

# Bluffviews

A quarterly newsletter by Clifftop

April, 2015

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## Discover the Illinois Ozarks

From limestone cliffs and caves to hill prairies and glades, Southwestern Illinois' Ozark region has many uncommon natural communities. These wildlands harbor many rare and endangered plants and wildlife, including several not found anywhere else in Illinois. Come explore this unique area right here in Monroe County from May 1 to May 3, 2015, at the Illinois Audubon Society Spring Gathering. This event is co-hosted by Kaskaskia Valley Audubon Society, Salt Lick Point Stewardship Committee and Clifftop.

The weekend event features Saturday field trips to Salt Lick Point Land and Water Reserve, White Rock Land and Water Reserve, White Rock Nature Preserve and Illinois Ozarks Nature Preserve. Sunday field trip locations include Buettner Farm Illinois Natural Areas Inventory Site, Kidd Lake Marsh State Natural Area and Conner Lake Wetland. All field trips depart from Borsch Memorial Park in Valmeyer.



Programs planned for Friday and Saturday evenings will complement the field trips with additional knowledge about species, conservation and history of the region. On Friday evening, Carl DauBach will speak at a social gathering at St. Mary Parish Center in Valmeyer. Carl's program is entitled "Humanscapes and Landscapes," a look at the unique private-public partnerships which leverage landowner, agency and non-profit organizational efforts to protect, conserve and steward the rich assembly of natural habitats, unique to the state in

this region. Carl is Clifftop's Executive Director and serves on the Illinois Audubon Society Board of Directors.

Debbie Scott Newman, guest speaker for the Saturday night banquet/silent auction at Acorns Banquet Facilities near Waterloo, will present "Welcome to the Illinois Ozarks: Exploring Southwestern Illinois' Unusual Plants, Wildlife and Natural Areas." Debbie is a Natural Areas Preservation Specialist with the Illinois Nature Preserves Commission and current president of the Kaskaskia Valley Audubon Society.

Membership in the Illinois Audubon Society or any of the hosting organizations is not required to attend, however, a reservation fee of \$15 is required by April 15. Additional charges for the Friday night social, box lunches during field trips and Saturday evening banquet will apply if you choose these options. To register or for more information, please visit:

<http://illinoisaudubon.org/PROGRAMSEVENTS/SpringGathering.html> or call Joann at (618)935-2542.



# An Illinois RiverWatch Citizen Scientist and the Collection of Macro Invertebrates in Monroe County

By Kari Sabrie, Master Naturalist, Citizen Scientist

In November of 2013, I became a Master Naturalist through the University of Illinois Extension Office. One of the criteria of becoming and maintaining Master Naturalist status is the volunteering of 30 or more hours of time to organizations involved with outdoor preservation and conservation and 10 hours of continuous education. In pursuit of my hours of volunteerism, I discovered a state-wide program called Illinois RiverWatch.

On a chilly Saturday morning, March 28, 2015, I ventured to the National Great Rivers Research and Education Center in Alton, Illinois for an eight hour RiverWatch Training. Sponsored by the Citizen Scientist program, it trains volunteers on aquatic macro invertebrates. By providing the knowledge needed for the collection, identification and recording methodology volunteers are able to provide scientifically documented and collected data to help determine water quality in local streams.



Kari Sabrie, Sue Sweet and Patty Taylor, Illinois Master Naturalists and RiverWatch Citizen Scientists, Rocky Creek, Madison County, IL. Photo courtesy Kevin Sweet

Illinois RiverWatch is a stream monitoring program. Primarily by volunteer involvement, it provides data collected on a statewide scale therefore encompassing a larger area than individual organizations could logistically gather. Volunteers are asked to identify a stream or a currently identified site. Once the site is selected, the survey can be conducted in a 4-6 hour time period. After the field work, the identification and recording of data is done and submitted to the Illinois RiverWatch headquarters.

Macro invertebrates are considered bioindicators of water quality and can point to the need for habitat management that can provide long-term stewardship possibilities.

Aquatic macro invertebrates are animals that neither possess nor develop a vertebral column, derived from the notochord. These animals are visible to the naked eye and

found in aquatic environments (i.e. lakes, rivers, streams, creeks). For our purposes, we will be referring only to the macro invertebrates located in streams or creeks.

