



U.S. Fish & Wildlife Service

Inside Region 3

November 2012

U.S. Fish & Wildlife Service

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Tom Melius • Regional Director • Midwest Region
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A Season of Changes

In the coming months you will be noticing some changes in Inside Region 3 as we test new formats and delivery systems. Last year we conducted a survey of the readership and are working to incorporate some of the recommendations. We will be moving toward an on-line format that will allow us to incorporate more images, video and audio to really help us show the critters and people that make up the Midwest Region. As with all new technologies there may be a few missteps along the way, but with your help we can continue to adapt and improve Inside Region 3. I ask that you send any suggestions to the External Affairs Office so they can continue to monitor the effectiveness of this internal publication.

Speaking of change, there is much of it going on around us this time of year. Here in the northern part of the Region the leaves have changed colors and most have fallen. Waterfowl and other migratory birds are gathering and moving as we all prepare for a change of seasons. Many plants, animals and people are preparing for changes in the coming weeks and months. Some of these changes are not new to us, but many of them are. The U.S. Fish and Wildlife Service is also changing as we adapt to new political, social and ecological environments.

By now, you've all heard how the Service will adapt to these changes. Hopefully concepts such as adaptive management, SHC and surrogate species have become part of your understanding as to how the Service will accomplish its mission in the future. If you are not familiar with these terms, I encourage you to become familiar with them. I have sent out several all employee messages on these topics and there is a great deal of information on the Service website at: <http://www.fws.gov/landscape-conservation/index.html>.

Change can be unsettling to some, but it is an inevitable part of life. The fish, wildlife and plants we protect have helped us to understand many things about our own lives; perhaps the most important is that change is inevitable, and ignoring change will be at our own peril.

Personally, I look forward to change and the challenges and opportunities it brings. There will be much more to come as we move toward the new year. I encourage you to join me as we face these changes together.



Thomas O. Melius

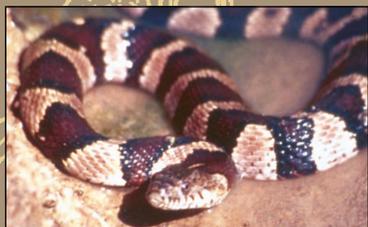
Tom Melius
Regional Director, Midwest Region



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In this Issue



On the Cover

Missouri/Mississippi Rivers Confluence Conservation Partnership with federal, state and non-governmental representatives at Edward "Ted" and Pat Jones Confluence Point State Park. Ashley Spratt, USFWS



Missouri/Mississippi Rivers Confluence Conservation	4
Master Naturalists Explore Missouri River.....	5
LCCs Launch Partnership Web Sites.....	5
A Landscape Conservation Approach to Saving Native Prairies.....	6
Service Celebrates National Wildlife Refuge Week	9
Mingo's Snake Migration	10
Seney's Piping Plover Habitat	10
Minnesota Bald Eagle Killed.....	11
Sea Lamprey Movements	11
Neosho Receives Award	12
2012 - A Year for the Birds.....	13
Bat Conservation Leader Receives Award.....	14
Invasion of Sky Dogs, Bird Chick and Odd Bird	15

Celebrating the Missouri/ Mississippi Rivers Confluence Conservation



The Missouri/Mississippi Rivers Confluence Conservation Partnership at Raccoon Ranch near St. Louis. Ashley Spratt, USFWS.

*By Ashley Spratt,
External Affairs*

The Missouri/Mississippi Rivers Confluence is the convergence of the two largest rivers in North America encompassing nearly 300,000 acres of lands predominantly in private ownership.

The Missouri/Mississippi Rivers Confluence Conservation Partnership seeks to promote a balance between fish and wildlife habitat and agriculture and community development. This private-public partnership is a signature demonstration of the U.S. Fish and Wildlife Service's Partners for Fish and Wildlife Program and America's Great Outdoors Rivers Initiative.

Since 2004, the Missouri/Mississippi Rivers Confluence Conservation Partnership has protected more than 21,000 acres of private land, and restored and enhanced more than 8,000 acres of wetland habitat on private land in Pike, Lincoln, St. Charles and St. Louis counties.

These wetlands provide migratory habitat for millions of migrating waterfowl, shorebirds, marsh birds and neotropical migrants in spring and fall. The area also supports 68 state-listed species and five federally-listed plants and animals.

Catastrophic flooding in 1993, 1995 and 2008, combined with urban expansion into the flood-

plain generated interest from local landowners and organizations to join federal and state agencies to strategically implement conservation programs.

This relationship was the catalyst for motivating landowners to maintain, protect, restore and enhance the open space and natural communities of the Confluence Focus Area (CFA). In response, voluntary programs were made available through existing federal, state and local conservation sources.

Members of the Missouri/Mississippi Confluence Conservation Partnership include the Great Rivers Habitat Alliance, Ducks Unlimited, Inc., U.S. Fish and Wildlife Service,

USDA Natural Resources Conservation Service, Missouri Department of Conservation, The Nature Conservancy, Missouri Audubon, Pheasant and Quail Forever and private landowners and also the U.S. Army Corps of Engineers, Missouri Department of Natural Resources, and the Conservation Federation of Missouri.



The Partners for Fish and Wildlife (PFW) program was officially established by the U.S. Fish and Wildlife Service in 1987. Service biologists and numerous conservation partners had the vision to look beyond the boundaries of government fee-title holdings and see the need to work cooperatively with private landowners. They recognized that nearly 73 percent of U.S. lands are in private ownership and a vast majority of federal trust species used these areas during their life cycle. Intense stakeholder outreach concluded that the most effective way to achieve conservation success was to provide direct financial and technical assistance.

Master Naturalists Explore the Missouri River to See the Meaning Behind Landscape Conservation



USFWS fisheries and refuge staff Tracy Hill and Tim Haller talk with Master Naturalist about geology along the river. Ashley Spratt, USFWS.

