



MISSOURI ForestKeepers MONITOR

SUMMER 2008

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Emerging Issues and Forests

By Lisa G. Allen, Missouri State Forester

AS I SIT HERE AT MY KITCHEN TABLE, I LOOK out the bay window and I see a lot of trees. I, like most Missourians, take them for granted because of their seeming abundance. I also take for granted things like clean water, diverse wildlife habitat, and wood products that forests produce daily! With our forests providing so many benefits for what seems like “free,” what’s the problem with the forests in Missouri?

The biggest problem is that while they seem abundant, most forests are not properly cared for. Most of our forestland has been abused by practices such as “high-grading” (cutting the best and leaving the rest), livestock grazing, and uncontrolled wildfire. These practices, coupled with thin, rocky soils, have resulted in a state that produces the most “cull trees” in the nation.

Don’t be discouraged! This is an exciting time in our state! I see opportunities on the horizon that just might change the face of forests in Missouri for the better.

Production of Bio-fuels

Plans to build a facility in Missouri that will use woody biomass to produce a product called BioOil® have already been announced. It is likely that other, similar operations are being considered.

In a sustainably-managed forest, small diameter trees must be thinned, as dense stands lead to forest health issues. Often forest landowners must pay someone to thin these stands. A bioenergy facility can utilize these currently unmarketable trees as biomass to produce fuel, while enhancing a landowner’s ability to sustainably manage their forests.

Such a market also has the potential to exploit the forest. In the short term, a landowner could cut more trees to maximize profit today at the expense of larger, higher quality trees for tomorrow. It is imperative that woody biomass derived from standing forests be harvested professionally and sustainably, following best management practices.

Carbon Credits

Another emerging opportunity for forestland owners is the potential to sell carbon credits for managed forestland to globally-recognized markets such as the Chicago Climate Exchange (CCX).

The CCX was founded to facilitate carbon offset credit trading. Net emitters of CO₂, such as power plants, can voluntarily join the CCX by signing a legally binding document which requires them to reduce their greenhouse gas emission by six percent over a fixed period of time. Three percent of this reduction must result from the emitter changing their facility processes, while the other three percent may be achieved by buying carbon credits from net carbon sequesters. Carbon sequesters are landowners with growing vegetation.

At this time, eligible carbon offset practices include trees planted since 1990 on formerly non-forested sites. Recently, managed natural forests have been accepted by the CCX as a practice eligible for carbon credits. It is anticipated that managed forestland will become a major player in carbon trading markets in the near future.

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MISSION:

To develop a network of informed citizens working to conserve, sustain and enhance Missouri's urban and rural forest resources through volunteerism, advocacy, and management.

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Courtesy of the Missouri Department of Conservation

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Emerging Issues and Forests *continued from page 1*

Forest "Green" Certification Programs

Green certification programs are becoming increasingly popular in the international forest products market. Forest certification programs are used to "certify" that a forest is being managed professionally and sustainably. This definition of sustainable means that environmental, social and economic criteria are being met during all forest management activities.

The two globally-recognized and accepted programs for forest certification are the Sustainable Forestry Initiative (SFI) and the Forest Stewardship Council (FSC). Another certification program gaining credibility in the United States is the American Tree Farm System (ATFS) group certification program. These programs require that the landowner have a forest management plan and that an approved third party auditor evaluate the forestry practices implemented on their land. The auditor determines if these activities meet the criteria of sustainable management established by the green certification program (SFI, FSC, or ATFS) they are pursuing.

At this time, there are really no tangible benefits for the landowner to participate in certification. My crystal ball, however, suggests that forest certification programs could provide significant benefits to Missouri landowners in the future.

Missouri's forest products industry is receiving increasing pressure to provide green certified wood products in a global market. As mill owners lose their market share to companies

that can provide green products, I see the demand for green certified wood increasing, which will drive the price up. Will this result in more profit to a landowner whose forest is SFI, FSC, or ATFS certified? Only time will tell, but I think it is likely.

If the issues above create these anticipated opportunities, together they could have a positive impact on the profitability of forest management and the health of Missouri's forest land. It all begins with forest certification, because it is highly likely that any creditable carbon market which accepts managed forestland will require that lands offered for carbon credit trading be "green" certified by a globally-recognized program. In addition, there are currently forces at work to encourage and provide incentives to a bioenergy facility in our state that procures standing trees, if the incoming trees are certified as sustainably harvested.

