

Project Leader's Report

March - 2004



DMISE
DISTURBANCE AND MANAGEMENT
OF SOUTHERN ECOSYSTEMS

Table of Contents

S
4
R
O
S
4

Technology Transfer.....	1
Outreach Activities.....	1
Meetings/Reports.....	3
Funding.....	4
Visitors.....	5
Personnel News.....	5
News from Around the Region.....	6
GPRAC Accomplishments.....	8
Publications.....	9
Upcoming Events.....	12

Outreach Activities:

Six organized groups totaling 136 people visited the Brender Forest during March. Groups included Georgia Forestry Commission water quality specialists attending a training session, county extension agents who toured the mountain longleaf planting and the "ideal" temporary logging road demonstration, two biology classes from Mercer University, GFC I&E specialists, and Boy Scouts working on Eagle badges.

Approximately 35 visitors came by the office at the Brender Forest for information and 101 people signed the register at the Hitchiti Interpretive Trail. The first turkey hunt of the season was held this month.

Gary Achtemeier, Yongqiang Liu, and Ken Forbus gave a tour of SHRMC and SRS 4104 smoke modeling for Ms. Helen Mills, and the McGowan family (Mason, Sherri, Matt, Katherine and Claire).



Katherine and Claire

Technology Transfer :

- Joe O'Brien participated in a workshop, conducted in Spanish, on tropical pine forest ecology and management "El Manejo Integrado del Fuego en Ecosistemas Montanos de Latinoamérica " (Integrated Fire Management of Latin American Montane Ecosystems), and held in Constanza, Dominican Republic. He represented the Forest Service in the workshop designed for forest managers from countries throughout the Caribbean Basin, including Mexico, Cuba, Honduras, Nicaragua, the Dominican Republic, Belize, and Haiti. The Nature Conservancy Parks in Peril Program, which is funded by the Forest Service International Programs and USAID, sponsored the workshop.



Climate Center to produce a Southeast Wildfire Potential Outlook. The outlook assesses the probability of abnormally wet or dry conditions across Florida and southern Alabama and Georgia for the next few months. These outlooks are based on an analysis of historical rainfall and temperature data for the region along with sea surface temperature conditions in the equatorial Pacific Ocean. Conditions this year do not show a high probability of above normal fire activity, as rainfall conditions are likely to be near normal. You can access the monthly forecasts at the Florida Climate Center website, www.coaps.fsu.edu/climate_center/wildfire.html

- Research funded as part of the unit's National Fire Plan funded work on seasonal forecasting of fire season severity is in use by the Florida State

Continued
Continued
Continued



Ten-year-old Matt shows a great interest in atmospheric sciences.

A description of the prescribed burning workshop held at the Hitchiti last month appeared in the Jones County News.

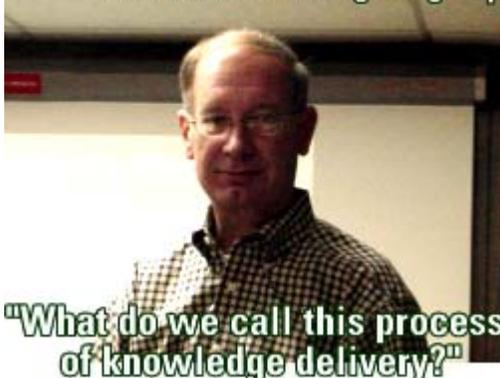
Two middle schools in Athens, GA invited several employers to participate in a career fair. The Southern Research Station was one of approximately forty employers to participate in the Athens, GA Middle School's Career Day. Richard Reitz, Fire Technology Transfer Specialist for the unit, prepared a four-page handout entitled "21st Century Forestry" for the sixth, seventh, and eight grade student who attended.



Rick Reitz telling Clarke County middle-school students about the Forest Service.

• Rick Reitz, unit tech transfer specialist, hosted a workshop with Lee Barkow, BLM National Science and Technology Center director and Joint Fire Science Program governing board vice-chair, on Barkow's vision of technology transfer. Barkow discussed the process of technology transfer, scientist and manager partnerships, and improving responses to announcements for proposals issued by the Joint Fire Science Program. Lee identified and discussed seven steps to effective technology transfer: identify, acquire, analyze, synthesize, package, deliver, and evaluate. Along with his wit, such as "sometimes it takes several years to recognize the obvious," he stressed that technology is both a process and an activity. Lee also stressed that research projects should respond to management needs or problems to insure relevancy and have a better chance of securing funding. Therefore, scientists and managers need cultivate personal relationships so communication free occurs each way. Lee demonstrated many of his points through a project he has worked on to increase technical transfer, USGS-BLM Science Needs Field Tours. Several partners came together and visited four locations in Colorado where scientist and manager came together to solve some of each areas issues and concerns. This field tour activity built scientist and manager relationships through improved communication, and improved resource management at each location.

Lee Barkow asking the group



• Most of the unit scientists attended the Southern Research Station All Scientists Meeting, held in Atlanta. Unit staff prepared and displayed 16 posters at the meeting. One immediate outcome was initiation of collaboration between the atmospheric scientists in the unit and the Southern Global Change Program, to integrate our atmospheric and climate models with their land use and productivity models. Yong Liu, Scott Goodrick, and John Stanturf will meet in Raleigh with Ge Sun and Steve McNulty in April to work out details.

• John Stanturf served on a panel at the ASM on getting outside funding. Presentations from the meeting are available on the SRS intranet website. If you don't have access to the FS Intranet, contact John (jstanturf@fs.fed.us) for a copy of his PowerPoint presentation.

• Gary Achtemeier represented the unit at the National Fire Plan Research and Development Meeting in Reno, NV. Because of the conflict with the All Scientists Meeting and a sudden illness that prevented Scott Goodrick from attending, Achtemeier presented all seven talks and spent 6 hours participating on panel discussions during the two-day period. By all accounts, Gary gave a *tour de force* performance and sounded like an expert in all the areas he represented.

• While in Reno, Gary Achtemeier attended the atmospheric modeling consortia (FCAMMS) Director's meeting. The directors and WO staff reviewed progress to date, planned a joint publication describing the Consortia for the Bulletin of the American Meteorological Society, and discussed plans for interagency collaboration and funding.