By Ashley Spratt,
External Affairs

More than 20 Missouri Master Naturalists and their families, ranging in age from two to over 70, joined U.S. Fish and Wildlife Service biologists and staff on a dusk boat exploration of the Missouri River, in October. The Missouri Master Naturalists volunteer with the Service throughout the year, providing support to fisheries, refuges and ecological services programs.

The Missouri Master Naturalists joined Service staff along the banks of the Missouri River to learn about the river's ecology, fish and wildlife, and commercial and navigational uses. Service communications coordinator Ashley Spratt also provided an overview of Landscape Conservation Cooperatives, conservation

partnerships that bridge the gap between science and land management, while touring the river.

“This was a way to say thank you to the entire Missouri Master Naturalists community.”

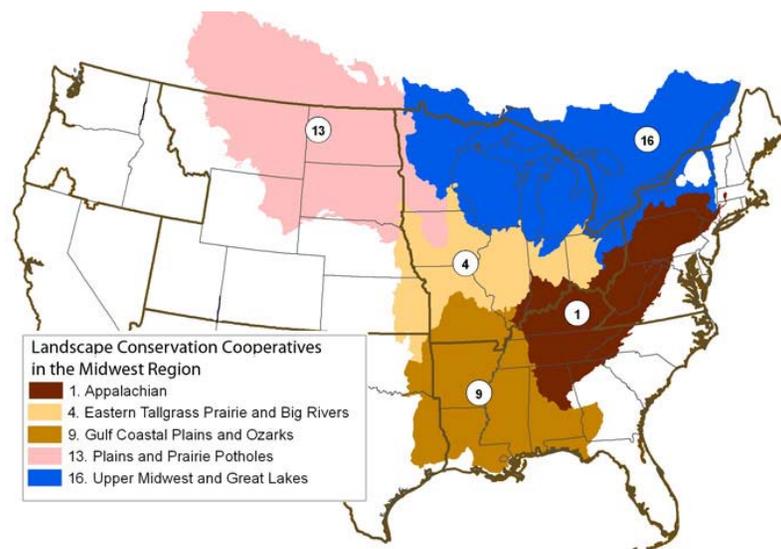
T. Haller, USFWS

Tim Haller, Visitor Services manager from the Big Muddy National Fish and Wildlife Refuge, coordinated the evening excursion, with the support of Service fisheries, refuge and external affairs staff. “This was a way to say thank you to the entire Missouri Master Naturalists community. They do so much to further the cause for conservation efforts, and are key partners in on-the-ground restoration and conservation activities,” Haller said. “We value their time, their passion for the outdoors, and their

interest in natural resources issues.”

Missouri Master Naturalist is a community-based natural resource education and volunteer program. Its purpose is to develop a corps of well-informed volunteers to provide education, outreach and service dedicated to the beneficial management of natural resources and natural areas within their communities for the state of Missouri. 🐾

Click here for more information about the Master Naturalist program.



LCCs Launch Partnership Web Sites

By Ashley Spratt,
External Affairs

Communication is a critical function of the Landscape Conservation Cooperative (LCC) community. This month, three LCCs within the Midwest Region launched partnership web sites, which will serve as communication forums to bridge the gap between conservation science and natural resources management, and provide a consistent source of updated.

- [Eastern Tallgrass Prairie and Big Rivers LCC](#)
- [Plains and Prairie Potholes LCC](#)
- [Upper Midwest and Great Lakes LCC](#)

Breaking down the barriers often times created by scientific lingo, these web sites will share stories that reflect how LCC partners are advancing science for the future of conservation.

Want to keep updated on LCC activities? Be sure to subscribe by clicking the “Email Subscriptions” button on the right-side of the LCC Web site home page for latest updates.

To share a story about landscape conservation in your area, contact LCC Communications Coordinator Ashley Spratt at (573) 234-2132 ext. 104 or Ashley_Spratt@fws.gov. 🐾

Saving Our Native Prairies: A Landscape Conservation Approach

*By Ashley Spratt,
External Affairs*

The business of conservation is changing in the prairies. Conservationists recognize that collaborative, science-based management is necessary to ensure a future for our prairies and wetlands, and the unique wildlife these habitats support.

“North America’s grasslands are arguably the continent’s most endangered ecosystem due in part to the invasion of our native prairies and wetlands by Kentucky bluegrass, smooth brome grass, reed canary grass and other cool-season introduced species,” said Michael Olson.

Olson is the science coordinator for the Plains and Prairie Potholes Landscape Conservation Cooperative (LCC), a partnership of federal, state and nongovernmental organizations vested in working together to improve conservation and management across jurisdictional boundaries in the prairie pothole region.

“Restoration and maintenance of prairies and wetland habitats requires an understanding of factors contributing to current ecosystem dysfunction and those necessary for restoring ecosystem health,” Olson said.

Through the integration of an adaptive management approach, partners of the Plains and Prairie Potholes LCC are improving management by building science support tools to help land managers make the best decisions about when, where and how to treat invasive species. National wildlife refuge managers across the prairie pothole landscape are using these science support tools to make management decisions to protect and restore native prairie and wetland habitats.

U.S. Fish and Wildlife Service wildlife biologist Socheata Lor

represents a multi-partner team leading the effort to save our native prairies by combining the expertise of scientists and land managers across agencies through the Native Prairie Adaptive Management Project. The team’s work is made possible through financial and partnership support from the Plains and Prairie Potholes LCC and federal funding through U.S. Geological Survey (USGS) and the U.S. Fish and Wildlife Service (USFWS).

