

Interview with a Sponsor



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On the cover ~ A Brown Creeper banded at the home of Bob & Pat Perry in Rolla on February 18th, 2012.

By Diane Benedetti MRBO Board Member

It is through the support and generosity of sponsors that MRBO is able provide special activities for education and community events as well as take on interns to share knowledge and experience with a look to the future.

MRBO is privileged to have a number of sponsors who share our passion and concern for nature. Mark Bowman is one such individual. In searching on-line for conservation organizations, he came to learn about MRBO as it was just beginning as a non-profit organization. His background and genuine concern for the environment was a match for MRBO and a story that inspires us.



Above: Supporter Mark Bowman with a Great-crested Flycatcher at MRBO's spring banding site.

As an eight year old, Mark found himself moving from the metropolitan surroundings of Akron, Ohio to a 25-acre country homestead. To him it was a veritable playground and he delighted in the small creatures like frogs, toads, and snakes who shared his world. This led him to pursue graduate degrees in biology. He is currently a medical laboratory scientist at Skiff Medical Center in Newton, Iowa.

Mark's interests were never limited to one aspect of biology. Life on the prairies in the Midwest and his enchantment with wildflowers led him to studies in botany. Time spent exploring Iowa prairies later led to a strong interest in bird life.

When asked his thoughts on ecology, Mark reveals his own zeal: "I have become very concerned over the years about environmental issues. There is a truly incredible loss and degradation of natural habitat. I have witnessed acres of incredibly beautifully prairies bulldozed to make way for tennis courts and asphalt sports fields. It is not just the beauty of the area that is destroyed, it is the homes of hundreds of indigenous American grassland creatures that are obliterated."

Mark's commitment to protecting the environment led him to Missouri in spring 2011 to spend several days with MRBO. As an educated biologist, he enthusiastically expresses his delight with his brief experience in the field on MRBO projects. "I came in from the prairies of Iowa to the woodlands of Missouri and was astounded by the diversity of birds being tracked by MRBO. More than this though, I was greatly impressed by Dana and Ethan, the two highly skilled ornithologists who headed MRBO. Their skills, energy and enthusiasm are what led me to become a sponsor."

This experience was just a beginning though as Mark is returning to MRBO for a three week personal training this spring. "We look at this as a 'flexible workshop' where I can increase my skills in bird banding and MRBO will find a new platform for sharing their knowledge with an ever growing number of environmentally conscious citizens."

In closing, Mark shared his philosophy for life. "It is so important that we all learn more about nature. Pick an area of interest, reach out and become involved. We should live as gently as possible, limiting the carbon footprint that we leave behind. To sense nature as it was meant to be is one of the most rewarding experiences one can ever have."

April 9th: **Grand Pass Conservation Area spring migration station** open for the season. Visitors welcome! View bird-banding and learn about how MRBO conducts long-term monitoring of migrant passerines. Station operated daily from pre-dawn til mid-day.

April 14th: MRBO will be conducting a morning workshop for at **The Wildlife Society's Midwest Conclave** at Duck Creek Conservation Area. This is an important event for wildlife students from across the region, hosted by our friends from the University of Central Missouri.

April 16^{th} : **Van Meter State Park spring migration station** open for the season. Station operated once per week. Visitors welcome here, too – please call to find out dates of operation!

April 21st: **University of Central Missouri's Bio-Blitz** at Pertle Springs Park in Warrensburg. All are welcome at this family-oriented event where all living creatures residing within Pertle Springs are surveyed and counted. MRBO will be banding birds for public viewing from dawn til mid-day.

April 28th: **Friends of Squaw Creek International Migratory Bird Day festival** at Squaw Creek National
Wildlife Refuge. Join the Friends and MRBO for a fun allday event that includes great birding and bird-banding
demonstrations as we welcome our migrants back to
Missouri.



An Orange-crowned Warbler that remained in our backyard all winter. It was still visiting in late March!

May 2nd and 4th: MRBO and the staff of **Van Meter State Park** welcome the 5th-graders of **Marshall's Bueker Middle School**! This will be our third year hosting Bueker students, and we will have even more activities, demonstrations, and programs than ever before!

