demonstrations and bird-watching at the Library. The Library always provides a pleasant setting for people of all ages to observe, discuss and enjoy birds.
- ✚ **Birds-I-View, Jefferson City:** Our friends at BIV hosted three MRBO banding events and an evening seminar in the midst of their own extensive education programs. BIV, MRBO and the Columbia Audubon Society also hosted Peregrine Fund biologist Matt Giovanni for an American Kestrel Project workshop. This event established partnerships with several citizen scientists who will be engaged in nest-box monitoring.



- ✚ **Missouri River Relief Speaker Series, Rocheport:** We were so pleased to be invited once again by MO River Relief to present on MRBO's monitoring projects on the Big Muddy. MRBO Assistant Director Ethan Duke presented to a packed house at Les Bourgeois Winery.

✧ **Sacred Heart School, Sedalia:** We were invited back to the Sacred Heart School to teach 2nd graders and the mixed-age after-school Project WILD club about Missouri's birds, and work with the students to build feeders and nest-boxes.

✧ **Burr Oak Woods Big Year Kick-Off Festival, Blue Springs:** MRBO's banding demonstrations were a hit with the large crowd that gathered for Burr Oak's Kick-off event on January 8th. This event was the first of many at BOW throughout this Big Year.

✧ **Educator's Workshop, Clinton:** Clinton residents always seem to be up for learning about nature. At another well-attended event held at the MDC office, participants learned basic bird identification, saw a banding demonstration, and went on a field trip to a nearby wetland.



✧ **Indian Foothills Park, Marshall:** The site of our Northern Saw-whet Owl occupancy studies became a forum for community outreach when the Foothills Park staff invited us to present to their weekly Lunch Bunch. Twenty local ladies heard about the Saw-whet Owl and other Missouri birds.

✧ **Hillerman Nursery and Florist, Washington:** We were incredibly pleased with the large turn-out at this event. Even though we changed dates due to winter snowstorms, about 40 adults and kids attended a presentation on how to ID Missouri birds and ways to attract them to the backyard with gardening. This was followed by a fun banding demonstration.

✧ **Flying WILD Workshop for Homeschoolers, Joplin:** MRBO and Wildcat Glades Audubon Center staff became certified facilitators of Flying WILD together last August. The Wildcat folks then invited us to help with their first WILD training, which was a smashing success. Eleven parents and 22 students of homeschooled families attended this workshop, which will help boost their science curriculum with critical thinking activities about birds and conservation.



Photo from Chris Pistole of Wildcat Glades Audubon Center.

Spring 2013

✧ **Master Naturalist Banding Training/MAWS, Marshall and Cole Camp:** Fellow Master Naturalists of the Hi-Lonesome Chapter endured days of thorough training in preparation for volunteering during the field season.

✧ **Marsh Bird Workshops at Duck Creek CA, Eagle Bluffs CA, Squaw Creek NWR, and Grand Pass CA, March through April:** The Audubon Society of Missouri co-hosted a stellar, but nearly weathered-out!, weekend marsh bird workshop premiere at Duck Creek Conservation Area. Trainings included presentations and discussions with land managers and volunteers.

✧ **Truman Elementary School, Rolla:** Teachers working with Master Naturalists Bob and Pat Perry invited us to band birds at their outdoor classroom in Rolla. Several classes were able to experience the birds which benefit from the habitat they provide onsite at Truman Elementary. This event included an afterschool presentation for teachers wishing to add bird knowledge to their teaching tool-sets.

- ✧ **Arrow Rock Conservation History & Hike:** MRBO spoke on the conservation history of Missouri Birds at Arrow Rock State Historic Site for their First Saturday Lecture Series. After the presentation, attendees enjoyed birds in around this beautiful Historic Town, including its adjacent Jameson Island Trail. <http://www.marshallnews.com/story/1957274.html>
- ✧ **River Bluffs Audubon Presentation, Jefferson City:** We had the honor of presenting to the River Bluffs Audubon Society in Jefferson City, where we all shared in understanding more about monitoring, conservation, and the wonder of birds.
- ✧ **The Wildlife Society Conclave at Prairie Fork, Callaway County:** The Midwest Wildlife Society Conclave was held at Prairie Fork this year and MRBO was there to demonstrate bird banding and its uses for research and monitoring.
- ✧ **Columbia Audubon “Banding With Nature,” Columbia:** Teachers and partners hosted yet another amazing event for over 300 students of area schools at The Columbia Audubon Nature Sanctuary. The birds captivated the kids seemingly on cue again this year (<http://youtu.be/HJj0siIG-cE>).
- ✧ **Wings Over Weston, Weston Bend State Park:** Celebrating the Important Bird Area (IBA) designation of the Weston Bend area is taken seriously by a dedicated contingent of people. Each year MRBO serves as one booth in this huge event presented by naturalists and educators serving busloads of kids one day and the general public the next. What an amazing event!

Summer 2013

- ✧ **Missouri Prairie Foundation Bioblitz, Denison Prairie:** As MPF Executive Director Carol Davit explains, “Our purpose [for the BioBlitz] is to engage people, to provide a really rich experience that includes an afternoon, an evening, a night and a morning, along with interpretation of what they’re seeing.” MRBO was very pleased play a part in providing this experience, which included camping on the Prairie! For more information visit <http://www.moprairie.org>.
- ✧ **Burroughs Audubon Presentation, Blue Spring:** Our friends of the Burroughs Audubon Society of the Greater Kansas City area invited to speak at their June meeting. It is a pleasure to engage this contingent of the birding community every time! For more information on all the happenings with Burroughs Audubon, visit <http://www.burroughs.org/>.
- ✧ **Purple Martin Presentation and Banding Demonstration at Birds-I-View, Jefferson City:** They host MRBO regularly at various events to supplement their many educational offerings.
- ✧ **Father/Son Banquet at St. Peters Evangelical Lutheran Church, Jefferson City:** The kind folks of this church in Lohman, MO invited MRBO to share the appreciation of birds and what parents can do with their kids in the outdoors.
- ✧ **Purple Martin Banding and Demonstration, Licking:** Kathy Freeze, Purple Martin Landlord Extraordinaire, hosted an all day workshop and banding event at her impressive colony site in Licking, Missouri. See it in pictures at <http://purplemartin.org/forum/viewtopic.php?t=25931>.
- ✧ **St. Louis Audubon Purple Martin Banding Event at Creve Coeur Park, Maryland Heights:** John Miller, a Purple Martin expert and landlord in the St. Louis area, invited us once again to take part in banding one of the colonies he helps manage. St. Louis Audubon folks helped us with the banding and with the press. <http://kplr11.com/2013/06/26/conservationist-help-purple-martins-make-comeback-to-st-louis/>



FY2013 Financials

Income Type	Amount
Research & Monitoring Grants/Contracts	\$60,053.72
Education Grants/Program Income	\$8,117.16
Unrestricted Gifts/Donations	\$43,282.41
Remaining Assets FYE2012	\$11,056.10
Total	\$122,509.39

Expense Type	Amount
Permanent & Seasonal Staff Salaries/Fringe	\$69,226.13
Research & Monitoring Projects	\$12,187.03
Education Programs	\$2,034.79
Assistant Housing	\$6,546.03
Administrative Expenses (Utilities, printing, meetings, etc).	\$5,190.10
Total	\$95,184.08
Remaining Assets FYE2013	\$27,325.31