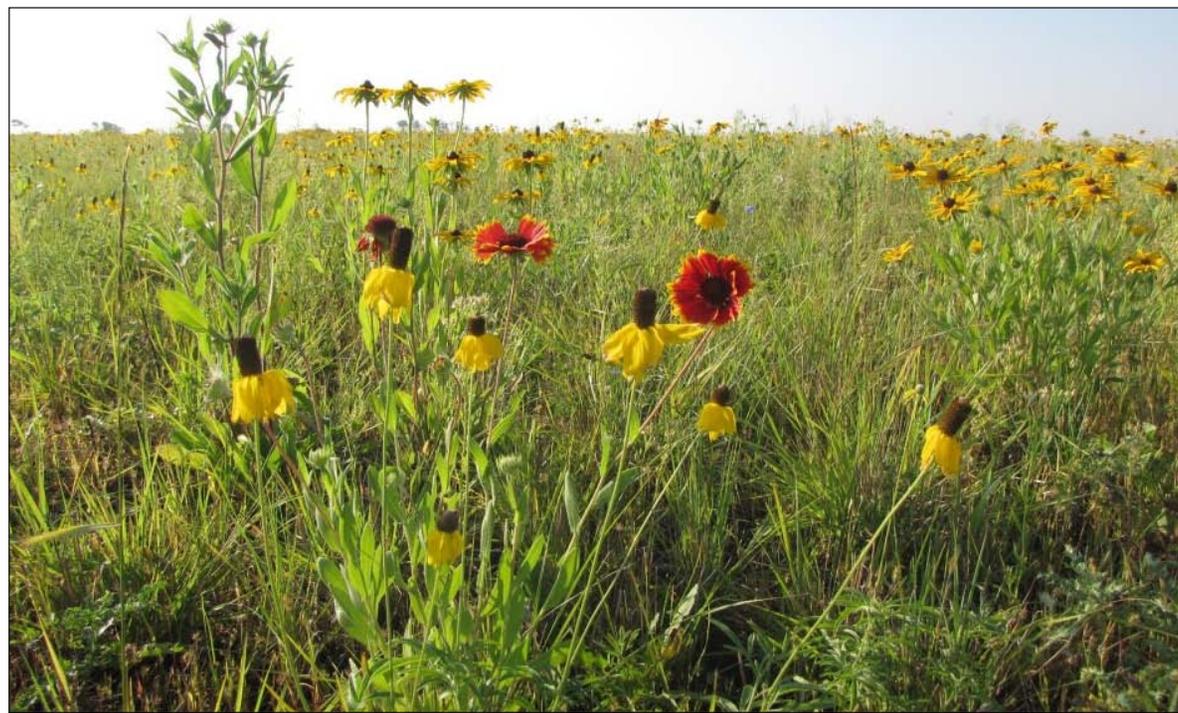
“We share the goal of saving our native prairies. By linking the scientific process to the

decisions of land managers, we can better respond to the ever-present threat invasive species pose to our native ecosystems,” Lor said.

Lor says the Native Prairie Adaptive Management Project is the gold standard in how adaptive management should be set up and carried out. “Our hope is that the protocols and recommendations for management decisions at national wildlife refuges and wetland management districts may be modified for use by lands beyond the National Wildlife Refuge System, to include privately and publicly managed lands throughout the prairie pothole region.”

Cami Dixon, wildlife biologist with the USFWS in North Dakota, serves as the coordinator for the Native Prairie Adaptive Management Project. Dixon says nearly 115,000 data points are collected annually in a centralized database from 20 national wildlife refuges and wetland management districts across four states in the prairie pothole region. The database allows researchers to compile information on the composition of native and non-native vegetation across prairie units.

The database stores valuable monitoring data and keeps track of management actions taken on specific refuge and wetland management district units over time. The data can then be input into predictive models that generate specific management recommendations for refuge managers for the upcoming year. Specific management recommendations for controlling invasive vegetation and increasing native vegetation include grazing, burning or a combination of both.



Prairie flowers at Audubon National Wildlife Refuge in North Dakota. USFWS.



Prescribed burning is a management technique used to control invasive grasses on refuge lands. USFWS.



Livestock grazing, under the right conditions, can encourage growth of warm-season grasses. USFWS.

U.S. Fish and Wildlife Service land managers and biologists learn standardized monitoring protocol as part of Native Prairie Adaptive Management Project. Cami Dixon, USFWS.

Refuge in North Dakota is utilizing the modeling recommendations to manage invasive species at four waterfowl production areas (WPAs) within the Audubon Wetland Management District. Refuge deputy project

leader Todd Frerichs has been making management decisions at those WPAs based on the modeling tool for the past four years.

“We know that models are never 100 percent correct, but the more data we feed into the models over time, the more accurate they will become,” Frerichs said. “The beauty of participating in this project is that we are all learning together, working our way toward the answer to a question that was too big for any one of us tackle on our own.”

When native prairie sits idle, brome and Kentucky bluegrass can take over, providing little

to no sustainable habitat for grassland and wetland wildlife. “You can reach a point of no return,” Frerichs said. “By teaming up and combining our data across refuges in the prairie pothole region, we are heading in the right direction to save our prairies.”

Many grassland birds including the Sprague’s Pipit, a candidate for listing as threatened under the Endangered Species Act, require large blocks of prairie to survive. Habitat fragmentation caused by urbanization and agricultural expansion continues to threaten remaining prairies and wetlands, making national wildlife refuges and other federally protected lands so critical to ecosystem health. Invasive species like Kentucky bluegrass and brome add fuel to the fire, invading native prairie habitat and limiting prairie productivity. Less productive prairie means less habitat available to sustain resident and migratory wildlife populations.

“Although it sounds cliché, our prairies really are a national treasure. A good portion of North America used to be covered by prairie ecosystems, which support a unique group of birds and other wildlife,” Dixon said. “When we break these habitats up, we don’t get them back.”



Monarch butterfly (*Danaus plexippus*) resting on a beautiful native prairie flower, Black-eyed Susan (*Rudbeckia hirta*) at Chase Lake National Wildlife Refuge in North Dakota. USFWS.

Butterflies and other pollinators also rely on many native prairie plants for both nectar and reproduction. The Powershiek Skipperling, also a candidate for listing under ESA, uses native prairie plants like the little bluestem and purple coneflower as nutrient or nectar sources. High quality prairie is critical for the long-term survival of these declining grassland species.

Prairies and wetlands also offer significant benefits to humans by contributing to water quality and storing carbon. “Prairie plants have large root systems, making what’s below ground much like an inverted rainforest,” Dixon said. Big bluestem roots can extend more than 12 feet below the surface.

