

FOCUS ON FORESTRY

WINTER 2001

THE MAGAZINE FOR THE FRIENDS AND ALUMNI OF THE COLLEGE OF FORESTRY



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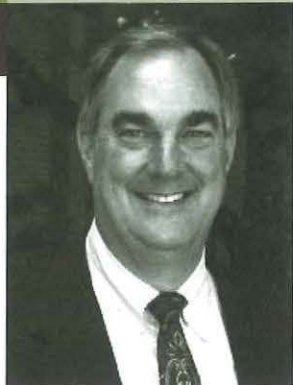
OREGON STATE UNIVERSITY
COLLEGE OF FORESTRY

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WINTER 2001

A LETTER TO THE FRIENDS AND ALUMNI OF THE COLLEGE OF FORESTRY



We are all saddened and shaken by the recent terrorist attack on our nation. It may seem there's nothing we can do to aid in the response that our government is undertaking. We've all been horrified by the pictures in the newspapers and on T.V. of the destruction in New York, Washington and Pennsylvania.

But there are two things we can do. One is here at home, where we live and work with people affected in various ways by the attacks and by what is to come. And one is there, in the places where those terrorists find support.

Our immediate action must be to make our home places safe and welcome for all the people who share in our sorrow and sadness. We must treat everyone, regardless of cultural background, with the very same respect that we wish to have conferred on us—the universal golden rule.

In addition to the pictures from New York and Washington, DC, I've also been looking at pictures of the countries where those terrorists come from and of the faces of the people in those countries. These countries are desperately poor. The people there are not benefiting from the trickle-down of economic prosperity such

as we enjoy in countries where we have the capacity to offer everyone a decent education, a job, and a quality environment.

When you see these pictures and get an idea of the abject poverty, the grindingly bleak life, that people endure there, you begin to understand why some people might become so desperate that they lash out at a target of what they think oppresses them, any target—even the wrong target.

It may seem that we're helpless to do anything beyond support of our government and care of the people we encounter. But I believe this tragedy holds an opportunity for people in the resource professions to reach out with their knowledge, their technology, and their passion for improving the well-being of people and our living world, in a humanitarian effort that could accompany our military responses to these terrorist acts.

I know this would not be an easy job. It would be analogous to fighting World War II and carrying out the Marshall Plan at the same time. But Americans are not alone in either the immediate task or the longer-term challenge of building a safer, more equitable world for all people. We who study and teach good stewardship of natural resources may find that we have unprecedented

opportunities to reach out, through our research, teaching, and service, to help people in the poorest parts of the world improve the quality of their lives.

In the end, addressing the root causes of terrorism, poverty and alienation, in addition to its agents of destruction, may be as important in creating the kind of world we want for everyone as the immediate acts of retribution. It's worth thinking about.

A handwritten signature in dark ink, reading "Hal Schnaser". The signature is written in a cursive, flowing style. To the right of the signature is a small, dark, circular object, possibly a hole punch or a decorative element.

CREDITS



Focus on Forestry is published three times each year (Fall, Winter, Spring) by the Oregon State University College of Forestry. Our goal is to keep Forestry alumni and friends informed about the College of Forestry and its many activities and programs.

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COLLEGE OF FORESTRY

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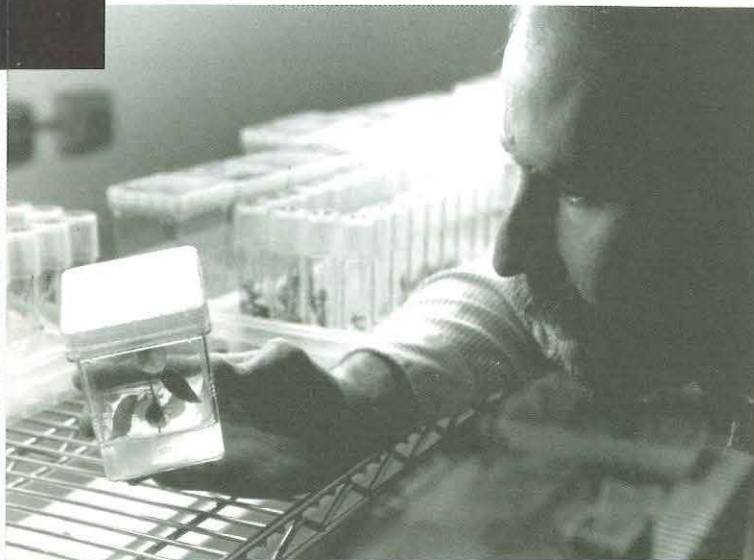
A MOON TREE?

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Cover: Caiping Ma, faculty research assistant with the Tree Genetic Engineering Research Cooperative, with genetically engineered tobacco plants. Left, a 10-micron (1/100,000 of a meter) slice of poplar floral tissue; the light heart-shaped patch at upper right shows where a floral gene is being expressed. This page, upper left: a flower from a genetically altered *Arabidopsis thaliana*, a fast-flowering plant used, like tobacco, to test genetic engineering of sterility.

Gene research in the spotlight

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"WE BROUGHT TOGETHER A KNOWLEDGEABLE AND DIVERSE GROUP OF PEOPLE FROM AROUND THE WORLD."

"Biotechnology is "a topic of obvious public importance," says Steve Strauss, an internationally known expert on gene research in trees.

Throughout the last half-century, the biological sciences have delved ever deeper into the very building blocks of life. Researchers have cracked the genetic code of hundreds of organisms, including human beings. Genetics research confronts society with the reality of human power over nature, and it raises difficult questions about how much power is too much.

So it's not surprising, says Steve Strauss, that genetics research has stirred much public interest and not a little contro-

versy. "There are complex issues of science, public policy, economics, and ecology that need to be analyzed at length," says Strauss, professor in the Department of Forest Science and director of the Tree Genetic Engineering Research Cooperative (TGERC) at the College of Forestry. "Hopefully we can develop a working consensus about how to proceed with forest biotechnology in a responsible way that addresses ecological and social concerns."

Strauss was co-organizer of a July conference that gathered scientists and environmental activists to address some of the more difficult social, scientific, and ethical concerns relating to forest biotechnology—a science that holds considerable promise to produce timber and fiber, but that has also been the target of public criticism, protests, and even a few terrorist attacks.

"We brought together a very knowledgeable and diverse group of experts from around the world to discuss a topic of obvious public importance," says Strauss, an internationally known expert on the use of biotechnology in forestry. He worked with H.D. "Toby" Bradshaw, a geneticist at the University of Washington, to organize the conference, held at Skamania Lodge in southwestern Washington. The meeting drew almost 300 people, including university researchers, government

regulators, business people, ethicists, ecologists, and representatives of environmental groups.

The words "biotechnology" and "genetic engineering" are often used in the same breath, but they are not synonymous. "Biotechnology" has been defined in numerous ways," says Strauss. "Its basic definition is manipulating biological systems toward human goals. This would include traditional breeding and traditional manipulation of organisms and environments, such as silviculture." A more specific and modern definition, he says, would be "the use of laboratory-based propagation, horticulture, genetic mapping, and gene transfer methods directed at improving production, quality, or environmental characteristics of biological systems."

Genetic engineering has a narrower definition—it is a set of techniques used in some kinds of biotechnology research and practice. It involves the use of recombinant DNA methods, where genes are physically cut and rejoined with enzymes. The modified genes are then transferred into chromosomes asexually, without any cross-breeding.

Genetic engineering of trees in plantations has potential to increase fiber productivity and provide other social and environmental benefits. Although biotech research in forestry lags behind

COVER STORY

that in agriculture or pharmaceuticals, it holds great promise for developing trees that can grow faster, resist insects and diseases, require less use of chemicals, thrive in drier conditions, and take pressure off native forests to produce wood fiber, freeing them to be reserved for watershed protection or wilderness.