May 11th – 12th: **Wings Over Weston festival** at Weston Bend State Park. Join Burroughs Audubon, Master Naturalists, State Parks folks, and MRBO for the third year of this excellent festival. Many booths, demonstrations, vendors, games, and native plant sale. On Friday May 11th we will host students from local 2nd-grade classrooms; Saturday is open to the public!

May 16th: **Burroughs Audubon Society** visits us at Grand Pass Conservation Area. We have long been looking forward to our friends from Burroughs visiting the Grand Pass monitoring station during a busy migrant time!

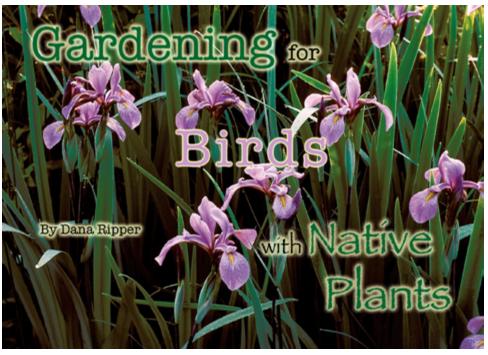
May 23rd: Monitoring Avian Productivity and Survivorship (MAPS) project begins at **Paintbrush**, **Grandfather**, **and Ionia Ridge prairies**. This intensive breeding season study will run several days each month until August 8th. Visitors are welcome; please contact us to determine schedule.

New events are added regularly to our website – please check www.mrbo.org for updates!

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ately I've become aware of a ✓ revolution. It's a quiet one, and I couldn't say for certain if it's going on in states other than Missouri, where we have a superior conservation community and a vast, well-informed citizenry. But the revolution is here – it consists of gardeners who have the ability to transform our entire landscape by gardening with native plants. It doesn't matter if you have 5 acres, 500 acres, a tiny city lot, or an apartment balcony – anyone can make a significant contribution to Missouri's natural diversity by planting natives in your yard or whatever space you have.

I was trained in ornithology, not botany, so this is a whole new world for me. I'm pleasantly amazed by not only the incredible diversity of Missouri plants, but by their attractiveness. Looking at our beautiful native flowers, I find myself shocked that, historically and unto the present, people feel the need to import flowering plants from other regions of the world! Our native plants display amazing beauty, variety, and, by virtue of different flowering times, gratifying change from early spring to late fall.

The importance of native plants can not be overlooked or overstated. Missouri's native animals – including our wide variety of insects and the birds that depend on them – evolved in synchronicity with the native plants. Take, for instance, a 100-acre patch of native prairie. Such a piece can harbor 200 different plant species...and 3,000 insect species. Think of how many Henslow's Sparrow babies can be raised on that many insects! Not all plants are created equal in terms of bird use. For example, the Flowering Dogwood (*Cornus florida*) is unusual in that it produces berries quite late in the year – late fall persisting into winter. The berries are exceptionally high in protein and are therefore a staple for migrating songbirds.

Or consider butterflies. Many species will use only specific plants to lay their eggs; the emerging larvae are specialized to feed on particular plant species. The Spicebush Swallowtail, for instance, is hosted by Missouri's native Sassafras (Sassafras *albidum*) and – go figure – the Spicebush (*Lindera benzoin*). Aside from the extensive benefits to our native wildlife, there are many benefits to the gardener. Native plants are lower maintenance than exotics. They are much more adapted to local climate, soil type, and precipitation, and therefore will require less coddling and less resource use. For instance, if you live in central or northern Missouri in what was historically dry prairie, you use a great deal of water maintaining plants that originated in moist areas of Europe – like your lawn! Additionally, many of the plants we consider weeds, such as the common Dandelion, are lovers of disturbed areas. Healthy native plants, grown as a community, will outcompete these weeds.