- Cynthia Fowler presented posters on the fire encyclopedia at the Southeastern Ecology and Evolution Conference held at Georgia Tech University and the International Association of Fire Chiefs Wildland Fire Conference in Reno.

- Tom Waldrop met with Gerard Kyle of the Clemson University Department of Parks, Recreation, and Tourism Management. Dr. Kyle recently received funding from the Pacific Southwest Research Station to study landowner opinions of Forest Service fire management in southern California. Waldrop will serve as a consultant to Kyle on matters of fire operations.

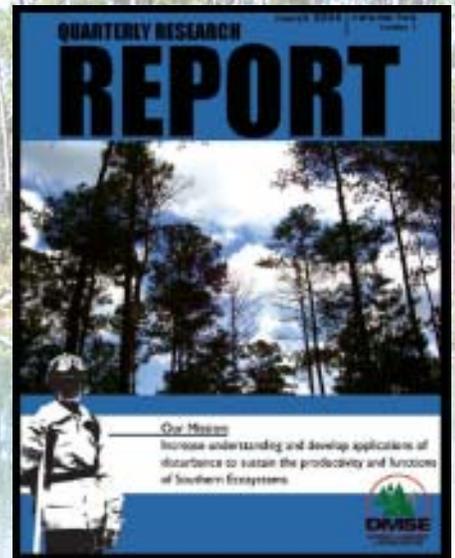
- Dave Cleland met with staff of the Wisconsin Department of Natural Resources in Madison to present preliminary data from the cooperative effort to implement the National Association of State Forester’s process for identifying communities at risk, using the Montreal Criteria and Indicators of sustainability as an overarching framework. This is also an implementation of the Healthy Forest Restoration Act. Jolene Ackerman, WI DNR Wildland/Urban Interface coordinator, coordinated the meeting.

- Ken Outcalt attended the Coastal Plan Chapter, Society for Ecological Restoration Annual Meeting, held in Raleigh, NC. He presented a poster (with Dale Brockway, Auburn) “Restoration of pine communities on the Kisatchie National Forest with mechanical clipping and fire.”

Tom Waldrop met with Rob Bixler of Clemson University to discuss their cooperative study of public perceptions to fuel reduction treatments in the southern Appalachians. The topic is particularly important in the southern Appalachian Mountains because of an unusual dilemma.

The primary fuel that causes wildfires to reach uncontrollable intensities in the region is also a major attraction to tourists and residents. Ericaceous shrubs, including rhododendron and mountain laurel, add to the scenic beauty of the mountains but have reached invasive levels of cover with fire exclusion. Fuels management would remove these shrubs in hazardous areas. An understanding of public perceptions would help to guide management policy.

- A new issue of the Quarterly Science Report was sent to readers.



Meetings / Reports :

- Gary Achtemeier and the Smoke Management Team hosted a workshop on EPA/USFS Collaboration. The purpose of the workshop was to acquaint EPA managers from Region 4 (Atlanta) and Research Triangle Park, NC with SHRMC and to discuss transfer of the BlueSkyRAINS (BSR) smoke and air quality-modeling framework to the South. In addition to 10 attendees from EPA, Susan O’Neill from the Pacific Northwest Research Station and a developer of BSR took part, along with Al Riebau from the WO. Other speakers included Doug Fox (Colo. State U - CIRA), Prof Tom Mote (UGA), and Scott Goodrick. Tim Giddens and Ken Forbus provided a tour of the SHRMC facilities. EPA headquarters appears to be committed to implementing a pilot for BSR in the South. Region 4 needs to define their level of effort and to name a lead person.

- Ken Outcalt, Deb Kennard, David Jones, and Brian Bulger met with cooperators of the Gulf Coastal Plain Fire

and Fire Surrogate study at the Solon Dixon Forestry Education Center, AL. Cooperators gave current results from the first three years of the study.

- John Stanturf attended the SRS Management Team meeting, held in Atlanta. The meeting was abbreviated in length, as it was held in conjunction with the All Scientists Meeting. The primary message was the Healthy Forest Restoration Act represented both a major opportunity for the agency and potential threat, if performance does not meet expectations. The President’s Budget for FY 2005, if enacted, will push some units over the edge financially.

- John Stanturf has been invited to serve on the Scientific Board of the international conference “Assessment of the 2003 Drought and Heat Impacts on Forests”. The conference was prompted by the extreme drought and heat we have last year in many parts of Europe. The organizers

Visit our website at:

<http://www.srs.fs.usda.gov/disturbance>

thought that a synthesis about drought effects on forests taking into consideration different climatic scenarios was urgently needed. The conference is scheduled for November 2004, to be held in Freiburg im Breisgau, Germany. French and German scientists have initiated a multidisciplinary collaborative research initiative "Drought2003." The specific objectives are to discuss impacts of severe droughts on forests, to discuss research needs in respect to drought events and their impacts on forests, to present and discuss the results of the multidisciplinary French-German expertise, and to explore links between researchers and disciplines concerning the future. Sponsors include the Institute for Forest Growth (IWW), Faculty of Forest and Environmental Sciences, Albert-Ludwigs-University, Freiburg im Breisgau, Germany; Forest Research Institute Baden-Württemberg, Freiburg im Breisgau, Germany; the Groupement d'Intérêt Public ECOFOR, Paris, France, and the IUFRO.



- Prescribed burning on the Hitchiti Experimental Forest. In March, 500 acres were burned for understory control and a winter burn treatment was initiated on the long-term burning demonstration plots for Ken Outcalt.

The new 4104 reality show, "Joe the Bachelor" had Joe O'Brien auctioned off at the "BreastFest 2004" charity event.



biology and condition of the surrounding forest. The project will consider these impacts for separate goals of commercial productivity and ecosystem restoration. Study areas will be the Clemson Experimental Forest, the Calhoun Experimental Forest, and Kings Mountain National Military Park.

- Deborah Kennard and Cynthia Fowler received notice from JFSP that their proposal to expand the fire encyclopedia will be funded if they can merge it with a proposal from FRAMES, the Fire Research And Management Exchange System group. FRAMES is a web portal to wildland fire information developed in the Pacific Northwest. (<http://www.frames.gov/>). Funding is contingent on the two groups combining the projects, revising their proposal, and resubmitting.