So if the stars align just right, consider a scenario in which a Missouri forestland owner enrolls in a forest certification program which provides access to the carbon and woody biomass markets, and a higher price for highly sought after green certified forest products. Imagine all of this and the icing on the cake is validation/certification that the forest is being conserved and managed sustainably for clean air and water, diverse wildlife habitat, quality wood products, soil protection, outdoor recreation, scenic beauty and solitude. Yes, there is hope for Missouri's forests!

Is Your Firewood Harboring a Killer?

Forest pests like the Emerald Ash Borer can hitchhike on YOUR firewood. Don't give bad bugs a ride!

- Leave firewood at home.
- Use only local sources of firewood.
- If you brought firewood, burn it!

For more information, visit:
www.missouriconservation.org/firewood



FEATURED SPECIES:
KENTUCKY COFFEETREE

Gymnocladus dioica (L.) K. Koch



Illustrations courtesy of the Missouri Department of Conservation

KENTUCKY COFFEETREE IS A FAIRLY SLOW growing and medium-sized tree, which can reach approximately 60 feet tall. It has a narrow, somewhat rounded crown. It is of little use to wildlife, although some mammals occasionally eat the pods and seeds. The pulp in the pod was used medicinally by Native Americans, and some tribes made a coffee-like beverage from roasted and ground seeds, although it is a very inferior substitute! At one time, the leaves and the pulp were also used to make a tea to treat reflex troubles and as a laxative. Kentucky coffeetree is an attractive shade tree and can grow well in urban conditions, as it tolerates poor soils, drought, and pollution. However, the pods and leaflets can be messy. The wood can be used for a wide variety of purposes.

LEAVES: Alternate, bipinnately compound; 1 to 3 feet long, and 1 to 2 feet wide; multi-branching, with six to 14 leaflets

per branch; very dark green; turn yellow in fall and drop early. Kentucky coffeetree has the largest leaves of any native tree in Missouri.

BARK: Gray to dark brown, with interesting, scaly ridges that curl outward.

FLOWERS: Appear after the leaves in May to June; male and female flowers very similar; fragrant, greenish-white and found in clusters of 14 to 20 flowers.

FRUIT: The pods are 4 to 10 inches long; dark brown and leathery, with three to four seeds imbedded in a sticky pulp. Pods fall to the ground unopened in late fall or stay on the tree all winter. Children may find them entertaining, but caution is urged as the raw seeds are toxic to humans.

HABITAT & RANGE: Occurs in many counties of the state in bottomland forests along streams and near the base of bluffs.

Treevia

FUN FOREST FACTS
 TO KNOW AND TELL!

Missouri's tallest champion tree is a Pumpkin ash (*Fraxinus profunda*) standing 150 feet tall. This tree, which is also our state's only national champion, can be found at Big Oak Tree State Park located south and east of Sikeston in Mississippi County. In Missouri, Pumpkin ash can be found in the southeast corner of the state in swamps and wet bottomland forests.

Q&A

Q: How can I find out more about the latest pests and threats such as the Emerald Ash Borer?

A: One of the best resources is the Missouri Forest Health Update produced by the Missouri Department of Conservation. Just visit the website at www.forestkeepers.org and click on "Forest Health Updates" on the homepage.

Have a question about Forestkeepers, trees, or what you read in this issue? Contact us at information@forestkeepers.org or by mail to: Q&A, c/o Forest ReLeaf of Missouri, 4207 Lindell Blvd., Suite 301, St. Louis, MO 63108.

We may answer your questions in the next newsletter.

Welcome New Members

We would like to welcome the following new members to the Missouri Forestkeepers Network:

Clarence Admire	Richard & Pat Hopkins	Principia Roots & Shoots Club
Rich Andrews	Dr. H. E. Lee	Janice Sparks
James Bowers	Matt McMillion	St. James Middle School
Mary Brauningner	Ty Melgren	Tim & Theresa Watson
Kim Buck	The Moak Family	Lenora Wiley
Vern & Bobbie Freyholtz	Mudlick Mountaineers	Michael Wohlstadter
Brad Guccione	Julie Nicolai	Young Riders 4-H Wildlife
Sarah Hanson	Outdoor People	Darcie Zobeck
Helping Hands	W. L. Pope	

Do you know someone who might be interested in becoming a Forestkeeper? Call 1-888-9-Forest or visit www.forestkeepers.org for details on joining our Network of nearly 2,000 citizens who are working to conserve, sustain, and enhance Missouri's urban and rural forest resources.