Ryan Frohling, project leader at Detroit Lakes Wetland Management District in western Minnesota, is one of many USFWS project leaders participating in the Native Adaptive Management Project. He says the adaptive management approach supports his mission to preserve the small pieces of remnant prairie left on refuge lands.

“The historic tallgrass prairie was very diverse. When you consider the potential threats posed by climate change and other stressors across the landscape, it’s important to have the diversity provided by native prairies to sustain species over the long term. Prairies support everything from birds to butterflies, from meadowlarks to mallards,” said Frohling. He explains that although invasive grasses can provide habitat for some native species in the short-term, they can’t sustain healthy populations over time.

“Prairies support everything from birds to butterflies, from meadowlarks to mallards.”

Ryan Frohling, Project Leader Detroit Lakes WWD

Frohling says contributing to the data collected through the Native Prairie Adaptive Management Project helps fuel a discussion across regions and management districts about invasive species management.

“By working with our neighbors across the prairies and across state and other jurisdictional lines, we can slowly begin to paint a fuller picture of what works, what doesn’t and what we may be up against in the future given new environmental stressors.”

Every year, Frohling, Frerichs and other managers at national wildlife refuges and wetland management districts across the prairie pothole region implement the recommendations made through the Native Prairie Adaptive Management Project.

“By inputting monitoring data and following through on our management decisions, we participate in a feedback loop,” Frohling said. “We monitor and model with data collected from the previous year, and decide how to manage based on our knowledge about how different invasive grasses respond to different management techniques.”

For example, Kentucky bluegrass is more likely to be controlled through burning, as overgrazing has been documented to increase the invasive species’ spread.

Dixon explains how management decision-making is



Purple coneflower, a native prairie plant, provides a source of nectar for many invertebrates, including the Powershiek Skipperling butterfly, a candidate for listing under ESA. Cami Dixon, USFWS.

continuing to evolve to benefit the prairies by putting the scientific research and monitoring components of adaptive management to practical use. “Historically, a land manager would commonly make management decisions based on a subjective process or on small-scale monitoring efforts,” she said. “By implementing such an expansive and collaborative effort using a standardized monitoring protocol, natural resource managers have the opportunity to use information from a landscape-level dataset to drive management decisions.”

Biologists and land managers across the prairie pothole region agree that the Native Prairie Adaptive Management Project will improve predictive modeling efforts and promote scientifically-based management actions over the long term.

Frohling and Frerichs both say they will continue to utilize the database and modeling tools to guide management of prairie units on their wetland management districts. They say each year of additional data gets them closer to ensuring they are making management decisions to save the prairies based on sound science.

Dixon says the enthusiasm shown by both USFWS and USGS staff, combined with the financial support and guidance provided by the Plains and Prairie Pothole LCC, has built a solid foundation for this large-scale effort to save our prairies and the unique and diverse wildlife they support. “The scale and synergy facilitated by all of our partners has been essential to making this effort realizable.”





Being Neighborly in Iowa - Working with Landowners to Conserve the Tallgrass Prairie

By Alex Galt,
Wildlife Biologist,
Port Louisa NWR

The U.S. Fish and Wildlife Service and its partners have identified mesic tallgrass prairie and wet meadow habitats as high priority for restoration and enhancement in the Lower Iowa River Habitat Complex. These habitats are located in wetter areas of the tallgrass prairie and are typically dominated by big bluestem, indiangrass, switchgrass, prairie cordgrass and sedges. Tallgrass prairie was once the largest ecosystem in the United States, but is now one of the most endangered ecosystems on the planet.

This southeastern Iowa complex consists of two divisions of Port Louisa National Wildlife Refuge, as well as multiple state and county wildlife management areas, and a variety of conservation easements on privately owned lands. Although much of this land is managed by government conservation agencies, there is a clear need to expand conservation efforts beyond the boundaries of public lands to meet larger scale conservation goals.

[Click here to learn more about Port Louisa National Wildlife Refuge.](#)

To accomplish this task, the U.S. Fish and Wildlife Service is working outside of refuge boundaries, with partners and private landowners, through the Partners for Fish and Wildlife Program. This program allows the service to provide technical and financial assistance to private landowners who voluntarily restore and enhance fish and wildlife habitat on their properties.

Port Louisa recently partnered with an adjacent landowner through the Partners Program to develop and implement a management plan that would meet the habitat objectives of both the landowner and our agency. Woody vegetation encroachment, especially by willow, is a major management issue in these floodplain systems. Prescribed burning and herbicide application are being used to manage willow on privately owned wetlands and the adjoining mesic tallgrass prairie. This activity mirrors the efforts of the refuge staff right next door and provides high quality habitat for waterfowl and other migratory birds that is a limiting habitat type on the landscape. 🦉

Battling the Drought in Indiana Creating Wetlands for the Crawfish Frog

By Andrew Hoffman,
Volunteer Intern,
Big Oaks NWR

Dry grasses and clay are odd places to look for frogs – but biologists are walking Indiana’s grasslands in search of them. For the biologists at Big Oaks National Wildlife Refuge, summer droughts may have dramatically changed the landscape, but that has not stopped their efforts to protect the rare crawfish frog.

Crawfish frogs are large, light-colored frogs with ornate blotches marking their bodies. As their name implies, these frogs rely on burrowing crayfish to create the burrows that they occupy throughout the year. Crawfish frog research and management has been a priority for Big Oaks since 2004, when the initial breeding surveys for the elusive amphibians began.

“Crawfish frogs are an indicator of high quality grasslands and perhaps a surrogate species to inform management for other of grassland species,” said Big Oaks Manager Joe Robb.

Though Big Oaks contains 50,000 acres of varied habitat, crawfish frogs can only be found in temporary wetlands.

These seasonal ponds are essential habitat for the frogs to reproduce. Even though many of these ponds were lost due to drought, land managers have developed some man-made wetlands to provide much needed habitat this summer.

Despite the inability to dig new ponds on this past military proving ground, biologists enlarged existing wetlands by damming nearby culverts and ditches, effectively flooding the small pools and creating more extensive wetlands that mimic the natural cycles.

