

Project Leader's Report

December - 2002



USDA Forest Service - Southern Research Station - 320 Green Street Athens GA 30602 - <http://www.srs.fs.fed.us/disturbance>



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Outreach Activities:

102 visitors registered at the Hitchiti Interpretive Trail in December, and 15 people stopped by the office for information and assistance.

Three formal tours and one training session were held with groups from the Georgia Wilderness Society, Audubon Society, Bowden Family, and the Red Cross.

Work has been curtailed because of limitations on senior program employees operating equipment. Nevertheless, longleaf pine was planted in some of the Southern Pine Beetle sanitation cuts as well as planting and pruning in the Arboretum. Other work included trail maintenance and seeding wildlife food plots.

Technology Transfer:

Cooperators completed a first version of a complete content management system for the Encyclopedia of Southern Fire Science hypertext. Bryan Jordin and William Milnor of the Southern Forestry Extension Service used Zope CMF software for the system that integrates the entire publishing process (author contribution, peer review, technical editing, and final publishing) into a single web-based system. Contributing authors will begin submitting their material directly to the on-line system in Spring 2003. Deb Kennard is leading this effort to develop a fire encyclopedia, with funding provided by the National Fire Plan.

Scott Goodrick attended the first meeting of the Fire Index Validation Task Force in Salt Lake City, Utah. The Task Force outlined their plans for

creating a robust, standardized framework/data set for evaluating the wide range of indices used in evaluating the fire environment. They are developing a proposal to the Joint Fire Science Program to further development of the framework.

Scott Goodrick attending a meeting of the cadre developing a new training course for the state of Florida's on "Implementing Prescribed Fire at the Wildland Urban Interface." Scott developed the fire weather section of the course and assisted in critiquing the smoke management section. This is the first training course to attempt to teach the intricacies of planning and executing prescribed burns in the wildland urban interface.



Hitchiti crew came to Athens for the Christmas Party

Meetings / Reports:

• Ralph DiCosty visited Dr. Steve Kelley and co-workers at the National Renewable Energy Laboratories (NREL) in Golden, CO. DiCosty presented a summary of his dissertation work on the chemical structure and biological stability of soil organic nitrogen, and the group then discussed how NREL's pyrolysis molecular-beam mass spectrometer could contribute to the molecular characterization of soil organic matter. Kim Magrini and her group are able to distinguish old from new carbon, and can differentiate lignins of different tree species. Steve Kelley would like to see if Near Infra-Red (NIR) could distinguish the same differences between sites as py-MBMS. The characterization of char or "black carbon" emerged as a key area of scientific interest in evaluating soil organic matter in fire-affected soils. DiCosty also discussed with the NREL future collaboration on smoldering combustion. Mark Davis is investigating whether different species of organic N contribute differently to NO_x release during combustion. The NREL group has experience and continuing interest in this area, and is connected to Bob Yokelson's group at the University of Montana.

• The Faculty of Forest and Environmental Sciences, Forest Research Institute of Baden Württemberg, Germany are organizing a meeting on conversion of Norway spruce forests, with several IUFRO research groups co-sponsoring (1.14.00, Uneven-age Silviculture, 1.14.02, Restoration of Temperate and Boreal Forests, and 4.04.09, Scenarios for Transformation Forest Management). The meeting is titled "The Question Of Conversion of Coniferous Forests" and will be held in Freiburg, Germany from 28 September to 2 October 2003. The meeting

developed from the work of the RPC CONFOREST, led by Heinrich Spiecker. RPC CONFOREST stands for the Regional Project Centre under the umbrella of European Forest Institute EFI, which deals with the question of CONversion of pure secondary Norway spruce FORESTs on sites naturally dominated by broadleaves for sustainable fulfillment of society's needs. Stanturf discussed collaboration between the restoration research group (which he chairs) and the other groups. They had a spirited discussion (via E-mail) on terminology (conversion, transformation, restoration, rehabilitation).

• Boyd Edwards met with the Planning Committee for the 2003 Agroforestry and Wildlife Field Day, to be held September 18 at the Griffin Campus of the University of Georgia. Last year, approximately 3000 natural resource professionals and their clients attended the Field Day. Anyone interested in participating in the program should send his or her title and general description of the topic to Boyd at bedwards@fs.fed.us before January 7, 2003.