SUMMER ACTIVITY

A seasonal project to enjoy with the whole family



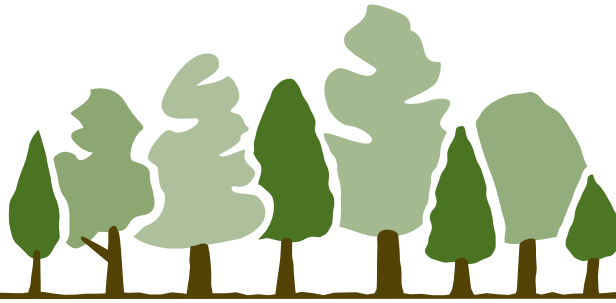
Photo Scavenger Hunt

IN THE LAST ISSUE, WE DESCRIBED HOW TO conduct a nature-themed scavenger hunt. For a more challenging variation, expand your scavenger hunt list to include animals and animal-related items, as well as trees, insects, rocks and wildflowers. Here's an example of a short list for this type of activity, which can be adapted to your surroundings:

- Sleeping dog
- Squirrel with an acorn
- Bird's nest
- Animal tracks

Instead of sketching on paper, participants capture their findings with a camera. Depending on the length and complexity of your list, the Photo Scavenger Hunt can last an hour or be played over the course of an entire trip. At the end of the hunt, family members will enjoy comparing photos!





FORESTKEEPERS BULLETIN

How Is Your Habitat?

AS AN EMPLOYEE OF THE CONSERVATION

Department, I get a lot of questions on how to manage land for wildlife. These questions can range from how to provide quality habitat for deer, turkey, songbirds and quail, to how to make landscapes less appealing to deer. However, no one has asked me yet what makes good habitat for people, such as creating environments where people feel safer, experience less stress, and feel a greater sense of community. Researchers have been conducting studies on what makes good human "habitat." The emerging answer appears to be, "The greener the better."

THE DAILY COMMUTE

Commuting may be one of the most stressful experiences of urban life. Longer and more difficult commutes increase blood pressure, lower job satisfaction, cause higher illness rates and absenteeism, and lower performance on various cognitive tasks.

Scientists conducted a study of driver stress response based on various types of roadsides. Using indicators such as heart rate and blood pressure, the researches discovered several response patterns. Drivers who were viewing built-up, strip mall style roadside environments had slower and more limited recovery from stressful driving situations. Drivers who were exposed to green roadsides, such as golf courses or forests, returned to normal heart rates and blood pressure faster after a stressful driving event and had a greater ability to cope with those stressors. Exposure to natural roadside settings decreased the magnitude of response to a later stressful attack. This suggests that an "inoculation" of viewing natural settings while driving enhances a person's ability to cope with the demands of driving.

So how is your commuting habitat? Research suggests that the greener it is, the better it is.

THE DAILY GRIND

Research has also been conducted on how the "habitat" at work influences workers' attitudes and wellness. Desk workers were surveyed about their illness rates and job satisfaction. Some of the workers had windows where they could view nature from their desks, while other participants in the study did not.

Those workers who could not view green space reported 23 percent more episodes of illness in the prior six months than workers with a natural view. Those employees who could view nature also reported the following satisfactions more often than their colleagues without views: 1) found their job more challenging; 2) were less frustrated about tasks and generally more patient; 3) felt greater enthusiasm for the job; 4) reported feelings of

