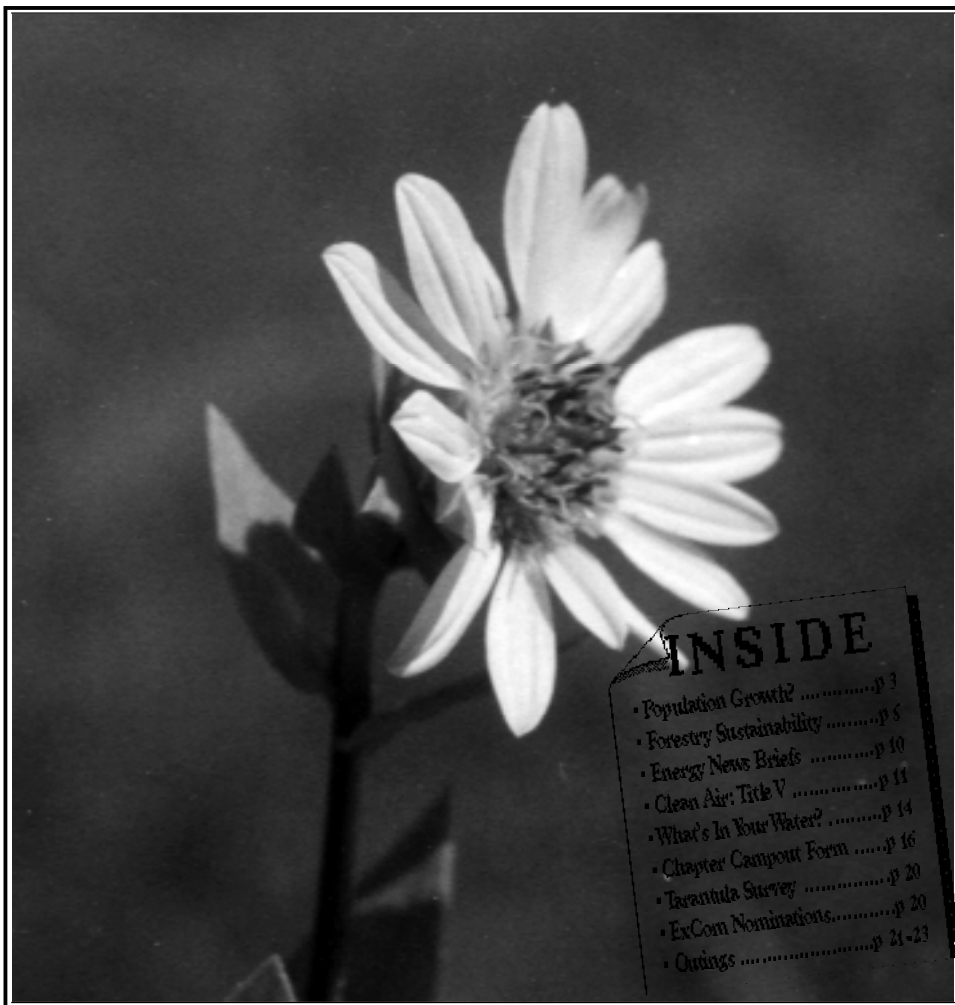


OZARK ONE EARTH ONE CHANCE SIERRAN

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*Sunflowers add color to the late summer scenery
photo by Doris Sherrick*

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Hard-working, All-volunteer Editorial and Production Staff: Bob Sherrick, Editor; Keet Kopecky, and Claus Wawrzinek

What's To Be Done About Global Population Growth?

by William N. Ryerson
President, Population Media Center

This past February at the Cairo +5 U.N. meeting in The Hague, governments and NGOs (non-governmental organizations) called upon the developed countries of the world, particularly the United States, to live up to the financial commitments they made at the U.N. Conference on Population and Development held in Cairo in 1994.

Twenty-five years ago, I attended the first U.N. Conference on Population held in Bucharest. The draft Programme of Action presented for adoption at that conference focused on making family planning medical services more easily accessible and on the importance of economic development for the world's poorest countries. There was barely any mention of the status of women. A colleague of mine, David Poindexter (who is now Honorary Chair of Population Media Center), and Margaret Mead sat down together at the Bucharest conference to write a paragraph on the importance of women's status and handed it to one of the U.S. delegates with the expressed hope that he would help to insert it in the final draft of the Plan of Action. His response: "We're talking about

family planning. What's the status of women got to do with family planning?"

We've come a long way since then. In Cairo, the world community embraced the importance of elevating the role and status of women in the family and in the community as an essential element in addressing population growth issues and, independent of population issues, important as a basic human right.

The importance of women's rights from a population perspective is driven home by the data gathered in numerous Demographic and Health Surveys in developing countries in recent decades pointing to the fact that many women believe they do not have the right to participate with their husbands in making decisions about family size and family planning use. Moreover, many societies do not accept the importance of educating girls or give acceptance to women in the workplace outside the home. Furthermore, in some societies, a major obstacle to family planning use by women is the men — who fear that contraceptives will lead to infidelity.

In many of the largest countries of the world, marriages are still arranged for daughters by their parents, and daughters are often placed at puberty into marriages not of their choosing.

Many, if not most, societies demand that a woman must bear her husband a son. Moreover, many societies have a cultural expectation that a married couple will produce a large number of children. In Madagascar, the ideal family size is 14 children (seven sons and seven daughters); on average in sub-Saharan Africa, the ideal family size is five children.

All of these cultural factors, combined with overblown fears about

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Dates You Need to Know

- 9/19** Chapter ConsCom meeting:
Chapter Campout
contact Caroline Pufalt (314) 878-3165
- 9/19** Chapter ExCom meeting:
Chapter Campout
contact Keet Kopecky (816) 966-9544
- 10/1** Nov/Dec Ozark Sierran
Deadline
contact Bob Sherrick (816) 779-6708

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the safety of contraceptives (particularly when compared with the dangers of early and repeated childbearing) are a formula for large families and rapid population growth — even in the presence of contraceptive services that are now widely available in most developing countries.

The problem at the Cairo conference — as at the Bucharest conference before it — is that very few people have any idea how to go about elevating the status of women — or changing the other cultural and informational barriers that prevent achievement of replacement level childbearing.

The human species has a lot at stake in finding an answer to this dilemma. According to a Stanford University study, humans now are using or indirectly appropriating about 50 percent of the total products of photosynthesis on a worldwide basis. One more doubling of our use of all of the products of photosynthesis is not in the cards — even if we were to eliminate all of the other animal species that currently share the planet with us.

Our generation of waste products — both toxic ones and the more benign greenhouse gases that now threaten serious global overheating — are also causing us to run into very scary reminders that the planet has limits on its capacity to support people. Overwhelmed water treatment systems; shortages of fresh water for domestic purposes and agriculture; falling per capita production of grain products over the last 15 years; loss of topsoil through erosion; massive loss of forest cover; decreasing per capita incomes in the fastest growing regions of the world; growing unemployment in much of the developing world; growing numbers of environmental refugees; and ocean fisheries on the verge of collapse in many areas are all symptoms of a serious global problem — of which the addition of 80 million new people to the population each year

is a key part.