Where to start:

Learn about Missouri's natural communities. What his

Below: A Slate-colored Junco, one of Missouri's winter-only visitors, feeding on Dogwood berries after leaf-drop. Photo by: Linda Williams Missouri Master Naturalist





The above photographs from Left to Right:

Indian Pink (Spigelia marilandica) is a native of woodland edges and stream banks. Grow in partial shade and fertile, well-drained soil. Photo from the Missouri Department of Conservation

Missouri Primrose
(Oenothera macrocarpa)
is found in glades. Grow
in rocky soil with good
drainage, in full sun.
This plant is pollinated
by a nocturnal hawk
moth!
Photo from the Missouri

A Cloudless Sulphur caterpillar feed-ing on Partridge Pea (Chamaecrista fasciculate) on its way to becoming a striking yellow butterfly.

Department of Conservation

Photo by: Linda Williams Missouri Master Naturalist

Cardinal flower (*Lobelia cardinalis*) is a plant of wet areas. Grow in full to partial sun near water. A favorite of hummingbirds and butterflies.

Photo from the Missouri Department of Conservation

- Prairie, savanna, glade, upland forest, and bottomland forest are examples of natural communities. Their presence in any given area is based largely on natural soil type and precipitation. The Missouri Department of Conservation has fantastic information on our natural communities: http://mdc.mo.gov/discover-nature/habitats.
- Once you've determined what your yard would have consisted of historically, start learning some of **the plants that would have been there**. If you live in an area that was once savanna, for instance, there would have been widely-spaced oak trees with a ground cover of grasses and forbs, such as little bluestem and coneflower.
- Innk about the lay of your land. Do you have a south-facing patch adjacent to your house, where the conditions are exceptionally hot and dry? You might want to place plants that are native to Missouri glades in this location, as glade plants are well adapted to poor soils and drought-like conditions.

Some very helpful resources:

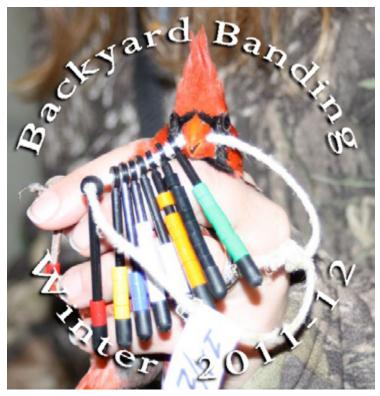
- www.grownative.org
- www.wildflower.org/explore
- http://www.missouribotanicalgarden.org/gardens-

- gardening/your-garden/help-forthe-home-gardener.aspx
- "Bringing Nature Home: How You Can Sustain Wildlife with Native Plants", by Douglas Tallamy. This book gives the in-depth perspective on how gardeners can truly change the world. Available on Amazon. com.
- "The Terrestrial Natural Communities of Missouri", by Paul Nelson. Published by the Missouri Department of Conservation. This is *the* book for information on Missouri's habitats.
- "Missouri Wildflowers" and "Tried and True Missouri Native Plants for Your Yard". Both published by the Missouri Department of Conservation and available at MDC visitor centers and via their on-line store at www.mdcnatureshop.com.

Below: A Grey Catbird, one of Missouri's migratory summer breeders, feeding on native blackberries (*Rubrus spp.*)

Photo by: Linda Williams Missouri Master Naturalist





MRBO had another outstanding Backyard Banding season during the winter of 2011-2012 – if this mild season we had can rightly be called "winter". With temperatures hovering in the high-40's to mid-60's, most people noted less birds at their feeders overall this year. The temperatures and lack of snow cover made netting at feeders difficult on some occasions – backyard birds simply weren't as dedicated to visiting feeding stations and often would disappear when we had nets open, returning right after we closed them! Nonetheless, we color-banded 438 birds at 19 locations beginning in early November and finishing in mid-March.

In keeping with the citizen science purpose of Backyard Banding, birds were given unique colorband combinations so that individuals are immediately



Left: Possibly the cutest bird in the world, this female White-breasted nuthatch was banded during Backyard Banding. For more about this species see Page 10. distinguishable from one another by the bird-watcher.