However, scientists and the public alike have concerns about introducing genetically engineered plants into plantations if they might thereby also be able to enter natural ecological communities. For example, what might happen if "engineered" sets of genes escape to a wild population of trees? Sue Mayer, executive director of GeneWatch and an environmental spokesperson at the conference, raised this issue in her talk. "Trees live for a long time, are relatively undomesticated, and disperse their seed and pollen widely. It's very difficult to gauge environmental impacts," she said. Strauss and others agree that this needs serious consideration; however, a distinct advantage of genetic engineering is that the genes and traits they impart are

known in far more detail than has ever been possible with conventional breeding or use of exotic horticultural varieties.

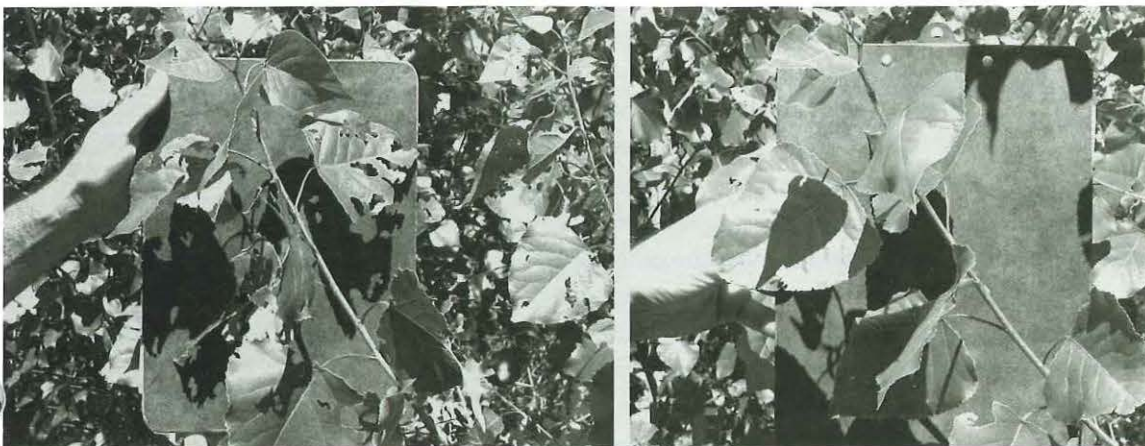
The only way scientists can hope to understand the risks and benefits, says Hal Salwasser, is to conduct research, carefully monitored and controlled, into all aspects of genetic modification of trees. "We have to feed, clothe, and house the people of the world while protecting the environment," said Salwasser, Dean of the College of Forestry, who also spoke at the conference. "To meet this challenge, we need to balance a legitimate concern for precaution with a bias for boldness. Studies suggest that within 10 years, about 40 percent of the world's wood supply may come from intensively managed forest plantations." With proper research and precautions, he said, genetically modified trees might be a valuable component of those plantations.

Continued and even expanded research, agrees Strauss, is the only way to answer the many questions about forest biotechnology and to gain public

confidence. "I think it's possible to start the research and educational process without making a wholesale endorsement of biotechnology," he says. "I would urge against making a global 'yes or no' decision about all genetically modified organisms. What we need to do is get on with carefully planned research, and then report the results to the public."

The TGERC cooperative, says Strauss, has been doing precisely that kind of work since it was started seven years ago. Established to conduct research and technology transfer to facilitate the growing of genetically engineered trees in plantations, the cooperative is funded by dues from a number of industrial and government cooperators. The 11 TGERC scientists and students focus their studies on trees of the genus *Populus*—poplars and aspens. "Hybrid poplar appeared to be becoming a major fiber crop in the Northwest when we started, although its progress has slowed," says Strauss. "Poplar is highly amenable to genetic engineering methods. Also, it's an

Cottonwood tree on the right is transgenic — it has genetically engineered insect resistance. Leaves in the lower canopy show little or no insect damage mid-way through the season, compared to leaves of the non-transgenic tree on the left.



intensively managed, short-rotation crop, much like hemp or cotton. At the present time, using poplar for genetic engineering is more biologically, economically, and environmentally appropriate than using our long-rotation, semi-natural conifer forest trees."

The TGERC team is conducting experiments to engineer sterility into poplars, which would drastically reduce, if not prevent, sexual reproduction in the wild. They're also testing ways to manipulate the timing of the flowering to keep trees in their rapidly growing juvenile state permanently, or to speed breeding progress. The scientists are also testing ways to genetically engineer trees for pest resistance and herbicide resistance—the latter to make it possible to control weeds with less tillage and smaller amounts, or more environmentally desirable forms, of herbicides.

Strict government regulations require rigorous monitoring of genetic engineering field trials, says Rick Meilan, associate director of TGERC. "Before we plant any genetically modified trees out in the field, we must obtain a permit or file a 'notification' with the Animal and Plant Health Inspection Service (APHIS), a branch of the U.S. Department of Agriculture. APHIS forwards our applications to the Oregon Department of Agriculture for their assessment as well." A typical application spells out in detail

the various genetic "lines," or genetic variants, of the trees to be planted, how the genetic engineering was done, how long the trees will be on the site, and how they will be monitored and disposed of at the end of the study. Trees must be killed (usually with an herbicide) and the site left fallow for at least one year. During this time, any volunteer trees must be killed.

"In our work we use both cottonwood and aspen," says Meilan. "Cottonwoods that are genetically modified cannot be grown in the field for more than three years unless they're coppiced, which means cut off at ground level every year to ensure they won't flower. One of the main goals of TGERC is to engineer reproductive sterility. To see whether our research is working, we have to allow the trees to reach maturity and flower. You can't do this in a greenhouse, because the trees get too big."

Because they're not permitted to let genetically modified native cottonwoods flower in field trials, the TGERC scientists are using nonnative hybrid aspens developed in France. These aspens don't interbreed with native *Populus* species in the vicinity of the trials, and their flowering does not coincide with the flowering of Oregon's native aspens. "So there is virtually no chance of genetically modified trees interbreeding with native trees," says Meilan.

Even with this rigorous government oversight, there's some public distrust of both the research and the regulatory mechanisms governing it, says Steve Strauss. A major step forward, suggested by several of the conference participants, might be the formation of a federally funded commission to study ethical, legal, and social issues in forest biotechnology, with the net result being the production of specific safety guidelines. "We need to get past the polarization, and this kind of forum might help to build public confidence," says Strauss.

Other conclusions and observations of meeting participants:

- More work needs to be done in risk assessment and in controlling the flow of genes to nontarget species.
- The engineering of sterility into genetically modified trees may hold the key to their safe and publicly accepted use.
- The issue of whether trees ought to be grown in plantations is separate from, and may spark more public concern than, the issue of using genetically altered trees.
- Research into tree genetics may bring unanticipated advances in basic knowledge that are impossible to factor into a current assessment of risks and benefits, and genetic engineering and field trials are key methods for scientific analysis.
- Genetically modified trees are not the same as "invasive

species," although the two are often compared. Genetic alterations usually affect only a single gene or a few genes, and pose far less risk than introducing a novel nonnative species into an ecosystem.

- Genetic engineering holds the potential to save some at-risk tree species, such as the American chestnut.

- The use of genetically modified trees might actually speed the rate of conventional cross-breeding, which has been carried out on many animal and plant species for thousands of years.

"The potential for forest biotechnology is huge because it is based on so much new scientific knowledge and technological capability," says Strauss. "We need lots of research so the public can have as many options as possible, and we need the proper regulatory mechanisms, so research and possible commercial uses can proceed in a safe, orderly manner. The more we know, the better we should be able to control the whole process and decide where we, as a society, might want to go with it."

— D.S.