The medical model of ‘set up the clinic and they will come’ is not sufficient to solve the population problem. Nor, as the world agreed in Cairo, are coercive or heavy-handed programs likely to be successful, let alone acceptable.

What the world community hasn’t fully embraced is that we already know much of what is needed in order to solve the problem. Promoting acceptance of small family size cannot be achieved through exhortations to patients at family planning clinics. But educating people about the benefits of small families, and providing role models to women who play a new role in the family and in society, can be done successfully and is being done in some countries.

The most successful strategy developed to date is the use of long-running serial melodramas (100 to 200 episode soap operas) in which characters evolve to become role models for the audience in elevation of women’s status, use of family planning, and adoption of small family norms. Combining entertainment with education accomplishes two goals: attracting an audience and providing an emotional impact that affects attitudes and behaviors in a way that purely educational programs can never hope to do.

Population Media Center is one of only a handful of organizations that are using this strategy. As a nonprofit, charitable organization, PMC works with health authorities and broadcasters in developing countries to enable them to create popular programs that provide entertainment value and simultaneously educate the audience about behaviors that will improve their health and well being.

In some countries, radio is the primary means of reaching people, while in others it is television. The communications revolution that has so influenced U.S. culture over the last 50 years is now a major factor in affecting cultural norms worldwide. Entertainment broadcasting has a lot of positive potential. What the

experience with entertainment-education strategies reveals is that the negative messages of sex and violence we worry so much about in the U.S. media can be replaced with positive messages and useful information without losing the audience — if it is done well in the context of an entertainment methodology that has now been refined over a period of 20 years. Programs of this type in Mexico,

Brazil, Kenya, Tanzania, India, and The Philippines have attracted record audiences and at the same time have led large numbers of people to adopt positive health behaviors and to accept the concept that women should be granted equal status in society.

For more information, please contact Population Media Center, 489 Thompson Road, Shelburne, Vermont 05482, or visit www.populationmedia.org.

SUSTAINABLE MANAGEMENT OF NATURAL RESOURCES: A REASONABLE GOAL FOR FORESTRY IN THE NEXT MILLENNIUM!

by Alan R. P. Journet and Christine E. Logan

Based on 'Ecological Sustainability' presented at: Towards a Vision for Missouri's Private Forests Environmental Sustainability and Public Policy Conference 1999 University of Missouri, Columbia, March 4-5, 1999 available on the web at <http://cstl.semo.edu/journet/BI684/Logan.htm> This is the second of a three-part series dealing with the principles of ecological sustainability (with an emphasis on forests), and the management implications. Part I dealt with biodiversity, Part III will focus on the management implications, while this part deals further with the principles.

ECOLOGICAL PROCESSES AND IMPOSED LIMITS

From an ecological point of view, it is important that we recognize that natural resources (whether renewable or non-renewable) are finite. This imposes a limit on consumption. Since the ecological processes of natural systems are the source of the timber and non-timber goods and services provided by forest ecosystems, it is essential that these be maintained. It is the vitality of these natural processes that allows natural communities to resist or rebound from disturbances, and overcome long term change. One

such concern is global climate change.

Global Climate Change

Over recent years, the scientific debate over global warming has become a highly charged and rhetoric-laden public debate and one of the 'hottest' topics for political commentators. On one hand we find the Intergovernmental Panel on Climate Change (IPCC) strongly endorsing the principle that warming is already occurring, and further suggesting that human activities are quite probably significant contributors to the problem. This view is shared by the atmospheric experts with the Union of Concerned Scientists, and a vast array of scientists from around the world. Recent data certainly appear quite consistent with the concerns and predictions, suggesting that the temperature may increase over the next few decades as much as it has increased in fifteen thousand years or so since the temperature trough of the last ice age. On the other hand, there are some so-called skeptics, such as those in the Science and Environmental Policy Project who remain dubious about the accuracy and significance of the pattern reported, and particularly the role of human activities in promoting any change. Besides noting that all 10 of the warmest years on record have

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SUSTAINABILITY continued from page 5 occurred during the last 15 years, we do not intend to discuss the extensive and somewhat alarming evidence regarding this problem. However, it is worth noting that in 1995 the IPCC "best estimate" scenario projected a 3.6°F (2°C) increase in global temperature over the next 100 years. In all scenarios, the projected warming would probably be greater than any similar event in the last 10,000 years. Because many tree species have a narrow temperature range for successful growth and reproduction, and forests are extremely vulnerable to extremes in water availability, an average temperature change of as little as one degree C over several years can affect growth and reproduction of many tree species. Climatic fluctuations could shift the competitive balance among tree species, and adjust the advantage that one has over another, causing significant change in forest composition.

An example of one potential consequence of an elevated carbon dioxide level in the atmosphere predicts what would happen to the optimum zone for boreal coniferous forests under the impact of a doubling of the carbon dioxide concentration. The habitable zone would be a global ring far to the north of the current zone, in some regions exhibiting no overlap with the presently favorable conditions. The area of boreal forest would inevitably be reduced if it migrated further north, where there is less land surface to occupy, a pattern that would generally be followed if other forest types were to move polewards from current locations.

In addition to the direct effects, climate warming could increase prevalence of insect pests and diseases because individual development and population growth of cold-blooded species is temperature dependent.

Should global warming occur, with an increase of up to 3.5 degrees C over a few decades into the coming century, the impact on natural and agricultural system health, distribution,

and economic value will be dramatic. Ultimately, global climate change would probably have a more disastrous impact on all natural resources than all other human insults combined.

An important issue in connection with forests is that, as sinks of carbon, they can offset some greenhouse gas emissions and thus could play a significant role in policies attempting to address the threat. Unfortunately, rather than using forests to ameliorate climate change, we find that each year the conversion of forest to agriculture and other human development activities releases an additional net 3 billion tons of carbon into the atmosphere, with the result that atmospheric carbon concentrations are out of balance, and have risen by 30% in just 250 years since the Industrial Revolution. This trend cannot be reversed unless we reduce our appetite for fossil fuel consumption, and reverse the trend in deforestation especially in the tropics. In the short term, however, tree planting, and sustainable forest management could slow or mitigate climate change.

Watershed Protection

One of the major community ecosystem services supplied by forests relates to their role in the water cycle. Because of the demand of forests for water, under any given temperature regime, forests occupy the moister zones. It is not surprising, therefore to find that upland areas, where rainfall is more abundant, are forested. Forest soils, in turn serve to trap the rainfall, and release it slowly to downhill, and downstream regions. When grassland replaces forest the storage capacity is destroyed. Water then flows quickly off the land, not only promoting soil erosion, and nutrient export, but also causing downstream flooding in times of high rainfall. The extreme flooding that globally and regionally has attended extensive upland deforestation is testimony to the value of standing forests.

Since humans, both individually and industrially, require vast amounts of water, the role of forests in

protecting watersheds, and contributing to a stable, clean water supply cannot be underestimated.

Deforested areas require vast financial investments for water filtration plants, to repair flood damage, and to recover devastated fisheries, etc. Cities which retain forested watersheds save these vast water purification costs (e.g. Seattle, Washington, Portland — but logging-induced siltation and sedimentation are threatening to cost these cities hundreds of millions!). New York, for example, is spending \$1.2 billion to purchase, zone and protect its watershed in the Catskills. Though expensive, this is cheaper than the \$3 billion that a water purification system would cost.