continued on next page >

Compiled by
Chuck Conner,
Urban Forester,
Missouri Department
of Conservation



**PREVIOUS
TECHNICAL BULLETINS:**

- #1 Our Upland Oak-Hickory Forests
- #2 Bottomland Forests
- #3 Missouri's Coniferous Forests
- #4 Urban Forests and Plantations
- #5 The Gypsy Moth
- #6 Dogwood Anthracnose
- #7 The Japanese Beetle in Missouri
- #8 Butternut Canker and Its Dwindling Host
- #9 Asian Longhorned Beetle
- #10 Chip Mills in Missouri
- #11 Community Forestry
- #12 Proper Pruning
- #13 How to Hire an Arborist
- #14 Can These Trees Be Saved?
- #15 Maintenance of Backyard Trees
- #16 Selecting Professional Tree Care
- #17 Tree Protection During Construction
- #18 Poison Ivy
- #19 Tick-Borne Diseases
- #20 Chiggers
- #21 Snakes of Missouri
- #22 Managing Your Forest
- #23 Are You Protecting Missouri's Water?
- #24 Selling Timber the Smart Way
- #25 Timber Stand Improvement
- #26 Benefits of Livestock Fencing
- #27 Edge Feathering
- #28 Managing for White-Tailed Deer
- #29 Turkeys & Woodlands
- #30 Underutilized Trees for Missouri Landscapes
- #31 Managing Your Yard for Trees and Grass
- #32 Windbreaks: Protection That Grows
- #33 Evergreens: Selections for Your Landscape
- #34 Specialty Products
- #35 Heating with Wood
- #36 Utilizing Eastern Red Cedar
- #37 Black Walnut: Missouri's Most Valuable Tree
- #38 Those Pesky Insects
- #39 Diseases and Healthy Forests
- #40 I Hurt My Tree?
- #41 Exotic Forest Pests Are Becoming A Common Threat
- #42 Trees Pay Us Back

You can access these bulletins online at www.forestkeepers.org by clicking on "Newsletters" on the homepage.

How Is Your Habitat?

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higher life satisfaction; and 5) reported better overall health. Other studies have found that people who view nature after stressful situations show reduced physiological stress response, as well as better interest and attention and decreased feelings of fear, anger or aggression.

So how's your work habitat? Need a window in your office?

AVOIDING ILLNESS

It has been documented that hospital patients who see trees (and other plants) need less potent pain drugs and have a better attitude. The overall result is faster recovery times following surgery. Consider the investment Barnes-Jewish Hospital has made in the establishment of a rooftop garden for the children's hospital at their facility in St. Louis. Individuals with a view of trees or access to green space have more effective rehab, speeding their recovery.

Trees can even affect your lifestyle by reducing fatigue and helping you cope with relationships and your career. Other research has shown that trees (along with other plants) absorb high-frequency noise, which is the most distressing range for humans.

THE HABITAT AT HOME

Research has also been conducted on the effects of trees and green space on people at home. In one Chicago public housing development, there were dramatically fewer occurrences of crime against both people and property in apartment buildings surrounded by trees and greenery than in nearby identical apartments that were surrounded by barren land. Buildings that had high levels of trees and greenery had 48 percent fewer property crimes and 56 percent fewer violent crimes than buildings

that had little or no vegetation. Even modest amounts of greenery lowered crime rates. The greener the apartment's surroundings, the lower the crime rate.

Another study found that girls who lived in apartments with views of trees and green space have greater concentration and self-discipline than those without views of nature. According to the study, the greener a girl's view from home, the better she concentrates and the less she acts impulsively.

Two surveys of parents of children with Attention-Deficit/Hyperactivity Disorder, (ADHD), have shown that playing in green settings can reduce the symptoms. Playing in green outdoor environments reduced ADHD symptoms more than playing indoors or outdoors in a barren land setting. Planting trees and landscaping in neighborhoods and school grounds may help supplement established treatments for children with ADHD.

Other findings show that residents of buildings landscaped with trees and grass reported that they knew their neighbors better, socialized more often, had stronger feelings of community, and felt safer and better adjusted than did residents of more barren, but otherwise identical, properties.

BUILDING HABITAT FOR PEOPLE

With over 80 percent of the United States population living in urban areas, it is time to start building better habitat for humans. As a society, we need to maintain and preserve the remaining urban green spaces, and incorporate the benefits of trees and nature as we expand our communities. As individuals, we can plant, care for, and campaign for trees for healthier communities!