This winter, many of our Backyard Banding events involved large numbers of visitors, whether the banding took place in a residential backyard or at public properties. In total, we reached over 500 people with information about Missouri's birds! The Backyard Banding season included events at:

- Busch Conservation Area: We provided a banding station for approximately 200 students of the Fort Zumwalt School District. 40 students from the local Wentzville School also viewed banding. More than 50 birds were color-banded at Busch CA, which will hopefully provide viewing opportunities for many visitors in the coming years.
- Birds-I-View store, Jefferson City: We had the opportunity to band for visitors of the BIV store on three different occasions this winter. Over the three days, we had over 60 visitors and ended up with a front-page article in the Jefferson City News Tribune!
- Clinton MDC office and Van Meter State Park: Birds were color-banded as part of demonstrations during "Missouri's Winter Birds" workshops. More than 70 people attended these two workshops! Each day included a detailed presentation on winter bird ID, feeder-making, and banding.
- Burroughs Audubon Library: Our second annual Backyard Banding at Burroughs was a success! We had many members of the Audubon Society visit, and had assistance from our friends who run the Missouri Western State University banding station. At this event Burroughs Audubon donated \$1000 to MRBO; these funds will be going directly to more education and outreach programs.
- Arrow Rock: Tom and Margaret Hall hosted a public event for Arrow Rock residents at their property that backs up to a unit of the Big Muddy National Wildlife Refuge. The Halls have the greatest number of backyard feeders we've ever seen, and numbers of birds to go with them! The Catches of the Day were three Brown Creepers, subtly-colored birds that were greatly enjoyed by all present.
- Missouri Botanical Garden: We were invited to be a part of MBT's 8th Annual Backyard Birding Festival. The day started off slowly as



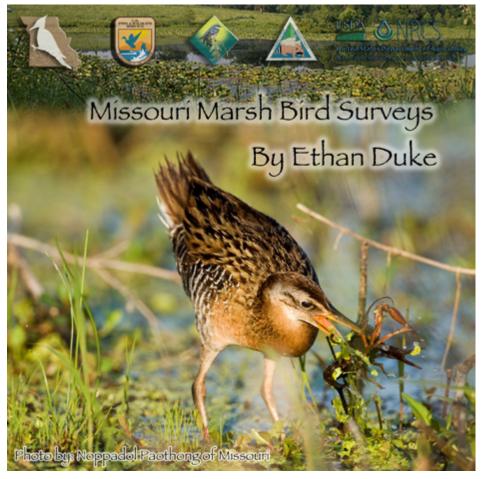
Above: A St. Louis Boy Scout Pack observes Backyard Banding. Below Left: Members of the general public band together in Clinton. Below Right: Missouri Master Naturalists in Rolla get advanced training through learning about bird monitoring.

- a steady mist kept us from opening nets. But by mid-day, we were back in action, and were able to show birds to every one of our 30 or so visitors, including Boy Scouts who were earning their Bird Badges.
- Dixon Area: Michael and Therese Morgart and their daughter Kayla hosted an event for homeschooled students from their region. Throughout the afternoon, 30 students and their parents watched bird-banding, engaged in games

- related to migration, and had a fun afternoon of socializing.
- Meramec Hills Master Naturalists: Naturalists Bob and Pat Perry gave us the opportunity to provide two training events at their home for members of the Meramec Hills Chapter. Not only did we get to be around a bunch of great people, the Perrys have been diligent about recording their color-banded birds!
- Runge Nature Center: We conducted a program at Runge in early March by invitation from the River Bluffs Audubon Society. Though the day was warm and windy, we were able to band over 30 birds, and had more than 50 people visit the banding demonstration area throughout the course of the day! Hopefully Runge visitors will keep track of their colorbanded birds until we're able to visit again.
- Sweet Springs Historical Society: Our last Backyard Banding of the year was hosted by Mary Ann Keeney for our friends from the SSHS. It was almost 80 degrees and the birds were feeling uncooperative, but we did manage to color-band two Downy Woodpeckers, one Tufted Titmouse, and a White-breasted Nuthatch, to the delight of the Historical Society members.

A great big thank you to everyone, including those private homeowners not listed here, for taking part in the Backyard Banding Program! We will see you again next winter, and hope that in keeping track of your color-banded birds, you are seeing some interesting patterns in movement, behavior, distribution, and timing.





two main groups, Rails (see photos on next page) and Bitterns.

Who is doing the surveys and how?

