



focus on

College of Forestry • Spring 2004

FORESTRY

Oregon State
UNIVERSITY

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Cover —

Aluria aurantia, Orange Peel cup-fungus, Hatfield courtyard, photo by Nancy Weber, see accompanying story, page 9.

Focus on Forestry is published by the Oregon State University College of Forestry. Our goal is to keep Forestry alumni, friends, faculty, staff, and students informed about the College of Forestry and its many activities and programs.

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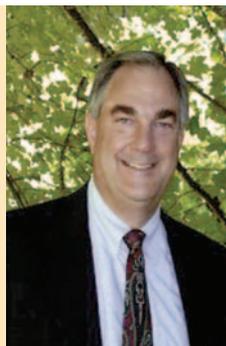
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Dean's Column

Despite the declining state budgets, we continue to keep our programs academically vigorous and accessible by drawing on revenues from College forests and private gifts. Our Innovative Grants

Program commits more than \$100,000 to support faculty- and staff-generated innovations in teaching, research, outreach, and recruiting. We also pledged \$250,000 of Foundation funds to a departmental Initiatives Program as a stimulus for growth. These projects are a bit like venture capital, letting us start new programs or revitalize existing ones.

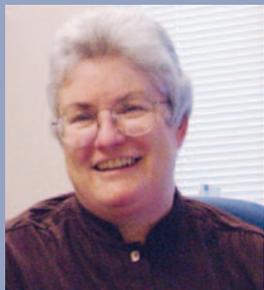
The caliber and energy level of our faculty remains impressive. This issue of Focus on Forestry highlights just a few of their accomplishments. For example, Rakesh Gupta is studying the dynamics of earthquakes on structures with the goal of improving strength and safety of wood buildings. Bev Law has received international recognition for her groundbreaking work in synthesizing research findings on the carbon cycle. Paul Adams has been working diligently for many years at the regional level to help give professional foresters a voice in policymaking. Norman Elwood is training forestland owners in economic assessments. John Garland remains integral to the state and regional process of keeping OSHA's Forest Practices regulations relevant and usable. Nancy Weber provides a fascinating look at finding and studying hundreds of fungi in what is literally her own back yard. Bill Ripple and Bob Beschta have conducted studies at Yellowstone Park that depict the essential interaction of habitat and wildlife in a balanced ecosystem. And a number of our faculty and graduate students are assisting federal forest managers in restoration work following the large fires of the past two years.

While the state's ability to fund higher education is uncertain, the College of Forestry's future relevance to forests, forest owners and managers, users of forest resources and the wood products industry is not. We will continue to stay on the cutting edge as a premier forestry educational institution, and are committed to excellence in all research, public service, extension and teaching areas.

— Hal Salwasser



2003 Dean's Awards



Each year, the Dean presents awards to faculty and staff who have made significant contributions to the success of the College of Forestry. Paul Foshay received the 2003 Dean's Award for Outstanding Achievement - Service in recognition of his exceptional commitment to customer service, vision, and leadership in the Forestry Computing Group. The Dean's Award for Outstanding Achievement - Advising, Mentoring, and Instruction went to Lisa Ganio, in recognition of her exceptional skills in advising, mentoring, and guiding graduate students in research design and statistics, and to Edward C. Jensen, in recognition of his exceptional skills in advising, mentoring, and instruction for the Forest Resources Department and the College. The Dean's Award for Outstanding Achievement - Research went to Jeffrie L. Husband, in recognition of her significant contributions to advance the research mission of the College. Camille Freitag received the Dean's Award for Outstanding Achievement - Faculty Research Assistant in recognition of her exemplary contributions to the Wood Science & Engineering Department and the College. The Dean's Award for Outstanding Achievement - Support Staff went to Tresa Stevens, in recognition of her exceptional service and skill in support of College Leadership.

Congratulations recipients of the Dean's Awards!

Governor Appoints Hobbs to Forestry Board



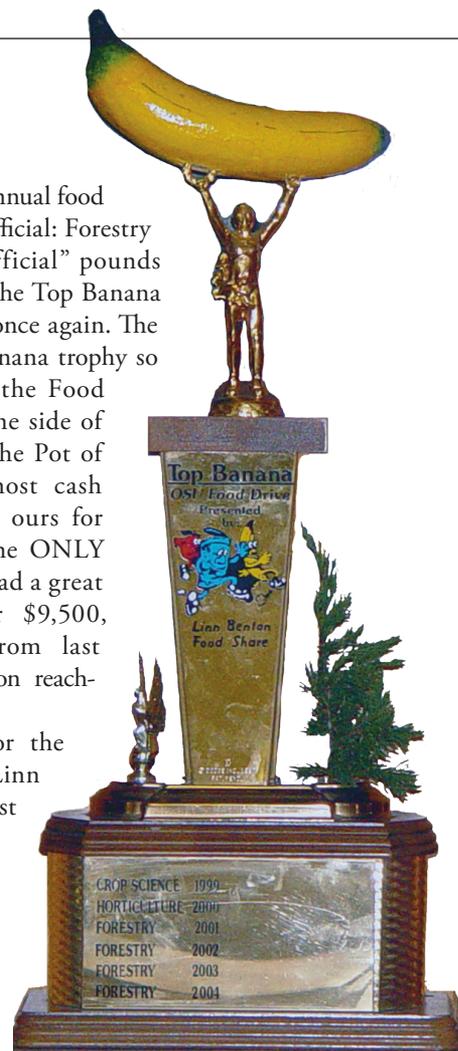
The College is proud to announce that **Steve Hobbs**, Associate Dean for Research and Associate Department Head of Forest Science, has been appointed by **Governor Kulongoski** to the Oregon Board of Forestry. Following confirmation by the State Senate, Hobbs started a four-year term of office February 1. The Governor has also appointed him Chair of the Board of Forestry. The seven-member Board of Forestry "is empowered by the Oregon Legislature to oversee all matters of forest policy within the jurisdiction of the state. Additionally, the board appoints the state forester, adopts rules regulating forest practices and other forestry programs, and provides general supervision of the state forester's duties in managing the Department of Forestry. Therefore the board supervises many actions: policy-making, public debate facilitation, environmental regulation, forestland management of state-

owned and private forestland, wildland fire-fighting, and most importantly, advocacy for the sustainable management of Oregon's forests" (Oregon Blue Book 2003-2004). *Congratulations, Steve!*

"Yes! We Have the Banana!"

The results of the 22nd annual food drive are in, and it's official: Forestry rules! With 46,887 "official" pounds collected, we brought home the Top Banana trophy and the Pot of Gold once again. The College has won the Top Banana trophy so many times (4 years) that the Food Share folks put a tree on one side of the trophy in our honor. The Pot of Gold—for collecting the most cash in the university—has been ours for 5 years now, and we are the ONLY ones who have won it. We had a great showing, and raised over \$9,500, an increase of \$2,000 from last year. Together, let's work on reaching \$10,000 next year!

Thank you, everyone, for the part you played in helping Linn Benton Food Share assist others in the community who are not as fortunate as we are. We are a generous and caring College.



Initiatives Program Boosts Budgets



Restricted state budgets have kept many strategically valuable forestry programs from taking flight. As the College's executive committee planned for this biennium, it was decided to tap into Richardson Endowment earnings again in order to help energize these programs. Thus, the Initiatives Program was born.

"We didn't want to just curl up and die," says **Roger Admiral**, Director of Operations for the College and Associate Director FRL. "Our goal is to come out of the biennium with a strong, vibrant program and actually move in some new directions." The committee asked each of the four department heads and the Cascades Campus to submit a proposal for their most promising new initiative. Some programs have been envisioned since the College's strategic planning occurred two years ago, but the resources have not been available to move ahead on them until now. Once approved, each initiative was funded at \$50,000 per year for two years, effective September 2003.

"We didn't want to just curl up and die"



Forest Resources— Wildland Fire Science Program

Wildland fires pose a grave environmental and economic threat to our forests and communities. The Forest Resources Department has identified a need to aggressively address this threat through the creation of an integrated program of courses and curricula in Wildland Fire Science. The Initiative Program will allow that strategic plan to move toward implementation.

The plan calls for establishing undergraduate and graduate courses and programs of study intended to prepare the next generation of wildland fire managers, natural resource stewards, scientists, and policy makers. While the departments of Forest Resources, Forest Science, Fisheries and Wildlife, and Rangeland Resources will participate in the Wildland Fire Science program, integration and collaboration across OSU units engaged in natural resource education, research, and extension will be cultivated.



Forest Engineering— Watersheds Research Cooperative

The scientific information base available to understand the effects of contemporary intensive management practices on headwater streams is not sufficient to guide the regulatory process. The Initiatives Program provides support to the Watersheds Research Cooperative (WRC) to help launch the Hinkle Creek Paired Watershed Study and Demonstration Area project. The WRC is a research cooperative representing OSU, counties, state, and federal agencies, and representatives of the forest industry.

Hinkle Creek is the pilot project for what the WRC hopes will be several experimental watersheds to study the environmental effects of intensive forest management activities water quality, fisheries, and aquatic habitat.



Forest Science— Intensive Forest Management Initiative

The Intensive Forest Management Initiative allows researchers to find sustainable and environmentally acceptable management practices that will maximize the yield and quality of wood produced on a shrinking land base. While progress has been made in understanding how various factors such as genetic material, seedling quality, site conditions, density, and harvest age influence yields and quality to meet specific product needs, experts have identified a need to learn more about how they interact in aggregate.

This initiative will organize current knowledge about the impact of various treatments available for industrial plantation management, then conduct a problem analysis to identify and prioritize gaps in this knowledge. Finally, research teams will develop a means to fill such knowledge gaps.