“Ideally, we would provide the frogs with wetlands that will reliably hold water through much of the summer even in dry years,” explained Robb.

With landscape-level modifications like this, the prospects for crawfish frogs at Big Oaks are promising. Active management and research strategies like these may serve as a model for other ecological systems across the country as managers adapt to a rapidly changing climate. 🦉

[Click here to learn more about the crawfish frog.](#)



Big Oaks NWR staff have been studying the crawfish frog and developing conservation strategies to increase population levels since 2004. Andrew Hoffman, USFWS.

Mingo National Wildlife Refuge's Lesser Known Migration

By Peter Rea,
Park Ranger,
Mingo NWR

During National Wildlife Refuge Week visitors to Mingo National Wildlife Refuge in Missouri often get to experience two very different types of migration.

The first type of migration is the push of migratory birds that utilize the bottomland hardwood forests and marshes of Mingo Refuge as stopover or wintering habitat.

What's the second type of migration, you ask? Snakes! Yes, that's right. Some snakes actually do migrate, just on a much smaller scale than that of migratory birds. At Mingo, snakes will migrate out of the swamps and bottomland habitat up into the bluffs that surround the Mingo Basin and they are doing that right now.

National Wildlife Refuge Week usually marks the peak of this movement, with many of the 22 different species of snakes at Mingo Refuge crossing refuge roads to make their way to wintering dens in the caves and crevices of the surrounding bluffs. During this migration period, snakes are exposed to a number of risks, with one of the greatest being vehicles on the roadways.

In order to assess the number of snake mortalities that occur on refuge roadways and to locate "hot spots," refuge biologists conduct snake mortality surveys. During these surveys, refuge staff drive established road transects and record all the snakes observed.

Each snake encounter is documented including species type, length, sex, age class, and of course, whether they are alive and what their geographic location is within the refuge. The data collected from these studies gives refuge biologists a better understanding of Mingo refuge's snake population and how they are faring in their annual migration.



The cottonmouth snake is a common sighting at Mingo National Wildlife Refuge during fall migration. Vergial Harp, USFWS.

It provides data on whether a species or age class is more susceptible to mortality and it also points out "hot spots" that snakes favor for migration. These locations could lead to future management actions that aim at reducing snake mortality on the refuge.

Snakes are an extremely important component of the bottomland habitat at Mingo National Wildlife Refuge and, hopefully, through these studies, we can see a higher migration success rate. 🐍

[Click here to learn more about Mingo National Wildlife Refuge.](#)

Expanding Piping Plover Habitat at Seney National Wildlife Refuge

By Mark Vanniman,
Refuge Manager,
Seney NWR

The U.S. Fish and Wildlife Service recently finalized the purchase of 19.85 acres of land at Whitefish Point, in Chippewa County, Mich. The acreage, which includes 1,200-feet of Lake Superior shoreline, is within designated critical habitat for the endangered Great Lakes piping plover and is adjacent to 33-acres that make up the Whitefish Point Unit of the Seney National Wildlife Refuge.

The gravel beaches, sandy beach dunes and stunted jack-pine dominated forests once slated for development will now be protected as part of the National Wildlife Refuge System. Whitefish Point is renowned for its concentrations of birds during migration.

Each year thousands of raptors, passerines and waterbirds funnel up to the point to cross Lake Superior. They are followed by hundreds of birders. The bird list for Whitefish Point includes 273 species and the point has been designated as a globally important bird area.



Michigan's active recovery program has steadily increased the piping plover population. K.Adams, USFWS.

Piping plovers, after a 23-year absence, returned to the point in 2009 and successfully fledged young. Nesting has increased over the past three years and in 2012 four pairs fledged 11 chicks. Plovers have been observed using the newly acquired acres as recently as August 28, 2012. The signing of the deed in late August signaled the end of an effort that began with the Service and partners meeting in Newberry, Mich. more than two years earlier.

The purchase of the land was made possible with funding through the Great Lakes Restoration Initiative, as well as a considerable amount of donated funds raised by the Whitefish Point Bird Observatory. The efforts of the Service and our partners exemplifies our mission of working with others to conserve, protect and enhance fish, wildlife and plants and their habitats for the continuing benefit of the American people. 🐦

[Click here to learn more.](#)

Bald Eagle Killed in Minnesota: Help Us Defend America's Symbol



American bald eagles are protected under federal law. Rich Keen, USFWS.

By Tina Shaw,
External Affairs

The U.S. Fish and Wildlife Service is seeking information leading to the arrest and conviction of the party responsible for killing a federally-protected American bald eagle near Cass Lake, Minn.

On October 4, a dead juvenile bald eagle was recovered along the north side of Beltrami County Road 20, approximately 500 feet west of Oman Road. Preliminary investigation showed that the eagle was killed with a shotgun. A forensic examination is currently being conducted to obtain additional information.

Bald eagles are protected under both the Bald and Golden Eagle Protection Act and the Migratory Bird Treaty Act. Killing bald eagles is prohibited by both laws. "Wildlife crime affects all of us and we depend on the eyes

and ears of the public as we look for those who attack our conservation legacy," explains Special Agent in Charge Gregory Jackson.

The maximum penalty for the unlawful take of a bald eagle under the Bald and Golden Eagle Protection Act is one-year imprisonment and / or a \$100,000 fine. The maximum penalty for the same violation under the Migratory Bird Treaty Act is six months imprisonment and / or a \$15,000 fine.

There is a \$1,000.00 reward for information that leads to the arrest and conviction of the party who committed this wildlife crime. Any person with information about the bald eagle killed near Cass Lake, Minnesota or other bald eagle killings should contact Special Agent Ron Kramer at 218-720-5357. 🦅

What's the Attraction? Understanding the Movements of Sea Lampreys

By Sara Ruiter,
Marquette Biological Station

Sea lampreys are attracted to certain rivers, but are they also attracted to rivers populated with the scent of native lampreys? This summer, personnel from the Marquette Biological Station collected water samples from five rivers to determine pheromone concentrations of sea and native lampreys present in the stream water before and after lampricide treatments.

