

# Midwest Coordinated Bird Monitoring Partnership: 2011 in Review



## 2011 Highlights

- Launched the Midwest Avian Data Center and formed a Technical Working Group to oversee development
- Expanded pilot testing of the Secretive Marshbird Monitoring protocol and sampling design
- Began developing a vision for coordinated forest bird monitoring
- Developed and participated in a landscape-scale grassland bird conservation workshop
- Hosted the first annual Midwest Bird Conservation and Monitoring Workshop (with 100+ participants and excellent plenary speakers)
- Initiated the Midwest Migration Monitoring Network

Dear Partners:

Thank you for an exciting, successful, and energetic year of bird monitoring and conservation in the Upper Midwest region. In 2011, the Midwest Coordinated Bird Monitoring Partnership made significant progress on each of the 10 goals outlined in our 2010 Framework document. In spite of travel and financial restrictions, we once again demonstrated the utility of collaboration to deliver much-needed monitoring information to guide bird conservation activities.

The Midwest Coordinated Bird Monitoring Partnership has also emerged as a leading entity among international bird conservation working groups. Through our activities, we are motivating other partnerships to follow suit in developing avian data centers, improving the statistical rigor of bird monitoring protocols, better linking monitoring programs and management activities, using web-based technologies to improve communication and coordination, and strengthening collaboration between government and non-government organizations.

We hope you enjoy this summary of the many great efforts undertaken in 2011, and we encourage you to remain involved in our dedicated working groups. Congratulations on an impressive year, and I look forward to future monitoring work with you in the service of bird conservation!



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### **Midwest Bird Conservation and Monitoring Workshop**

For the first time since its inception, the Midwest Coordinated Bird Monitoring Partnership convened a single workshop to bring all regional participants together. Held at the Illinois Beach State Park (in sweltering heat!), the workshop attracted more than 100 participants to hear excellent plenary presentations about full-life cycle bird conservation, the importance of linking efforts through monitoring across the life cycle, and the launch of the Midwest Avian Data Center. Participants then attended several concurrent, break-out sessions to identify and work towards greater coordination of efforts to monitor waterfowl during the non-breeding season, evaluate the pilot efforts for the National Secretive Marshbird Monitoring program, expand the vision for integrated grassland bird conservation and monitoring throughout the Midwest, and initiate development of a Midwest Migration Monitoring Network. We also hosted a poster session, which increased opportunities for students and professors to showcase research and connect with bird conservation practitioners.

### **Interactive Midwest Coordinated Bird Monitoring Partnership Website**

In 2009, partners strongly recommended development of a website that promotes networking and sharing of information, provides a sense of regional identity, allows administrator access for frequent updating, offers diverse functionality, and is easy to use. As of December 2011, our website (<http://midwestbirdmonitoring.ning.com>) has grown to serve 295 individual members, 10 focused working groups, a real-time calendar of events, Registry of Midwest Bird Monitoring Programs, bird conservation updates and discussion forums, and the Midwest Avian Data Center. This webpage has served as a model for other efforts as they develop web-based networking hubs (e.g., Integrated Waterbird Management and Monitoring Program and several Landscape Conservation Cooperatives).

### **Registry of Midwest Bird Monitoring Programs**

The Registry of Midwest Bird Monitoring Programs presently lists more than 170 monitoring initiatives along with their sponsoring institutions and principal investigators. Most entries list contact information and web links to facilitate communication and public access to monitoring results. Many of the records also include information on survey scope, frequency, and methods. Inevitably there are programs that have escaped attention, so we invite additions from initiatives or partners who know of initiatives. In 2011, we updated the registry to make it more easily searchable and user-friendly and continued to add new programs to the list.

### **Secretive Marshbird Monitoring**

Secretive marshbirds such as rails, bitterns, coots, and grebes are among the most poorly monitored bird groups in North America. For the past few years, conservation partners in Wisconsin and Michigan have played a key role in pilot testing the National Secretive Marshbird Monitoring protocol and sampling design. Researchers have also applied the protocol to efforts in Iowa. In 2011, Ohio joined in the pilot-testing by initiating surveys on higher-quality, managed wetlands. In 2011, the Missouri River Bird Observatory, in cooperation with the Missouri Department of Conservation and other key partners, also began planning efforts to begin surveys for secretive marshbirds in 2012.

