

MISSOURI. Conservationist

VOLUME 68, ISSUE 9, SEPTEMBER 2007 • SERVING NATURE & YOU



Answering the Call

For as long as I can remember, Conservation Department employees have assisted in emergency situations. Staff have taken action to rescue drowning, choking and accident victims.

The Department and its staff are also ready to step up when natural disasters strike.

After Hurricane Katrina in the fall of 2005, the Department answered the call for help. Sixteen conservation agents and agent supervisors, with eight boats, went to New Orleans. Search and rescue was their top priority.

Severe spring storms in 2006 brought significant destruction to southeast Missouri. The Department aided with both staff and equipment. Teams assisted with road cleanup and county-damage assessment, and agents provided security detail.

About this time, all Missouri state agencies incorporated the National Incident Management System (NIMS). NIMS provides a consistent approach for federal, state and local governments to work together more effectively and efficiently during domestic incidents.

NIMS taught Department employees how to determine the most critical needs during a major disaster and effectively gather resources to meet them on local, county or state levels. They learned how to organize and move large groups of people and/or entities. Staff also learned how to create an Incident Command Team. Each member of the team is assigned distinct duties that ensure law enforcement, fire control, financial management, safety, computer technology and other responsibilities are appropriately addressed during emergencies.

Along with the NIMS training requirements, the Department places a high priority on safety programs. Employees are instructed in the proper operation of chainsaws, ATVs,

watercraft, firearms and other specialized equipment. Safety equipment and gear are mandated. Accidents are reviewed to determine how they can be avoided in the future. With the specialized skills of Conservation employees, it isn't surprising that the Department of Public Safety asked us to take a much larger role in managing Missouri's emergency response and recovery if a natural or technological catastrophe occurs.

Severe winter weather in early 2007 created an "opportunity" for us to use the Incident Command Team concept. With power outages affecting thousands and massive debris blockages in several counties, the Department and other state agencies quickly joined SEMA's efforts. Conservation employees opened roads for emergency vehicles and the National Guard and provided access to power lines for utility trucks. Conservation agents helped with well-being checks and law

enforcement. Numerous Department staff volunteered to work in treacherous conditions.

The 2007 spring rains created yet another need to activate an Incident Command Team. Whether patrolling flood-swollen waters, evacuating trapped people or helping with the extensive debris clean-up, Department employees were proud to serve.

As caretakers of Missouri's fish, forests and wildlife, we are forever reminded of the bounty and unpredictability of nature. We're just happy we can be there to help out with both.



After severe winter weather in early 2007, Department employees cleared access to power lines and roads.

Debbie Strobel, human resources division chief

OUR MISSION: *To protect and manage the fish, forest and wildlife resources of the state; to serve the public and facilitate their participation in resource management activities; and to provide for all citizens to use, enjoy and learn about fish, forest and wildlife resources.*











On the cover: Photographer Jim Rathert captured this image of a mourning dove. Dove season this year is Sept. 1 through Nov. 9. Last year around 5,000 acres on almost 150 fields on 100 conservation areas were actively managed for doves. To locate dove fields in the area you want to hunt, contact the regional office in that area (see page 3 for phone numbers). Maps of areas that have dove fields are available from the Department's Web site at www.missouriconservation.org/7469.

Left: Photographer Cliff White took this image of a snipe hunter. To learn more about hunting these "utility birds," read Jim Low's feature article starting on page 14.

NextGEN

This section reports on goals established in *The Next Generation of Conservation*. To read more about this plan, visit www.missouriconservation.org/12843.

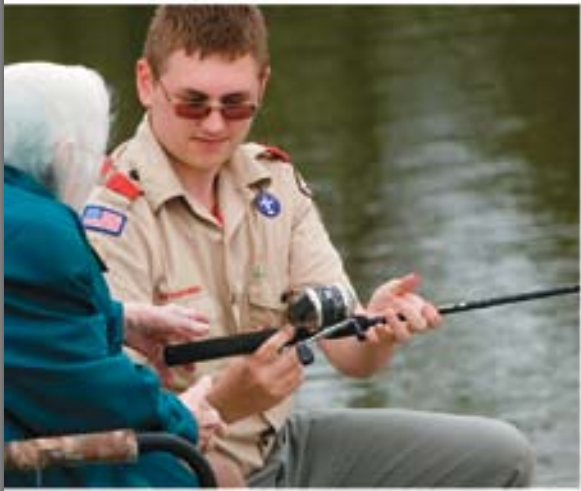
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A GOOD TURN

The article in the July issue of the *Conservationist* concerning the Boy Scout program [page 27] was nothing short of top notch.

Having grown up in Scouting (Eagle Scout) and now a troop and district leader in the program, I can attest to the conservation-minded practices that so enrich the Scouting program. Having been the camp director for two Cub Scout Adventure Camps in the recent past, I was very pleased with the Department of Conservation and the support they offered. The number of young people that are learning the joys of fishing and hunting seems to be down. The number of boys in the Scouting program is also down. These facts are so distressing considering that we are living in a

time when the Scouting program can be such a benefit to our youth. Maybe with the continued efforts of the Scouting program along with the assistance of MDC we can increase the numbers of young men that will become true outdoorsmen. **Greg Rudroff, Farmington**

RAPTOR REHABERS
My father, Mark Vogt, worked for the Missouri Department of Conservation as a towerman for over 35 years. As children, we were taught the

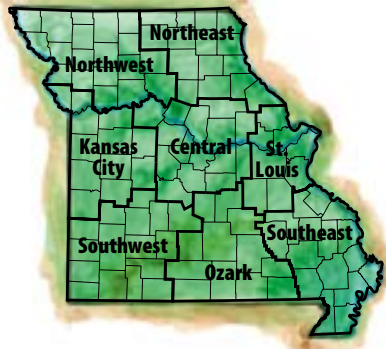


importance of respect for wildlife and the laws of conservation. Though my father has since passed, my husband, Steve, continues with these same beliefs. An avid hunter and outdoorsman, he keeps a watchful eye out for wildlife. With the assistance of a program called Raptor Rehab, he has helped to save and release three injured owls back into their natural environment. Recently, on a trip through Buffalo, he came upon an owl [caught in a barbwire fence]. It took Steve about 45 minutes to free it because of its wounds. We turned the owl over to the very capable hands of the Raptor Rehab team, where after examination, it will be returned to the wild. I am grateful that there is a program like this available, and I'm proud of my husband for the respect and love he shares for the outdoors and all the wonder it holds.

M. Kay Hickman, Barnett

Editor's note: To learn more about the Raptor Rehabilitation Project at the College of Veterinary Medicine, University of Missouri-Columbia, or to report an injured raptor, call the College of Veterinary Medicine Teaching Hospital at 573-882-7821. You can also visit their Web site at www.raptorrehab.missouri.edu.

BACK TO THE FUTURE
Sour Water, the 1957 article featured in the July Time Capsule (page 33), was actually based on Cedar Creek, rather than Dodge Creek as written. The name was intentionally changed in the article to avoid difficulties with the local coal company. For 50 years, Cedar Creek was drastically impaired. It took over \$5 million dollars and the hard work of many people to restore ecological value to Cedar Creek, which thousands of local residents, including visitors to U.S. Forest Service lands, can now enjoy. It is considered a great example of what mine reclamation projects can accomplish. The Department of Natural Resources did most of the work using federal funds, but MDC has been deeply involved from the beginning. The author, Robert Hartmann, is very pleased that the creek has been restored and is again populated with fish.



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 E-mail subscriptions: Subscriptions@mdc.mo.gov
 Online subscriptions and address changes:
www.missouriconservation.org/15287

Cost of subscriptions:

Free to Missouri households
 Out of State \$7 per year
 Out of Country \$10 per year

Address Changes: Don't miss an issue due to an address change. Go online, call, write or e-mail us to update your information.

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The *Missouri Conservationist* (ISSN 0026-6515) is the official monthly publication of the Missouri Department of Conservation, 2901 West Truman Boulevard, Jefferson City, MO (Mailing address: P.O. Box 180, Jefferson City, MO 65102.) Subscription free to adult Missouri residents; out of state \$7 per year; out of country \$10 per year. Notification of address change must include both old and new address (send mailing label with the subscriber number on it) with 60-day notice. Preferred periodical postage paid at Jefferson City, Mo., and at additional entry offices. Postmaster: Send correspondence to Circulation, P.O. Box 180, Jefferson City, MO 65102-0180. Phone: 573-751-4115. Copyright © 2007 by the Conservation Commission of the State of Missouri.

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Printed in USA

Printed on recycled paper with soy ink



Reader Photo

THIS HONEY ISN'T SWEET

Bush honeysuckle (*Lonicera maackii*) is native to Asia but has been planted as an ornamental in the U.S. It has spread widely, and the St. Louis area has been heavily invaded. It will take over the understory of forests, displacing native shrubs, and it suppresses the growth of spring wildflowers. Learn more about natives at www.grownative.org. Photo taken by Dennis Jennings of Arnold.

on the WEB

This month check out our featured Web pages, or go online anytime to learn more about conservation at www.missouriconservation.org.