Colleges of Business and Forestry— Targeted Education in Innovation Management

The Colleges of Business and Forestry are poised to create a hub of innovation education excellence in the forestry sector, jumpstarted by the Initiatives Program. The Colleges are currently assessing the need for a Continuing Education degree in Innovation Management, which would include new product development. Opinions and views are being sought from key managers in research and development, marketing, and other pertinent areas in forest products companies in North America and Europe. If sufficient demand is identified, a program will be designed and submitted to the University for approval.



Wood Science & Engineering—Wood-based Building Durability Research Cooperative

Although wood has been used for centuries in residential and commercial building construction, changes in building design have contributed to an ever-increasing array of problems related to durability. These changes have caused considerable public concern and costly litigation, and have encouraged the substitution of non-wood products. In recognition of the importance that wood and wood-based composite products provide for Oregon's forest products industry, OSU is leveraging its considerable core expertise and experience to develop practical solutions for wood durability issues in timber framed structures.



Cascades Campus— Outdoor Recreation Leadership and Tourism Program

Recreation and tourism comprise the largest and fastest growing industry in the world, generating 11 percent of the global economy and 8 percent of total employment. Experts project the creation of 5.5 million new jobs per year over the next five years. The College of Forestry, in collaboration with the College of Health and Human Sciences, has implemented the Outdoor Recreation Leadership and Tourism (ORLT) program at the Cascades Campus in order to train professionals in this area. The program is strongly supported by public land management agencies, the Central Oregon Visitors Association, and the Oregon Tourism Commission.

The Initiatives Program is providing funding to enable the ORLT program fund the research portion of two faculty positions, one focused on international ecotourism and one focused on commercial recreation and tourism.

Wolves and Cottonwoods



— by Luke Jarmer

William Ripple (Professor, Forest Resources), and **Robert Beschta** (Professor Emeritus, Forest Engineering), have been making headlines lately by providing concrete answers to a controversy that seemed to be doomed to abstraction. The controversy all started with wolves. Many believed that wolves were only a menace to livestock, but others saw them as an integral part of a delicate ecosystem. Therefore, many were doubtful of the possible benefits when they were reintroduced to Yellowstone National Park in 1995–1996. These creatures of about 100 pounds each had been totally eradicated from the park in the mid-1920s.

The two College of Forestry professors' research all starts with cottonwoods in Yellowstone. The results of their studies, recently published in two different journal articles, show that cottonwood growth in Yellowstone is either older than 60 years or younger than 10 years. But, how do these two seemingly unrelated pieces fit together? The answer may intrigue you.

When the last wolves were expelled from Yellowstone in the 1920s, the elk population was left with no significant predator. With over 17,000 elk in the park in the mid-1990s, the herd was one of the world's largest. Without wolves the elk were safe to graze wherever they wanted, including near streams, where cottonwood often grows. So many elk were grazing that cotton-

wood could not get established and most trees that were not already mature did not grow much at all.

When the wolves were reintroduced, elk had to be more careful about where they grazed. Some locations, such as large open landscapes, are safer for elk, while locations where visibility is low or a wolf den is close by are not as safe. The elk keep away from the unsafe areas, enabling cottonwood and willow to grow back in the largest quantities seen in years. The story does not stop here though. More cottonwood means shadier streams that are better for fish and more trees of the right size for beaver to use in building their dams. In fact, where there was only one beaver family on the northern range of the park in 1995, there are now eight. Wolves are taking the place of the human hunter for culling the herds of elk, and as it turns out, they are doing so in a way more beneficial to the ecosystem overall. Where hunters usually take the best males, wolves take the weaker males and females thus limiting the herd growth and creating a stronger herd at the same time. Also, wolves hunt year-round providing much needed food to scavengers in the winter.

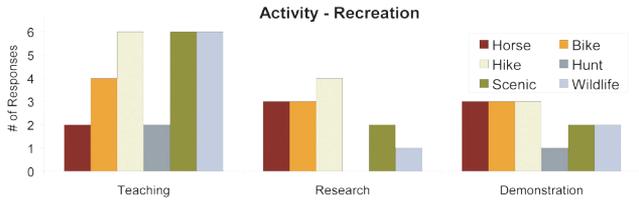
Unlike bears or mountain lions, wolves do not carefully guard their prey. They gorge themselves on 20 pounds of meat and then go sleep it off, leaving the rest open to birds and small animals like golden eagles, bald eagles, magpies, and coyotes. One study in 1998 found that more songbird diversity existed outside of the national parks than inside them. Now, researchers think this trend is reversing. Wolves represent a “keystone species” with the power to change an entire ecosystem.

Beschta's study took place in the Lamar Valley along Soda Butte Creek and the Lamar River. Part of his study involved measuring trees' diameter at breast height to determine the age of the trees. This is how he determined that nearly all the cottonwood trees were older than 60 years. In the study by Ripple and Beschta, they examined photographs of different stretches of the river. The photographs were taken anywhere from 1977–1997, and they were compared with pictures taken of the same spots by Ripple and Beschta in 2001–2002. They found that in no less than six places, the height of woody plants along the stream had increased. The places where there was no increase of plant height were straight stretches that provided an easy escape route for elk if wolves should appear. Places that were the most dangerous for elk, such as a location adjacent to a deep gully, had the most plant growth.

The research Beschta and Ripple have done shows the benefits of reintroducing the wolf to the lower 48 states. The reintroduction has in fact been so successful that the Fish and Wildlife Service is in the process of changing the status of wolves from “endangered” to “threatened.” Through it all, scientists such as our Forestry faculty are getting a wonderful chance to see an ecosystem being changed before their eyes. Ripple, in an interview with the *Washington Post*, called it, “a grand experiment.”



Many Uses of McDonald-Dunn



—by Taylor Fielder

Last fall, as a student project in FOR 459 Forest Resources Planning and Decision Making, Taylor Fielder, Melusi Rampart, and Lucas Titus, conducted a survey to evaluate the research, teaching and demonstration opportunities on the McDonald-Dunn College Forest. The main goal of the survey was to find out what types of activities and conditions instructors and researchers want and/or need to conduct and promote research and teaching on the forest.

Surveys were sent to faculty, staff, research assistants, and graduate students in the College of Forestry, the departments of Fisheries and Wildlife, Botany and Plant Pathology, Environmental Sciences, Corp and Soil Sciences, and Biology. Follow-ups included “personal visits” and additional copies being sent to department mailboxes. A total of 56 surveys were returned and analyzed.

Analysis of the survey indicated instructors and researchers need a wide diversity of conditions and activities for research, teaching, and demonstration. While clearcuts and old-growth stands were shown to be the most commonly used stand types for teaching, all the stand types and area conditions present on the Forest were shown to have some teaching use. All activities and silvicultural treatments on the Forest were also shown to have some teaching use associated with them.

The overall analysis of the survey showed that a wide range of forest conditions and a diverse array of activities are vital to maintaining current and promoting future research, teaching, and demonstration activities on the McDonald-Dunn Forest.



Successful Forest Resources Graduate Students — Congratulations!

Andrea Laliberte, PhD

“Human Influences on Historical and Current Wildlife Distributions from Lewis & Clark to Today”

Paige Fischer, MS

“Mental and Biophysical Terrains of Biodiversity: Conservation of Oak Woodland on Family Forests”

Jeffery Hamann, MS

“Simultaneous Equation Estimation for Southern Oregon and Northern California Conifer Plantations”

Jenny Hawkins, MS

“A Place-based Examination of Community Well-being in a Historically Timber Dependent Region: Grant, Union, and Willowa counties, NE Oregon”

Marie Lennette, MS

“Using a Heuristic Programming Method for Incorporating Wildlife Habitat Constraints into Spatial Harvest Scheduling on the Elliott State Forest.”

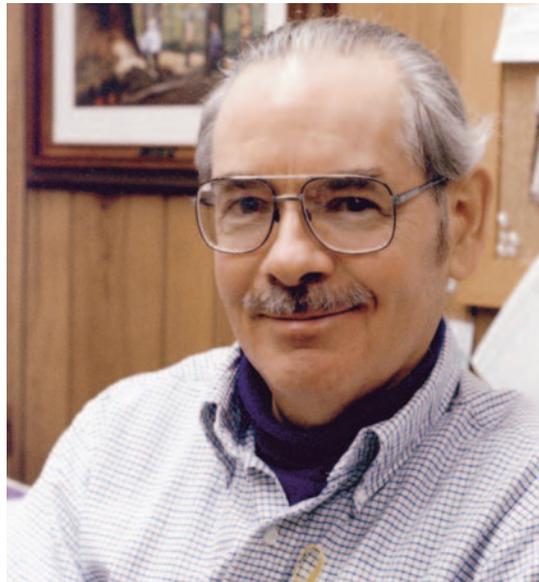
Aaron Weiskettel, MS

“Alterations in Douglas-fir Crown Structure, Morphology, and Dynamics Imposed by the Swiss Needle Cast Disease in the Oregon Coast Range”

Adam Wiskind, MS

“Down by the Creek: Understanding Landowner Perspectives on Streamside Health and Management”

It's GREAT—New Analysis Tool for Small Woodland Owners



For years, small private woodland owners have been asking for tools to help them analyze the economic effects of their forest management practices, especially as those practices affect taxes, says **Norman Elwood**, Associate Professor and Forest Management Extension Specialist in OSU's Forest Resources Department. Elwood and a team of experts from around the state recently released a personal computer model in response to this need.

The Grass Roots Economic Analysis Tool, or GREAT model, is a spreadsheet-based program for projecting forest management options and their economic impacts, including tax impacts. It is intended to be useful to private woodland owners operating as unincorporated sole proprietors and who are considering different silvicultural, harvesting, marketing, and tax strategies. Although similar tools for woodland owners have existed for years, the GREAT model is the first to address both the federal and state tax portion of the economic and forestry analysis, says Elwood.

