FOCUS

Spring 2014

THE MAGAZINE OF OSU COLLEGE OF FORESTRY

Carving an Abundant Future

COF scientists, the US Forest Service and Alaska Native tribes are working together to improve populations of key cedar species

Oregon State UNIVERSITY

Dean's Column

Increasing global population and concern for sustainability has brought the world's attention back to forests as a source of environmentally friendly and sustainable products as well as a healthy refuge for life on earth. Just like our students, our alumni, and our collaborative partners, to remain the best, the College of Forestry will need to succeed in a future that is very different from our past.

The key to our success is the success of our students. We are growing the next-generation leadership and practitioners who will assess and seek solutions for our complex forestry and natural resources issues. We have recommitted ourselves to focus on our students' experiences while they're here and when they go out into the workforce.

In order to make that happen, we are changing the face of the college itself, with our newest initiative to completely renovate Peavy Hall. Students and faculty will benefit from dynamic, up to date laboratories, advanced technological infrastructure, and collaborative learning spaces. The renovation of Peavy Hall will also provide an once-in-a-lifetime opportunity to demonstrate the sustainability and beauty of engineered wood construction, showcasing innovative uses of wood in building design.

At the same time, we are building partnerships with local, regional and international partners to provide the hands-on experience students need. One of the keys to revitalizing the forest sector in Oregon is to dramatically increase the competitiveness of Oregon's manufactured wood products, with new products that better match our forests and strong environmental values. In addition to the Peavy Hall renovation, we are also looking to build the new Oregon State Advanced Wood Products Manufacturing and Design Center, which would house research, education and training programs focused on design, engineering, and manufacturing of engineered wood building components.

Growth and energy are in the air as spring approaches. I hope you can feel it like I do every time I see a student researcher discover a new way of looking at a seedling, or teaching elementary school visitors about how wood affects their daily lives. The groundwork is laid for a truly transformational College of Forestry. With your help, we're committed to keep the momentum going.

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FOCUS

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The Raven pole, carved by TJ and Joe Young, Haida carvers. Sealaska Heritage Institute, courtesy of Sealaska Corporation. Photo by Todd Antioquia ©2013

Attention Job Seekers and Employers!

The Student Services Office offers an employment site where alumni can find job announcements and employers can advertise their open positions.
See what's available at jobs.forestry.oregonstate.edu
Or call 541-737-1594 to advertise your open position(s).

Please note: Fall *Focus* 2013 cover photo was taken by Bryan Bernart.

College of Forestry and USFS researchers work together with Alaska Native tribal members to plant and protect redcedar and yellow-cedar seedlings near Lime Creek in southern Alaska.

Growing Cedar and Collaboration in Southeast Alaska

Research partnership aims for healthy landscapes, communities, & economies

by Bryan Bernart

In Alaska Native folklore, the Killer Whale creation story tells how Killer Whale was fashioned from a piece of cedar. For thousands of years, the significance of cedar has been passed on not only through oral tradition and legend of Tlingit, Haida and Tsimshian peoples, but also in art forms such as paddle carving, canoe building, and Chilkat blanket and cedar bark basket weaving, all of which rely on redcedar and yellow-cedar.

"Cedar also continues to play an important role in the rebuilding and renovation of traditional clan houses and modern cultural centers," says Brian Kleinhenz, Natural Resources Department Manager and Corporate Forester for Sealaska, a corporation owned and operated primarily by Alaska Natives. Additionally, cedar is still an economically important species for tribes in Southeast Alaska, with villages finding a rich contemporary market for Alaska Native art as well as sales of timber and lumber.

However, for the past few decades, yellow-cedar, also called "Alaska-cedar" (*Callitropsis nootkatensis*) has been in decline. Western redcedar (Thuja plicata) regenerates naturally with little difficulty, but each year, less and less yellow-cedar comes back. Researchers believe that browsing by deer and moose may be largely to blame. Sitka black-tailed deer seem to find planted cedar seedlings especially delicious, Kleinhenz explains, and can nearly eradicate cedar seedlings in localized areas. "From Sealaska's perspective, we want to see a larger component of redcedar and yellow-cedar on our lands, but relying on natural regeneration means that good success only comes with productive natural seed crop years."

In response to this issue, Sealaska began investigating active planting of the two species. Oregon State Professor Emeritus Mike Newton (FERM) and Liz Cole, Senior Faculty Research Assistant (FERM) were also conducting reforestation research in Southeast Alaska. For more than a decade, researchers from the College of Forestry and the USDA Forest Service PNW

Station had been working on deer forage studies in collaboration with Sealaska on natural regeneration and stand density, and with Klukwan, Inc., an Alaska native corporation, on stand density in the region. These projects provided enough experience for Newton and Cole to have a fair understanding of how to approach Alaskan environments for such studies. Over the years, they often talked about how to improve populations of the two cedar species. Newton explains, "I had some familiarity with redcedar, but none with yellow-cedar, and so became interested in how these two species might become contributors to the next generation of forests in Southeast Alaska."