It has been argued that if the costs (flooding, erosion, fisheries habitat loss) imposed by many current forestry practices were correctly charged against their perpetrators, the practice would become instantly uneconomic, and would stop.

Timber and watershed requirements can complement one another if silviculture and harvest practices take into consideration topography. Though nearly all states require some form of Best Management Practice that emphasizes watershed protection and post-harvest reforestation, extraction techniques over the last 50 years (particularly in the western steep slopes) have unbalanced the equation.

Chip mills pose exactly such a threat to the forests in their source area.

FOREST HEALTH AND PRODUCTIVITY

Forest health from the productivity point of view can be measured in terms of annual growth of (commercial) timber species. This is important because we have only limited forest available. Unfortunately, the currently available 490 million acres of productive forest are insufficient to meet current demand using sustainable management. As

forest is removed from this timber base for protection, this area will probably decline to 460 million or so by 2040.

For most of the decades following 1920, forest productivity exceeded harvest such that an accumulation of timber occurred. More recently, however, net annual timber growth has exhibited a decline and stagnation and many forest species are showing signs of population decline. The sustainability problem is simply that reduced productivity and increased demand will almost assuredly cause one of the following outcomes: reduced timber consumption (unlikely), increased imports (exporting unsustainable management), increased plantations on agricultural or other land, unsustainable harvest of the forest capital, opening public lands to increased timber harvest.

In the seventy years following the peak destruction of the U. S. forests (around 1920), forested area has increased but little, or may have decreased. Forest rate of growth, meanwhile, has increased to some 3.5 times what it was, and the harvestable timber volume has grown from 11.8 billion cubic feet (bcf) to 21.6 bcf).

Productivity exceeded harvest by 17% in 1952, and by 54% in 1976, and today, sustained yield harvesting is the norm for all operations but forest industry lands where softwood harvests exceed growth. But, growth is projected to slow to 0.03% annually by 2040, while harvests are projected to increase 43%. As noted, this excess of harvest over growth will result in a reduction in the size of harvested trees, indeed the average diameter decreased 20% from 1976–1991, though the decrease may slow since most larger old-growth stands have already been harvested.

As a result of the stagnation in growth, coupled with a projected increase in timber demand, it is expected that the trend in declining harvested tree size witnessed from 1976–1991 will continue. One

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consequence of this is that by 2010, there will be no forest older than 60 years on Pacific Northwest industry land, and precious few older than 35 years in the South, on any private lands. That most timber harvested will be near or below minimum size poses a severe threat both to forestry activities and the mature forest habitats of many species of flora and fauna.

Not surprisingly, with this trend, prices for large diameter saw timber are projected to triple by 2030 placing even greater pressure on the few old growth forests that remain, wherever they are. Whatever the cause, the problem is likely to increase in coming decades.

In the Central Hardwood Forests, it has been suggested that much of the private land is poorly managed and mined because of high stumpage prices, with little concern being displayed for regeneration or ecosystem sustainability. One significant result of this pattern in forest ownership is the admonition that "neither the current system of forest reserves, nor any conceivable such system, will be sufficient to provide adequate protection of biodiversity in the wide range of forest habitats." Programs for biodiversity protection must, therefore, incorporate private land management.

Concerns about unsustainable forestry practices are not new: concern about private land nearly a century ago led the first U.S. forester, Gifford Pinchot, and others to seek federal authority to regulate private lands. Meanwhile, concern over the long term health of public forests and grasslands was a motivating factor for the adoption of the Ecosystem Management approach (also called New Perspectives in Forestry) by the National Forest Service and the Bureau of Land Management in the early 1990s.

OTHER FOREST SERVICES

Recreation

While we tend to focus on timber

products, it is worth remembering that even if increasing recreational demand on Forest Service land were halved, it would still be growing faster than demand for any other forest product or service; the number of registered visitor days now is ten times what it was in 1950. Additionally, with increasing frequency, private landowners are leasing forest for hunting and fishing.

While economic analysis is difficult and data are sketchy, it appears that recreational use nationally is economically not far behind timber value. In some areas (Rockies, West, and Northeast) the regional economic benefits of the forest systems are clear and unquestionable, yet they are threatened by forestry practices that destroy both scenic beauty and terrestrial and aquatic habitat.

Nationwide estimates for the market value of outdoor recreation in our national forests system place it at over \$6.6 billion per annum or a little over \$20 per person for each of the 300 million visitor days annually.

Aesthetics

Protection of greenways and parklands in metropolitan areas testify to the aesthetic value placed on forest by the public, as does the impact of forest on property values.

ASSESSING THE COMPLETE PRODUCT CYCLE

One important component of any drive towards forest sustainability is recognition that environmentally destructive consequences can follow the product throughout its life. We will not have achieved genuine forest sustainability without assuring that all phases in the life of forest products are environmentally sound.

Chief among the forestry hazards is the pulp and paper industry. In the U.S., we now consume 90 million tons of paper and paperboard, a per capita doubling since 1970, to 700 pounds). The USFS predicts this will rise to 130 million tons by 2020.

Pulp/paper mills have long been recognized for their air and water pollution; and paper, for many, signifies

our throw-away society. Indeed, pulp and paper products comprise 36% of our solid waste output, more than any other material. But, we can get more for less, with both greater recycling which has increased from 25/30% in 1952, to 60% now, and greater use of electronic communication. But, though a success story, recycling isn't enough; we also need to reduce consumption.

Despite significant improvements in addressing the toxic chemical problem, the pulp and paper industry remains third behind the chemical and primary metals industries in air and water pollution and alone accounts for 10% of the energy consumed in the U.S. While over half of Finnish pulp capacity is totally chlorine-free, the American Forest and Paper Association criticized the U.S. EPA attempts to clean up the system as overly stringent, and too costly; others, meanwhile, consider the approach too weak. Nonetheless by 1994, one third of U.S. mills were using non-chlorine techniques.

According to the United Nations Environment Programme definition of Clean Production, such a strategy includes "conserving raw materials and energy, eliminating toxic raw materials, and reducing the quantity and toxicity of all emissions and wastes before they leave a process [thus] reducing impacts along the entire life-cycle of the product from raw material extraction to the ultimate disposal of the product." Converting these concepts into practice is a vital challenge to the U.S. forest sector.

In a world of sustainable forest products, agricultural produce such as kenaf, hemp and straw would replace wood fiber in pulp, while electronic communication would negate much of the paper demand. We need to better monitor the life of forest products to ensure that they are being wisely and sustainably used.

Social Justice

It is generally recognized as a principle of conservation efforts that successful planning must include the stakeholders and must produce

proposals and programs that incorporate social justice. Without these components, conservation efforts are doomed to flounder in the face of the expectations or demands of humans involved. Proposals that promote ecologically sustainable goals are no different.

THE INTRINSIC VALUE OF THE NATURAL WORLD

One component of ecological sustainability wherein agreement may be lacking is whether the underlying value of ecological sustainability should be couched in utilitarian (purely anthropocentric) terms, or whether nature should be accorded intrinsic value, and should be managed sustainably for its own sake without regard for the benefits which humans can acquire from it. The former camp appears to claim most of the authors consulted in this review, while the latter camp includes writers such as Aldo Leopold, Reed Noss, E.O. Wilson, and many Conservation Biologists who adhere to the notion that biotic diversity has intrinsic value and for whom a biocentric world view is a basic postulate.