FALL HUNTING

www.missouriconservation.org/7442

The Fall Deer and Turkey Hunting Information booklet has been updated and is online. It is available in standard HTML, as well as Adobe Reader PDF format.



EDUCATION GRANTS

www.missouriconservation.org/8793

Conservation education grants give schools financial aid so students can experience nature through field trips, outdoor classrooms and wildlife habitat projects.



WATERFOWL HUNTING

www.missouriconservation.org/7559

Information on the upcoming waterfowl seasons and habitat. Find out about the waterfowl reservation system, apply or check to see if you have been drawn.



ASK THE OMBUDSMAN

Q: A tree by our house has a big spot on the trunk that is leaking sap. It bubbles through the bark and has a very bad odor. Can you tell us what this is?

A: Wetwood, or slime flux, is unpleasant and somewhat alarming. Bacteria and yeast have invaded the tree and are breaking down the wood through a fermentation process, hence the bad smell and the bubbles.

There isn't much you can do once wetwood/slime flux is established, but the tree might be able to wall off the area and heal. The oozing fluid might also attract insects. They are not known to spread the disease, so there is no need for control.

Take preventive measures to stave off wetwood/slime flux. Avoid wounding your trees and learn the best methods for mulching and watering them to promote good tree health. For tips, read *Mulch: Your Tree's Best Friend* online at www.mdc.mo.gov/documents/forest/urban/F00111.pdf or request a print copy from your local conservation office (phone numbers on page 3). The publication *Watering Trees* is also available at local offices.

These sites may be helpful in learning more about wetwood/slime flux:
www.utextension.utk.edu/publications/spfiles/SP631.pdf
csfs.colostate.edu/library/pdfs/iandd/diseases/bacterial_wetwood.pdf
www.extension.iastate.edu/news/2007/jun/071301.htm

Ombudsman Ken Drenon will respond to your questions, suggestions or complaints concerning Department of Conservation programs. Write him at P.O. Box 180, Jefferson City, MO 65102-0180, call him at 573-522-4115, ext. 3848, or e-mail him at Ken.Drenon@mdc.mo.gov.

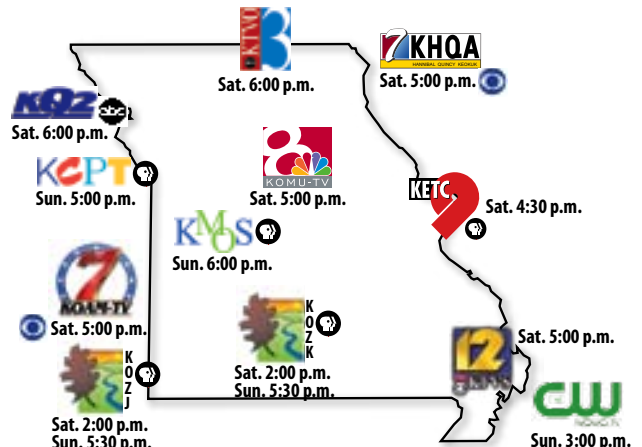
on the TV

For additional show information and video clips, be sure to visit

www.missouriconservation.org/8726.



Television the way nature intended!





Species of Concern

Running Buffalo Clover



Common name: Running buffalo clover

Scientific names: *Trifolium stoloniferum*

Range: Missouri, Indiana, Kentucky, Ohio and West Virginia

Classification: State and federally endangered

To learn more about endangered species: www.missouriconservation.org/8227

RUNNING BUFFALO CLOVER once inhabited moist, shaded woodlands frequented by bison. The big grazers kept taller plants chewed down and fertilized the clover with their manure. The elimination of bison through unregulated hunting probably contributed to this plant's decline. Competition from imported clover species might have played a role, too. Today, running buffalo clover is known to exist at only three Missouri sites. Two are on public land where they are protected. The discovery of a few plants in the Gasconade, Meramec, Cuivre and Loutre river basins leads experts to suspect that undiscovered populations might exist there. Running buffalo clover resembles some common imported clovers. It is different, however, in having a pair of leaves, each with three leaflets, on each flower stalk. If you find a plant matching this description, take close-up photos and contact the nearest Conservation Department office (see page 3 for phone numbers). Don't disturb the plants!

PHOTO: CASEY GALVIN; ART: MARK RAITHEL

Endangered Species

Walk/run features a certified course and chip timing.

Whether you're a quick swamp rabbit or slow western chicken turtle, you can support imperiled bottomland forest wildlife Oct. 13 at the Endangered Species Walk/Run in North Jefferson City. The event raises money for endangered wildlife habitat. Events include a 10K run, 5K run, and a 5K walk. Participants receive T-shirts featuring bottomland forests and swamps. Winners get medals depicting Missouri endangered species. There are also youth teams and a kids' postcard contest this year. For more information, visit www.missouriconservation.org/programs/es_walkrun/.



Migrating Teal

Watch for these speedy little ducks mid-September.

Swooping and banking with astonishing agility, teal resemble miniature fighter jets as they patrol lakes and rivers looking for places to rest. These small ducks begin arriving in Missouri in August. Their numbers usually peak around mid-September, well ahead of larger ducks. Sandbars on larger rivers and shallow coves on big reservoirs are good places to watch these harbingers of autumn. They are most active at dawn and dusk. Sit quietly at the water's edge and you may hear the roar of the wind through their flight feathers before spying the birds coming in low over the water. Blue-winged teal are most common, but you also might glimpse smaller green-winged teal with gorgeous, iridescent emerald bars on their wings.





NextGEN

Find Fishing Hotspots Online

Use GPS technology to home in on fish.

For years, the Conservation Department has been creating fish-attractor structures in lakes. Until recently, anglers had to motor around to find these fishing hot spots. Now, maps at www.missouriconservation.org/areas/swest/ allow you to zoom in and access GPS coordinates for dozens of fish-attractor structures on southwest Missouri lakes. Map coordinates are available for fish attractors at Lake of the Ozarks and Thomas Hill Reservoir, too. For this and other fishing information, visit www.missouriconservation.org/4174 and click on the desired region at the bottom of the page.



Valley View Glades Natural Area

Forest Service, the National Park Service, the U.S. Fish and Wildlife Service, The Nature Conservancy, Pioneer Forest and other corporations, nongovernmental organizations and individuals. Natural areas are excellent places to see wildflowers, birds and natural features such as waterfalls. For more information, visit www.missouriconservation.org/8363.

Natural Areas Turn 30

These areas harbor nature's diversity.

On May 9, Gov. Matt Blunt proclaimed 2007 Natural Areas Year in Missouri. In three decades Missouri has set aside more than 180 areas to save the best examples of the state's natural communities. Those areas, encompassing more than 60,000 acres in 74 counties, are a tremendous recreational resource. If you haven't visited at least a few of these you are missing the best that outdoor Missouri has to offer. The departments of Conservation and Natural Resources cooperated to create the system and continue working together to preserve the state's natural diversity. Other partners include the USDA

Trail Guide



BUSIEK STATE FOREST AND WILDLIFE AREA



HIKERS, BIKERS AND trail riders find plenty of room to get away from civilization on this 2,500-acre area 18 miles south of Springfield. Start at one of two parking lots near where Highway 65 passes through the center of the area. These give access to the 10-mile East Trail System. Its network of primitive trails offers at least a dozen different possible loops of 10 miles of moderate difficulty through forest, woodlands, glades and along an intermittent stream. A parking lot at the east side of the area increases possibilities. The 8-mile West Trail System has moderate and difficult sections, with some switchbacks along a steep, gladey ridge near the center of the area. An unstaffed shooting range is just west of Highway 65. The most popular attraction is the creek near the central parking lots. Primitive camping is allowed by permit only. You might also want to take pictures of wildlife or the spare but beautiful glade landscape.

Trail: Two multi-use trail systems totaling 18 miles
Unique features: Shooting range, glade plants and wildlife
Contact by Phone: 417-882-6880
For more information: www.missouriconservation.org/a8109

NATURAL AREAS: NOPPADOL PAOTHONG; TRAIL GUIDE: DAVID STONNER



TAKING ACTION

Easement Protects Wetlands



Group featured: John Timmermann in partnership with the U.S. Farm Service Agency, Natural Resources Conservation Service, Fish and Wildlife Service, Ducks Unlimited and the Department of Conservation

Group mission: Protect wetland habitat for wildlife and outdoor recreation.

Group location: St. Charles County

THE DONATED CONSERVATION easement John Timmermann established on his St. Charles County farm, Mallard Point, assures there always will be wetland habitat for wildlife and outdoor recreational opportunities for his family. The easement enabled Timmermann to restore wetlands and protect his 576 acres from development. That land and other wetlands located in the Mississippi-Missouri River confluence area are among the nation's most critical habitat for migrating birds. Increased urban development threatens the future of the wetlands.