Pheromones are chemical compounds released from an animal that can influence the behavior of other animals of the same species. When sea lampreys are present in a river they release two types of pheromones, a migratory pheromone that attracts lampreys to a specific river and a mating pheromone that attracts lampreys to one another. Native lampreys and sea lampreys have very similar



Tiffany Opalka-Myers, Biological Science Technician, extracting pheromone from water samples. Sara Ruiter, USFWS.



Sara Ruiter, Biological Science Technician, collecting water samples from the Carp River. USFWS.

pheromone composition and it is believed that a sea and native lamprey can be attracted to each other's pheromones.

To better understand how sea lampreys respond to native lamprey pheromones, water samples were collected and pheromones were extracted from five rivers plus two controls streams for this pilot study. The rivers sampled include, the Black Mallard River on Lake Huron with the Ocqueoc River as the control stream, and the Sand and Carp Rivers on Lake Superior, with the Anna River as the control stream.

Two water samples were taken from the mouth, an intermediate point along the river, and above the lampricide primary application point for the Black Mallard, Sand and Carp Rivers.

Lampricide is a chemical used to kill juvenile sea lampreys before they become parasitic adults. Water samples were

collected prior to the river being treated with lampricide, just after the treatment, and approximately 30 days after the treatment. Two water samples were also collected at the two control streams at the same times.

Harlow Creek on Lake Superior and Ocqueoc River on Lake Huron are the two rivers where temporal sampling took place. At each site two water samples are collected every six hours within a 24 hour period. These water samples were collected from the same location every month to look at the change in pheromone concentrations over time.

The project is currently ongoing. Water samples have been collected from all lampricide treated streams and all pheromones have been extracted from the water samples and are now awaiting analysis at Michigan State University. 🦅

Neosho National Fish Hatchery Receives 2012 Federal Energy and Water Management Award



By Katie Steiger-Meister
External Affairs

Representatives from Neosho National Fish Hatchery were in Washington, D.C. on October 4 to receive the 2012 Federal Energy and Water Management Award. The award, given out by the U.S. Department of Energy, recognizes projects that have made outstanding contributions to the areas of energy efficiency, water conservation and the use of renewable energy technologies at federal facilities.

Neosho NFH was established in 1888 and is the oldest operating federal fish hatchery. The hatchery encompasses approximately 18 acres in the heart of the town of Neosho, Missouri, due to availability of excellent-quality spring water. It raises endangered pallid sturgeon for recovery efforts in the lower Missouri River and rainbow trout for stocking in Lake Taneycomo. It supports conservation of the endangered Ozark cavefish and restoration of native mussels.

More than 20 years after the hatchery's centennial, a new high-performance 9,839 square-foot Visitor Center, the first U.S. Fish and Wildlife Service building to earn a Leadership in Energy and Environmental



Midwest Region staff accept the award from the Department of Energy in Washington, D.C.. Sara Ruiter, USFWS.

Design (LEED) Gold rating officially from the U.S. Green Building Council, opened in December 2010. The Visitor Center is architecturally designed to mimic the original headquarters from 1888, which featured similar onion dome and witches hat roof styles.

Many energy efficiency design strategies were realized in the finished construction. The super-insulated building retains thermal mass. Passive solar architecture reduces heating and cooling loads and operating costs. The building's orientation, floor plan, and window locations were strategically placed for maximum daylighting and scenic views. Energy efficiency is

accelerated with low-e glazed, double-hung, aluminum-clad operable windows that are easy to maintain, while minimizing solar heat and maximizing visible light.

A lighting control system including occupancy sensors, daylight sensors, timers, and dimmers, together with energy-efficient fluorescent, task, and LED lighting, minimize energy used for artificial lighting. Closed-loop geothermal wells provide 60-degree glycol to zoned ground-source heat pumps (31.13 tons) controlled by individual thermostats that ensure thermal comfort for heating and cooling of fresh supply air.

Mechanical ventilation is treated separately by an energy recovery unit that contributes to energy savings. All of these energy conservation measures combine to yield energy performance at least 34% better than an average building. In addition, a net-metered, grid-tied, 16-panel 3.36 kW solar photovoltaic (PV) array on the roof produces 4.818 MWH of renewable electric power. Site lighting is kept to minimum levels required for safety. Outside light fixtures that direct light downward were chosen to ensure the visual access to the night sky and prevent disruption of nocturnal animal habitat (dark sky principles).

The facility was built using environmentally friendly, regionally extracted and manufactured "natural" materials including Hardie-Plank fiber cement siding, wood framing (not from old growth forests), a long-life, standing-seam metal "cool" roof, and marmoleum flooring. Low VOC (volatile organic compounds) emitting carpets, paints, and adhesives provide a healthy indoor environment. Building elements were selected for high recycled content, such as: steel rebar, insulation, acoustical ceiling tiles, carpet, ceramic tile, and restroom partitions. Polished, stained concrete floors with attractive stainless steel fish inlays reduce maintenance. The exterior deck is made of recycled waste materials. Low-flow plumbing conserves 28,225 gallons of water annually.

Using hatchery spring water for large aquariums eliminates the need to de-chlorinate potable city water. Water-efficient landscaping with native plants and forbs avoids chemical use and irrigation. Stormwater containment and drainage swales conserve more water. Concrete drives and paths minimize the heat island effect compared to asphalt.

The efficiencies built into Neosho NFH's Visitor Center contribute to over \$7,000 in savings on both energy and water use expenses. ▶

2012 Is Banner Year for Kirtland's Warblers



Kirtland's Warbler, USFWS.

By Dan Elbert and Scott Hicks, East Lansing Ecological Services Field Office

On many fronts, 2012 has been a notable year for Kirtland's warblers. Survey results scored a new record, with 2,090 singing males, up from 1,828 last year.

"It was only 1987 when we tied an all-time low of 167 singing males," said Scott Hicks, the Service's East Lansing Field Office Supervisor. "This is a pretty remarkable recovery



Singing male Kirtland's warblers are counted every year in Michigan, Wisconsin and Ontario. Joel Trick, USFWS.

