

INews

MESSAGE FROM THE DEAN

In January 2007, the College will begin celebrating the centennial of its founding. In 1907, the forests of the Northwest seemed limitless. Long-term resource management was only beginning to be recognized by institutions of higher education. Forestry education at the UW was an early response to the recognition of society's need to conserve forests for future generations. In 2008, another centennial will honor Xi Sigma Pi, the forestry honor society founded at the UW with the objectives of securing and maintaining a high standard of scholarship in forestry education and working for continuing improvement and collegiality in the forestry profession.

One hundred years later, the College continues to honor the commitment of its founders and the objectives of scholarship and professional excellence advocated by Xi Sigma Pi. We now focus on the sustainability of natural resources and environmental services in ecosystems ranging from wilderness and parks, to intensively managed forests, to urban green spaces. Our long history and our location in one of the world's largest forested regions ensure that forestry and its related disciplines remain central to our mission. We will continue to produce highly trained graduates to contribute to the sustainable management of both private and public forests, including increasingly important urban forests. We will support education and research in forestry and related commodity production and marketing through undergraduate and graduate programs and through research centers like the Precision Forestry Cooperative, the Center for Sustainable Forestry, the Center for International Trade in Forest Products, and the Stand Management Cooperative.

Our Master of Forest Resources (MFR) in Forest Management was recently approved by the UW Graduate School; we will present it to the Society of American Foresters for accreditation during an April on-site visit to the College. Recognizing the importance of maintaining an accredited professional forestry program and committed to educating some of the world's best forestry and natural resource professionals, we created the MFR to allow undergraduates and professionals with forestry or natural resources background or experience to pursue a one-year professional master's degree. Current students can take the appropriate courses in the sustainable forest management pathway of our undergraduate curriculum and earn both a BSF and an MFR in Forest Management in five years.

Recent faculty hires embody our commitment to excellence in our forestry mission. Areas of expertise they bring include silviculture, forest management and ecology, wood chemistry and bio-fuels, landscape plant science, remote sensing and analysis, and landscape ecology. I invite you to read about our new hires on page three of this newsletter. It is our great pleasure to both welcome them to the College and to introduce them to you, our external community. Search committees are now hard at work filling five more faculty positions, and I look forward to updating you about these soon.

The ongoing transformation in our programs and personnel is generating a wave of excitement and energy throughout the College. All of our current distinguished teachers and researchers look forward to working alongside these new members of our community. The events we are planning for our centennial celebration will be a way for you, our valued constituents to also participate in creating futures into the next century.

B. Bruce Bare



Measuring acoustic velocity in left, a Douglas-fir tree, and right, a Douglas-fir log. Photos: Stand Management Cooperative.

Evaluation of Wood Quality Helps Link Tree-to-Log-to Wood Product

The Stand Management (SMC) and Precision Forestry (PFC) Cooperatives and the Rural Technology Initiative are collaborating with the U.S. Forest Service and CHH Fibre Gen on research that includes evaluating wood quality by measuring the acoustic velocity of logs and standing trees. The study, part of the Sustainable Forestry component of Agenda 2020, an effort of the U.S. Forest Service and the American Forest and Paper Association, is also investigating the genetics of wood stiffness with the Northwest Tree Improvement Cooperative at Oregon State University.

Says Professor Dave Briggs, SMC and PFC Director and holder of the Corkery Family Endowed Chair, "We hope to find a way to monitor the natural variability of stiffness among trees within a stand and incorporate the results into tools that help managers assess stands and stand treatments and make better marketing decisions."

An important sector of wood product markets involves applications in which mechanical properties used in designing structures, such as stiffness and strength, predominate in defining quality. As harvest age decreases and intensive silviculture increases, the quality of stands, logs, and products is becoming more variable and tree and log size are decreasing. The development of engineered wood products (EWPs) such as oriented strand board and wood-plastic composites, means that smaller wood pieces easily obtained from small trees and logs and low quality or underutilized species, and even recycled wood, can be used for a wide range of products.

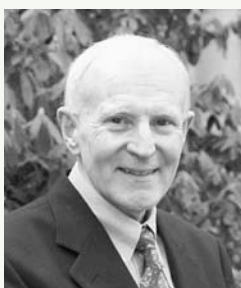
Says Briggs, "Non-destructive methods to test lumber and veneer for mechanical properties are important because mills need raw material with wood elements best suited to the type of EWP they manufacture. Timber growers need to assess tree properties to know which stands are best suited for marketing to EWP markets. And silviculturists need to monitor properties of stands as they develop and respond to cultural practices. New technologies to determine wood stiffness in trees and logs will improve sorting and matching with desired levels of lumber or veneer stiffness and provide an innovative way to link properties from tree to log to product."