Funding :

- Joe O'Brien, Ken Outcalt, Deb Kennard and Cynthia Fowler were awarded \$10,000 from the Joint Fire Sciences Program to host a workshop and develop a template for the JFSP to use to request Best Management Practices in Fuel Management proposals. The proposal for a pine rocklands BMP submitted by O'Brien et al. came closest to the vision of the JFSP board. Two other groups, Mike Wimberly and John Stanturf (Loblolly pine) and Wayne Sheppard and cooperators from the Rocky Mountain Research Station, will be part of the template development process. The three BMP proposals can be re-submitted, using the developed template, in the Fall round.

- Gary Achtemeier was co-PI on a successful proposal submitted to the JFSP by Bob Mickler, Southern Global Change Program, "Development and demonstration of smoke plume, fire emissions, and pre- and post-prescribed fire fuel models on North Carolina coastal plain forest ecosystems." This will provide SHRMC with about \$50,000 in funding over the next three years.

- Tom Waldrop and Geoff Wang (Clemson University) received notification of a new grant from the JFSP. Their proposal, entitled "Epidemic southern pine beetle attacks: a problem of fuel loading or an opportunity for management?" will be a 3.5 year project funded for over \$350,000. The project will examine high-intensity fires and mechanical fuel reduction impacts on soil

- Gary Achtemeier received \$10,000 from the Savannah River Forest Station to support continuing smoke research at the Site.

- Gary Achtemeier, in collaboration with Sue Ferguson of PNW submitted a revised proposal entitled, "Migration of the BlueSkyRAINS smoke impact prediction system to the southeastern United States," for funding by the EPA. The total dollar amount is \$398,676 with \$199,311 earmarked to come to SHRMC if the proposal is funded. Outlook for funding is optimistic.

- Cynthia Fowler participated in a proposal to the Department of Energy for biomass focused forest management training. The Wildland Urban Interface Center and the University of Florida submitted the proposal.

- An on-line forum has been set-up by the Collaborative Partnership on Forests and the National Forest Programme Facility to allow people to share information, ideas and experiences on funding for forest-related projects. The on-line forum aims at helping fund seekers to further and enhance their funding search process as well as increase their skills on how to go about soliciting funding for their projects. Representatives of grant making bodies are also invited to post news and advice for potential applicants. Links to the forum: <http://www.fao.org/forestry/site/17261/en>

↓ Visitors :

- Dr. Yuanchun Yu, Professor of Forest Soils and Environmental Science of Nanjing Forestry University in China met with Tom Waldrop. Dr. Yu is on sabbatical to visit major fire research facilities in the United States. His country is beginning a program of fire research in support of their prescribed burning efforts. Tom will be introducing Dr. Yu to the National Fire and Fire Surrogate Study and other research in the Piedmont and Appalachians. Dr. Yu is anxious to witness an operational prescribed burn.

- EPA staff attending the workshop included Lisa McKinley, EPA Liaison to the USDA/Cooperative State Research, Education, and Extension Service; Robin Dunkins, Associate Director, Air Quality Strategies and Standards Division, Office of Air Quality Planning and Standards, Research Triangle Park, NC; Lynorae Benjamin, Acting Chief of the Air Quality Monitoring and Transportation Section, EPA Region 4; Carol Kemker, Asst. Director, Air, Pesticides, and Toxics Management Division (APTMD); Kay Prince, Chief, Air Planning Branch; Dick Schutt, Chief,

Regulatory Development Section, Air Planning Branch; Jeanne Gettle, Chief, Pesticides Section, Pesticides and Toxic Substances Branch; Thomas Dzomba, Regional Haze Expert, Air Quality Monitoring And Transportation Section, Air Planning Branch; and Steve Scofield, Particulate Matter Technical Expert, Regulatory Development Section, Air Planning Branch.

- Visitors from the Communications Office in Asheville attending the tech transfer workshop with Lee Barkow included Carol Ferguson-Whitlock, Zoë Hoyle, Randy McCracken, Claire Payne, Paul Smith, and Louise Wilde. Lindsey White from the Charleston Lab also attended.



↓ Personnel News :

- Sandra Rideout-Hanzak and Terry Hanzak have a new daughter. Daphne Marie was born on March 16, weighed 8 lb. 1 oz., and was 19.25 inches long. The entire family, including Sandra's son Dillon, are doing well. Sandra has visited the office several times and is still excited. She does not even seem to be missing the fire season. Congratulations to Sandra, Terry, and Dillon.



- Deb Kennard attended a workshop on authoring for the hypertext

encyclopedias, given by Mike Rauscher and Bryan Jordin. They showed attendees how to create and publish content directly to the encyclopedias on-line.

- Patricia Outcalt and Dmitry Lima received Certificates of Appreciation from the Coastal Plain Chapter, Society for Ecological Restoration International for their assistance in designing and maintaining the Chapter's website.

- With sadness we note the passing of Ira Freeman, SCSEP on the Hitchiti-Breder. His family will be in our prayers.

News from around the Region :

- Eric Berg, tech transfer specialist at Bent Creek, has been selected as the Program Manager, Joint Fire Sciences Program. He will be moving to Boise soon.

- The USGS, in collaboration with other federal and state government agencies, industry, and academia, is conducting the National Geochemical Survey (NGS) to produce a body of geochemical data for the United States based primarily on stream sediments, analyzed using a consistent set of methods. These data will compose a complete, national-scale geochemical coverage of the US, and will enable construction of geochemical maps, refine estimates of baseline concentrations of chemical elements in the sampled media, and provide context for a wide variety of studies in the geological and environmental sciences. The goal of the NGS is to analyze at least one stream-sediment sample in every 289 km² area by a single set of analytical methods across the entire nation, with other solid sample media substituted where necessary. The NGS incorporates geochemical data from a variety of sources, including existing analyses in USGS databases, reanalyses of samples in USGS archives, and analyses of newly collected samples. The NGS presently includes data covering ~71% of the land area of the US, including samples in all 50 states. An on-line version of the report provides complete access to NGS data, describes the history of the project, the methodology used, and presents preliminary geochemical maps for all analyzed elements. Future editions of this and other related reports would include the results of analysis of variance studies, as well as interpretive products related to the NGS data. <http://tin.er.usgs.gov/geochem/doc/home.htm>

