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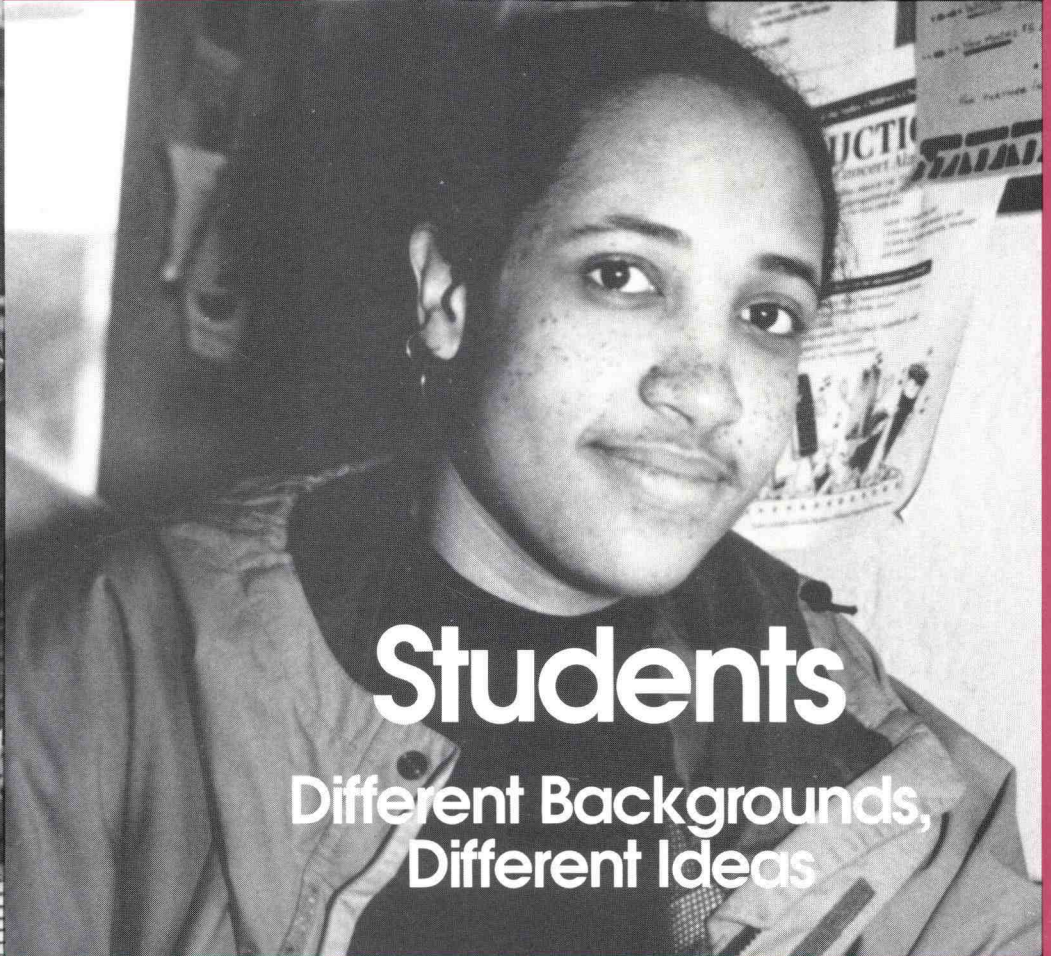
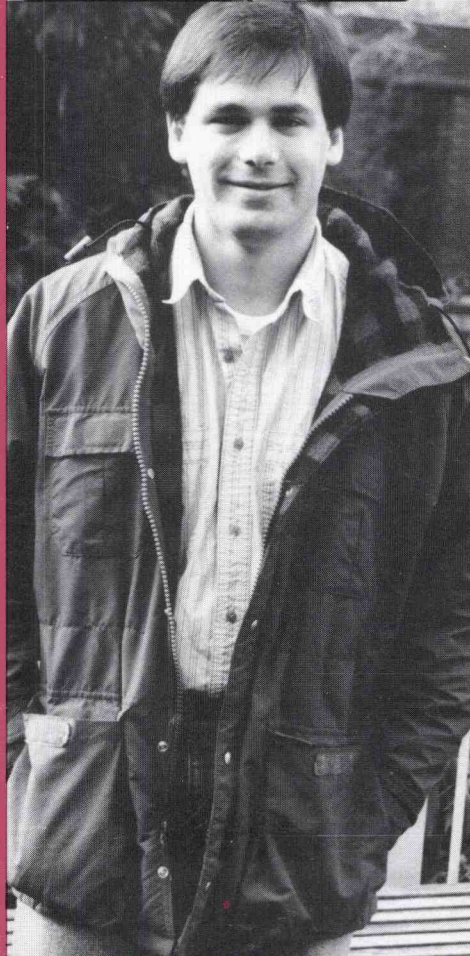
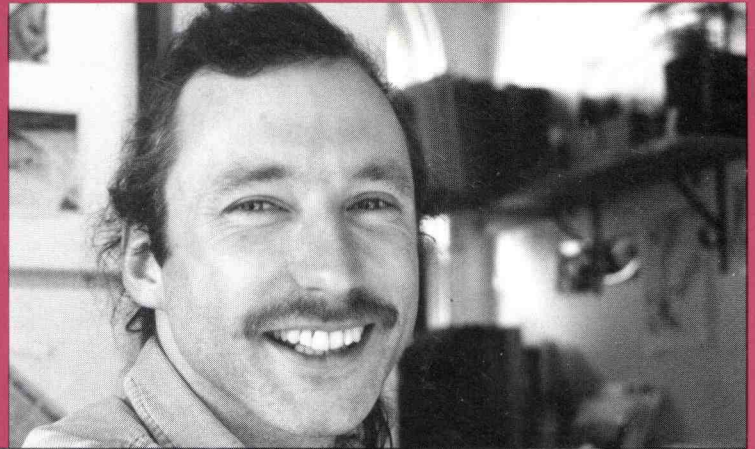
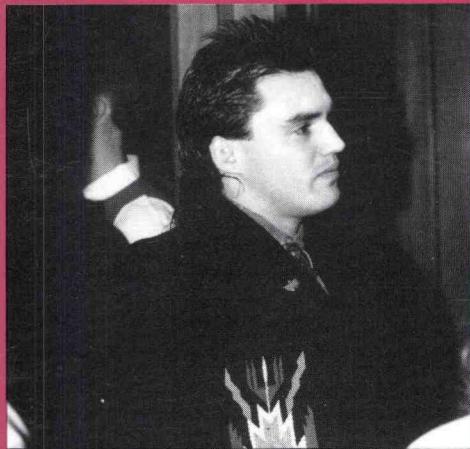
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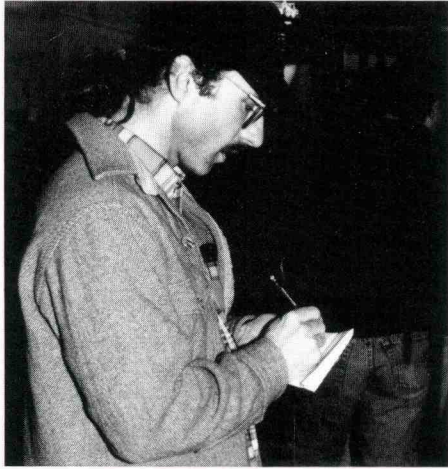
focus on **forestry**

at Oregon State University



Students

Different Backgrounds,
Different Ideas



Varied experiences. Chris Johnson (that's him on the cover, upper right) takes notes on a mill visit. The other students are (clockwise) Deirdre Shaheed, Will Shallenberger, and Bodie Shaw.