Proceedings of the International Symposium on Ecological and Societal Aspects of Transgenic Forest Plantations will be on the web at:

<http://www.cof.orst.edu/coffpub/home/structur/indorpub.htm>



Dean Hal Salwasser prepares to address attendees of the International Symposium on Ecological and Societal Aspects of Transgenic Forest Plantations.

OUTREACH EDUCATION EVENT SCHEDULE

For workshop information, contact the Outreach Education office at 541-737-2329, e-mail outreach@for.orst.edu, or visit their web site at, www.cof.orst.edu/cof/extended/conferen/

- October 1, 2001-April 15, 2002. Tax Cuts Workshop on the Web
- November 7-9, 2001. Advanced Variable Probability Sampling
- November 15, 2001. Oregon Urban Forestry: Research and Education Forum
- November 16, 2001. Questioning the Need for Precommercial Thinning
- November 26-December 6, 2001. Natural Resources Institute Module 2 : Decision Making and Systems Thinking for Natural Resource Professionals
- November 29-30, 2001. Selling Forest Products
- December 3-6, 2001. How to Dry Lumber for Quality and Profit
- December 6-7, 2001. Introduction to ArcView GIS Applications in Natural Resources
- December 10-14, 2001. Basic Forest Road Design Workshop
- December 12-13, 2001. High Desert Green Industry Conference
- December 13-14, 2001. Advanced ArcView GIS Applications in Natural Resources
- March 5-6, 2002. Silviculture Options for Sustainable Management of Pacific NW Forests
- April 8-12, 2002. Variable Probability Sampling
- July 15-26, 2002. Advanced Silviculture Module
- November 10-13, 2002. Pacific Rim Bio-Based Composites Symposium

Accreditation teams impressed

Evaluators praised our exceptional level and array of support services, among other good things. Accreditation teams were impressed with the College's programs and services.



Two accreditation review teams that visited the College recently had mostly good things to say, according to Becky Johnson, Associate Dean for Academic Affairs. "Both site visit teams praised our teaching, advising, research, and extended education activities," she says. "They were also extremely impressed with our teaching and research facilities."

The College was up for reaccreditation last year by three bodies. One is the Northwest Association of Schools and Colleges, which reviewed programs and facilities of the whole University. The other two are the Society of American Foresters (SAF) and the Society of Wood Science and Technology (SWST). This combined body accredits the College's under-

graduate degree programs in Forest Engineering, Forest Management, Forest Products, and Forest Recreation Resources, as well as the general Master of Forestry and Master of Forestry in Silviculture programs.

The SAF/SWST draft report offered these compliments:

"The faculty is to be commended for requiring considerable writing and public speaking in a variety of courses."

"The CoF provides an impressive level and array of support services to faculty and students."

"The faculty provides high-quality instruction in all the programs being considered. This was reinforced in discussions with students, who praised the quality of instruction throughout the CoF. At the same time, the research productivity is extremely high."

"The CoF also maintains the

most extensive forestry, forest engineering, and wood products extension programs in the nation. These programs are widely acclaimed nationally."

The teams also noted areas to work on, says Johnson. "We need to establish mechanisms for assessing the degree to which our educational objectives are being met—i.e., move toward outcomes-based education. We need to continue to find ways to recognize and reward excellence in teaching. Finally, we need to continue to improve the diversity of our students, faculty, and staff."

Overall, however, the accreditation teams were quite positive about the College's programs, says Johnson. "In the review of the whole University, CoF programs were singled out as being one of the strengths of the overall institution."

FIELD SCHOOL TAKES STUDENTS INTO BACK COUNTRY

Each fall, juniors and seniors in Forest Recreation Resources come together for a Field school to work with resource managers on their territory so that we might better understand current issues in the broad field of recreation. Another important purpose of this class is to strengthen friendships between students. I participated in the 10-day field school this year.

Led by instructor Mark Reed, we traveled through northeastern Oregon and Idaho and into Utah, where we spent five days in Escalante working with Maile Adler and the Bureau of Land Management (BLM). Our project was to build a pole fence and floodgate from lodgepole pine and juniper to exclude cattle from the Grand Staircase-Escalante National Monument.

For our five days in Escalante, we camped at a group campsite at the Petrified Forest State Park. The second day in town, we met at BLM headquarters and got the scoop on what our project would be like. That morning we loaded supplies onto a trailer and into the bed of a pickup. From there we went to the worksite and unloaded the materials. We finished the day off by celebrating a student's birthday at the Cowboy Blues restaurant.

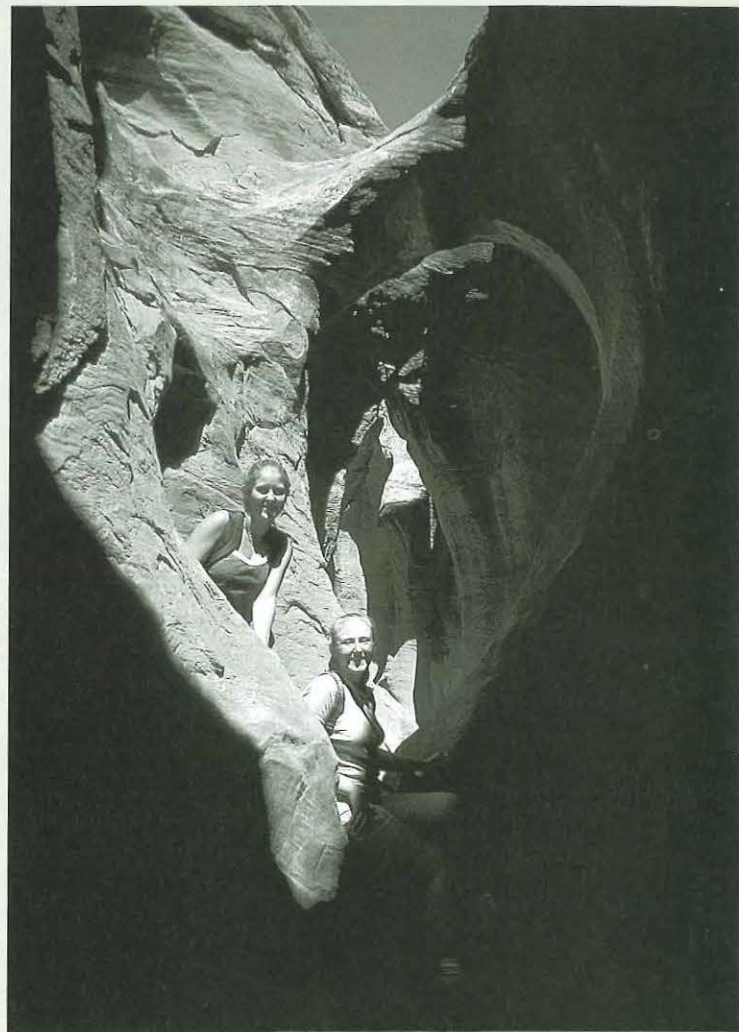
The following day (September 11) our group was split in two. This made it so that a smaller number of students could recreate and observe management issues on the monument and stay within the group number requirements to be in the backcountry areas of the monument. Each day the groups would alternate activities. The smaller of the two groups (the group I was in) spent the morning at the fence project.

Upon learning of the terrorist attacks on the East Coast, we went back to BLM Headquarters where employees were getting ready to go home. "Field School is over," we were told, because there would be no one left to supervise our project. We spent the day listening to the radio and catching glimpses of the events on a small and fuzzy television in the gas station's mini mart.