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SPRING 2006

"The College of Forest Resources:
creating futures since 1907."



West Nile Virus Research — from Stormwater Ponds to Urban Birds

West Nile virus (WNV) was first detected in the Western Hemisphere in 1999 and has since spread across the North American continent into all 48 continental states, seven Canadian provinces, and throughout Mexico. The U.S. Centers for Disease Control and Prevention reports that over 15,000 people in the U.S. have tested positive for WNV infection since 1999, with over 500 deaths. More people have likely been infected with WNV but have experienced mild or no symptoms. To date, human WNV has not been identified in Washington State.

Most often, WNV is spread by the bite of an infected mosquito. Mosquitoes are WNV vectors that become infected when they feed on infected birds. They can then spread WNV to humans and other animals when they bite. Mosquitoes breed in standing water — even a small bucket that has stagnant water in it for seven days can become home to up to 1,000 mosquitoes.

In 2002, researchers found that underground structures associated with stormwater ponds were reservoirs for mosquitoes in Orange County, California. Sergio Camacho, a master's student in forest entomology is researching the dynamics of microinvertebrate production in stormwater ponds and their corresponding underground structures. "Stormwater systems in the Puget Sound region are extensive and are necessary to control flooding," says Camacho. "King County has over 700 stormwater ponds and associated underground structures."

Studies of underground structures may provide answers to important questions such as: Do mosquitoes in the Puget Sound region reproduce in pulses resulting from the runoff from summer rains? What conditions do dry structures provide for mosquito breeding? Can native predators form part of existing Integrated Pest Management (IPM) programs? The study will contribute to an understanding of where dangerous mosquitoes breed in highest numbers and where mosquito control efforts can be focused with increased efficiency.

Working with faculty advisor Professor Bob Gara, Camacho has surveyed ponds and associated underground structures in Snohomish and King Counties. The research documented dragonfly, diving beetle, and other predaceous macroinvertebrate numbers, and tracked changes in dissolved oxygen, temperature, and conductivity. Mosquito larvae and copepods (diverse aquatic crustaceans that are the most numerous metazoans in the water community) were collected from stormwater systems using a standard dipper. Says Camacho, "Copepods are being studied for possible use as a biological control; they have

proved effective in other parts of the world and are a component of Louisiana's IPM Program. Lab experiments with native copepods and mosquito larvae will aid in the identification of copepod species as biological control agents."

Preliminary results of the study show that WNV mosquitoes prefer underground structures, which house few, if any, natural predators and have ideal water quality conditions for some of the most dangerous mosquito species.

Other WNV research in the College is related to the infection of crows, jays, and urban songbirds by the virus. Since WNV severely impacts crows, they, along with other species may serve as sentinels for potential local infections of humans. To contribute to local and national efforts to better understand how WNV spreads and to develop methods to minimize its impacts on humans and wildlife alike, Professor John Marzluff and his graduate students are incorporating WNV into their long-term study of urban crow and songbird populations in the Seattle area.



Sergio Camacho collects macroinvertebrate samples from a stormwater pond. Photo: The Water Center.

A Warmer Pacific Northwest? — Insights from the Past



Linda Brubaker and colleagues retrieving sediments from Ridley Lake, North Cascades. Photo: Bob Mierendorf.

Can research give us clues about future climatic conditions in the Pacific Northwest and what kinds of forests we might have in the future? Scientists overwhelmingly agree that the earth is getting warmer, but many research directions are needed to understand the consequences of warmer climate. Professor Linda Brubaker has developed a research program at the College investigating the responses of vegetation to climate change and disturbance at different temporal and spatial scales. Over short time scales, she and her graduate students have examined the recent history of insect outbreaks and climate variations in the Pacific Northwest based on analyses of ring-width patterns in major conifer species. Over long-time scales, she and many coworkers have examined pollen grains and other components of lake

sediments to reconstruct late-Quaternary (~20,000 years ago-to present) climate, vegetation, and fire histories in Alaska, Far Northeast Siberia, and Washington State.

