



Missouri River Bird Observatory

Annual Report FY2017

1 August 2016 - 31 July 2017



Our Mission is to contribute to the conservation of Missouri's birds and their habitats through research, monitoring, education & outreach. We do this by...

- **Gathering information about avian communities and habitat use that assists state, federal, and private natural resource managers in their efforts to improve conservation programs.**
- **Providing opportunities for Missourians of all ages to spend more time outdoors and to learn about species and habitat conservation.**

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Why birds?

Birds are good indicators of environmental quality. The expression "canary in the coal mine" is an apt one. The presence, abundance, diversity and physical health of birds in an area can tell us a great deal about the quality of the land and water as well as a habitat's potential suitability for other species of wildlife.



Birds are relatively easy to study. Most (though not all!) birds are quite conspicuous, particularly during the breeding season. This allows trained observers to survey birds across the landscape efficiently and with great accuracy, while keeping project costs low.

Birds are attractive and loved almost universally, making them an excellent educational tool. Birds are great ambassadors for conservation - inspiring people of all ages to spend more time in the outdoors, be more aware of the wildlife around them and care more about the quality of Missouri's natural resources.



Prairies

Less than 1% of Missouri's original tallgrass prairie remains today. Prairie-obligate birds are undergoing the steepest declines of any guild in North America. MRBO tracks Missouri's prairie bird populations using a variety of methods. The goal is to help public and private land managers better understand the management practices that result in stable or increasing bird populations on their properties.

Surveys

In 2017 MRBO staff continued our statewide prairie bird survey project, now in its sixth year. Surveys are conducted during the breeding season on more than 50 properties. All birds are recorded by sight and sound on iPads, allowing us to determine the density of each species on every property surveyed and to track changes in density between years. We keep close track of bird populations so that if a species is declining in Missouri, land managers can respond quickly by providing more suitable habitat.

Nest Monitoring

During the 2016 and 2017 breeding seasons, MRBO surveyors located and monitored more than 300 nests of prairie birds! This study aims to document the nesting success and amount of young produced in grasslands that receive prescribed fires and that are grazed by cattle, compared with unburned and/or ungrazed acreage. This will help managers determine the fire frequency and amount of grazing that constitute good habitat management.



Wetlands

Approximately 15% of Missouri's original marshes exist today. Critical acreage has been conserved and restored by Missouri's private landowners, often as part of the Wetland Reserve Easement Program. MRBO monitors bird populations on thousands of acres of private wetlands each year. In addition to collecting data on bird diversity and abundance, we are able to reach out to the landowners on whom many bird species depend.

Marsh Bird Surveys

MRBO staff surveyed 32 private wetland easements during spring migration and breeding season in 2017. Over 12,000 birds of 200 species were documented on 5,000 acres of marsh habitat. Several rare and state-endangered species were documented, particularly in the Missouri Bootheel.

Working with Landowners

The most important part of the survey project is the opportunity to interact with every wetland owner personally, relating to them how important their property is for birds. Each landowner receives a detailed yearly report of MRBO's findings.

"Your great powers of observation and impressive use of technology along with your obvious educational background and dedication makes for a wonderfully detailed report. We did not realize that wetlands provided benefits for such a variety of shorebirds and marshbirds. Thank you for your polite, unobtrusive and informative visits and for the report of your findings."
-a landowner near Nevada, MO



Forests

Bottomland Forests of the Bootheel

Bottomland, or riverine, forest remains in only about 15% of its former distribution in Missouri. MDC Foresters are using new techniques to better manage our remaining bottomlands for maximum biodiversity and forest health.

2017 was the third year of MRBO's point-count surveys in the bottomlands of Missouri's Bootheel. The surveys occur in forest stands of various ages and multiple management treatments. Our data will allow managers to track exactly how the bird community is responding to their management actions and the stage of forest growth.

Ozark Forests

The quality and extent of Missouri's Ozark forests are a conservation success story in our state. Nonetheless, managers at the Missouri Department of Natural Resources are using sound management practices to further increase bird diversity and numbers in our State Parks.

MRBO has helped track bird response to management actions on several thousand acres of St. Joe and Washington State Parks. These data will help Missouri State Parks managers determine which actions, such as prescribed fire or tree thinning, will result in the highest density of bird use.



Photos, clockwise from top: Pileated Woodpecker nestlings, Yellow-billed Cuckoo, Blackpoll Warbler, Canada Warbler.

Education & Outreach

Even more important than scientific research and monitoring work is getting people thinking about conservation. This is why MRBO places a great emphasis on education. People are motivated to conserve the plants, animals and land that they connect with. Also, a connection with nature and spending time outdoors simply makes people's lives better!

K-12 Education

MRBO conducted 87 education events that reached 3,000 young Missourians across the state during FY2017. Events included guided nature hikes, bird-banding demonstrations and inquiry-based outdoor activities that promote critical thinking.

Adult Education

Each year MRBO conducts a variety of adult programs, many of which are focused on training educators or parents to get their students outdoors. We work with schools, agencies, other NGOs and a wide variety of civic organizations and clubs to bring programs to adults throughout Missouri.

Education Staff

MRBO has found an educator who is a perfect fit for the organization. Meet Paige Witek, who will be staying on with MRBO through 2018!



The Missouri River Bird Observatory fills a critically important niche where grassland bird monitoring is concerned. MRBO staff have the expertise and technology to provide Department grassland managers with a clear understanding of how migratory bird populations vary from year to year. MRBO reports and online tools help our managers understand how birds respond to grassland management practices. We have a much better understanding of the value of our grasslands to both breeding and migrating birds as a result of MRBO's work.

