

FOREST ECOLOGY AND MANAGEMENT NEWS

A Newsletter for Department of Forest Ecology and Management Staff, Students and Alumni

Vol. 6, No. 1

March 2003

News from the Chair

Tuesday, February 18th ranks as a 'double barreled' kind of day – one that most chairs hope they never experience. The day began with a dean's budget meeting where I learned just what part of our collective hide we would lose to meet the state-mandated 2003-04 budget cuts.

Forest Ecology and Management returned a sum in excess of \$10,000, but I felt fortunate knowing that other departments were asked to cut even deeper. Then I listened to Governor Doyle's evening budget message – probably the most important political pronouncement we have witnessed in many a year. Uncertain economic prospects locally, nationally, and internationally all conspire to raise belt tightening to new levels. The University was not spared, and will experience a cut of 6.3% during the next biennium. Will it be difficult to cope with even more budget cuts? Absolutely. Will we do it? Absolutely. And I have confidence that in a few years when we review the events of this period, we will understand that we became stronger and more focused on those educational and professional activities that really matter. Like it or not, fear has a way of focusing our attention and energy.

Amongst the gloom of Wisconsin's present fiscal situation, we can find many things to celebrate, not the least of which is the success of our students. Although it can be hard to recall our own youth, it remains true that young people have a resilience that is a joy to behold. While we may think they face hardship amidst uncertain times, students are blessed with an optimism that

won't deter them from following a dream or allow them to accept failure. This year's graduating class is no exception, and most already are immersed in graduate study, work, or travel, both home and abroad. It is also a pleasure to report that our department successfully completed its periodic Society of American Foresters accreditation review. We met all educational requirements and satisfied every standard – a fine tribute to the university and our faculty.

Please read and enjoy this newsletter. We like to think we put it together with our alumni and friends in mind. Please take a minute to tell us how you are doing (and where you are doing it). Unless we hear from you, we are only talking to ourselves. Stay connected – we haven't forgotten you. Please don't forget us. – *Ray Guries*, e-mail: rpguries@wisc.edu.

Alumni Update

Brian Beisel (BS 1981) is currently the Customer Service Manager at the Land Between the Lakes National Recreation Area in Tennessee and Kentucky. This 170,000 acre area is managed by the US Forest Service. Created by President John F. Kennedy in 1963, Land Between the Lakes is the cornerstone of the outdoor recreation industry in W. Kentucky and Tennessee. Brian oversees the management of visitor services for more than 2,000,000 visitors each year. Prior to this position, Brian worked on the Francis Marion National Forest in South Carolina. He, his wife Shirley, and son Trent were happy to move "back north" in order to make more frequent visits to

family in Wisconsin. Check out the Land Between the Lakes web site at <http://www.lbl.org/> as you plan your next camping trip. Brian would love to see old (and young) classmates visit him.

Kate Wipperman (BS 2002) is working as a Project Assistant for the Natural Heritage Land Trust (NHLT) in Madison. Kate majored in Recreation Resources Management and Botany and also received an IES Certificate. In August she landed a position with NHLT, an organization dedicated to the conservation of open space and natural areas in Dane and surrounding counties. Her current work focuses on local watersheds. "I work closely with the local watershed groups, coordinate with other partner groups, contact and meet with landowners, write applications for grants, keep updated on activities in these areas, do some outreach, and other related activities," Kate reports. Kate's e-mail address is: kate@nhlt.org.

FOREST ECOLOGY AND MANAGEMENT NEWS is published by the Department of Forest Ecology and Management

Please send comments and submit news to:

Department of Forest Ecology and Management

1630 Linden Drive

University of Wisconsin-Madison
Madison, WI 53706-1598

Tel. 608-262-9975

Fax 608-262-9922

Email: forecol@calshp.cals.wisc.edu

<http://forest.wisc.edu>



Student News

Congratulations to Our Recent Grads

Congratulations to the following Forest Ecology and Management students who received degrees in December 2002:

Sean Burrows – PhD
Yousoo Hann – MS and PhD
Daniel Kashian – PhD
Rebecca Ralston – MS