-- 12 times the population size from where it was just a short 25 years ago,"

Biologists, researchers and volunteers in Michigan observed 2,063 singing males during the official 2012 survey period – up from 1,805 in 2011. In Wisconsin, a minimum of 23 singing males were observed in five counties. Another four males were counted in Ontario.

The Kirtland's warbler survey is conducted during the second and third weeks of June, when the birds are defending their nesting territories. Warblers are detected by listening for their songs, which can be heard at distances up to a quarter mile. Only the males sing, so estimates of breeding population size are obtained by doubling the number of singing males recorded, based

on the assumption that each male has a mate in its territory.

Kirtland's warblers typically nest on the ground in stands of jack pine between four and 20 years old. Historically, these stands of young jack pine were created by natural wildfires that frequently swept through northern Michigan. Modern fire suppression programs altered this natural process, reducing Kirtland's warbler habitat. As a result, the population of Kirtland's warblers declined to the point that they were listed as endangered.

To mimic the effects of wildfire and ensure the future of this species, the DNR, the U.S. Forest Service and the U.S. Fish and Wildlife Service manage the forests through a combination of timber harvests, burning, seeding and replanting to promote habitat for many species, including snowshoe hare, white-tailed deer, other songbird species and rare plants.

Michigan Kirtland's Warbler Tours Attract Growing Number of Birders

Each year, in late spring and early summer, birders from around the globe trek to northern Lower Michigan to see Kirtland's warblers. This year, a total of 687 tourists took advantage of guided tours, an 18 percent increase from last year's number and comes after a 47 percent increase in attendance in 2011. The jump occurred even though tours were scaled back this year.

Tourists came from 37 states, Puerto Rico and five foreign countries. Participation by visitors from California, Illinois, Michigan, Ohio and Pennsylvania was significantly higher in 2012 compared with the average from the past eight years. The increase in Michigan participation was most noticeable, reflecting the effort to reach out to Michigan media outlets and inform Michigan residents of the world-famous resource in their own state.

New Methods will Help Track Migrating Kirtland's Warblers

As October began, the last few Kirtland's warblers that remained on the breeding grounds in northern Michigan finally departed. They have embarked on a journey spanning more than 1,600 miles. Many will likely pause en-route somewhere between Michigan and the Bahamas to rest and refuel before finally arriving at their winter home. The vast majority of these individuals will go undetected as they fly south, eluding the eyes of ever-watchful birders as they have done since the species was first discovered in 1851. A small sample of this population, however, promises to remove some of the obscurity associated with this species during the non-breeding season and literally shed light on where these birds spend the bulk of their time outside of Michigan.

In the spring of 2012, the East Lansing Field Office began a project in collaboration

with Dr. Pete Marra of the Smithsonian Institute to track the movement of Kirtland's warblers from their breeding grounds to their winter grounds. Several Kirtland's warblers were equipped with light-level geolocators during the 2012 breeding season. These devices are incredibly small, weighing just 0.65 g, and will record time and light intensity levels while the individual wears the device. Upon recapture of these birds next spring, data archived on the device will be downloaded and analyzed to determine where those individuals have been (accuracy is approximately 200km). This information will help clarify the geographic distribution of the species during migration and winter seasons. It will also facilitate future studies that examine the biology and ecology of the Kirtland's warbler during these important periods of its annual life cycle. Most importantly, this new information will increase our ability to identify and ensure that threats to the survival of this endangered species are adequately addressed across the entirety of its range.



Students Get Up-Close Look at Kirtland's Warblers

Getting kids excited about wildlife is always a goal for the Service, and the East Lansing Field Office launched an effort to show local third-graders the amazing resource right outside their doors. In late May and early June of 2012, biologists from the East Lansing Field Office travelled to elementary schools in northern Lower Michigan to educate approximately 365 third graders about the Kirtland's warbler. Biologists visited classrooms to introduce students to endangered species and the plight of the Kirtland's warbler through an interactive presentation and educational game. Students learned to identify a Kirtland's warbler by sight and sound, learned about the special type of jack pine habitat the species needs during the breeding season, and how the surrounding area where the students live is also used by hundreds of Kirtland's warblers. Biologists also introduced students to the brown-headed cowbird, the concept of nest parasitism, and the impacts the cowbird



Data from small geolocators will help track migration of Kirtland's warblers. Dan Elbert, USFWS

has on the Kirtland's warbler populations. Kids participated in a cowbird game, in which students played the roles of warbler or cowbird during a mock breeding season.

Biologists later took students on walking field trips of nearby jack pine forest stands to see first-hand Kirtland's warbler nesting habitat and management efforts

that benefit the species. Students practiced identifying Kirtland's warblers and other birds by sight and sound, while using binoculars and spotting scopes. During these field trips, biologists explained why large stands of young jack pine forest are important to Kirtland's warblers and why fire is critical to the regeneration of this habitat type. Students

were then asked to discuss some of the challenges that humans experience living in a fire-prone environment, and learned how land managers are able to artificially regenerate Kirtland's warbler nesting habitat in the absence of wild fires, so that humans and Kirtland's warblers can successfully co-exist.

After a tour of the nesting habitat, students learned about migration and the Kirtland's warbler annual cycle through a game in which students had to "migrate" to their winter grounds and back. In addition to avoiding the common hazards of migration, such as poor weather and

predation, students also had to respond to human-caused changes to habitat (both positive and negative). In this way, students were better able to understand how the breeding, migratory and winter phases of the species were connected, and how events happening in one place at one time were linked across the species' annual cycle, to the survival of individual birds, and to population trends.