“Almost anything you do in the timber stand, whether it costs you money or makes you money, creates a tax impact,” he says. “You can find professional tax software out there, and in some cases woodland owners need the detail and the specificity of those dedicated models, but for many owners they are overkill.”

The GREAT model is programmed on a firm economic and technical foundation, but much of the inner workings operate out of the user's sight. Elwood says woodland owners are less interested in traditional economic performance criteria such as present net worth, soil expectation value, and inter-

nal rate of return. “Woodland owners are very astute and well educated, but they don't deal with this stuff day in and day out,” he says. “As a result, it's not their cup of tea.” Instead, they prefer more easily understood and directly accessible criteria—what the GREAT team refers to as “grass roots” criteria—such as the amount of harvested volume, net economic return, and comparisons of management options.

Many small woodland owners prefer to work with a consultant rather than working with the program themselves, he says. For this reason, consultants are also target users for the program.

The prototype of the GREAT model was created in about four weeks in 1999, with just enough programming to illustrate the concept. Elwood's team presented the prototype and the concept to twelve master woodland managers at an all-day conference. Their review was so positive that everyone concerned was convinced it would be useful to develop a complete model. It was developed incrementally and Version 1 was released September 2002.

The development team consisted of **Jerry Hull**, Excel programmer; **Susie Gregory**, tax consultant; **Norm Miller**, supervisor, Timber Tax Division, Oregon Department of Revenue; **William Emmingham** (Professor Emeritus, Forest Science); and Elwood. However, Forestry Extension agents from across the state provided input throughout the development process. “This really was a Forestry Extension-wide project,” says Elwood. The development team invited Forestry Extension agents together several times for full-day critique sessions, and then incorporated the feedback they received. Since agents see woodland owners daily, they were a valuable link in the communication chain.

Once Version 1 was complete, the development team provided to Forestry Extension agents and Master Woodland Managers a cost-free copy of the model, training on its use, and one-on-one support as needed. This has created a wide enough knowledge base so that users will have more than one place to go for assistance with the model, says Elwood. In turn, the Master Woodland Managers are expected to offer volunteer assistance to their county to support use of the model.

Recent (August 2003) Oregon state forest tax changes will necessitate the release of Version 2 in order to update the tax portions of the program. However, Version 1 remains viable for a variety of uses.

The GREAT model was produced thanks to \$37,500 in grant money from the Oregon Department of Revenue, Oregon Forest Resource Institute, US Forest Service Cooperative Programs, College of Forestry, and Forestry Extension. It is sold at price of \$65.00, with all proceeds benefitting the Forestry Extension service. It runs on both Windows and Macintosh platforms.

Earth, Wind, and Fire—and Mushrooms?

Severe winter storms descended on the valley in late December and early January, bringing down trees, branches, and power lines, and closing OSU for two rare days.

As snow, then ice, accumulated in the 125-ft-tall trees around her Witham Hill home, mycologist **Nancy Weber** (Associate Professor, Courtesy, Forest Science) waited with some anxiety, but also with anticipation. For her, storms that bring down branches may also yield mycological surprises from the canopy.

Most of us wouldn't think of looking for mushrooms and other non-lichenized fungi in the treetops. For a long time, neither did Weber. Mycologists generally work beneath the trees studying fungi that inhabit the soil, form mycorrhizae on tree roots, or take hold on woody debris and other substrates on the forest floor.

In recent years, however, scientists have begun to look more closely at fungi in the forest canopy. Weber's own research into canopy species began after a storm brought down branches several years ago. While cleaning up the yard, she happened to notice slugs grazing on lichens and wondered if they also grazed non-lichenized fungi. They did, and she started collecting freshly fallen branches with obvious fungi on them. Weber has found tiny cup-fungi, jelly fungi, miniature mushrooms, and shelf fungi, as well as lichens on the downed branches.

The canopy species added yet another dimension to Weber's already extensive research. Now if you want to meet with Nancy, you have to know what time of year it is. If it's the rainy season, she's in the yard studying the diversity of fungi on her quarter-acre Corvallis yard. If it's spring or summer, however, she's farther afield, hunting morels and related cup fungi.

To date, Weber has found 340 kinds of fungi in her backyard. She estimates that she has explored about 88,000 cubic feet of the property's 1,375,000 cubic foot total volume where fungi of interest might be found. Mycologists all over the country

To date,
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backyard.

have helped her in her research. Weber in turn shares her expertise and enthusiasm not only with her colleagues but also with the public through dozens of lectures, short courses such as with OSU's Academy for Lifelong Learning, workshops, extension publications, and guide books. Networking is key in mycology, she says. A diverse group of people working together can help develop a better understanding of all aspects of the "whole fungus."

Although she is becoming well known for her backyard research, Weber has long been known for her work on the filamentous ascomycete genus *Morchella*, better known as the true morels or "morel mushrooms". These tasty morsels, prized by gourmets, have become increasingly popular among commercial pickers—leading to growing concern over the future management of this nontimber forest product.

There remains much to learn about the biology and diversity of morels, however, before informed decisions can be made about how best to approach the resource. Weber has been working with local scientists including **Dave Pilz** (Faculty Research Assistant, Forest Science), **Randy Molina** (Professor, Courtesy, Forest Science), and **Catherine Parks** (Forest Service PNW Research Station), as well as researchers in Illinois, Maryland, Michigan, and New Hampshire to learn more about genetic diversity in the morels.

Last fall, Weber joined an expedition in Alaska with two scientists from the Forest Service PNW Research Station, Research Botanist **Jane Smith** of Corvallis (Courtesy, Forest Science) and Research Ecologist **Trish Wurtz** of Fairbanks. The trio set out in a rented 30-foot motor home to study morel



Jane Smith



Nancy Weber



Nancy Weber

Successful Forest Science Graduate Students — Congratulations!

Kevin Dodds, PhD

“Basic and Applied Studies on Douglas-fir Beetle: Spatial Relationships of Infestations, Lipids and Host habitat, and Attraction Distances of Pheromone-Baited Traps”

Joan Hagar, PhD

“Functional Relationships among Songbirds, Arthropods, and Understory Vegetation in Douglas-fir Forests, Western Oregon”

Robert Kennedy, PhD

“Causes and Consequences of Uncertainty in the Application of a Biogeochemical Model to a Large Geographic Region”

Jennifer Swenson, PhD

“Analyzing Patterns of Woody Plant Richness at Multiple Spatial Scales with Modeled Photosynthesis”

Hoonbok Yi, PhD

“Response of Arthropods To Different Intensities of Thinning in Oregon”

Edward Arellano, MS

“Effect of Soil Type, Fertilizer, and Soil Moisture on 1+0 Douglas-fir [*Pseudotsuga menziesii* (Mirb.) Franco] Seedlings”



Nancy Weber

productivity and morphological diversity in burned areas in Alaska. Along the way they also saw lynx, bear, many moose, and relatively few mosquitoes. They drove from Anchorage to Fairbanks during the longest days of the year, arriving by the light of the midnight sun. “We found mushrooms and we had a ball,” Weber says. “Our collections will be used for phylogenetic analysis (DNA studies) of these mushrooms and studies of their ecological function.”

Genetic research has helped show that there may be a dozen different kinds of morels in the western United States. Traditionally, scientists recognized no more than a half dozen morel species appearing mainly in burned areas. Yet morels also fruit under other types of conditions such as undisturbed forests, as well as in areas with soil disturbance and where trees have died from insect infestations and other causes.

Weber and Smith are looking forward to this spring when they hope to learn more about what has happened in the aftermath of the B&B fire. Weber is especially interested to see what happened in area where the B&B fire overlapped with the 2002 Cache Mountain fire wildfire in the Deschutes National Forest where she collected morels last year. That fire brought on an abundance of morels.

In Oregon, a study headed by Pilz looked at ecology, productivity, diversity, and genetics of morels in burned, insect-damaged, and relatively healthy forests in northeastern Oregon. The team’s research has turned up some interesting results. They identified and characterized three types of morels that fruited only on burned soils the first spring season following a wildfire. Two other species fruited in nonburned forests, in islands of nonburned soils in burned forests, or the second year following fire on burned soils. Furthermore, morel productivity varied wildly, from 32 to 1760 morels per acre and from 0.49 to 8.1 pounds per acre.

Large commercial crops of morels are already harvested each year in the Northwest, but the 2002 season was unique. According to **Alan Heath**,

special forest products manager with the Sisters Ranger District, the harvest yield was three to four times larger than most years. However, Heath sees no problem with the increased harvesting. “We think it’s a fairly benign activity,” says Heath, “but the impact remains to be seen.”

More critical may be the impact of management techniques such as thinning and prescribed fire, which are used to recreate forest conditions that existed before the advent of wide-scale fire suppression. These techniques appear to give managers a means to promote morel crops while also achieving other goals, such as clearing fuels to prevent future wildfires and producing timber. But without additional knowledge of morel productivity, diversity, and ecology, managers don’t really know what the overall impact such methods may have on the greater morel resource.

New research is prompting land managers to examine the effects of forest management activities on mushroom crops. According to Weber, there are crucial questions yet to be answered about morels: “The post-fire morels fruit one or two seasons (years) and then seemingly disappear until the next fire. How do you compare species that fruit after fire with those that fruit in the living forest?”

Land managers must eventually address this question and others. “It comes down to gaps in the knowledge of the biology of these organisms,” Weber says. “I have been working on my backyard research intensively for 7 years and casually for 15 years and I still find conspicuous fungi new to the list.” There clearly is much left to learn about morels and other fungi. “Mycology is not just about attaching a name,” she says, “but about learning the ‘personality’ of a fungus, about the whole fungus.” On any given day—especially after wind, rain, or even wildfire—Weber will probably be outside doing just that.

