Learning about life
The Spring issue of *Focus on Forestry* traditionally features our students and recent graduates. This year's theme is "Learning About Life." The stories illustrate the many ways our students are engaged in professional growth and development through work and travel experiences, both in and out of the classroom.

"Hands-on" experience has been a tradition in the College of Forestry since we began offering degrees in 1910. Students have always spent lots of time in the forest and in manufacturing facilities or field labs. They have worked on the Research Forest and in summer jobs for private or agency employers. We have long demanded successful completion of six months of practical work as a graduation requirement. We even monitor student performance in these jobs by asking employers to tell us how our students met their job requirements. Recruiters tell us that they come here because our students are "woods savvy" and "mill wise." They know our students will be ready for the responsibilities of a career when they graduate.

The stories in this issue expand on the idea of preparing for work by showing how our students are preparing themselves for life through a wide variety of real-world experiences. Internships, international travel, and community service are all ways in which our students have extended their classroom education into opportunities for professional and personal growth.

I am proud of the ways our students have taken advantage of opportunities to both grow and serve. I am also thankful for the generous support provided by alumni and friends whose gifts have given us significant resources to help broaden our students' educational opportunities in many ways. It makes the College of Forestry a very special place to study and to develop the skills necessary to lead our profession in the next century.

George Brown
Dean
College of Forestry
Oregon State University
On the cover.
Stephanie Kollars interviews a visitor at
Grand Staircase-
Escalante National Monument, where she
and other Forest
Recreation Resources
students took a
working trip last
summer. It’s real-life
learning for Stephanie
and other Forestry
students. Their stories
start on page 4.

Spring 1998

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Real-life learning

Jobs, internships, field projects, and community service give these students a rich education.

By day, **Jeff Bennett** is a mild-mannered Forest Engineering student. By night he's the creator, producer, cameraman, and sometimes anchor of his own weekly television show, "KBVR Sports Extra."

The weekly program, modeled loosely on ESPN's "Sports Center," features coverage of OSU's athletic events, news from the larger world of college and pro sports, and interviews with OSU sports figures like women's head basketball coach Judy Spoolstra, men's assistant coach Chad Forcier, and gymnasts Amy Slack and Megan Murphy.

Jeff covers the events, edits the video and audio, schedules interviews on-site or in the studio, writes the scripts, records the voice-overs, and directs the whole thing from behind the camera. He likes to stay out of the viewer's sight, but sometimes that's not possible—as when, on this all-live program, a scheduled interviewee doesn't show.

"At first we had to just wing it," he says. Now the crew is usually prepared with a taped backup, "and that's good, because I get terrible stage fright."

Jeff has been student engineer at KBVR for two years. He created the show a year ago out of a love of sports and an interest in television production. "KBVR Sports Extra" airs for an hour on Monday nights at 9 on OSU's student-run, public-access TV station. Viewers in Corvallis, Albany, and Lebanon can pick it up on cable channel 99.

This spring he was promoted to station manager, with responsibility for supervising 15 paid and volunteer staffers and coping with the station's "antiquated" production and broadcasting equipment.

He welcomes the chance to increase his management responsibilities. Jeff has been learning the basics of management not only at KBVR but in his internship with Willamette Industries over the past two summers.

He likes the professional manner in which the Willamette crew bosses handle their student workers—holding regular meetings and insisting on high standards of performance. "I'll expect the station crew to act professional, even though we are students," he says.

Jeff, 25, came to OSU with a variety of life experiences. He "caught the independent bug" at 17 and moved from his parents' home in San Diego to his uncle's farm in Pendleton. He graduated from tiny Echo High School with a class of seven.

He enrolled at Blue Mountain Community College but didn't declare a major—he just took classes for three years "until there were no more classes to take." Then he quit and worked various farm jobs.
After a year, he'd had enough of low-paid, dead-end work. "It was the end
of the harvest season. I was driving a potato truck for a big outfit out of Echo.
And it hit me, 'I don't want to do this for the rest of my life.'"

He applied to OSU, intending to pursue a major in the College of Agricultural
Sciences. Then a friend drew his attention to the College of Forestry. He
was interested in the Forest Engineering major but worried that his background in
math might be weak—"I sort of gave up on math at BMCC," he says. "But I took
the classes here, and I did okay."

Jeff is grateful for the variety of experiences he's enjoyed at OSU. "There
are so many opportunities in college, and most people don't take advantage of
them," he says. "The sky's the limit when you get here! Don't let anyone tell you
you can only do one thing."