Forest Science Graduates:

Tricia Burgoyne
Guenther Castillon
Tracy Elver
Briana Frank
Jason Ludden
Adam Makda
Aaron Mielke
Steve Wangen

Recreation Resources Management Graduates:

Kevin Colwin
Sara Halton

Current FEM Enrollment

The Dept. of Forest Ecology and Management currently has 16 students working toward the MS degree and 25 PhD students. Undergraduate majors include 38 students pursuing a Forest Science degree and 40 pursuing a Recreation Resources Management degree. Undergraduate enrollment in the Forest Science degree has been steady over the past couple of years. However, student interest in the Recreation Resources Management degree appears to be increasing. The number of students in our graduate degree program is also on the rise in response to the addition of three new faculty in recent years.

Welcome to Our New Graduate Students

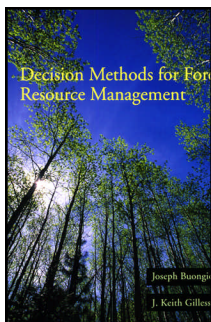
We have two new graduate students in the department this semester - Michael Labissoniere and Laura Marx. They each have provided a bit of background about themselves. Take a moment to welcome them, either in person or by e-mail.

Michael La Bissoniere <labissoniere@wisc.edu> - My name is Michael La Bissoniere (most people know me as Mike) and I'm a new Master's Degree candidate working with Scott Bowe in the wood products area. I grew up in Monona, just southeast of Madison and earned my Bachelor's of Business Administration degree from the University of Wisconsin-Whitewater in 1988, majoring in Finance and Real Estate. After working in the commercial real estate industry in southern Wisconsin for 12 years, I wanted to change my career direction. After taking introductory courses in plant pathology and forestry, I was fortunate enough to be accepted as a new graduate student beginning this semester. My wife, Lisa, and I live in Middleton, where we spend many hours working on our house and in our gardens. We also enjoy traveling around the state and nature photography.

Laura Marx <lauramarx@wisc.edu> - I got my BA in biology from Kenyon College (in Ohio). I'm currently a PhD candidate in my third year of graduate school at Michigan State University's Forestry Department. I'm interested in forest ecology, but especially in the mechanisms behind ecological patterns like forest types and species distributions. My research involves trying to figure out why hemlock and yellow birch seedlings are preferentially found on decaying wood, and whether this limitation to a certain kind of substrate can help explain the hemlock patch structure and the hemlock-yellow birch association in Michigan's Upper Peninsula. I am working with Prof. Craig Lorimer here at UW and have gotten some advice and help on wood identification from the Forest Products Lab. I'm also trying to take advantage of the teaching resources here and so am taking a course on teaching college biology and setting up guest lectures in intro courses. (Grad students should note that all of the Big Ten schools have a cooperative agreement to make it easy for grads to study at a different Big Ten school for up to two semesters.) I have been involved in various choirs, and I occasionally go swing or ballroom dancing when the opportunity presents itself.

Department News

Prof. Joseph Buongiorno co-authors two new books



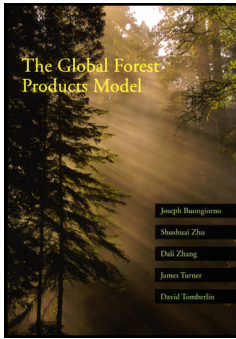
Professor Joseph Buongiorno, Dept. of Forest Ecology and Management and Prof. Keith Gilles (PhD '83) are co-authors of: ***Decision Methods for Forest Resource Management***, published in February

2003 by Academic Press, ISBN 0-12-141362-4. Gilles is now the S.J. Hall Professor in the College of Natural Resources at the University of California, Berkeley. The textbook on forest resource management is intended for senior undergraduates; first year graduate students; and professionals in forestry, natural resource management, and other fields of environmental science. In their book Buongiorno and Gilles review the essential modern decision methods used in the scientific management of forests. They give a balanced treatment to the ecological and economic impact of alternative management decisions in both even-aged and uneven-aged forests. The relevant

continues on page 3



methods are presented with simple algebra and spreadsheet models, along with a variety of examples that you can download from the web to brush up your management skills.