The utilitarian view essentially argues that biodiversity only has value so long as humans can exploit it economically. The biocentric view can best be expressed as Reed Noss has done: "We are interested in preserving the full richness of species, genetic material, and ecosystems on Earth because they have an inherent worth that overshadows any use we might make of them."

The extent to which the distinction between the utilitarian and biocentric approaches is critical remains unclear. One potential arena where the distinction might be important is economics and policy. If we adopt a utilitarian view of natural resource conservation, the burden of proof will fall, as it falls today, upon the conservationist to demonstrate that some management or development proposal that threatens sustainability will impose an economic cost greater

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SUSTAINABILITY continued from page 9 than its economic benefits. Only then can such a proposal be thwarted or modification required. On the other hand, if nature has intrinsic value, the burden of proof switches to the manager or developer to demonstrate that a proposal will have no negative impact on wildlife, our environment, or ecosystem processes. If only humans are worthy of ethical consideration, conventional Cost-Benefit Analysis (CBA) is legitimate. If, however, all

diversity is worthy of ethical consideration, we must apply the principle of the Safe Minimum Standard (SMS), which assumes that biodiversity has incalculable value, and any action is unacceptable if it might exceed some threshold threat to that biodiversity.

To be continued.

Alan Journet is a professor of biology at Southeast Missouri State University. Christine Logan is a second-year graduate student in the Department of Biology at Southeast.

Energy News Briefs

by Wallace McMullen

UNIVERSITY OF MISSOURI TEAM

WINS SUNRAYCE '99

The University of Missouri — Rolla took first place in America's largest solar car race, beating 28 other solar cars to the finish line at the Walt Disney World Resort in Orlando, Florida. This was the university's fourth Sunrayce competition and its first win. Sunrayce '99 was the fifth biennial intercollegiate solar car race, held over a difficult 1,425-mile route with inclement weather conditions. All of the nations biggest and most prestigious engineering schools routinely participate in the competition.

The UMR's winning entry is fully powered by photovoltaic solar cells. During operation, PV solar cells produce no air pollution, hazardous waste or noise, and require no transportable fuels. Electrical energy is captured from the sun and fed to batteries and an electric motor.

The race started June 20 in Washington, D.C. and covered five states (Virginia, North Carolina, South Carolina, Georgia, and Florida) under consistently cloudy and often rainy skies. Awards include cash prizes, trophies, and an invitation for the University of Missouri — Rolla to compete in the World Solar Challenge in October in Australia.

"Sunrayce provides students the challenge of taking an idea from the paper to the pavement as they design, build, and race a vehicle that is powered exclusively by energy from the sun," said Energy Secretary Bill Richardson. "The event showcases the talents of some of the country's brightest young minds while helping to promote the growth of a renewable energy technology." Since its inception, more than 6,000 students from more than 175 colleges and universities have participated in vehicle design, testing or actual racing in Sunrayce events.

Wind Power is Developing in Iowa

Utility scale electric wind-power generation is surging in our sister state to the north. The American Wind Energy Association reports that utility scale wind projects presently on line, or scheduled to be on line this summer, now total 251 Megawatts of generating capacity. (For comparison, the big nuclear generating facility at Calloway has a rated capacity of 1000 MW). The two biggest Iowa projects are at Storm Lake, 192.75 MW, and Clear Lake, 42.0 MW. Both are being developed by the Alliant firm. Ten other sites were already on line in Iowa as of April, with two more under development. More information is available at the American Wind Energy Association's Web site: <http://www.awea.org/projects/>.

Another Front on The Battle for Clean Air: Title V of the Clean Air Act

by Wallace McMullen

When Title V of the Clean Air Act was passed, it was seen as providing an unprecedented opportunity for concerned citizens to ensure that polluters would comply with air quality laws.

Title V covers the airborne emissions of big stationary facilities such as electric generating plants. The new generating facility that Associated Electric Co-op is planning to build in southeast Missouri is an example — the plans for it have been reviewed and submitted for a permit under the provisions of Title V. The permit application had to address airborne emissions such as nitrous oxides that cause smog and acid rain, sulfur oxides, carbon monoxide, volatile organic compounds, and other potentially harmful pollution.

Unfortunately, across the country the vast majority of Title V permits are being issued without any public involvement. Members of the public are simply not aware of the Title V program. Though Congress intended for Title V to improve the public's ability to monitor industry compliance with air quality laws, until recently few attempts were made to educate the public about the program. The permits that are coming out may actually end up making it more difficult to bring enforcement actions, because most permits include a permit shield. The permit shield protects a polluter from enforcement so long as they are complying with the terms of the permit, even if the permit misapplies legal requirements.

Therefore, the Ozark chapter joined with 63 other environmental and health groups across the USA in petitioning the Environmental Protection Agency (EPA) to provide citizen training so that the intent of the Clean Air Act, improving the ability of concerned citizens to hold polluters accountable for violating air quality

laws, might actually be fulfilled. The petition was submitted in late February.

This concerted action has produced a response! The EPA recently responded to the request by proposing a "Citizen Involvement" plan. The suggested provisions are rather vague, but include:

- (1) Introductory level training—in the coming year EPA headquarters will "work with EPA Regional offices" on offering at least one introductory level training session in each EPA Region.
- (2) An advanced training workshop in the coming year with more to come, hopefully, in subsequent years.

Unfortunately, we aren't the only ones interested in EPA's outreach plans. Highly paid industry lawyers reportedly are now studying the plan, looking for ways to weaken it and keep citizens from causing trouble. Procedural wrangles could be used to tie up action, and defeat the initial intent.

The Ozark Chapter has joined with other clean air advocates in sending a letter urging EPA to strengthen its proposed outreach and training plan, and to proceed immediately with the proposed training programs in an effective way.

At this point, EPA Title V guidance documents focus primarily upon how to make the program more manageable for industry and state governments. Meanwhile, many issues that are of particular concern to volunteer based citizen groups such as the Sierra Club are ignored, such as:

- What are the public notice requirements?
- What are the requirements for facility compliance certification? How should these requirements be included in Title V permits?

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What should be required in monitoring reports (that a facility must submit after receiving a permit) to ensure good compliance?

Unless information is publicly accessible and unless monitoring reports and compliance certification contain adequate information about a facility, the Title V program will not be useful for citizens who wish to participate in air quality regulation and enforcement.

We emphasized to EPA in the comment letter that citizen training programs are the most important and pressing need at the moment, as the majority of Title V permits are being issued absent any public involvement around the country.

We need training soon!

Our comment letter makes the point that citizen training programs need to take place as soon as possible. We are concerned that by the time EPA offers training, the majority of initial Title V permits will already be released. Most states have already missed the three year statutory deadline for issuing permits. As a result, there is likely to be a large number of permits issued over the course of the coming year, both in Missouri and nationwide. Therefore, EPA needs to offer the initial wave of introductory training programs as early as possible.