Allan Czinger came to college with
an unconventional experience under his
belt. In 1992, chosen to take part in a
glasnost-era high-school exchange pro-
gram, he spent six weeks in Khabarovsk,
a town of 600,000 people on Russia's east
cost. Allan came back with a halting
proficiency in the language and a keen
interest in Russian culture and economics.
The interest ripened into a passion,
and Allan, now 21, enrolled at OSU with
the conviction that forestry and Russian
would somehow be in his future.

He intended at first to study Forest
Management. But in the Forestry 111
introductory class he found that the Forest
Products field was more his calling. "I
realized how much things are changing in
the wood products industry," he says. "It's
becoming more high-tech and more
international. It's an interesting, changing
field, and that attracted me."

He also enrolled in Russian language
classes, and he elected to pursue an
International Degree in addition to his
major.

OSU's International Degree program
offers a second bachelor's degree in
International Studies in conjunction with a
primary degree. The program requires an
additional 32 credits of course work,
proficiency in a foreign language, study
abroad, and a senior thesis or project
dealing with the international dimensions
of the primary degree.

Allan traveled to Russia again in July
of 1996, this time staying almost a year.
He visited Moscow in the west,
Khabarovsk in the east, and many towns
in vast Siberia. Because the trip fulfilled
Allan's overseas study requirement, the
University picked up about half his
expenses. "It ended up costing about as
much as staying in Corvallis for a year
and going to school."

By the time he got back, he was
fluent in Russian. His language skill,
international experience, and Forest
Products degree (which he expects to get
in June of 1999) should make him very
marketable when he goes job-hunting.
"My first choice would be to do some-
thing international—probably manage-
ment or sales."

This summer he hopes to go to
Russia again—this time on full pay. He's
applied for a job with an American wood
products firm that is exporting Siberian
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They told me, ‘People are always going to need wood products.’”

He feels confident there’ll be a permanent job for him after he graduates. “There will be so many doors open to me, I know I can find a good Forest Products job easily.”

Michelle Hadley got started on her engineering studies early. At 17, a precocious junior at South Salem High, she enrolled in the pre-engineering program at Chemeketa Community College. Almost finished with high school, she took just enough credits at South Salem to be eligible for the swim team.

The schedule kept her busy. “I was like all over town during the day,” she says with an engaging smile. “Busy” seems to be the way this dynamic Forestry student likes it.

Now a 21-year-old Forest Engineering-Civil Engineering dual-degree major, Michelle at first thought about becoming a veterinarian or an architect. But her enjoyment of math and science drew her toward engineering.

Before she finished her pre-engineering courses, however, she took a year’s detour to pursue another important vocation: an in-depth study of the Bible. Her year-long sojourn at Multnomah Bible College also gave her time to decide whether she really wanted to be an engineer. The Bible course was rigorous—“there was lots of reading, lots of writing,” says Michelle. “But no math or science, and I missed it. It hit me one day—I’m in math withdrawal!”

She enrolled at OSU in the winter of 1997 and discovered engineering’s forestry dimension. “I took forestry classes that weren’t available at Chemeketa, and those were my absolutely most fun terms at school.” She decided to enter the FE-CE program, “and I’ve had a blast ever since.”

The FE-CE program is offered jointly by the Colleges of Forestry and Engineering at OSU. The rigorous five-year program grants two bachelor’s degrees, equipping graduates to work in a wide range of engineering and construction fields and preparing them to work toward a Professional Engineer license.

This year Michelle was admitted to the College of Engineering professional school—a key requirement for the FE-CE program. She expects to graduate in early 2000.

Last summer she took a paid intern-
For one of her senior-level Forest Recreation Resources classes, Stephanie Kollars and four fellow Forest Recreation Resources students developed a comprehensive plan and budget for improving facilities and managing recreation in Willamette Park, a 286-acre city park on the west bank of the river, south of Corvallis. The park contains paved roads, graveled trails, a small campground, three soccer fields, and a 35-acre patch of native riparian hardwoods.

It's a real place, an urban park with a diversity of not-always-compatible uses and not-always-agreeable users. As such, it presents just the sort of situation a recreation planner is likely to encounter many times in his or her career.

The team first had to learn about the park’s natural and social history and current use patterns. Then, before they could start writing their plan, they had to work out conflicts of opinion among themselves. This negotiation, says Stephanie, gave the students another sort of real-life experience.

“We had very different ideas about what to recommend. Some team members wanted to stop using the soccer fields and let them revert to a more natural state.” Others, pointing out soccer's large following in Corvallis, argued that the park ought to have soccer fields as well as more-primitive areas.

Compromising on key points, the students wrote a plan that called for keeping the soccer fields, replacing an existing riverbank road with a footpath, restoring trampled trailside vegetation, installing interpretive signs, maintaining existing trails, improving garbage collection, and setting aside the native riparian forest as an unimproved natural area.