Spring 1993
Volume 6, No. 2

College of Forestry
Oregon State University

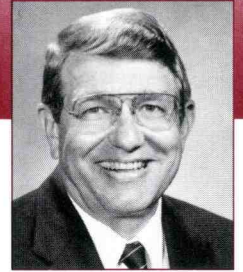
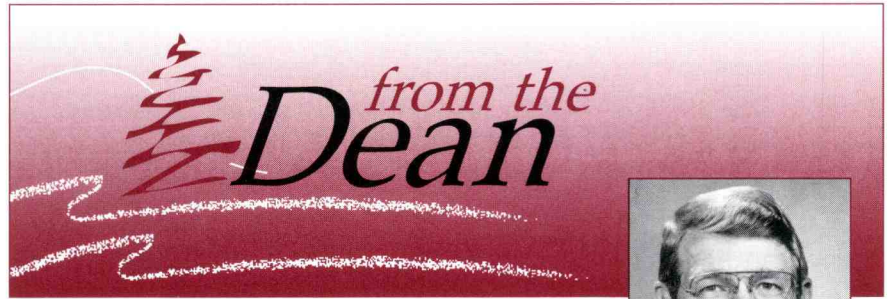
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Spring 1993

Biodiversity has emerged as one of the most important concepts driving forestry in the 1990s. The reason is that highly diverse forest ecosystems are generally healthy and productive ones, more resilient to disruption caused by human or non-human factors.

As it is with forest communities, so it is also with human communities. Our nation has been enriched by a highly diverse population with a broad range of ethnic, cultural, and religious traditions, each contributing significantly to our culture and national prosperity. In the past, the diversity of our population was not well appreciated, and only recently have Americans recognized the important role diversity plays in our national culture.

The forestry profession has, until recently, lacked the diversity of the national workforce. Fortunately, that is changing, although the pace is much slower than we would like. In the College of Forestry, about 27 percent of our student body is female, but only about six percent are students of color. That is unacceptably low. We are working hard to recruit more women and ethnically diverse students to the College.

We've been working with state and federal natural resource agencies to help female and minority students learn about the exciting career opportunities available in the natural resources professions. As one means of telling that story, we will host a national conference called Minority Participation of Forestry and Forestry-related Sciences (MINFORS II) at OSU October 24-26, 1993.

And we have made progress. There is a wide diversity of students in our College. This issue of *Focus on Forestry* is devoted to a celebration of that diversity and an invitation to all interested in pursuing a natural resource education, regardless of their gender or ethnic heritage, to come to the College of Forestry at Oregon State University.

George Brown

**George Brown
Dean, College of Forestry
Oregon State University**

MANY VOICES

OUR STUDENTS BRING A WEALTH OF VARIED EXPERIENCE

Fifty years ago the average School of Forestry class was—at least outwardly—a pretty homogeneous bunch. Mostly men, mostly white, they reflected the look of the larger forestry profession. This seemed natural to many people—it was the way things were then.

But times have changed. The profession of forestry has broadened. More and more, forestry is being practiced by people with different backgrounds, different experiences, different ideas.

AT THE COLLEGE OF FORESTRY, WE welcome this change, for we believe such diversity ultimately ensures that many voices will be heard. We believe that a diversity of *educated* viewpoints will lead to wiser management of our forests.

Our pride in our students is one thing that has not changed with the changing times. We have always been proud of our students as individuals—proud of their quick minds, their hardworking ways, their fresh curiosity.

This year, we celebrate their diversity as well. We're grateful that they have chosen us to help shape their future. And we're optimistic that the variety of their backgrounds and experiences will shape the future of forestry in positive ways.

IT WAS WORK IN THE WOODS THAT turned Shannon McLaughlin's ambitions toward forestry.

She got a job on a Youth Conservation Corps crew the summer after her junior year in high school, working on the Umatilla National Forest. Raised on a ranch near Heppner, Shannon grew up knowing how to work hard. That summer she worked *very* hard.

"I started at the bottom, doing grunt work," she says, "rehabilitating

streams, fighting fires, clearing trails, painting outhouses, pulling those little tubes off seedlings (for protection against deer) that are supposed to disintegrate in the sun—but don't . . ."

The hard work was unexpectedly satisfying. Shannon had been thinking about law school, but "that job experience changed my mind."

Throughout her college years—she expects to graduate in June—Shannon has continued to work in one or another forestry-related summer job. She's moved up to a higher level,



Shannon McLaughlin
Forest Recreation Resources

though: she is an entomologist trainee with the Forest Service's Blue Mountain Pest Management Zone. The job is a "co-op," or cooperative educational opportunity, and, unlike some co-ops, it pays her tuition.

The Blue Mountain Pest Management Zone has responsibility for

managing insect and disease problems on the Wallowa-Whitman, Malheur, and Umatilla national forests. Shannon works with an entomologist and a plant pathologist, performing site visits, diagnosing problems, and recommending silvicultural solutions.

It's valuable experience, she believes, and will almost certainly get her a job after graduation, if she wants one.

But she may go on to graduate school instead. "A master's is almost certain sooner or later," she says. "And I still haven't ruled out law school. I've always been interested in forest policy, and that's a big concern now. There's a need for lawyers with technical knowledge about forestry—these issues are very complex."

Shannon values her work experience highly. She urges others interested in forestry to take on all the related employment they can get. "Don't work on a road construction crew just because it pays more," she advises. "Work experience that's related to your education will pay off in better ways."

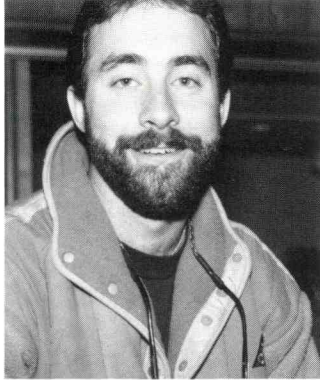
SOMETIMES MICHAEL FISHER HAS A hard time believing he's almost done with *two* college degrees.

Higher education was never an ambition for the restless kid who grew up hunting and riding motorcycles in the back country of eastern Oregon. "When I graduated from high school (Klamath Union, class of 1984), I joined the Army," says Michael. "I knew I couldn't afford

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college and never would be able to. I just didn't have a reason to go."

But as his discharge day approached, Michael started thinking hard about his future. "I was in Mannheim, Germany, and we were always out in the woods. Working outside felt pretty natural, and since



Michael Fisher
Forest Management/Range Management

my mother was already going to forestry school (at Central Oregon Community College in Bend), I thought I'd give it a try."

Michael joined his mother at COCC. (Liz Fisher is now a forest technician in Klamath Falls.) "I decided to go for the forest tech degree, too," he says. "I wasn't thinking about a four-year degree at that time."

While in school he got a job in the Forest Service's cooperative work experience program (a "co-op," as they're called) on the Mount Hood National Forest, and that plus military education benefits supported him through school. He got his degree in 1990, graduating with honors. Then he crossed the mountains to join his new wife, Peggy, a civil engineer working for the Forest Service in Eugene.

But scarce employment prospects at the forestry-technician level, Michael says, made a four-year forestry degree look pretty good. He enrolled in the Forest Management program at the College of Forestry, and was fortunately able to land another Forest Service co-op job on the Willamette National Forest.

This past fall, 1992, he started his second degree program, in Range Management. He expects to graduate

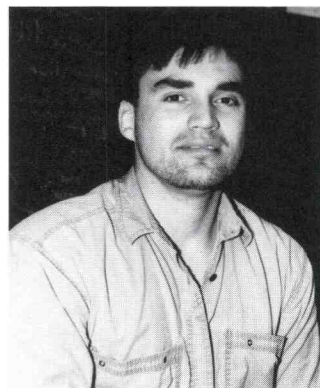
this year, and he's counting on the dual degree to enhance his job prospects.

He and his wife have a commuter marriage once more—Peggy moved over to the Ochoco National Forest in 1992. Michael hopes to land a job on the east side so that he can settle down with her and their 15-month-old daughter, Samantha, to enjoy a more normal family life.