Travel and lodging expenses

The draft plan does not mention any scholarship assistance for citizens who cannot afford travel and lodging expenses while attending a citizen training program. Such assistance is critical for the volunteers who are the mainstay of the Ozark chapter, and who will be interested in attending EPA-sponsored training sessions, but do not have the financial resources to cover a lot of travel expenses.

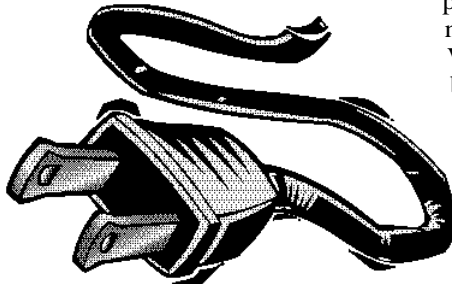
Financial underwriting for training attendees is a major need.

Citizen involvement in planning training

It is important, however, that citizens be involved in planning the training sessions. Last February, citizens in every region of the country signed on to the petition requesting EPA-sponsored Title V training. EPA should plan to reach out to these citizens and involve them in planning training sessions in their respective regions.

Involvement by state agencies and regional EPA offices

According to the draft plan, EPA's headquarters, will work with EPA's Regional Offices to offer introductory training. Headquarters supervision is critical because policies on various Title V issues vary from region to region, and information presented at the introductory training programs must be nationally consistent. While citizens need to be aware of policies that are unique to their EPA region, it is important that they also know how their region's policies differ from those of other regions. We want the training sessions to present a complete picture of the Title V program.



The draft plan also indicates that State permitting agencies will be involved in presenting information at these workshops. State agencies can provide helpful information about their particular state program. Beyond offering a presentation on these state-specific issues, however, state agencies should not be heavily involved in developing and administering the citizen training programs proposed in EPA's draft plan. The Title V training program should not become a forum for state agencies to push interpretations of program requirements that differ from EPA interpretations.

Advanced training workshop

The draft plan proposes to offer an advanced training workshop for citizens who have completed the introductory training, are already engaged in reviewing permits, or are otherwise ready for a more technical training on the major issues involved with permit review and implementation of the permit program. We support this aspect of the plan. At present, the regulations and policies underlying the Title V program are in flux, and it is very difficult for concerned citizens to keep pace with these changes. As a result, the public's perspective on national issues affecting Title V implementation is severely under-represented. Periodic advanced training workshops are essential for effective citizen participation in the development of Title V law and policy.

As discussed in relation to the introductory training sessions, it is

important that the first advanced training conference be held as soon as possible. Furthermore, if EPA plans to offer only one advanced training session each year, then that session must be accessible to concerned citizens across the country. We again made the point that scholarship assistance to help cover travel and lodging assistance will be necessary for volunteer activists to participate.

Other organizations signing the comment letter included:

- Natural Resources Council of Maine
- Citizen Alert
- New Jersey Environmental Lobby
- Valley Watch
- NJ/NY Environmental Watch
- LEAF
- Hamtramck Environmental Action Team
- Environmental Advocates
- NY Public Interest Research Group

Club Considers Consumption

by Ron McLinden
member, Sierra Club's national
Consumption Task Force

Responding to a growing concern that Planet Earth cannot support its growing human population, particularly if that population continues to place such a heavy and growing burden on natural resources, the Sierra Club has formed an eight member task force to develop a plan to guide the Club on the matter of consumption.

Consumption of material goods is one of the three elements of the classic formula for calculating human impact: Impact = Population x Affluence x Technology. "When we try to pick out any one thing by itself," said Club founder John Muir, "We find it hitched to everything else in the universe." Virtually every act of consumption has some negative impact on the environment, including some of the special places and wilderness areas that are among the Club's highest values. Thus, if we are to be intellectually honest, we have to take a

position on consumption.

But where to start? How far to go? Do we ask that our members give up all consumption beyond some "basic necessities?" Do we ask all members to at least reduce their own consumption? How far do we go without alienating long-time members? What new activists might we now be missing because we aren't already more assertive on the issue?

Over the next year or so the task force will develop the Club's "voice" on the issue — the words and phrases we'll use to communicate with members and the public at large about the issues. We should expect that voice to be sensitive, but also thought-provoking. The task force will also prepare a plan of action for effecting fundamental change, both in individual behavior and in the national economy.

The task is daunting — getting humanity to sustain the Planet, one consumption decision at a time. Your thoughts on the matter are welcome, either by email (ron.mclinden@sierraclub.org) or regular mail (see page 2)

What's In Your Water?

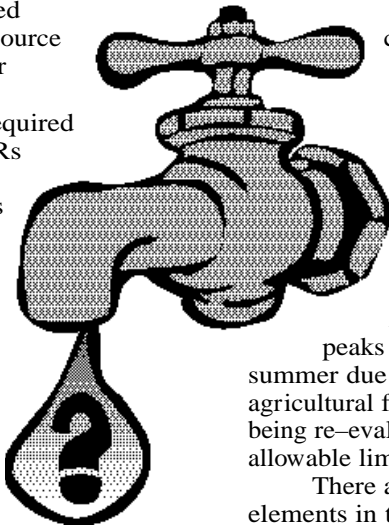
New Report Provides Some Answers

by Caroline Pufalt

If you have ever wondered what is in your tap water, the answer may soon be found in your mailbox. The 1996 amendments to the Safe Drinking Water Act require water utilities to provide consumers with test results for drinking water. These reports are called Consumer Confidence Reports (CCR) and should be mailed to most consumers by October 1999. The reports should provide information about contaminant level standards and levels found in treated water. The 1996 amendments required states to develop a source water assessment for drinking water "watersheds" and required the CCRs. The CCRs represent an expansion of what is commonly called "right to know" (RTK) legislation.

The CCRs should provide consumers with the following information:

- The source of drinking water, such as river, lake, aquifer, etc.
- The level, or range of levels, of any contaminant found in local drinking water.
- The current EPA standard for that contaminant and the health based standard for comparison.
- The potential health effect of any contaminant detected in violation of EPA standard and an explanation of remedial action.
- The likely source of contaminants found to violate standards.
- Information about vulnerable populations, such as children or those with impaired immune



systems.

The CCR will be mailed to all water customers of larger utilities. Utilities servicing less than 10,000 customers are required to post the availability of the CCR in newspapers or other means. Even larger utilities will mail the report only to paying customers, which means that apartment owners will not receive a copy. However, individuals may call their utilities and request a report. The CCRs are meant to be user friendly. Contaminant levels should be listed in whole numbers only. Explanations should be clearly written.

In the CCRs contaminant levels should not be presented solely in averages since some contaminants are inherently cyclical and may thus present health concerns in certain seasons. Pesticide and herbicide residues are such substances. Atrazine, for example, peaks in the spring and early summer due to runoff from agricultural fields. Atrazine is also being re-evaluated by the EPA and the allowable limit may be reduced.

There are several interesting elements in the CCR. One is the difference between the current allowable limit and a purely health based standard. As we know, many environmental and health standards are set through a political process that includes economic, political, and health considerations. The "maximum contaminant level" (MCL) is the current standard. The "maximum contaminant level goal" (MCLG) is the purely health based standard. The CCRs should explain this and provide both standards. Standards are also limited by the scientific and health based information available at the time they were set. For example, we are

operating with an arsenic standard that dates back to the 1940s.

