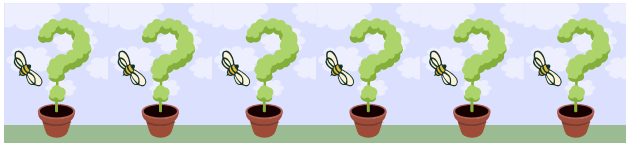




FEBRUARY MEETING

The Boone's Lick Chapter of Missouri Master Naturalists will meet at 6:30 p.m. on Thursday, February 8 at the Boone County Extension Center. The program will be given by Andy Forbes, an ornithologist jointly employed by the Missouri Department of Conservation and Missouri Audubon Society. He will be speaking about the MAPS Project (Monitoring Avian Productivity and Survivorship) and the relationship between bird banding and Missouri's IBAs (Important Bird Areas). A business meeting will follow the presentation.



PRESIDENTIAL PONDERINGS

Suzanne Wright

The view from my window is a sparrow colored landscape. Most people would say it's a dull palette of grays and tans, but like the pattern on the back of the white throated sparrow, it's intricate and complex. Last winter I began reading "Winter World: The Ingenuity of Animal Survival" by Bernd Heinrich. I admit that his reference to the tiny kinglet was what inspired me to pick it up. Since childhood I have been fascinated by the ability of all animals to survive the harshest of environments and I thought Mr. Heinrich's book would answer all my questions. However, it isn't a clinical listing of scientific data but his personal discoveries while he walked his woods and watched the wildlife that lived there.

It's tempting to stay cozy in our homes on these cold days, comfortably toasty in front of our fires with a cup of cocoa, but there are many fascinating things happening in the frozen landscape. If you find a winter feeding flock of birds, you can match your pace and direction to theirs and follow them as they forage. Animal tracks are easier for the untrained to spot in a fresh snowfall than in a complex pattern of leaf litter. And surely identifying trees by their bark will make you an expert come spring. The trick is to get your warm duds on and get out the door.

When my daughters were younger, they had horses. Despite the fact that their ancestors ran wild and free, the present day animal requires vast amounts of care. There was the lightest of mists, hovering rather than falling, as Abby and I headed out the door for the evening feeding. My one thought was that it was the perfect condition for Missouri's famous black ice. When we arrived at the barn the horses were not conveniently waiting for us at the fence so we headed into the pasture in the freezing mist. From the dark we heard the ringing of glass bells. We found our ponies grazing, indistinct shapes in the fog, seemingly each hair of their manes and tails ending in an ice crystal that would ring like glass wind chimes with each step. We walked them down to their grain and stood silently while they ate and then followed them back into the fields so we could listen to the music they made.

It was one of those rare moments, when you are witness to something that will never happen again in your lifetime, one of the gifts Nature gives us if we are there to witness its wonder.

I have been watching the deer as they struggle on the ice that covers the hills and valley behind my house and I have noticed that one of last spring's fawns has a limp. I wonder how they survive in the cold, and if they look at the buds already on the trees and have thoughts of spring.

Humans alter their environment to suit themselves while animals adapt to an amazing range of conditions. How does the kinglet, who is no bigger than the end of my thumb, maintain a body temperature in winter that's above that of a healthy human? Heinrich never disclosed the answer in his book. But he did remind me of something I already knew, which is to go outside and look around and see what you can see. While, unlike him, I probably won't be climbing trees and dismantling squirrel nests to see how they are constructed, I will walk my winter world.

*"Winter Solitude: in a world of one color
the sound of wind"* Matsuo Basho



MEETING MINUTES

The January meeting of the Boone's Lick chapter of Missouri Master Naturalists took place on January 11, from 6:30 – 9:00 PM. Attendees: Suzanne Wright, Marcus Wallace, Jody Stotsky, Gail White, Beverly Boyd, Sharon Reed, Jack Dillard, Mary Jane Wheeling, Troy Gordon, Janine Gordon, David Silvey, Vanessa Melton, Marie Scruggs, Celeste Mazzacano, Julie Fisher, Dan Reeves, Alice Havard, Buffie Balling, Carolyn Doyle, Cheryl Hardy, Rebecca Allen, Sally Swanson, Kirk Keller, Meredith Donaldson

Jeff Briggler, MDC Herpetologist, presented a two-hour advanced training program on hellbenders, salamanders and other amphibians. This was the first advanced training program held during a regular monthly meeting; the chapter will schedule two

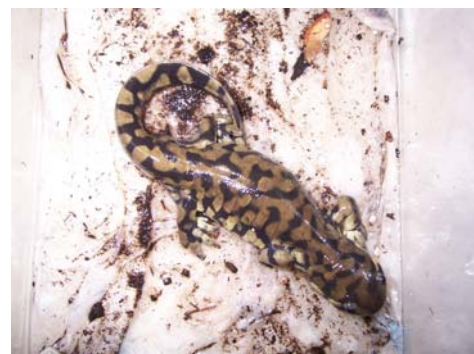
advanced training classes during the year to help members achieve certification. There was no regular business meeting, but a handout with upcoming events and notifications was available.