"Why look to the past?" asks Brubaker, "and what conclusions can we reach about climate conditions and tree species that were abundant then?" Looking at the Early Holocene (11,000 to 7,000 years ago) in the Pacific Northwest, the record reveals that the large-scale climatic forcing of solar radiation resulted in hotter summers and colder winters, and different distributions of plant species. For example, at mid-elevations on the western Olympic Peninsula, early Holocene climatic conditions resulted in a preponderance of Douglas-fir and red alder, with frequent fires and increased dwarf mistletoe (a tree pathogen). Subsequent climatic cooling, and its effects on fire regimes and tree pathogens, resulted in forests now dominated by western hemlock and silver fir.

Predictions about how these forests might change with global warming involve understanding the relationships among species, pathogens, and other disturbances under warming conditions. Brubaker says, "Because climate is driven by a complex set of boundary conditions that do not change in unison, new conditions constantly arise and disappear. Thus, tree species continuously reassemble in different combinations that follow the rhythm of changing climate."

Brubaker, along with Professors Bob Gara and Tom Hinckley, were lecturers in the CFR-UWAA Winter Lecture Series, "Sustaining our Northwest World — Tales from the Forest." With support from the Rachel A. Woods Endowment, these programs were recorded by UWTV and will soon be available via streaming video on the UWTV website.

College News



Left to Right: Monica Moskal, Greg Ettl, and Christian Torgersen. Not pictured: Renata Bura and Soo-Hyung Kim. Photo of Christian Torgersen: E. Welty.

College Welcomes Five New Faculty

The College welcomes five new faculty members, while search committees are completing the process on five additional searches. Hired to date are new Assistant Professors Drs. Renata Bura, Soo-Hyung Kim, Monika Moskal, and Christian Torgersen; and new Associate Professor Dr. Greg Ettl. Bura, who has most recently been a post-doctoral fellow at UBC, will fill the natural products chemistry position and work closely with the College's bio-resource science and paper science and engineering programs. Kim, who is a plant physiologist with the USDA Agricultural Research Service, will fill the landscape plant science and sustainable management position, working closely with plant sciences faculty and the UW Botanic Gardens. Moskal, who is currently on the faculty at Missouri State University, will fill the remote sensing and biospatial analysis position, working closely with the Precision Forestry Cooperative. All three will engage in classroom teaching, mentor graduate students, and serve on graduate student guiding committees, as well as develop strong research programs working with the College's centers and graduate interest areas. Ettl, whose background is in silviculture and forest ecology, currently serves on the faculty of Warren Wilson College and manages the school's forest; he will serve as Director of the Center for Sustainable Forestry at Pack Forest. Torgersen, a landscape ecologist with the USFS Forest and Rangeland Ecosystem Science Center, will staff the

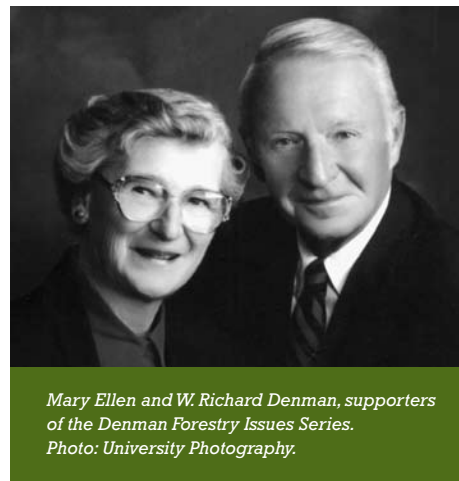
USGS Cascadia Field Station located at the College. The searches yet to be completed will fill positions in natural resource economics, informatics, and restoration and management, and in bio-resource science and quantitative landscape science.

SAF Accreditation Site Visit

The College is in the process of reviewing its new Master of Forest Resources (MFR) in Forest Management for SAF accreditation. The MFR was recently approved by the UW Graduate School. Recognizing the importance of maintaining an accredited professional forestry program and committed to training and educating some of the world's best forestry and natural resource professionals, the College designed the new MFR to allow undergraduates with a natural resources or forestry-related background and/or professionals with forestry or natural resources experience to pursue a one-year master's degree. Current undergraduates can take all of the appropriate courses in the sustainable forest management pathway and in one extra year earn both a BS and an MFR in Forest Resources. An accredited MFR program is also expected to appeal to other UW and non-UW students and help to recruit them into the College. The site visit is scheduled for April 11-13, 2006; members of the Accreditation Visiting Committee include Perry Brown, Dean, University of Montana College of Forestry and Conservation; Richard Kluender, Dean, University of Arkansas-Monticello School of Forest Resources; and Terry Clark, SAF's Associate Director of Science and Education.