Due to such shortcomings, the 1996 Safe Drinking Water amendments also require EPA to review MCLs for many contaminants. Arsenic, Atrazine, and others will be revised. Year 2002 is the goal for completion of those revisions.

The CCRs represent an important step in consumer information. After this fall, updated CCRs should be available in July of each year. Consumers who take the

effort to study the CCRs will come to appreciate the importance of standards and gain an understanding of pollution sources and watersheds. Since this is the first year CCRs are due it is likely that some reports will be late and others not in full compliance. Consumers should ask questions of their utilities if they don't understand the reports. The EPA also has information through its toll free number 1(800)426-4791, or at its web site <http://www.epa.gov/safewater>.

Club Challenges Lack of Alternatives for South Kansas City Highway Project

by Ron McLinden

For centuries the "Bermuda Triangle" is reputed to have claimed ships and planes, lost without a trace. The "Grandview Triangle," a complex freeway interchange in southern Kansas City, isn't quite that mysterious, but it is the second most accident prone interchange in the state. It's the site of almost daily traffic backups, and it's falling apart.

When built in the early 1960's it was barely a wide spot in the road on US 71 highway. Since then it has been expanded, first to serve I-435 traffic, then to add I-470 traffic. The result is a five-way interchange of such complexity that no one but a highway engineer could sketch its many ramps, and that users negotiate with ease only by making the same movements every time. Today the interchange serves 220,000 vehicles per day, 26 percent more than it is designed to handle.

Understandably, MoDOT wants to re-build it, and they have had a team of engineers evaluating new designs for three years or more. OK so far.

MoDOT originally conceived the project as pretty much just replacing the interchange that was already there, and working within the existing right-of-way. Consequently, they wouldn't have to do a formal

Environmental Impact Statement, but could instead get a "Categorical Exclusion" (CE) for the project, meaning they wouldn't have to consider all environmental impacts or get extensive public input on alternatives. They did that in June, 1998.

A year later, MoDOT staff contacted the Thomas Hart Benton Group of the Club and asked to do a presentation on what they planned to do. The group heard the presentation in May. In the process we learned of the CE, and that the project would more than double capacity from 175,000 to 400,000 vehicles per day and increase the size of the interchange from 284 to 376 acres. The proposed project would cost \$200 million or more and take eight years to build.

Too much, we decided, to be exempt from normal environmental review processes. The Group gathered additional information and then sent a letter to the head of the Missouri office of the Federal Highway Administration (FHWA) in Jeff City. That office had signed off on the CE — although, according to one staffer, they had "struggled" over that approval decision.

The letter points out that MoDOT had not considered any actions other than to increase the

continued on page 16... **Highway Project**

Highway Project continued from page 15 capacity of the interchange and to implement some early phases of their "intelligent transportation system" to better monitor and manage traffic in the area. There had been no consideration of public transit, car-pooling, or car-pool lanes, and no consideration of measures to discourage future growth of traffic to assure that the interchange would not once more be over-congested before the pavement wears out. In fact, if

MoDOT's own projections are correct, traffic could exceed the 400,000 "design capacity" of the interchange shortly after 2025 when the newest stretches of pavement are less than 20 years old.

The letter also points out the fallacy in MoDOT's strategy of pursuing a "highway only" strategy for the region. To do so, the letter asserts, "...announces to the region's citizens and developers that outward urban

continued on page 18... **Highway Project**

JOIN US SEPTEMBER 17-19 FOR OUR ANNUAL CHAPTER CAMPOUT & REUNION!

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 Send in your registration form today!

Registration Form for '99 CampOut

name _____
(please list names of all persons you are registering)

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#s	#s	\$s	
	child: 0-3 yrs.	free	\$ 0
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	child: 6-12 yrs.	\$15	\$
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	adult, partial weekend *	\$20	\$
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total ◆	fee enclosed \$		◆total

maximum fee for a family \$80

Fees include cabin camping, and 5 meals (Sat. breakfast through Sun. lunch).
 * "partial weekend" defined as less than 3 meals.

- ◆ Make checks payable to "Ozark Chapter, Sierra Club"
- ◆ Mail form and checks to:
 Andrew Gondzur, 4037 McDonald Ave., St. Louis, Mo. 63116
- ◆ Any questions, phone Andrew Gondzur (314)772-8810 or e-mail at agondzur@stlnet.com
- ◆ We must receive your reservation by September 3rd
- ◆ Camping fees will be refunded for cancellations received prior to Sept 13th
- ◆ We will mail you an information packet containing map in advance of the Camp-Out date.



Oh, say can you see...?

For the past five years, the Endangered Species Act, and the many species it seeks to protect, has been under attack by politicians backed by a powerful coalition of timber, grazing and mining interests as well as real estate developers.

The Bald Eagle is a success story — won't you join the Sierra Club, and add your voice to the many thousands who want to ensure that our nation's unique natural heritage is protected?

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Card Number _____ Expiration Date _____

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Highway Project continued from page 16 expansion and near-total reliance on the personal motor vehicle for transportation will continue undiminished into the future.” It also reinforces the notion that “...other modes of transportation, and other approaches to serving transportation needs, are not expected to be a part of the long term solution to transportation problems in the southern part of the metro area. We suggest that these messages run counter to growing public concern about such trends. ...”

The letter asks the FHWA to rescind approval of the CE determination, and to work with MoDOT and other agencies to do a more formal environmental review that would address “secondary and cumulative” environmental impacts (such as from sprawl encouraged by the expanded interchange), thoroughly

examine all reasonable alternatives (such as public transit and “transportation demand management”), and submit the results to the public for comment.

The letter closes with acknowledgement of the need to improve the interchange: “We want improvements to the Grandview Triangle to be made as soon as possible. We also want to know that the strategies selected to do so make the best use of public resources, and that they improve local economic efficiency, enhance quality of community life, and have lower direct and indirect short- and long-term environmental impacts.”

The letter was dated July 16, and signed by THB Group chair Donna Clark Fuller, along with representatives of the Kansas City Smart Growth Alliance and the Metropolitan Coalition for Sensible Transportation.

Wither the Mississippi? River or Barge Canal?

by Caroline Pufalt

While river or barge canal may seem like a stark contrast, the priorities at work in the Army Corps of Engineer’s study and related promotion regarding expansion of navigation on the Mississippi river, if left unchecked, lead one to that choice. The Corps is studying ways to decrease the time it takes barges to travel the upper Mississippi and Illinois rivers. In order to do so the Corps is considering enlarging the locks and making other more minor structural changes to the lock and dam system.

The Corps is now accepting public comment on this project. The Sierra Club has registered its concerns and opposition but input is also needed from individuals. We oppose this project for the following reasons:

- Increased navigation will cause environmental damage to the river.

While the Corps’s study only assumes minimal increases in traffic, the whole thrust of the project is

clearly aimed at larger increases in the future. As the river becomes more and more committed to navigation, other values will suffer. Also, the Corps considers only the impact of minimal increases, not the existing impacts. Environmental damage comes largely from silted and damaged backwaters. Backwaters are extremely important to fish and other river related wildlife.