OSU Prof Leads Efforts to Understand Carbon Cycle



Long-term, comprehensive, synthesized studies are key to understanding the complex and ever-changing carbon cycle, says Associate Professor **Beverly Law** of OSU's Forest Science department. Since 2000, Law has been Science Chair for AmeriFlux, a network of 120 sites in the Americas that explore scientific uncertainties associated with global climate change. The AmeriFlux network is attempting to determine the current state of the carbon balance of terrestrial ecosystems and how that balance is affected by land use and climate variations. In addition, research is aimed at discovering the effects of terrestrial ecosystems on the global carbon cycle.

AmeriFlux was established in 1996 after scientists met to arrive at consensus on the direction of ongoing flux research. Research sites are located in North, Central, and South America in such diverse geographies as arctic tundra, grasslands, agricultural croplands, tropical forests, and temperate coniferous and deciduous forests. Three sites are operated in eastern Oregon in various age classes of ponderosa pine forest.

The network consists of an array of flux towers that measure flux densities of carbon dioxide, water vapor, and energy between vegetation and the atmosphere. The method combines the information about vertical wind speed fluctuations and carbon dioxide fluctuations to get the net carbon dioxide exchange. In forest environments, additional measurements are taken at different heights within the canopy.

All sites are independently funded, primarily through the DOE, NASA, NSF, and USDA. AmeriFlux coordinates these individual efforts so that synthesis activities can be generated. "In the past, several agencies have independently funded global climate change research," says Law. "But we decided that the agencies must get together and

pool their resources and their direction in order to achieve our goals."

The future behavior of the carbon cycle is one of the greatest sources of uncertainty in climate over the next century, says Law, along with anthropogenic emissions and imperfect understanding of the physical climate system. Poorly understood "sink" processes currently remove about half of global carbon dioxide emissions arising from the combustion of fossil fuels, but there is little reason to expect these sinks to continue to operate unchanged over the coming decades. Diversified research that combines measurements at different temporal and spatial scales with models is the best way to answer the question about where carbon is going.

"The idea has always been to understand the processes that are controlling the fluxes and to improve the process models that are used to map this over space and time," she says. "But it's not just the flux we're concerned about; it's how much is stored onsite and how that might change with climate and disturbance."

New technology makes more comprehensive data collection possible. "Because of the limitations of the technology in the past, micrometeorological techniques were limited to short-term campaigns over days or weeks. This is the first time we've had observations that integrate many ecosystem processes over time and space to test and improve models that have been developed from leaf-level and soil studies," says Law.

In addition to flux measurements, the research teams collect data from meteorological stations that measure weather, soil, and moisture conditions. They measure process rates such as photosynthesis and the transport of water through trees that contribute to the whole ecosystem fluxes. "Physiologically, there's a strong coupling between carbon dioxide uptake and water vapor loss through vegetation," says Law.

Law stresses how important it is to keep learning more over time.

"You might think you understand how a system is behaving with climate over a year, and then you might see a different story with several years of data," she says. "We must understand long-term effects of climate and how it trickles down through the system."

Law recently received, as senior author, the Norbert-Gerbiert Mumm International Award from the World Meteorological Organization for a synthesis paper titled, "Environmental Controls over Carbon Dioxide and Water Vapor Exchange of Terrestrial Vegetation." The paper was recognized as the most outstanding original publication of the year on the influence of meteorology on the physical, natural, or human sciences. "It was a nice gesture of recognition for the hard, continuous work that has been conducted by our global network of research teams," she says. "It's very difficult and challenging to do these large synthesis activities, but they're really what is needed to advance the science."

Successful Forest Science Graduate Students — Congratulations!

Kristin Fields, MS

"Impact of Armillaria and Annosus Root Diseases on Stand and Canopy Structure, Species Diversity, and Down Woody Material in a Central Oregon Mixed-Conifer Forest"

John Campbell, MS

"Carbon Fluxes Across Three Climatically-distinct forest Chronosequences in Oregon."

Nicole Czarnomski, MS

"Effects of Harvest and Roads on In-stream Wood Abundance in the Blue River Basin, Western Cascades, Oregon"

Julian Licata, MS

"Structural and Physiological Changes with Stand Age: Use of a Process Based Model to Compare Carbon and Water Fluxes in Young and Old-growth Douglas-fir/Western Hemlock Forest Stands"

Tiffany Neal, MS

"Western Larch Resistance to Douglas-fir Beetle Attack"

Etsuko Nonaka, MS

"Disturbance and Landscape History as a Reference for Evaluating Forest Management Effects at a Regional Scale: Examples from the Coast Range of Oregon, USA"

Successful Wood Science & Engineering Graduate Students — Congratulations!

Antonio Silva, PhD

“Development of Accelerated Methods for Assessing Decay of Wood Plastic Composites”

Preston Baxter, MS

“Comparison of Screening, Evaluation, Rehabilitation, and Design Provisions for Wood-framed Structures”

Pranueng Limkatanyoo, MS

“System Behavior of Wood Truss Assemblies”

Katherine Josephine Pavia, MS

“Wood Treating by Double-diffusion using Copper Sulfate and Sodium Fluoride”

Quake, Rattle, and Roll

Simulating “The Big One” with dynamic earthquake tests



the stress of real earthquakes.

Some of these losses may be due to gaps in our knowledge of the way wood-frame structures perform under actual conditions. The creation of test methods that better represent actual “in-service conditions” would be invaluable for helping engineers and architects design safer structures. **Dr. Rakesh Gupta**, Associate Professor in the Department of Wood Science and Engineering (WSE) at the College of Forestry is leading a team to do exactly that.

Buildings are designed to carry two kinds of loads: vertical and lateral. Vertical loads consist of the weight of the building itself, including the roof and all the contents such as furniture and people. Lateral loads, generated by wind storms and earthquakes, consist of sideways loads applied against a building. Lateral loads generate shear forces, which are resisted by shear walls, usually the outside walls of a wooden structure. Current structural design is based on testing 8 ft by 8 ft shear walls using monotonically increasing lateral loads.

There is no national standard for testing building designs against earthquakes, however—and although researchers have tried different cyclic tests, none match actual conditions. In monotonic testing, the test wall is pushed in one direction until it breaks or fails. Several researchers have tried cyclic testing in order to simulate earthquake loading: the wall is pushed and pulled to failure, but the load increases and decreases in cycles at a slow rate, rather than randomly as in actual earthquakes.

During earthquakes, structures are subjected to random loads at a fast rate from more than one direction and at varying intensities and durations. Therefore, earthquake testing should be dynamic—simulating the duration, randomness, and intensity of an actual earthquake—in order to simulate conditions that occur during earthquakes.

earthquakes and other natural disasters can significantly damage structures, including residential wood structures. Recent earthquakes have demonstrated that real structures may not perform as expected under

In the Gene D. Knudson Wood Engineering Lab in Richardson Hall, Dr. Gupta and **Tom Miller**, Associate Professor in Civil Engineering (CE), along with **Milo Clauson** (Senior Faculty Research Assistant, WSE), and graduate students **Kevin White** and **Peter Seaders** (WSE and CE), have been conducting the commonly used monotonic and cyclic tests of full-scale shear walls, as well as dynamic tests to learn whether walls react the same way under different kinds of loading conditions.

Most tests to date have been conducted on walls that represent “engineered construction” – or light commercial buildings, rather than residential construction. Yet most wood buildings in the U.S. are residential buildings and most building in the U.S. are made of wood. The OSU researchers are testing 8 ft x 8 ft wood-frame shear walls made of 2 x 4 Douglas-fir with OSB sheathing and nailed connections. The test walls are built according to the U.S. residential construction code.

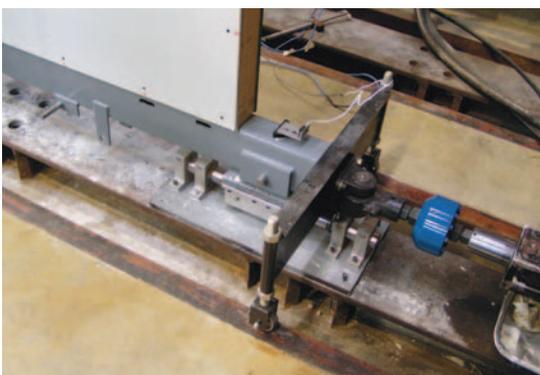
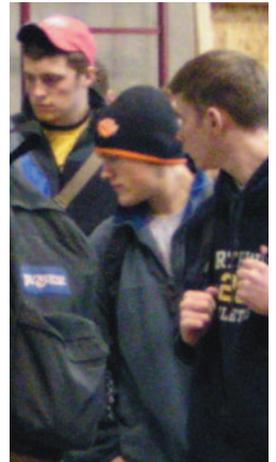
The computer-controlled earthquake tests are being conducted under the type of earthquakes expected in the Pacific Northwest, including subduction zone quakes, which are infrequent, massive (magnitude 8.0 or greater), and of long duration (1 to 2 minutes). The last great (magnitude ~9.0) subduction zone quake hit the Pacific Northwest in 1700. Scientists warn that the next great quake could occur at any time and may be very destructive. The tests conducted in the College of Forestry have used seismic data from actual recorded earthquakes from the Pacific Northwest, including the well-documented Olympia quake of 1949 (magnitude 7.1) and the massive Chilean quake of 1960 (magnitude 9.5), which was 100 seconds long.

Some tests have been conducted in rather dramatic fashion: before large audiences made up of structural engineers from Portland, students from across campus, K-12 students, industry visitors, and news camera crews. During one such demonstration, the interior side of the test wall had been decorated with metal bracketed book shelves complete with books, containers, and even a teddy bear. As the wall rocked and shook violently, items came tumbling from the shelves onto the concrete lab floors, nails pulled out and bent, and the wall shifted alarmingly from the metal beam foundation to which it was bolted.

According to Gupta, however, the current construction stood up surprisingly well, despite the teddy bear's tumble.