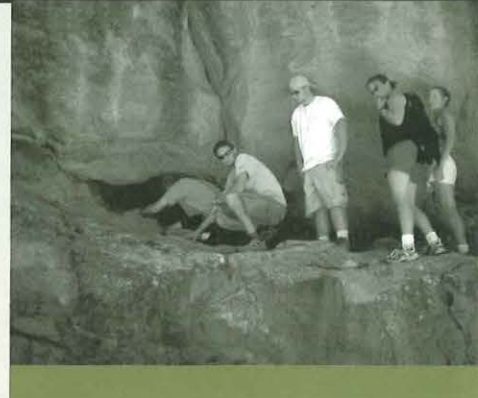
There were a lot of tough decisions to be made before we would be home. The consensus, however, was to stay in Escalante, where we had friends in the BLM. We feared that if we rushed home and the terrorist activities escalated, we might have been stuck on the road somewhere in Nevada or California. The next day we heard that government employees were to "return to work as usual". This put us back on track and allowed us to finish the fence and carry

out the rest of our activities. We completed the project in three days, leaving us lots of time to enjoy ourselves in a spectacular natural setting.

— K.D.P.
Junior, Forest Recreation Resources



Author Kate Pryor, above left, with friends at Peek-A-Boo slot canyon, Grand Staircase-Escalante, and Fiery Furnace, Arches, Utah.



WOOD MAGIC DRAWS 1,200 STUDENTS

How many stones
will break this
board? Rakesh
Gupta, Forest
Products, helps
Wood Magic
students fill the
bucket with stones.

About 1,200 third- and fourth-graders from across Oregon came to the College of Forestry to take part in Oregon Wood Magic, a hands-on educational program about the use and value of wood in our lives.

In lessons with such titles as "Bubbling Bazookas" and "Dr. Fire," the young students observed the operation of a portable sawmill, learned about fire retardants, watched a video about house construction narrated by a talking

2X4, and tested the strength of a wood beam loaded down with rocks placed in a bucket.

"The program lets students and their teachers move through a

series of nine stations covering aspects of science and technology that relate to wood, wood products, and natural resource issues," says Margie Hoover, assistant program coordinator in the Department of Forest Products.

"All the lessons are tied to the Oregon Benchmarks, and schools are encouraged to do science lessons relating to the material before they arrive on campus. The event is always very popular."

Participants in this year's program come from elementary schools in Portland, Beaver Creek, Veneta, Lebanon, Salem, Junction City, Springfield, Philomath, Albany, and Corvallis.



GRAD STUDENTS HONORED FOR PAPERS AND PRESENTATIONS

Steve DiFazio and Sarah Dye, doctoral students in the Department of Forest Science, were recognized for their excellent presentations at the IUFRO meeting on tree biotechnology held in Stevenson, Washington, in July. DiFazio's presentation, titled "A landscape modeling approach to assessing potential gene flow from transgenic poplar plantations," was named best student oral presentation. Dye's poster, "Isolation of TERMINAL FLOWER 1 homologs from *Populus* and expression analysis over a seasonal cycle and continu-

ous maturation gradient," was named best student poster presentation. DiFazio and Dye are students of Steve Strauss.

Woodam Chung, doctoral student in the Department of Forest Engineering, was awarded the Student Communication Award for best student paper at the 2001 Council on Forest Engineering annual meeting at Snowshoe, West Virginia, in July. His paper was titled "Designing a forest road network using a heuristic optimization technique." Woodam received a \$300 cash prize as part of the award. Chung is a student of John Sessions.

John Tappeiner, Forest Resources, received the Barrington Moore Memorial Award for 2001 by the Society of American Foresters at the SAF National Convention in Denver in September. The award is given to those who achieve a high level of scientific achievement in biological research.

Bob Buckman, Forest Resources (emeritus), has been chosen by the Board of Directors at the University of Minnesota to receive the Outstanding Achievement Award, given to "graduates who have attained unusual distinction in their chosen fields or professions, in public service, and who have demonstrated outstanding achievement and leadership on a community, state, national, or international level."

Diane Haase, Forest Science, received the Outstanding Faculty Research Assistant award from OSU at University Day in September. She was honored for her support of the Nursery Technology Cooperative, of which she is associate director, in planning, development, and implementation of new applied and basic research projects in the areas of field reforestation, nursery management, and plant physiology. In addition, she supports the NTC through organizing meetings and confer-

ences, maintaining the co-op's web page, and assisting NTC graduate students. In 2000, she initiated the Seedling Quality Evaluation Service. Haase has published papers on nursery practices, outplanting treatments, seedling quality, seedling nutrition, and chlorophyll fluorescence, in addition to co-authoring a book on native-plant propagation.

David Rosowsky, Forest Products, is winner of the 2001 Walter L. Huber Civil Engineering Research Prize from the American Society of Civil Engineering. Rosowsky, who holds the Richardson Chair in Wood Engineering, was commended for his research on stochastic modeling of engineered wood construction behavior under stress from natural and man-made hazards, and for the development of practical risk-consistent criteria for design of wood structures. In addition, along with two coauthors, Rosowsky will receive the T.K. Hsieh Award from the Institution of Civil Engineers in London in November. This award is presented to the best paper published by the Institution in the field of structural and soil vibrations caused by earthquakes.

Bev Law, Forest Science assistant professor, was appointed science

chair of the AmeriFlux network, which consists of 45 intensive sites in the Americas that are devoted to research on the interactions between terrestrial ecosystems and the atmosphere. She will lead strategic planning for the science direction of the network and further development of an infrastructure to study a variety of terrestrial ecosystems, from the tundra to the tropics. By gathering, interpreting, and disseminating information on long-term measurements of CO₂, water, and energy exchange, and on ecosystem processes and disturbance history that influence exchange rates, the network's research enhances the understanding of underlying forces that affect future climate change. Law also has been appointed to a national committee working to strengthen the nation's air quality management system. She joins the Committee on Air Quality Management in the United States, operated by the National Academy of Sciences' National Research Council. The task of the committee is to develop scientific and technical recommendations on air quality.

Barbara Gartner, Forest Products, has been elected a Fellow in the International Academy of Wood Science. Since the fall of 1999, Gartner also has also been coediting the



Bob Buckman

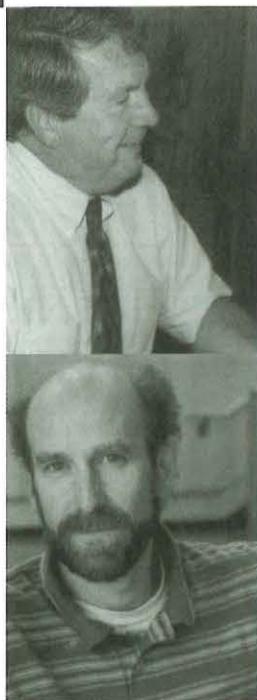
David Rosowsky

Bev Law

Barbara Gartner

FACULTY/STAFF

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Bart Thielges,
Steve Strauss

International Association of Wood Anatomists (IAWA) Journal.

Bart Thielges, Associate Dean for Research and International Programs, was honored at OSU's University Day in September for his work in developing cooperative agreements between OSU and universities in Africa. Thielges has been instrumental in establishing research and educational linkages with the universities of Natal and Zululand in South Africa, the University of Botswana, and the International Center for Research in Agroforestry in Kenya. He also developed a USAID-funded cooperative project with the University of Fort Hare and Fort Cox College of Agriculture, two historically black colleges in South Africa. (Thielges has developed many such agreements with research institutions around the world; please see the story "New international partnerships formed" on p. 19.)

Steve Strauss and the forest biotechnology group he directs, Tree Genetic Engineering Research Cooperative, were inducted into the ASE Mentoring Hall of Fame in October. Strauss and his group have mentored 10 outstanding high school students over the last eight years via the Apprenticeship in Science and Engineering Program of the

Saturday Academy. Each year the students are exposed to lab and field research in plant biotechnology and discussions of science careers and ethics concerning biotechnology, forestry, and agriculture.

Connie Patterson has left the Department of Forest Products to join the Department of Forest Resources as advisor for the Natural Resources undergraduate degree program.

— C.M.