Besides his Forest Service employment, Michael has relied on scholarships to support him through school—a fact that makes him shake his head in wonder sometimes. "When I was in high school, I never had any idea I could get a scholarship," he says. "I would never have thought I'd someday be at this level of education."

To high school students who might feel discouraged about college, Michael has this to say: "Don't ever set a limit on anything. The minute you do, you've put the brakes on." In other words—if Michael Fisher can do it, you can, too.

BODIE SHAW SPENT HIS EARLY childhood on the Warm Springs Indian Reservation. He played in the forest as a boy and worked in it as a young man. When he finishes his Forest Management degree this spring, he plans to go back as an educated forester to work for the Confederated Tribes.



Bodie Shaw
Forest Management

"My grandfather was a forester," says Bodie, who is of the Wasco tribe, one of the three that make up the Confederated Tribes of Warm Springs. "He was the fire manage-

ment officer on the reservation. Forestry is something I've always thought about doing. There aren't a lot of tribal members who are foresters, and there's always an opening for an educated forester who wants to come back and work for the tribes."

Bodie, 27, joined the Air Force after graduating from high school in 1983, working as a jet mechanic in Japan, Korea, and the Philippines. He left the service in 1987 and enrolled at Central Oregon Community College in the two-year forestry technician's program. After he finished, he knew he needed more education. "I realized there would be a limit on my career with a two-year technical degree."

He started his Forest Management studies at OSU in 1990. He found the classes more rigorous than he expected. "The forestry program is heavy on the science and math," he says. "I didn't have a good background in those subjects, and I had to struggle when I got here."

But he worked hard and pulled himself through. And the struggle has been worth it, he says, for forestry continues to be a viable and challenging profession.

"Sometimes you get the impression from the media," says Bodie, "that the future of forestry is not promising." But the conflicts over old growth, log exports, and other such heated issues mean educated foresters are needed now more than ever. "We need better foresters, better managers, people who can solve the problems. It's all the more reason to go into forestry."

Eventually Bodie plans to leave the reservation and become a higher-level manager in one of the federal agencies.

He has received scholarships from the College of Forestry, the Warm Springs Tribes, and the American Indian Science and Engineering Society (AISES). He has a cooperative work experience job (a "co-op") with the Bureau of Indian Affairs, and he works summers and Christmas vacations for the Confederated Tribes' forest development office.

Bodie is a member of Xi Sigma Pi forestry honorary. He serves on the Dean's Council for Women and Cultural Diversity, and he is active in the AISES chapter at OSU.

WHEN ASKED WHERE SHE STANDS ON environmental questions, Heidi De Haan describes herself jokingly as



Heidi De Haan
Forest Recreation Resources

"one of those terrible middle-of-the-road people," the ones who want to work for balance, education, and compromise.

"Everything's not black and white," she says. "I'm more interested in a fair process than in the outcome of any specific issue." The diversity of opinion and the breadth of scholarship she's found at the College of Forestry, she says, makes her feel she's come to the right place.

Heidi, 21, grew up in Beaverton, an avid camper and football fan (she likes to play, too) and passionately interested in films. After high school

she went to Los Angeles, intending to study film production at a private college there. One semester in southern California was enough—Heidi had to come back. "I missed Oregon. I missed the trees!"

She enrolled at OSU, choosing communications as her major. Considering a minor in tourism, she took one of the required classes—a forest recreation management course taught by Royal Jackson, associate professor of Forest Resources. "It was fun and interesting," she says, "not particularly easy but worth the effort."

Forest Recreation Resources began to look appealing. "I looked at the requirements and saw statistics, math, and I thought, Arrgh!" But an end-of-term visit with Jackson reassured her. "Royal said to me, 'With your record, you can handle this.' He encouraged me to go on."

Heidi's been a Forest Recreation major ever since, with a minor in resource planning. She expects to complete her degree by the spring of 1994, and she'd like to go on to law school after that, with the goal of becoming an environmental lawyer.

What exactly would she like to do? Not entirely joking, she says immediately, "Secretary of the Interior. Why not aim for the top? But really, I've been talking to environmental lawyers, reading about what they do, whether it's in agencies, or industry, or as consultants." It all sounds interesting, she says.

Heidi belongs to the Forest Recreation Club and is active in the Associated Students of OSU—she just finished a stint as ASOSU women's affairs director. Last summer she worked on the Tillamook State Forest, interviewing recreational users of the forest as part of the recent recreation planning process. She hopes to go back this summer to help put the new plan into place.

She believes her forestry education is broad-based and comprehensive—good preparation for the career she's aiming for. "It's a shame that forestry students get stereotyped—you either wear Birkenstocks or flannel shirts, you're either a tree-hugger or a timber beast. Because it's just not true. (The College) is a good school with a good science base, and it's too bad more people don't get into it."

SAF STUDENTS PAIR UP WITH ELEMENTARY CLASSES

They may not be forestry students (yet), but their small, eager faces show how much fun a little natural resource education can be.

The first-graders in Susan Creighton's class at Jefferson Elementary School are learning about communities—plant, animal, and human—and how they all fit together. Their teacher today is not Creighton, though, but forestry student Debbie Anderson.

Anderson is chapter chairwoman of the student Society of American Foresters and mastermind of a new student SAF program called Adopt-A-Classroom.

"We're offering teachers

access to a resource they may not have known about, and that's the students here (at the College)," says Debbie, a master's student in Forest Resources. "And we're also trying to get students involved in community service. There's a big need for natural resource education out there, and we're trying to address that at a fundamental level—the kids."

The program doesn't try to supplant the school's own natural resource curriculum, Debbie stresses, but rather offers to lend a hand in the

teaching. The forestry student and the teacher agree on a set of activities that best suits the needs of the class. "They can do any number of things—classroom sessions, workshops, field trips," says Debbie. "It's up to the teacher and the student."

Jefferson Elementary was chosen for the program when it began last fall because the faculty advisor to the student SAF, Forest Resources associate professor Brian Greber, has a daughter in the first grade there. ■

Bridging the gap.
Debbie Anderson
and young friends.



DEIRDRE SHAHEED CAME TO THE College of Forestry with a strong science background and a lot of practical experience in the woods, but no formal forestry education. "I found that I could do many different things (on the job)," she says, "but I



*Deirdre Shaheed
Forest Management*

knew I couldn't go anywhere without a degree."

Deirdre, 30, was born in Texas to a cattle-ranching family. When the family moved to San Francisco a few years later, Deirdre discovered the Sierra Nevada, found she loved hiking and camping, and got involved in a leadership training program patterned after Outward Bound.

"In fact, I came to Oregon (after high school) to get in touch with Outward Bound, but the first person I met in Eugene was a tree planter," Deirdre says. That encounter steered her into Hoedads, a tree-planting cooperative, and led to her first woods work.

Soon after that, Deirdre married and moved to Idaho with her husband, who had a job at a hunting lodge in the remote community of Powell. Two daughters were born there. The family lived in Idaho for five years, and then moved back to Oregon.

In 1984 Deirdre was injured in an auto accident, and she was afraid she'd never work in the woods again. She went back to school, intending to study nursing. "But then, after I healed, I found myself in the woods again, working to earn extra money," she says. "It became clear to me that nursing was not the career I wanted."

Deirdre got a job with a Eugene forestry contracting firm, doing reforestation, slash burning, tree planting, and firefighting. She was quickly promoted to crew boss—the first woman ever to hold that job. "To me it didn't seem out of the ordinary," she says. "I guess my managerial skills became apparent."

But by now she was raising her daughters alone, and contract work, with its irregular, demanding schedule, became impossible for her. So she started school again—this time at the College of Forestry. She chose Forest Management as her major. "I knew that I wanted to get into management," she says. "I wanted to affect how decisions are made—I didn't want to be only the 'legs' any longer."