These tests should provide insight into the dynamic behavior (strength, failure modes, energy dissipating characteristics) of shear walls. This will contribute not only to an improved utilization of wood, but also to improved design of residential wood-frame buildings, thereby increasing their safety, reducing economic losses, and improving performance of American homes in natural disasters. Gupta and the others hope the experiments will lead to improved testing procedures and new building codes.

"An earthquake is a release of energy," Gupta said. "Wood has good energy-absorbing characteristics, and it's lightweight and flexible—so wood buildings usually perform quite well during an earthquake. But we can make them safer still and that's our goal."



Recent Grad Has His Goal in Reach



—by Michelle Delepine

John Murphy Jr. graduated from Oregon State University Spring 2003 with a major in Wood Science and Technology and a minor in Business Administration. His career goal? “To be at the top of my field.”

Murphy regularly contributed to the community of the College of Forestry. He served on the college’s Honor Board and as Vice President of the Forest Products Society Student Chapter. Staffing College of Forestry sponsored events for children was another way Murphy volunteered.

Being active around campus and the greater community, Murphy developed the skills necessary to accomplish his career goal. He served on the Memorial Union Programs Council for two years. Murphy said, “Just being active on campus is what I think gets you the job offers.” This gave him the opportunity to work with others and improve his leadership skills, skills that he would later emphasize to potential employers.

Wood Science and Engineering graduates are blessed with an extraordinary amount of opportunities. According to **Jim Funck** (Associate Professor, Wood Science & Engineering), “our department is well-known within the industry. The companies are familiar with our program and the types of students we put out. A lot of them already employ students from

past years. So that is what makes it easier for each year’s crop of students going out.”

In his job search, Murphy identified important aspects of his ideal job and then kept an open mind. “I applied for a variety of different jobs,” Murphy said. He secured interviews with various organizations by networking with **Jim Wilson** (Professor, Wood Science and Engineering), Jim Funck, and his parents.

Though each job was unique, Murphy had the same agenda for all the interviews. “We talked about where I could start and I asked questions such as how I could grow and climb the ladder into this business. It was all about finding the right opportunity and what fit me the best,” he explained. The interviews focused on how the job could suit him rather than on how Murphy was qualified for the job.

Part of the interview process involved taking personality and aptitude tests. Murphy even flew to another state for an interview. While in Portland, Murphy toured various mills of potential employers. Between the interviews, Murphy searched for more job opportunities. “It was a waiting game but I had to explore, make sure that I was jumping on the right opportunity, not missing anything.”

After being successful in his interviews and having an assortment of jobs to choose from,

Murphy talked to his mentors in the Wood Science and Engineering Department to help him weigh his options. Funck provided guidance to help Murphy see the advantages and disadvantages of each offer.

After all that hard work, it turned out that the job that suited Murphy the best was with his family’s business, Murphy Company, in the division of Murphy Veneer in White City, Oregon. Murphy reflected on his job, veneer sales and quality assurance, “It’s more than I expected. I am very fortunate to have this tremendous opportunity. My father has given me the opportunity to learn at a speed which enables me to gain enough knowledge to move on to the next level.” His job provides him with the qualities he had looked for most in a job: The opportunity to learn in a position that will set him up to climb the corporate ladder to the top.

Besides giving Murphy the opportunity to be a top leader, his job fulfills another hope of his. “It is part of my dream to work right along side [my father]. My dad is my dad as well as my boss, but when we are at work he is definitely my boss.”

By fully participating in Wood Science and Technology classes and College of Forestry extracurricular activities, John Murphy Jr. obtained the skills necessary to start in a position that will let him achieve his career goal to climb to the top of his field.

OSU Prof Helps Develop New Oregon OSHA Regs



John Garland, Professor and Extension Timber Harvesting Specialist in OSU's Forest Engineering department, has been involved in developing forest safety regulations for over 30 years. He has had a hand in all of the revisions to the logging and forest practices sections of Oregon's Occupational Safety and Health Administration code to date.

After years of safety efforts by the forest industry, Oregon's OSHA code came into being as a result of the 1970 federal Occupational Health and Safety Act. The portion of the Oregon code that pertains to forestry workers originally addressed only logging safety. In 1988, however, it was expanded to include all forest activities, including fire fighting. The code has now been completely rewritten to make it easier to understand, easier to work with, and more consistent with other rules that govern forest activities. It also addresses new technologies that were not in existence when the last code was written—some technologies that are a direct result of OSU's research. The new code became effective December 1, 2003.

Others involved in writing the new code represented logging contractors, wood products manufacturers, logger associations, labor unions, state and federal agencies, and Oregon OSHA.

Garland says the latest code revision is substantially different from prior codes in several ways. "It's much more results-oriented, and places much more emphasis on safety and health management by employers," he says. In fact, the changes to the code were so substantial that the existing code, referred to as Division 6, was repealed and replaced by the new Division 7 code. "We made major changes in

so many places that to try to fit the new concept into the structure and format of the old code just didn't work," says Garland. The new code is structured in such a way that it should be easier and more practical for workers to use in the field.

Garland uses an example to illustrate the difference between the old and new code. "Let's say we're working around an intermediate support tree in a cable logging operation. In the past, a rigid safety distance was set—such as 'one tree length away from the hazardous area—and the crew was expected to observe it.' What we found was that people couldn't really operate, because they would have to be within that hazardous zone at least part of the time. There was confusion about how to deal with that: 'Did they mean uphill or downhill? How far away is one tree length?' A rigid distance was not very workable."

With the new code, employers are asked to provide safety and health training to employees to the extent that employees can recognize a "potential failure zone" associated with a particular tree. Plans would be in force so that if the hazard were to occur—that is, the tree failed—the crew would have moved to a safe distance and direction away from that potential failure zone.

Of course, there are still specific regulations and standards that must be met, but the idea is that much of the reduction in hazards has to come from individual workers being able to recognize the hazard and then take the appropriate safe actions to avoid getting hurt. The new code puts more of a burden on employers to provide training and supervision in order to establish a safety conscious workforce.

"You can't regulate safety into being," says Garland. "You can't write codes so definitively as to cover all the conditions you find in woods work—to make it a safe place—so what we have to worry about is the exposure of the workers to those hazards."

Because the new code is so different from the old code, OSHA has given OSU two grants to implement training programs and materials for employers, under Garland's leadership. Training will include field demonstrations of the new concepts introduced by the code, such as "potential failure zone," around the state. Training programs and materials will be offered in both English and Spanish.

As an employer, OSU is governed by the Oregon OSHA regulations, so Garland is also working with the College executive committee to keep faculty and staff informed about the new requirements.

Successful Forest Engineering Graduate Students — Congratulations!

Peter J. Matzka, PhD
"Thinning with Prescribed Fire and Timber Harvesting Mechanization for Fuels Reduction and Forest Restoration"

Hilda J. Tromp-van Meerveld, PhD
"Hillslope Hydrology: From Patterns to Processes"

Joseph R. Amann, MS
"Sediment Production from Forest Roads in the Upper Oak Creek Watershed"

Deborah L. Goard, MS
"Characterizing the Spatial Distribution of Short Duration, High Intensity Rainfall in the Central Oregon Coast Range"

Joel Hartter, MS
"Investigation of Synthetic Rope End Connections and Terminations in Timber Harvesting Applications"

Danielle Smith, MS
"Contributions of Riparian Vegetation and Stream Morphology to Headwater Stream Temperature Patterns in the Oregon Coast Range"

Elizabeth Toman, MS
"Forest Road Hydrology: The Influence of Forest Roads on Stream Flow at Stream Crossings"

OSAF Gives Professional Foresters a United Voice



Speaking out about forest management and other forestry issues can be a challenge for many foresters, says **Paul Adams** (Professor and Forest Watershed Extension Specialist, Forest Engineering). Adams, chair of the Oregon Society of American Foresters (OSAF) Policy and Legislation Committee since 1999, says many professional foresters are frustrated by policies that keep them from doing what they think is right in managing the forests under their care. The problem is compounded for government employees who are often restricted from expressing themselves publicly, especially when they disagree with controversial existing or proposed policies. The OSAF gives these forestry professionals a way to express their views.

Over the past eight years or so, OSAF has released 10 position statements that encapsulate the organization's views on complex and often controversial forestry issues. The statements reflect the consensus of professionals representing a broad range of interests. Committee members responsible for drafting the position statements represent state

and federal agencies, large and small private timber companies, academics, independent consultants, and landowners. This diversity of interests makes for some interesting and lively discussions, says Adams. "It can be a challenge to come to an agreement," he says. He points out that when they do come together on an issue, it's a pretty strong statement.

Collectively debating the issues, which moves the organization to the point of being able to articulate a position, is a primary value offered by OSAF membership, says Adams. "It unifies us. It allows us to learn from each other and exchange experiences and perspectives," he says. "That, in turn, allows us to do some things related to forestry issues at both the local and national level."

In addition, he says the position statements themselves are a great public education tool. All of the statements are available online on the SAF web site (www.forestry.org). "We know the web site gets a lot of hits and we also get questions from students, the general public, and people outside the profession," says Adams. OSAF has also made strong efforts to get them into the hands of policy and decision-makers.

While the OSAF wants to influence public policy, it doesn't necessarily want to take a political stand on specific legislative proposals, says Adams. "We want to give legislators some solid scientific and technical information that can help them make better decisions," he says. "While we do at times have pretty strong views about a particular piece of legislation, we're more interested in making

sure the decisions that are made are based on science-based, objective information, with the perspective of the professional forester included."

After the leadership committee of about 30 foresters adopts the statements, all OSAF members are asked to vote on whether they agree or disagree. So far, all of the statements have been overwhelmingly approved by the general membership—approximately 95 percent of members agrees with the positions taken by OSAF.

Each position statement is effective for five years, so some of the original statements have been revised more than once. Four expired last year and the committee either has revised them or will review them in the near future.