Denman Forestry Issues Series Prepares New Program for June

Established by the College in 2000, the Denman Forestry Issues Series provides information and discussion for the UW community and the public on timely forestry and natural resource issues. A program on June 1, 2006 at the University of Washington Botanic Gardens, Center for Urban Horticulture will focus on issues in sustaining urban ecosystems. The speakers will include College alumni Ella Elman ('01) and Ray Larson ('05) and faculty members Rob Harrison and John Marzluff, Weyerhaeuser Company scientist Robert Bilby, and UW Department of Landscape Architecture faculty Rich Horner. Denman programs are recorded by UWTV in digital format and broadcast nationwide on the UWTV cable channel and the ResearchChannel. They can also be viewed via streaming video at the UWTV website. Past programs have included forest certification, conservation easements and land trusts, global climate change, invasive species, and forest fire ecology. The series is funded with support from Mary Ellen and W. Richard Denman.



Mary Ellen and W. Richard Denman, supporters of the Denman Forestry Issues Series. Photo: University Photography.

Highlights

January 2006 marked the 80th anniversary of C.L. Pack Experimental Forest. Now home to the College's Center for Sustainable Forestry, Pack Forest is planning a series of celebratory events throughout the year.

Kevin Hodgson, Professor of Paper Science and Engineering, was awarded a joint appointment as Professor of Chemical Engineering in the College of Engineering.

The College's Distinguished Alumni Seminar series offered a panel presentation on January 12, 2006 by Court Stanley ('83), Senior Vice President, Port Blakely Tree Farms and Sue Joerger ('79), Executive Director, Puget Soundkeeper Alliance; and on February 24, 2006 a Graduate Student Symposium keynote talk by Kenton Miller ('63), Director Emeritus of the World Conservation Union.

The College's annual Graduate Student Symposium was held on February 24, 2006, a day-long event that included a wide range of research presentations and posters by students in all of the College's graduate interest areas.

The Washington Park Arboretum created a design garden for the February 2006 Northwest Flower and Garden Show. Seminars during the show included talks by alumnus Dan Hinkley ('85), affiliate faculty Linda Chalker-Scott and Ray Maleike, and lecturer Christina Pfeiffer.

The Water Center's 16th Annual Review of Research on February 16, 2006, featured seminars and posters on the latest research on stream restoration, salmon and salmon habitat, droughts and water shortages, dam removal, new technologies, sustainability, and climate variability and change.

The College welcomed new members to its Visiting Committee, including Bov Eav, newly appointed Director of the U.S. Forest Service PNW Research Station, Jeff Koenings, Director, Washington State Department of Fish and Wildlife; Neal Lessenger, President, Arboretum Foundation; Jim Peters, Chairman, Squaxin Island Tribe, and Dick Stroble, President and CEO, Merrill and Ring, Inc. The College thanks outgoing members Bob Alverts, Jim Anderson, Tom Quigley, and Dana Rasmussen for their years of service.

The Robert and Louise Harris Endowed Scholarship, to support students in the Paper Science and Engineering undergraduate curriculum, was established through the Washington Pulp and Paper Foundation by the Harris Group, in recognition of the Harris' long-time contributions to the pulp and paper industry.

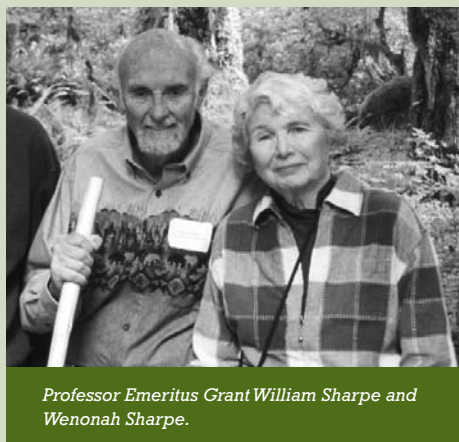
Alumni Focus

Professor Emeritus Grant William Sharpe

Grant William Sharpe ('51, '56), Professor of Outdoor Recreation, died on January 17, 2006. His contributions to the programs of the College and to the field of interpretation are unparalleled. He was the founder of the National Association for Interpretation and was almost single-handedly responsible for legitimizing interpretation as a profession as well as a field of study in higher education. The careers of nearly two generations of interpretation professionals took place during Sharpe's tenure with the UW. During his life, he nurtured, cultivated, and shaped an entire profession and virtually anyone who wears the label "interpreter" is indebted to him in some way.