Joseph Buongiorno, Shushuai Zhu (PhD '01), Dali Zhang (PhD '92), James Turner (Graduate Student), and David Tomberlin (PhD 99) are co-authors of: *The*

Global Forest Products Model, published in February 2003 by Academic Press, ISBN 0-12-141362-4. Zhu is now a Senior Software Engineer with Oracle Co., Zhang is an Associate Principal at Jaakko Poyry Consulting in Shanghai, Turner is a PhD student here, and Tomberlin is a Research Economist with the National Marine Fisheries Service in Santa Barbara. Their book describes the Global Forest Products Model (GFPM) designed to predict production, consumption, trade, and prices of forest products in world markets. The model simulates how world forests and their industries interact through international trade. The book thoroughly documents the methods, data, and computer software of the model. Six applications of the model show its usefulness in addressing international economic and environmental issues. You can download from the web the software and the data to run these applications, and see what the future world forest sector will be like.

Study receives NRI funding

The UW-Madison, Department of Forest Ecology and Management has been awarded a National Research Initiative (NRI) grant for \$168,500. The principal investigator is **Professor Donald Field**. The two-year project will examine the social transformation of a rural area in an amenity rich natural resource context.

In particular, the study will examine the impact of population growth associated with housing/residential development (both seasonal and permanent land ownership) on local communities and how it affects nearby national forest and park management. The study will take place in southwest Utah and the study results will be compared to the results of a similar study Field and colleagues are doing in the Pine Barrens in northwestern Wisconsin. Co-investigators for the new NRI project are Dr. Richard Krannich, Utah State University, and Dr. A.E. Luloff, Pennsylvania State University.

Kemp Station Adds New Lodging for Northwoods Scientists and Students

Whether it was for Summer Camp, a weekend field trip, or a Northwoods research project, there's a good chance that your academic travels took you to Kemp Station. More and more people have been making the trip to Kemp in recent years. So much so that the Station is adding new lodging to accommodate the growing number of scientists and students working at the Station. "We've seen a terrific increase in research and teaching activity," says **Tom Steele**, Kemp Superintendent. "In the mid-1990s, we completed a major lab renovation project and since then our use has grown dramatically." Demand from users now exceeds Station capacity. During the busy field season, scientists and students from Wisconsin and across North America call Kemp Station home. Indeed, the Station is developing a national and international reputation for supporting innovative research and education.

To address its lodging shortage, the Station is in the preliminary stages of constructing a new dormitory. The structure will house 18-20 people and provide year-round accommodations. In addition, the building will include a comfortable lounge, kitchen and dining facilities, and meeting area. "Kemp is truly a unique place and we want a building that fits

the history, setting, and mission of Kemp Station," says Steele. "We want a building that not only allows students to study conservation, but a building that puts conservation into practice." Features such as "green" construction techniques, energy efficient heating and ventilation, and innovative day lighting will make this a state-of-the-art facility.

Funding comes from a grant from the National Science Foundation's Field Station & Marine Laboratory Program and from the generous support of numerous private citizens. Steele notes it is the private funding that makes this project a reality. "We are most grateful for the support provided by the friends of Kemp Station. We have raised over \$500,000 to date but still have \$100,000 to go." When completed, the new building will go far to advance the Station's mission of natural resources research, instruction, and public education.

If you would like to learn more about the project or wish to contribute to the building fund, please contact Tom Steele at 715-356-9070 or via email at tsteele@wisc.edu.

Research Capsules

Model shows impact of fire suppression on red pine

The current practice of forest fire suppression may have a dramatic effect on the forest landscape in the Boundary Waters Canoe Area (BWCA) of Minnesota, reports **Rob Scheller**, FEM graduate student. Scheller, who is working with **Professor David Mladenoff**, has developed a model that shows the long-term effects of fire suppression in the BWCA as well as the expected outcome if regular burnings are allowed.