Newton got in touch with Ron Wolfe, former Natural Resources Department Manager and Corporate Forester with Sealaska, and Sheila Spores, a silviculturist with the Forest Service, who organized a trip with her staff to a plantation of yellow-cedar north of Ketchikan that had been established in 1998 as part of a study. With all three parties talking together about cedar reforestation, the ball was rolling.

Oregon State scientists supported the cedar research for many reasons. Recent studies of yellow-cedar have suggested that, in addition to deer browse, decline may be linked to climate change, already a critical topic. Declining forests are found in lower elevations on poorly drained soils, and current thinking is that they are damaged by the lack of a persistent snow load in the winter to protect sensitive roots from freezing. Sealaska and the Forest Service were particularly interested in increasing the abundance of both species in the landscape and in "assisted migration" of yellow-cedar, which entails planting trees in areas where the tree may be able to establish, survive, and grow, but may have not migrated to on its own. Current guidance is to plant yellow-cedars at higher elevations and on better drained soils, Kleinhenz says. "Sealaska also recognized that given its past involvement in forest research issues in Southeast Alaska, Oregon State would be a natural partner to assist in the design and implementation of a robust investigation."

Responsibilities were split among collaborators. "The Forest Service took the lead on providing tree seed, procuring the tree seedlings, and shipping them to the study site, Prince of Wales Island," Spores explains. Sealaska covered the design and installation costs of the study and provided three sites for the research plots and the Forest Service provided two sites. The College of Forestry contributed to the study plan and oversaw the process of setting up the sites. Oregon State "can also help ensure that the work is statistically sound," explains Klaus Puettmann, Edmund Hayes Professor in Silviculture Alternatives in Forest Ecosystems & Society (FES) and key contributor to the project. "Our experience dealing with reforestation issues complements the project."

Goals for the study are somewhat different for each party. The project will contribute to the Forest Service's 30-year research effort on yellow-cedar decline; Oregon State researchers want to expand their knowledge of reforestation, especially in other climates; and Sealaska has multiple aims.

> *"Cedar is a very important cultural species, and we want the next generation to have the same opportunities for cultural activity that this generation has had."*
>
> Brian Kleinhenz, Sealaska

Sealaska Corporation

Shaadoo'tlaa (Lorene Hanlon) preparing to pull bark from a cedar tree. First tree, 2012. Sealaska Heritage Institute.

"The reason we're so interested in cedar research and planting is that we want to be able to provide cedar trees for tribal member shareholders in the future," Kleinhenz explains. "It's a very important cultural species, and we want the next generation to have the same opportunities for cultural activity that this generation has had." Because cedar also provides habitat for wildlife, preserving the species allows for hunting opportunities as well—another cultural touchstone for Alaska Natives.

Test-planting different size seedlings, like these redcedar (left) and yellow-cedar (right), is key to discovering which will grow best yet still be cost effective.

With these objectives in mind, Spores, Wolfe, Newton, and their respective colleagues put together a study plan. Seedlings from both species, at three different ages, averaging 10-34 inches tall, were ordered several years ahead of the first planting so that they would all be ready in the spring of 2013. The different sizes and ages will provide information that may help answer a variety of questions. Older seedlings tend to be larger, but they cost more and can be more difficult to plant. Researchers are testing whether the larger seedlings will better tolerate being browsed by deer and whether they handle competition from other vegetation better than smaller seedlings. They are also examining the survival of the different types to see which seedlings will be the most cost effective and have the best ability to contribute to future stands.

A team of people from the Forest Service and Oregon State arrived at the sites ahead of the planters to install the study plots. The seedlings had to be counted out and placed, by species, in the correct rows for the Sealaska planting crew. Pin flags were also set out for the planters to place next to the seedlings. After planting, the seedlings were

One treatment being tested with yellow-cedar seedlings to prevent deer browse is tubing (left, at the Natzuhini site), compared with other seedlings (right, at the Steelhead Creek site).

given a tag and measured. A retired Forest Service volunteer prepared the tags and helped transfer the seedlings to the sites. Student interns from Sealaska helped with tagging, taking photos, and other tasks.