The education program will continue on an annual basis, in order to build a more educated public, whose lives intersect most directly with that of the Kirtland's warbler. 🦉

Kirtland's Warbler Census Results, 2005-2012								
County	2012	2011	2010	2009	2008	2007	2006	2005
Antrim	2							
Alcona	266	221	178	243	207	175	170	140
Clare	40	84	99	137	141	147	137	114
Crawford	322	315	288	326	288	290	276	227
Grand Traverse	0	0	0	0	2	1	2	1
Iosco	248	134	167	142	192	238	168	131
Kalkaska	72	53	60	40	10	4	4	9
Montmorency	63	32	28	23	11	14	10	14
Ogemaw	540	569	566	571	627	529	493	479
Oscoda	388	261	256	226	209	198	149	209
Otsego	11	31	24	27	40	43	35	47
Presque Isle	24	5	6	7	5	6	0	0
Roscommon	49	65	41	38	25	20	13	26
NLP Subtotal	2,025	1,770	1,713	1,780	1,757	1,665	1,457	1,397
Alger	4	1	0	0	0	0	0	0
Baraga	2	2	3	3	0	1	0	2
Chippewa	13	14	15	9	12	8	5	2
Delta	5	11	7	14	10	7	7	6
Luce	3	3	0	0	1	0	0	4
Marquette	4	2	5	3	6	8	3	0
Schoolcraft	7	2	4	4	5	8	6	4
UP Subtotal	38	35	34	33	34	32	21	18
MI TOTAL	2,063	1,805	1,747	1,813	1,791	1,697	1,478	1,415
Adams	19							
Douglas	1							
Marinette	3							
WI TOTAL	23	21	22	11	9	8		
ONTARIO TOTAL	4	2	3	2	3	2		
TOTAL	2,090	1,828	1,772	1,826	1,803	1,707	1,478	1,415

Bat Conservation Leader Honored with Silver Eagle Award



Dave Redell (left), Wisconsin DNR biologist, receives the Midwest Region's Silver Eagle Award for his career-long contributions to bat conservation and the fight against white-nose syndrome. Redell dedicated his career to the conservation and management of bats, and his work contributed significantly to the collective knowledge and understanding of bat biology, behavior and conservation. Presenting the Silver Eagle Award in September was Midwest Region White-nose Coordinator Rich Geboy (middle) and National WNS Coordinator Jeremy Coleman. Redell passed away several days after receiving the award. Wisconsin DNR

Sky Dogs, Bird Chick and Odd Bird Land in Midwest



Sky Dogs left to right: Birding enthusiast Doug Gray, Clemson University Professor of Wildlife Ecology Dr. Drew Lanham, wildlife photographer and author Dudley Edmondson, Three Rivers Park District Senior Outdoor Education Manager Bob Gibson, birding enthusiast Paul J. Baicich, Texas Parks and Wildlife Ranger Roy Rodriguez and Fledging Birders Institute President Dave Magpiong. Valerie Rose Redmond, USFWS

*By Valerie Rose Redmond
External Affairs*

Sky Dogs, Bird Chick and Odd Bird flew in and landed at Minnesota Valley National Wildlife Refuge, on October 13, for a birding diversity convention aimed at increasing birding among nontraditional audiences. The “Focus on Diversity: Changing the Face of American Birding” themed convention attracted a large flock of 75 birding enthusiasts from New York, Washington D.C. and across the nation as far west as Los Angeles.

The conference was spearheaded by Dave Magpiong, president of the New Jersey non-profit corporation Fledging Birders Institute. Magpiong is one in the group of birders who have donned the monikers Sky Dog, Bird Chick and Odd Bird.

“We’re excited to be part of this conference,” said Minnesota Valley National Wildlife Refuge Manager Charlie Blair. “We know that we will get information today that will help us move our program forward.”

The conference focused the nation’s demographic shift and the increasing and imperative need for concentrated outreach to nontraditional audiences. Barriers to birding and call to action strategies were also points of discussion.

The diverse crowd at Minnesota Valley NWR looked like America. “Who are American birders?” Magpiong asks. “This does not look like any other birding event that I’ve ever been to,” he said looking out at the crowd before drawing the contrast of

the American populace of 65 percent white and 35 percent non-white as compared to the birding community at 92 percent white and 8 percent non-white. “We share this love—beautiful birds. Minnesota Valley National Wildlife Refuge was no accident,” he said, referring to the venue. “It is perfect.”

The dual mission of Magpiong’s Fledging Birders Institute is “enhancing the healthy development of our youth with the profound benefits of bird watching and promoting public awareness of avian diversity and factors which threaten it thereby fostering a societal bird conservation ethic.”

Themes of relevancy, perspective and people were repeated throughout the

conference. Speakers at the conference indicated that social economic factors, perspective and relevancy play a huge role when making attempts to reach non-traditional audiences. In his presentation, Clemson University Professor of Wildlife Ecology Dr. Drew Lanham referenced a popular birding corridor in an impoverished South Carolina community where the people have no water to drink. Attempts to rectify the situation were met with concerns from environmental communities about how it was going to impact bird habitat. “This,” he said, “while people have no water to drink.”

Lanham also referenced a population density map of people of color in the nation and invited the audience to overlay it with a bird conservation map. “Do we ever think about land conservation regions and think about the layers of humanity underneath? It’s a critical thing,” he said. “If you are not talking to the people on that landscape, then you are not addressing the issues of conservation.”

Magpiong invited the audience to submit their call to action ideas before announcing that the next conference will be in the Rio Grande Valley. This diversity conference and the U.S. Fish and Wildlife’s decision to host it, brings us all one step closer to changing the face of American birding. Notable speakers at the conference in addition to Lanham included wildlife

photographer and author Dudley Edmondson, bird guide author Kenn Kaufman, birding enthusiast Paul J. Baicich, birdchick.com blogger Sharon Stiteler, Texas Parks and Wildlife ranger Roy Rodriguez, and birding enthusiasts Doug Gray, Marta DelCampo, and Derek Washington, among others.

While Washington answers to Duck and Oddbird and Stiteler to Bird Chick, Edmondson, Gray, Lanham, Magpiong, Baicich, and Rodriguez have dubbed themselves the Sky Dogs. Also on the speaking agenda were the U.S. Fish and Wildlife Service’s own, Dr. Mamie Parker, Judy Geck, and Tom Worthington. 🐦

[Click here for more information on this and other birding events.](#)

Click below to view a live stream of the conference visit.

[Early Morning Live Stream](#)

[Late Morning Live Stream](#)