Scheller reports that before people settled the area in the early 1900s, fires

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started naturally, mainly by lightning bolts, and swept through the area every 50-100 years. The fires reduced competing vegetation and triggered the release of seeds from pine cones, which enabled the surviving trees to reproduce more successfully.

The model suggests that while a fire every 300 years would allow red pines to persist, jack pine, another tree species dependent on fire for reproduction, could eventually be lost. Fires every 50-100 years, as they once occurred naturally, would maintain tree diversity. A fire every 50 years would actually increase the number of red pines, but continued fire suppression would lead to the disappearance of red pine, jack pine, aspen, and birch trees within 300 years. "If full fire suppression continues, the forest may never recover and red pine may be lost as a locally dominant species," states Scheller.

Scheller recently presented his findings at the Ecological Society of America's annual meeting. His research is funded by the USDA Forest Service, which plans to use the model to develop a long-term perspective on fire and forest management.

Remote Sensing Brings Views of Wisconsin Lakes to Your Computer Desktop

It is now possible for anyone with internet access to sit down at a computer and access images of Wisconsin lakes captured by satellites 438 miles above the earth. UW-Madison researchers at the Environmental Remote Sensing Center (ERSC), along with their cooperators, have completed the first satellite-based inventory of water clarity for the largest 8,000 lakes in the state. The inventory is available to the public in map form on the Web, where it is possible to zoom in for a close look at your favorite lake or group of lakes. You can view the lake clarity images as well as other ERSC images at their Web site: www.ersc.wisc.edu.

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Year in Germany was experience of a lifetime

by Amy Jahnke

Standing alone at the international terminal in Chicago's O'Hare airport, I realized I had no idea why I was there, but it was the best feeling of my life. There are some things that you just get a gut feeling about, and for me, studying abroad was one of them. As I boarded the plane, destination Freiburg, Germany, I didn't know what would happen to me in the next 11 months, but I was ready for an unforgettable experience.



Amy Jahnke is pictured above visiting Hinterzarten, a small town near Freiburg.

Freiburg lies in southwestern Germany at the foot of the Black Forest, close to both the French and Swiss borders. As Madison's Sister City, Freiburg plays host to a similar liberal, college-town atmosphere. Most German students there opt to live in university housing, which consists of apartment-style, co-ed dormitories. I lived in a newly renovated, seven-bedroom apartment with five Germans and one Turkish student. We all got to know one another well enough to cram into our living/dining space to watch "Die Simpsons" together, but not well enough to tolerate showering at the same time in the two side-by-side shower stalls with transparent doors.

My first semester at Albert-Ludwigs-Universität was spent studying German history, literature, and music to improve my language skills. The second semester I braved German forestry courses. The forestry classes were held as one-week modules, consisting of 8 hours of class each day and a test or paper due each Friday. I went on several week-long class excursions to the Rhine Valley, France, the Swabian Alb, and the Black Forest region around Freiburg to study tree physiology, ecology, and forest management.

One of the more noteworthy experiences I had was traveling to 10 European countries during the two-month semester break. The most memorable two weeks of that were spent with my dad driving around in a tiny German rental car through parts of Germany, Switzerland, Liechtenstein, Austria, Czech Republic and Poland. We saw some incredible countryside, celebrated my 21st birthday in Munich, found the town in Poland where my great-grandparents were born, and had a few traffic incidents on the Autobahn.

It may sound glamorous to just hop on a plane and fly to a foreign country for a year to live, study, travel and learn another language, but it's really not what I would consider glamorous. Every day was a new adventure, with different challenges arriving like high-speed trains and learning experiences around every cobblestone street corner. If you ask me now why I went, my answer is why not? The decision is not something I dare to question because I'm thanking myself everyday for having made it.



"Our research aims to integrate satellite data into the state's day-to-day lake management programs. This won't eliminate the need for conventional water quality monitoring, but it will greatly increase the benefits of ground-based sampling," says **Thomas Lillesand**, director of ERSC and a professor in FEM and the Gaylord Nelson Institute for Environment Studies.