More than 5200 seedlings were planted and measured in May and June of last year, and the planting conditions (soil or organic material) were noted. Seedlings received one of three treatments meant to prevent deer browse or no treatment at all, which served as the control. Treatments included Plantskydd® Deer Repellant, plastic protective tubing meant to physically prevent deer from eating the seedlings, and a delayed planting, in which seedlings were planted later in the spring—when there would be more vegetation available from non-cedar sources, which could prevent cedar from being over-browsed. Aside from deer browse, other challenges facing the cedar plantings included overtopping by salmonberry and western hemlock and the potential for heavy snowfalls to crush the new seedlings. In total, the study comprises five sites, each containing three 150- by 360-foot plots. Seedlings will be re-measured in the spring of 2014 for survival and first-year growth and damage. The study will continue through year 5 or until the cooperators have come to a conclusion about what works best.

Kleinhenz hopes that the study will yield information about the level of effort and investment required to grow cedar seedlings to maturity. "If successful, the study will result in a greatly increased amount of redcedar and yellow-cedar planting in the region," he explains. "In addition, land managers will be able to assist the migration of yellow-cedar into more suitable locations, the goal of which is to mitigate current yellow-cedar decline."

Spores notes that the Tongass Land Management plan encourages the Forest Service to "consider regenerating and maintaining a mix of dominant overstory tree species, where appropriate, for the site, to provide for the diversity of future stands," which fits within the project's aims. The Forest Service would also like to continue managing the forests in a way that compensates for habitat range shift in yellow-cedar.

Puettmann sees the study at various levels. "In terms of management, I hope the Forest Service and Sealaska will be able to reforest with redcedar and yellow-cedar, keeping these species in the landscape for social, ecological, and economic reasons," he says. "I also see this project as a great opportunity to create more linkages between different parties and expand the playing field of our college."

The College of Forestry has not historically had a very strong relationship with Alaska Native tribes (although there have been some linkages with more local tribes), and Puettmann sees this project as perhaps a good way to begin changing that. "One of Sealaska's student interns, a tribal member, came down to Oregon State and toured the college, and he saw it as a good place to potentially come and study," Puettmann says. "I think having these connections helps put OSU on the radar screen and I like to think that down the line, we make it easier for people from different cultures to come to OSU. We may now have something to offer that fits their needs better than what we had before."

Finally, the project is also providing educational opportunities for local communities, Kleinhenz adds. Sealaska has built a trail through the plot closest to town to provide access and has produced a video about the project (available at www.sealaska.com/object/io_1343244818175.html).

Overall, Puettmann is perhaps most impressed by the way that people from the three diverse entities have worked together on the cedar project. "I'm pleased with the quality and enthusiasm of everyone involved," he says. "Despite having different management objectives, it's very clear that the different parties are aligned, and see this as a common challenge."

For regular updates on the project, follow www.sealaska.com/page/news.html

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TJ and Joe Young, originally of Hydaburg, Alaska. The Haida carvers are working on two totems for Juneau's Gajaa Hit Building, through Sealaska Heritage Institute. In this photo they are working on the Raven pole. Follow their progress at http://juneauempire.com/art/2013-08-29/young-brothers-begin-work-downtown-totem-pole

Making Wood Magic

In its second decade, the elementary education program is more vital than ever

by Bryan Bernart

Trees and wood are essential resources, but many young people know little about them. Oregon Wood Magic is an innovative, hands-on, educational experience designed to help young students explore some of the "magical" aspects of trees and wood, a renewable material, and to encourage them to think about resource issues.

The program, held annually at the College of Forestry since 1999, recently expanded to Portland, where the next session will be held at the World Forestry Center in April 2014. It has educated thousands of Oregon 3rd and 4th graders about wood by having members of the Wood Science & Engineering (WSE) Department interact with elementary school children. Students and their teachers visit a series of nine stations that cover aspects of science and technology relative to wood and wood products. The stations are designed to be fun, visually stimulating, and interactive—and each station is connected to a series of lesson plans. The goal is not only to help students learn more about why trees and wood are so important to us, but to also introduce students to the possibility of careers related to forestry or wood products.

Oregon Wood Magic relies on volunteers from the College of Forestry to help the program run smoothly each year; faculty, staff, and students participate as instructors and guides. Greeley Beck, a second-year graduate student in WSE, gives us an inside look at what it's like volunteering with the dynamic program and what was new this year:

FF: You're a seasoned volunteer now. How were things different this time?

GB: Last year, I walked with the kids to the different stations, but this year, I got to actually run one of them! For my station, "Daily Wood," we switched things up a little. Joey Hulbert [also a second-year graduate student in WSE] and I met with Scott Leavengood [Director of the Oregon Wood Innovation Center] a week beforehand and talked about how we could make our station more interactive. The students come to us directly from the "Dr. Fire" station—which is almost inherently exciting [*laughs*]. Then at our station, we'd usually just give a talk about the ways you could find wood in your daily life. So we wanted to improve on that.