Deirdre commutes from Eugene, where her daughters are in school. "I've been able to work my schedule so I can drop them off in the morning," she says. "My most important priority is to keep their lives stable." Her family commitments make it impossible for her to be involved with student activities, which she regrets, "but that's just something I have to compromise."

Deirdre has received scholarships from the College and the University. She works summers for the Forest Service in Cottage Grove to earn money for school.

She expects to finish her degree in the spring of 1995. "I don't know what I'll do when I graduate," she says. "Being here has shown me there are so many possibilities. I'm interested in inventory. I'm interested in GIS (geographic information systems), remote sensing, photogrammetry."

She plans to cast her net wide, considering agencies and companies alike as potential future employers. "As long as I can work in the woods," she says, "I'll be happy."

FORESTS DID NOT LOOM LARGE IN Chad Kirlin's world view when he was a youngster. Growing up in Laramie, Wyoming, where the sky is the dominant presence, Chad enjoyed trees the way most people do, but he didn't have a particular awareness of forestry.

Even after the family moved to Victoria, B.C., when Chad was in

high school, "I was interested in tree biology, but I wasn't even aware that there was such a major as forestry."

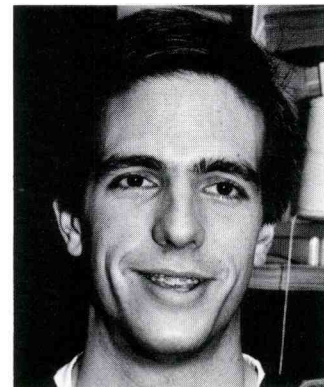
Chad likes science and has always been good at it. After he graduated from high school with honors in 1989, he enrolled at the University of Victoria with a major in biology. Midway through the year, he began to feel restless—this wasn't really what he wanted to do.

He learned about the OSU College of Forestry when his father, an electrical engineering professor at the University of Victoria, traveled to Corvallis for a professional conference and brought back a university catalogue. "I looked through it and saw forestry, and I thought, that might be something interesting to study."

After some more serious research and a visit, Chad decided to make the change.

He enrolled as a Forest Engineering major. Then he took an introductory class in Forest Products and liked it very much. Chad's part of the class was taught by associate professor Phil Humphrey, who, as part of his research program, has devised machines to measure such things as the permeability of wood to water and the strength of a glued bond.

"I liked the little machines," Chad



*Chad Kirlin
Forest Products*

says. "And I found the whole class interesting, especially when we were learning about wood composites and engineered materials—I got interested in the engineering of wood itself."

He expects to finish his degree this summer and intends to go straight on for a dual master's in Mechanical

Engineering and Forest Products. "I'd like eventually to work in a design area—designing testing and production machines related to forest products."

He feels there's a growing niche in the marketplace for people with skills like these, not only to design such machines but to maintain them. "A lot of mills have modernized quite a bit over the last several years. I've been told that since they now have some highly engineered machines,

Master of Forestry degree offered

The Forest Science department is offering a Master of Forestry degree in forest biology. The program is designed for people already working in forestry careers who would like to deepen their understanding of forestry's biological basis.

Applicants must have either a bachelor of science degree in forestry or another, closely related bachelor's degree and three years of forestry experience.

Students may choose from among eight areas of emphasis: ecosystem management, forest wildlife management, integrated forest protection, tree improvement, silviculture, regeneration, vegetation management, and agroforestry. The non-thesis program may be completed in as little as 12-15 months, officials say.

"The program offers students a chance to obtain a current understanding of broad aspects of forest biology, including its relevance to contemporary forest resource management," says Logan Norris, Forest Science department head.

Those interested may write to Forest Science Department, Oregon State University, FSL 020, Corvallis, Oregon 97331-7501.

they need people who understand them."

Chad is a member of the student chapter of the Forest Products Society, the forestry honorary society Xi Sigma Pi, the national honorary society Phi Kappa Phi, and the College Honor Board. He's been receiving College of Forestry scholarships since he got here. "There are a lot of scholarships available in this college, and they really help a lot, since I'm an out-of-state student."

Chad likes the small, friendly atmosphere of the College of Forestry. "You get to know your professors a lot better than at a bigger school. The faculty here are quite open, less formal than at other places."

GINA RINGER'S STUDIES IN FOREST hydrology bring together two abiding interests in her life—her education as a scientist, and her citizen's concern about the proper functioning of natural systems.

Gina is a civil engineer who has worked on major water resources projects in California's Sacramento Valley, including the design of a geothermal power plant.

She is also an environmentalist who's worried about the welfare of water systems everywhere. "I have the sense," she says, "that the water resource integrates and reflects how the ecosystem functions—if we are protecting the water resource, we are protecting the environment."

Since the fall of 1990, Gina has been studying forested watersheds with hydrologist and Forest Engineering professor Bob Beschta. The forested high country interests her, she says, because "the higher up in the watershed you are, the more opportunity you have to preserve the pristine aspects of the water, and the better the quality you can maintain."

Gina, 37, grew up in New Zealand, a land as moist and mild as the maritime Northwest. She moved with her family to California at the age of 13, and graduated from high school in southern California. She studied engineering at the University of California at Davis, earning a dual degree in civil and agricultural engineering in 1979.

She worked for three years for the California state water resources department. Then she left engineer-



*Gina Ringer
Master's student
in Forest Engineering*

ing for five years and embarked on a more personal quest. "I had become more environmentally concerned by that point, and I wanted to adopt a responsible lifestyle, a low-impact lifestyle." She traveled north to Boise and operated an organic gardening and landscaping business for a while. Then she moved to Eugene and went to work for the Hoedads, a tree-planting cooperative. After that she joined a cooperative organic farm, raising vegetables and bedding plants and selling them to local markets.

"It was while I was there," she says, "that I decided I was ready to come back to school. I wanted to try to integrate my background in engineering with my interest in ecology."

There is much for her to learn, she acknowledges. "I already had the sense that natural processes are too complex to ever fully know. It takes years of experience," and even then, solving the thorniest environmental problems "is going to be an intuitive, site-specific process."

For her thesis project Gina is looking at beaver ponds—beavers are an important influence on how valley lands are shaped over time. She is analyzing them with her engineer's mind, gauging the rate of sediment accumulation and the distribution of the various particle sizes and studying the relationship of these things to the peak flows of water in the streams.

After she finishes her degree this fall, Gina would like to work on large-scale analyses of watershed use, such as those being done right now in Washington. "That seems to be where the most fertile job prospects are right now."

WILL SHALLENBERGER DIDN'T WANT to choose between forestry and civil engineering, so he came to a school where he could have both.

Will, a senior in the Forest Engineering/Civil Engineering program, made his choice carefully. He'd looked at maybe a dozen universities all over the United States, and he'd visited five, including OSU. "No other university had a program quite like this one," he says.

Will grew up in Kirkwood, Missouri, near St. Louis. He was active in Boy Scouts, and he spent a lot of time outdoors, exploring the hardwood forests, rivers, and caves of his native state. When he graduated from high school in 1989, he knew he was interested in working with soils and water, and what he found at OSU was just right.

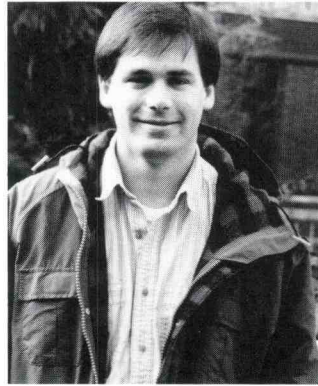
The Forest Engineering/Civil Engineering program, he says, is giving him all the quantitative skills he'll need—both within the broad background of civil engineering and in the more focused applications that come with a forest engineering education.

When he graduates in June of 1994, Will would like to work for a consulting engineering firm with opportunities to serve forest landowners. He'd like to help landowners solve their management problems, especially those involving the conservation of soil and water resources.