With his wife Wenonah, Sharpe authored many publications including wild-flower guides of several national parks, text books on environmental interpretation, park management, and American forestry, all contributing to the experience of park visitors and to the effectiveness of park managers.

Sharpe was recognized around the world for his work, but it was his commitment to students and their educational experience at the College that leaves the most enduring legacy. He was a founder of the International Short Course on National Parks and Equivalent Reserves and developed an extensive undergraduate program in outdoor recreation that provided a springboard for careers in local, state, and federal parks. In addition to his interpretive courses, he developed and offered a successful internship with the Washington State Parks and Recreation Commission, and taught an annual outdoor



Professor Emeritus Grant William Sharpe and Wenonah Sharpe.

recreation field course that introduced students to prospective employers and provided a bonding experience that has sustained enduring personal and working relationships over three decades. Throughout his years at the College, the Sharpes graciously hosted hundreds of UW and international students at their home.

Sharpe was carried to his resting place in the shadow of Olympic National Park by his eight surviving adult children. Each held one of the nine handles on the pine box they crafted for him — one handle was left unattended for his youngest daughter Lena, who died in 1993.

Watch for details of a fund that will be established in the College in Sharpe's honor.

Alumni News

Ron Dinus ('63) recently received a National Association of Agricultural Educators Outstanding Cooperation Award for his volunteer work with Mt. Baker, Washington High School.

Fu-Wen Horng ('82), after many years with the Taiwan Forestry Research Institute, has taken a position in mainland China, where his work involves breeding, silviculture, and fertilization for fast growing eucalypts and poplars.

Tony O'Hara ('87), after nearly 30 years with New South Wales State Forests, including serving as investment manager, has joined the start-up company Structured Investment Solutions Limited that will structure, promote, and implement high quality green investment opportunities.

Kelly Hetzler ('99) is working for the San Carlos Apache Tribe forest resources program in rural eastern Arizona and watching the Denman Forestry programs on satellite TV.

Ella Elman ('01) is an ecologist with the Seattle Urban Nature Project, a local non-profit organization dedicated to enriching the quality of life in the Puget Sound region by engaging communities to improve urban forests.

Perry Gayaldo ('02) has been promoted to deputy chief of the National Oceanic and Atmospheric Administration (NOAA)'s Restoration Center in Silver Spring, Maryland.

Emil Cherrington ('04), an Organization of American States Fellow while at the College, works on developing Belize's national spatial data infrastructure. He recently joined the Water Center of the Humid Tropics of Latin America and the Caribbean (CATHALAC), a UNESCO Center of Excellence, as CATHALAC's Geographic Information Systems and Natural Resources Specialist. Cherrington writes, "I wanted to confirm to you all that CFR students are making a difference in the broader world."

In memoriam

Kenneth Beil ('42)

James Johnston ('42, '47)

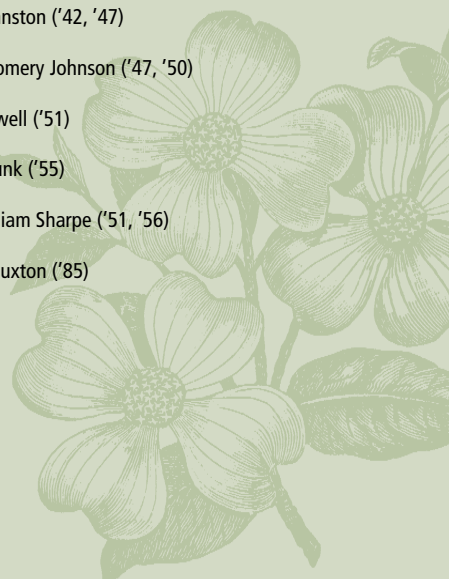
C. Montgomery Johnson ('47, '50)

Albert Powell ('51)

Richard Junk ('55)

Grant William Sharpe ('51, '56)

Gregory Buxton ('85)



Hummingbird Research in Chile



Graduate student Erin Hagen surveys the dramatic landscape on Robinson Crusoe Island.

Erin Hagen, PhD candidate in wildlife science, has been doing research in the Juan Fernández Archipelago since 2001. Located over 400 miles off the central coast of Chile, the archipelago is known for its isolated plant and animal communities. Predation by introduced mammals, primarily cats and rats, habitat degradation by feral goats and rabbits, and the spread of exotic plants pose problems for nesting birds. Hagen first researched the islands' seabirds, but local park rangers urged the investigation of the Juan Fernández firecrown — a charismatic hummingbird whose numbers have declined dramatically in recent decades and are currently numbered in the low hundreds.