- National Park Service (NPS) Director Fran P. Mainella selected Patricia A. Hooks as Director of the NPS's Southeast Region, which includes 64 national park sites in nine southern states, Puerto Rico and the U.S. Virgin Islands. Hooks, an attorney formerly with the Department of the Interior's Southeast Regional Solicitor's office in Atlanta, joined the NPS as deputy southeast regional director in September 2000. She succeeds Jerry Belson, who departed the top post 18 months ago to become a special advisor to the NPS director. An Albany, Ga., native, Hooks becomes the first African-American woman to head one of the Park Service's seven regions. The Southeast Region has nearly 3,000 employees and a budget of \$300 million annually. It includes four of the top 10 most visited areas in the National Park System-Blue Ridge Parkway, Great Smoky Mountains National Park, Natchez Trace Parkway and

Gulf Islands National Seashore. Headquarters offices for the region are located in downtown Atlanta. Hooks earned a business degree from Albany State College and a doctor of law degree from Emory Law School in Atlanta. Earlier in her career, she worked for Bell South, and as a law clerk to a U.S. District Court for judge in Atlanta. She also has served as an adjunct professor at Clark Atlanta University and as a staff attorney for the U.S. Environmental Protection Agency's Atlanta office.

- A veteran park ranger and manager currently in charge of operations for the National Park Service's (NPS) Northeast Region headquartered in Philadelphia has been selected as the new superintendent of Great Smoky Mountains National Park in Tennessee and North Carolina. Dale A. Ditmanson will take over the top management job at the nation's most visited national park in May, according to NPS Southeast Regional Director Patricia A. Hooks. He succeeds Mike Tollefson, who left the Smokies more than a year ago to become superintendent of Yosemite National Park in California.

- In what may become one of the largest federally funded habitat restoration programs in the country's history, the U.S. Army Corps of Engineers unveiled a 30-year, \$1.3 billion plan to restore the Missouri River. Initial reaction indicated the plan satisfied no one involved in long dispute over the future of the historic river, including environmentalists, farm and barge shipping interests and states that rely on the water. In the 200 years since William Clark and Meriwether Lewis first explored its length, America's longest river has been dammed, narrowed, deepened and straightened for commercial barge traffic so that it is some 100 miles shorter than the 2,500 miles navigated by their expedition, according to the environmental group American Rivers. Its water irrigates millions of acres of farmland, provides drinking water, cools homes, fills reservoirs and provides a waterway for barge transportation of farm products used by people throughout the United States and abroad. Under the plan, about 1,200 acres will be immediately established as a shallow-water habitat for spawning fish, while an unspecified amount would be designed to benefit nesting birds. The plan aims to maintain a seven-month navigation season. Upper-level management of the river calls for conserving more water in the northern states and "unbalancing" the three largest reservoirs, in Montana, North Dakota and South Dakota. The Corps would lower one of three lakes about three feet to allow vegetation to grow around the rim and then refill the lake, on a rotating three-year cycle. (Source: Reuters)

News from around the Region :

- William Conner, Professor of Forestry at Clemson University in Georgetown, SC, will Chair the Society of Wetland Scientists 26th annual meeting in 2005, to be held in Charleston.

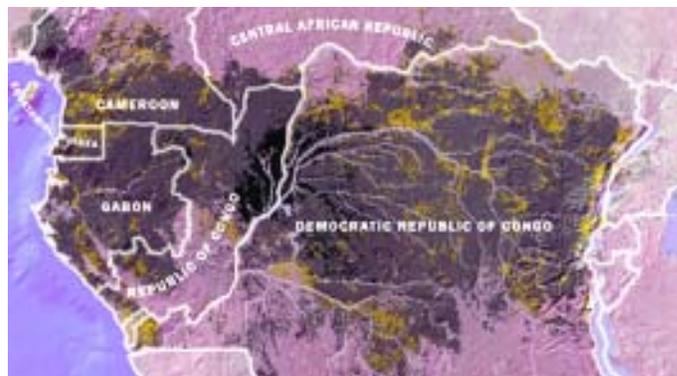


- The National Wildlife Federation (NWF) announced the appointment of Larry J. Schweiger as its new president and chief executive officer. Schweiger has served the past eight years as president and CEO of the Western Pennsylvania Conservancy (WPC). Schweiger will assume his post at NWF on April 5. As president and CEO, Schweiger will work from NWF's headquarters in Reston, VA, and supervise a staff of nearly 600 located there, in Washington, DC, and at eight Natural Resource Centers across the country. He will also oversee a budget currently running at \$120 million annually and coordinate NWF's work with its 47 state and territorial affiliates. (Source: NWF press release)

- All provisions of the 1997 Kyoto Protocol are now legally binding in the European Union, following a decision of the European Parliament. The Kyoto Protocol and agreements reached at subsequent Conferences of the Parties envisage strict accounting, reporting and review procedures of emissions to ensure transparency as well as a high quality and comparability of data. The new Decision provides concrete procedures for accounting, reporting and review of emissions, replacing and widening the previous Greenhouse Gas Monitoring Mechanism Decision, which only covered requirements arising from the 1992 UNFCCC. The European Union and its Member States ratified the Kyoto Protocol to the UNFCCC on 31 May 2002. In addition, the Decision addresses reporting and monitoring issues related to the EU's "Burden Sharing Agreement" under which each Member State accepted an individual target for

limiting or reducing greenhouse gas emissions when the EU ratified the Kyoto Protocol in 2002. The Kyoto Protocol commits the EU to reducing its greenhouse gas emissions by 8% below 1990 levels during the first "commitment period" 2008 to 2012. Under the "Burden-Sharing Agreement" this target is shared between the 15 Member States. (Source: EU Brussels)

- Some new words in the Mother Tongue. Gazundering is the practice of a buyer changing the agreed upon price of real estate at the last minute, in order to drive down the price. The opposite tactic, gazumping, is when the seller reneges on a deal at the last minute after receiving a higher offer from a third party. Seems like we in the Colonies use the phrase bait-and-switch to cover both situations. (Source: The Scotsman)