The US Fish and Wildlife Service’s statement at a July hearing regarding navigation expansion stated that information on existing impacts of navigation on river ecology are inadequate, much less information on significant expansion. The USFWS opposes the existing proposal and schedule. The agency did suggest a compromise on scheduling of the project may be possible.

- Proponents of the project claim that decreased navigation time will assist struggling American farmers.

But large international agribusiness, such as Cargill and ADM are the more likely beneficiaries Both the companies, or their subsidiaries, own barge lines as well as grain export and processing facilities. It is these companies, not the family farmer who will benefit.

Barge traffic down the Mississippi and Illinois river moves grain for export. Competition from markets abroad is driving market prices down. Project proponents claim that faster transit time is needed for American grain to compete with growing producers such as Brazil and Argentina. But in those

not pursuing this project of lock expansion could go a long way to funding much needed environmental studies along the Mississippi and supporting habitat restoration. Or it could be used to provide real aid to the American farmer, instead of holding out the false hope that agribusiness will pass savings on the farmer.

Many agribusinesses and some politicians and farmers have come out in favor of the lock expansion. Yet others see the folly of the project. The Des Moines Register, deep in corn country, called the project a boondoggle. Your voice is also needed.



countries many of the same agribusiness corporations are poised to benefit from South American grain as well. nNavigation is expensive and highly subsidized. Although some fees and gas taxes are collected from barge traffic, the cost of building and maintaining the navigation system is primarily paid by taxpayers. Industry pays less than 10% of ongoing maintenance costs of the lock and dam system. It is projected to may no more than half of the cost of lock expansion. Navigation is the second most subsidized mode of transport in the country. Only space travel receives more taxpayer support.

A fraction of the money saved by

You may send your comments regarding the lock expansion to the Army Corps of Engineers. The official project title is "Upper Mississippi River-Illinois Waterway System Navigation Study". The address for comments is:

US Army Engineer District,
Rock Island
Attn: Planning Division (PD-C)
Clock Tower Building
PO Box 2004
Rock Island, Illinois 61204 9908

You may call with questions or ask to be added to the project mailing list at 1(800)872-8822. Or visit the Corps web site at http://www.mvr.usace.army.mil/pdw/nav_study.htm

Tarantula Survey

by M. E. Janowski-Bell

Tarantulas (*Aphonopelma hentzi*, Theraphosidae) have a high profile due to their popularity as pets, larger size, ease of recognition, and the wandering habits of the males. In addition, their delayed sexual maturity (up to 10 years), long life span (20–30 years), and appeal as pets places them at a higher risk for extinction than other invertebrates.



However, very little is known regarding the abundance and distribution of tarantulas in Missouri. Generally, they are believed to be limited to glades and dry woodlands primarily in the southwestern portion of the state. Yet, they have been noted as far east as Jefferson County. Unfortunately, most of the data regarding tarantulas in Missouri have been derived from casual observations, speculation, and anecdote. To date there has been no systematic assessment of the

distribution of this family in Missouri, even though these spiders are by far the largest in the state. As part of my Ph.D. dissertation at the University of Missouri-Columbia, I would like to

construct a distribution map of tarantulas in Missouri based upon recent and past field observations from as many reliable sources as possible. As a result, I am requesting anyone with first hand knowledge regarding presence of tarantulas in Missouri to send me the following information: date observed (as specific as possible), location

(as specific as possible), the number of sightings per year (if applicable), and contact information of contributor. I can receive information via e-mail (tarantula@missouri.edu), phone (573-882-3037) or postal service:

tarantula
105 Tucker Hall
Univ. Missouri
Div. Bio. Sci.
Columbia, MO 65211

Call for Chapter Executive Committee Nominations

Wanted: People committed to fighting for Missouri's environment by leading the Sierra Club's activities in the state.

Must plan on devoting several hours per week to the cause.

Involves frequent communication by e-mail or phone to stay on top of current issues. Demands preparation for and participation in Sunday meetings held once every other month in January, March, May, July, September, and November. Can include taking an office or committee chair position.

You decide Chapter direction and priorities by approving volunteer and staff activities, Chapter policies, membership activities, and monetary fundraising and expenditures.

Contact Brian Alworth at btalworth@aol.com or (573) 334-7978 any day prior to 8 p.m. to nominate yourself or others.

The Ozark Chapter Executive Committee and Missouri's environment thank you. 🐜

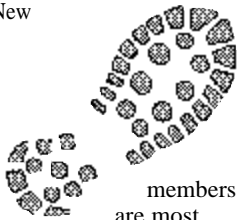
OZARK CHAPTER SIERRA CLUB OUTINGS

*Be sure to check
your GROUP
newsletter
for more or current
outings!*

Eastern Missouri Group

Sept 3 (Fri) Night hike. We'll be calling the owls at the Arboretum with the help of an expert birder. Helen McCallie, (636)742-4380 (h) or (636)451-3512 (w-toll free).

Sept 3-6 (Fri-Mon) St. Louis County Fair and Air Show. The lemonade crew returns for the last fund raiser of the summer. We would love to have each of you join us for a few hours making and selling lemonade.
New

 members are most welcome as this is a great way to meet fellow Sierrans and contribute in a practical way to meeting the club's environmental goals. Jim Young, (314)664-9392, or the Sierra Club office, (314)909-0890.

Sept 4-6 (Sat-Mon) Paddle the river made famous by Joliet, Marquette, and the Stades: the mighty Mississippi, from Kimmswick to Chester, IL. Must have canoe, paddles, life jacket,

and sense of adventure. Enjoy sandbar camping and a big, wide, rolling, safe river. George



Behrens, (314)821-0247 (after 6 p.m. only).

Sept 11 (Sat) Highway Cleanup. Please join us picking up litter. It will really help the deer mice find new places to store seeds and nuts underground. Diane DuBois, (314)721-0594.

Sept 11-12 (Sat-Sun) Seventh annual Current River equinox (early)

canoe trip. Paul Stupperich, (314)429-4352.

Sept 17-19 (Fri-Sun) Ozark Chapter Camp Out and Reunion. Register by Sept. 3. Andrew Gondzur, (314)772-8810.

Sept 25 (Sat) One day canoe trip near St. Louis. Water will determine best stream. Please call by Sept. 20. Stephen Finch, (314)644-2553.

Sept 25-26 (Sat-Sun) Trail maintenance on the Blair Creek section of the Ozark Trail. We will attack the summer's growth of weeds and brush encroaching on the trail. All tools will be furnished. Common commissary Saturday night. Paul Stupperich, (314)429-4352, or Bob Gestel, (636)296-8975.

Sept 26 (Sun) Day hike at
continued on next page

Sept 29 (Wed) Beginner backpackers planning meeting at the club office at 7:30 p.m. You need not own any equipment. We will show and discuss equipment and tell you where you can borrow, rent, or buy equipment. Bob Gestel, (636)296-8975.



Outings Continued

the Columbia Bottom Conservation Area.

Experience the beauty and solitude of one of the Conservation Department's newest properties. We will hike an eight mile loop around the perimeter and we will walk to the confluence of the Missouri and Mississippi Rivers. Jim Rhodes, 821-7758 or e-mail earthman@stlnet.com for more information.

