

Project Leader's Report

November - 2003



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Outreach Activities:

Six organized groups with a total of 92 people visited the Brender Forest during the month of November. These groups included the Mercer University Biology Lab, the Older American Council, Georgia Forestry Commission, and a silviculture class from Abraham Baldwin Agriculture College. The Older American council visitors had such a good time during their first visit to the forest that they returned later in the month to learn about the red-cockaded woodpecker, southern pine beetle, bent tree root and forest products. They were also shown crafts using forest products and visited by Smokey Bear, but couldn't talk him into making a tree out of tree bark and pine straw on his paper plate.

Approximately 31 visitors came by the office at the Brender Forest for information and 72 people signed the register at the Hitchiti Interpretive Trail.

Technology Transfer :

- Mac Callaham attended the Soil Science Society of America Annual Meeting in Denver, CO and presented an invited paper "Natural abundance and tracer applications of stable isotopes for examination of soil invertebrates feeding ecology." The paper was co-authored by Paul Hendrix, University of Georgia, John Blair, Kansas State University, and Matt Whiles, Southern Illinois University.
- Callaham also judged a poster session on "Carbon Pools and Carbon Cycling" at the Soil Science Society meeting.
- Tom Waldrop presented a tour and discussion of research results for the annual meeting of the Southern Appalachian Man and Biosphere Program, Asheville, NC. A group of natural resource managers, ecologists and environmentalists joined Tom at the

Green River Game Lands to see study plots established for the National Fire and Fire Surrogate Study. Tom showed how mechanical fuel reduction and prescribed burning could impact vegetative diversity, stand structure, and fuel loading. He also discussed impacts to wildlife, soils, and incidence of disease and insects. The presentation was well received by all interest groups.

- Alex Clark presented a review of current research at the Wood Quality Consortium annual fall meeting held at the University of Georgia. Clark, co-director of the Consortium, reported on the effects of annual irrigation and fertilization, and mid-rotation fertilization on wood specific gravity of loblolly pine.
- Ken Outcalt attended the annual meeting of the Society for Ecological Restoration in Austin, TX, and presented a paper entitled "Developing treatments

Rick Reitz participated in the Tool & Truck Day sponsored by the Athens-Clarke County School System at their middle schools. The objective of Tool & Truck Day is to expose students to different career paths at a young age. Rick was at two sessions and demonstrated tools used in wildland fire suppression, fire weather, and fire behavior. About 120 students, plus teachers, attended the session at Clarke Middle School, and 120 students, plus teachers, attended the session at Coile Middle School.

Reitz participated in Abraham Baldwin Agriculture College silviculture class forest management tour at Brender Demonstration Forest with David Combs and Boyd Edwards (retired). Twenty-three students plus their instructor reviewed a variety of research on the forest.

to restore structure and composition of Longleaf Pine ecosystem of the Gulf Coastal Plains.” This was based on the study at Solon Dixon Forestry and Education Center in Andalusia, AL, which is funded by the National Fire Plan.

The unit was well represented at the Second International Congress on Wildland Fire Ecology and Fire Management, in conjunction with the Fifth Symposium on Fire and Forest Meteorology, held in Orlando, FL. The following oral and poster presentations were made or co-authored by staff:

“Rabbit rules — an application of Stephen Wolfram’s “New kind of science” to fire spread modeling,” **Gary L. Achtemeier**

“Atmospheric response and feedback to smoke radiative forcing from wildland fires,” **Yongqiang Liu.**

“Recent results from PB-Piedmont—A model to simulate smoke on the ground at night,” **Gary L. Achtemeier**

“On the origins of “superfog”—A combination of smoke and water vapor that produces zero visibility over roadways,” **Gary L. Achtemeier**

“The Southern High Resolution Modeling Consortium—A source for research and operational collaboration,” **Gary L. Achtemeier, Scott L. Goodrick, and Yongqiang Liu**

“Relationship between atmospheric stability and area burned during the 1998 Florida wildfires,” **Scott L. Goodrick**

“Numerical simulation of buoyant plumes from annular heat sources in a crossflow,” **Scott L. Goodrick, P. Cunningham, M. Y. Hussaini, C. Xia, and R. R. Linn**

“Development of a statistical validation methodology for fire weather indices,” **Brian E. Potter, Scott L. Goodrick, and Timothy J. Brown**