Timmermann accomplished his wetlands restoration project through partnerships with the U.S. Farm Service Agency, Natural Resources Conservation Service, Fish and Wildlife Service, Ducks Unlimited and Department of Conservation. He hopes other landowners follow his lead and take action to protect wildlife and conservation traditions.

Property owners interested in establishing conservation easements to protect wetlands in the confluence area should contact DU at 660-938-4646.

Give and Take

Muskies Inc. partnership projects help fish habitat.

For members of Muskies, Inc. improving the muskellunge population goes hand-in-hand with the privilege of pursuing the fish. The Pomme de Terre Chapter provides funds to help improve fish habitat and they partnered with the Shawnee Muskie Hunters Chapter to provide netting to cover hatchery rearing ponds to reduce predation by fish-eating birds on small muskies. The anglers also participate in the Show-Me Muskie Project, a volunteer angler catch reporting system which gathers data to help evaluate the muskie program.



Share the Harvest

Funding assistance available for donations.

A venison donation to the Share the Harvest program helps provide nutritious meals to thousands of needy Missourians. To participate in the program, hunters simply take their deer to an approved meat processor listed in the Fall Deer and Turkey Hunting Regulations and Information booklet and let the processor know how much venison they wish to donate. The cost of processing the deer is the responsibility of the hunter. Funding assistance is available for hunters who donate a whole deer. Be sure to contact individual processors to determine what funds are available at that particular location. For details on the Share the Harvest program, read pages 44 and 45 of the Fall Deer and Turkey Hunting Regulations and Information booklet, or visit www.missouriconservation.org/9032.





NextGEN

Trapping Clinic

Two-day seminar covers skills and ethics.

Trapping is essential for controlling furbearers and a good way to enjoy time outdoors.

Learn trapping basics at the Department of Conservation and Missouri Trappers Education Foundation trapping clinic Oct. 13 and 14 at the Land Learning Foundation near Triplett, Mo. Clinic courses include hands-on training in



setting and checking traps. Participants also will learn about trapping equipment, skinning and handling fur, and trapper ethics

and responsibilities. Meals and accommodations are provided free-of-charge. Preregistration is required for the two-day seminar. To register and get more information about the clinic call Clay Creech at 660-288-3127.

Every Member Draws

New daily drawing system at seven conservation areas

The Every Member Draws procedure for waterfowl hunting slots is now in effect at seven conservation areas. The procedure allows every member of a hunting party to participate in the daily drawings for unreserved hunting spots at Bob Brown, Columbia Bottom, Eagle Bluffs, Grand Pass, Marais Temps Clair, Otter Slough and Ten Mile Pond conservation areas. Letting everyone draw puts more hunters in the marsh by creating an incentive for hunters to team



with family and friends—up to the maximum of four hunters—instead of hunting alone or with just one partner. Details on the Every Member Draws

procedure are available at www.missouri-conservation.org/15299.

Muskellunge Fishing

Scout it Out



Name: Hazel Creek Lake

Location: 3.2 miles north of Kirksville on Highway 63, then 1.5 miles west on a gravel county road (marked by a cantilever sign).

For more info: www.missouriconservation.org/a8221



AS ANY DIE-HARD muskellunge angler can tell you, it takes a lot of casting to get the explosive-striking, hard-fighting muskie to take a lure. If chasing the elusive fish is how you get your kicks, you must fish Hazel Creek Lake. Located about three miles north of Kirksville, the 530-acre Hazel Creek is one of five lakes the Department of Conservation

regularly stocks and manages for muskie. This year's fishing prospects for muskie are described as fantastic. Anglers can expect a high proportion of fish caught to measure 36 inches or longer.

Mid-September through November is one of the peak times of the year to pursue muskie. Fish the timber stands and brushpiles near deep water. The most popular technique for catching muskie in Missouri is casting large, artificial lures. The length limit for muskie at Hazel Creek Lake is 42 inches with the daily limit of one fish. By city ordinance, gasoline powered boats are prohibited on Hazel Creek Lake, but electric motors may be used. For more information on muskie fishing at Hazel Creek Lake, call 660-785-2420.

PHOTO: CLIFF WHITE; ART: MARK RAITHEL



Monarch Migrations

Don't miss the spectacle of their departure.

For a few weeks each September, Missouri becomes a butterfly haven as monarch butterflies wing their way south for the winter. Take advantage of the mass migration to observe the butterflies.

Monarchs reside in Missouri only during summer because they cannot survive our long, cold winters. Each fall, monarchs east of the Rocky Mountains migrate to forests high in the mountains of Mexico. Western populations overwinter in central, coastal California. Their migration is driven by seasonal changes.

North American monarchs make an annual two-way migration. They travel much farther than other tropical butterflies, up to 3,000 miles. Monarchs born in late summer enter a nonreproductive phase known as diapause, during which they fly to overwintering sites. In early spring they return to the U.S., migrating as far north as Texas and Oklahoma, where they reproduce. It is usually the second, third and fourth generations that we see in Missouri. How the species manages to return to the same overwintering spots over a gap of several generations is still a subject of intrigue.



Monarch butterfly

Fall Color in September

Blackgum and dogwood put on an early show.

Brighten your hikes with a glimpse of fall color. While the peak of fall color occurs in mid-October, the leaves of blackgum and flowering dogwood change color in late September. Browse the outdoors in southern Missouri for blackgum. Its bright scarlet leaves have made it a fall favorite. Look for blackgum in wooded slopes, ridges, ravines and lowland forests. The bright red berries and red to maroon-colored leaves of flowering dogwoods offer a spectacular fall display. You'll find flowering dogwoods along wooded slopes, ravines, bluffs, upland ridges and old fields. To learn more about viewing fall color, visit www.missouriconservation.org/8422.

FEATHERED FASCINATION



King rail

Molting Helps Age Some Birds

JUST AS GRAYING hair can indicate that a human is no longer young, molting—the shedding and replacement of feathers—sometimes can help determine a bird's age. Feathers, like human hair and nails, can't be repaired when damaged, so birds must molt regularly to replace damaged feathers and to produce feathers appropriate to their age and sex.

Because molting requires a lot of energy, it occurs when birds are not engaged in other high-energy activities, such as nesting or migrating. In a complete molt all feathers are replaced. In a partial molt only some feathers are replaced.

As a bird grows, the small feathers produced early in life are not large enough to carry out the functions necessary for an older bird. A young bird will pass through one or more immature, or subadult, plumage before reaching the definitive plumage of a mature bird. Long-lived species such as eagles and gulls are among the birds that take several years to grow adult plumage. The herring gull is an excellent example of a bird that can be aged by its plumage. Herring gulls pass through four different immature plumage before reaching the white and gray definitive plumage at four years of age.

Information from the *Handbook of Bird Biology* by the Cornell Lab of Ornithology was used in this segment.



NextGEN

Pond Fish Kills

Fish are at risk now, find out how to prevent loss.

Overabundant filamentous algae (moss) is a nuisance for swimmers and anglers. Worse, several days of cloudy weather can cause algae to die causing oxygen levels to drop and kill fish. If fish are gulping at the surface, you can sometimes provide relief by spraying a fan of water across the surface from a high-pressure hose or mixing air and water with an outboard motor trimmed to spray a "rooster tail." Prevention is the best remedy though; remove algae with a rake, and dispose of it below the dam. This removes the nutrients and reduces the likelihood of more algae growth.



Bagnell Dam Relicensing

New requirements benefit wildlife and recreation.

The new federal license for Bagnell Dam requires Ameren-UE to make hydroelectric operations better for wildlife. The license, which resulted from more than a year of negotiations, ensures that Missourians will get more than just electricity from Bagnell Dam for the next 40 years and protects business, tourism and recreational interests. The Conservation Department fought for provisions to reduce damage to the Osage River's banks below the dam and to protect the river's fish habitat. The Conservation Department also negotiated changes to prevent fish from being sucked into hydroelectric turbines or killed by violent currents and low-oxygen water below the dam. Furthermore, the utility company takes responsibility for improving habitat for freshwater mussels and other plants and animals that are part of the Osage River's normal, healthy ecosystem. The company also will pay for stocking to replenish fisheries in Lake of the Ozarks and below the dam. The utility will increase water-quality monitoring and expand its analysis of erosion problems in the lower river to find ways to further reduce the impact of its operations.

Stream Team



Family Farms Group



MELODY TORREY'S IDEA of fun is taking a niece and nephew out on one of northeast Missouri's headwater streams and catching crawdads and other critters to learn how clean the water is.

"I like the idea of leaving the world a better place than when I came into it," Melody says. "Unfortunately, we haven't always received the land the way we should, but you can do something about it." She and other members of the Family Farms Group are doing lots to ensure that streams stay healthy in their area, which has lots of confined animal feeding operations and a meat-packing plant.