We also played a key role in developing a continental-scale workshop held in December 2011, "Management and Conservation of Secretive Marshbirds: Priority Needs at Multiple Scales." Several members participated in this effort, which resulted in a renewed vision for marshbird conservation and monitoring in North America. Through the [Midwest Secretive Marshbird Working Group](#), we will be assisting with development of a business plan in 2012 and coordinating closely to align our Midwest efforts with this developing vision.

### **Nocturnal Bird Monitoring**

Owls and nightjars are not well-monitored through large-scale, standardized programs, and many have been identified as being species of greatest conservation need. Several Midwestern states (i.e., MN, WI, MI, and IL) have been conducting owl and nightjar surveys for the past few years and are increasing coordination of their efforts. Beginning in 2011, the Illinois Natural History Survey initiated a project to analyze the efficacy of the protocols and sampling designs currently in place. This will be the first step to developing a standardized and coordinated program for surveying nocturnal species throughout the Upper Midwest. Our [Midwest Nocturnal Bird Monitoring Working Group](#) is also regularly communicating with the Northeast Nightjar Survey Network, Bird Studies Canada, and the U.S. Nightjar Survey Network to ensure consistency, data sharing, and opportunities to manage for and conserve nocturnal species. Efforts are also underway to archive historical nocturnal bird monitoring datasets in the Midwest Avian Data Center (planned for completion in fall 2012).

### **Grassland Bird Conservation and Monitoring**

In 2011, the [Midwest Grassland Bird Conservation Working Group](#) continued to increase awareness of and connectivity among existing conservation and monitoring efforts throughout the region by hosting a webinar and full-day workshop. The Illinois Natural History Survey continued its effort to aggregate and synthesize results of wide-ranging grassland bird studies and monitoring programs from throughout the Midwest. Datasets will be shared via the Midwest Avian Data Center to promote hypothesis building, validation of assumptions, identification of information gaps, and evaluation of conservation actions. Wisconsin partners began implementing the Grassland Bird Conservation Area concept in several key portions of the state and will be testing a monitoring approach to evaluate that concept in terms of supporting focal grassland bird populations. Other partnerships throughout the Midwest have been in close communication with Wisconsin partners in an effort to build upon and expand their approach elsewhere in the Region.

We also played a leadership role in developing and facilitating a week-long structured decision making workshop in September 2011 at the National Conservation Training Center. We structured the workshop around our shared objective, to sustain and restore populations of grassland birds that breed east of the Rocky Mountains, including Canada. Participants determined a structured framework is needed to guide managers, scientists, and decision makers to integrate management efforts with human dimensions and create partnership opportunities to deliver the most effective conservation actions at local, regional, and national scales. The hope is that the general approach can be informative and, with proper leadership, can help to guide a more coordinated approach to this very

complex challenge. Workshop participants produced a 25-page document calling for significant outreach efforts in 2012 to support a refined conceptual model plus enhanced leadership and coordination

### **Midwest Avian Data Center**

The model for how aggregations of data can be used in bird conservation in the U.S. has evolved over the last ten years from centralized *data management* to centralized *data sharing*, and the main hub for data sharing is the Avian Knowledge Network (AKN). In 2010, we partnered with the Informatics Division of PRBO Conservation Science (founded as Point Reyes Bird Observatory) to develop the [Midwest Avian Data Center](#), a new regional node to the AKN. In August 2011, avian monitoring data and analyses became more accessible to habitat managers, conservation practitioners, scientists, decision makers and the public. Midwest bird conservation partners can readily compare bird population trends from several large datasets at multiple scales. Field biologists can access standardized monitoring protocols, downloadable field data entry forms, customized data entry pages, online training resources, and other important considerations for a successful monitoring program. Citizen scientists can learn about new ways to get involved in bird conservation and monitoring from their own backyards or in a nearby wildlife area in the region. In November 2011, we published a User's Guide to the Midwest Avian Data Center in (largely authored by Gareth Rowell, NPS).