Thanks to Vanessa Melton, Jody Stotsky, Buffie Balling, and Suzanne Wright for providing refreshments. There is a new refreshment sign-up sheet for 2007. There are openings in March for non-dessert and beverage. You don't have to whip up anything fancy; snacks are for those who don't get to eat before the meeting or would like a little dessert as we socialize. If you haven't brought treats in the past or your name isn't on the list for this year, contact Suzwright@centurytel.net to sign up.

Submitted by Buffie Balling, chapter secretary



As always, David Silvey is on hand with his magic camera...here he has captured the allure of Jeff Briggler's spotted and tiger salamanders...





RECOMMENDED READING

“A Crack in the Edge of the World”, Simon Winchester, 2005, ISBN # 0-06-057200-0 (paper).

submitted by Celeste Mazzacano

I've been a Simon Winchester junkie ever since I read “The Professor and the Madman” (a history of the Oxford English Dictionary), and this book just fed my habit. Winchester's gripping histories of scientific discoveries and cataclysmic events are expertly infused with the personalities of the people who shaped them. This book's scope is ambitious, to say the least, covering a period from ~2500 million years ago to modern time, but it never lags. Trained as a geologist at Oxford, Winchester has once again turned his eye towards the earth, and while this book is subtitled “America and the Great California Earthquake of 1906”, it is really a story of the geology of the world, and of the American West in particular.

The scientific information in this book helps remediate a lack of geology training as Master Naturalists. Winchester provides concise, understandable delineations of topics that could be dry as, well, rock dust in the hands of a less-skilled historian, such as the forces that caused the creation and breakup of Pangaea to yield today's continents; the characteristics and nature of rocks such as gabbro, chert, serpentine, and ophiolite; and the theory of plate tectonics. The tale of the New Madrid Sequence provides zesty local flavor—five months of ghastly geological upheaval in 1811 that made the Missouri River flow backwards and terrified the beleaguered inhabitants of New Madrid MO (and made me double-check whether we had earthquake insurance...).

The history of the great American geological survey expeditions in the late 1860's was new to me. Sprinkled with a cast of players that included such notable explorers and naturalists as John Wesley Powell, Clarence King (first

director of the USGS), and John Muir, who not only mapped but loved the regions they explored, one gets a sense of the wonderment they felt as they recorded “all the stunning details of the fantastical worlds that lay in the far beyond”.

An additional bonus is the way Winchester constantly inserts intriguing tangential details, such as the fact that the inventor of the eponymous Richter scale was a randy vegetarian nudist; that the original name of San Francisco was Yerba Buena, a Spanish tribute to an aromatic green mint that grew in such profusion in the area and was prized by the indigenous Miwoks for its curative abilities; and that photographer Ansel Adams owed his distinctive profile to a broken nose suffered as a 4-year old in the San Francisco earthquake.

Geology, naturalism, science, history, superstition, cataclysm, competition, failure, insight, triumph, and weird personal foibles—there is something here for everyone. This book will leave you with a feeling of real awe at the impossible mechanics that guided the formation of the Earth and a sense of our vulnerability as we cling to the fragile crusts that skate about haphazardly on its surface.

LEARN MORE ABOUT ...

...birding. Osher Lifelong Learning Institute is offering a 4 week condensed Birding course taught by Bill Clark, President of the Columbia Audubon Society. Classes will be held Jan. 23, Jan. 30, Feb. 6 and Feb. 13 from 9:30 - 11:30 am at the MU Extension Center on Lemone Blvd. The course is open to anyone; cost is \$45.00. Call 882-4349 to register. Class size is limited to 30. Approved as advanced training.

...volunteer water quality monitoring. The Missouri Stream Team will host a Level 2 Workshop in St. Louis on Feb. 23 and in Springfield on March 2. Anyone who has completed Introductory & Level 1 training and submitted stream data is eligible to attend. Or, get your feet wet at an Introductory workshop on May 30 in Jeff City; registration deadline is

UPCOMING EVENTS

May 4. To register, contact Priscilla Stotts at priscilla.stotts@dnr.mo.gov or 573-526-3406. Approved as advanced training.