He appreciates the practical, job-oriented approach of his forest engineering classes. "Many FE assignments are written as from an employer. That's probably half your job as a student—putting the answer in a form an employer could use. The assignments here are preparing you to become employed—you don't just crunch numbers."

He also appreciates the diversity of opinion and openness of spirit he's found at the College of Forestry. He arrived at OSU, he says, wondering whether to expect the stereotypical loggers-versus-tree-huggers conflict, and was pleased to discover the broad scope of ideas here. "There is a more diverse set of opinions than the stereotypes would have you think."

Will, 22, has earned scholarships from the College of Forestry and other sources since he began his studies. He also works as a part-time



*Will Shallenberger
Forest Engineering/Civil Engineering*

research assistant for two of his professors, Marv Pyles and Julie Kliewer. The scholarships, he says, have been a blessing: "My parents retired after I started school. I still have some support from them, but it's not so big a burden because of the scholarships."

WHEN SHAFIQUR KHAN RETURNS home with a doctorate in forest nursery management, he hopes to use his education to help solve some of his country's pressing forestry problems.

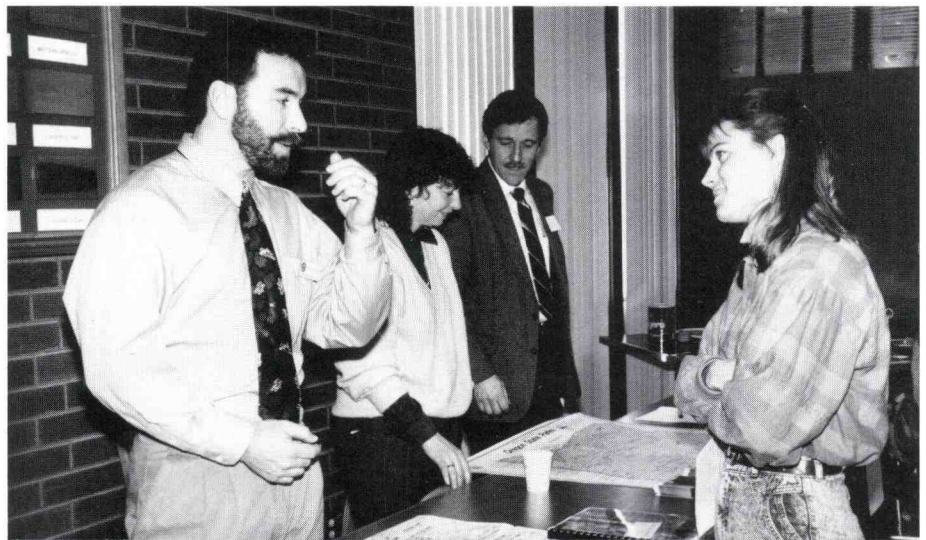
One of the most urgent, he says, is the lack of high-quality conifer seedlings for reforestation. "Currently the nursery program in my country raises conifer seedlings only in polythene tubes. No one knows how to raise bareroot conifer seedlings successfully."

Shafiqur is from Azad State of Jammu and Kashmir, a politically troubled country bordered by Pakistan, India, and China. In 1947 India and Pakistan became two countries and Kashmir, then independent, was divided. Part of the country was and remains occupied by India, while the rest, Shafiqur's home, is independent but closely tied to Pakistan. Recent history of the region has been marked by intermittent warfare over political, cultural, and religious issues.

Azad Kashmir is also a heavily forested country, with 43 percent of the land under the control of the Azad Kashmir Forestry Department. Most of that land—80 percent—is in coniferous forests.

Because of continuing political and social pressures, Shafiqur says, much of the forest is in poor condition. "About 66 percent of the state's revenue is generated from these conifer forests," he says, "and that brings political pressure from leaders." There is also illegal cutting and theft of the more valuable woods, such as deodar cedar. "When there is heavy snowfall and severe winter, people go out and cut firewood without a permit because they have to keep their houses warm. There is also a grazing problem—the cattle

Job talk. Ric Balfour, recreation coordinator on the Tillamook State Forest, explains a point to grad student Connie Weigers. Balfour was one of about a dozen representatives of public agencies and private firms who came to a job fair organized last spring by the student chapter of the Society of American Foresters to showcase forestry employment opportunities.

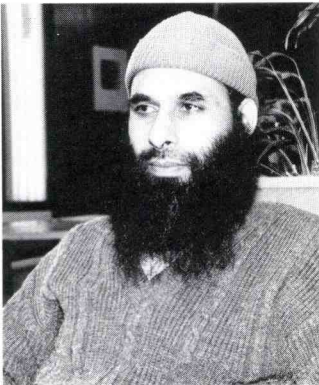


and goats of nomadic people do a lot of damage."

The forest laws are enforced as well as they can be, Shafiqur says, but it takes more than laws to protect the forests. "You cannot fight (the public) until people's education level is much higher and they understand the problems."

Shafiqur has worked in his country's forest service since 1977, after scoring well on a competitive exam. He completed a bachelor's degree in forestry in 1979 (his second bachelor's) and a master's in 1983, finishing first in his class and winning two gold and two silver medals. He was promoted to assistant conservator of forests, and then to deputy conservator. He is on leave from this job while he's studying at OSU.

Shafiqur came to the United States in 1990, one of only a handful of scholars selected from Pakistan and Azad Kashmir to study abroad under a program of the U.S. Agency for International Development. His wife and four sons, ages 15, 11, 10, and 4, joined him in 1992.



Shafiqur Khan
doctoral student in Forest Science

He finished a second master's at OSU in 1992 and then began his doctoral studies. Shafiqur is studying techniques for producing high-quality bareroot seedlings of four Northwest species. He hopes to apply the most successful nursery techniques to the native conifers of his country's forests. His major professor is Robin Rose, Forest Science associate professor and project leader of the Nursery Technology Cooperative.

Shafiqur is optimistic about forestry in his country, despite its

problems, because of the skills and knowledge he and his colleagues will bring back. "If we were able to grow conifer seedlings bareroot and achieve good quality, we might be able to look at our forests and say, yes, there are problems—but at least we have the technology to replenish what has been lost, to keep up with the degradation."

MICHELLE DURVIN LIKES KIDS, AND she also likes forests. Her ideal job? Helping kids learn about forests—teaching, devising programs, and crafting field workshops for hands-on learning.

Michelle, who grew up in Portland, learned to love the woods through a similar education program, the Multnomah County Outdoor School. "I was in the sixth grade," she says. "The school lasted five days. We lived in the woods, and we learned about all the natural resources—the water, the soils, the plants, the animals."

She enjoyed the time so much that she went back to serve as a counselor for six sessions during high school. She's also been a wilderness instructor at a children's camp in Colorado, a science teacher at an after-school program for inner-city youth, and a worker in a child care center.

Michelle, 22, feels a Forest Recreation Resources degree is the best bet for what she wants to do, especially coupled with her chosen minor in environmental education. "I've always had a way with children," she says, "and I've always felt I have good leadership skills. Eventually I want to implement forestry education programs into the school curriculum, or into extracurricular activities, or both. I want to be in an instructor's role, but I also want to get programs started."

Michelle is the education chairwoman for the OSU student chapter of Society of American Foresters. Right now she's helping with a program called Adopt-a-Classroom, an informal way for students at the College to help bring forestry teaching into elementary-school classrooms (please see story on page 5). She is assistant Forester of Xi Sigma Pi, the forestry honorary society, she

CONFERENCE TO ADDRESS MINORITIES IN FORESTRY

Increasing ethnic and racial diversity within the forestry profession will be the aim of MINFORS II (Minority Participation in Forestry and Forestry-related Sciences), a national symposium on minority participation in forestry and forestry-related sciences being hosted at OSU on October 24-26, 1993.

The conference will attract college students, especially those of Native American, Asian, Latino, and African-American descent, from all parts of the nation.