Adams is frustrated by the lack of attention given by the news media to OSAF's position on the issues. "Often in news articles about forest issues, you'll get a quote from spokespersons for advocacy groups on both ends of the spectrum," he says. "I suppose part of that is driven by the quest for balance in reporting. But the views offered by the media tend to be polarized, and are not necessarily professional or science-based views. The professional forester is rarely seen or heard from in the news media today, at least in Oregon."

Visibility has become increasingly important as the debate on forest management has heated up in recent years. "We're encouraging our members to raise their voices," says Adams. "We're encouraging our members to speak out, such as writing letters to the editor or speaking to a civic group. As it stands today, the professional forester is relatively invisible on these issues."

Text of the position statements adopted by the OSAF can be found on the OSAF web site at: www.forestry.org. Current position statements and their expiration date are:

- Active Management to Achieve and Maintain Healthy Forests (2008)
- Clearcutting (2008)
- Commercial Timber Harvest on Public Lands in Oregon (2005)
- Fish and Riparian Forests (2004)
- Landslides on Forest Lands (2007)
- Salvage Harvesting (2008)
- Using Pesticides on Forest Land (2008)

Into the Woods with the Student Logging Crew

— by Tristan Huff

About 25 years ago the College of Forestry, Department of Forest Engineering, introduced a program designed to study small-scale logging operations and commercial thinning. The program has gone through many changes since it began and has attracted an increasing amount of student interest over time.

The program all started when the college obtained a Koller yarder and gathered a crew of students to work with a contract logger to conduct research on the college forests. Initially the crew was paid for their work on completing research projects. This lasted up until 1984, when **Loren Kellogg** noticed the great learning potential inherent in the program and decided to offer it as a two-credit elective course so that more students could be involved. The students in the course would spend every Saturday getting hands on experience with the logging machinery and gaining an applicable knowledge of forest operations. During this time, the College of Forestry purchased their current yarder, another Koller with a twenty-three foot tower mounted on a 70 hp Kubota tractor.

This led to the long-term educational program envisioned by Kellogg: a small group of students being trained to carry out logging operations on the college forests, with a larger group of forestry students studying practical applications through their courses with field labs at the logging sites. This crew, known as the “Koller Crew,” is composed of Forest Engineering students along with some Forest Management students and has typically included at least one woman. Currently the Koller Crew has 10 students and is managed by **Jeff Wimer**, a former student of Kellogg’s. Wimer graduated from OSU in Business Management with a minor from the College of Forestry and worked with Wimer Logging, where he became proficient in the ways of contract logging. With his vast amount of knowledge and experience, Wimer is able to contribute to the program an expertise in logging operations and planning.



Students who are accepted into the program begin with a term of in class instruction followed by a term in which they work side-by-side with an established crew member. It is important that the individuals participating in the program are properly trained because they are working with lighter, smaller-scale equipment; thus, using proper harvesting technique is vital. Compared with a larger yarder that is able to muscle through mistakes in planning and execution, the smaller, less powerful Koller yarder requires students to develop exceptional logging skills and appreciate the need for good harvest planning. Kellogg calls this “logging with finesse”.

Once the two-term training period is completed, the students are able to work safely and effectively with the rest of the crew. During the summer, the crew works full time on logging projects within the college’s forest. Crew members continue to work part-time throughout the school year as their schedule allows. From their time spent on various thinning projects, the students are able to gain experience in cruising, unit layout, and harvest procedures. Through thinnings and occasional patch clear-cuts, the Koller Crew harvests 300,000 board feet of logs from the college’s forests annually, making the crew more than self sufficient.

Besides the logging that is done on the college’s forests, the crew is sometimes called upon to clear the roads of fallen trees, as was

the case this past winter. The heavy snow and ice storms that hit the Willamette Valley in early January left many roads a ruin with downed trees. The Koller Crew was able to cut ten loads of logs off the roads alone. The work is not over yet; more extensive salvage work will follow in the spring and summer to recover fallen trees elsewhere.

Not only does the Koller Crew help out managing the college’s forests and cleaning road debris, it also serves as a research platform. Often, new equipment





ATTENTION

Koller Crew Alumni:

Jeff Wimer is gathering contact information for all Koller Crew alumni in the hopes of organizing a get-together. Former members should email Jeff at: jeffrey.wimer@oregonstate.edu



and harvesting techniques are tested for their effectiveness. For over a year the crew has been field testing a newly developed synthetic rope, which replaces the steel cable on the yarder's mainline, as well as the winch line on the crew's John Deere 540B skidder. So far the crew has been impressed with the lightweight substitute.

While the Koller Crew spends much of its time researching and working within the forest, its ultimate goal is education. Kellogg says that by educating this core group of students (the Koller Crew) the knowledge and experiences that they obtain will radiate out to their classmates. The crew is enlisted to help teach two classes that cover harvesting practices (FE 370 and FE 371) as well as other College of Forestry courses, outreach education programs, and field tours. In this way, the vast amount of knowledge and experience that the crew obtains will reach far beyond its 10 members.

Of course, for those 10 members, the experience gained is extraordinary. Wimer points out that, unlike private industry, when the students start on the Koller Crew they get exposure to all facets of logging, not just the grunt work. Says **Mark Bond**, a member of the crew, "Prior to being on the crew I didn't really have any experience with logging other than watching from afar ... I have learned a lot of practical information".

It is obvious that the Koller Crew is an integral part of the college. Kellogg commends the crew, saying that, "The student logging program sets our forestry education apart by connecting the theory to practical applications". It is this valuable trait that will ensure the crew's existence for many years to come.



Outstanding Editorial Assistants

There are four student editorial assistants in the Forestry Communications Group this year, including three editorial assistants for the *Focus*. In addition to writing for the *Focus*, the students have been making great contributions to FCG and the College. Some of their efforts are readily visible, such as the nearly 300 articles now on display in the second floor Peavy corridor and the articles featured in this issue of *Focus*.

Other projects are behind the scenes, but no less valuable. Together, **Michelle Delepine** (Natural Resources), **Tristan Huff** (Forest Management), **Luke Jarmer** (History), and **Amanda Reich** (Fisheries and Wildlife), have filled reprint requests, stocked shelves, written annotations, styled lit cites, revised the pubs book, and kept various databases up to date. Jarmer, who graduated at the end of Winter term, also created a photo library/database with thousands of images and then conducted a training workshop for FCG staff.

We would like to thank our editorial assistants for their hard work this year. Congratulations on graduation, Luke, and best of luck to you in the future!



*Tristan Huff
Michelle Delepine
Amanda Reich*

SAF Job Fair a Big Success

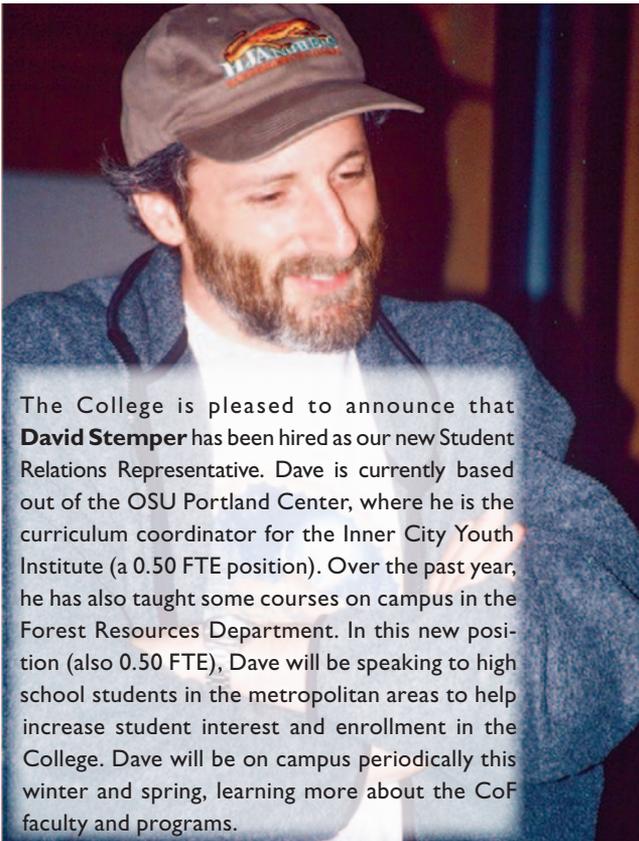


—by Lisa Parkin

On February 3rd, 2004, the Oregon State University Student Chapter of the Society of American Foresters hosted the annual job fair at the College of Forestry. This year's job fair had over 25 different employers from federal, state, and private agencies. Every major was represented—from forest management, to forest recreation, to wood science. Participants filled the common areas of all three floors of Richardson Hall. The fair was organized by SAF Chair-elect **Lisa Parkin** with assistance from fellow club members. Students seemed to be very pleased with the employer selection and the participants were very pleased with the students that turned out. One problem with past fairs has been how to feed the participants. This year, the forestry honorary society Xi Sigma Pi held their annual chili cook-off during the fair, which helped tremendously. According to professors and employment recruiters, this year's job fair was one of the best—which was great to hear.

Clay Torset, Student Services Advisor, agrees wholeheartedly: "Lisa did an outstanding job," he says. "We were very pleased with the coordination, the turnout, and the response. Everything went very smoothly this year. Well done, Lisa!"