...CARP. No, not the invasive species that jump into your boat and break your jaw. CARP (Columbia Aquatic Restoration Project) is a new volunteer program offered through Columbia's Parks & Recreation, Office of Volunteer Services, and Stormwater Outreach Program. CARP will train volunteers to aid in aquatic plant management and maintenance for the growing number of park ponds, retention basins, rain gardens, and lakes. Three classes will be held on the evenings of March 5, 12, and 19 at City Hall; projects will be on Saturday mornings. Class topics include lake ecology, storm water management, rain gardens, and aquatic plants and insects. Projects include installing & maintaining aquatic plants at Stephens Lake Park, Phillips Lake, and other water bodies in city parks. Volunteers are asked to commit to 18 hours of service. For more information, contact the Office of Volunteer Services at 573-874-7499 or volunteer@gocolumbiamo.com. This course has not been approved as advanced training.

...landscaping with native plants. Ann Wakeman (RockPost Wildflowers) will present the workshop "Landscape Design With Native Plants" on Saturday Feb. 10th at the Columbia Public Library, Conference Room A, 10-11:30 am. Learn more about landscaping with Missouri's native plants. Their natural beauty, ability to thrive with fewer resources than horticultural selections, and attractiveness to butterflies, hummingbirds and other pollinators make our native plants the choice for gardeners wishing to be more ecologically minded while using something new and different. This workshop is presented as the regular monthly meeting of the Mid-MO Wild Ones, but is free and open to the public. For more details, contact Celeste Mazzacano at 572-239-4267 or cmazzacano@gmail.com. This course has not been approved as advanced training.

2nd Fridays Environmental Alliance will meet Friday Feb. 9 at 7:30 am at Uprise Bakery (816 E. Broadway). Individuals from Master Naturalists, Friends of Rock Bridge, Audubon Society, Sierra Club, Missouri River Communities Network, Hawthorn Native Plant Society, Hinkson Restoration Project, Greenbelt Land Trust, Friends of Big Muddy, and related organizations are invited to attend. For more information, contact Celeste Mazzacano at 573-239-4267.

Rock Bridge Memorial State Park program "Slaves, Graves and Buried Jewells" Saturday, Feb. 17, 2007, 1-4 p.m. Learn how slavery impacted Boone County and the state of Missouri with particular emphasis on the historic community of Rockbridge Mills (which is now Rock Bridge Memorial State Park) and the Jewell family buried in Jewell Cemetery State Historic Site. Program will include discussion, interactive sections, and a field trip to Jewell Cemetery to show how Missouri's approach to the "peculiar institution" of slavery differed radically from that of other slave states. About two dozen unmarked graves in the cemetery are believed to be the slaves of the Jewell family. More well-known figures buried in the cemetery include Charles Henry Hardin, Missouri's 22nd governor, and William Jewell, former mayor of Columbia and founder of William Jewell College in Liberty Missouri. Program is free but reservations are required. Contact Kathryn DiFoxfire at Rock Bridge Memorial State Park at 573-449-7402 to make reservations.

Explore Rock Bridge program "Downtown Rock Bridge", Saturday Feb. 17, 1-3 pm, Devil's Icebox Parking Lot. Where was the industrial center of Mid-Missouri in the mid-19th century? Smack in the middle of the park. Because of the free flowing water, the area around the Rock Bridge provided the energy and resources to run several businesses. Join Meredith Donaldson on an exploration of the park's commercial past.

Saturday Morning Science Lectures will begin February 3rd, 2007. The lectures are free, and are held on Saturdays from 10:30 - 11:30 am in the Monsanto Auditorium of the Life Sciences Center on MU campus. The first lecture on February 3rd is by professor Maikel Rheinstaedter whose talk is entitled "Biophysics and Biology on a molecular scale" The talk starts at 10:30, with refreshments at 10:00. These talks are not approved as advanced training. To find out more, visit web.missouri.edu/~physwww/satscience.html



CONSERVATION
CORNER

submitted by Celeste Mazzacano

The king rail (*Rallus elegans*) is one of 50 birds in the MDC Species of Conservation Concern Checklist. The species has a fairly widespread geographic distribution, but populations in Missouri have declined rapidly since the 1960's, and the king rail is considered endangered in this state.

The king rail is the largest of the North American rails, weighing in at 12-16 ounces, and standing ~14 inches tall. King rails are slender birds with cinnamon-edged dark feathers on their backs, attractive dark barring on their belly and flanks, a distinctive curved bill, and long toes that enable them to walk more easily in the shallow marsh habitats they prefer. They eat a variety of small aquatic animals such as insects, fish, mollusks, and the ever-popular crayfish.