New Faces

Glen Murphy joined the Forest Engineering Department in July 2001 as a professor of harvest operations analysis. He earned his Ph.D. at OSU in the mid-1980s. He comes from New Zealand, where he worked as a research leader, professor, and international consultant.

Stephen Schoenholtz joined the Department of Forest Engineering as an associate professor in forest hydrology. He comes most recently from Mississippi State University.

Kevin Hudson has come on board with the College of Forestry as system support specialist in the Computer Resources Group. Kevin is a familiar face, having been a part-time consultant since 1999.

Joe Holmberg, a Fernhopper from way back (Forest Management 1963), has joined Forestry Extension and Rick Fletcher's work in the Sustainable Forestry Partnership and the Outreach Office. Holmberg will develop a year-long program in silvicultural options.

Jessica Leahy, who just finished her master's in Forest Resources with a concentration in environmental and resource economics, is a new faculty research assistant working with Becky Johnson, Associate Dean for Academic Affairs.

Mark Lichtenstein, who just finished his master's in forest economics, is a new faculty research assistant working with Claire Montgomery, Forest Resources.

Office specialist **Susan McEvoy** is new in the Forest Resources office; she coordinates and supports the department's web page.

Jerry Mohr and **Denise Steigerwald** are new in Computing Resources. Mohr coordinates computing applications for research, and Steigerwald develops and maintains research databases for both Computing Resources and the Northwest Tree Improvement Cooperative.

Glenn T. Howe is new in the Department of Forest Science as

New Faces, continued

assistant professor of forest genetics and director of the Pacific Northwest Tree Improvement Research Cooperative (PNWTIRC). Howe, who received his doctorate here in 1991, comes most recently from The Ohio State University. He worked for the PNWTIRC under Tom Adams from 1983-86.

Daniel W. Cress has joined the staff of the Northwest Tree Improvement Cooperative (a different co-op, despite the similar-sounding name) as analyst and coordinator after working for the co-op as a consultant.

Visiting Faculty

Forest Resources: **Alan Long**, from the University of Florida; **Stale Stordal**, from the Eastern Norway Research Institute at Lillehammer; **John Wu**, from the Taiwan Forestry Research Institute in Taipei.

DOUG BRODIE RETIRES

Doug Brodie, forest economist and professor in the Department of Forest Resources, has retired after 26 years on the College faculty. Brodie received his doctorate in agricultural and resource economics from the University of California at Berkeley in 1970, when he joined the faculty at University of Wisconsin at Madison. He came to OSU in 1975. Brodie taught two undergraduate classes and the senior capstone course in Forest Resources. At the graduate level he has taught courses in advanced forest economics, harvest scheduling, the economics of private

forestry, forest policy, and optimal control applied to natural resources. His research has focused on silvicultural investment in timber management, including investments in controlling wildfire and insect and animal damage. Brodie advised 70 master's and doctoral students, "some of whom have achieved academic and research prominence in Finland, Canada, Mexico, Chile, New Zealand, Taiwan, Africa, and Japan, as well as the United States," he says. Brodie was honored in June with a seminar and dinner organized by his colleagues and attended by many former students.



Doug Brodie
Eldon Olsen

ELDON OLSEN RETIRES

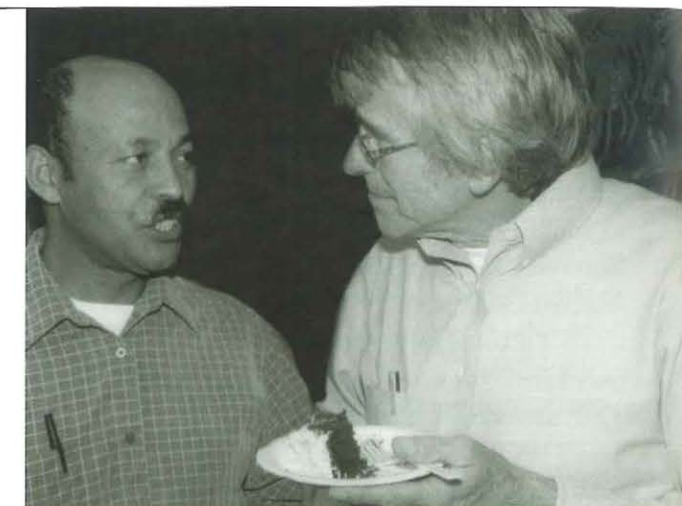
Eldon Olsen, industrial engineer and professor in the Department of Forest Engineering, has retired after 21 years on the College faculty. After working for several years in private industry, Olsen received his doctorate in industrial engineering at OSU in 1979, and joined the Forestry faculty a year later. His research has focused on optimal bucking to capture higher value from logs. Olsen advised 25 master's and five doctoral students, three of whom went on to

join the College faculty: John Garland, Loren Kellogg, and Glen Murphy. "Now that I'm retired from the College," says Olsen, "I'm teaching part-time in the College of Business. They are recruiting a new faculty member in operations management, and I'm covering that class for them this year. I also have been busy as a volunteer helping develop the buildings, roads, timber, water, and sanitation systems for a large youth camp near Alsea Falls."

WARD CARSON RETIRES

Ward Carson, photogrammetry specialist, mechanical engineer, and associate professor in the Department of Forest Resources, retired after nine years on the College faculty. Carson received his doctorate from the University of Washington in 1973. He spent 10 years with the USDA Forest Service Pacific Northwest Research Station, where he conducted much of the pioneering research on computer-based analytical descriptions of logging cable system loads and geometry. He was associated with much of the early research on balloon logging. He joined the Forest Resources faculty of the University

of Washington in 1978. He left in 1980 to spend 12 years in Norway, where he developed a photogrammetric mapping instrument and started a business to manufacture and market it. He returned to the United States and joined the OSU faculty in 1992. Carson has taught and conducted research in aerial photography, remote sensing, and digital mapping, and he headed the College's Forest Photogrammetry Research Laboratory. "In September 2001 I joined the Forest Service PNW Research Station, Forest Systems Engineering group at the University of Washington," he says. "I'll be working on a project that'll merge the metric informa-



tion available in LIDAR [Light Detection and Ranging System, developed recently to collect topographic descriptions in forested areas], and airborne digital imagery for the purpose of forest mensuration. The project is expected to last two to four years."

Ward Carson, right,
with colleague
Badege Bishaw.

PUBLICATIONS OF NOTE

Here is a selected list of reprints available from the Forestry Communications Group. You may order them by calling (541) 737-4271, or order from the web at www.cof.orst.edu/cof/pubs/home

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Brandeis, TJ, M Newton, and EC Cole. 2001. **Underplanted conifer seedlings survival and growth in thinned Douglas-fir stands.** *Canadian Journal of Forest Research* 31: 302-312

Dodds, KJ, DW Ross, GE Daterman. 2000. **A comparison of traps and trap trees for capturing Douglas-fir beetle, *Dendroctonus pseudotsugae* (Coleoptera: Scolytidae).**

Journal of the Entomological Society of British Columbia 97: 33-38.

Hansen, E, and R Smith. **Stopping the slide- market share shifts in structural floors.** Case Study Series 3, Forest Research Laboratory, Oregon State University, Corvallis.

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THE COLLEGE

C

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FULL STEAM AHEAD ON STRATEGIC PLAN

The College is near final adoption of a new Strategic Plan, developed throughout the past year by a group of faculty, staff, and students known as the "Dream Team." Dean Hal Salwasser outlined some of the major initiatives being proposed as part of the new plan at the annual All-College Meeting in September:

- Increase the numbers, quality, and diversity of the College's student body
- Adopt new degree programs in hydrology and integrated global sustainability
- Seek gifts to create additional endowed fellowships and scholarships
- Diversify the College's faculty, student body, and staff and improve the sense of community
- Institute an internal competitive grants program
- Embrace recreation and education on the McDonald-Dunn Forests
- Seek gifts of forest properties to create a Discovery Forest Network around the state.
- Continue and expand research partnerships
- Strengthen communications and marketing programs

The Dean outlined a set of specific goals under the slogan "Four 10s by 2010 plus one." "We need ten new endowed faculty chairs," he told the College faculty and staff. "We need ten new endowed programs, ten new endowed fellowships for graduate students, and ten new endowed scholarships for undergrads."