In 2011, we also began working with Patuxent Wildlife Research Center to connect the Point Count and Marshbird Databases presently housed there with the Midwest Avian Data Center (and thus the entire international AKN community). Connecting these data management centers to the AKN provides incentive to share data as well as become part of a complete data management solution.

We also formed a [Technical Team](#) that, working closely with PRBO Conservation Staff, will oversee development of the Midwest Avian Data Center. The team will identify user needs, help populate the data center with relevant spatial data layers and bird monitoring datasets, and develop web-based training events to increase access to and use of the Midwest Avian Data Center.

### **Migration Ecology**

Information about the pelagic distribution of waterbirds and waterfowl during migration and wintering periods is sparse. Datasets on landbird and shorebird migration are widely scattered and in different forms (i.e., hand-written data sheets, excel spreadsheets, well-organized databases), making organization and use of these data in quick response decision making nearly impossible. Many conservation opportunities, including informed wind power development, will be contingent on well-coordinated and inter-connected bird monitoring programs and sound data management. We recognize the need to further our collective understanding of bird migration corridors and stopover concentrations, particularly along Great Lakes coastlines and inland riverways.

In 2010, the [Great Lakes Coastal Bird Monitoring Advisory Group](#) formed to begin addressing information needs around the Great Lakes. Two complimentary projects to

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assess pelagic bird distributions along Lake Michigan continued in 2011, thanks to our partners at the US Geological Survey and Western Great Lakes Bird and Bat Observatory. The Ohio Division of Wildlife has also continued aerial surveys to map bird use of the open waters of western Lake Erie. In late 2011, partners from Wisconsin, Michigan, Illinois, Indiana, and Ohio developed a collaborative grant proposal to coordinate future pelagic bird surveys and ensure complete coverage throughout the Great Lakes and to digitize historical bird migration datasets for addition to the Midwest Avian Data Center. Additional projects to digitize historical datasets along Lakes Michigan and Erie are already underway and slated for completion in 2012.

The [Integrated Waterbird Management and Monitoring Program](#) is aimed at helping wildlife area managers sustain healthy populations of shorebirds, waterbirds, and waterfowl that migrate long distances. Managers and scientists are using adaptive decision making in an innovative way that incorporates management expertise with new conservation planning and modeling tools. In 2011, we continued to provide technical input to the project's steering committee and helped link existing partnerships (i.e., Joint Ventures) with this program.

As a result of discussions held during the August 2011 workshop, we initiated a technical working group to begin drafting out a [Midwest Migration Monitoring Network](#). We have participants from almost every state meeting via regular conference calls to develop a well-coordinated network of observers. This network will hinge on agreed-upon standards for data collection and careful thought about the specific questions to address within a multi-tiered, statistically based framework.

### **Demographic Monitoring**

Beginning in 2010, the [Midwest Demographic Monitoring](#) working group partnered with the Institute for Bird Populations (IBP) to assess the regional value of existing bird demographic data from the Monitoring Avian Productivity and Survivorship (MAPS) network within the Midwest. This project was completed in 2011, and resulted in the creation of several useful products: 1) baseline demographic parameter estimates (including survivorship and productivity), 2) maps of protected lands indexed by their potential to provide source habitat, 3) GIS tools allowing managers to analyze landscapes and extract specific spatial statistics for input to models, and 4) species management guidelines for creating or maintaining source habitat. IBP has provided regional MAPS data to the Midwest Avian Data Center, and efforts will be underway in 2012 to add the aforementioned products to the Midwest Avian Data Center and our interactive website. We anticipate scheduling a webinar event to discuss these efforts in greater detail and generate enthusiasm to use them in bird conservation planning and evaluation efforts.