Boyd Edwards in his office

• Gary Achtemeier with Tom Mote and Luke Naeher, UGA, will prepare a proposal and submit it to the Joint Fire Sciences Program for the study of the effects of prescribed burning of coastal

grasslands on micrometeorology and formation of super fog.

• A national workshop for Fire and Air Quality Management has been rescheduled for 28-30 January in Tucson, AZ. The objective of the workshop is to improve integration and collaboration of Forest Service Fire Management and Air Quality Management programs at the regional and national levels.

• A West Gulf Forest Soils Group has been formed and a field tour organized by Tat Smith and Mike Messina, Texas A&M, and Clay Bales, Texas Forest Service. The field tour, to be held 3-4 February, is titled "Sustainable Forest Management Systems: Research advances, spatial information systems, and management interpretations." The tour will begin in Lufkin. Topics to be covered include the relationship between forest soils and sustainable forest management, including soil mapping, SFI, water quality, site productivity, site preparation and plantation establishment activities, nutrient and vegetation management systems, land application of waste (e.g. wood ash, biosolids), and management decision support systems.

• The annual conference of the European Forest Institute (EFI) will take place on 3-7 September 2004 in Bangor, Wales (UK). The scientific program of the conference will be organized by the IUFRO working party 4.04.09, Scenarios for Transformation Forest Management. Conference organizers envision that special (but not exclusive) attention will be paid to Sitka spruce, as this is the main coniferous species of Great Britain, and to the specific issue of transformation of pure, even-age conifer stands to other

Funding :

species or structures in the face of high precipitation and high wind speeds. The scientific committee of this meeting involves IUFRO members of Divisions 1 and 4 and the meeting will be co-sponsored by IUFRO WP 1.17.02, Restoration of Temperate and Boreal Forests.

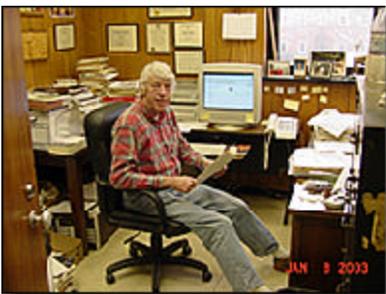
Sandra Rideout, John Stanturf, Patricia Outcalt, and Dmitry Lima submitted two pre-proposals to the National Web-based Learning Center for Nonfederal Forest and Range Lands. The Center is located at the University of Tennessee, as an extension activity of the Department of Forestry, Wildlife, and Fisheries. The USDA provided funding for the Center. The proposals submitted were to develop web-based educational modules for private landowners on "Prescribed fire as a management tool in Southern Forests" and "Restoring bottomland hardwoods."

Personnel News :

- Tim Giddens, electronics technician in Athens, was awarded the Director's Award for Support Services. Congratulations, Tim, for well-deserved recognition of your efforts to provide super-computer capability for the unit.

- Janet Revell and Pat Outcalt were nominated for the Fiscal award for their development of an Excel budget/financial program. They received an acknowledgment and encouragement letter from Director Roussopoulos.

- Dale Wade, Research Forester, announced his retirement after 38 years with the Forest Service. Dale is projecting an effective retirement date of January 3, 2003. He will continue to serve the unit as a volunteer and plans to complete writing projects.



Dale Wade arranging office space

- Jason O'Shell, technician stationed at Myakka River State Park, FL, wed longtime fiancée Mary Ann over Christmas. Congratulations to the newlyweds.



- A new student joins the Athens team, Marshall Thompson. Marshall replaces Mona Joshi, pre-law, who is leaving to take up an internship with the Solicitor General's office. Marshall, a sophomore, is a Business major and will primarily assist Janet Revell with administrative tasks.

- Sandra Rideout, Research Forester at Clemson, was elected to a two-year term (2003-2005) on the national board of directors of the Association for Fire Ecology. AFE is an organization of professionals dedicated to improving the knowledge and use of fire in land management. It was started in 2000 by a group of researchers in California involved with the California Association for Fire Ecology (CAFE).

- Kim Crider, ecologist, completed her coursework and residence for her MS from the University of Tennessee. Kim will re-locate to Athens in January to work in the unit and finish writing her thesis. She plans to begin her Ph.D. program next fall under the Scientist Recruitment Initiative.