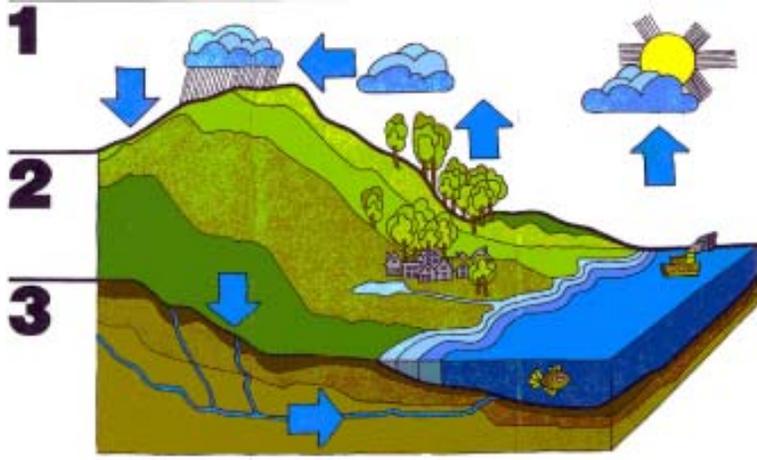


- The Congo Basin Forest Partnership (CBFP) recently launched a multilingual website to facilitate communication, cooperation and coordination among partners, as well as to respond to the public's interest in the Congo Basin's forest and environment. The site includes a description of the partnership, a calendar of events, partnership news updates, contact information and links for partners and to other organizations active in economic development, forest management, and environment in the Congo Basin. <http://www.cbfp.org/en/>

- William Mitsch, professor at Ohio State University, and Danish professor Sven Erik Jørgensen have won the 150,000-dollar (122,000-euro) Stockholm Water Prize for their research on the world's lakes and wetlands. Mitsch, a 56-year-old professor at OSU, and Jørgensen, 69, of the Danish University of Pharmaceutical Sciences, will receive their prize from King Carl XVI Gustaf at a ceremony at Stockholm's City Hall on August 19. The prize committee said their theoretical and applied work on lake and wetland ecosystems, management of lake and wetland water quality, and lake, river and wetland conservation, restoration and usage has been implemented in

News from around the Region :

both developing and developed countries. The Stockholm Water Foundation has awarded the prize annually since 1990.



- The French National Hydrology Committee has created an international hydrological glossary for UNESCO's International Hydrological Programme. The glossary is available in 12 languages at their website: <http://www.cig.ensmp.fr/~hubert/glu/aglo.htm>

- A new initiative aimed at developing leadership to promote sustainable forestry will be announced at the 5th Certification Watch Conference in April in Vancouver. The announcement will feature brief speeches by Jean-Pierre Kiekens, initiator of ForestLeadership, as well as by selected members of the ForestLeadership Advisory Network, namely Bill Banzhaf, President, Sustainable Forestry Board; Michael Goergen, Executive Vice-President & CEO, Society of American

Foresters; John Innes, Professor, University of British Columbia; Peter Johnson, Program Manager, CSA-International; Heiko Liedeker, Executive Director, Forest Stewardship Council - International; Cassie Philips, Vice-President, Sustainable Forestry, Weyerhaeuser; and Mike Willick, Assistant Deputy Minister, Ontario Ministry of Natural Resources. (Source: PRNewswire)

- Vietnam is a rapidly emerging supplier of some of the cheapest woodwork exports on the world market. Vietnam's furniture boom is welcome news for global retailers from the European Union and Japan, who are cashing in on low-priced imports, but it could spell more trouble for some U.S. manufacturers. The socialist republic on the Indochina peninsula and its surging furniture industry has been a cause for concern among other furniture makers, especially those in the United States, where the industry is deteriorating. American wood-furniture manufacturers, based mainly in the South, have lost more than 30,000 jobs in the last three years, according to the U.S. Department of Labor. The loss is due in large part to a flood of cheap Chinese imports. With goods nearly 10 percent cheaper than those made in neighboring China, Vietnam is being courted by U.S. manufacturing and retail executives looking for inexpensive desks, chairs, and household sets made from pine, cajuput or rubber wood. The cost of labor in Vietnam is roughly 20 percent to 40 percent cheaper than in China and with Chinese-made bedroom furniture facing a possible U.S. tariff this year, even more business will head to Vietnam. In quantity of shipments, furniture exported by Vietnam to the U.S. still ranks well below that of China, Canada and Mexico but U.S. furniture imports from Vietnam leaped 155 percent last year to \$123.5 million. (Source: Reuters)

GPRA Accomplishments:

Category	FY 2002	FY 2003
	Total	To Date
Number of Refereed Journal Publications	24	13
Number of Non-Refereed Publications (include abstracts)	50	52
Number of Publications (refereed + non-refereed)	74	65
Number of Tours	66	29
Number of Short Courses/Training	8	15
Number of Invited Presentations to Scientific Organizations	8	11
Number of Invited Presentations to Lay Organizations	45	26
Volunteer Presentations to Scientific Organizations (non-GPRA)	27	36
Number of Technology Transfer Activities (other than above)	135	70
Outside Funding	\$1,955,455	\$2,454,500