One of four Missouri bird surveyors (Ethan Duke, Bo Brown, Tami Courtney, and Jean Favara) will visit each survey location once a month for three months (April, May, and June). Surveys work best if done from an hour before dawn for 3 hours and/or an hour before sunset for 2 hours. There will between five and ten points in each wetland where surveyors stop to look and listen for marsh birds. We then use a small speaker to play the calls of all of our focal species during each survey. This has been proven to work well in helping detect the birds, as they often respond to calls of conspecifics.

Bird surveys conducted with a traditional protocol, such as the Breeding Bird Survey (BBS), have been found to be unreliable for the secretive marsh birds. As a result, researchers throughout the United States have teamed in past decades to establish the most effect survey method for marsh birds and have developed the Standardized North American Marsh Bird Monitoring Protocol.

With a grant from the Upper Mississippi River & Great Lakes Region Joint Venture (UMRGLJV) http://uppermissgreatlakesjv.org/, MRBO is able to embark on the monumental task of surveying the entire state of Missouri. Using a rigorous and unbiased process of survey site selections, we have been reviewing over six hundred survey points on both public and private lands.

Partnerships have been pivotal, with a high level of support from the Missouri Department of Conservation (Wildlife Division and Conservation Area Managers), Central Hardwoods Joint Venture (CHJV), NRCS, Fish & Wildlife Service personnel, and private landowners.

Further research regarding the vocalization rates of marsh birds and the efficacy of the standard protocol will be accomplished with the deployment of Autonomous Recording Units (ARUs). We hope to improve current survey protocol by using these recording devises to assess impact of human observer bias and measure species response to broadcasts by determining natural temporal rates of vocalizations.

MRBO Assistant Director Ethan Duke will serve as Principal Investigator along with MDC Wildlife Diversity Chief Gene Gardner.

MRBO is on the lookout for marsh birds in Missouri. We know a lot about many of Missouri's birds - we know approximately how many there are, what habitats they use, and where and when they can be found. There is, however, one group we don't know very much about and that is marsh birds.

King, Virginia, Black, and Yellow Rails, Sora, and Least and American Bitterns are secretive, usually very quiet and well camouflaged. They also live in wetlands that are usually difficult to access. Due to wetland habitat loss, populations of these species appear to be in serious decline.

Some of these birds have been known to breed here in Missouri. Others just migrate through and use Missouri's wetlands to fuel up. Some of these birds as large as a chicken and some are the size of a sparrow! The birds fall into

Missouri's Rails

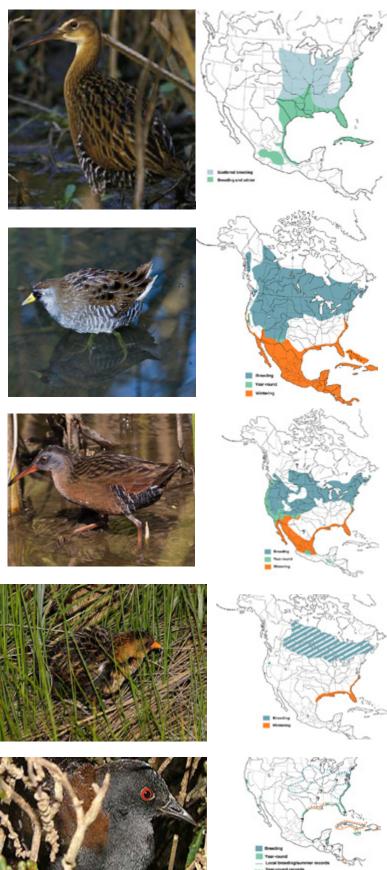
There are less than 500 breeding pairs of **King Rail** remaining in the Midwest. This species was fairing better in the southern portion of its breeding range; however, the Gulf oil spill is likely to have a damaging effect on wintering birds and those that breed closer to the Gulf.

Sora are long-distance migrants in the eastern part of their range. They are hunted in Missouri as they migrate through during spring and fall. Some also breed in northern Missouri. Sora have the most extensive range of any American rail species and are not considered to be of conservation concern.