“Exhausting relative greenness: inaccurate fire potential index for Florida?” **Carter Stone, Scott L. Goodrick, and Deborah E. Hanley.**

“Numerical study of effects of atmosphere temperature profile on wildfire behavior,” **Chunmei Xia, M. Y. Hussaini, Philip Cunningham, Rodman R. Linn, and Scott L. Goodrick**

“Assessing the value of increased model resolution in forecasting fire danger,” **Jeanne Hoadley, Miriam Rorig, Kenneth Westrick, Larry Bradshaw, Sue A. Ferguson, Scott L. Goodrick, and Paul Werth.**

“Human influence on fire disturbance in northern Wisconsin,” **Brian R. Sturtevant, and David T. Cleland**

“Dynamics of fire plumes in vertical shear,” **Philip Cunningham, Scott L. Goodrick, M. Y. Hussaini, Rodman R. Linn, and Chunmei Xia.**

“Developing management options for fuel reduction in pine flatwoods of the Southeast,” **Kenneth W. Outcalt, and Debbie K. Kennard**

“Dormant-season prescription fires to reduce hazardous fuel loads on the South Carolina coastal plain: A 40+ year study,” **Joseph J. O’Brien**

“Correlates of tree mortality resulting from re-introducing fire to long-unburned longleaf pine forests,” **John Kevin Hiers, Roger D. Ottmar, Joseph J. O’Brien, J. Morgan Varner, III, Francis E. Putz, Doria Gordon, and Sue Ferguson**

“Techniques and sampling strategies for comparing fires of different intensities,” **D. Kennard, Ken Outcalt, David Jones, and Becky Estes**

“Fuels and fire behavior vary by fuel reduction treatment and landscape position,” **Thomas A. Waldrop, Helen H. Mohr, and Sandra Rideout**

“Effects of fire intensity on vegetative composition in Piedmont loblolly-shortleaf pine communities: Preliminary results of the National Fire and Fire Surrogate Study,” **Sandra Rideout, Ross J. Phillips, and Thomas A. Waldrop**

“Fire Ecology Hypertext: A tool for synthesizing and distributing knowledge,” **Cynthia T. Fowler, D. Kennard, and H. M. Rauscher.**

- John Stanturf co-authored a poster presented by senior author Cal Meier, SRS-4155 at the Soil Science Society annual meeting in Denver. The poster was entitled “Litterfall and soil carbon in a mature bottomland hardwood forest.”

- Scott Goodrick chaired a session on Mesoscale Meteorology at the American Meteorological Society meeting in Orlando, FL.

Meetings / Reports :

- John Stanturf attended a planning meeting in Raleigh, NC to discuss writing a history of forest fertilization in the South. Steve Jones, Vice-Chancellor for Extension and Engagement at NC State University, hosted the meeting. Attendees included Steve Anderson, President of the Forest History Society; Lee Allen, Director of the NC State Forest Nutrition Cooperative; Bob Kellison, Director of the Institute of Forest Biotechnology; and Bud Broerman, retired research manager, Union Camp Corp.

- The unit will hold a staff meeting and have a family Christmas Party on Dec. 15.

- Kathleen Atkinson, Supervisor of the Chattahoochee-Oconee National Forest, will visit the Athens Lab on December 16. She will meet with staff of each of the research work units to obtain an overview of the research conducted at Athens and to explore cooperation with the National Forest. Rick Reitz arranged the meeting.

- Stanturf has been invited to attend an interagency workshop on Ecosystems and Carbon Budget, to be held in Silver Springs, MD on February 23 to 25.

- While in Colorado to attend the Soil Science Society of America annual meeting, Callaham toured the Fraser Experimental Forest and met with Chuck Rhoades, biochemist with the Rocky Mountain Research Station, to discuss possible collaborative work on soil biota in riparian wetlands on the Fraser.

- Callaham met with Dick Rosemier, Ranger, and several others from the Enoree Ranger District of the Sumter National Forest, SC to discuss the design and implementation of their prescribed fire long-term monitoring plots.

- Jen Staeben, graduate student in Entomology at Clemson University, successfully defended her Master’s thesis research, which was part of the Fire and Fire Surrogate Study (FFS) at Clemson Experimental Forest. Jen’s thesis research was focused on responses of ground beetles to the experimental treatments in the FFS. Mac Callaham was part of the advisory committee for Ms. Staeben. Congratulations to Jen from all the folks at RWU-4104!