In the past 12 years, members of the Family Farms Group have devoted more than 13,000 hours to water-quality monitoring on more than 20 streams. That is more than 130 eight-hour work days a year. Data they gathered have helped state officials identify and correct water quality problems.

Stream Team #: 714

Date formed: Oct. 31, 1995

Location: Unionville

For more info about Stream Teams: www.mostreamteam.org

DAM: CLIFF WHITE; STREAM TEAM: DAVID STONNER



Our Glorious Forests POOSEY CA



Size: 5,738 acres

Location: 13 miles northwest of Chillicothe in Livingston County

Importance: Poosey CA is a designated Important Birding Area.

Take the fall driving tour: Oct. 21 (third Sunday in October)

Find more info: www.missouriconservation.org/a7935



FERN-DRAPED STONE walls, heavily timbered hills and rolling grass expanses make Poosey Conservation Area a must-see in the fall. The annual driving tour occurs the third Sunday in October, when the area's color usually peaks. More than just a pretty drive, the Poosey driving tour helps visitors understand the link between sustainable forest management and beautiful, bountiful forests. Most of the

15 stops feature a management approach that helps protect the local watershed, increase natural diversity and produce high-quality wildlife habitat and valuable forest products. Other stops, such as the Panther's Den, give visitors a glimpse into the past when the Poosey area was a vibrant farming community. Best of all, Poosey's mosaic of upland hardwoods and grasslands creates a masterpiece of fall color.

KC TreeKeepers Class

Six-week course starts at Burr Oak Woods Oct. 2.

The Heartland Tree Alliance announces its fall TreeKeepers Class. Emphasizing community tree health, the course will be held at Burr Oak Woods Nature Center in Blue Springs. The course's many topics include tree identification, species selection and diagnosing tree problems. Participants will apply classroom lessons during hands-on field experiences. To register, call 816-561-1061, ext. 110, or e-mail treemail@bridgingthegap.org. The class is free, but participants are asked to donate 24 hours of public tree-care help in the Kansas City region.



We All Live in a Forest

Don't move firewood! Help prevent against tree pests.

If you move firewood between campsites this summer, you may be spreading tree-killing pests such as emerald ash borers, Asian longhorned beetles and gypsy moths. These species hide and travel in firewood. In recent years, they have devastated hardwood forests in the eastern United States, and they're headed to Missouri. While campers are advised not to transport firewood between camps in the state, a federal quarantine makes it illegal to bring firewood in from infested states, specifically Illinois, Indiana, Ohio and lower Michigan. To avoid spreading tree pests, buy firewood from local sources and burn it all before you leave camp. Learn more about reducing threats to Missouri's glorious forests at [www.missouri conservation.org/11242](http://www.missouriconservation.org/11242).





NextGEN

Burn Now for More Forbs

Wildflowers enrich prairie habitat.

Spring burns improve native warm-season grass stands, but they decrease wildflower vigor—and your prairie’s natural diversity. Wildflowers such as cone-flower and partridge pea also provide wildlife cover and forage. To strengthen your prairie’s forb component—and open up grass stands for ground-nesting birds—burn some of your grassland every fall.



This leaves enough cover for wildlife this winter and prepares for richer habitat next year. Remember, any prescribed burn

requires safe weather conditions and adequate fire lines.

Plant Green Browse

For better hunting and wildlife viewing

To attract deer for viewing or harvest, plant green browse food plots. Clover, alfalfa and wheat provide protein-rich vegetation during the critical growth period of early spring. Grain plots, on the other hand, offer energy for maintenance during the cold winter months. Establish green browse plots near cover and away from roads to reduce the potential for poaching. A patchwork of plots is better than one large one.

To plant, fertilize and prepare the seedbed in mid-August to early September.



Broadcast with wheat at one bushel per acre and disc lightly to cover the seed. In late February or early March, broadcast a mixture

of red, ladino and white Dutch clovers. For full details about planting green browse, visit www.missouriconservation.org/8328.

Farmer Appreciates Conservation Reserve Program

On the Ground



IT’S HARD TO tell what Carroll County resident Ben Teevan likes most about the Conservation Reserve Program—the quail and songbirds or the improved soil and cleaner water. Through rental payments and cost-share, CRP helps Ben and other participating landowners convert highly erodible cropland to grasses, shrubs, trees, filterstrips or riparian buffers. Although Ben says there’s no more beautiful sight than a covey of quail, he maintains that CRP “goes beyond wildlife. It’s about conserving the land and water.”

CRP is among the many farm bill conservation programs Congress is reviewing this summer. The new farm bill will most likely continue CRP but favor targeted efforts and conservation buffers. Currently, Missouri has 38,000 CRP contracts, totaling 1.6 million acres and bringing in \$105 million annually to Missouri landowners. To track Congress’ treatment of CRP this summer, go to www.agriculture.house.gov or www.agriculture.senate.gov.

PHOTO: DAVID STONNER; ART: MARK RATHIEL



New Education Program

Learning Outdoor Schools "passed" the field test.

Outdoors is the best place for students to learn how nature works. This premise shaped the Department's new Learning Outdoor Schools, a statewide conservation education program that rolls out this month. "Teachers helped us develop this, so we're confident that it will meet their needs, both in the classroom and in the field," said Lorna Domke, the Department's Outreach and Education Division chief. After a year of testing the curriculum and its field activities, one Missouri middle school teacher wrote, "MDC resources are great, a teacher's best friend." Key elements of the program include free instructional units that meet current testing needs, as well as grants for field trips and teaching materials. The first unit, available this month, teaches 6th through 8th graders about aquatic ecosystems via such activities as fishing and stream exploration. Units for elementary and high school grades will follow in 2008 and 2009. The elementary curriculum will focus on wildlife and habitat, and high school students will learn about ecology and wildlife management. Educators interested in the Learning Outdoor Schools Program should contact their local conservation education consultants and outdoor skills specialists at www.missouriconservation.org/teacher/contacts.



Cave and Karst Symposium

Some programs open to educators and public

The Department of Conservation and the Missouri Caves and Karst Conservancy will hold the National Cave and Karst Management Symposium in St. Louis, Oct. 8 through 12.

The Monday field trip and workshops are open to educators. The Oct. 9 panel discussion titled "Managing Caves and Karst in the 21st Century" is open to the public at the Powder Valley Conservation Nature Center.

Powder Valley will also exhibit cave photos throughout October. To view the entire symposium schedule, visit www.nckms2007.org.

NATURE ACTIVITY



PHOTOS: CLIFF WHITE

Columbia Bottom CA



EXPLORING BIG-RIVER ecology near the big city—that's what the Columbia Bottom Conservation Area is all about. Located in north St. Louis County, it gives visitors an intimate view of the confluence of the Missouri

and Mississippi rivers. A mosaic of shallow wetlands, bottomland hardwoods, prairie and cropland attract resident and migratory wildlife, including bald eagles, waterfowl, trumpeter swans, northern harriers, indigo buntings, gold finches and woodpeckers. The Howard and Joyce Wood Education and Visitor Center provides programs and houses exhibits. Visit this fall to watch migrating birds and learn more about the big-river area's ever-changing landscape.

Where: Confluence of Missouri and Mississippi rivers in St. Louis

Features: 4,318-acre area including more than 6.5 miles of river frontage, 800 acres of forest and a 110-acre island; the Howard and Joyce Wood Education and Visitor Center housing many natural history exhibits; eight Exploration Stations throughout the area

Things to do: Observe and/or photograph birds and wildlife, enjoy visitor center programs and activities, take an auto tour, hike, bike, canoe or kayak, fish and participate in managed hunts

For more info: 314-877-6014



The bird rose from the crisp leaves between the dog and me almost in slow motion. Its wingbeats made a metallic twittering sound. It was so close I could feel the breeze from its wings. Five feet off the ground, it turned and seemed to look me in the eye before pitching horizontally through a tangle of grapevines. My shot interrupted the spell, but not the bird's flight.

Another day, hunkered at the edge of a plowed cornfield that held an inch or two of standing rainwater, I spied a dozen sleek forms 100 yards out, slicing down the north wind toward me with breathtaking agility. I stood up and fired twice. The skein of birds parted like a curtain, sweeping around and past me, without apparent injury.

Yet another day, in a cattail marsh with small watery clearings, my quarry stubbornly declined to fly, preferring to skulk among knee-high grass hummocks. Whenever one of the birds did leave the ground, however, it rewarded my patience with an easy shot. My game vest grew heavy.

If these scenarios seem unfamiliar, it is probably because you have never pursued woodcock, snipe or rails. Of all Missouri's game birds, these are perhaps the least hunted. That's a shame because each species provides a challenge.

As a bonus, pursuing them takes you to places you otherwise might never visit and fills otherwise empty spaces in autumn's hunting calendar. Hunting woodcock, snipe and rail also offers a chance to sharpen rusty wing-shooting skills and an excuse to scout new hunting areas.