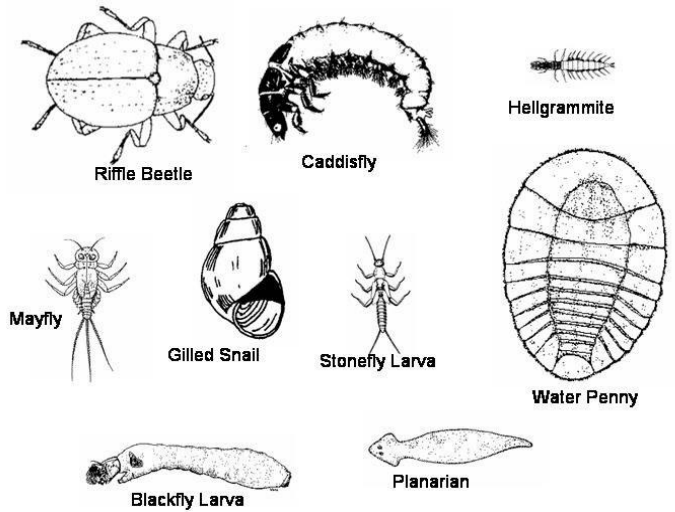
RiverWatch research involves *Site Identification*, *Habitat Survey* (weather, water, canopy cover, algae growth, substrate siltation (sand, gravel, silt, and clay), riparian vegetation (streamside plants), bottom substrate, stream discharge, land uses and unusual contributing factors [dams (including beaver dams), wastewater treatment, residential pipes, channel alteration]). The *Biological Survey* is the main source of information. Sampling includes "special interest" species such as native mussels, zebra mussels, fingernail mussels, Asiatic clams, Chinese Mystery Snails and Rusty Crayfish. Thirty seven other species of macro invertebrates are recorded and identified including flatworms, aquatic worms, leeches, dragonfly and damselfly larvae, mayfly larvae, beetle, midge, fly larvae and snails. In order to help identification of these subspecies, we were given 4 hours of identification and lab work, followed up by 4 hours of field work. Using microscopes, we surveyed all 37 types of species down to gill, mouth, prolegs, legs, etc. in order to differentiate species.





Above: A sampling of macro invertebrates from Rocky Creek in Madison County. Photo courtesy Kevin and Sue Sweet

Right: Drawings of low pollution sensitive macro invertebrates



Each species has a "tolerance range" for pollution from 0.0-10+. Counting the number of each species present, the result can determine tentative water quality ratings. Monitoring these streams yearly, a data table can be constructed to determine streams in critical need of restoration.

Completing the RiverWatch training, I immediately thought of Kopp Creek. Kopp Creek (which I didn't know had a name), runs along Konarcik Road into Gerhardt Creek into the Kaskaskia Watershed. This small, inconspicuous creek flows past the lower part of our property. The only time most people think of it is when it floods during the spring rains and runs over the road causing minor traffic issues (as in we can't drive through it in or out of our subdivision until the water subsides). Hopefully, I can get permission to use the creek as my monitoring site.

The RiverWatch research and monitoring period is from May 1- June 30<sup>th</sup>. I hope to write a follow-up article after conducting and interpreting my research. For anyone interested in any of the above organizations, you can contact:

Illinois RiverWatch Network: [www.ngrrec.org](http://www.ngrrec.org)

Illinois Master Naturalist: [www.web.extension.illinois.edu/mms](http://www.web.extension.illinois.edu/mms)

## Turkey Update...



By Joann Fricke

Some of you may recall my turkey stories from last spring—hens pecking at our office window and seeing 25 at a time. Well, that number doubled this spring. If you count the turkeys in the photo above, you will only find 46, but believe me when I tell you there were 50! This year the toms are purring and pecking at the window (left) and large groups sometimes roost in the trees north of our house (right). They keep us entertained, that's for sure!