FF: What kinds of ideas did you have for improving it?

GB: Well, usually, at our station, we'd ask a lot of questions to try to get kids involved, but we found they weren't really taking ownership of the material. So we decided we would revamp it this year. When the kids came in, we immediately split them into teams. Then they'd come up, three at a time, to a table with objects that are either made from wood or wood composites—or they aren't [smiles].

The kids then decide whether they think the objects came from wood or not and sort them appropriately. After that, we talk about what the objects are and what they're made of, and of course, let them know which team made the best guesses. Overall, I believe the kids really enjoyed this year's activities a lot.

FF: Did making it a competition help?

GB: Yes, definitely. As soon as you do that, they get really excited. At first, we thought we'd need prizes or something for the winning team, but it wasn't necessary. As long as someone can "win," you're covered [*laughs*].

FF: What were the kids most interested in?

GB: The kids were interested in the tricky stuff. Sometimes they think that honey, one of our objects, comes from trees because they see it like that in cartoons. But then we get to explain, "No, it actually comes from bees." The baseball, also—they're impressed when they get to see a whole baseball next to one that's been cut in half, revealing the wood inside.

FF: Now that you've worked extensively with children in the program, in which ways do you believe Wood Magic is most valuable as a learning tool?

Forestry grad student Greeley Beck introduces Wood Magic students to the wood products in their daily lives, from wood pellets for biomass fuel energy to everyday foods in the cupboard. Photos by Bryan Bernart.

GB: I think it's definitely important—especially in a place like Oregon, where issues surrounding wood can be really polarizing—to enable kids to learn in a friendly, educational environment. I think it's good to talk to kids when they're young about all of the things we use wood for. It makes sense to give them a knowledge base early on, especially in terms of sustainable forest management, since it's an important issue statewide. I like that we get to show kids that we not only cut forests down, but also grow them back, and the ones we do cut down, we turn into a huge number of useful things. I know also that there are actually kids who've attended Wood Magic and have later gone on to be College of Forestry students, which is very encouraging.

FF: Did the kids say anything this year that surprised you?

GB: Actually, they did. As I was explaining the traits of each individual object, I learned that some of the kids knew things I wouldn't have expected them to. For instance, we had a little piece of a wood composite that's used in decking, and I held it up and asked "Does anyone have any ideas about where this may have come from?" There was one group where a kid yelled "It's part of a deck!" and I was completely stunned. It wasn't even a guess—he knew exactly where it came from and what it was. I'm not from this state, but I can now say that Oregon children can sure be knowledgeable about wood composites!

For more about Oregon Wood Magic, visit woodscience.oregonstate.edu/wood-magic

Going International

In search of knowledge and cultural understanding in Japan and Scandinavia

Students from OSU and other Oregon universities came together to learn about sustainable forestry and housing design across Scandinavia. Here, the group visits a forest in Finland.

by Bryan Bernart

More than a decade after completing his doctorate in forest resources at the College of Forestry, Yoshitaka Kumagai, Director of Basic Education at Akita International University in Japan, contacted his former major professor, John Bliss, Associate Dean for Graduate and International Programs, about another potential project. Kumagai had received funding to create an exchange course involving students at Akita University and Oregon State University. Would Bliss be as interested in setting it up with him? "Of course I was!" says Bliss.

The course, "Resilient Rural Communities," was held for the first time in the spring of 2013, with a class of both Japanese and American students taught by faculty from Oregon State and Akita University. The students' project was to create a comparative case study between rural communities in the two very different cultural contexts, Bliss explains. "We did this by first spending three weeks in rural Oregon, talking with agriculture, forestry, and civic leaders, along with loggers and farmers. We then took the whole group to Japan in rural Akita Prefecture."

Japanese and American students worked well together, acting as translators in their respective countries, and demonstrating their commitment to teamwork and to better understanding the kinds of issues facing today's rural communities in a world that is becoming more urban and globally oriented by the day. "Quite frankly, I was very impressed by how well they rose to the occasion. I have worked primarily with graduate students in the past, and these kinds of courses can be tough even for them," says Bliss. "We forward to holding the course again soon."

Two months after the conclusion of Bliss and Kumagai's course—and literally on the other side of the world—two Oregon State faculty from the department of Wood Science & Engineering and a group of Oregon students were landing in Helsinki, Finland to begin a tour of Scandinavia. Eric Hansen, Professor of Forest Products Marketing, and Chris Knowles, Assistant Professor of Forest Products Marketing and Assistant Director of the Oregon Wood Innovation Center, were leading the next iteration of the study abroad course, "Insights from Scandinavia: Sustainable Housing Design."