COMPILED FROM RESEARCH INFORMATION AT:

www.lhhl.uiuc.edu/

www.cfr.washington.edu/research.envmind/

Consulting Foresters

By Shelby G. Jones, CF, Midwest Forest Consultants LLC

LOOKING FOR SOME PROFESSIONAL HELP managing your forest? Need a bit of assistance selling some timber? Consider securing the services of a consulting forester.

Consulting foresters are private, self-employed owners or employees of small businesses providing services for a fee. These individuals are professionally trained with a minimum of a four-year college degree and several years of experience. Many have advanced degrees. Almost all are credentialed by the Society of American Foresters as a Certified Forester®. Those providing services in urban areas may also have International Society of Arboriculture Certified Arborist credentials. As with most certification programs, continuing education requirements assure up-to-date competency.

Forestry consultants provide a great variety of services and are often specialists or experts in a specific subject. Appraisals, timber tax preparation, litigation and damage assessment are several areas where it is usually necessary to obtain services of consulting foresters.

Often consulting foresters can complete a job sooner than the free assistance available from a public agency. Timber sale



preparation and administration, for example, is a service that may need to respond to changing market conditions to assure optimum financial return to the landowner. A consultant can advise landowners how to obtain cost-share assistance for implementing forest management practices, assist with the application to the appropriate agency, and even have their technicians complete the work.

In urban areas, consulting foresters provide services related to tree health, such as insect and disease diagnosis, landscape planting, damage appraisal, pruning, chemical use and tree removals. Insurance claims involving damage to trees or shrubs usually require an assessment by a certified forester or arborist.

Fees are determined by the individual consultant or company. A fee schedule can be obtained by contacting specific companies.

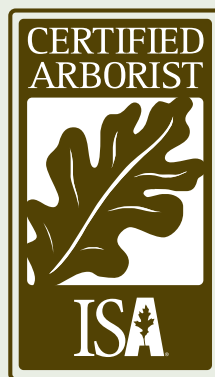
Missouri Consulting Foresters Association (MCFA) is an organization of professional consultants operating in Missouri and surrounding states. A membership directory is available online at www.missouriforesters.com or contact Scott Brundage, MCFA President, at 1-573-881-1858.

Certified Arborists

Compiled by Nancy von Brecht, Executive Director, Forest ReLeaf of Missouri

AN ARBORIST IS A PROFESSIONAL WHO IS trained in the art and science of planting, caring for, and maintaining trees. Arborists are knowledgeable about the needs of trees and are trained and equipped to provide proper care. Proper tree care is an investment that can lead to substantial returns. Trees that are well cared for are attractive and can add considerable value to your property. Poorly maintained trees can be a significant liability. Pruning or removing trees, especially large trees, can be dangerous work. Tree work should be done only by those trained and equipped to work safely in trees.

Hiring a tree care company is a decision that should not be taken lightly. Ask if the arborists on staff hold certification from the International Society of Arboriculture (ISA). ISA offers a range of certification credentials from Certified Tree



Worker/Climber Specialist to Board Certified Master Arborist. To be certified, individuals must pass a voluntary comprehensive exam. Certification must be maintained through continuing education, which means a certified arborist should be up-to-date on the latest in arboricultural technology and acceptable practices.

ISA is a worldwide, professional organization dedicated to fostering a greater appreciation for trees and promoting research, technology, and the professional practice of arboriculture. As part of ISA's dedication to the care and preservation of shade and ornamental trees, it offers the only internationally-recognized certification program in the industry. For more information, including a list of the certified arborists in your area and additional resources, visit www.isa-arbor.com or call toll free: 888.ISA.TREE (888.472.8733).

Help Us Save Trees!

More and more Forestkeepers are opting to go online to get workshop announcements, activity reporting forms, and other mailings from the Network. Some members even read this newsletter online! If you would like to help us cut down on the number of hard copies mailed, just send an email to information@forestkeepers.org or call 1-888-9-FOREST.

Be sure to let us know whether you would like to access all mailings on the website, or whether you would still like to get a hard copy of the newsletter mailed to you. You will then receive electronic notices when new materials are available on the website.



Feel Like a Nut?

The Missouri Department of Conservation needs your help again in September to survey the abundance of acorns, walnuts, hickory nuts and other tree fruits in Missouri. Watch for your copy of the Mast Survey form in your mailbox in late August!



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