“In the End, we will remember not the words of our enemies, but the silence of our friends.”

- Martin Luther King Jr.

- Elizabeth Blizzard, a graduate student at Clemson University, received second place honors for a poster she presented at the National Convention of the Society of American Foresters in Buffalo, NY. Her poster was entitled “Fell and burn regenerated mixed pine-hardwood stands: A concept revisited” and co-authored by David H. Van Lear, G. Geoff Wang, James A. Abercrombie, Jr., and Thomas A. Waldrop. The poster was based on research done by Tom Waldrop’s former Research Work Unit. Tom serves as research advisor for Ms. Blizzard’s M.S. Program. Her thesis work will examine early stand dynamics of pine-hardwood mixtures.

- Tom Waldrop discussed protocols for sampling vegetation and fuels with Greg Yarrow of Clemson University. Dr. Yarrow is beginning a project to evaluate impacts of various silvicultural treatments on wildlife habitat.

Funding :

- Gary Achtemeier has received \$10,000 from the Savannah River Station for research on smoke dispersion modeling. This is in addition to direct funding of a 3 mm radar project with the University of Massachusetts.

GPRA Accomplishments:

Category	FY 2002	FY 2003
	Total	To Date
Number of Refereed Journal Publications	24	7
Number of Non-Refereed Publications (include abstracts)	50	27
Number of Publications (refereed + non-refereed)	74	34
Number of Tours	66	13
Number of Short Courses/Training	8	5
Number of Invited Presentations to Scientific Organizations	8	5
Number of Invited Presentations to Lay Organizations	45	6
Volunteer Presentations to Scientific Organizations (non-GPRA)	27	29
Number of Technology Transfer Activities (other than above)	135	25
Outside Funding	\$1,955,455	\$23,000

Visitors :

• Dr. Palle Madsen, Senior Scientist with the Danish Forest and Landscape Research Institute visited John Stanturf to work on the book they are editing for CRC/Lewis on Restoration of Temperate and Boreal Forests.



• Dr. C. L. Huang, a microstructure scientist with Weyerhaeuser, stationed in Tacoma, WA, visited with Alex Clark. They reviewed the procedures Alex uses to prepare wood samples for x-ray densitometry and discussed the wood quality research Alex is conducting.

Personnel News :



• Dale Wade, retired scientist from RWU-4104, was awarded the first Herbert Stoddard, Sr. Lifetime Achievement Award at the Second International Congress on Wildland Fire Ecology and Fire Management in Orlando, FL in November. The award is given by the Association for Fire Ecology to recognize pioneers in the field of fire science.

“Well done is better than well said.”

- Benjamin Franklin

• Yongqiang Liu was the Grand Prize winner in the Athens Lab drawing for supporters of the Combined Federal Campaign. Yong received 8 hours of administrative leave. All employees at Athens who contributed to the CFC were eligible for the drawing.

• Janet Revell attended financial management training in Asheville, including the new WorkPlan program.

• Rick Reitz attended Introduction to Programming Concepts Using SAS Software in Atlanta, with tuition covered by the Forest Service nationwide license with SAS.

Yongqiang Liu



Richard Reitz

Janet Revell

News from around the Region :

• Changes in the Forest Service hierarchy were announced in November. Ann Bartuska has been named Deputy Chief for Research for the Forest Service. She takes over from the retiring Robert Lewis in early January. Since 2001, Ann directed the Invasive Species Initiative at the Nature Conservancy. Tom Mills is also announcing his retirement and Chief of Staff, Chris Pyron, has been selected to replace Mills as the Deputy Chief for Business Operations. Both Bartuska and Pyron will assume their new duties in January. In addition, Jack Craven, Director of Lands, has also announced his plans to retire at the end of 2003.