"The assumption is that these groups are underrepresented in the natural resource disciplines because they do not have good information about forestry. We hope to present a clear picture of what modern forestry is all about, change outdated perceptions, and present the real opportunities. This applies especially to the science arena," says Pam Henderson of the College's instructional and continuing education office.

A separate session for counselors, educators, and recruiters will focus on methods of attracting and retaining these students.

MINFORS II is co-sponsored by OSU and the USDA Forest Service (Washington office, Region 6, and the PNW Research Station) with additional support from the Bureau of Land Management, the Bureau of Indian Affairs, and many other public and private entities.

For further information, get in touch with Pam Henderson, College of Forestry, Oregon State University, Peavy Hall 140B, Corvallis, Oregon, 97331. ■



Michelle Durvin
Forest Recreation Resources

belongs to the Forestry Club—and she's co-editor of *Hi-Lead*, the forestry students' newspaper. "I do everything," she says with a shrug and a smile.

BY HIS OWN ADMISSION, CHRIS Johnson's journey to a four-year forestry degree has been "a convoluted, roundabout path."

Raised in Beaverton, Chris always enjoyed being out of doors. "I did a lot of backpacking and camping—it was just something fun to do; I never thought about forestry as a career then."

He went to the University of Oregon after high school, earning a degree in German and secondary education. But he found teaching didn't appeal to him, and after a brief spell in a high school classroom he took a job with the state Adult and Family Services agency.

One day he noticed a job announcement from the state Department of Forestry. He thought about it, decided he was interested, and applied for the job: assistant to the forest practices forester on the Clackamas-Marion District, based in Molalla. This office-manager job was his first forestry-related employment.

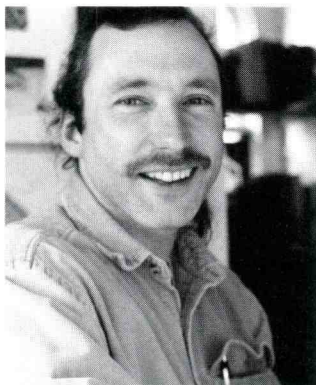
He'd been there for a year when his wife was hired to teach at an international school in Tokyo. During their two years in Japan, Chris pondered his life's direction. "I knew I wanted something in forestry, but I wanted more than the old job. I saw the writing on the wall. With the education and experience I had, I knew it wouldn't take too long before I reached a dead end."

When he and his wife arrived back in the United States in 1991, Chris enrolled at OSU—an older-than-average student (he's 32) whose background, he feels, nevertheless gives him certain advantages. "In any (forestry) job you have to deal with people—not just the trees. You have to communicate, because communication is the center of life. I feel well prepared for that aspect of forestry."

Still, juggling his roles as student, husband, and father (to six-month-old son Syllas) has at times been an uphill battle. "I've found the studies here to be rigorous—that's a good word."

He is financing his education with a tuition scholarship, a student loan, part-time work for the College of Forestry, and savings. His wife, Julie, teaches part-time; her paycheck supports the family.

Chris has done summer work for the Forest Service, and he'd like to be



Chris Johnson
Forest Management

offered a permanent job when he finishes school this spring. Right now, he says, that prospect looks uncertain. "But I keep my feelers out—I'm looking all the time."

All in all, Chris believes his "convoluted, roundabout path" has led him to a good place. "My dad always told me to do whatever I wanted to do—as long as I did it well—and to do something that helps others," he says. "I think forestry fits that description very well. Besides, there aren't many jobs where the things you do now have an impact so far into the future. That's the daunting part of forestry, but it's an appealing part, too."

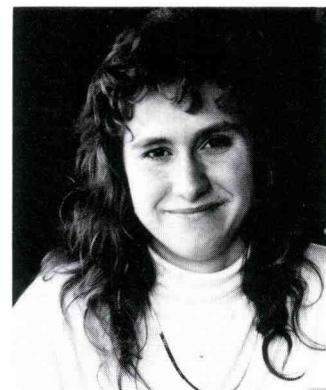
WHEN SHE WAS 17 YEARS OLD AND IN her second year of college in Farmington, New Mexico, Koshare Eagle decided she wanted to move to Oregon and go to Oregon State University. "I didn't know why—I just wanted to do it." Now 20 and a Forest Management student at OSU, Koshare is realizing that dream.

Born and raised in Aztec, N.M., the third-youngest in a family of seven, Koshare entered community college at the precocious age of 15 after she got bored with high school.

An older brother and sister had gone this route before her, with their mother's help, and Koshari is glad she got to do it, too. "It was a wonderful experience. People always ask me, 'Didn't you miss the prom and all the socializing and stuff?' Well, I didn't miss it at all."

Many of her community-college core courses transferred, she says, "but I was deficient in math and science. It's really been a challenge to retrain my brain to think in that way. I'm a more intuitive, right-brain kind of person. I'm having to work hard. But the amazing thing is—I understand it! I love my calculus class, which makes me wonder if I'm weird and crazy. But I love it."

By the way (because everybody wants to know): Koshare is not Native American, but her first name is. "It's Pueblo for the specially appointed people who take part in rain and fertility ceremonies and other sorts of rituals. I like my name. I think it suits me because part of the role of the Koshares is to provide some lightness—to lighten the mood—and I interpret that as, to make people happy." ■



Koshare Eagle
Forest Management

THE TOUGHEST CLASSES THEY'LL EVER LOVE

If you saw him on a field trip with his students, you'd have a hard time picking Brian Greber out as the professor. He looks like a student himself in his blue jeans and wind-breaker, his longish hair shoved casually back from his face.

He's only 35, after all—much too young for the resume he carries: associate professor at a major school

and then, with a smile, "but then, my scale of what's unreasonable may be set on a different gradient than a lot of people's."

GREBER IS PRETTY DEMANDING OF himself. He graduated a year early from high school, in his home town near Pittsburgh, even though he was working 40 hours a week. He contin-

chosed academe. He was 25 years old.

After a couple of years he began to feel stultified by the familiarity of the place ("I still felt like a grad student") and started to look around. He'd gotten acquainted with Norm Johnson, who had then just joined the forestry faculty at OSU, and Johnson invited him to apply for a new opening there. He interviewed, liked

"I'm demanding," says Brian Greber. But he gets the students' applause. Here he is at Cinder Butte, near Bend (second from right) with doctoral students Hal Kingslien, Andre Laroze, and Jun-Yen Lee.

of forestry, widely published economist, co-author of two influential reports on timber availability in Oregon, behind-the-scenes advisor to governors and lawmakers on questions of forest resource policy.

Add one more thing: teacher of the year. At last year's Fernhopper Day barbecue, Greber received the 1992 Aufderheide Award for excellence in teaching. Winners are nominated by students—the ones who ought to know.

"He's a really concerned instructor, concerned that what he's teaching is really getting across," says Michael Fisher, a student in Greber's forest economics class. "To me it means a lot when an instructor shows that kind of concern, when he applies himself to his teaching in the way that he expects us to apply ourselves to our learning."

Another student, Chris Johnson, says, "He's always willing to go out of his way to help his students."

Greber's teaching style is low-key, friendly, anecdotal; his out-of-class assignments are renowned for their toughness. "I don't think I'm unreasonable in my demands," he says,



ued to work full-time through college while carrying between 19 and 22 hours of classes. He managed to earn a four-year degree from West Virginia University (in forestry, with an emphasis in statistics and biometrics) in three-and-a-half years. He finished a master's there in a year, then transferred to Virginia Polytechnic Institute and picked up a doctorate in economics.

Then he started looking around for jobs. He found a promising lead at U.S. Steel, a job as manager of the corporation's timber lands. VPI immediately countered with the offer of an assistant professorship. Greber

the College, and was offered the job of assistant professor in forest economics. He joined the College faculty at the end of 1985.

Greber was immediately assigned to a big project—the 1989 update of *Timber for Oregon's Tomorrow*, the 1976 timber availability study widely known as the Beuter Report. He also got his teaching and research programs established, and he began to settle in and get comfortable.