The **Virginia Rail** is also one of Missouri's game birds. Hunters in Missouri harvest about 25% of the rails (both Virginia and Sora) taken in the Mississippi flyway. The Virginia Rail pushes itself through dense sedges and marsh grasses, and, accordingly, has the highest leg-to-flight muscle ratio of any bird.

Yellow Rails do not breed in Missouri but pass through during migration. They vocalize almost exclusively at night. Detecting the presence of Yellow Rails is one of our objectives for surveying during the migration period. Very little information is available about this species' population trends since the Yellow Rail is so infrequently encountered.

There is less known about the small **Black Rail** than any other marsh bird species, and arguably any other bird species in the United States. Almost strictly nocturnal, this incredibly secretive bird has thwarted ornithologists' attempts to document its ecology. The range map at right shows how few places this species has been recorded.



Photos from Wikipedia Commons. Yellow Rail and Sora by Mike Baird. Range maps from The Birds of North America Online (A. Poole, Ed.). Ithaca: Cornell Laboratory of Ornithology; Retrieved from The Birds of North America Online database: http://bna.birds.cornell.edu/BNA/.



The White-breasted Nuthatch (*Sitta carolinensis*) is one of my top three favorite birds of all time. Its appearance, voice, behavior, and relative fearlessness are very endearing qualities. This bird can be seen in almost any backyard, and its little *yank-yank-yank* vocalizations will welcome you in almost any forest or woodland, no matter how small the patch.

Catching a White-breasted Nuthatch during a Backyard Banding is always a delightful experience. They're one of our most charismatic winter residents, and even novice birders will recognize a nuthatch, not necessarily on its appearance, but its behavior. On many occasions I've heard a child pipe up, "Oh, I know that one! That's the one that walks upsidedown!" - referring to their unique behavior of foraging down tree trunks headfirst. This allows them to see and glean insects on the upper underside of bark that other, right-side-up birds miss.

Though we have three other species of nuthatch in the United States – the Red-breasted (*Sitta canadensis*), the Pygmy (*Sitta pygmaea*), and the Brownheaded (*Sitta pusilla*; once a resident of Missouri pine forest, but now extirpated) – our White-Breasted Nuthatch has been found to be more closely related

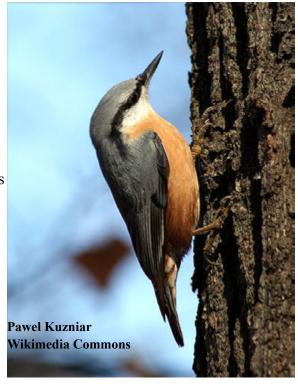
genetically to the Eurasian Nuthatch (*Sitta europaea*). I found this surprising as you can see from the picture below that the Eurasian Nuthatch looks more like our Red-breasted Nuthatch. There are a total of 25 species of nuthatch around the world, all belonging to the genus *Sitta*. Several of these, such as the White-Browed Nuthatch (*Sitta victoriae*) of Burma, are critically endangered or threatened.

Our White-breasted Nuthatch is largely a resident species – that is, individuals remain in the same area throughout the year and do not migrate. They form monogamous pairs that remain together throughout life un-

less one of the pair dies. White-breasted Nuthatch pairs reside on a small (<10 acre) territory. They will defend that territory against conspecifics, but during winter will join small mixed flocks composed of other species (typically chickadees, titmice, and Downy Woodpeckers) as the group forages throughout the woods or nearby backyards.

For all its commonness, there is actually very little known about the breeding habits and nest success of this species relative to many other birds. There have been few studies on the fledging rate and survivorship of White-breasted Nuthatches. Some authors have suggested average clutch size is 4, with an average fledging rate of just over one bird young per nest. Personal observations here in Missouri lead me to believe this may be a low estimate; I have seen adults in the company of two to four young on several occasions. However, I was not counting the nests that failed!

The *Birds of North America* account suggests that our lack of knowledge comes from the fact that White-breasted Nuthatches nest in old woodpecker holes that are relatively hard to access. This sounds like an excuse for ornithological laziness to me, since there are many species of cavity-nesting birds, including the wood



peckers themselves, for which we have plenty of nesting observations!

