MESSAGE FROM THE DEAN

In partnership with the CFR Alumni Association, I extend a warm invitation to our Centennial Weekend Friday, November 2-3 (see article) — an opportunity to share memories and reflections while we look to the future. A century is also a good time to reflect on change — what does the future hold for forestry colleges like ours, and how will we change in the 21st century?

Our college views its mission broadly. We have educated highly trained natural resource managers and scientists in a wide range of disciplines. We have graduates who lead international programs in many areas of forestry, natural resources, and conservation. We have remained relevant and committed to the sustainability of the environments and communities we serve. But can we predict what new changes are in store?

The 20th century forest management paradigm was based largely on an agricultural model. Its utilitarian emphasis was output-oriented, geographically focused at the stand level, and although its goal was multiple use, sustained timber yield was the primary driving mechanism. The 21st century paradigm is based on an ecosystem approach. It has a naturalistic emphasis that is condition or state oriented; it takes a landscape view, and its goal is the integrated and sustainable use of multiple resources.

Natural resource management has long been a complex undertaking, and the 21st century decision environment presents great challenges. Changes in our socio-physical systems such as global climate and the increasing spread of invasive species and pathogens may well surpass forest productivity in importance, with reducing forest risk and increasing forest resiliency becoming principal concerns of land managers. Changing socio-economic systems, including the expanding global marketplace and the mobility of expertise in the internet age, may well replace hierarchical structures with a more responsive network of collaborative organizations operating at local levels.

Centennial Weekend Gala — November 2 and 3, 2007

The College of Forest Resources Centennial Weekend Gala is scheduled for November 2-3, 2007. The weekend’s events will provide an opportunity for the College community to reflect on the past and connect to the future, celebrating 100 years of creating futures. The Weekend Gala will also serve as the finale for the College’s Centennial celebrations.

- Centennial Social, Friday, November 2nd, 6:30-8:30 p.m., Governor’s Room, Hotel Deca (formerly the Meany Towers), Seattle, WA.
- CFR Alumni Association Annual Meeting, Saturday, November 3rd, 12-1:30 p.m., Anderson Hall Forest Club Room, UW campus.
- Research and Technology Showcase, Saturday, November 3rd, 2 p.m., Anderson Hall Forest Club Room, UW campus.
- Centennial Gala, presented in partnership by the College and the UW Alumni Association, Saturday, November 3rd, 5 p.m., Don James Center, Husky Stadium (2nd level), UW campus. $55 UWAA members, $70 general admission includes complimentary valet parking, two drink tickets, appetizers, plated dinner, and centennial memento. Festive attire requested, black-tie optional. The program includes a keynote address by Roger Hoesterey (’80), Vice President and Regional Director, The Trust for Public Lands; an awards ceremony presented by CFR Alumni Association President Bob Dick, Jr. (’74) and board members; and live music to dance the night away!

Hotel Deca has reserved a block of rooms at a reduced rate for those booking early for the weekend. Contact Paul Winters at Hotel Deca, 206.634.2000. The College thanks the following sponsors for making the Centennial Weekend possible: Buckman Laboratories Inc.; Canyon Lumber Co. Inc.; Cascade Hardwood, LLC; Green Diamond Resource Company; International Forestry Consultants, Inc.; Pendleton and Elisabeth Carey Miller Charitable Foundation; Port Angeles Hardwood, LLC; Port Blakely Tree Farms, LP; Allen and Victoria Symington; Washington Alder, LLC; and Weyerhaeuser Company.
The Pacific Northwest Fungi Project