- Achtemeier, Gary L.** 2003. Recent results from PB-Piedmont—A model to simulate smoke on the ground at night. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. Available on-line at <http://ams.confex.com/ams/pdfview.cgi?username=65880>
- Achtemeier, Gary L.** 2003. On the origins of “superfog”—A combination of smoke and water vapor that produces zero visibility over roadways. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. Available on-line at <http://ams.confex.com/ams/pdfview.cgi?username=65921>
- Achtemeier, Gary L., Goodrick, Scott L. and Yongqiang Liu.** 2003. The Southern High Resolution Modeling Consortium—A source for research and operational collaboration. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. Available on-line at <http://ams.confex.com/ams/pdfview.cgi?username=65894>
- *Borders, B.E. Will, R.E., Markewitz, D., **Clark, A.**, Hendrick, R., Teskey, R.O., Zhang, Y. 2004. Effect of complete competition control and annual fertilization on stem growth and canopy relations for a chronosequence of loblolly pine plantations in the lower coastal plain of Georgia. *Forest Ecology and Management* 192 (2004) 21–37.
- Brenner, Jim and **Wade, Dale.** 2003. Florida’s revised prescribed fire law: Protection for responsible burners. In: Proc Fire Conference 2000: The First National Congress on Fire Ecology, Prevention, and Management. K. E. M. Galley, R. C. Klinger, and N. G. Sugihara, eds. Misc. Publ. No. 13, Tall Timbers Research Station, Tallahassee, FL., p. 132-136.
- ***Callahan, Mac A.**, Hendrix, Paul F., and **Phillips, Ross J.** 2003. Occurrence of an exotic earthworm (*Amyntas agrestis*) in undisturbed soils of the southern Appalachian Mountains, USA. *Pedobiologia* 47: 466-470.
- *Coleman, M.D.; Coyle, D.R.; Blake, J.; Britton, K.; Buford, M.; Campbell, R.G.; Cox, J.; Cregg, B.; Daniels, D.; Jacobson, M.; Jacobsen, K.; McDonald, T.; McLeod, K.; Nelson, E.; Robison, D.; Rummer, R.; Sanchez, F.; **Stanturf, J.**; Stokes, B.; Trettin, C.; Tuskan, J.; Wright, L.; Wullschlegel. 2004. Production of Short-Rotation Woody Crops Grown with a Range of Nutrient and Water Availability: Establishment Report and First-Year Responses. Gen. Tech. Rep. SRS-72. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station. 21 p.
- Cunningham, Philip, **Goodrick, Scott L.**, Hussaini, M. Y., Linn, Rodman R., and Chunmei Xia. 2003. Dynamics of fire plumes in vertical shear. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. Available on-line at <http://ams.confex.com/ams/pdfview.cgi?username=66011>
- Dagley, Christa M.** and O’Hara, Kevin L. 2003. Potential for old forest restoration and development of restoration tools in Coast Redwood: A literature review and synthesis. 72 p. Report to the Save-The-Redwoods League; download from their website <http://www.savetheredwoods.org/>
- DiCosty, R. J.**, Weliky, D. P., Anderson, S. J., Paul, E. A. 2003. 15N-CPMAS nuclear magnetic resonance spectroscopy and biological stability of soil organic nitrogen in whole soil and particle-size fractions. *Organic Geochemistry* 34: 1635-1650.
- Fowler, Cynthia.** 2003. The ecological implications of ancestral religion and reciprocal exchange in a sacred forest in Karendi (Sumba, Indonesia). *World Views: Culture, Environment, Religion*, 7(3): 303-329.
- Gardiner, E., **Stanturf, J.**, Schweitzer, C., Schiff, N., Vozzo, J., Hamel, P. B. 2003. SRS RWU-4155 Wildlife Research: Team 1 Problem Area – Regeneration Biology. Presented to USDA Forest Service Research, Wildlife Research Meeting, 3-6 November 2003, Albuquerque, NM. Poster.
- Goodrick Scott L.** 2003. Relationship between atmospheric stability and area burned during the 1998 Florida wildfires. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. Available on-line at <http://ams.confex.com/ams/pdfview.cgi?username=65958>
- Harrington, T. B., **Dagley, C. M.**, **Edwards, M. B.** 2003. Above- and below-ground competition from longleaf pine plantations limits performance of reintroduced herbaceous species. *Forest Science* 49 (5): 681-695.
- Hiers, John Kevin, Ottmar, Roger D., **O’Brien, Joseph J.**, Varner, J. Morgan, III, Putz, Francis E., Gordon, Doria, and Sue Ferguson. 2003. Correlates of tree mortality resulting from re-introducing fire to long-unburned longleaf pine forests. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. [Poster]

- Hoadley, Jeanne, Rorig, Miriam, Westrick, Kenneth, Bradshaw, Larry, Ferguson Sue A., **Goodrick Scott L.**, and Paul Werth. 2003. Assessing the value of increased model resolution in forecasting fire danger. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. Available on-line at <http://ams.confex.com/ams/pdfview.cgi?username=65271>
- ***Kennard, D. K.** 2003. Regeneración de especies maderables 6 años después quemadas controladas en el oriente boliviano: Implicaciones para el manejo forestal. [Commercial tree regeneration 6 years following high intensity burns in eastern Bolivia: Implications for forest management]. Technical Document. BOLFOR, Santa Cruz, Bolivia.
- Kennard, D. K., Outcalt, K. W., Jones, D.,** Estes, B. 2003. Techniques and sampling strategies for comparing fires of different intensities. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. [Poster]
- Liu, Yongqiang.** 2003. Prediction of monthly-seasonal precipitation using coupled SVD patterns between soil moisture and subsequent precipitation. *Geophysical Research Letters*, 30(15): HLS 3-1 to 3-4.1827, doi: 10.1029/2003GL017709.
- Liu, Yongqiang.** 2003. Spatial patterns of soil moisture connected to monthly-seasonal precipitation variability in a monsoon region. *Journal of Geophysical Research*, 108(D22), 8856. doi: 1029/2002/JD003124.
- Liu, Yongqiang.** 2003. Spatial and temporal variability of wildland fire emissions over the US. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. Available on-line at <http://ams.confex.com/ams/pdfview.cgi?username=65685>
- Liu, Yongqiang.** 2003. Atmospheric response and feedback to smoke radiative forcing from wildland fires. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. Available on-line at <http://ams.confex.com/ams/pdfview.cgi?username=65828>
- Meier, C. E. and **J. A. Stanturf.** 2003. Litterfall and soil carbon in a mature bottomland hardwood forest. Soil Science Society of America Annual Meeting, Denver, CO. [Poster]
- Miller, J. H., Zutter, B. R., Newbold, R. A., **Edwards, M. B.,** Zedaker, S. M. 2003. Stand dynamics and plant associates of loblolly pine plantations to midrotation after early intensive vegetation management—a southeastern United States regional study. *Southern Journal Applied Forestry* 27(4): 221-236.
- Miller, J. H., Zutter, B. R., Zedaker, S. M., **Edwards, M. B.,** Newbold, R. A. 2003. Growth and yield relative to competition for loblolly pine plantations to midrotation—a southeastern United States regional study. *Southern Journal Applied Forestry* 27(4): 237-252.
- *Myers, Ronald L., **O'Brien, Joseph J.,** Mehlman, David, Bergh, Chris. 2003. Evaluación del manejo del fuego en los Ecosistemas de tierras altas de la República Dominicana. [Evaluation of fire management in the high altitude ecosystems of the Dominican Republic]. Technical Report, The Nature Conservancy, Tallahassee, FL. 32 p.
- O'Brien, Joseph J.** 2003. Dormant-season prescription fires to reduce hazardous fuel loads on the South Carolina coastal plain: A 40+ year study. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. [Poster]
- Outcalt, Kenneth W.** 2003. Conversion of loblolly pine back to native longleaf in the southern USA. In: Hansen, Jörg, Spiecker, Heinrich, von Teuffel, Konstantin, eds. "The question of conversion of coniferous forests." *Berichte Freiburger Forstliche Forschung* Heft 47, p. 10. [Abstract]
- Outcalt, K. W.** 2003. Developing management options for longleaf communities of the Gulf Coastal Plain. In: Proceedings of Fourth Longleaf Alliance Regional Conference. Longleaf Alliance Report No. 6: 126-129.
- Outcalt, Kenneth W.** 2003. Decay of fire-caused snags in Ocala sand pine. In: Proc. Fire Conference 2000: The First National Congress on Fire Ecology, Prevention, and Management. K. E. M. Galley, R. C. Klinger, and N. G. Sugihara, eds. Misc. Publ. No. 13, Tall Timbers Research Station, Tallahassee, FL. p. 50-54
- Outcalt, K. W. and D. K. Kennard.** 2003. Developing management options for fuel reduction in pine flatwoods of the southeast. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. [Poster]