Sometimes Forestry students actually see their plans put into action. In this case the plans were an in-class exercise only. (As it happens, the city of Corvallis has decided to build eight new soccer fields at the park on recently purchased acreage.)

But the process of coming to consen-
Like many Forestry students, Meg McAndrews took a roundabout route getting here, with stops in early-childhood education and helping to run a computer business.

It took a cross-country move, a warm welcome at the Annual Ring, and the camaraderie of a diverse set of fellow students to convince her she was in the right place.

Raised in Trumbull, Connecticut, a town about the size of Corvallis, Meg is the second-youngest of five daughters. Their literature-loving parents named the girls after the five principal characters in the novel *Little Women*.

Meg was active in high school, both in and outside of class. She took on babysitting jobs, liked being with kids, and decided that early-childhood education was her calling. She enrolled at Boston College and entered wholeheartedly into the college experience, becoming president of three clubs and a staffer on the school yearbook.

To her surprise, she found she didn’t like college very much. “I didn’t fit in with the other students,” she says. “I felt that B.C. was gearing people toward upper middle-class corporate America, and that just wasn’t my direction.”

So she quit, came home to Trumbull, and took a job managing the office of a software company. “I was doing mailings, telemarketing, beta-testing software, supporting clients. I worked hard and learned a lot, and it was very good experience.” But still not what she was looking for.

By now, at 21, she had broadened her horizons beyond New England. And as a person with long-standing ideals about forests and the environment, she was beginning to see forestry as a practical and appealing field of study.

She came to OSU to check it out. Her first contact here was Forest Engineering professor Eldon Olsen, who made her feel thoroughly welcome.

She enrolled in the fall of 1995 and

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Community service: another side of real life

As Forestry students graduate and move into professional settings, they find no shortage of opportunities to stay active in the community.

Tash Shaheed, FM '95, spent a rainy Saturday in January working with 22 middle-school kids—also volunteers—to landscape two houses on Hope Loop, in north Eugene.

The St. Vincent de Paul Society, which owns the houses, is fixing them up for low-income housing. The society is rehabilitating the Hope Loop neighborhood as part of its transitional housing program, which helps to get homeless people into homes of their own.

Shaheed, who works for Weyerhaeuser's Cottage Grove timberlands division, came out with 22 other company employees, each of whom teamed with four or five young people. (Focus readers may remember meeting Shaheed in a Student Profile in the Spring '93 issue).

Shaheed planted trees with an all-girl group—an opportunity that allowed her to show the girls that a woman can be anything, even a forester. "I enjoy being a role model for girls who may be considering nontraditional careers," she says.

Like the Weyerhaeuser workers, the Cascade Middle School students are no strangers to the volunteer ethic. Community service is part of their school curriculum, says Lisa VanWinkle, communications program manager in Weyerhaeuser's Springfield office.

"And school officials said some of the Cascade students are clients of the (transitional-housing) program," says VanWinkle. "So this volunteer opportunity carried a special meaning to them."

Together, adults and children planted shrubs and trees, cut brush, and picked up litter at the two houses. They also pruned the garden beds at five adjacent duplexes.

The Hope Loop project was one of hundreds of grassroots community-service projects undertaken nationally by Weyerhaeuser employees through its WAVE (Weyerhaeuser Active Volunteer Employee) community service program. Employees work in teams to accomplish a volunteer job in their communities. The nonprofit organizations that administer the projects then become eligible for a company grant.

Hope Loop is part of a community-wide United Way initiative called YouthWorks. It's the first of four projects to which Weyerhaeuser employees will lend their time and talent this year. Because of their volunteer commitment, YouthWorks received a $2,000 grant from the company's foundation.

attended the Annual Ring, the College's get-acquainted picnic for new students, where she met several congenial classmates and upper-division students.

Meg found herself becoming close to people "whom I wouldn't necessarily encounter in everyday life apart from here." Not that every student thinks alike—far from it. "But we joke about our differences," says Meg, calling one another, with rough affection, "tree huggers" and "timber beasts." Students who seem "really different from one another," Meg says, "are working together."

Meg, who's majoring in Forest Management, is also in OSU's International Degree program, which calls for an additional 32 credit hours beyond those she earns for her major. It offers a second bachelor's degree in International Studies in conjunction with the primary degree.

Later this year, Meg will travel to South America on a six-month study trip. She will spend next fall and winter (spring and summer, down there) working with Hector Gonda, an Argentine silviculturist who is pursuing his doctorate at the College of Forestry. Meg and her mentor will be analyzing certain height and diameter measurements in young ponderosa pine plantations in Patagonia.