Virtually nothing is known about the dispersal of young White-breasted Nuthatches after fledging, or where and how they go about establishing their own territories. There are a couple of documented cases of 100-300 White-breasted Nuthatches migrating irruptively in a flock – ornithologists hypothesize that these were young birds in a mass dispersal during a time of low food resources.

Good news: the White-breasted Nuthatch is one of the few species for which Breeding Bird Survey data show no decline! Unlike many of the species we study, our Nuthatch is doing well and will be around for years to come – which may allow us to finally unravel some of the mysteries of their nesting and fledgling behavior.

The Missouri River Bird Observatory is interested in gathering anecdotal data from Missouri residents who are able to observe White-breasted Nuthatch nests and determine their fate.



Kids' Corner



One activity that we find particularly enjoyable is to build and decorate bird houses. Bird house kits can be purchased at any hobby store, or, if you're handy and have the tools, can be built from scrap wood. You can also purchase ready-made, simple wooden birdhouses from home stores like Orcheln's. Be sure to buy or build one with a small access door that will allow you to check on your nest without having to take the house down and apart.

The fun part...

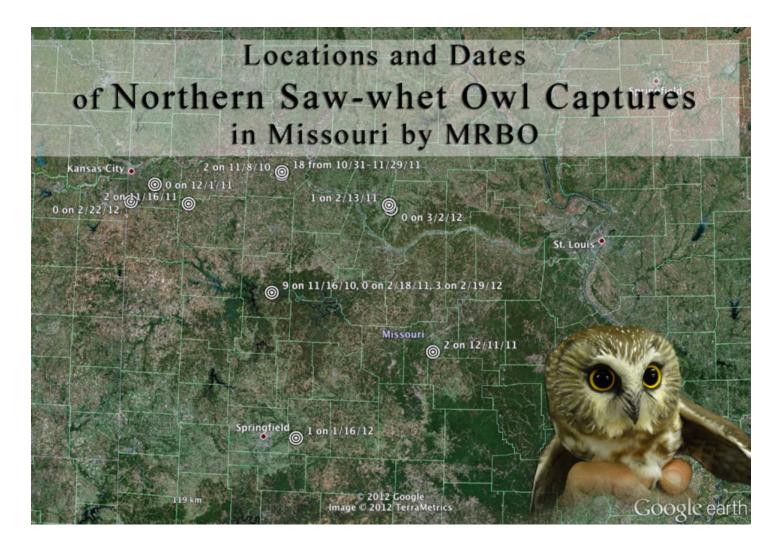
Depending on what species of bird you'd like to at-

tract, determine what size entry hole is needed, whether you need any special predator protection, and where exactly you should place the house. For example, if you'd like a bluebird, your box should have a 1.5-inch hole, an overhang on the roof to prevent mammals from reaching in, and should be placed on the side of a large tree or fence post facing an open, grassy area. There are all kinds of birds that nest in human-made birdhouses, from the tiny, vocal House Wren to the beautiful American Kestrel.

Now the really fun part...

It's one thing to piece together some boards to make a home for a House Wren or an Eastern Bluebird, but the real joy is in the decorating! Once you have assembled your bird house, take to the outdoors and find sticks, leaves, small rocks, moss, pine cones, and anything else that strikes your fancy. Use a little bit of wood glue to attach the items to the house. You'll end up with a house that not only makes a cozy home for your birds, but also has extra camouflage!

Don't forget to check on your eggs and nestlings, and to clean out the box at the end of the summer!



Since the publication of our Winter newsletter, we have been joined by the following new members:

Steward Level

Mark Bowman Burroughs Audubon Society of Greater Kansas City River Bluffs Audubon Society of Jefferson City

Contributor Level

Steve and Regina Garr Jack Duncan

Sponsor Level

David & Ruth Cott

Individuals, Families, and Students

Sherry Leonardo
Chris Wilson
Michael & Jaye O'Keefe
Amy & Scott Laurent
Neal & Gail Vreeland
Susan Dyer
Rolla's Venture Crew 84
Jeff Cantrell
Sue Bone
A.J. Bone – a special welcome to A.J., our first
student member!