What's the "plus one"? If the College accomplishes all these goals by 2010, he said, "We'll need to add a new wing onto Richardson Hall."



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THE COLLEGE

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WILLAMETTE INDUSTRIES HOSTS OSU FACULTY



Combined faculties of the Colleges of Forestry and Business got a close-up look at a leading American forest products company in a September tour of Willamette Industries' woods and mill operations. One goal of the tour, says Jim James, general manager of the company's Oregon timber and logging operations, was to give OSU professors a glimpse of how Willamette uses sustainability concepts in its operations. "A high percentage of Willamette foresters are OSU graduates," says James, a 1970 graduate of the College. "It's fun to reconnect with professors, talk about real-world issues, and show them the results of their efforts."

The tour was the first fruit of an invitation to Dean Hal Salwasser from the College of

Business faculty to share a pizza and explore potential opportunities to collaborate, says Steve Lawton, professor in the College of Business. "It immediately became clear that the business faculty needed to see firsthand the entire spectrum of forestry before we could explore collaborative efforts. So another goal of the tour was for us to learn about the entire value-added chain, from the forest floor to the retail floor."

About 80 OSU faculty and WI employees toured forest management operations on the company's lands west of Dallas, Ore, and then were guided through Willamette's state-of-the-art Dallas sawmill.

Over dinner, Willamette's CEO, Duane McDougall, a 1974 graduate of the OSU College of

Business, spoke of the need for OSU to develop complementary OSU business and forestry programs to meet the needs of an industry that must compete in global marketplaces and remain leaders in sustainable forestry, employee relations, community relations, and environmental performance.

Participants discussed such ideas as joint Forestry-Business degree and certificate programs, new research cooperatives, and professional development short courses that would bring forestry and business closer together around concepts and practices of sustainability.

"This was one step toward our goal to increase our relevance to those we serve," says Dean Hal Salwasser, who was along on the tour. "There is no substitute for seeing firsthand how our clients use the results of our teaching, research, and service."

Dean Salwasser handles visual aids while Mark Baumgartner, communications forester/certification director for Willamette Industries, addresses the crowd at the WI's faculty tour of its forest lands.



NEW INSTITUTE TO TACKLE ENVIRONMENTAL ISSUES

OSU has formed a new Institute for Natural Resources that will improve people's access to the most current information, analytical tools, and scientific expertise on some of Oregon's most pressing natural resource and environmental issues. The Institute is one fruit of the Oregon Sustainability Act of 2001, recently signed into law.

For the first time ever, say the initiative's leaders, anyone wrestling with a natural resource issue—from a federal agency to a concerned citizen—will have a place where they can come for current information, coordinated research, organized data, and advice on policy options. The Institute will provide a central site for a client to ask questions, request information, propose studies, learn about natural resources and environmental conditions across the state, and get help in developing options or policy proposals.

"We believe this Institute will become a key asset in Oregon's pursuit of sustainability for our communities, economies, and environments," says Hal Salwasser, Dean of the College of Forestry and one of the leaders in organizing the initiative. "The time has come to address the major resource issues facing the state in an integrated way, combining the economic, environ-

mental, and social dimensions that are common to every natural resource challenge, and work with affected people to find solutions that help both our environment and our people."

OSU President Paul Risser, a strong advocate of the new Institute, says only OSU has the range of international experts and the reputation of scientific credibility to successfully tackle these issues. "OSU has an incredibly diverse research faculty with expertise in everything from forestry to oceanography, agriculture, habitat protection, fisheries, soils, and climate change," he says. "Oregonians will now have somewhere to turn for credible, scientific options to deal with the challenging issues we face."

The new Institute will be based and housed at OSU, but will collaborate as necessary with other institutions and agencies in Oregon. It will include a research office, a policy office, and an information office to accomplish such tasks as data acquisition, original studies, development of policy options, linking of research databases, synthesis of information, and communication of findings. Six colleges, three statewide public service programs, one center, the Sea Grant Program, and the Valley Library are charter partners in this new endeavor.

Most of the work, says Salwasser, will be done on a proj-

ect basis, by contract; research contracts could eventually be worth millions of dollars per year. Initial funding of \$145,000 is provided for the first fiscal year by the OSU Research Office and the 12 collaborating OSU colleges and programs. Staffing will be minimal at first, but will later expand to include permanent scientists with expertise in appropriate areas. A national search is already under way for a permanent director; Salwasser is acting director. The Institute's goal is to become self-supporting in five years.

The Institute will also have an executive board of directors, an interdisciplinary scientific and scholarly advisory board, a stakeholder advisory board, and ad-hoc working groups.

The Institute's clients will range from state agencies to tribal governments to natural resource industry leaders, environmental groups, and concerned citizens. Citizen participation in developing policy options will be encouraged. The institute is already at work responding to requests from state agencies on the topics of river recreation, fisheries research plans, and forest biodiversity.

— D.S.

REPORT SAYS FORESTRY AND WATER QUALITY ARE COMPATIBLE

A research review and survey of water systems in many Oregon cities suggests that modern forest management can be compatible with a high quality and quantity of water.

The report, authored by Paul Adams, Extension forest watershed specialist in the Department of Forest Engineering, and Mark Taratoot, former research assistant, was both a review of published studies and a survey of 30 major municipal water systems in the state that are served largely by forested watersheds, including those of Portland, Eugene, and Salem. "When people raise concerns about impacts of forest practices," says Adams, "one of the first things they mention is water quality. In this report we tried to separate the facts from the myths to better understand how we get clean water."

One myth, he says, is the notion of pure water always emerging from pristine forests. "While it's true that forested watersheds usually deliver a very high quality of water, there's a wide variation even in nature." For example, the Flynn Creek watershed in the Coast Range is a relatively pristine forest, "but even there the suspended sediments have ranged from near zero to about 2,000 parts per million, when the water looks about like a chocolate milkshake."

Another myth, he says, is that trees store and release water to streams. Actually a heavy forest canopy in most cases causes a net loss of 15-20 inches a year in water volume. Trees consume water like any plant—it's the forest soils that store water like a sponge and release it slowly, filtering it in the process.

Protecting forest soils, then, is the key to water retention, filtering, and quality. Forest cover is important because it protects and nurtures the soils. Occasional timber harvest should not interfere with this process if done carefully, with modern methods and good stream buffers. "Keeping forest lands intact is vital, but in general we've found that advanced harvesting practices with proper reforestation has little impact on water quality and quantity for municipal supplies."

Because much of the research on the effects of forest practices was done years ago, says Adams, it can give an incomplete picture of the benefits of management tools and techniques now commonly used or required by law. "But this earlier research did help guide us to adopt these improved methods."

Highlights of the report, sponsored by the Oregon Forest Resources Institute, were presented at a conference, "Forests and Drinking Water," held in Ashland, Ore., in August.

— D.S.



NEW INTERNATIONAL PARTNERSHIPS FORMED



From left, K.S. Rao, director of the Institute of Wood Science and Technology in Bangalore; G.S. Rawat, director of the Forest Research Institute, ICFRE; Dean Hal Salwasser; A.K. Rana, national project director at the World Bank; V.K. Jain, scientist in charge of the World Bank project; and Bart Thielges, the College's Associate Dean for Research.

The College of Forestry has entered into three new international research and exchange agreements with sister universities in India, Australia, and Taiwan.