# The Benefits of Controlled Burning

By Pen DauBach



White Rock burn photo courtesy Tom Rollins,  
ThomasRollinsPhotography.com

We built a really big fire at White Rock Nature Preserve on the last day of March. Earlier in the month, some of us helped with an even bigger fire at Salt Lick Point Land and Water Reserve and another at Fults Hill Prairie Nature Preserve, and at Buettner Glades Natural Area site. Why do this? Why deliberately set a fire? Some “just-the-facts-ma’am” language in the Illinois Prescribed Burning Act, passed into law in 2007, offers our basic reasons:

*Prescribed burning is a land management tool that benefits the safety of the public, the environment, and the economy of the State. Therefore, the General Assembly finds that:*

*(1) Most of the State's natural communities require periodic fire for maintenance of their ecological health. Prescribed burning is essential to the perpetuation, restoration, and management of many plant and animal communities. Significant loss of the State's biological diversity will occur if fire is excluded from these fire-dependent communities.*

(525 ILCS 37/5)

Prescribed fire is done with strict adherence to safety guidelines. A burn plan is written for each site, and includes temperature, wind speed and direction, soil types, fuel loads, and other factors that could influence fire behavior. The plan must include a permit, issued by the Illinois Environmental Protection Agency, and must follow that agency's air quality and safety regulations, including smoke abatement factors. If weather or other conditions are outside of the plan's ranges, the burn is canceled. Local police and fire departments are informed and, in the case of Clifftop's burn at White Rock, which included a mile-long area bordering Bluff Road, we also informed and sought the cooperation of the Monroe County Highway Department.

A prescribed burn is only done when it can be safely done. But, can a burn really benefit the safety of the public, as Illinois law states? The answer is yes and the benefits are both immediate and long-range. An immediate good result of a program of periodic controlled burning is the reduction of fuel load, which prevents an out-of-control wildfire that could result in damage to ecosystems and, potentially, property and people. The longer-range and often-overlooked benefit to public safety results from fire's use as a management tool to create better and healthier habitats that, in turn, provide area and regional residents with a host of no-cost ecosystem services.

A healthy high-functioning woodland, prairie or wetland composed of the plants and animals that evolved within that ecosystem holds soil in place and filters and absorbs rainwater. The absence of healthy native plants results in soil breakdown and reduced absorption capacity and leads to higher rain runoff rates and



Checking and recording wind speed and direction before the Salt Lick burn.  
Photo courtesy Joann Fricke



soil erosion. In time, soil erosion means silted waterways and wetlands and higher risk of flooding.

Healthy prairies and woodlands scrub carbon dioxide from the air and store carbon in plant material and soil. Some carbon dioxide certainly is released as smoke during a controlled fire and is a source of air pollution for the brief period of an actual fire. But this very temporary smoke pollution is offset by the tremendous growth spurt of plants, especially grasses, following a fire and the plants' renewed and enhanced ability to clean the air during the hottest summer months when poor air quality is of greatest concern.

The services ecosystems provide – enhanced air quality, reduction in soil erosion, and carbon dioxide storage – depend upon the ecosystem's overall health and fire, in controlled doses, is a prescription for health.

Our native plants evolved with fire on the landscape. Many plants depend on fire for seed germination, nutrient cycling into soils, and the creation of open tree canopies that then reduces competition for life-giving sunlight. Plants that are not adapted to occasional fire, like most non-native invasive species and native species that can become invasive, are set back. Our native oaks and hickories – the bulwarks of our forests – cannot regenerate in woodlands where bush honeysuckle, maples, Tree-of-Heaven, Japanese honeysuckle vines, and box elder trees have taken over the understory and shade out hickory and oak seedlings and associated wildflowers, mushrooms, sedges and grasses. A 60-year program of fire cessation dating from World War II correlates with the near-loss of self-sustaining oak-hickory forests throughout the eastern U.S. Before fire suppression, middle-aged, teen-aged and young oaks and hickories flourished in the dappled shade of their elders' great heights. But fire suppression, intensive logging without follow-on forest management and the rapid spread of non-native invasive plants resulted in shade tolerant species taking over the understory. Oak and hickory seedlings simply can't grow up into tomorrow's forests under the shade of maples and invasive shrubs. Fire is a management tool that can bring back oak and hickory forests.



An Illinois Ozarks Nature Preserve hill prairie after 2 consecutive years of prescribed fire. Photo courtesy Joann Fricke

Fire is equally beneficial for prairies and even more needed for their continued survival. Hill prairies, such as ours in southwestern Illinois, not only are clinging to the tops of cliffs, but also are clinging to a slender thread of existence itself. Less than 500 acres of hill prairie remain in the entire state and limestone glades, another notable natural system of our area, constitute an even smaller total state acreage. By definition, prairie and glade habitats are dominated by grass and flower species. Absence of fire has allowed woody species, including native cedar trees, sumacs and shrub dogwoods, along with non-native bush honeysuckle, to move into prairies and glades and replace open sunlit areas of grass and flowers. Fire helps reduce woody plant invaders and helps return our prairies and glades to a state of natural health. Because soil is an excellent insulator and fire adapted native plants have deep roots, grasses and

flowers suffer no harm from the intense heat of a prairie fire.