"Then, after three years," Greber says, "the real wild hair came up." A forest products firm, Contact Lumber, offered him the job of operations planning and scheduling at its

Prineville manufacturing plant. The offer was tempting. He'd never planned to be a professor, after all; he'd always had a hankering to work in industry. "So I decided to scratch that itch." He departed for Prineville in 1988.

He continued to work on the timber report update at a distance, though, at the prompting of John Beuter. Beuter, former associate dean of the College and co-author of the report, spent a lot of weekends in Bend conferring with Greber on the study. At every opportunity, Beuter also urged Greber to come back to the College. After a couple of years away, that idea was beginning to sound good. "I'd scratched my itch—I'd found that teaching and research were more what I wanted." He returned in August of 1989, "and pretty much picked up where I'd left off."

THOUGH LEAVING THE COLLEGE HAD made him feel a bit like a traitor ("I knew I'd have to eat some crow if I came back"), the private-industry experience was good for both him and his students. One, it gave Greber a feel for the knowledge, skills, and attitudes that real-world employers want from their people. And two, it made him more sensitive to the private hardships and worries that can affect a student's performance. "I learned a lot," he says, "about how to handle people, about what are reasonable expectations for performance. I got more sensitive to people's feelings and what's going on in their lives."

He illustrates this with a story

from his industry days, about the time he inappropriately chastised a subordinate at the mill. "That guy went down and took it out on the people down on the floor. The next day productivity dropped 10 percent. In industry you have that immediate feedback—saying and doing the wrong thing sends productivity down the dumper." It's the same with students, he says—and because of his industry experience he doesn't have to wait for the end-of-term evaluation to know when he's doing something wrong.

That doesn't mean he's a softie. "I'm very big on the idea that education is a two-way responsibility," he says. "Acquiring an education requires a whole lot of the student's input. My own work ethic instilled that in me. And having paid for my education, I value it highly, because I know what it cost me."

GREBER PLANS NO MORE SUDDEN moves. He'll continue teaching his economics and marketing classes and developing his research program on the economics of the forest products markets. He also intends to keep up his involvement in larger forest management and policy issues.

After the timber-availability update was published in 1989, Greber and others revised some of its projections in light of subsequent developments related to the northern spotted owl. That report was published in 1990.

The next year Greber served on a blue-ribbon panel of economists picked by the U.S. Department of Interior to review the assessment of

economic effects of the spotted-owl critical habitat designations in the Northwest. In 1992 he served as an impartial consultant to Oregon's representative to the Endangered Species Committee (the "God Squad") on the issue of exempting 44 BLM timber sales from spotted-owl restrictions.

Last year Greber led a panel of College faculty who studied and made recommendations on the latest 10-year plan for Bureau of Land Management forest lands in western Oregon. The panel was called by Dean George Brown at the request of Gov. Barbara Roberts.

He testified at the April 2 Forest Summit on the economics of timber harvesting in the Northwest, and he's provided research and expert testimony several times to the state legislature and individual legislators.

He's also chairman-elect of the Oregon chapter of the Forest Products Society, an active member of the Society of American Foresters, and faculty advisor to the student SAF chapter at the College.

"I believe in being active professionally—not only in the standard teaching and research, but keeping a high profile in the profession," he says. "That's why I'm willing to take on a lot of the political stuff—not because my job depends on it, but because it's a professional responsibility. That ethic of service is also something I try to convey to my students."

A party for kids, too. Teddy Bishaw (son of Forest Resources grad student Badege Bishaw) came along with his dad to a reception for international forestry students held last winter. About 125 attended, including international students, spouses, and children, as well as several Americans who had been abroad. About 25 countries were represented.



PUBLIC SERVICE FOR COLLEGE FACULTY

HELPING SOLVE PROBLEMS IS JUST PART OF THE JOB

Behind the College of Forestry's explicit mission of teaching, research, Extension, and continuing education lies the implied mission of public service. College faculty are frequently asked to give extra help to problem-solving efforts linked to forestry issues. There's often no compensation for this extra work—it's considered public service.

Recently several College faculty members were asked to lend their expertise to efforts involving forest planning, forest management, and international trade.

At the request of Governor Barbara Roberts' natural resource staff, eight College faculty conducted a technical review of the 1992 ten-year management plans drafted by the Bureau of Land Management. The plans covered BLM forests in six western Oregon districts.

The Governor's office needed the review in order to offer a response to the plans during the public-comment process last fall.

Dean George Brown assembled an eight-member team representing expertise in forest economics, silviculture, ecology, forest mensuration, watersheds, wildlife, fisheries, and integrated pest management. Team members were coordinator Brian Greber, David Hann, Ed Starkey, and Steve Tesch (Forest Resources; Starkey is an adjunct professor whose main appointment is with the National Park Service), Robert Beschta (Forest Engineering), Greg Filip and Bill McComb (Forest Science), and Stan Gregory (OSU Fisheries and Wildlife).

The team spent two months intensively reviewing the draft plans. The goal, says Greber, was not to pass judgment on the appropriateness of the agency's preferred alternative, but to examine the analytical process that led to the plans—to provide a sort of peer review of the planning procedure.

Although the team's assignment was to provide information to the Governor's office, they also shared their findings with BLM state director

Dean Bibles and his staff.

The review was time-consuming for the busy faculty members, says Steve Tesch, but its public-service value was high. "I think this is a very important service role for OSU faculty to play," he says. "Providing an unbiased scientific peer review of a public-agency plan is very appropriate."

NORM JOHNSON (FOREST RESOURCES) and John Sessions (Forest Engineering) currently serve on a five-member panel reviewing the quality of forest management on Indian reservations. The committee's chairman is John Gordon, former head of Forest Science at OSU, now at Yale University.

The panel's client is the Intertribal Timber Council, an organization of Indian tribes on timber-producing reservations. The panel has been charged by Congress to find out how well reservation forests are being managed.

Historically, the federal Bureau of Indian Affairs has been responsible for forest management on reservations. But over the past decade or so, the tribes themselves have taken over much of the leadership in managing their forests.

Johnson and his teammates are visiting reservations, talking to tribal and BIA officials, interviewing tribal members, touring forests, and looking at management records.

Other panel members are Jim Sedell of the PNW Station and Jerry Franklin of the University of Washington.

FINALLY, FOREST PRODUCTS FACULTY, especially just-retired department head Bob Ethington, played a key role in resolving a long-standing trade dispute between the United States and Canada over plywood.

After four years of tedious, sometimes discouraging negotiation, the two countries have agreed on performance standards for plywood and other flat structural panels. The "harmonized" performance stan-

dards—so called because the standard in each country is technically consistent—replaces a Canadian standard that did not permit the use of D-grade veneer (a veneer with fairly large knots used for sheathing plywood). The standard effectively kept most U.S.-made plywood out of the Canadian market.

"By using this performance standard," says Ethington, "manufacturers can make flat structural panels out of whatever they please—so long as the panels pass the tests prescribed in the standard." The performance standard thus avoids the dispute over things like acceptable knot sizes, which often function as nontariff trade barriers, Ethington says.

At the same time, the two countries lowered tariffs on plywood, the first phase of a reduction schedule that should reduce tariffs on both sides to zero in five years. Tariffs had been frozen while the countries were working out the standards agreement.

Ethington co-chaired the binational committee appointed to resolve the trade dispute, and he also sat on the subsequent committee that worked the agreement into a standard that manufacturers could use.

In addition, using a database that only the College has, Forest Products associate professor Jim Funck was able to evaluate the implications of different standards proposals all through the negotiations.

The negotiations have been kept quiet, says Ethington, because committee members didn't want to jeopardize an agreement with premature publicity. "There were a number of times over a year or two when I thought we were going to be deadlocked and go home with no accomplishment," he says. "Any publicity would have tipped the balance the wrong way. So that is really built into our service role—to work without fanfare until everything falls into place."