Potter, Brian E., **Goodrick Scott L.**, and Timothy J. Brown. 2003. Development of a statistical validation methodology for fire weather indices. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. Available on-line at <http://ams.confex.com/ams/pdfview.cgi?username=65540>

Schwendenmann, Luitgard, Veldkamp, Edzo, Brenes, Tania, **O'Brien, Joseph J.**, Mackensen, J. 2003. Spatial and temporal variation in soil CO₂ efflux in an old-growth neotropical rain forest, La Selva, Costa Rica. *Biogeochemistry* 64: 111-128.

Stanturf, J. A. 2003. Promises and pitfalls of reference wetlands in forested ecosystem restoration. 12th World Forestry Congress [Poster].

Stanturf, John, Gardiner, Emile, Schoenholtz, Stephen. 2003. Interplanting for bioenergy and riparian restoration in the southeastern United States. In: Nicholas, Ian D., compiler. Proc. Short Rotation Woody Crops for Bioenergy. International Energy Agency Task 30 Conferences, 1-5 December 2003, Tauranga, New Zealand. Pp. 241-249.

Stanturf, J. A., Kellison, R., Broerman, F. S., Jones, S. B. 2003. Innovation and forest industry: Domesticating the pine forests of the southern United States, 1920-1999. Communication Across the Forest Science / Policy Interface - Special issue edited by John A. Parrotta and Jose J. Campos Arce. *Forest Policy and Economics* 5(4): 407-419.

Stanturf, J. A. and Madsen, P. 2003. Temperate forest restoration. 12th World Forestry Congress [Poster].

Stanturf, John and Madsen, Palle. 2003. It's not just semantics: Why clear communication matters. In Hansen, Jörg, Spiecker, Heinrich, von Teuffel, Konstantin, editors. "The question of conversion of coniferous forests." *Berichte Freiburger Forstliche Forschung* Heft 47, p. 29. [Abstract]

Stone, Carter, **Goodrick, Scott L.**, and Deborah E. Hanley. 2003. Exhausting relative greenness: inaccurate fire potential index for Florida? In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. Available on-line at <http://ams.confex.com/ams/pdfview.cgi?username=65660>

Sturtevant, Brian R. and **David T. Cleland**. 2003. Human influence on fire disturbance in northern Wisconsin. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. Available on-line at <http://ams.confex.com/ams/pdfview.cgi?username=65931>

Waldrop, Thomas A., Brose, Patrick H., Welch, Nicole Turrill, **Mohr, Helen H.**, Gray, Ellen A., Tainter, Frank H., and Ellis, Lisa E. 2003. P. 157-163 in K. E. M. Galley, R. C. Klinger, and N. G. Sugihara, eds. Proc. Fire Conference 2000: The First National Congress on Fire Ecology, Prevention, and Management. Misc. Publ. No. 13, Tall Timbers Research Station, Tallahassee, FL.

Waldrop, T. A., **Mohr, H. H.**, **Rideout-Hanzak, S.** 2003. Fuels and fire behavior vary by fuel reduction treatment and landscape position. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. [Poster]

Xia, Chunmei, Hussaini, M. Y., Cunningham, Philip, Linn, Rodman R., and **Scott L. Goodrick**. 2003. Numerical study of effects of atmosphere temperature profile on wildfire behavior. In: Proceedings of the Second International Wildland Fire Ecology and Fire Management Congress, American Meteorological Society, November 16-20, 2003, Orlando, Florida. Available on-line at <http://ams.confex.com/ams/pdfview.cgi?username=65947>



Upcoming Events :