There appears to be a great deal of interest in the images. Just after information about the Web site was issued in a press release "... we had hundreds of new users of the interactive map, so many that it crashed our server," says Lillesand. The project is funded by a NASA initiative called the Satellite Lake Observatory Initiative.

Communities and Natural Resources: A Word about Seasonal Residents in the Pine Barrens of Wisconsin

Prof. Donald Field and graduate students **Greg Clendenning** and **Dana Jensen** are continuing with their research in the Pine Barrens of Burnett and Washburn Counties. These two counties are particularly rich in natural amenities, with over 1,500 lakes and thousands of acres of forests found within their borders. Both counties have been experiencing rapid population growth and development pressures over the past few decades, largely because of the abundant natural amenities. During the 1990s Burnett County's population increased by 20 percent while Washburn County's population increased by 16 percent. Even more remarkable is the growth in the number of seasonal homes. Since 1970, the number of seasonal homes has increased by 76 percent in Burnett County and by 112 percent by Washburn County. With the survey complete and data analysis under way, we are learning more about the landowners in these two counties, especially the seasonal homeowners.

Most seasonal residents are Minnesotans, who represent 61% of the seasonal respondents. Wisconsin contributes 22% of the seasonal respondents while only a small number of seasonal homeowners, 8%, come from Illinois. Not surprisingly, most seasonal homeowners, 77%, own waterfront homes while only 35% of permanent residents live along lakes or streams. Seasonal residents also are wealthier as a group and have attained higher levels of education when compared to permanent residents.

Seasonal residents spend an average of 72 days a year at their seasonal homes. Summer is still the time when the home is used the most (31 days per year), but seasonal homes are still visited in the other three seasons: 9 days a year in the winter, 14 days a year in the spring and 19 days a year in the fall. In addition, many seasonal homeowners plan to retire or relocate to the Pine Barrens. When asked if they will relocate to their seasonal home within the next 5 years or sometime after 5 years, 25% of seasonal respondents replied that they are somewhat or very likely to relocate within 5 years and 41% after 5 years. This trend towards relocating to the Barrens is also apparent in the permanent resident population, as 16% of all permanent respondents were once seasonal residents. -

Greg Clendenning

*And, what's a butterfly? At best,
He's but a caterpillar drest;*

- John Gay



Announcements

'Marketing Urban Wood' Workshops Planned for March

Two *Marketing Urban Wood* workshops are scheduled for March 12 and 13. These one-day workshops are designed for persons involved with urban tree removal (tree service companies, utilities, and municipalities) and wish to learn about options they have for utilizing wood and producing additional income.

The workshop on March 12 will be held at Havenwood State Forest in Milwaukee. The March 13 workshop will convene at the Ag and Extension Center, Green Bay. For more information, contact Don Peterson tel. 715-528-5579. The workshops are sponsored by the USDA Forest Products Lab in Madison, Glacierland RC&D, Lumberjack RC&D, UW-Extension Forestry and Wisconsin DNR.

Forest Products Marketing Workshop Set for June

Marketing forest products in the Lake States will be the focus of a two-day workshop June 12-13, 2003, in Stevens Point. The workshop will introduce the basics of marketing to new employees and update current employees to the changing forest products industry. The workshop will emphasize strategies to maximize product image and improve competitiveness in the market.

Instructors include Dr. Scott Bowe, Wood Products Specialist in FEM and Dr. Robert Smith, Extension Specialist in Forest Products Marketing at Virginia Tech. For registration materials and further information, contact: Scott Bowe, tel. 608-265-5849, email sbowe@wisc.edu.



Featured Faculty - Prof. Glen Stanosz

I know I'm an odd one. My daughter says, "Dad, you have an illness!" I get a lot of strange looks when talking to foresters and landowners and I excitedly remark "This is just the best *Armillaria* root rot!" or "You have the nicest *Eutypella* canker I have ever seen!" or "Cherry leaf spot does not get better than this!" Sometimes, I find it hard to see the forest through the disease! But as a forest pathologist I see tree diseases not just as impediments to our management objectives, but interesting biological interactions and powerful ecosystem influences. And frankly sometimes a good example of a disease symptom or fungal fruiting body is a beauty to behold!