The 2013 course differed from previous years in that it was open to students from throughout Oregon and from a variety of majors. Participants hailed from the Oregon Institute of Technology, Portland State, University of Oregon, and Oregon

State. "Just from OSU, we had interior design, renewable materials, natural resources, fisheries and wildlife, and forest management students all present," explains Hansen. "They all had different takes on what they saw, which meant that, by communicating amongst themselves, they were exposed to different information than they would have been were they all forestry students."

A new component of the Scandinavia trip this year was a visit to Denmark, where students were able to meet Peter Rathje, managing director of ProjectZero, an initiative aimed at making the city of Sønderborg emission-free by 2029 through improved energy efficiency, use of renewable energy sources, and sustainable urban growth. "Mr. Rathje hosted us for a whole day and even paid for the bus that took us around to visit rural communities in the area, which is really above and beyond what we expect from hosts," Hansen says. "One of the things we're most looking forward to, from the next Scandinavia course, is the chance to see ProjectZero again and have a similar tour in Copenhagen, in addition to the rural version." He smiles. "It's just too cool. We can't not take that opportunity."

The college will offer three international faculty-led programs in summer 2014 in Australia, Japan, and Spain. These are outstanding learning opportunities for students designed to help them acquire a global perspective on their Oregon State studies.

For more information, visit international-programs.forestry.oregonstate.edu

Branching Out

The Western Forestry Graduate Research Symposium—bigger, better, and more collaborative

By Bryan Bernart

On an otherwise quiet afternoon in November, students are pouring into a small lounge on the 2nd floor of Peavy Hall. At this first meeting of the 2013-14 College of Forestry Graduate Student Council (GSC), the hot topic is the 2014 Western Forestry Graduate Research Symposium: "Branching Out: Communicating Forest Research beyond Academics," coming up on April 21-22. Open to graduate students at Oregon State and beyond, attendance is free and open to the public.

"Last year, we had participants from the University of Washington, Montana, and Idaho," says GSC member Kate Marcille. "It was especially beneficial to be able to present our work to visitors because students from different places ask different questions, which inspires further critical thinking."

The 2013 symposium was also notable because of the collaboration within the college, as students from all three departments came together to share their research with outside colleagues as well as peers, advisors and other faculty. "That made last year's symposium an enormous success," says Council member Danielle Marias. "It was a prime opportunity for students to experience the environment they might find should they continue in the academic research community."

The Council has implemented other activities designed to foster collaboration and build community within the college, including an all-college winter social and the graduate-undergraduate mentoring program "Forest GUMP". Council members hope that by developing and working on these initiatives together, they can foster a legacy of collaboration that can be passed along to future students. As Marias says, "The more people help out, the more everyone becomes invested in our mutual work."

Martin Goebel

Visionary, Mediator, Alumnus

by Bryan Bernart

Bryan Bernart

"I was born and raised in Mexico by a Tillamook, Oregon mother," begins Martin Goebel '79, an internationally renowned environmental mediator with a ready smile. "My grandfather, John Edwards, had a small timber operation in Tillamook. There's still a creek, a road, and butte all named after him – I seem to have forestry in my blood."

He also remembers the green, natural landscapes around his childhood home on the southern edges of Mexico City—and how they disappeared almost overnight due to urbanization. "It really disturbed me that so much beautiful forest land disappeared so quickly," he says.

A naturalist during his childhood ("I used to run around collecting things"), he vowed to study something to do with the environment when he grew up. Goebel eventually found a degree path that involved forestry and the environment in what was then the Forest Management program at Oregon State. Following his graduation, he began a kind of "world tour" of forestry careers, working as a forester in Mexico and Germany before transitioning into international conservation, where he worked for the World Wildlife Fund and The Nature Conservancy and attended graduate school at Texas A&M.

When Goebel returned to Oregon in 1994, "there was this raging battle going on between the environmental community, the local community, the forest industry, and the government, all over multiple issues," he recalls. "The same general set of concerns pervaded eastern Oregon, just as in South America, where I had been working previously."

This realization sparked a fresh approach to problem-solving, which is embodied in Sustainable Northwest, the non-profit organization Goebel founded 20 years ago to tackle problems that arise at the intersection of communities, economies, and ecosystems. "It became obvious to me that if you don't solve three kinds of problems, you can't have sustainable environments, forests, or anything else," Goebel notes. These problems are (1) how to sustainably manage resources; (2) how to manage resources in a way that meets human needs, economically and otherwise; and (3) how to manage resources in a way that is supported by society.