Researchers from the University of Minnesota are teaming up with land managers to assess whether the demographic response of Golden-winged Warbler populations to forest management and other habitat alterations is critical if this species is to be included in future landscape management planning in the Upper Midwest. The project has focused on three study sites—two national wildlife refuges (Tamarac and Rice Lake) and a national forest—spanning a predicted climate change gradient from southeast to northwest and

corresponding gradient of genetic introgression with Blue-winged Warblers. The project also centered on the two principle habitat types— lowland wetland shrub and early successional upland forest, with emphasis on habitat prescriptions developed for American Woodcock through the Upper Great Lakes Woodcock & Young Forest Initiative.

### **Forest Bird Conservation**

Developing a coordinated approach to forest bird monitoring and conservation faces many challenges: varying forest ownerships, multiple forest use objectives, competing successional stage needs for forest birds, and different approaches to forest bird and habitat monitoring. Several land managers have adopted the standardized Landbird Monitoring Protocol throughout portions of the Upper Midwest. This protocol includes birder certification; clearly articulated data management practices; training and personnel needs; the ability to measure abundance, density, occupancy, and species richness of breeding landbirds; and clearly written standard operating procedures.

In late 2011, staff at the IBP completed their historical analyses using MAPS data to identify source landbird population areas requiring conservation and buffering activities as well as potential source habitats in need of targeted management and restoration. Efforts are underway to make this information readily available to partners in 2012 through our interactive website, Midwest Avian Data Center, and a webinar event. Audubon Indiana also completed a project that evaluated approaches to integrate forest bird monitoring programs at a state level, and results from that effort will be distributed in 2012.

Several National Forests in Bird Conservation Region 12 (the Boreal Hardwood Transition) have a great history of landbird monitoring, and in 2011 they began developing a shared vision for coordinating their efforts. Through several face-to-face meetings, conference calls, and a strong dedication to bird conservation, they have established a commitment to integrating their monitoring efforts with those of other partners across the BCR. We are now determining the feasibility of hosting a meeting in 2012 to discuss the need and support for an integrated approach to forest bird monitoring and conservation in these northern forest landscapes.

### **Climate Change**

Coordinated bird monitoring will be critical to understanding the influence of climate change on bird populations and developing and prioritizing management actions at various scales. We will continue to develop our capacity to provide Landscape Conservation Cooperatives and other partners with the avian data and tools needed to inform strategic conservation under a changing climate (along with other potential broad-scale stressors of bird populations). Several new projects emerged in 2011 and will be on-going into 2012:

- The Central Hardwoods Joint Venture is working closely with Frank Thompson (US Forest Service), Hong He (University of Missouri), and a diverse group of partners to assess the impact of climate change on forests and priority forest and shrubland birds in the Central Hardwoods region. The goal is to develop a set of tools that will allow people to visualize not only broad scale climate change effects, but effects at the forest stand level to support “climate smart” conservation.

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- With funding support from NASA, research was begun by Dr. Brooke Bateman and PhD candidate Jessica Gorzo (both of the University of Wisconsin, Madison) on the effects of extreme climate events on avian demographics: the role of habitat refugia in mitigating climate change. This is a collaboration of the USFWS (Pat Heglund), the University of Wisconsin, Madison (Anna Pidgeon, Volker Radeloff, and Stephen Vavrus), Stony Brook University (Resit Akcakaya), USGS (Wayne Thogmartin), the University of Nevada, Reno (Tom Albright), and the USDA Forest Service (Curt Flather).
- Under the direction of Dr. Peter Marra (Smithsonian Migratory Bird Center) and several Midwest co-PIs, full life-cycle vulnerability assessments will be carried out to determine the effects of climate change on nongame migratory birds of conservation concern and that breed in the region. Model-based life-cycle analyses are critical, as many scientists believe we likely underestimate bird vulnerability during the non-breeding period, especially during migration. Their approach will provide a framework for integrating exposure to climate changes, sensitivity to these changes, and the potential for adaptation in both winter and summer seasons, and accounts for “carry-over” effects from one season to another. The results of this work will inform regional management by highlighting both local and distant drivers of vulnerability, and provide a model for accounting for the complexities of migration within multi-taxonomic assessments that can also be applied to other species, such as waterfowl and fish. Bird banding data and life history information will provide the primary source data for the project.

2009 – 2012 Midwest Coordinated Bird Monitoring Partnership Steering Committee



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