-Max Alleger
Missouri Department of Conservation
Grassland Coordinator

MRBO's state-of-the-art bird monitoring and hands-on bird and habitat education activities are vital components of Missouri's nationally recognized reputation for support of quality wildlife research, habitat management, and observation opportunities. No other public or private organization in Missouri fills the niche of doing what MRBO does so well.

-Edge Wade
Audubon Society of Missouri
Conservation Partnership Coordinator

The avian observation data that MRBO has collected, assembled in report style and displayed in GIS terms has been invaluable data for NRCS to obtain. The presence and preference areas of whole suites of water birds on our easements during the spring represent the habitat we strive to seasonally provide. The work MRBO has accomplished and data they have provided shows the worth of the Agricultural Conservation Easement Program/Wetland Reserve Easement Program in Missouri and the seasonally critical habitat we provide back on landscape-scale wetland restorations.

-Kevin Dacey, USDA Natural Resources
Conservation Service
Wetland Reserve Easement Coordinator



MRBO's work was made possible in FY2017 by:



Members

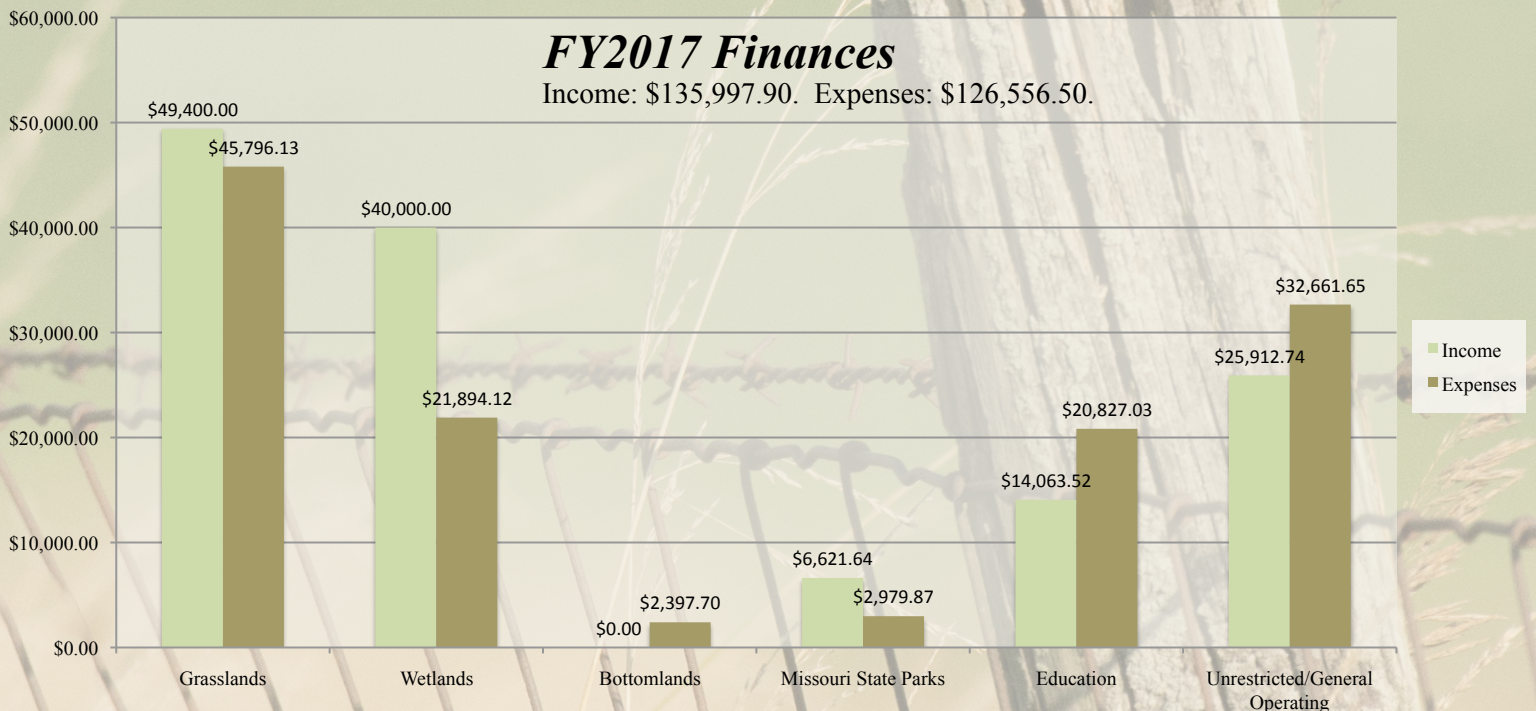
Pat Jones



**MISSOURI
DEPARTMENT OF
NATURAL RESOURCES**

FY2017 Finances

Income: \$135,997.90. Expenses: \$126,556.50.





Our thanks to the following photographers who contributed to MRBO's Images of Hope photo competition in November 2016!

Cover: Short-eared Owl, Dawn Loehr

Second Page: Painted Bunting, Dug Threewit; White-tailed Deer with Northern Bobwhite, Mark Ramsey

Prairies: Short-eared Owl, Donnie Nichols; Dickcissels and Henslow's Sparrow, Andrew Reago.

Wetlands: Osprey, Dianne Van Dien; American Avocets, Emily Burke; Great Blue Heron, Ryan Wertz; Black-crowned Night Heron, Andrew Reago.

Forests: Pileated Woodpeckers, Marvin De Jong; Yellow-billed Cuckoo, Shiann Piekkarski; Canada Warbler, Andrew Reago; Blackpoll Warbler, Andrew Kinslow.

Page Seven: Northern Bobwhite, Doug Hardesty

Back Cover: Rose-breasted Grosbeak, Tom Tucker