The highly regarded organization initially struggled to gain trust and establish credibility. "In the early days, we had to invite ourselves in," he says. "I had to explain that I wanted to provide solutions in gridlocked situations, where no

progress was being made by any side of a conflict." This was particularly challenging in rural areas that had, in Goebel's words, "seen parades of NPOs come through town, mostly to alienate them and, in their perception, shut down the forest or cattle industry for the sake of the environment."

Once it became clear that Goebel and his growing team at Sustainable Northwest were providing meaningful solutions for multiple parties in any given disagreement, "the calls started coming in." Their job is to find ways to listen to people, and also to ensure they hear each other, Goebel explains. "Common ground exists, even if it's only this big," he says, forming the shape of a dime with his hands.

> *If you can't talk to and listen to people, you won't get very far.*
>
> Martin Goebel, 2013 Alumni Fellow

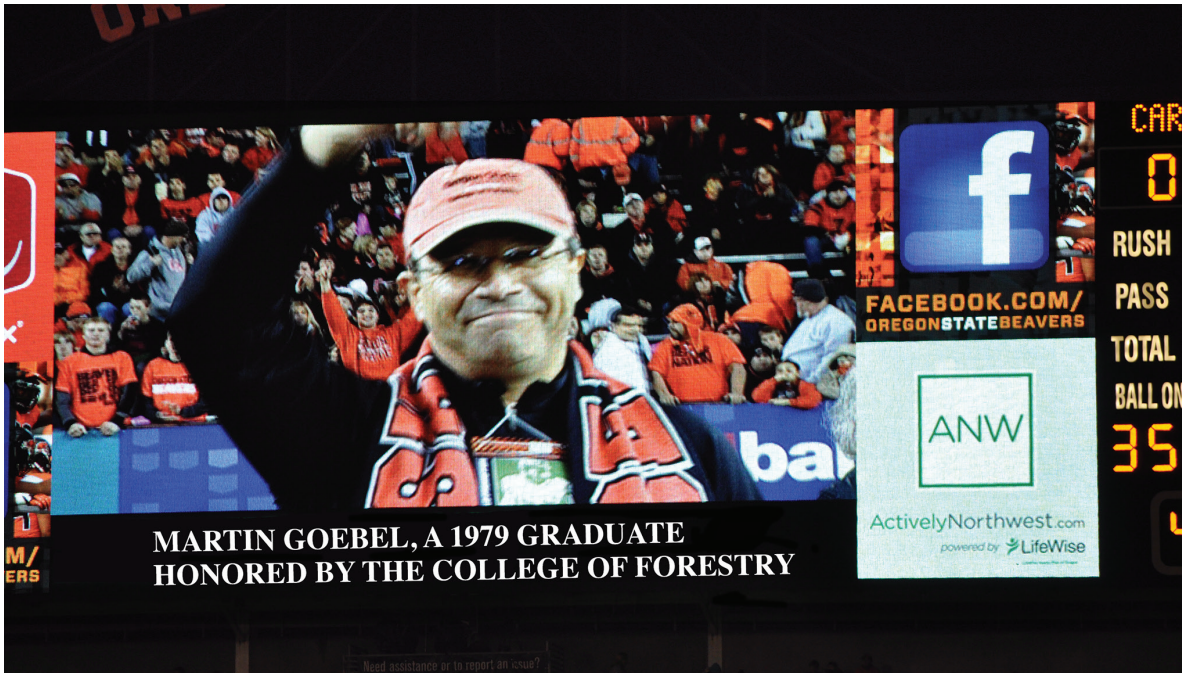
The organization is now part of a large "family of collaborators," a group of like-minded yet diverse NPOs that work together on topics including marketing and policy development. "An important part of collaboration is storytelling, and we work to relate 'good news' stories, especially to urban places, where people may not have deep knowledge of the environment," Goebel says. "There's still a wide perception that forestry is bad, as a generality—we are making progress to change that."

Goebel, who was honored as the 2013 College of Forestry Alumni Fellow during Oregon State's Homecoming in October, reflected on his own time as a forestry student during a visit to Peavy Hall. "I wish now that I had learned more about the social dimension of forestry," he says. "I learned the technical sides of resources management and forest management, but not how to talk to and listen to people. If you can't do that, you won't get very far, especially if your goal is to help them."

He believes that Dean Thomas Maness's focus on systems analysis, organizational development, and the study of institutions will be useful to today's graduates. Asked for advice for current students, Goebel says, "You should get experience outside of academia while you're still in school. With knowledge of how what you're learning relates to the real world, you'll know what questions to ask your professors. More experience can only benefit you."

As for his own future plans, Goebel has turned Sustainable Northwest over to his successor, John Audley, and is beginning a new venture, Moebius Partners, an environmentally centered organization dedicated to advising philanthropic groups.