In fact, during the very next growing season, prairies and glades show greatly enhanced growth, bloom, and even an increase in species diversity. Burning of dead plant material reduces mats of thatch that can prevent sunlight from reaching the earth and the ashes that are left soak into soils and provide a burst of nutrients. Plant species that had been struggling to grow through years of accumulated thatch or seeds unable to germinate without fire to scarify a tough outer cover, or, simply, plants that appreciate a good

meal of naturally produced fertilizer, recover, grow and flourish. And as they do so, animal species that depend on native plants also benefit from a new cycle of growth made possible by a prescribed fire's dose of health.

Prescribed fire, done well, enhances wildlife habitat and helps animal organisms within a natural ecosystem. Does fire kill? Yes, it can and does. One of our primary purposes is that prescribed fires kill, or at least set back, select plant species. Does controlled fire kill animals? Again, the answer is yes, but with important qualifications. Mammals are rarely harmed during a controlled burn, and birds, too, rarely suffer mortality from a burn. In fact, some bird species are attracted to burn areas, with bluebirds often flying in before smoke even clears, to the delight of burn crewmembers. Controlled burns in our area are done only in the dormant season: generally November through March or very early April, when animals such as snakes and turtles are not active and before most invertebrates, such as insects, are active. Invertebrates do suffer a level of harm from fire, as over-wintering eggs and larvae are consumed by flame. To provide as much protection as possible for these often keystone species, we refrain from burning entire habitat areas and types so that insect species can re-colonize from adjacent unburned areas. As research in our state and throughout the eastern U.S. has demonstrated, fire-sensitive native insect and other invertebrate species rapidly re-colonize burned areas. Long-term studies from the tallgrass prairie areas of Illinois show some of the highest population numbers of rare fire-sensitive butterfly and bee species in areas that are maintained with regular use of prescribed fire.

Fire is a management tool to help natural areas return to health. The 'state of nature' in our state is threatened with some habitats – our woodlands, prairies and wetlands – clinging to a slender thread. We hold one end of that thread in our collective hands. The landscape no longer is something out there and apart from us. It is a humanscape, ours to manage or to lose on a piece-by-piece basis. More than a century ago, bush and vine honeysuckles were planted in yards and gardens for their virtues as ornamental plants; some 60 years ago, suppression of all fire in natural areas became common. We can choose to let our one-time oak and hickory forests become acres of maples and honeysuckles and Tree-of-Heaven. We can ask our grandchildren to tell their children about one-time forays for mushrooms and hunts for turkey and deer in deep woods of oak, but to explain that those things don't live here anymore because those forests exist only in memory. We can ask, as well, that they point to cliff tops overgrown with cedars and brush and tell about when flowers and grasses painted the area with color and were filled with butterflies, bees, and a great diversity of life. We can ask that they remember the addition to the family house was paid for by a timber sale, but that the woodlot never will produce such a bounty again because maple isn't nearly as valuable as oak and maples are the only trees that sprouted and grew. We can ask or we can manage.



Bear lights a fire along the fire break at White Rock to get a good black line in before lighting a head fire. Photo courtesy Tom Rollins, ThomasRollinsPhotography.com



Burn boss Mike Fries, center, consults the burn plan while volunteers Mark and Mike look on during the White Rock burn. Photo courtesy Tom Rollins, ThomasRollinsPhotography.com



# You Saw the Challenge and Met It!

In less than a year, Clifftop members and supporters and CLIFFhanger volunteers have over-matched both dollars and hours needed for our Illinois Clean Energy Community Foundation Stewardship Challenge Grant! The grant, awarded to Clifftop last July, has three components:

1. **Cash Donations:** \$3 for every \$1 of actual cash contributed toward a stewardship fund for use at the White Rock Nature Preserve, up to \$21,000.
2. **Equipment:** 80% of the amount paid for individual stewardship equipment to be used to improve natural habitat at White Rock NP, up to a maximum of \$5,000.
3. **Volunteer Labor:** An outright gift of \$4,000 for a minimum of 400 hours of volunteer work completed at White Rock NP.