Utility Birds

Pursuing elusive woodcock, snipe and rail tunes you up for the fall hunting season. STORY AND PHOTOS BY JIM LOW

If you get the urge to take your favorite scattergun afield before big flights of ducks and geese arrive, this trio of what I call “utility birds” may be just what you need.

Woodcock

Also known as “timberdoodles” or “bogsuckers,” these stout but oddly handsome birds are mottled buff and black. They make their living by poking long, sensitive beaks deep into the soil in search of their primary food, earthworms. For this specialized lifestyle, they have eyes set far back on their heads, allowing them to watch for trouble while probing for food.

The quality of woodcock cover can be gauged by how much grief it causes you and your dog. Timberdoodles favor low-lying areas where the soil is moist and loamy,

Snipe and rail can be found in shallow ponds, in mud flats of lakes and along muddy stream banks. “The jacksnipe rises something like a whirling dervish. He twists and swerves and zigzags in the air in mad, disordered flight.”
—Lorene Squire, *Waterfowling With a Camera*.

but you may also find them amid blackberries, wild roses, gooseberries and catbriers in uplands. Clearcuts between 10 and 25 years old are excellent woodcock habitat, as are abandoned bottomland fields that grew up in cottonwood thickets after the Great Flood of 1993.

The common thread in woodcock habitat is a closed canopy of vegetation that shades out turf grasses, leaving

the ground beneath nearly bare and ready for “bogsucking.” A blanket of leaves doesn’t deter woodcock. In fact, their markings mimic fallen leaves so perfectly that a dog is almost essential for locating downed birds.

Woodcock are most likely to be found near the edges of suitable cover near open ground rather than in the middle of thickets. Evidence that woodcock are present includes white, quarter-sized droppings with brown streaks. You might also find holes in the soil where the birds have been poking around for worms.

Woodcock migrate at night, settling into thickets to rest and eat during the day. They are birds of passage, here one day and gone the next, even in the best habitat. Their wings make a distinctive metallic sound when they take flight, almost like tiny wind chimes. That, coupled with squat bodies and outrageously long beaks, makes them unlike anything else you encounter in similar habitat.

Woodcock seldom fly far when flushed. That is fortunate, because you have only about a fifty-fifty chance of getting off a shot when one flushes in thick cover. Typically,

Having a dog retrieve woodcock is ideal for hunters, especially when the birds fall into thorny areas.



they rise just above the shrubby undergrowth, then dodge among tree branches for 20 or 30 yards before settling back down. If you can mark the spot where it lands, your chances of flushing a bird again are excellent.

The best gunning strategy is to shoot at the moment when the bird reaches the peak of its rise. This is simpler in theory than in practice, because you usually have a blackberry thorn tugging at your earlobe or a screen of saplings between you and the bird.

Shots at woodcock are fleeting, so you need a gun that is quick in hand. A light double-barrel is ideal, but any short, maneuverable shotgun will do. A flushed bird often is obscured by tree limbs by the time it is 15 yards away, so it is almost impossible for a woodcock gun to have too open a choke. Spreader loads—shotgun shells with wads designed to disperse the shot as soon as it leaves the barrel—can convert a tight-choked gun into an excellent woodcock gun.

My golden retriever loves hunting timberdoodles. However, a few dogs apparently find woodcock either uninteresting or distasteful and refuse to retrieve them. Spaniels are ideal woodcock dogs, wiggling into terrifyingly thorny places to root out tight-sitting birds. Getting your dog to work close is the key, because it is easy to miss a flush that occurs more than 30 yards away.

Snipe

Practical jokes aside, snipe are real game birds. They can be devilishly hard to hit when flying from place to place and are only slightly less challenging when flushed.

Snipe resemble woodcock because of their long bills. However, their plumage has bold stripes, their necks are longer than woodcocks’, and they inhabit open, marshy areas, never forest thickets.

Look for snipe around the margins of shallow ponds, in mud flats of lakes and along muddy stream banks. You also might find them in adjoining disked or plowed crop fields. Late-migrating snipe sometimes take shelter in moist, grassy draws after wetlands freeze over.

When flushed, snipe utter a sharp cry that mimics their name. This is important, as other wading birds often are found in close association with snipe. Hold your fire if you don’t hear the *snipe* cry and see a long bill.

A stealthy hunter might be able to get quite close to snipe before they take flight. They often return to a location after having been flushed, so you might get a second shot by hunkering down in any available cover and waiting a few minutes.

Although nontoxic shot is not required for snipe, some of the best places to hunt them are public wetland areas where the use of nontoxic shot is mandatory. No. 7 steel shot with a modified or improved cylinder choke is a good choice.

Rails

Almost all the rails taken by Missouri hunters are soras, but the two rail species most commonly seen in Missouri are similar enough in appearance that an aggregate bag limit makes sense. Be aware that other rails, including the rare king rail, can be found here during the hunting season.

Soras are small, drab gray birds with yellow beaks much shorter than those of snipe and woodcock. They are secretive, but they betray their presence with frequent *ker-wee* calls from their hiding places.

You might find several soras around a piece of open water when you first appear, but they quickly disappear into surrounding cattails and sedges. A dog is very help-

ful for rousting them out of these haunts and for finding them once they are down.

Soras are not fast or erratic fliers, and often they concentrate in large numbers around small marshy areas on state-owned wetlands. These habits make them great confidence-builders for young hunters with limited patience and shooting skill. The fact that these little shorebirds pass through Missouri in September and early October, when temperatures are still pleasant, also favors young hunters. Getting a little wet at this time of year is only an inconvenience, not a reason to stop hunting.

No. 7 steel shot with an improved cylinder choke is a practical combination. Bring along insect repellent and a bottle of drinking water. ▲

American Woodcock ▶

Scientific name: *Scolopax minor*
Length: 10-13 inches
Wingspan: 17-19 inches
Season: Oct. 15-Nov. 28
Daily/possession limit: 3/6



◀ Wilson's Snipe

Scientific name: *Gallinago delicata*
Length: 11-13 inches
Wingspan: 16-17 inches
Season: Sept. 1-Dec. 16
Daily/possession limit: 8/16



Sora ▶

Scientific name: *Porzana carolina*
Length: 6-7 inches
Wingspan: 12.5 inches
Season: Sept. 1-Nov. 9
Daily/possession limit: 25/25
(in the aggregate with Virginia rails)



◀ Virginia Rail

Scientific name: *Rallus limicola*
Length: 8-11 inches
Wingspan: 13-15 inches
Season: Sept. 1-Nov. 9
Daily/possession limit: 25/25
(in the aggregate with soras)



Make a meal out of it

You won't feed a large group with utility birds unless you bag a limit of all three. Some people say these birds are not fit to eat. Others—who either are better cooks or have broader tastes—think they provide excellent table fare.

The easiest way to prepare snipe, rail and woodcock is to pull back the skin covering the breast and carefully fillet the meat from the bone. Snipe and rails yield about an ounce of meat per bird. Woodcock breasts are a little larger.

Soak breast fillets for an hour or so in milk or buttermilk, then rinse them with cool water. Saute the breast halves in butter or olive oil with minced garlic, salt and pepper to taste. Cook only until the meat is still slightly pink at the center. Overcooking makes wild fowl tough and contributes a strong taste.

To make a sauce, remove the meat from the pan and add a tablespoon of red wine for each breast. Cook on low heat until slightly thickened. Garnish with parsley and serve on a bed of wild rice.







More than just a curtain call, the **alligator gar** gets a new “release” on life in southeast Missouri.



Encore!

by A. J. Hendershott and Phil Helfrich
photos by David Stonner

ILLUSTRATION BY A.J. HENDERSHOTT

A crisp *kerplunk* reverberates off the surface of Monopoly Marsh in Mingo National Wildlife Refuge.

“Did you hear that?” asks Chris Kennedy, a fisheries biologist with the Conservation Department. “That is the sound of balance being restored, and I’m proud to play a role.”

Until today, the creature making that sound—a young alligator gar—hadn’t set fin in these waters for more than 30 years. This June morning, Kennedy will introduce 300 young *kerplunkers* to their native dark waters.

Alligator gar were the top predators in Mingo’s swamps until about 1970, when habitat loss and wanton harvest drastically cut their numbers. In 2006, the U.S. Fish and Wildlife Service and the Conservation Department approved a plan to restore this legendary leviathan to its former habitat.

“My dad used to take me fishing, and when we caught a gar he would snap its beak and throw it up on the bank to die,” Kennedy recalls. “He was told it was the right thing to do, but I remember sitting in the back of his boat, actually feeling sorry for those gar.”

Kennedy slips his hands into a fish tank in the back of the airboat, cradles a 30-inch gar, lifts it out of the tank, swings it over the side of the boat and releases the wrig-

gling 2-pounder. Before the day is over, he will repeat this bare-handed procedure 298 more times.