Growing up I came to know plants through trips to Boerner Botanical Gardens near my home in Milwaukee and I learned to love forests during camping trips throughout the state. I earned a BS in Forest Biology ('76) from the State University of New York, College of Environmental Science and Forestry at Syracuse, and then MS ('83) and PhD ('85) degrees studying forest pathology here in Russell Labs in the Department of Plant Pathology. After a post-doc at North Carolina State studying maladies of boreal-montane spruce and fir and almost five years as forest pathologist in the Pennsylvania Bureau of Forestry, I landed back in Madison to begin my faculty career in 1992.

Students seem to appreciate my enthusiasm in my classes. "Insects and Diseases in Forest Management" (co-taught with forest entomologist Ken Raffa) and "Diseases of Landscape Trees and Shrubs" are two twists on similar

*Photo below shows the fruiting bodies of *Armillaria* root rot. Photo used courtesy of Dave Powell, USDA Forest Service (www.forestryimages.org).*



Glen Stanosz, professor of Forest Ecology and Management and Plant Pathology, at work in the field pursuing his goal to keep Wisconsin's trees and forests green and growing.

pathology subjects. Forestry undergrads are most common in the former; Horticulture, Landscape Architecture, and nontraditional students (green industry professionals) predominate in the latter class taught on Monday nights. I try to provide a learning opportunity that will change what students see and how they think. One of the best compliments a student ever gave me was to say, "After your class, I just can't walk through the woods the same way anymore!"

My research group focuses on diseases caused by fungal pathogens of pines and poplars. We use methods ranging from field surveys, to microscopic examinations, to molecular genetic analyses attempting to understand diversity in fungi and how this pathogen diversity and host condition influence diseases. We also respond to new or increasingly important diseases caused by new, invasive pathogens or those fungi that exploit changes in the climate or forest practice. I enjoy learning how forest management practices influence disease development, and how disease development influences forest management practices. Much of what we learn has direct implications for tree health and can be put to use by forest and landscape tree managers. I have an active outreach program (i.e., there is NO Extension faculty plant pathologist with a commitment to nurseries, ornamental or shade trees, or forest trees!?!) and am happy when results of our research allow managers to achieve ecological, economic, recreational, or other chosen objectives. As my letterhead indicates, "Forest pathology helps to keep Wisconsin's trees and forests *green and growing!*"



Thank You to Our Generous Donors

We want to take this opportunity to publicly thank everyone who made a gift to the Department of Forest Ecology and Management during 2002. Having gift funds available to support undergraduate scholarships and educational activities, targeted research, and special development projects is always valuable, but especially this year when cuts are being made in so many university programs. We recognize and appreciate your generosity and continuing interest in our programs here in Madison.

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Forest Ecology and Management Endowment Fund

We invite you to join us in our efforts to establish an endowment fund. Earnings will be used to support student travel to professional meetings, help cover the costs of the summer field camp and the southern trip and to renovate work space in Russell Labs.

I/we would like to give: ____ \$25 ____ \$50 ____ \$75 ____ \$100 ____ Other _____
(please specify amount)

I/we would like to pledge \$_____ each year for _____ years.

Please charge my gift of \$_____ to my (please circle): Mastercard Visa American Express

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If paying by check, please make your gift payable to UW Foundation Forestry Fund, University of Wisconsin Foundation, 1848 University Avenue, P.O. Box 8860, Madison, WI 53708-8860

Alumni Update

We'd like to hear what's new with you, your family, career, etc. Please complete and return the form below or e-mail the information to <rpgurries@wisc.edu>.

Name: _____

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Department of Forest Ecology and Management
1630 Linden Drive
University of Wisconsin-Madison
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Department of Forest Ecology and
Management
University of Wisconsin-Madison
1630 Linden Drive, Room 120
Madison, WI 53706-1598
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