Rallus elegans is more easily heard than seen, and population densities have generally been assessed by monitoring their calls. Secretive by nature, their slightly laterally flattened bodies allow them to move through the grasses, sedges, rushes, and cattails abundant in high-quality habitat with a minimum of

disturbance, making them even more difficult to see.

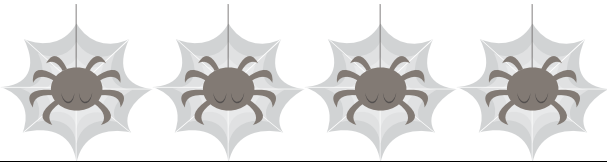
Missouri populations breed in April; the male is primarily responsible for nest building, and the female lays 10-12 eggs in a nest built on an elevated platform under an herbaceous canopy. Both sexes incubate the eggs, which hatch in 3 weeks, yielding downy black puffballs that are trailing after their parents within a day of hatching.

Missouri's king rails were once common in the shallow marshes along large rivers, but today there are found mainly in wildlife refuges in less than 5 sites in the state each year. As with many wetland-dependent species, a combination of land leveling and development, water impoundments, removal of vegetation, and impaired water quality have contributed to severe degradation of suitable breeding habitat. And because king rails prefer shallow marshes, wetlands that are actively managed for game waterfowl may use deeper flooding regimens that don't improve the living conditions for king rails.

What can be done for the king rail? Primarily, protection and restoration of high-quality shallow vegetated marshes to restore their habitat. Conservation projects include re-planting suitable areas with native wetland plants, protecting remaining habitat in areas within their range, and strategically flooding crop or fallow fields.

*"Unless someone like
you cares a whole
awful lot, nothing is
going to get better.
It's not."*

Dr. Seuss, The Lorax



FEBRUARY VOLUNTEER OPPORTUNITIES

WEB RESOURCES FOR MASTER NATURALISTS

Discover Life (<http://stri.discoverlife.org/>), a web site under the auspices of The Polistes Foundation, University of Georgia, and Missouri Botanical Garden, has free on-line tools to identify species, share ways to teach and study nature, report findings, build maps, and contribute to and learn from an encyclopedia of life that now contains 647,015 species. Some of the site is still under construction, as this appears to be a recent endeavor, but they hope to have guides, maps, images, and text for a million species by 2012—check out their guides to see how you can report your own sightings!

NOTEWORTHY NATURAL HISTORY

Missouri Invasive Forest Insects Update

(from a compilation by Rob Lawrence, MDC):
Emerald Ash Borer: Movement of infested firewood remains the primary means of spread to new locations. EAB prefers to attack larger, open-grown ash trees in areas of rougher bark. Green ash the most preferred host, followed by white ash, then other ash species. No EAB has been detected yet in Missouri, based on results of visual surveys conducted by the MDC and MO Dept. of Agriculture at selected state parks, commercial campgrounds, and high-risk urban sites in 2005 and 2006. Education efforts involving agency web sites, “don’t move firewood” posters, magazine articles, and workshops continue.

Gypsy moth: 17 gypsy moths were trapped statewide in the 2006 survey. One to five moths per year have been captured in one area of St. Louis for 6 of the last 7 years. This area is monitored intensively each year. Thus far, no gypsy moth populations are known to be established in Missouri.



Emerald Ash Borer

Great Backyard Bird Count

Friday Feb. 16 - Monday, Feb. 19

Sponsored by Friends of Big Muddy and Big Muddy National Fish and Wildlife Refuge. Volunteers count total number of birds seen at one of the eight refuge units. To participate, contact us and let us know which refuge unit you would like to count birds on and what day (or days) you would like to count. Birds can be counted on any of the four days of the count, or you can conduct the same count on each of the four days, etc. For more information visit http://www.friendsofbigmuddy.org/next_outing.htm or contact Troy Gordon at 573-424-9051 or friends@friendsofbigmuddy.org. Project is approved

Ongoing Volunteer Opportunities

North American Amphibian Monitoring Program: Calling Surveys

Sponsored by the USGS. You learned all about amphibians at the January meeting, now put your knowledge into practice! Volunteers are needed to participate in amphibian calling surveys to determine population levels. Visit <http://www.pwrc.usgs.gov/NAAMP/> for additional information. Project is not yet approved.