CoF alumnus Martin Goebel was honored by the Oregon State University Alumni Association as a 2013 Alumni Fellow, and featured on the stadium Jumbotron during the Homecoming football game in Reser Stadium last October.



Woods Work

A myriad of research in The OSU College Forests

by Bryan Bernart

L-R: T. Fjeran, E. Dodson, G. Bracher

L-R: Treating Brachypodium sylvaticum *in McDonald-Dunn Research Forest; A bumblebee (*Bombus sp.*) in the act of pollinating a native lupine (*Lupinus sp.*); Typical road debris.*

The College Forests Research and Outreach Program funded three research proposals in 2013. This pilot program is designed to generate interest in the College Forests by reconnecting students and staff to McDonald-Dunn Research Forest. Below are brief descriptions of the projects, along with comments from the primary investigators and their teams, both about their research and regarding their experiences in and appreciation for "Mac-Dunn" Forest.

Treatment Options for Controlling the Spread of *Brachypodium sylvaticum:* Risks, Implementation, Effectiveness, and Impacts on Native Vegetation

"When it comes to the College Forests, we all know what a rich history of research exists out there," notes John Bailey, associate professor in Forest Engineering, Resources & Management (FERM). "I'm glad for the new Research and Outreach Program because it allows us to explore new territory in our field."

Why study *Brachypodium*? Taylor Fjeran, a master's student in Bailey's group, explains: "It has a nearly 100-year history in the area. USDA researchers studied it as a rangeland grass, and Mac-Dunn Forest was one of the first places it really took off." Bailey adds, "It's a monoculture that replaces native species. Its name, *sylvatica*, refers to its ability to grow in the forest."

Given that the grass may also be found in full sunlight, *Brachypodium* can tolerate a huge range of habitats, which enables it to out-compete many other species. Due to its prevalence and dominance within its ecosystem, Bailey and Fjeran are now conducting trials investigating different methods for its control.

They applied the first treatments in May 2013, which included herbicide followed by a burn — Bailey's specialty. "*Brachypodium* presents a very contiguous surface fuel loading issue, which is getting worse every year. Burning stands where that species grows allows us to study the way its presence influences the fire dynamic," says Bailey.

For now, the treatments are complete. Fjeran's next job is to analyze soil samples collected from the seed banks studied in order to understand their composition. As for Mac-Dunn Forest, Fjeran reiterates a point made by many researchers over the years: how its proximity to campus facilitates research. "I've gone out there between classes to gather data," she says with a smile. Additionally, she appreciates being able to set up plots near the common trails, the presence of which allow passers-by to catch a glimpse of her research. "Eventually, I want to put a sign up so people can better understand what we've been doing. Through our work, we can start a larger conversation about forest management."

Assessing the Consequences of Herbicide Use on Animal Pollinators in Early Seral Forests

In May, wildlife ecologists Jim Rivers and Matt Betts, research associate and associate professor,

respectively, in the Department of Forest Ecosystems & Society (FES) will be on the hunt. For insects, that is. "Roughly 90% of the world's flowering plant species are pollinated by animals," says Rivers. "Early seral habitats, forests that are just beginning to regenerate, are very attractive to pollinators due to the quantity of flowering plants found there. However, we don't know much about the ecosystem services provided by those species." The Betts Forest Landscape Ecology Lab group intends to change that, in part though research in Mac-Dunn Forest.

When a given site is harvested for trees, herbicide is often used in order to prevent maples and other hardwood species from overtaking the area, Rivers explains. "Without it, Douglas-fir can't compete with the other vegetation. Our proposal is to examine sites that have, in the past, been given different treatments, and based on those, infer which pollinators may exist there."

The group also intends to work across a range of ages. "We'll have some very recently harvested stands all the way to some that are 10 or 12 years post-harvest. We would like to study how the composition of pollinator populations differs across those ranges," Rivers says. He is looking forward to his first project in the Mac-Dunn forest, as well as to supervising undergraduates assisting in the research. "One of the objectives in our proposal was to include them—it's important to me to help prepare these students for graduate school by giving them a taste of actual research."

Improved Aggregate Management: Evaluating Factors in Extending Forest Road Lifespans

"It's a mouthful, isn't it?" jokes Ben Leshchinsky, an assistant professor in Forest Engineering, Resources & Management (FERM). Leshchinsky and Associate Professor Kevin Boston (FERM) are conducting the "Improved Aggregate Management" study, which in part examines the effect of leaf debris on vehicle traction on forest roads. Their proposal marked an intersection between the two faculty members' individual research goals and the goals of the College of Forestry. "Having adequate traction on forest roads is a priority for many parties," Leshchinsky says, "especially during the fall, when all the leaves have come down. When saturated, they form a kind of slippery film on the road surface that can be quite hazardous."