About Alligator Gar

Alligator gar are among the largest freshwater fish in North America. They can reach 10 feet in length, though 5 to 8 feet long is a more common size for adults. An adult can weigh between 100 to 300 pounds. The largest known Missouri gar mount is located in the Hornersville Duck Club. This 8-foot, 3-inch behemoth weighed 228 pounds.

A thick coat of bony scales make alligator gar better protected than any other fish species. Adult alligator gar can be distinguished from other adult gar species by the double row of teeth they have in their upper jaw.

Commonly known as “gator gar,” these fish occupy slow-moving backwater sloughs and rivers looking for large prey.

While every fish is a potential meal, gar usually eat whatever is most common. Studies show that gar mainly eat shad, buffalo and drum. Surprisingly few sport fish make their way into a gar’s stomach.

Gar hunt by ambush. They float along, still as a log, until a tasty morsel gets close. They then sling their head to one side and slam their jaws down on the prey.

Occasionally, gar surface to gulp air. Fisheries biologists call this breathing behavior “breaking.” It allows gar to survive low oxygen levels in the water.

Seventy-seven-year-old Richard Woods grew up on the Black River in Butler County and remembers seeing gar up to 8 feet long rolling on the surface.

Young alligator gar like this one will be stocked at Mingo National Wildlife Refuge. Alligator gar are among the largest freshwater fish in North America.





“Alligator gar would move up in the spring and hang around in the river holes,” Woods says. “We watched two of them that moved into our swimming hole. We’d jump off of a leaning tree into that water time after time. It’s a wonder we never hit either of them. And they never attacked.”

The History of Gar

Native tribes were first to harvest gar. They worked the tough scales into arrow points and breastplates. They fashioned the ribs into needles.

Early farmers stretched gar skin over their plows. The result was a tool armored like a shield. The skins were also used for covering pictures, making purses and decorating fancy boxes.

Probably the biggest use of alligator gar was for dinner; the meat is tasty.

However, European settlers disdained the big predators. Gator gar tore their nets and were difficult to keep on a line because they were so big. People believed gar ate the same fish they wanted—a misconception that persists to this day.

They even imagined these toothy, gigantic fish ate humans. However, there are no documented cases of alli-

Historical photo of large alligator gar caught by anglers. Adults commonly reach 5 to 8 feet long and can weigh between 100 and 300 pounds.

gator gars attacking people in North America.

Responding to pressure, state and federal authorities sought to eliminate gar to protect game fish and prevent human attacks.

In the 1950s, anglers came to Arkansas from all over the country to catch alligator gar. Fishermen would hire guides to help them kill huge numbers of the big fish. One participant noted, “We were catching gar like there was no tomorrow. When we got one to the boat, we’d shoot it and just let it sink. We thought we were doing a great service.”

Bootheel folks also fished for gator gar. Catching one was a spectacular event. The ensuing tussle gave any angler the right to be proud, and people seldom let the flesh go to waste.

Market fishermen butchered the fish for meat. Some fish markets would sell gar alongside catfish and other sport fish. But, given the fish’s generally poor reputation, most

Missourians were glad to see gator gars nearly disappear from southeast waters, which they did by the late 1960s.

Gar in Our Future

The Mingo National Wildlife Refuge is a 21,000-acre remnant of the 500,000 acres of wetlands that once dominated Southeast Missouri. With its combination of marshes, swampy waters and seasonally flooded woodlands, the area provides the best opportunity to restore alligator gar to southeastern Missouri.

All the gars Kennedy released have tags that researchers can use to track them. Anglers are encouraged to release

any alligator gar they catch and to write down and report its tag number and where and when it was caught.

Researchers also will be radio tracking 20 of the released gar. They will mark the particulars of each gar's travels—what habitats it prefers, how far it moves and at what times. Radio telemetry also allows scientists to pinpoint a gar's location so it can be recaptured.

Fisheries biologists consider gar to be big-river fish. But gar also need to get in and out of wetlands and floodplains for spawning. This is hard to do these days. Levees may prevent flooding, but they also prevent gar from reaching typical spawning habitat.

Missouri Gar

Alligator gar is not the only type of gar found in Missouri. Spotted, shortnose and longnose gar can all be found in various waters around the state.



SPOTTED GAR

Habitat: Swamps, sloughs, slow backwater sections of rivers

Size potential: 30+ inches, 5–8 pounds

Diet: Mosquito larvae, crustaceans, minnows, shad



SHORTNOSE GAR

Habitat: Swamps, sloughs, slow backwater sections of rivers, lakes and streams

Size potential: 25+ inches, 5–10 pounds

Diet: Shad, crayfish, insects, miscellaneous

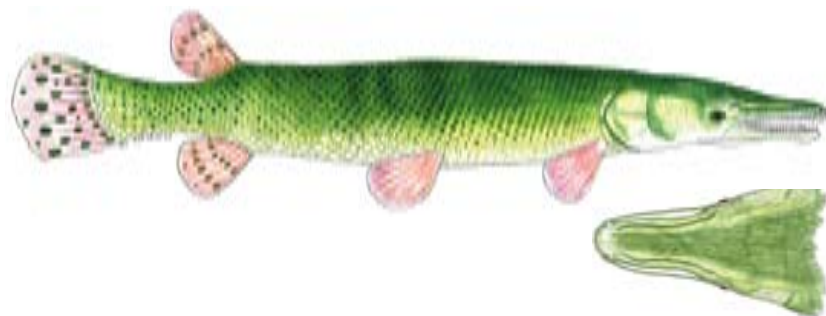


LONGNOSE GAR

Habitat: Large rivers and lakes, sloughs, and swamps with good water clarity

Size potential: 50+ inches, 30+ pounds

Diet: Shad, minnows



ALLIGATOR GAR

Habitat: Backwater sloughs, swamps, large rivers with backwater areas

Size potential: 8 feet, 250+ pounds

Diet: Whatever is large and common. Records show that buffalo, carp and shad are major components of their diet as well as ducks and other waterfowl.

Kennedy and other researchers also will be gathering data on the gar's impact on the overall fish community at Mingo. An increasing number of fisheries biologists believe that not only can sport fishing and alligator gar coexist, but that the presence of gar might improve sport fish communities.

“Some of the best bass fishing in the southern U.S. is in waters where solid populations of alligator gar exist,” Kennedy says.

Kennedy dips the remaining dark-olive gar into the water. He holds it for a few seconds before letting go, and then the last of the lot disappears quickly. The 10-year veteran of the Department wipes his hands and marks a map where the fish was set free.

Events over the last hundred years have changed this landscape dramatically. From a species point of view, many of those events have marked loss. But today a different kind of event took place. A native species was reintroduced, helping to restore balance and resources for future generations to enjoy. ▲

Visit the Refuge

Visit Mingo National Wildlife Refuge to learn about or observe wetland habitats unique to southeastern Missouri. The refuge's visitor center is open Monday through Friday from 8 a.m. to 4 p.m. Five observation overlooks are located on refuge roadways, or visitors can hike the mile-long Boardwalk Nature Trail.

During April and May, take the 19-mile, scenic Auto Tour Route to see spring wildflowers and witness spring songbird migration. Take the same route during October and November to view fall foliage and waterfowl migration.

For more information about Mingo National Wildlife Refuge, visit midwest.fws.gov/mingo, e-mail mingo@fws.gov or call 573-222-3589.

Levi Solomon radio-tracks alligator gar in Monopoly Marsh at Mingo National Wildlife Refuge. Once gar are located, their position is marked using GPS for future reference.





THIRTY YEARS FOR MISSOURI'S *Natural Areas*

by Mike Leahy, photos by Noppadol Paothong

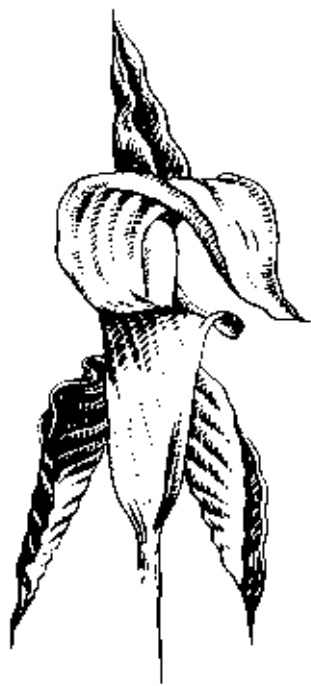
Visit a designated
natural area near you!



Ashy sunflowers at Diamond Grove Prairie Natural Area



Columbine at Valley View Glades Natural Area



The jack-in-the-pulpit, emblem of the Missouri Natural Areas System, is featured on natural area boundary signs and registration certificates.

When I tell people that I'm the natural areas coordinator for the Missouri Department of Conservation, they often ask me, "Aren't all woods and prairies natural areas?"