Kim Crider

- Helen Mohr has returned to work at Clemson from maternity leave and is preparing her presentation for the Southern Silvicultural Research Conference in February.

- Last month we reported that Joe McConnell, a GS-4 Forestry Technician at the Solon Dixon Center, was leaving for

Happy New Year from everyone in the Unit

a position in the private sector. We are happy to announce that Joe changed his mind and will remain with the unit.

- Unfortunately, Steve Miller, for personal reasons, has decided to retract his acceptance of the Prescribed Fire Technology Transfer specialist position. The Position (GS-13 Forester) has been re-advertised. Closing date for new applications is January 13.

- Ralph DiCosty attended a 3-day hands-on training course at Perkin Elmer Instruments in Shelton, CT for operation of the Optima 2000 DV Inductively Coupled Plasma Optical Emission Spectrometer (ICP). The unit owns this instrument, which can determine the total amounts of 72 chemical elements in plant soil and water samples. Highlights of the course included software, hardware, maintenance, and an in-depth discussion of detection limits and interferences.

- Corey Babb and Ralph DiCosty attended a 3-day training course at the Hach Company in Loveland, CO for operation of the Lachat Quick Chem Flow Injection Autoanalyzer (8000+ Model). This instrument, owned by the unit, has the capability of determining the concentrations of important nutrient ions (e.g. nitrate and phosphate) in hundreds of plant/soil extracts per day. The final exercise of the hands-on course involved troubleshooting multiple instrument problems on an instrument that had been extensively and secretly “un-tuned” by the instructor.

(from left to right) Ross Phillips, Chuck Flint, Greg Chapman and Rob Harrison received performance awards from Tom Waldrop as John Stanturf looks over during the Staff Meeting.

- Edward Andrews completed a graduate-level course in soil physics at the University of Georgia.



- John is still recovering from his surgery, but as you can see he hasn't quite get the hang of this "rest and relaxation" business. After deliberately going against doctor's orders, he was caught attempting to take his work home. For shame, John, for shame.



- The unit Christmas party was enjoyed by one and all. Many thanks to Janet Revell and Pat Outcalt for organizing it, to everyone who helped with set-up, and to everyone who brought in such great dishes. Once again, smoked turkey was a highlight—thanks to Ken Forbus.



Pictures from The Christmas Party:



Families in line for food at the christmas party



What a feast



Future volunteers! left to right: Rachel and Chad Bland, Anna DiCosty.

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and find out more at:
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GPRA Accomplishments:

Category	FY 2002 Total	FY 2003 To Date
Number of Refereed Journal Publications	9	4
Number of Non-Refereed Publications (include abstracts)	53	1
Number of Publications (refereed + non-refereed)	62	5
Number of Tours	46	22
Number of Short Courses/Training	8	4
Number of Invited Presentations to Scientific Organizations	6	1
Number of Invited Presentations to Lay Organizations	25	27
Volunteer Presentations to Scientific Organizations (non-GPRA)	28	8
Number of Technology Transfer Activities (other than above)	172	51
Outside Funding	\$3,227,500	\$45,563

News from around the Region:

- A new IUFRO research group was formed in June 2002, WP 04.04.09 entitled “Scenarios for Transformation Forest Management”. The group’s main task will be to investigate silvicultural transformation scenarios, initially concentrating on temperate forests. The exact definition of transformation depends on national and sometimes even regional forest policies but usually means changing stand structure. In the UK for example, a common transformation scenario is the conversion of even-aged Sitka spruce stands to two-storied pure Sitka spruce stands, or Sitka spruce mixed with other conifers or broadleaves. Transformation deals with what is called ‘continuous cover forestry’ (CCF) in Britain and close-to-nature forestry or near-natural forest management in other parts of Europe. Work will focus on modeling, simulation, and other biometric methods, but there is still scope to incorporate other research fields and methods. Close cooperation is planned with IUFRO 1.14 ‘Uneven-aged silviculture’ and 1.17.02 ‘Temperate and boreal forest restoration.’ For more information, contact Arne Pommerening, University of Wales, arne.pommerening@bangor.ac.uk.
 - The Southern Appalachian Man and the Biosphere (SAMAB) program announced availability of summer internships for 2003. The ten-week program runs from June 2 through August 8, 2003 and places interns with environmental decision-making organizations in the East Tennessee area. The program is open to advanced undergraduate and graduate students in public policy and administration, environmental science, planning, natural resource management, business, decision research, information, and related fields. Contact samab@utk.edu or see <http://www.samab.org/Opps/intern> for full program description and application procedures.
 - Terry Lynn Barton, a former FS employee, entered a guilty plea on December 16th in Federal District Court in Denver, CO for causing the Hayman fire, the biggest wildfire in the history of the State of Colorado. Barton ignited the fire on June 8th near Lake George, CO. The fire burned 137,000+ acres and 133 homes. Barton is facing 70-87 months jail time and up to \$500,000 in fines, plus restitution for the federal charges. The State is expected to file further charges.
- Sentencing on the federal charges is set for February 21st. (Source: LEI Weekly Report).
- Rayonier announced approval by its Board of Directors for the sale of 8,465 acres of land and timber for \$39.9 million to the St. Johns River Water Management District (SJRWMD) and the State of Florida. The SJRWMD last week agreed to purchase the property but the transaction remains contingent on ratification by the Florida Cabinet. The sale price is subject to a post-survey acreage adjustment and could be somewhat different from the announced figure. The acreage will nearly triple the size of Faver-Dykes State Park in St. Johns County and create a 16,000-acre conservation area in Flagler and St. Johns Counties. Rayonier said the proposed transaction is part of its strategic program to capture appreciating timber and land values by annually selling 2 to 4 percent of its holdings, while opportunistically purchasing timberlands. The company said many of its 2.2 million acres of timberland in the U.S. and New Zealand have higher value as conservation, recreation, or development properties. (Source: BusinessWire)

- Dudley Hartel is joining the Southern Center for Urban Forestry Research and Information as a technology transfer specialist. Hartel earned Forestry degrees from Michigan State (BS) and Clemson University (MS) and he is an ISA Certified Arborist. He has over 10 years experience providing urban forestry consulting services in the southern US. He will be located at the Forestry Sciences Lab, Athens, GA.

- Kathleen Atkinson has accepted the Forest Supervisor position on the Chattahoochee-Oconee National Forests in the Southern Region (R-8).

- Sharon Friedman is leaving the R&D staff in the Washington Office to become Assistant Director, NEPA in the National Forest System, Washington Office.

- Ralph Crawford has accepted the Research Ecologist, Range National Program Leader position in Research and Development, Washington Office.

Publications :

FY 2003 (*denotes new publication this month)

*Glitzenstein, J.S, Streg, D.R., and **Wade, D.D.** 2003. Fire frequency effects on longleaf pine (*Pinus palustris* P. Miller) vegetation in South Carolina and Northeast Florida, USA. *Natural Areas Journal* 23:22-37.

Escalante Fernandez, R. Monreal Rangel, S., **Stanturf, J.**, Arseneau, C., Nantel, P. 2002. Forest plantations in North America. Report to the North American Forestry Commission. 26pp.

Rideout, S. and Oswald, B.P. 2002. Effects of prescribed burning on vegetation and fuel loading in three east Texas state parks. *Texas J. Science* 54(3): 211-226.

Stanturf J.A. and Madsen P. 2002. Restoration concepts for temperate and boreal forests of North America and Western Europe. In: *Forest Ecosystems: Ecology, Conservation and Sustainable Management* (eds. Jiang Z., Centritto M., Liu S. & Chiatante D.). *Plant Biosystems* 136, 143-158.

Stanturf, J.A., Wade, D.D., Waldrop, T.A., Kennard, D.K., and Achtemeier, G.L. 2002. Fire in Southern Forest Landscapes. P. 607-630 (Chapter 25) In Wear, D.M. and Greis, J.G., editors, *Southern Forest Resource Assessment*. Gen Tech Rep. SRS-53. Asheville, NC: U.S. Department of Agriculture, Forest Service, Southern Research Station.

Upcoming Events :

2003

Jan 14-17 National Fire Plan Coordination Meeting, New Orleans; Achtemeier, Outcalt and Waldrop to attend.

***Jan 28-30** National Fire and Air Quality Workshop, Tucson, AZ

***Feb 3-4** West Gulf Forest Soils tour, Lufkin, TX

Feb 11-13 Southern Research Station Management Team meeting, Asheville; Stanturf to attend

Feb 24-27 Southern Silvicultural Research Conference, Biloxi, MS., unit staff to attend.