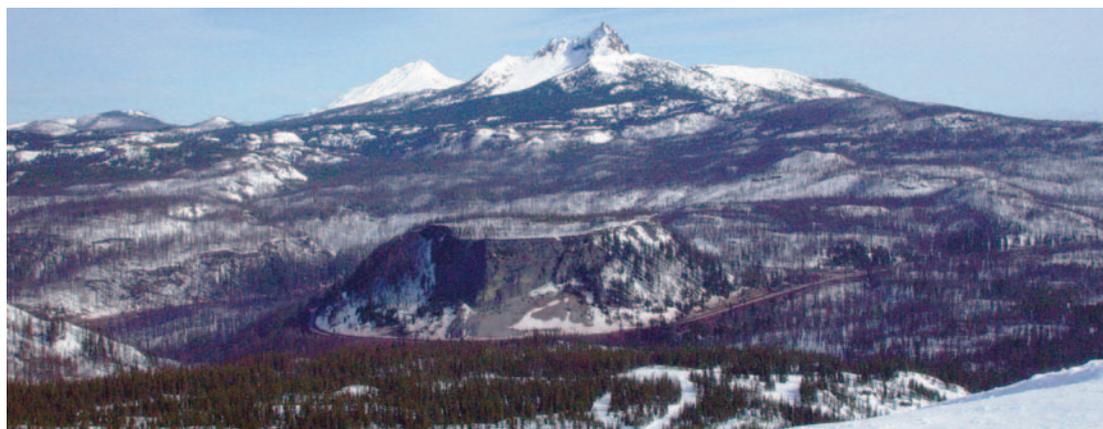
New Student Relations Rep



The College is pleased to announce that **David Stemper** has been hired as our new Student Relations Representative. Dave is currently based out of the OSU Portland Center, where he is the curriculum coordinator for the Inner City Youth Institute (a 0.50 FTE position). Over the past year, he has also taught some courses on campus in the Forest Resources Department. In this new position (also 0.50 FTE), Dave will be speaking to high school students in the metropolitan areas to help increase student interest and enrollment in the College. Dave will be on campus periodically this winter and spring, learning more about the CoF faculty and programs.



Distance Education and Wildland Fire Ecology



—by Luke Jarmer



It is critical that a university such as Oregon State stay trendy to meet the needs of the ever-changing students. Well-publicized fires like the B and B complex and Biscuit have changed the look of some of Oregon’s beautiful forests, and recent statistics show that fires in the United States’ forests are on the rise. These trends mean there is a great need for today’s forestry students to be educated about forest fire. OSU is rising to the occasion with a new class called “Wildland Fire Ecology.” The new class is only offered by distance education—where students learn in the comfort of their own homes, perhaps never stepping foot onto the OSU campus. Distance education is a great new tool that the College of Forestry can use to reach out to students who might not otherwise have the opportunity to take a class, perhaps because they are already working in forest-related jobs.

The fire ecology class fall term had a wide variety of students, two studying from as far away as the Caribbean. The lectures are a series of videos featuring six principal lecturers from three different departments, as well as seven guest lecturers from land management agencies and other universities. The videos are professional and well illustrated with relevant information and outlines appearing on the screen. The students must watch the videos and participate in discussions held on the course website. Discussion topics are given by **Mark Reed** the course facilitator. Reed also grades the final exam, which is sent in by mail or fax, and term project, which is submitted electronically. The class is conducted during the regular 10-week term at OSU, and all assignments must be completed in that time.

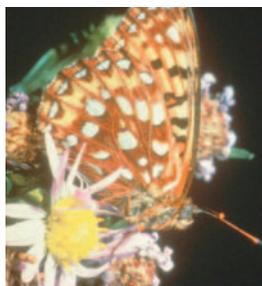
Before Reed came to OSU, he worked as a video producer for the space shuttle program. He likes working outdoors, and this was one of the major reasons he moved into forestry. Prior to any talk of a wildland fire ecology class, Reed was also interested in distance education. With his knowledge of video

production, he was the natural choice to facilitate the class when the opportunity arose. Development of the course was featured in the October/November 2003 issue of the *Journal of Forestry*.

The wildland fire ecology class provides a unique way of learning, which many students find beneficial. According to Reed, the class discussions provide a “higher quality of discourse,” since students can spend time thinking through the topic before posting messages on the discussion board. In addition, the video lecture format makes it possible to take students on field tours and go into more detail than would be possible in a regular classroom. Some students find the class difficult, however, since they must have computer skills beyond those necessary in regular classes on campus. A teacher may also miss the nonverbal cues that students usually give when they don’t understand a particular topic, Reed says. He overcomes this problem by maintaining regular communication with each student. For this reason, the class is limited to 40 students. Reed has each student introduce him or herself in the first week of class, and he responds to each one of them. The result is that he “feels he knows them as well as live students.” Reed’s students agree saying communication is “fantastic” and pointing out that this is something that you often don’t get even in a regular class.

What about the students? How do they feel about distance education? **Steve Hunter** works for the city of Aspen, Colorado and is a senior in OSU’s program in natural resources. He found OSU’s program the only of its type available by distance education. This is very important because Hunter holds a full time job and takes a full time school load. He says, it is “not easy, but certainly not possible any other way.” Hunter is pleased with the wildland fire ecology class and says the key is keeping up with the videos and discussion boards. His advice: “Take the course; it’s well worth it.”

Paul Hammond



JELD-WEN Gives \$3.5 Million For Wood Composite Research

The JELD-WEN Foundation has announced a gift of \$3.5 million to create the JELD-WEN Chair in Wood-Based Composites Science in OSU's College of Forestry. The gift will enable the expansion of the wood-based materials composites program in the Department of Wood Science & Engineering with an additional senior scientist who will focus on research and teaching.

"This is a tremendous opportunity for the college, the university and our partners in the Oregon wood products industry," said OSU President **Ed Ray**. "JELD-WEN's generosity is enabling us to increase our research output in ways that will help Oregon compa-

of wood science and engineering. "This gift will be a big boost to our entire program," McLain predicted. "Everyone associated with wood composites at OSU, from undergraduates on up, will benefit by working with the JELD-WEN chair holder, and by the working relationships that we continue to establish with the JELD-WEN corporation."

Rod Wendt, secretary and a trustee of the JELD-WEN Foundation, says his organization is pleased to make the award.

"The OSU Department of Wood Science & Engineering and JELD-WEN have had a long-term relationship over 30 years now, involving research and sharing of ideas and new



nies become more globally competitive. At the same time, this new faculty member will help undergraduate and graduate students develop promising careers through mentoring and teaching.

Ongoing research at OSU includes investigations into composite materials engineered for desired strength, flexibility, durability, physical appearance and improved utilization of natural resources. OSU researchers say the practical applications for these new composites are extensive, ranging from homebuilding to auto parts to high-tech electrical components. "We will use the JELD-WEN gift to hire someone who is among the top scientists in the field," said **Tom McLain**, department head

technologies," Wendt said. "This grant recognizes the importance of that friendship and working relationship and declares our intent in maintaining and building an even more active permanent association with the university."

Wendt, who also serves as president and CEO of the JELD-WEN corporation, believes the endowment will help advance OSU's international reputation. "The chair will propel Oregon State University to an expanded leadership role in the nation and world in the wood science arena and help companies in Oregon, around the nation and globally," Wendt emphasized.

Richardson Hall Conference Rooms Dedicated



The College of Forestry celebrated the dedication of the Shelk and Sohn Conference Rooms in Richardson Hall on November 14th, 2003. Dean **Hal Salwasser** welcomed and thanked the members of the **Frederick Sohn** and **Stuart Shelk** families, highlighting the many accomplishments of the two men in his opening remarks.

Frederick Sohn was "a giant in the application of technology to wood manufacturing," Salwasser said, and the family continues its tradition of innovativeness in technology to this day. Stuart Shelk was particularly renowned for his strong support of education, a tradition continued and supported by the Shelk family. Both men were characterized by a strong sense of civic responsibility and provided leadership at a critical time for the college, Salwasser said.

Tom McLain, Department Head, Wood Science and Engineering, noted, "Without people like you, we would not have the opportunities we have for research, outreach, and teaching." **Tom Adams**, Department Head, Forest Science, agreed: "We are fortunate to live in a state where we have such strong supporters."

Students from the Wood Science and Engineering and

Forest Science departments spoke about the importance of the conference rooms, noting that the rooms have witnessed many thesis defenses and seminar presentations. Several said that the rooms were comfortable and welcoming, which helped put them at ease as they gave their presentations. **Shelly Xiao**, PhD candidate from the Wood Science and Engineering Department, spoke eloquently about the importance of the rooms to students. She also noted that it was common to hear accents from many nations spoken in the rooms, making them "a window to the world."

The conference rooms are used for a variety of purposes, including preliminary exams and defenses, seminar series, leadership committee meetings, faculty meetings, communications workshops for faculty, staff and students, and social engagements like pizza lunches, going-away parties, and baby showers. Xiao hoped that the heavy use of the conference rooms could perhaps be considered "payment for the donor's generosity."

Development Farewell and Hello



Marianne Barker, Forestry's Director of Development recently relocated to Colorado. Well known for her professional knowledge and cordial relationship building, she has been instrumental in helping add endowments for faculty chairs, and increasing funds for student scholarships. We wish her well as she settles into new responsibilities in the Rocky Mountain state.

Picking up the leadership for our development program is **Lisa French**. Lisa is bringing some Midwestern drive and ideas to Oregon. She just arrived from Edgewood College in Madison, Wisconsin, where she was recruited to create and manage a whole new gift program. Prior to that she spent nine years at the University of Wisconsin. Lisa's plans for the next few months are to log many miles on Oregon roads as she travels to meet and learn more about the helpful and generous Friends of Forestry. *Pictured Lisa French.*

LEMATTA PROFESSORSHIP HONORS AERIAL LOGGING PIONEER

Nancy Lematta, the wife of Columbia Helicopters chairman and co-founder **Wes Lematta**, made a gift of \$1 million in November 2003 to create an endowed professorship in the College of Forestry at Oregon State University.

"Endowed chairs and professorships are keys to our ability to attract and retain top faculty in a very competitive job market," said **Hal Salwasser**, dean of the College of Forestry. "We will use the Lematta endowment to support the work of one of our outstanding faculty members." The appointment is expected to be made this summer.