Boston and Leshchinsky's group intends to first sample the leaves on the forest floor for moisture content and then conduct trials in a lab environment using weights, before moving on to actual traction testing using vehicles. "We have the capability, using cameras mounted to a given truck, to measure how many spins a tire undergoes as a result of leaves reducing friction between the tire and the road," Leshchinsky explains. "From there, we may be able to say whether or not it's worth removing leaves from the road in order to increase safety."

Finally, although he doesn't make it to the woods as often as he'd like to, Leshchinsky notes that he has a personal as well as professional connection to Mac-Dunn forest. "Nothing can take your mind off all of your concerns better than walking through the forest. I love being there when it's silent and peaceful—and also when I'm conducting research."

The Right Trail

Also new in the College Forests is "The Right Trail," an extensive and user-friendly online guide to the trails of Benton County, created via a partnership among Benton County, the City of Corvallis, and Oregon State College Forests and coordinated by Greenbelt Land Trust. Greenbelt collected and organized information provided by the partners mentioned above, including GIS data, photos, and information about each trail, all of which is now accessible to casual outdoors-people and enthusiasts alike. It is funded by the Recreational Trails Program of the Outdoor Parks and Recreation Department.

Ryan Brown, the OSU College Forests recreation manager, is excited about the new website's capabilities. "We can regularly update the posted information to notify users of landslides, closures, and new trails we're building, like the Firehouse trail in the Cameron tract."

She is glad that the site offers options to filter trails based on a user's preferred activities. "For instance, I might think 'I have a dog—where can I go that's different?' or 'I really want a hike where I can take my 2-year-old and stroller,'" Brown explains. "It's easy to find a trail that's nearby and fits what you'd like to be doing outdoors. The Right Trail is a gateway for people to get outside."

www.therighttrail.org

Ryan Brown and the administrators of The Right Trail want to hear about your experiences using the trails in Benton County. If you'd like to share your story, contact her at ryan.brown@oregonstate.edu.

Forestry Students "Stump the Senator"

More than 75 CoF students had a rare chance to meet and talk with Oregon's senior senator, Ron Wyden, on January 21 in Peavy Hall. He commended the students for choosing to study forestry, saying that policy makers need their help learning about the science of forestry so they can make sound decisions. "I'm kind of envious," he told the students. "Forestry and recreation are big economic engines. In your careers, you'll find things you didn't even know you wanted to do."

Students peppered the senator with questions about his new forest management bill, ecological forest practices, future jobs, how students can affect policy decisions, climate change, the importance of tourism and recreation, and more. Sen. Wyden has represented Oregonians in the U.S. Senate since 1996, and was named Chair of the Senate Finance Committee in February.

John Sessions receives SAF National Award in Forest Science

The Society of American Foresters (SAF) recognized John Sessions, Forest Engineering, Resources & Management, for his outstanding contributions to the forestry profession during a ceremony at the 2013 SAF National Convention in Charleston, South Carolina in October 2013. Sessions received the SAF National Award in Forest Science, which recognizes distinguished individual research in any branch of the quantitative, managerial, and/or social sciences leading to the advancement of forestry.

For more than four decades, Sessions has devoted significant time and energy to forest engineering and management operations research and education. Through his work, Sessions has advanced the field of forest engineering through technical contributions in logging mechanics, forest road engineering, transportation planning, forest operations analysis, harvest scheduling, and forest economics. The results of his research have been published in every major journal in the field of forest engineering and, as a result of his expertise, Sessions was honored as the 24th Distinguished Professor of Oregon State University, the first recipient of the Stewart Chair in Forest Engineering, and the first recipient of the Strachan Chair of Forest Operations Management. Currently, he is lead OSU investigator for a $5 million research project on biofuels feedstock and logistics.

Outdoor Life honors senior Kati McCrae

Kati McCrae, senior in the Natural Resources program at the College of Forestry, was selected by *Outdoor Life* magazine to receive its Open Country Award, which honors those working to improve outdoor access. McCrae was recognized for her work with the Rocky Mountain Elk Foundation at a ceremony in Las Vegas in January. McCrae has helped make her Eugene, Oregon chapter of the foundation one of the most active grassroots chapters in the nation. Under her leadership the chapter scheduled nearly a dozen projects ranging from native plant restoration to road repair and access enhancement projects in partnership with the Bureau of Land Management. "Kati is one of those remarkable volunteers who understands what a big difference hunters and anglers can make when we're willing to work to protect the lands we love," said Andrew McKean, editor of *Outdoor Life*. "She embodies the spirit of the Open Country Program."