The term "natural area" can be a bit confusing. Missouri's designated natural areas protect the best available examples of Missouri's prairies, forests, glades, savannas, woodlands, wetlands, cliffs, caves and streams. Although we have many natural areas throughout Missouri, designated natural areas within the Natural Areas System might be considered the "cream of the crop" of natural communities.

A Network of Natural Gems

Back in 1977, forward-thinking folks from the Missouri Department of Conservation and the Missouri Department of Natural Resources created a partnership called the Missouri Natural Areas Committee. The charge of this committee was to identify, designate and recommend management of the best remaining examples of Missouri's natural communities.

The Natural Areas System has grown from 43 natural areas 30 years ago to more than 180 natural areas today, with 86 owned by the Missouri Conservation Department. The success of the Missouri Natural Areas System has resulted from a partnership of local, state and federal government agencies, private conservation organizations, such as The Nature Conservancy, and private landowners in recognizing and conserving high-quality natural communities as designated Missouri natural areas.

The citizens of Missouri were promised an expanded Natural Areas System in 1976 as part of the *Design for Conservation*, and proceeds from the conservation sales tax have been used to establish natural areas either through new acquisitions or through an inventory of existing public lands. Over the next 30 years the Conservation Department promises to establish or expand 40 natural areas as part of its promise in *The Next Generation of Conservation*.

Missouri's Living Museums

Our natural areas are storehouses of biological diversity. They support populations of more than 300 plant and animal species of conservation concern, ranging from prairie chickens to pondberry shrubs. In a sense, natural areas are living museums that show what the land looked like prior to the industrial age.

Natural areas contain high-quality natural communities. These groupings of plants and animals and their associated soils and topography have been minimally impacted by humans or have been restored back to a healthy condition. They are an important part of our heritage that we pass on to future generations.

They also are repositories of genetic diversity. The plants, animals and microorganisms found there have high scientific value and may one day have important medicinal or economic value as well.

Natural areas serve as living laboratories and outdoor classrooms for scientists and teachers to use for research and teaching. These areas also are important green space and provide outdoor recreation opportunities including hiking, birding, nature study, photography and, in many cases, hunting and fishing.

Natural Areas Stewardship

Today the natural processes of fire, flooding, native predators and grazers no longer sustain our ecosystems as they did prior to settlement. In many cases, non-native invasive species threaten our natural areas. Land cannot simply be designated as a natural area and left alone forever. Natural areas typically require some form of hands-on land management, such as prescribed burning, to restore or maintain their ecological integrity.

See a Natural Area Today

The best way to learn about our natural areas is to visit one. Some natural areas are remote and require good orienteering skills with map and compass to visit. But many are relatively easy to access and not far from metropolitan areas.

This article includes descriptions of and directions to 10 natural areas owned or managed by the Conservation

Department. These areas have parking lots and either have trails or are relatively easy to traverse cross-country.

For more information about designated Missouri natural areas, visit www.missouriconservation.org/8364 or write to the Natural Areas Coordinator, Wildlife Division, Missouri Department of Conservation, P.O. Box 180, Jefferson City, MO 65102.

Least bitterns can be found in wetland natural areas such as Little Bean Marsh Natural Area.





Little Bean Marsh Natural Area

416 acres in Platte County
816-655-6250

Marsh, slough and bottomland forest rich in wetland wildlife in the Missouri River floodplain between Kansas City and St. Joseph. One and a quarter miles of disabled-accessible paved trail, viewing blind and viewing tower.

Driving Directions: Thirty miles north of Kansas City. From the town of Iatan on Highway 45, drive approximately three miles north. From the highway, turn west at the sign and follow the gravel road that ends at the trailhead and parking lot.

Maple Woods Natural Area

18 acres in Clay County
816-655-6250

Old-growth oak-maple forest in the Kansas City Metro Area. The area has a network of natural-surface hiking trails. The Conservation Department owns this land, and the City of Gladstone manages the site.

Driving Directions: Take I-435 to Highway 152. Go west on Highway 152 for 1.8 miles and turn south onto Route 1 for 0.5 mile, then turn west onto 80th Street. Look for the sign on the corner and follow this road, which becomes 76th Street, south and west 0.7 mile to the parking lot on the south side.

La Petite Gemme Prairie Natural Area

37 acres in Polk County
417-895-6880

Tallgrass prairie, just south of Bolivar, that is bisected by the Frisco Highline Trail (36-mile Springfield to Bolivar biking/hiking trail, www.friscohighlinetrail.org or 417-864-2015) at mile marker 32. Owned by the Missouri Prairie Foundation (www.moprairie.org or 573-356-7828) and managed by the Conservation Department.

Driving Directions: Go south from Bolivar on Highway 13 and exit to the west at the Highway 13 and Business Highway 13 (Highway 83) interchange. Take the Outer Road south 0.6 mile to East 473rd road; go west on East 473rd road for nearly a mile to the parking lot on the south side.

Lichen grasshoppers can be found on glade natural areas such as Stegall Mountain Natural Area.





Marginal shield fern
at Pickle Springs Natural Area



Summer tanagers can be found in wooded natural areas such as Weldon Spring Hollow Natural Area.

Natural Areas Partners

Visitors are also welcome at designated natural areas on lands owned by other partners in the Missouri Natural Areas Committee, including Missouri State Parks (www.mostateparks.com/natareas.htm or 800-334-6946), the Mark Twain National Forest (www.fs.fed.us/r9/forests/marktwain or 573-364-4621), the Ozark National Scenic Riverways (www.nps.gov/ozar or 573-323-4236), and The Nature Conservancy (www.nature.org or 314/968-1105). A number of other entities, such as private individuals, the University of Missouri and the L-A-D Foundation, also own designated Missouri natural areas.

Agency partners of the Missouri Natural Areas Committee are:

- Missouri Department of Conservation
- Missouri Department of Natural Resources
- The Nature Conservancy
- U.S. Forest Service
- National Park Service
- U.S. Fish & Wildlife Service

Diamond Grove Prairie Natural Area

570 acres in Newton County

417-895-6880

Tallgrass prairie close to Joplin, rich in wildflowers and prairie birds.

Driving Directions: From the town of Diamond, go four miles west on Route V, then turn north onto a gravel county road for 1.25 miles to the parking lot on the east side.

Stegall Mountain Natural Area

3,872 acres in Carter County

417-256-7161

Ozark glades, expansive woodlands and deep hollows traversed by over six miles of the Ozark Trail. Area owned by the Conservation Department, the National Park Service and The Nature Conservancy.

Driving Directions: Located within Peck Ranch Conservation Area. From the junction of Highway 19 and Route H in Winona, travel east five miles on Route H to the entrance sign, then east on County Road 311 (gravel) for approximately 5.75 miles. Before the gravel road heads south down the hill, look to the north side of the road for a parking lot and Ozark Trail trailhead. Best access is by the Ozark Trail (Ozark Trail Coordinator, 800-334-6946).

Paint Brush Prairie Natural Area

74 acres in Pettis County

660-530-5500

Tallgrass prairie south of Sedalia with many wildflowers, regal fritillary butterflies and prairie birds.

Driving Directions: From the intersection of Highway 65 and Route B in Sedalia, drive approximately nine miles south on Highway 65. Then turn east on Manila Road (gravel) for about 400 feet to a parking lot on the north side.

Grand Bluffs Natural Area

160 acres in Montgomery County

573-884-6861

Towering bluffs of dolomite rock rise 300 feet above the Missouri River floodplain near the town of Hermann. Visitors can hike a 1-mile natural-surface trail from the parking lot to an overlook, or they can hike or bike along the KATY Trail State Park (800-334-6946) between mile markers 105 and 110 to see the bluffs from below.

Driving Directions: From the junction of Highways 63 and 54, north of Jefferson City, take Highway 94 east for 34.1 miles. Turn left on County Road 291 (gravel) and travel north 0.3 mile to a parking lot and trailhead on the east side.

Valley View Glades Natural Area

227 acres in Jefferson County
636-441-4554

Just south of the St. Louis Metro Area, near Hillsboro, are large open dolomite glades and woodlands that can be seen along the 2.5-mile natural-surface Valley View Glades Trail.

Driving Directions: From the intersection of Highway 21 and Route B in Hillsboro, go west on Route B for 4.5 miles to the parking lot and trailhead on the north side.

Pickle Springs Natural Area

180 acres in Ste. Genevieve County
573-290-5730

Sandstone waterfalls, canyons and amazing rock formations that can be enjoyed along the 2-mile natural-surface Trail through Time interpretive hiking trail.

Driving Directions: About halfway between Cape Girardeau and the St. Louis Metro Area. From the junction of Highway 32 and Route W in Farmington, travel east on Highway 32 for five miles, then east on Route AA for 1.7 miles to Dorlac Road (gravel). Turn north and drive 0.4 mile on Dorlac Road to the parking lot on the east side.