Hagen says, "Working with my adviser, Dr. Dave Manuwal, I'm researching the ecological requirements of the Juan Fernández firecrown, which lives year round on only one island in the world, Robinson Crusoe. The island shares its name with

Daniel Defoe's famous novel based on the experiences of the mariner Alexander Selkirk who was marooned there in 1704. Fieldwork on Robinson Crusoe Island is not exactly like living a page of Defoe's novel — the 500 permanent island residents are not cannibals, but mostly lobster fishermen. But store shelves sometimes empty as the wait for a supply ship drags on, and weather and sea conditions change rapidly."

"My research is investigating factors that may be underlying the decline of the Juan Fernández firecrown, including food shortages, predation by introduced mammals, loss of habitat, and competition with a co-occurring species, the green-backed firecrown, which arrived from continental Chile in the late 19th century. My objectives are to examine similarity of breeding biology for the Juan Fernández firecrown and the green-backed firecrown by describing nesting phenology, hatching and fledging success, and mortality at the nest; describing foraging behavior at focal trees and focal forest gaps during the breeding season; and quantifying nectar and insect resource availability and quality during the breeding season. This work will provide an initial quantitative investigation of potential mechanisms of the Juan Fernández firecrown's decline and their relative importance."

Hagen is also interested in the roles that invasive species play in native ecosystems, island ecology and conservation, and the development of environmental stewardship. "My work on the island," she says, "has been a wonderful experience interacting with a broad range of people — local and regional governmental organizations, concerned citizens, community groups, schoolchildren, terrestrial and marine biologists, social scientists, and educators. Although my focus is now on this tiny island in the middle of the Pacific that most people have never heard of, its conservation challenges are mirrored worldwide."

Hagen was a recipient of the College's Byron and Alice Lockwood Endowed Fellowship. She will be traveling to China this year with the UW Worldwide IGERT on Sustainable Multinational Collaborations.

PLANNED GIFT WILL SUPPORT COLLEGE'S PROGRAMS

Ben Harrison grew up in the Seattle area and earned a combat pin in the submarine service during WWII. Later, he went on to study forestry, getting his degree from CFR in 1966. A retired Weyerhaeuser forester, Ben manages a forestry advisory business, Bendory Enterprises. He and his wife, Dorie, are members of the Society of American Foresters, the UW President's Club, the College's Dean's Club, and the CFR Alumni Association.

The Harrisons also recently joined the Suzallo Society at the UW by adding the College to their estate plans. Their planned gift will create an endowment to be used at the discretion of the Dean. Says Harrison, "I credit the College, especially key faculty like Ben Bryant, Dave Scott, and Frank Brockman, for making me what I am today. Dorie and I want to give something back to the College that will support its programs far into the future."

If you would like to learn about making a bequest to the UW, please contact the UW Office of Gift Planning at 206.685.1001, giftinfo@u.washington.edu or the College Development and Alumni Relations Office at 206.543.9505, tmentele@u.washington.edu.



Ben Harrison ('66) counting tree rings at the Wind River Canopy Crane Research Facility.

Upcoming Events Calendar

APRIL 6
Distinguished Alumni Lecture Series,
UW campus

APRIL 18
ONRC Review of Research,
UW campus

APRIL 20-21
Arbor Day Fair, UW campus

MAY 6
Rhododendron Safari, Federal Way,
WA

MAY 17
College Scholarship Luncheon,
UW campus

MAY 18
UWBG Public Education, "Spring
Propagation," UWBG

MAY 19
CFR Distinguished Alumni Lecture
Series, UW campus

MAY 20
Garb Day, Center for Sustainable
Forestry at Pack Forest, Eatonville, WA

MAY 24
WPPF Annual Conference,
UW campus

JUNE 1
Denman Forestry Issues Series,
UWBG

CFR Visiting Committee, UWBG

JUNE 9
CFR Graduation Celebration,
UW campus

CFR News

Please direct all corrections and inquiries to CFR News, University of Washington, College of Forest Resources, Box 352100, Seattle, WA 98195-2100.

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Share your news: CFR alumni activities and successes are of interest and inspiration to faculty, students, staff, alumni, and friends of CFR. Update your contact information at <http://www.washington.edu/alumni/addresschange.html>.

This newsletter can also be found on line at: www.cfr.washington.edu.

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