Meg expects to graduate in the spring of 1999. Her Argentine research experience, she says, will help her assess whether she'd like to pursue an academic life—a path she's been considering. International forestry is another tempting direction.

Whatever she chooses, Meg feels well prepared by her undergraduate education. "If you're going into the College of Forestry, you'll work hard. But the faculty make themselves available to us, and they are all enthusiastic about what they do. They are truly here for the student."

Continued on page 11
Partnering makes it a dance, not a disaster

A large construction project is a well-choreographed dance of highly trained professionals doing their jobs with competence, courtesy, and timely communication.

Maybe on another planet. In real life, a construction job can be a muddle of missed cues, misfires, miscommunication, and machine parts backordered till Christmas.

Project manager Mike Day, of the construction firm Lease Crutcher Lewis, knows a better way. It's called partnering—a formal, process of making sure everybody is dancing to the same tune and not stepping on their partners' toes.

"It's a way to establish a team rapport rather than taking an adversarial approach," says Day, who is managing the new Forestry Research Lab project. "Everyone agrees at the outset to work proactively to meet the challenges of the project. The beauty of partnering is that it's done on a mutual basis, interactively, with everyone's input."

The partnering effort for the Research Lab project began in early 1997 when people from the College of Forestry, the University, Lease Crutcher Lewis (the general contractor), and SRC Partnership (the architectural firm), got together to talk about it. That group established the project's mission statement.

A formal partnering workshop was held in December. The core team was joined by representatives from 17 subcontractors and the City of Corvallis.

At the all-day workshop, the partnering team adopted the mission statement and defined mutual goals for the project (e.g., "Highest quality product imaginable,"); "Establish trust among team,"); "Have Fun!"). They also developed a set of communication ground rules and a conflict-resolution procedure. Further meetings will be held regularly to monitor progress.

A partnering agreement doesn't magically ward off problems, says Day. What it does is offer a framework for resolving small misunderstandings and contentions that might otherwise result in low-quality work or costly delays, or even end up in court.

The partnering model has been highly successful on several of the firm's previous projects. 'We've had no unresolved disputes, no litigation, no outstanding claims, no delays—not nothing that threw the project off schedule or budget or affected the quality of the job.'

Having a partnering agreement for the Research Lab job has already paid off, Day says, in creative juggling of subcontractors' schedules. 'We had our share of challenges from early wet weather. Because we'd established good communication with our subs at the outset, we were able to stay on schedule by resequencing some phases of work.' And in the process, subcontractors made helpful, money-saving suggestions.

Having the partnering agreement makes it easier to relax and enjoy the project. 'After all, one of our goals is 'Have fun,' says Day. 'Partnering reminds everybody that we have a life beyond work.'
A mound of a different color. A lot of concrete has been poured up, down, and sideways, and now walls and roofs are going on. Construction on the new Laboratory is right on schedule. The office wing, the one heading west out of Peavy Hall, is now roofed, and the laboratory wing, to the south of Peavy, is close behind. The interior work will begin soon.
Making an impression. Folks at the College of Forestry getting their hands dirty.
We wrote a management plan for 50 acres in the Coast Range.

Rebecca Schoonover, raised in Connecticut, was looking for "some place warm" when she landed in Corvallis in the fall of 1995.

Well—Corvallis is warmer than New England. In the winter, anyway. "I was born in Texas," Rebecca explains, "and I never got used to the snow."

Educated at a Massachusetts girls' boarding school, Rebecca, 21, was unsure of her direction when she graduated in 1995. She loved riding horses, she liked plants, and she enjoyed being outdoors. "I decided to study horticulture," she says. "I didn't know about OSU at all, but I thought Oregon would be a good place to live."

She called the University of Oregon and asked about their horticulture program. "They said, 'What horticulture program?' and they steered me up here."

Rebecca got in touch with OSU, studied the University's program brochures, discovered the College of Forestry, and decided that was what she really wanted.

A Forest Management major, Rebecca has found surveying to be her particular vocation. She really likes the work—the precision of it, the satisfaction of clarifying boundaries, and, of course, the opportunity to be outdoors.

Last summer she interned with a civil engineering firm in Massachusetts as a "slave girl," as she puts it, on a survey crew that was platting a housing development. Being the youngest and least experienced, "I got to carry all the gear." Still, "they did let me do some real surveying."

After she graduates next spring, Rebecca would like to work toward her professional land surveyor's license. To do that, she'll have to work for a licensed surveyor for four years and then pass an exam.

Rebecca has gained another dimension of real-life experience in a team project for her forest mensuration class.

"We wrote a management plan for 50 acres in the Coast Range, in the Siuslaw National Forest," she says. "We were assigned this make-believe owner from New Jersey. He was supposed to be concerned about the environment, but he also wanted to make some money from his old-growth timber."