The College and the Indian Council of Forestry Research and Education (ICFRE) in Dehra Dun, India, have agreed to develop a long-term academic partnership with the College of Forestry. The partnership will make possible collaborative research between scientists at the two institutions, as well as faculty and graduate student scholarly exchanges. The Council represents 13 Indian natural resource institutions in several Indian states.

The College recently signed a similar agreement with the Taiwan Forestry Research Institute (TFRI) headquartered in Taipei with several laboratory and field locations nationwide. That agreement will cover cooperative

research and will also provide internships for OSU undergraduate and MS students through the "Global Graduates" program.

An undergraduate exchange agreement was initiated with the Australian National University (ANU) in Canberra. This agreement will allow OSU and ANU students to exchange for up to a full academic year by enrolling, registering, and paying normal fees at their home campus.

Another Memorandum of Understanding (MOU) was signed with the National Taiwan University in Taipei. While this is not an undergraduate exchange program, it will provide a mechanism for faculty and graduate students to visit to work on cooperative projects.

Also in the works is an agreement with the University of Valladolid in Spain that may provide the College with its first "non-English" undergraduate exchange program.

These four new agreements bring the College's worldwide linkages to 32 in 20 different countries. Other undergraduate exchange programs are with the Universities of British Columbia (UBC) and New Brunswick (UNB) in Canada, Lincoln College in New Zealand, and the University of Stellenbosch in South Africa.

The College also has existing research agreements with such institutions as the University of Buenos Aires, Chiang Mai University, Kasetsart University in Thailand, Gadjah Mada University in Indonesia, the Universitat fur Bodenkultur (BOKU) in Vienna, and the University of Natal in South Africa. College scientists also participate in research at the Centre for International Forestry Research (CIFOR) in Bogor, Indonesia, and the International Centre for Research in Agroforestry (ICRAF) in Kenya.

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SKYLINE MEMORIAL

A forest grove established as a memorial to four men—three with close ties to the College of Forestry and a prominent environmentalist—has been planted at Skyline Ranch in Yuba County, Calif. Another College alumnus was instrumental in preparing and planting the land.

The memorial honors Robert Conklin, who graduated from the School of Forestry with a degree in logging engineering in 1923; J.R. Dilworth, a professor of forest management in the 1950s; and Robert Reichart, creator of the Self-Learning Center in the early 1960s. It also honors David Brower, a prominent leader of the Sierra Club, who was instrumental in efforts to set aside many of America's wilderness areas and national parks and monuments.

Douglas Smith, who earned a bachelor's in Forest Products here in 1950, helped the owners of Skyline Ranch, Diane Pendola

and Teresa Hahn, reforest their land after a 1999 wildfire. The two women operate the ranch as a temporary sanctuary for women newly released from institutions, helping them to rebuild their lives and prepare to enter society again.

Smith was a friend of Conklin's, a student of Dilworth's, and an eager participant in Reichart's Self-Learning Center activities. Conklin worked for Weyerhaeuser for more than 30 years, and then worked for Cascade Plywood and U.S. Plywood, from which he retired in 1968. "He expressed dissatisfaction with the way timber was measured," says Smith, "and encouraged efforts to find a better way. He urged me to pursue this via a forestry research project, which led to talks with Professor J.R. Dilworth. "This further developed into a (master's thesis) developed around improved ways to measure raw material for fiber content as well as improved forest products potential."

For his other course work, Smith says, Reichart's Self-Learning Center "proved to be a lifesaver." In cooperation with other Forestry faculty, Reichart developed course work in print, slide-tape, audiotape, and graphical formats. "His self-learning concepts are still in use at several OSU departments, as well as sister colleges and universities in Oregon," says Smith.

Smith sees a common thread among the men memorialized at Skyline Ranch, one that extends to owners Diane Pendola and Teresa Hahn: "It is their dedication to advancing that which is worthwhile."

You may write to Diane Pendola and Teresa Hahn at Skyline Ranch, PO Box 338, Camptonville, CA 95922. Doug Smith can be reached at (530) 587-1425.

IN MEMORIAM

Harry Bernarr Forse '34, of Victoria, B.C., in Vancouver, in August.



Doug Smith '50 at the memorial conservation grove he helped create in Camptonville, Calif.

International Partnerships, from page 19

In addition to cooperative agreements and exchanges specific to the College of Forestry and the Forest Research Laboratory, students and faculty are eligible to participate, as appropriate, in more than 75 OSU-wide exchange agreements involving universities and colleges in almost 40 countries.

Bart Thielges, Associate Dean for Research, points out that all these international connections, especially those that facilitate undergraduate exchange, contribute to expanding the horizons of students and faculty in the CoF. "Many students and faculty members are interested in studying or working abroad, and these

agreements provide an open door to begin exploring those possibilities. We're hoping that eventually, we will also be able to provide some financial assistance to help with student exchanges in both directions, and also allow faculty members to visit overseas colleagues to explore opportunities for collaborative work."

ALUMNI PROFILE: HARRY FOWELLS

In 1932 a struggling young student at Oregon State College's School of Forestry learned that he had received the school's McDonald Fellowship. Like many of his generation, Harry Fowells been working his way through college washing dishes and waiting tables for 30 cents an hour.

In a way, the fellowship changed his life. It enabled him to pursue a master's degree in forest management, provided a financial life buoy, and sparked an interest in silvicultural research that would ultimately become his career.

The gratitude he felt never left him, and in 1992—six decades to the year later—he and his wife Mildred repaid the university for its generosity by establishing the Harry and Mildred Fowells Endowed Fellowship in Forest Science. In the intervening years, Fowells had earned master's and doctorate degrees, spent a distinguished career with the USDA Forest Service, organized and edited a landmark book on the silvics of forest trees, raised and educated three children, and retired to Oak Harbor, Washington.

"We were by no means wealthy when we decided to set up the fellowship," Fowells says. "We just decided we could do without fancy cars and things we

didn't need and give the money to the College instead. The McDonald Fellowship meant a lot to me back in the Depression in that it helped make graduate study possible and steered me toward a career in research. Mildred and I wanted to help students in the way we had been helped. So we talked with [then-Dean] George Brown and worked out the details."

Born in 1908 and raised in Portland, Fowells went to work after graduating from Washington High School to save money for college. Always fascinated by the way things grew, he developed an interest in trees by participating in Boy Scout outings around Portland. He recalls being devastated at seeing areas of forest destroyed by fire. When it came time for college, he felt forestry was his calling.

He entered Oregon State College in the fall of 1928. Within a month of his arrival, a school chum encouraged him to attend the first College dance. Fowells told him he hadn't met any girls yet and wouldn't know whom to ask. His friend asked if he would go if he fixed him up with a date. Fowells agreed. The girl he went to pick up at Waldo Hall the night of the dance was Mildred Carleton.

Within two years they became husband and wife, a union that lasted 64 years until



her death in 1995. Mildred also waited tables in the dorms and did typing for extra income. Fowells, in addition to his student jobs, worked summers for the Forest Service, one as a fire lookout east of Roseburg, another at the Experiment Station in Portland. By his junior year, the two were convinced of their love. They were married in December of 1930.

With research as his goal, he applied to a doctoral program at the University of California at Berkeley. He was accepted and offered a research assistantship, but in his first year the Forest Service offered him a full-time job at their experiment station in Berkeley. The offer was too good



The gratitude never left him. "Mildred and I wanted to help students in the way we had been helped," says Harry Fowells '32. Below, Mildred and Harry Fowells.

continued on page 23

STEWART GIFT ENDOWS PROFESSORSHIP

A new endowed professorship designed to improve sustainability of Pacific Northwest forests through advanced forest operations and management has been established at the College of Forestry. The Faye and Lucille Stewart Endowed Professorship in Forest Engineering has been set up in the Department of Forest Engineering through a contribution of \$1.1 million from the late Faye and Lucille Stewart.