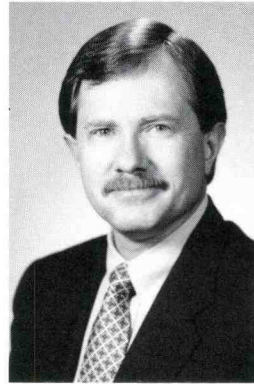


forestry Currents

McLain is new Forest Products department head

Thomas E. McLain has joined the College as new head of the Forest Products department. McLain comes from the Department of Wood Science and Forest Products at Virginia Polytechnic Institute and State University, where he was professor of timber engineering.

McLain received his bachelor's and master's degrees in wood science and technology and his doctorate in wood engineering from Colorado State University. His research program centers on structural wood fastenings and on the development of new technology and methods for structural design with wood.



Tom McLain

McLain replaces Robert E. Ethington, former department head, who now works part-time on research related to wood product standards.

Perry named to recovery team

David A. Perry, ecologist and professor of Forest Science, has been selected by the Fish and Wildlife Service of the U.S. Interior Department to join the recovery team for the marbled murrelet, a sea bird that nests in older coastal forests.

The Oregon, Washington, and California population of the marbled murrelet is listed as threatened under the Endangered Species Act of 1973. The recovery team is charged with completing the first draft of a recovery plan by December and a final plan by December of 1994.

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NEW NATURAL RESOURCE DEGREE PROGRAM PLANNED

Beginning next fall, OSU plans to offer a new, interdisciplinary bachelor of science degree in natural resources. The program is being developed by a faculty committee from four colleges, Agricultural Sciences, Forestry, Liberal Arts, and Science.

The new degree program will answer a need for broad-based learning about natural resources, says Bo Shelby, Forest Resources professor and committee chairman. "There is a demand for people who can work across disciplinary boundaries, particularly the boundaries between the social-political and the physical-biological sciences."

Besides the baccalaureate core curriculum required of all OSU students, the new degree program will have three components: a breadth requirement calling for upper-division classes from each of seven areas; core courses in natural resources, social sciences, and decision making; and 50 hours of course work in an area of specialization.

Graduates of the program might find employment on an interdisciplinary resource planning team, handling public affairs for an agency or a company, or working on the staff of an elected official, Shelby says. ■

Correction: On page 7 of the Winter 1993 *Focus on Forestry*, Forest Science assistant professor Darrell Ross is identified in a photo caption as holding a "spruce budworm trap." It's really a Douglas-fir beetle trap. The *Focus* is sorry for any confusion the error may have caused.

Crandall

from page 16

problem-solver, and a smart businessman who knows that protecting the environment is a bottom-line issue.

Soon he will be taking his skills into a larger arena—Washington, D.C., where he will be working for the American Forest and Paper Association as both a lobbyist and a consultant for member firms on legal and legislative issues.

Crandall will be missed at Brand S, says his boss, Jack Brandis of Corvallis, but his skills will be put to good use in Washington. "He deals with facts and issues, not emotionalism and sophistry, like so many people these days. I'm excited for him. I'm excited to have someone who's worked for us working on the national scene."

"There are reasonable people out there. You just have to find them."

Crandall has been deeply involved in community and legislative affairs in Montana ever since he's been there. He serves on many boards and committees, including the state Environmental Quality Council, which oversees all the state's environmental regulatory functions.

Crandall's involvement has won him friends all across the political spectrum, including many in the environmental community who praise him for his ability to bring diverse, even warring interests together in common cause. "It's good to have people like him in industry, people who have a sense of moral responsibility to the environment," says Dudley Lutton, director of development for The Nature Conservancy's Montana office. "You couldn't have a better person representing the timber industry in the Yellowstone region."

DOUG CRANDALL GREW UP IN Corvallis and worked his way

through forestry school at OSU. He was president of Xi Sigma Pi in his senior year, having revived the organization from its former moribund state. "My education at Oregon State was excellent," he says. "It prepared me well for the flexibility and diversity of the things I was going to face."

He went to work for Brand-S in 1983, when the lumber business was just beginning to pull out of hard times. "I realized when I got here," says Crandall, "that we had to do a lot better to survive."

He used his consensus-building skills to improve communication, heighten morale, and spread decision-making authority around. He met with each employee, one on one. Sometimes he heard praises, sometimes problems. "It took us a while to straighten things out," he says, "but when people were able to get complaints off their chest, it got better." He switched to a project-oriented management structure in which workers get a say in production decisions.

Two years ago the company started a new manufacturing plant, Yellowstone Woodworks, adding another 50 jobs to the local economy. The new plant produces tabletops, cabinet parts, molded doors and windows, and other remanufactured goods on order.

DOUG CRANDALL HAS PUT A LOT OF himself into Brand S, and he's leaving with mixed feelings. "I'm sitting here right now, looking at the Yellowstone River; my dog is right here beside me, my fly rod is leaning against the door . . . I'm going to miss Montana."

And yet he's looking forward to being one of the Washington movers and shakers, building creative partnerships, working for consensus.

"Here's how I look at it," he says. "There's a good guy in Bozeman with the Wilderness Society. A reasonable guy. It's so much better when you can call him up and say, 'Can we work on this?' There are people like that out there, reasonable people. You just have to find them." ■

MR. CRANDALL GOES TO WASHINGTON

HE'S A CONSENSUS BUILDER WHO KNOWS HOW TO EMPOWER PEOPLE

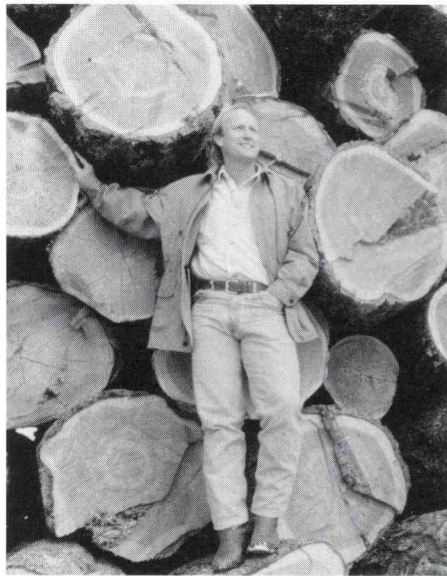
Conventional wisdom holds that conservation and profitability don't go hand in hand, but at Brand S Lumber's Livingston, Mont., plant, they do—thanks to the creative leadership of its young manager, Doug Crandall (Forest Products 1979).

The company, like many throughout the West, relies heavily on outside sources for its raw material. As other wood products manufacturers have languished, waiting for the pipeline of public timber to unclog, Brand S has been out stalking the wily private landowner.

"I have six foresters, which is a lot for a company our size," Crandall says. When they find a likely parcel, they put together what they humorously refer to as a "designer logging" plan, custom-tailored to the

landowner's needs and wishes.

"We don't try to talk a rancher into clear-cutting his timber," says Crandall. "Instead, we design the harvest so that wildlife cover, water quality, soils, aesthetics—whatever the landowner values—are preserved."



Designer logging. Visionary timber procurement has lined up a good supply for Brand S.

Often, he says, the neighbors are so impressed with the look of the land after harvest that they call Crandall and offer *their* timber for sale.

Such careful harvesting is expensive, but the payoff—a reliable supply—has been worth it. The mill has enough timber under contract right now, most of it on private lands, to keep its 200 employees busy for two and a half years. Three years ago the company had only a six-month supply ahead. "I feel really good about where we're going now," says Crandall. "It's been a neat deal, seeing (the company) progress for all the right reasons."

In a state with strong environmentalist leanings, it would seem that Crandall and his crew are doing something right. Brand S has won a reputation for progressive thinking and good land stewardship, thanks largely to his leadership over the past 10 years. Crandall has become known as a consensus builder, a creative

Continued on page 15



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