Rebecca and her two partners went down and cruised the parcel—in reality a tract near Marys Peak. They developed a plan that outlined three options: clearcutting (which they didn't recommend), selling the parcel with no harvest, and patch cutting (two- and five-acre patches) and then retaining the parcel. The team got good practice in working out the economic and environmental tradeoffs associated with each option.

Rebecca enjoyed the assignment, especially the teamwork—an important aspect of real-life forestry careers.

That project and all of her College experiences, she says, have told her that she's found the warm place she was looking for.
Even when she was very young, Tina Stahlstedt loved the out-of-doors and had a fierce desire to protect it from careless ruin. “I wanted to catch all the litterers,” she says, “and make them pick up all their trash.”

She was raised in Greenwich, Connecticut by a single mother, a Finnish immigrant. Tina spent four summers in early childhood with her mother’s family in Keuruu and Jyvaskyla, Finland, a region of forests and lakes. She spent the long Scandinavian summer nights exploring the woods with her cousins.

Educated at private schools, Tina entertained a brief ambition to become an astronaut, but ended up at Occidental College in California, studying anthropology. “I had an affinity for languages and ancient dead things,” she says. To augment her rough fluency in Finnish, Tina studied Latin, French, Italian, and Russian.

She enjoyed her anthropology classes, “but I never really wanted to do [anthropology] as a job. I actually had no idea what I wanted to do as a job.”

After she graduated from Occidental, she moved south and went to work at San Diego’s Lindbergh Field, pumping aviation fuel. It wasn’t long before she was ready to move on. “Nothing like fueling airplanes to make you want to get back to school,” she says wryly.

Then a friend from college told Tina she was going to enroll at the University of Oregon. She needed a roommate: did Tina want to come along? In Eugene, Tina found herself embroiled in the kinds of environmental discussions that used to raise her childhood passions. Her environmental consciousness was awakened again, along with an appreciation for Oregon’s natural beauty.

Yet she was still not sure of her life’s direction. Working odd jobs (such as packing granola and washing UPS trucks) to support herself, she began taking science classes at Lane Community College in Eugene. There she learned about OSU’s Natural Resources degree program. She enrolled in the fall of 1996.

The Natural Resources program is intended to equip graduates for careers studying, evaluating, managing, or regulating natural resources. The program is deliberately flexible, so the student can choose from a wide variety of OSU courses that best fit with her talents and goals. Because Tina is drawn to communication and public relations, her program has a heavy emphasis on technical communication.

She got a chance to practice her communication skills last summer when she interned with the Blue Mountain Natural Resources Institute in La Grande, Oregon. The institute sponsors applied, interdisciplinary research and public communication on natural resource topics.

It took a fair amount of communication skill to get the job in the first place. “I pestered them for three months,” Tina says. “I told them, ‘I really want to work for you.’ There wasn’t any internship at the time, but eventually they created one for me.”

Tina wrote and produced interpretive materials for BMNRI, including a pam-
learned as much about life as I did about forestry."

John Waterman’s student internship took him to Brazil last summer to study forest fragmentation in the subtropical hardwood forests near Sao Paulo. John’s mentor, a Brazilian biologist was looking at whether agricultural development—the clearing of the forest for coffee, banana, and guava plantations, begun around the turn of the century—was pushing native tree species toward extinction.

John sampled young trees of more than 1,000 hardwood species, themselves a small fraction of the huge diversity of plant life in the Brazilian subtropical rain forest. Many of these species had never been formally identified or catalogued. John and the biologist, Efraim Rodrigues, compared their samples to others preserved in an herbarium. Some had to be sent out to experts for identification. “It’s not like here,” he says, “where you can just take a book and key it out.”

The internship (unpaid, but OSU’s International Programs office covered the plane fare) was the highlight of a three-month sojourn in Brazil. John spent the last few weeks of the summer traveling up the Amazon by boat, alone, marveling at the splendors of plant and animal life, struggling to communicate in his minimal Portuguese. “I learned as much about life as I did about forestry,” he says with a smile.

John started out a computer science major at Indiana University. Raised in Fort Wayne, second son of a lawyer father and a teacher mother, John, now 26, experienced what he calls “a lifestyle change” at the end of his sophomore year. “I just decided I didn’t want to sit in an office all day,” he says. “I decided to look into forestry.” He checked out college catalogues at the university library, “and I found that Oregon State was pretty much the top school.”

This past winter John graduated with a degree in Forest Management. Next fall he’ll enter a master’s program at the University of Montana in landscape ecology and forest planning. He would have liked to stay in Oregon, “but I wanted to experience the people, ideas, and ecosystem of a different region.” He hopes eventually to work for the Forest Service or another natural resource agency, or as a private forestry consultant.