Faye Stewart, an OSU alumnus, received a bachelor's degree in Forest Engineering and Business in 1938. He was a long-time supporter of OSU and its College of Forestry.

The first holder of the professorship is John Sessions, an OSU Distinguished Professor of Forestry. Sessions is internationally recognized for the development of sophisticated computer models used in forest planning, and for his work in transportation planning, harvest scheduling, forest economics, and logging mechanics.

"This honor for Dr. Sessions recognizes a career of innovation and leadership in advanced forest harvesting techniques," says Steven Tesch, professor and head of the Department of Forest Engineering. "Research in this area will help us improve both the environmental performance

and the economic competitiveness of the Pacific Northwest forest products industry."

The Stewart Professorship, Tesch says, will be especially important as the emphasis increases on landscape-level forest management and sustainable forestry. This requires conducting the right activities at the right time, having a viable forest industry to carry out those activities, and understanding both their costs and benefits. Continuing research under the new professorship will target all these goals.

Research projects might include use of geographic information systems to improve transportation planning in landslide-prone areas and in developing methods to consider

both environmental and economic issues in road management decisions.

Says Sessions: "Having known Faye Stewart for 26 years, I am honored to be the first Stewart Professor, and to thank a family that has provided so much support to our College and University." Sessions received his doctorate in Forest Management in 1978 from OSU and has been on the College faculty since 1983.
— D.S.



John Sessions, of the Department of Forest Engineering, is internationally known for his sophisticated forest-planning computer models.

LaSells Stewart Center is 20

Faye and Lucille Stewart belonged to a giving family. One of OSU's landmarks bears the family name: the LaSells Stewart Center, which turned 20 years old this year. A \$1 million from Faye Stewart, his brother Loran L. ("Stub"), and their sister Dorothy Stewart Chapman helped build the center, which was named to honor their parents, LaSells and Jessie Hills Stewart. The Stewart name is also prominent at the College of Forestry. The main lecture hall is called Stewart Auditorium, named in honor of "Stub" and Elizabeth Stewart, whose generous contribution made the construction of Peavy Hall possible in 1971.

A NEW HOO HOO SCHOLARSHIP

The Willamette Valley Hoo Hoo Club #33 has established a new scholarship at the College of Forestry. The scholarship is intended for an undergraduate forestry student from a Lane County high school, or from Monroe Union High School, who intends to pursue a career in the forest industry. The club raises funds for the scholarship through its annual golf tournament. First

recipient of the scholarship is Ryan Allen, a freshman from Creswell.

Hoo Hoo International is a fraternal order of the forest products industry. Established in 1892, it is the oldest industrial fraternal organization in the United States. The Willamette Valley chapter was established in 1924 "and has operated nearly continuously ever since," says Archie Brown, treasurer-secretary of Club #33 and past president of

the international organization.

The club's whimsical name has a complicated history; for more information, consult the organization's web site at

http://www.boohoo.org/html/body_booweare.html.

Two other Hoo Hoo chapters also fund scholarships in the College of Forestry. They are the Green Peter chapter, #226 and the Portland chapter, #47.

Harry Fowells, from page 21

to turn down, and Fowells decided to pursue his doctorate part-time. At the Forest Service, he studied seed crops and nursery stock. Between that and raising a family, he found time to take some graduate courses, but it was 1953 before he completed his course work and met with his graduate committee to start work on his dissertation. That same week, the Forest Service informed him that they were transferring him to Washington, D.C.

"I got a 'swivel-chair' job," Fowells says. Besides reviewing the work of other investigators, he got involved in international research programs that required a good deal of foreign travel. In 1958, 30 years after he began his education, he earned his Ph.D. in plant physiology at the University of Maryland.

The classic book he edited, *Silvics of Forest Trees of the United States*, was published by the Forest Service in 1965. In 1966 he was transferred to the Agricultural Research Service as assistant director of the international programs division, which involved travel in Europe, Africa, and the Middle East. He retired in 1971, and five years later he and his wife moved back to the Northwest, settling near Fowells' sister in Oak Harbor on Whidbey Island in Washington.

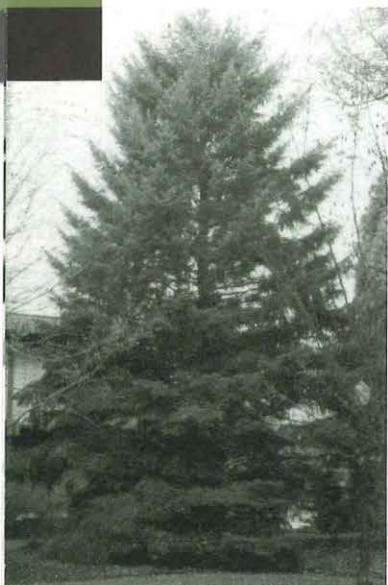
Through the years the couple kept in touch with the University, often attending alumni events and communicating with their fellowship recipients. This year's student, Harry says, is a young man from Chile, Patricio J. Alzugaray, who is studying forest regeneration and the effects of fertilization on Douglas-fir seedlings. Several years

after Mildred's passing in 1995, Harry remarried. He and his second wife, Winifred, the widow of a former college classmate, continue to live in Oak Harbor. One of his sons lives in Bend, the other in Washougal. His daughter lives in California.

George Brown, who was Dean when Fowells made his gift, calls him an ardent supporter of the College: "He has a strong sense of the importance of education, what the College did for him, and a commitment to reinvest in the future." Brown says their loyalty to the college was reflected throughout their lives, and remembers their attendance at many alumni events and Fernhopper Days. Fowells says, health permitting, he is looking forward to attending his 70th reunion next year.

— M.F.

A MOON TREE?



Maybe it's been to the moon, but you'd never know it. This healthy Douglas-fir is one of the moon seedlings planted across the United States in 1976.

Forestry Extension agents are used to fielding odd requests, but this one had Scott Leavengood stumped. A man in Phoenix, Arizona, named Michael Simon had heard there was a "moon tree" growing somewhere on the grounds of the OSU College of Forestry. Could he get cuttings?

Leavengood, an OSU Forest Products Extension agent in Washington County, asked a few questions. No, said Simon, it was not a tree grown on the moon, but a tree planted from seeds that had orbited the moon in 1971 with astronaut Stuart Roosa of the Apollo 14 team. Simon was trying to get his 16-year-old daughter interested in science, and he thought propagating a moon tree would be a good father-daughter project.

Leavengood did some investigating. Stuart Roosa had

been a smokejumper in his youth, and he and Forest Service officials arranged the seeds' flight to the moon.

Afterward, the seeds were germinated, and in 1975 and 1976 some 450 seedlings were given to state forestry organizations throughout the country to be planted as part of the nation's bicentennial celebration.

Leavengood discovered that one of the moon trees, a Douglas-fir seedling, had been planted on the east lawn of Peavy Hall in 1976. Today the tree is a healthy 40-foot-tall specimen, apparently none the worse for its wanderings as a seed. Leavengood took cuttings and cones from the tree and sent them to Simon.

The project did not have the hoped-for effect on Simon's daughter. "She didn't find moon trees exciting at all," he confesses. But Simon went ahead anyway,

trying unsuccessfully to get the cuttings to root. Now he intends to plant the seeds after conditioning them in the freezer according to Leavengood's instructions.

Leavengood wishes him luck. "Generating a Douglas-fir from a cutting is a very difficult task, even for a horticultural professional," he says. Sprouting a seed is somewhat easier, but it's still tricky. "I'm hoping he'll keep me posted."

The story of the moon trees, including their present whereabouts, is posted on the NASA web site, http://nssdc.gsfc.nasa.gov/planetary/lunar/moon_tree.html

*From OSU CCF
Fertile Moon
2.6.03*

WINTER 2000

MAGAZINE FOR THE FRIENDS AND ALUMNI OF THE COLLEGE OF FORESTRY

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