Feb 27-Mar 1 Coastal Plain Chapter, Society for Ecological Restoration annual meeting, Athens, GA

Mar 3-7 Functional Assistance Visit; Asheville admin team led by Jay Hundley, to Athens, GA.

Mar 12-14 Workshop on Forest Fire Modeling and Prediction in the Southeast United States, Tallahassee, FL; Goodrick, Liu, Achtemeier, Waldrop, and Stanturf to attend.

Mar 23-27 Molecular Studies Of Soil Organic Matter 225th ACS International Meeting New Orleans, LA; DiCosty to attend <http://membership.acs.org/g/geoc/>

Apr 21-23 Dean's Tour to be held in at the University of Georgia in Athens, Georgia.

Apr 23-25 IUFRO Conference on Decision Support for Multiple Purpose Forestry: A Transdisciplinary Conference on the Development and Application of Decision Support Tools for Forest Management, Vienna, Austria; Kennard to attend and present.

- May 11-16** Fifth International Conference on Science and the Management of Protected Areas (SAMPAA V), University of Victoria, Victoria, British Columbia, Canada. The theme will be Making Ecosystem Management Work: Connecting Managers and Researchers. For more information see <http://www.sampaa.org>
- May 12-15** 2nd Forest Engineering Conference, hosted by SkogForsk (The Forestry Research Institute of Sweden), Växjö, Sweden; Stanturf to present poster. <http://www.skogforsk.se/fec>
- Jun 16-20** Fourth Annual North American Forest Ecology Workshop, Oregon State University in Corvallis, OR. Abstracts due Jan 17, 2003. <http://outreach.cof.orst.edu/nafew/>
- Jun 22-25** 57th Annual Meeting of the Forest Products Society, Doubletree Hotel, Bellevue, WA. Alex Clark will make presentation.
- Jul 20-24** 10th North American Forest Soils Conference, Sault Ste. Marie, Ontario, Canada; Stanturf, Callaham to attend and present posters. <http://www.fs.fed.us/forestssoilsconference>.
- Aug 11-14** IUFRO Working Group for Seed Physiology and Technology conference to be held at the Georgia Center, Athens, GA.
- Aug 17-24** IUFRO UNIT 8.08.02 Impact of wind on forests conference, 'Strong Winds and Trees: ecology and management' Zurich, Switzerland
- Sep 7-10** Council on Forest Engineering annual meeting, Bar Harbor, ME; <http://www.forest-resources.umaine.edu/nercofe/cofe2003.htm>
- *Sep 18** Agroforestry and Wildlife Field Day, Griffin, GA
- Sep 21-28** 12th World Forestry Congress, Quebec City, Canada; Stanturf to attend. <http://www.wfc2003.org>
- *Sep 28-Oct 2** The Question Of Conversion of Coniferous Forests meeting, Freiburg, Germany; contact for further information: instww@uni-freiburg.de
- Oct 4-8** 3rd International Wildland Fire Conference, sponsored by the North American Forest Commission's Fire Management Working Group, Sydney, Australia.
- Oct 25-29** Society American Foresters Annual Meeting, Buffalo, NY
- Nov 2-6** Soil Science Society of America annual meeting, Denver, CO
- Nov 13-15** Society for Ecological Restoration 15th International Conference, Austin, TX
- Nov 16-20** Second International Congress On Wildland Fire Ecology And Fire Management, in conjunction with the Fifth Symposium on Fire and Forest Meteorology
- Nov-Dec** IEA Short Rotation Bioenergy (Task 30) meeting, New Zealand and Australia
- 2004**
- Aug** Society for Ecological Restoration 16th International Conference, Victoria, British Columbia
- *Sep 3-7** European Forest Institute (EFI) annual meeting, Bangor, Wales (UK).
- Oct 31-Nov 4** Soil Science Society of America annual meeting, Seattle, WA
- Nov** Short Rotation Woody Crops Operations Working Group Biennial Meeting, Aiken, SC; dates TBA
- 2005**
- Aug 8-13** IUFRO World Congress, Brisbane, Australia; Stanturf to Attend.
- Aug or Sep** Society for Ecological Restoration 17th International Conference, Zaragoza, Spain
- Nov 6-10** Soil Science Society of America annual meeting, Salt Lake City, UT

SRS-4104 Project Leader's Report

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