“Like a lot of people,” he says. “I got into forestry so I could work outdoors.” He understands now that a lot of good forestry takes place in an office, at a computer. But that’s okay, too. “With my schooling here at OSU and a graduate degree,” he says, “I hope to get into a position where I can really be involved in how the land is managed.”
More than a job ticket

A college education should build citizens, says Pam Henderson

If she hadn’t gone to college, Pam Henderson knows, her life would be much the poorer. "Those were critical years of growth for me. I became much more mature, focused, and self-confident. My education equipped me to become a citizen, not just a worker, and I am forever grateful for that."

Her education is all the more precious to her because she had to struggle for it. Girls from working-class families in economically depressed Scotland of the 1950s were not encouraged to go to college.

"My parents took great pride in practical learning," she says. "But they had no experience with college—college was only for the rich. My parents expected me to finish school at 16, go to work, and then get married and have babies."

Henderson, 53, grew up in Leven, a town of about 10,000 on Scotland’s North Sea coast, where her father was a coal miner. Hard-hit by the war, Britain did not experience America’s postwar prosperity, and there were few luxuries in young Pam’s life. "Self-sufficiency was a great virtue," she says. "We all knitted, sewed, baked, raised vegetables."

A bookish child ("I loved to read the encyclopedias at the library"), she enjoyed school and did well. When, at 12, she faced the choice of academic versus trade school, the school’s headmaster pushed her toward the academic track. "He told my mother, 'You can’t send her to trade school; she’s too bright.'"

Over her mother’s reluctant assent, she enrolled in the academic high school...
Approachable. Pam Henderson tries to treat every student with warmth and respect. Above, Henderson and Student Services specialist Connie Patterson.

and thrived there, acting in plays, winning poetry prizes, and finally being elected school captain, or student body president.

College, once a distant fantasy, now seemed within reach. There were grants available—you didn’t have to be rich any more. One of her teachers arranged a visit to the University of Edinburgh, and she walked her pupil through the grant-application paperwork.

Henderson passed the exam to enter the optional final-year college prep course. Her parents were angry. “Why do you need college?” they kept asking me. “What do people do there?” And I couldn’t tell them. I couldn’t say, ‘I’m going to college to become a... something.’ I only knew I loved learning.”

When the family finally realized she wasn’t going to finish school and get a job, “it all exploded,” says Henderson. “I left for Edinburgh and didn’t come home for two years.” She eventually reconciled with her family, but “it was very difficult to go against their wishes.”

Being at Edinburgh was a thoroughly broadening experience. The university was a cosmopolitan place, intellectually challenging, diverse in cultural influences. Unlike the town of Leven, it had a crowd of rich, sophisticated young people.

The professors, in the European tradition, were unapproachable. “They were God Almighty,” says Henderson. “You never asked them anything—you just wrote down everything they said, like parrots. They would tell us the first day, ‘By next year half of you will no longer be here.’ It was a lesson in intimidation.”

Graduating with a degree in modern languages, Henderson went to work at the head offices of the multinational corporation Unilever (parent of the American company Lever Bros.) as a junior executive in an international department.

Her work took her to Ghana, Nigeria, Zaire, Mexico, and other countries, as her team developed budgets and five-year plans for company-owned factories.

She worked at Unilever for six years, living in London with two other single women and enjoying her life. Then she met and married Allen Wasserman, a physics professor from OSU who was on sabbatical in London. Henderson settled with her husband in Corvallis, where he is still on the faculty.

She was hired at the College of Forestry in 1974 to develop and manage its growing Continuing Education program. By 1981 she was coordinating 20 to 25 conferences a year. Then she was tapped to manage student services when professor and student advisor Bill Wheeler retired.

She was at the student-services helm during the rough years of the early 1980s, when the recession hit and enrollment plunged. Henderson worked with John Beuter, then Associate Dean, to develop an active recruiting campaign, an effort that continues today.

Forestry jobs were also scarce during those years. “For a time there was hardly a summer job to be had,” she says. “I made many trips to companies and agencies and persuaded them to keep their student internships open.”

Today the College of Forestry actively maintains employment ties with companies and agencies, and most Forestry students find summer jobs through Henderson’s office.

In her work with students, Henderson is guided by two deep convictions: that a college education is valuable for its own sake, and that students ought to be welcomed into it.

In other words, she wants her students to be treated better than she was. Her job is to guide students through the process of becoming an educated person, treating them with warmth, civility, and respect. “This is very different from what I experienced. It shouldn’t be simply survival of the fittest. We try to reach out to students, to make them feel wanted.”
There's not a soul in the industry who would deny that reinforced composites are their future.