Bats on Parade, Summer 2007 Program

Sponsored by Friends of Rock Bridge Memorial State Park. Volunteers needed starting in February to help prepare materials for this series of summer programs designed to help families and children learn about bats and their importance in their ecosystems. This award-winning program offers an opportunity to help with a variety of interpretive formats. Estimated 4-8 hours/month. Contact Meredith Donaldson at Mjdonlsn@aol.com or 815-9255. Project is approved.

Raptor Rehabilitation Project Sponsored by MU Raptor Rehabilitation Project. Care for a sick or injured raptor; feed and provide activities to captive birds; create and deliver

presentations on these feathered wonders. Contact Erin West at eedw76@mizzou.edu for information about the project and training. Project is approved.

Fireline Installation at Grand Bluffs Conservation Area (flexible hours until completed) Sponsored by the Missouri Department of Conservation. The volunteer will be asked to run a leaf blower for at least 6 hours to install fireline in forested landscape. Work will be physically demanding (on uneven terrain with ~ 20 lb. backpack blower). Contact Josh Stevens at Josh.Stevens@mdc.mo.gov or 573-592-1412. Project is approved.

Prescribed Burns at Rock Bridge Memorial State Park (select weekdays between 8 a.m. and 3:30 p.m.; call for specific dates) Volunteers will assist in prescribed burns in restored native grassland or in woodland units within the park. Exact dates determined by weather, wind direction, and staff and volunteer availability. Contact Kathryn DiFoxfire at rock.bridge.memorial.state.park@dnr.mo.gov or Roxie Campbell at 573-449-7402 or roxie.campbell@dnr.mo.gov. Project is approved.

Prairie Fork Conservation Area Field Trip Naturalists Sponsored by MDC, University of Missouri and Prairie Fork Trust. Prairie Fork CA needs naturalists to staff environmental education stations during field trips for school students. Most programs take place Monday through Friday from ~9 am - 2 pm. Contact Benedict Nagy at (573)254-3262 or benedict62@yahoo.com. Project is approved

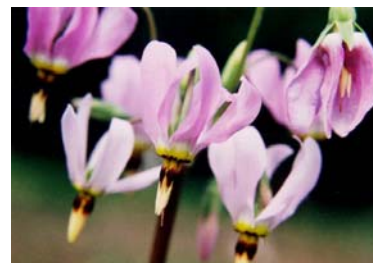
Prairie Fork Conservation Area Program Development Sponsored by MDC, University of Missouri and Prairie Fork Trust. Prairie Fork needs naturalists to help develop new, exciting, and innovative outdoor environmental education programs. These programs MUST be designed to help teachers meet goals described in Missouri state and National educational standards. Currently, emphasis is being placed on elementary aged students particularly 4th graders. Contact Benedict Nagy

at (573)254-3262 or benedict62@yahoo.com. Project is approved.

Friends of Rock Bridge Memorial State Park Explore Rock Bridge (3rd Saturdays) Sponsored by Friends of Rock Bridge Memorial State Park. Volunteers needed to assist with hike each month, or to assist in selecting topic and speakers for future programs. Program provides the public with opportunities to explore the park resources and participate in occasional service projects. Contact Meredith Donaldson at Mjdonlsl@aol.com or 815-9255. Project is approved.

Landowner Contacts Database (flexible hours until completed) Sponsored by the MDC. Volunteer will log landowner contact folders by location to provide an account of historical management that will allow MDC to better assess the needs for the property. Location: Fulton. Contact Josh Stevens at 573-592-1412 or Josh.Stevens@mdc.mo.gov. Project is approved.

Friends of Big Muddy Activities Sponsored by Friends of Big Muddy. Most opportunities are on units of the Big Muddy National Fish and Wildlife Refuge. Check <http://www.friendsofbigmuddy.org> for current opportunities or sign up for list serve announcements of activities by e-mailing FriendsofBigMuddy-subscribe@yahoogroups.com. Contact Troy Gordon at 573-424-9051 or friends@friendsofbigmuddy.org. Projects are approved.



Shooting star (*Dodecatheon meadia*)

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NEXT MEETING

Thursday, February 8, 6:30 - 8:30 p.m.
Boone County Extension Center

Program: Andy Forbes, MDC, Missouri Audubon Society
"The MAPS Project (Monitoring Avian Productivity and Survivorship) & the relationship between bird banding and Missouri's Important Bird Areas"

Refreshments: Non- Dessert, Rebecca Allen; Dessert, Gail White; Beverage, Meredith Donaldson.
Please bring anything needed to serve and consume your dish or drink.



*To promote awareness and citizen
stewardship of natural resources
through science-based education and
community service*