The **Wes Lematta Professorship in Forest Engineering** at OSU will enhance teaching and research in methods of safely and efficiently removing timber from forests while protecting water, soils, and other resources, and will help resolve other engineering challenges relating to forest management.

"I am delighted by this investment in the future of our students, programs, and faculty," said **Steve Tesch**, head of the Department of Forest Engineering. "This gift helps ensure an excellent education for forest engineering students."

In addition to teaching, **Tesch** said, the **Wes Lematta Professor** will work to develop science-based forest management techniques that meet the needs of industry, agencies, and small woodland owners while "minimizing the environmental footprint of logging." **Tesch** added that the professorship is "a fitting tribute to **Wes Lematta**, who is a strong proponent of the wise use of natural resources and a respected pioneer of aerial logging."

Columbia Helicopter, Detroit Lake, Oregon

Thanks donors!

Michael and Jane Newton recently gave timber valued at \$302,000 to support the **Newton Forest Research Fund**. With this and other gifts, the Newtons are building an endowment that will support long-term silviculture research.

Roberta Konnie continues to support programs in Forest Engineering with a gift of \$75,000 to the **Konnie Family Forest Engineering Fund**.

Starker Forests continues to support the **Starker Lecture Series** with generous contributions. The contributions and innovative work in the College through internet streaming, have made the lectures available to a much larger audience.

Richard Strachan has given another significant gift to keep the **Harris computer laboratory** in top-notch condition. Students make good use of the lab to support their studies.

Thanks to **Mrs. Anna Chasman**, the **Jackson Hole Community Foundation** has donated \$18,000 for the **Gordon Carlson Scholarship**.

The College of Forestry gratefully acknowledges the following donors who have made major gifts in support of the **Willamette Industries Legacy Scholarship**: **John and Linda Shelk Foundation** (\$35,000), **Duane and Barbara McDougall** (\$12,500), and the **Wheeler Foundation** (\$20,000).

In Memoriam

Nathan William Nakis

April 12, 1984 – December 16, 2003

At the age of 19, Nathan Nakis, College of Forestry student from Sedro-Woolley, Washington, had already learned more about living than many of us learn in a lifetime. As one friend wrote, it was as if Nathan “had figured something out that hadn’t occurred to anyone around him, but he didn’t tell anyone what it was for the sake of not spoiling the secret for everybody else.” What was his secret? From all accounts it seemed to be his unique zest for life, boundless enthusiasm, eagerness to meet challenges head on, and his way of changing everyone he met for the better. Nathan was killed December 16, 2003, while serving his country in Mosul, Iraq.

In dozens of comments in newspaper accounts and on memorial websites, Nathan is remembered for his honor, honesty, courage and loyalty—and above all, his irrepressible sense of humor. “He made everything fun,” said Dallas Trole, a science teacher who taught Nathan “Even tedious assignments, he was laughing, smiling.”

Nathan was born in Sedro-Woolley, Washington, on April 12, 1984. He was an honor roll student at Sedro-Woolley High School, graduating in 2002 as a member of the National Honor Society. He was active in symphonic and pep band, club and school soccer, cross country running, and wrestling, as well as peer groups such as Natural Helpers and Renaissance. Nathan was very active in the Boy Scouts of America, earning the rank of Eagle Scout with Bronze Palm in 2001 and was a member of the Order of the Arrow.

Nathan loved the outdoors—camping, hiking, and “playing in the dirt”, constructing dams and spillways on the creeks near his home, a 30-foot tower for paintball, and a nature-hiking trail for his Eagle Scout project. He also had an aptitude for things mechanical. For his HS senior project, he restored a small World War II vintage bulldozer, finding parts for the 60-year-old machine on the Internet. Teacher Jim Johnson said the project was typical of Nakis. “He’s one of those handful of kids who could work with his hands as well as his mind,” Johnson said.

With his interest in building and driving earth-moving vehicles, Nathan enlisted in the Washington National Guard at age 17. He chose the National Guard because he wanted to construct and build, not fight, said his father, Arty Nakis.

Nathan transferred to the Oregon National Guard, B Company, 52nd Combat Engineers (Heavy), based in Albany in order to attend Oregon State University. In January of 2003, he enrolled at OSU in the College of Forestry. It was his goal to earn a dual degree in Forest Engineering/Civil Engineering. Adam Taylor (recent PhD, Wood Science and Engineering) taught Nakis in an introduction to wood science course at Oregon State. “He struck me as a very able, interested student,” Taylor said.

About five weeks after beginning his freshman year, his unit was mobilized for deployment to Iraq. On his last day on campus, Nakis, an avid rock climber, rappelled from the roof of his residence hall, knocking on windows and waving to fellow students, a dorm resident recalled. His friends speculated that he had brought his positive attitude to a difficult situation in Iraq.

In Mosul, Iraq, engineering specialist Nakis was part of a unit involved in a variety of civil projects including building an orphanage, housing projects, athletic fields, road construction, and water systems. Nathan was considered a model soldier by his fellow service members. Sgt Jerry Donnelly, who supervised Nakis for four months, wrote, “He was a great man. I had four soldiers working for me and Nathan did 75% of the work. I enjoyed knowing him and will miss him dearly.” On December 16, 2003, Nathan died when the transport vehicle he was driving crashed while attempting to avoid a road hazard.

Nakis is believed to be the first Oregon National Guardsman killed in combat since World War II. On the order of Governor Ted Kulongoski, state flags at public institutions were flown at half-staff for a day to honor Nakis. The governor was among the speakers at a memorial service for Nakis in late December. Kulongoski said Nakis went to Iraq trained as a soldier but armed with the “tools of peace” to rebuild the country. “He put on the uniform to strengthen, not break our common bond,” Kulongoski said.

“His heart was different than other people’s hearts,” said Mike Janicki, a friend of the Nakis family. “Nathan went over there to win the peace.” He won over children with his soccer and slingshot skills, and in calls home, he asked his parents to send soccer balls for the local children. “His friends tell me stories of young Iraqi children gathering around his tent asking him to come out and play soccer,” his father said. According to his mother, Elinor Nakis, “He didn’t see age, gender, religion, color, social status or rank, he saw only a person’s spirit.”

Nathan is survived by his mother and father, Elinor and Arty Nakis of Sedro-Woolley; his brother, Nic of Seattle; his grandmother, Deborah Nakis, and aunts, uncles, and cousins.

All gifts and remembrances should be sent to the Nathan Nakis Memorial Fund in care of any branch of Skagit State Bank in Washington state.

Daren Kixmiller

We are again saddened by the death of one of our students. Matthew Daren Kixmiller, known to his friends as Daren, Natural Resources, died from a snowboarding accident on January 20, 2004.

Daren came to OSU in Fall ‘92, and transferred into the Natural Resources program in Winter 1995; then left the University after Winter 1997. He returned this fall and was readmitted into Natural Resources, expressing interest in watershed management and conservation.

Kixmiller, who had a passion for winter sports, died while descending the Cascade Express run on Mount Hood. He was snowboarding on the mountain, and fell, hitting an exposed log and sustaining injuries to his chest. He died before LifeFlight could transport him off the mountain.

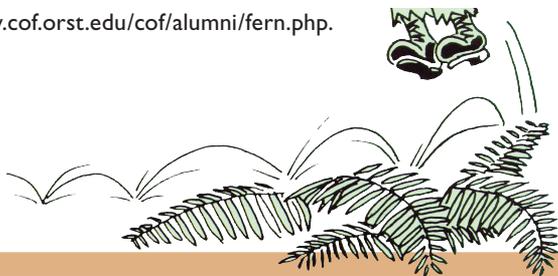
Calling all Fernhoppers!

The College of Forestry invites you and your family to join us for the 72nd Annual Fernhopper Day celebration on Saturday, May 15, 2004.

Come meet old friends and make new ones as we enjoy the variety of activities scheduled for the day. This year's Fernhopper Program begins with refreshments and registration at Richardson hall at 9:00 am, followed by a trip to the woods for demonstrations, hikes, lunch at the Forestry Club Cabin, student logging sports, and other recreational activities. At 5:00 pm, there will be a reception at the OSU Alumni Center, followed by the Annual Fernhopper Banquet honoring students, faculty, and alumni receiving scholarships, fellowships, or awards from the College of Forestry.

The 2004 Fernhopper Day theme is *Adapting to Change*. Oregon State University is launching the Strategic Plan for the 21st Century and the College of Forestry is revising the McDonald-Dunn Forest Management Plan. Both of these processes are requiring the College to adapt to change. Come see what is new at the College of Forestry!

For more info about Fernhopper Day 2004, please call the Outreach Office at 541-737-4279 or visit the webpage: www.cof.orst.edu/cof/alumni/fern.php.



Come Rain or Come Shine

2004 Commencement will be held Sunday, June 13th in Reser Stadium. (Rain or Shine!) For the 2003/04 year, the College of Forestry anticipates graduating a total of 140 students. Fifty advanced degrees will be awarded: Master of Forestry (1), Master of Science (31), and Doctor of Philosophy (18). Eighty-nine Bachelor of Science degrees will be awarded, with one of our students earning a Bachelor of Arts International Degree in addition to the Bachelor of Science.

The College will host its annual Commencement Brunch, in the Peavy Hall Courtyard, between the morning Graduate ceremony and afternoon Undergraduate ceremony. For information on tickets, times, or reservations contact Dena Keszler, 737-1593.

OUTREACH EVENT CALENDAR

June 2004

IUFRO Foliage Meeting
June 13-19, 2004
Corvallis, OR

August 2004

**Balancing Ecosystem Values:
Innovative Experiments for
Sustainable Forestry**
August 15-20, 2004
Portland, OR

To find out about upcoming events, visit: <http://outreach.cof.orst.edu/> or contact the Oregon State University Forestry Outreach Education staff at (541) 737-2329.



College of Forestry

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