Thanks to you, we have more than met the grant requirements. We have received a total of \$8,005 in cash donations, meaning that we fully qualify for the full \$21,000 in ICECF funds for donations and the additional \$1,005 donated can be used for equipment to further our stewardship goals at White Rock. The total of 212 volunteer hours during our prescribed burn at White Rock Nature Preserve on March 31<sup>st</sup> took us way, way over the total 400 hours ICECF requested. In fact, our volunteer hours at White Rock Nature Preserve between July 1 and March 31 stands at more than 535!

Clifftop applied for this challenge grant so we can complete initial restoration – primarily control of bush honeysuckle – on the 307 acre White Rock Nature Preserve. With the support of Natural Resources Conservation Service cost-share programs, we've been able to hire contractors for bush honeysuckle control, brush clearing on prairies and glades and tree thinning to bring sunlight, and wildflowers, back to the forest floor on the 168-acre White Rock Land & Water Reserve and on a large part of the Nature Preserve. Volunteers greatly enhanced these efforts by working with us on two prescribed burns, stacking and burning cedar trees, brush clearing at the prairies, and helping collect and distribute native grass and flower seeds. Because of changes in federally-funded programs we have not been able to finish the important work of controlling bush honeysuckle on a portion of the Nature Preserve.



Prairie seed collecting at White Rock.  
Photo courtesy Joann Fricke

The good folks at Clean Energy have stood up to help us with this vitally important stewardship work. Our success in meeting and even exceeding their challenge to Clifftop means we can finish bush honeysuckle control work at White Rock Nature Preserve.

We're going to continue to compile hours of stewarding at White Rock and in July's Bluffviews we'll present a complete list of all the various tasks and hours contributed.

White Rock Nature Preserve and its splendid wildlife habitat benefits from your help!



Prairie brush clearing at White Rock.  
Photo courtesy Tom Rollins,  
ThomasRollinsPhotography.com

## Upcoming events...



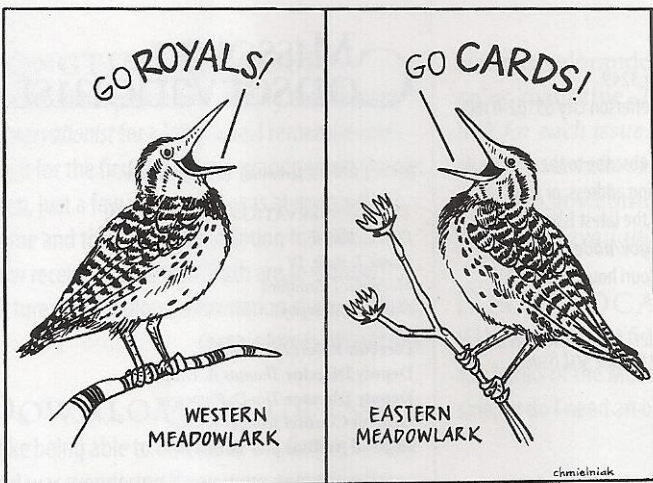
May 1<sup>st</sup> through May 3<sup>rd</sup>, Illinois Audubon Society Spring Gathering—field trips, presentations, banquet and silent auction. See story on page 1 for details.

Saturday, June 6, 9:30 a.m. until noon, join us on the field trip, Archeology of the Allscheid Rock Shelter in Monroe County. Explore the phenomenon of an upland rock shelter in the sandstone bluffs of the southern American Bottoms. Participate in ongoing field work to uncover evidence of use some 8,000 years ago. Transportation to the site via UTV's will be provided. Space will be limited, so make your reservations early by calling (618)458-4674 or emailing [clifftop@htc.net](mailto:clifftop@htc.net). Watch our website for further details.



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## Just for fun...



Missouri's two species of meadowlarks look nearly identical, but can easily be identified by their calls. \*

\* Drawing reprinted from the April, 2015, issue of the Missouri Conservationist, by permission of the Missouri Department of Conservation and the artist, Betty Grace, with our deep appreciation!

## Information...

We've recently received inquiries about where to purchase native plants. Below the photo is a link that provides both a list of plants and potential sources. Please be sure what you purchase is truly native by comparing the scientific name on the plant tag to the list below. Happy gardening!



<http://www.clifftopalliance.org/wp-content/uploads/2012/03/Growing-with-NativesII.pdf>