• Richard L. Porterfield has been chosen dean of the University of Georgia's Warnell School of Forest Resources. While working for Champion International from 1979 until 2000, Porterfield headed two of the company's major divisions, each having annual sales near or above \$1 billion. He also oversaw the firm's human resources operation and was responsible for management of the company's five million acres of timberlands. Prior to joining Champion, Porterfield was a professor of forest resources at Mississippi State University and taught forestry at the University of Arkansas. For the past year, he has taught at the College of William and Mary, where he created a new course in natural resources economics. Founded in 1906, the Warnell School is the oldest forest resources program in the South. With more than 200 undergraduates, some



140 graduate students and 37 faculty members, the school offers bachelor's, master's and doctoral programs in the areas of forestry, wildlife, fisheries and aquaculture and forest environmental resources. (Source: University of Georgia News Service)

- Leadership changes will occur at the Forest Nutrition Cooperative, NC State University. Tom Fox, professor at VPI, will become co-director with Lee Allen, NC State. The official home of the cooperative will remain NC State. Fox and Ralph Amateis, biometrics professor at VPI, have already begun to work with Allen and others on the work of the cooperative, including company visits and data analysis. (Source: Lee Allen, personal communication)

- A Survey of the "Use of Biotechnology in U.S. Industry" presents analysis of data collected in the first comprehensive federal survey of more than 3,000 U.S. firms' biotechnology-related business activities. Highlights from study are that biotechnology businesses and business lines are resilient and robust, despite the fact that 56% of respondents reported either no or negative operating income in 2001, biotech-related R&D accounted for about 10% of U.S. industry R&D in 2001, R&D intensity (the ratio of R&D expenditures to net sales) for biotech business lines was 33%, almost 3 times as much as the next most intensive sector, and national R&D intensity averaged 4% in 2000.
<http://www.technology.gov/Reports.htm>

"A friendship founded on business is better than a business founded on friendship."

- John D. Rockefeller

- Intellectual property rights (IPRs) in agriculture are a hotly debated topic. Is it moral for a scientist, for example, to patent an organism? While not so extreme, such questions are of interest in forestry as well. On Nov. 2, 2003, the Farm Foundation brought together seed producers, users and researchers to examine information and policy issues related to IPRs and agriculture. Papers and presentations of speakers at the *IPRs in Agriculture* workshop in Denver included Stephen Bent with Foley and Lardner. His talk, "Intellectual property rights in agricultural development: History and prognosis," is interesting, pertinent, and available at the Farm Foundation website.
<http://www.farmfoundation.org/projects/documents/Bentpaper.pdf>

- Chile's two largest forestry companies have agreed to protect native forests that they own. Units of Empresas CMPC SA and Compania de Petroleos de Chile SA signed an agreement with ForestEthics and Greenpeace, among others, that formally binds the two companies to certain environmental stewardship norms. Together, the firms account for some 80% of the Chilean forestry business. Home Depot, a major importer, helped broker the deal following the groups' pressure on U.S. buyers to demand sound environmental policies from the Chilean companies. An increasing number of Chilean companies - including state-run Corporacion Nacional del Cobre de Chile, Codelco - have secured ISO4001 certification, the benchmark set of norms for environment-friendly management. Although both sides agreed not to publish the investment involved Forest

Ethics said the companies spent significant amounts, with one of them purchasing sophisticated monitoring equipment. (Source: Dow Jones)

- The Alfred P. Sloan Foundation awarded the Center for Paper Business and Industry Studies (CPBIS), a Sloan Foundation Industry Studies Center (Sloan Center) at the Georgia Institute of Technology, a second three-year grant totaling \$1.3 million to continue building an academic center that serves the paper industry. This award follows a \$2.1 million grant from Sloan three years ago that helped create CPBIS. More information is available at www.cpbis.gatech.edu. (Source: PRNewswire)

Publications :

*Achtemeier, Gary L. 2003. Rabbit rules — an application of Stephen Wolfram's "New kind of science" to fire spread modeling. 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=65944>

*Achtemeier, Gary L. 2003. Recent results from PB-Piedmont—A model to simulate smoke on the ground at night. 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>

Publications :

- ***Achtemeier, Gary L.** 2003. On the origins of “superfog”—A combination of smoke and water vapor that produces zero visibility over roadways. 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. 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>
- ***Cunningham, Philip, Goodrick, Scott L., Hussaini, M.Y., Linn, Rodman R., and Chunmei Xia.** 2003. Dynamics of fire plumes in vertical shear. 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.
- ***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. 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 belowground 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., Vamer, 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. 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. 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., Outcalt, K.W., Jones, D., Estes, B.** 2003. Techniques and sampling strategies for comparing fires of different intensities. 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): 1827.
- ***Liu, Yongqiang.** 2003. Spatial and temporal variability of wildland fire emissions over the US. 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. 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]

Publications :