The headlines have a certain breathless quality: “Technological breakthrough” “Glulam gets new layers, new strength, and new uses” “Fiber reclaims wood beam market.” Then there are the awards: three in two years, one considered the Nobel Prize of the construction industry. All this fuss is about a building material five times stronger than steel, made of knotty second-growth two-by-fours and recycled plastic soda bottles.

Dan Tingley '97 reacts to the accolades with a mixture of satisfaction and bemusement. It may look as if his invention burst upon the engineered-wood scene overnight. Tingley knows better.

His “new” technology, manufactured under the trade name FiRP Glulam, is the reward for 15 years of hard and often unrewarding work. “I was tempted to give up many times,” he says, “but I didn’t. And that was the key.”

A “regular guy” from the town of Lower Cape in the Canadian province of New Brunswick, Tingley, 43, grew up the middle child in a middle-class family. “Dad was a traveling salesman and Mum was a stay-at-home mum,” he says, a trace of eastern Canada still clinging to his vowels. “There was no silver spoon. And I’m not a genius. But my mum taught me the value of persistence.”

He believes his beams represent a revolution in building materials equal to plywood. The beams are more than twice as strong as solid-sawn beams or conventional glulams, and they are 30 percent lighter in weight, making them cheaper to transport and easier to build with. And they cost about 25 percent less, making them competitive with precast concrete and steel—a $10-billion-a-year market. “There’s not a soul in the (wood products) industry today,” says Tingley, “who would deny that reinforced composites are their future.”

Glulam technology is not new. The idea of sandwiching pieces of lumber together to make large structural beams began to be developed back in the early 1940s. But like solid-sawn beams, conventional glulams were and are more expensive than steel or concrete. “In the 1970s,” says Tingley, who then ran a one-man engineering firm specializing in
Stronger, cheaper, lighter, and just as beautiful. Above, FiRP Glulams at the Valley Football Center at OSU's Parker Stadium. Left, after 15 years of hard work, Dan Tingley (those are his awards in front of him) has something to smile about.

glulam design, "there were 20 producers of glulam in Canada. Over a few years that dropped to four. I realized the industry was dying. Steel and concrete had taken away the market."

Tingley decided to do something about it. "I like wood—I've always liked wood; I think it's a superior material. I felt the technology could be improved to make the beams economical."

Conventional glulams are a simple sandwich of wood and glue. The strength of the wood is what determines the beam's load-bearing capacity—the glue does not add stiffness or strength in and of itself.

Tingley tried strengthening the beams by laying structural materials in between the pieces of lumber. He started with steel piano wire and moved on to carbon fiber, fiberglass-reinforced plastic, and aramid, a very lightweight, high-strength, petroleum-based material (marketed as Kevlar, it's used in bulletproof vests). He tried gluing these materials between the boards in various quantities and orientation patterns, embedding the structural materials in a plastic matrix.

He tried numerous combinations of fiber, plastic, glue, and embedding technique. "I had a lot of false starts and dead ends," he says. Finally he determined that orienting most of the reinforcing fibers in a parallel pattern worked best. He juggled the formulation of the matrix, experimenting until he got a plastic that would stick to the wood with conventional wood glues. The plastic from recycled soda-pop bottles is one of the types that will work.

In 1991 he got his long-sought break when he approached Marshall Turner, then president of Western Wood Structures in Tualatin. Turner introduced Tingley to Bill Walters, then general manager of Weyerhaeuser's Cottage Grove glulam plant, and Walters steered him to Pete Martini of American Laminitors in Drain, OR. Martini and his firm agreed to invest the first $100,000. The company followed up with several more millions, and other companies soon came to the party. Tingley finally had the capital he needed.

Tingley moved to Corvallis in 1992 and began his doctoral program, perfecting the technology under the guidance of professors Bob Leichti of Forest Products and John Peterson (now emeritus) of Engineering.

The team performed exhaustive tests—more than ever had been done for regular laminated beams. They developed the design standards by which the new material could be approved in U.S. and foreign building codes. Tingley was awarded his first patent in 1994—he now owns nine and expects to acquire another 15 in the United States alone. Code approval came in 1995. FiRP Glulam was headed for the market.

"The past five years," says Tingley, with a dry Canadian understatement, "have been very eventful." Four companies are now manufacturing FiRP Glulams under a license with Tingley's for-profit company, Wood Science and Technology Institute (WSTI), and six others are negotiating for licenses. The company gets a royalty for every beam that comes off the line.

FiRP Glulams are now in service in hundreds of bridges and several buildings in the United States and other countries—about $1 billion worth of infrastructure all told, including the newly remodeled Valley Football Center at OSU's Parker Stadium.