2004

- May 3-7** 12th meeting of the International Boreal Forest Research Association, “Climate-Disturbance Interactions in Boreal Forest Ecosystems”, Fairbanks, Alaska <http://www.lter.uaf.edu/ibfra/default.cfm>
- May 4-5** AF&PA’s Agenda 2020 Wood and Wood Composites Task Group—formerly the Committee on Research Evaluation (CORE)—meeting, Forest Products Lab in Madison, WI; Alex Clark to attend and present ‘Impact of fertilization on wood properties of loblolly pine’
- May 11-13** Interagency Fire and Air Group meeting, Athens; contact Gary Achtemeier (gachtemeier@fs.fed.us) for information
- *May 18-21** Creating solutions for using small trees, SmallWood 2004; Sacramento, CA; <http://www.forestprod.com>
- May 25-29** IUFRO Conference, Restoration of forest soils in polluted areas, Praha, Czech Republic, <http://www.ldf.mendelu.cz/konference/rfspa/>
- May 27-29** IUFRO Conference Natural Disturbances and Ecosystem-Based Forest Management, Tartu, Estonia; Stanturf to attend and present <http://www.eau.ee/~ecosyst/>
- *Jun 10-11** Energy with Agricultural Carbon Utilization Symposium - A Sustainable Alternative to Sequestration; Athens, GA <http://www.georgiaitp.org/carbon>
- Jun 14-18** IUFRO Division 1 - Silviculture Conference, CIRADForet, in Montpellier, France; Stanturf to attend and present two papers;
- *Jun 15-18** 2nd International Conference on Forest Measurements and Quantitative Methods and the annual meeting of the Southern Mensurationists; Hot Springs, AR; <http://www.mensurationists.com/event/events.htm>
- Jun 24-26** Greenhouse gas emissions and abrupt climate change: Positive options and robust policy, Paris, France; dates and location tentative; <http://www.iiasa.ac.at>
- Jun 27-Jul 2** First Agroforestry World Congress, Orlando, FL <http://conference.ifas.ufl.edu/wca/#background>
- Jun 24-26** Greenhouse gas emissions and abrupt climate change: Positive options and robust policy, Paris, France; dates and location tentative; <http://www.iiasa.ac.at>
- *Jul 12-15** North American Forest Biology Workshop, Managing forest resources in the 21st century: An Integrated Approach; Michigan Technological University Houghton, MI <http://www.forestbiology.org/>
- Jul 25-31** 7th INTECOL International Wetlands Conference, Utrecht, The Netherlands. <http://www.bio.uu.nl/INTECOL>
- Aug 15-20** Large-Scale Experiments for Sustainable Forestry: Balancing Ecosystem Values; International IUFRO Workshop, Portland, OR. <http://outreach.cof.orst.edu/ecosystem>
- Aug 23-27** Society Ecological Restoration International annual meeting, Victoria, BC; <http://www.ser.org/meeting.php?pg=call4abstracts2004>
- Sep 1-2** Forest IT 2004 Exhibition and Congress, Jyväskylä, Finland; <http://www.ForestIT.net>
- *Sep 3-7** European Forest Institute (EFI) Annual Meeting, Bangor, Wales (UK) and IUFRO International Conference Transformation to Continuous Cover Forestry in a Changing Environment Consequences, Methods, Scenarios, Analyses <http://www.efi.fi/news/2004/CallforPapers.pdf>
- Sep 4-12** EUROSIL, Freiburg, Germany; www.forst.uni-freiburg.de/eurosoil
- Sep 12-16** IUFRO Conference Regenerating Mountain Forests, Kloster Seeon, Bavaria, Germany; http://www.forst.tu-muenchen.de/events/rmf2004/index_en.html

- Sep 20-22** IUFRO All Division 8 Conference, Conservation biology and ecosystem functioning in plantation forests, Bordeaux, France; http://www.pierroton.inra.fr/IEFC/manifestations/IUFROD8_2004registration.php
- Sep 27-30** IUFRO Conference: The Economics and Management of High Productivity Plantations, Lugo, Spain; <http://www.lugo.usc.es/iufro>
- Oct 1-7** The National Wilderness Summit and Expo, Denver, CO; <http://www.wilderness.net/40th>
- *Oct 2-6** Society American Foresters Annual Meeting, held jointly with Canadian Institute of Forestry, Edmonton, Alberta
<http://www.cif-saf-2004convention.org/natcon/>
- Oct 17-22** North American Forestry Commission, Joint Meeting of Silviculture and Genetics Working Groups, Morelia, Michoacán, México; Stanturf to attend
- *Oct 18-22** Advancing the Fundamental Sciences - A Conference for Forest Service Physical Scientists, Shelter Point Island, San Diego, CA; abstract due April 30 <http://www.stream.fs.fed.us/EarthScience/NationalConference.html>
- Oct 19-21** SRS Management Team meeting, Coweeta
- Oct 31-Nov 3** Soil Science Society of America Annual Meeting, Seattle, WA.
- Nov 6-8** Southeastern Society American Foresters Annual Meeting, Jacksonville, FL "Managing forests for wildlife"
- Nov 8-12** Short Rotation Woody Crops Operations Working Group Biennial Meeting, Charleston, SC (date change)
- Nov 17-25** IUCN Third World Conservation Congress (WCC), Bangkok.
- *Nov 17-19** Assessment of the 2003 drought and heat impacts on forests, international conference sponsored by University of Freiburg, European Forestry Institute, Baden-Württemberg Forestry, FVA; Freiburg im Breisgau, Germany
- Nov 24-26** Introduction of broadleaf species for sustainable forest management, international conference sponsored by SUSTMAN project at the University of Ulm; to be held in Reissensburg, Germany, <http://www.sustman.de/Symposium.htm>
- Dec 16-17** SOFOR GIS 2004, Athens, GA; <http://www.gactr.uga.edu/conferences/forestry/index.html>
- 2005**
- *Feb 28-Mar 4** Southern Silvicultural Research Conference, Memphis <http://www.srs.fs.usda.gov/oaks/osc>
- *Mar 13-16** Emerging Issues Along Urban/Rural Interfaces: Linking Science and Society; Atlanta, IUFRO 6.00; <http://www.sfw.s.auburn.edu/urbanruralinterfaces/>
- Aug 8-13** IUFRO World Congress, Brisbane, Australia. Stanturf to attend.
<http://www.iufro2005.com>
- Aug/Sep** Society for Ecological Restoration 17th International Conference, Zaragoza, Spain.
- Oct 19-23** Society American Foresters Annual Meeting, Ft. Worth, TX
- Nov 6-10** Soil Science Society of American Annual Meeting, Salt Lake City, UT
- TBD** 5th International Conference on Forest Vegetation Management, IUFRO Research Group 1.13.00 Forest Vegetation Management. Corvallis, Oregon, USA
Contact: [Robin Rose](mailto:Robin.Rose@orst.edu), robin.rose@orst.edu.
- 2006**
- Jul 9-15** 18th World Congress of Soil Science, in Philadelphia, PA <http://www.18wcso.org>

SRS-4104 Project Leader's Report

John Stanturf

Editor

Lynne Breland

Technical Writer

Pat Outcalt

Production Manager

Dmitry Paladino

Design and Layout