- *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.
- ***O'Brien, Joseph J.** 2003. Dormant-season prescription fires to reduce hazardous fuel loads on the South Carolina coastal plain: A 40+ year study. 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, editors. "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. Proceedings of Fourth Longleaf Alliance Regional Conference. Longleaf Alliance Report No. 6: 126-129.
- ***Outcalt, K.W. and D.K. Kennard.** 2003. Developing management options for fuel reduction in pine flatwoods of the southeast. 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. 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, 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]
- Stanturf, John A.** and Zhang, Daowei. 2003. Plantation forests in the US, past present and future. In Proceedings 12th World Forestry Congress, vol. B: Forests for the Planet p. 41 [Abstract]. [Full paper available at FAO website: <http://www.fao.org/DOCREP/ARTICLE/WFC/XII/0325-B1.HTM>]
- *Stone, Carter, **Goodrick, Scott L.**, and Deborah E. Hanley. 2003. Exhausting relative greenness: inaccurate fire potential index for Florida? 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. 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, T.A., Mohr, H.H., Rideout-Hanzak, S.** 2003. Fuels and fire behavior vary by fuel reduction treatment and landscape position. 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. 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 :

2003		May 18-20	Interagency Fire and Air Group meeting, Athens; contact Gary Achtemeier (gachtemeier@fs.fed.us) for information
Dec 1-5	IEA Short Rotation Bioenergy (Task 30) Meeting, New Zealand; Stanturf to attend and present paper; http://www.shortrotationcrops.com/events.htm	Jun 14-18	IUFRO Division 1 - Silviculture Conference, CIRADForet, in Montpellier, France. Note date change.
Dec 8-10	Bioenergy australia 2003, Sydney; Stanturf to present paper; http://www.conferenceaction.com.au/current/Bioenergy2003RregDoc.pdf	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
2004		Jun 27-Jul 2	First Agroforestry World Congress, Orlando, FL http://conference.ifas.ufl.edu/wca/#background
*Jan 22-23	Short Rotation Woody Crops Cooperative Research Program Annual update and planning meeting, Aiken, SC	Jul 25-31	7th INTECOL International Wetlands Conference, Utrecht, The Netherlands. http://www.bio.uu.nl/INTECOL
Feb 2-3	2nd Annual Western Gulf Forest Soils Tour, Alexandria, LA	Aug 15-20	Large-Scale Experiments for Sustainable Forestry: Balancing Ecosystem Values; International IUFRO Workshop, Portland, OR. Contact Charley Peterson: cepeterson@fs.fed.us
*Mar 1-2	SRS Management Team meeting, Atlanta	Sep 1-2	Forest IT 2004 Exhibition and Congress, Jyväskylä, Finland; http://www.ForestIT.net
Mar 2-4	Southern Research Station All Scientists Meeting, Atlanta	Sep 3-7	European Forest Institute (EFI) Annual Meeting, Bangor, Wales (UK).
Mar 3-5	National Fire Plan and Wildland Fire Conference 2004, Reno, NV http://www.iafc.org/pdf/conf/WF04_attendee.pdf	Sep 12-16	IUFRO Conference Regenerating Mountain Forests, Kloster Seeon, Bavaria, Germany; http://www.forst.tu-muenchen.de/events/rmf2004/index_en.html
Mar 17-19	14th Central Hardwood Forest Conference, Wooster, OH. http://www.oardc.ohio-state.edu/chfc2004/	Oct 1-7	The National Wilderness Summit and Expo will be held, Denver, CO; http://www.wilderness.net/40th
*Mar 25-26	Coastal Plains Chapter of the Society for Ecological Restoration Annual Symposium and Membership Meeting, Raleigh, NC	Oct 2-6	Society American Foresters Annual Meeting, held jointly with Canadian Institute of Forestry, Edmonton, Alberta
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	*Oct 18-22	Advancing the Fundamental Sciences - A Conference for Forest Service Physical Scientists San Diego, CA
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	*Oct 19-21	SRS Management Team meeting, Coweeta or New Orleans

- 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 7-11** Short Rotation Woody Crops Operations Working Group Biennial Meeting, Charleston, SC
- Nov 17-25** IUCN Third World Conservation Congress (WCC), Bangkok.
- 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 Reisensburg, Germany, <http://www.sustman.de>
- 2005**
- 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.18wcss.org>



SRS-4104 Project Leader's Report

John Stanturf

Editor

Lynne Breland

Technical Writer

Pat Outcalt

Production Manager

Dmitry Paladino

Design and Layout