All this commercial success, says Tingley, promises to repay him amply—and rightfully—for his years of hard work. He expects to have the upfront expenses paid off by the year 2000. "After that," he says, "I hope to realize a significant return."

Not bad for a "regular guy" from a small town who bootstrapped his way to success, exemplifying the American myth of the triumph of hard work and persistence. "I truly believe," he says, "that the average young person has the same opportunity that I had."
Kudos to faculty and staff

A lifetime achievement award from the Western Forestry and Conservation Association was presented to Bill Atkinson, emeritus professor and former head of the Forest Engineering Department. Atkinson was president of WFCA in 1992. He was recognized for "a lifetime of promoting the science and practice of forestry for the sustainable production of good, services, and uses of forest resources." He retired from OSU in 1995 after a career that also included positions at the University of Washington and Crown Zellerbach.

Mike Newton, professor in the Forest Science department, received the 1998 Barrington Moore Award from the Society of American Foresters. The highly competitive national award is made annually to one person for biological research in forestry. Newton will accept the award at the annual SAF convention in Michigan in September.

One of the earliest Forestry continuing education workshops was offered for the 50th time this April, and its long-time instructor was surprised with a "birthday" cake and a round of applause. John F. "Johnny" Bell, emeritus Forestry professor, taught the first variable probability sampling workshop held in Corvallis in 1957 (the course was pioneered in the same year at Pringle Falls near Bend), and he's taught every one since then. The course reached the 50 mark in 41 years because it was offered twice in some years.

Bell became director of the course at OSU in 1959. He has given similar workshops in six U.S. states, British Columbia, and Australia. He retired from OSU in 1985.

The variable probability workshop was organized by J. R. "Dick" Dilworth, the first head of the Forest Science Department. Over the years, a group of experts have helped Bell teach it, including the late Lu Alexander (Forestry class of '40), Norm Marsh, Kim Iles ('69 and '74), and David Marshall ('79, '81, and '91). Over 2,000 students have taken the course.

Richard Recker, development director for the Sustainable Forestry Partnership, received a 1998 "Founders of the New Northwest" award from the Northwest Regional Council of the President's Council on Sustainable Development. The award honors Recker and other OSU faculty for their contributions to the scholarship and application of sustainable forestry principles in Oregon and beyond. The Sustainable Forestry Partnership is a research and outreach-education initiative headquartered at the College of Forestry. It promotes innovative approaches to the practice and teaching of sustainable forestry.

New faculty

Barbara Schrader, who recently earned her doctorate in the Forest Science department, has been hired as assistant professor of forestry and natural re-
sources. She will instruct three Forestry core courses and serve as head advisor for undergraduate students in the Natural Resources program. Schrader received her bachelor’s in wildlife resources at the University of Idaho and her master’s in ecosystem analysis at the University of Washington.

In memoriam

Charles S. Lewis ’42 died in February at his home in Independence, OR. He was 78.

He was born in Columbus, OH, in 1919. He attended Ohio State University and Oregon State College, graduating from OSC in 1942. He served with the U.S. Marine Corps in the Pacific during the second World War.

He married Lila Lee Larch in 1945 and went to work for the State Board of Forestry as an inspector in 1946. He worked in a variety of forest-related positions for private companies until 1966, when he returned to the OSU School of Forestry for a master’s degree. He taught classes while working on his degree, and in 1966 and 1967 he won the Aufderheide Award, a student-designated honor for excellence in teaching.

After completing his degree in 1971, he started a forestry consulting business and began publishing a quarterly market report, Wood Fibre Northwest. He sold the publication in 1994 but continued consulting on a part-time basis.

He was an active Rotarian and a member of the Masons, the Society of American Foresters, and the Presbyterian Church.

Lewis is survived by his wife, Lila, son Kirk Lewis of Independence, daughters Molly Albrecht and Beverly Thomas, both of Corvallis, and Charlotte Chrisman of Bonners Ferry, Idaho; and five grandchildren.

Fernhopper alert!

It’s time to reserve YOUR place at the 66th Annual FERNHOPPER DAY celebration and alumni gathering on Saturday, May 16, 1998. Don’t miss it!

• Gather at CH2M Hill Alumni Center
• Tour research sites on the Forest
• Eat lunch at Forestry Club Cabin
• Watch student logging sports demo
• Enjoy a buffet dinner at Alumni Center

All Fernhoppers should have received an invitation and registration card. Send yours back now!

If you didn’t get one, call Laurie Brendle to reserve your place.
Call 800-897-2832 or 541-737-2034. Or send an e-mail to brendlel@ccmail.orst.edu.
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