Weldon Spring Hollow Natural Area

385 acres in St. Charles County
636-441-4554

Rugged, wooded river hills rise over 300 feet above the Missouri River floodplain just 30 miles west of downtown St. Louis. Visitors to this area can hike either the 8.2-mile Lewis Trail or the 5.3-mile Clark Trail, both natural-surface trails. Hikers and bikers may view the bluffs of Weldon Spring Hollow from below by following the KATY Trail State Park (800-334-6946) between mile markers 56 and 53.

Driving Directions: Located within Weldon Spring Conservation Area. From Highway 40/61 at Weldon Spring, travel west on Highway 94, past Route D. Continue on Highway 94 for 1.1 miles past Route D and turn south into the parking lot and trailhead. ▲

The best way to learn
about natural areas is
to visit one.

Hunting and Fishing Calendar

FISHING

	OPEN	CLOSE
Black Bass (certain Ozark streams, see the <i>Wildlife Code</i>)	5/26/07	2/29/08
impoundments and other streams year-round		
Bullfrog	Sunset	Midnight
	6/30/07	10/31/07
Gigging nongame fish	9/15/07	1/31/08
Trout Parks	3/1/07	10/31/07

HUNTING

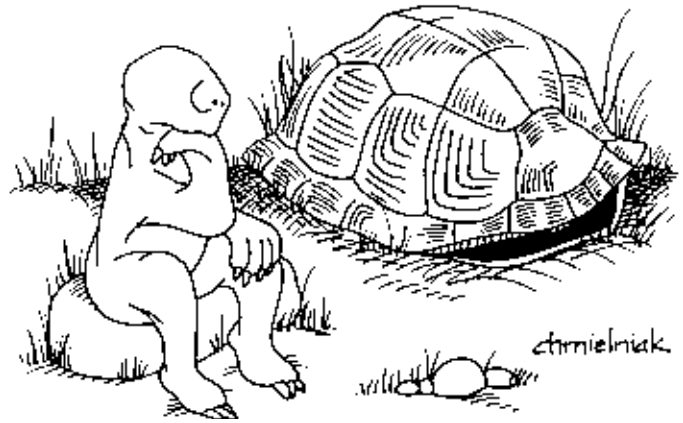
	OPEN	CLOSE
Common Snipe	9/1/07	12/16/07
Coyotes	5/7/07	3/31/08
Crow	11/1/07	3/3/08
Deer		
Archery	9/15/07	11/9/07
	11/21/07	1/15/08
Firearms		
Urban Counties (antlerless only)	10/5/07	10/8/07
Youth	10/27/07	10/28/07
November Portion	11/10/07	11/20/07
Muzzleloader	11/23/07	12/2/07
Antlerless	12/8/07	12/16/07
Dove	9/1/07	11/9/07
Furbearers	11/15/07	1/31/08
Groundhog	5/7/07	12/15/07
Pheasants		
North Zone	11/1/07	1/15/08
South Zone	12/1/07	12/12/07
Youth (north zone only)	10/27/07	10/28/07
Quail	11/1/07	1/15/08
Youth (statewide)	10/27/07	10/28/07
Rabbits	10/1/07	2/15/08
Ruffed Grouse	10/15/07	1/15/08
Sora and Virginia Rails	9/1/07	11/9/07
Squirrels	5/26/07	2/15/08
Teal	9/8/07	9/23/07
Turkey		
Fall Archery	9/15/07	11/9/07
	11/21/07	1/15/08
Fall Firearms	10/1/07	10/31/07
Waterfowl	please see the <i>Waterfowl Hunting Digest</i> or see www.missouriconservation.org/7573	
Woodcock	10/15/07	11/28/07

TRAPPING

	OPEN	CLOSE
Beaver and Nutria	11/15/07	3/31/08
Furbearers	11/15/07	1/31/08
Otters and Muskrats	11/15/07	see <i>Wildlife Code</i>

For complete information about seasons, limits, methods and restrictions, consult the *Wildlife Code* and the current summaries of *Missouri Hunting and Trapping Regulations* and *Missouri Fishing Regulations*, the *Fall Deer and Turkey Hunting Regulations and Information*, the *Waterfowl Hunting Digest* and the *Migratory Bird Hunting Digest*. For more information visit www.missouriconservation.org/8707 or permit vendors.

The Department of Conservation's computerized point-of-sale system allows you to purchase or replace your permits through local vendors or by phone. The toll-free number is 800-392-4115. Allow 10 days for delivery of telephone purchases. To purchase permits online go to www.wildlifelicenses.com/mo/.



Thinking outside the box.

Contributors



PHIL HELFRICH spends his free time looking for the place where blues, jazz and ozark streams converge. Preliminary data suggests the intersection is dependent on a change in latitude.

A.J. HENDERSHOTT lives with his wife, Cheryl, and children, Cheyenne and Hunter, in rural Cape Girardeau County. When not hiking, hunting or sketching, he crafts wooden longbows. A.J. is an Outreach and Education supervisor with the Conservation Department and holds wetlands in high regard.



MIKE LEAHY is the natural areas coordinator for the Conservation Department. He and his wife, Carol Davit, and their son, Jamie, live in Jefferson City. They enjoy hiking, birding, botanizing, gardening and playing in streams.

News Services Coordinator JIM LOW hunts snipe, rails and woodcock at conservation areas within 30 miles of his home in central Mo. He believes hunters who pursue a range of game species make the best conservationists, because they have a personal interest in wildlife and note changes in populations and habitat.



TIME CAPSULE

September 1977

Birds of Bell Mountain by John Karel introduces readers to the work of David Plank. Plank is a wildlife artist from Salem who finds inspiration for his paintings in watching the birds at Bell Mountain Wilderness Study Area

in eastern Missouri. A survey of natural areas in southeast Missouri by the University of Missouri identified five separate biological communities on only one 640-acre portion of Bell Mountain. The diversity of habitats is partly the result of the dramatic terrain of Lindsey and Bell Mountains. Through Plank's art, we can appreciate the variety and beauty of our native birds in their primitive surroundings. —*Contributed by the Circulation staff*



AGENT NOTES

Missouri's natural areas invite visitors, but don't bring unwelcome guests.

ON A RECENT Sunday, I patrolled three easily accessed Shannon County natural areas: Blue Spring, Powdermill Ferry Cave and Prairie Hollow Gorge. Seeing license plates from Florida, Illinois, Kentucky, Ohio, Oklahoma, Michigan and Texas at these areas reminded me of how mobile a society we've become. It's wonderful that we're so easily able to visit wild places across our nation, but with that ability comes a responsibility for those areas.

Visitors have introduced, sometimes intentionally and sometimes unintentionally, many organisms into areas where they were not previously found. These include gypsy moths, zebra mussels and rusty crayfish. Introduced species often displace native species.

You can greatly reduce the possibility of introducing nonnative species to our natural areas by exercising a little caution. Before visiting, take a few minutes to consider where you've been, what species might be found there, and the possible ways they might hitch a ride. (More information is available at www.missouri-conservation.org/8228.) Dedicating just a few minutes to ensure that the integrity of these special places is not compromised means they will still be here to be enjoyed by the next generation. That is a goal worthy of all our concern.



Brad Hadley is the conservation agent for Shannon County, which is in the Ozark region. If you would like to contact the agent for your county, phone your regional Conservation office listed on page 3.

behind the CODE

The Wildlife Code tells you what you can do.

BY TOM Cwynar

Legal codes typically allow everything that they do not prohibit. Missouri's Wildlife Code differs from most legal codes in that it is a permissive code. This means that it lists what people can do, not what they can't do. Methods, times and limits not specifically allowed by the Wildlife Code are considered illegal.

Missouri's permissive code is unique among other states' fish and game law codes. It dates



back to The Wildlife and Forestry Act of 1946, which replaced all old fish and game laws, some of which predated the relatively new Conservation Commission, with 27 new sections of regulations.

Wording in the sections relating to possession (Section 17) and means of pursuit and the disposition of wildlife (Section 27) established the permissive nature of the code. Both contained the wording, "except in the manner, to the extent and at the time or times permitted."

This philosophy is echoed in Chapter 4.110 of the current Wildlife Code, which includes the words, "except as specifically permitted by these rules."

Having a permissive code simplifies the rules for people enjoying the outdoors, for conservation agents and for prosecutors and courts. It also closes doors to those who might look for legal loopholes.

The current code contains some prohibitions and does not address all particulars, but the spirit of Missouri's Wildlife Code is, *if it's not listed, it's not legal.*

“I AM THE NEXT GENERATION OF CONSERVATION”

Dale Morris of Fortescue has hunted waterfowl for more than 35 years. Teal season often finds him here at Nodaway Valley Conservation Area in Holt and Andrew counties or at Bob Brown CA in Holt County. He says the area managers do a great job managing food and water levels and that these are good places to take new hunters. To learn more about conservation activities, visit www.missouriconservation.org—PHOTO BY DAVID STONNER



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