Oct 2 (Sat) St. Francis State Park. Scenic and easy 2.7 mile hike suitable for beginners. Optional, more strenuous, even more scenic, extension for those interested. Chuck Guenther & Margaret Gilleo, (314)991-1305.

Oct. 2-3 (Sat-Sun) Join the Kaskaskia Group for a Fall Weekend in the Shawnee. Canoe the "bayous" of the Cache River and hike in the beautiful Shawnee National Forest. Camp in your tent or sleep on bunks in Camp Ondessonk's "tree houses." Bring the whole family, but don't wait to register! This outing always fills up. Registration deadline is Sept. 6. Terry Allen, (618)398-1087, or Ted Horn, (618)397-9430.

Oct 3 (Sun) A fall walk through Tower Grove Park. No more than three miles. Begin 1:30 p.m. Sue King, (314)776-9276

Oct 9 (Sat) Highway Cleanup. Join the 'gang' picking up litter. Now that the ruby throated hummingbirds are gone, it is time to clean up their mess. Diane DuBois, (314)721-0594.

Oct 9-10 (Sat-Sun) Seed

collection. Gather native grass seed from healthy glades in Washington State Park to be sown in the area where we have been clearing Eastern red cedar for the past five years. Come one day or both. Free camping. Penny Holtzmann, (314)487-2738 (h) or (314)894-6668 (w).

Oct 10 (Sun) Day hike to Meramec State Park. Enjoy this loop hike that includes caves, springs, and savannas. Paul Stupperich, (314)429-4352.

Oct 15 (Fri) Hike past cascading waterfalls, lofty pines, unique rock formations, sandstone cliffs, and overlooks at picturesque Hawn State Park near Farmington. Six moderately difficult miles. Dick Klosterman, (314)776-1339.

Oct 16-17 (Sat-Sun) Beginners backpack trip to Bell Mountain. A short 3.5 mile hike to our campsite where we can enjoy the breathtaking view from the summit. A short hike from the summit will take us to the Ozark Trail. There will be common commissary for Saturday night dinner, followed by campfire talks on backpacking and wild tales of past adventures. Bob Gestel, (636)296-8975.

Oct 16-17 (Sat-Sun) Car camping 101. For those who want to give camping a try. Good for families and grandchildren, nieces, and nephews. Experienced

participants also welcome. Fall colors at Trail of Tears State Park should be gorgeous. K. Wodell, (636)240-0675.

Oct 16-17 (Sat-Sun) Two day float on the Black River. We will canoe a 15 mile stretch south of Lesterville. Optional camp out Friday night at Johnson's Shut-ins State Park. Some experience necessary. Jim Rhodes, (314)821-7758 or earthman@stlnet.com.

Oct 17 (Sun) Day float on the Mineral Fork or the Courtois. Jonathan Lehmann, (314)991-3969.

Oct 23-24 (Sat-Sun) Backpack Hawn State Park. Cross country exploration—a chance to use your map and compass skills. Call by Oct. 18. Stephen Finch, (314)644-2553.

Oct 23-24 (Sat-Sun) Trail maintenance and early Halloween Party in the Pioneer Forest. So bring your costume for our Saturday night party with common commissary. Menu suggestions wanted. Bob Gestel, (636)296-8975.

Oct 30 (Sat) Start your day with a morning hike in the fresh autumn air at Powder Valley Nature Center near I-270 and I-44. Choose to hike two or three miles on the paved hiking trails over the bridges and through the woods. Marsha Ammentrout, (314)892-4279.

Outings Continued

Oct 30-31 (Sat-Sun)
Fourth annual St. Francis Mountains backpack trip.
We will hike into Taum Sauk Mountain State Park for a two day backpack trip. Great views are guaranteed. Paul Stupperich, (314)429-4352.

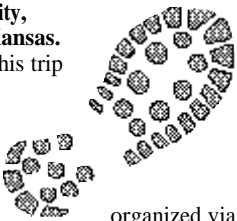
Thomas Hart Benton Group

Sept. 9 (Thur)
Gastronomic outing.
Coyote Grill in Mission. Gale Burrus, (816)763-5120.

Sept. 11 (Sat) Mushroom hike near Weston, Mo.
Hike loess bluffs on private land near Weston and learn to identify mushrooms. Steep and trailless, but fun nevertheless. Dick Ziock, (816)561-3053

Sept. 22 (Wed) Outings planning meeting for winter/spring 2000. Come at 7 p.m. to help us plan the first outings of the 2000s. Contact an outings chair for more information.

Sept. 25-26 (Sat-Sun) "Kaw Moonlight Series" canoeing/camping, De Soto to Kansas City, Kansas.
This trip is



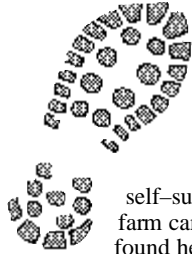
organized via the Kansas Canoe Association and is not sponsored by the Sierra Club. Dave Murphy, (913)831-2374

Sept. 26 (Sun) Organic Farm Tour, Maier Family Farms, Rantoul, Kansas.
All the aspects of a



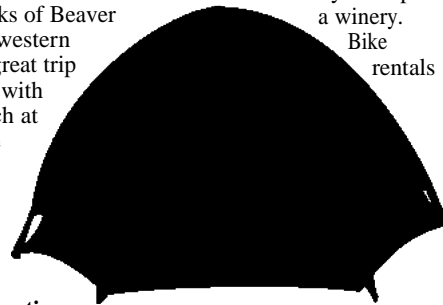
Sept. 16-19 (Thur-Sun) Walnut Valley Festival, Winfield, Kansas. Our annual trip to a great bluegrass festival. Dan & Donna Clark Fuller, (816)779-7284

Kolosseus, (913)371-6629



self-sustaining farm can be found here. Another great outing for children! Steve Hassler, (913)599-6028

Oct. 2-3 (Sat-Sun) Pigeon Roost Trail backpack, Rogers, Ark. This is a really beautiful 8-mile hike along the banks of Beaver Lake in northwestern Arkansas. A great trip for beginners with Sunday brunch at the War Eagle Mill. Scott Hooper, (913)722-3882



Oct. 15-17 (Fri-Sun) Backpacking at Johnson's Shut-Ins in southeast Missouri. We'll backpack along the 12-mile Taum Sauk section of the Ozark Trail. Car campers may also come along and relax at the park all weekend. Bob Wilshire, (913)384-6645

Oct. 23 (Sat) Bike trip to the KATY Trail, Rocheport, Mo. Join us as we wind along the Missouri River and maybe stop at a winery. Bike rentals available. Claus Wawrzinek, (816)561-7863

Oct. 8 (Fri) Gastronomic outing.
Cafe Italia in Martway. Gale Burrus, (816)763-5120.

Oct. 9 (Sat) George Latham Trail west of Lawrence, Kansas. This trail rewards hikers with beautiful lake views from wooded hills, many varieties of birds, beavers, coyotes, and deer. Andrew

Oct. 30 (Sat) Knob Noster State Park. Come hike with us on several of the trails in this attractive state park. Lee Ann Googe, (816)453-8558

Ozark Chapter / Sierra Club
325 N Kirkwood Road, Suite 100
Kirkwood, MO 63122

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