Professor Dean Glawe joined the College's faculty in July 2005, a joint appointment with Washington State University (WSU), where he has been on the faculty since 1996. Glawe completed his master's and doctoral studies in plant pathology at WSU; his research focus concerns the systematic (classification and biology) of powdery mildew fungi, common and destructive plant pathogens that have been little studied in North America. The research has shown that the Pacific Northwest is home to about 200 species of powdery mildews rather than the 21 previously known — important knowledge for diagnosing and controlling plant diseases. Clarifying the fungal life cycles, the research is also laying a foundation for new control strategies that can rely less heavily on extensive fungicide applications. Glawe also helped found the Pacific Northwest Fungi Project, a consortium of professional scientists and amateur natural history enthusiasts who are cooperating to develop a comprehensive inventory of the region's fungi. Their collaboration includes developing educational programs and coordinated research projects, as well as publishing an online journal, of which Glawe is editor-in-chief. He also manages the Pacific Northwest Fungi Database; see http://pnwfungi.wsu.edu/programs/aboutDatabase.asp.

"You might ask why such an inventory is needed," says Glawe. "Fungi exert a great influence on the economic and ecological health of our region. They are among the most diverse organisms on the planet, with more than 1.5 million species. They cause immense economic damage; for example, 75 percent of plant diseases are caused by fungi. Forests would not exist without fungi; 95 percent of tree species cannot grow normally without fungi to help extract nutrients from soil. Fungi cause many human health problems, ranging from deadly infections to allergies. Despite their economic, ecological, and medical importance, we still know very little about the fungi of our region, and less than one-third of the predicted number of species has been catalogued."

The Pacific Northwest Fungi, www.pnwfungi.org/index.htm is believed to be the world's first online mycology journal. Fully peer-reviewed, the journal provides information on fungal natural history in the Pacific Northwest, with topics including taxonomy, nomenclature, ecology, and biogeography.

In response to Forum recommendations and the research's testimony, the 2007 Legislature appropriated additional funding for several projects, including $950,000 to assess ways for retaining threatened forestland and for biomass recovery, $200,000 for joint SFR and WSU forest bio-energy projects, and $190,000 for economic research on log hauling safety.

The final study report was completed that July and is available online at http://www.ruraltech.org/projects/fwaf/final_report/index.asp. It provides research findings on timber availability conditions and management alternatives, direct and indirect economic contributions of the state's forestlands, competitiveness of the industry in Washington, land-use pressures that exist for these lands, and the financial returns of forested forestlands. The findings identify issues that require deliberation and action on the part of policymakers and stakeholders, as well as identifying future research needs.

The Future of Washington's Forests

Forestlands in Washington State provide a wide array of products, services, and benefits to the state's citizens and beyond. In 2005, the Washington State Legislature appropriated $1 million to the Department of Natural Resources to contract with the College for a comprehensive study and report on the future of Washington's forests. Growing out of the College's first Northwest Environmental Forum in 2004 and focusing on the economic and environmental health of the state's forestlands, the contribution of the state's forest industry, and the protection of working forestlands, the study was also intended to inform stakeholder discussions leading to policy recommendations to the Legislature.

Research teams led by Professor Gordon Bradley, Ivan Eastin, Bruce Lippke, and John Perez-Garcia, with many contributing staff and graduate students, each focused on a specific topic. Preparing several facings researchers included:

- Western Washington forests are being converted when the land becomes more valuable if used for such things as suburban housing and commercial development. New research says the process in the coming decade could consume more than 300,000 acres of forest, an amount of land comparable to five times the size of Seattle.
- After suffering through drier and warmer conditions in excess of 100-year historical ranges, Eastern Washington's brittle forest goes ripe for insect infestation and wildfires.
- A $16 billion-a-year industry — ranging from large industrial owners to woodlot owners with just a few acres — is facing transitions because of pressures that exist for these lands, and the financial returns of forested forestlands. The findings identify issues that require deliberation and action on the part of policymakers and stakeholders, as well as identifying future research needs.

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Richmond after receiving his doctorate at Iowa University, Toth’s primary field of interest is natural resource management. Two new assistant professors have been hired by the College during the last academic year, and several additional faculty members throughout the summer and fall. The College continued to welcome new faculty members Sergey Rabotyagov and Sandor Toth. New faculty appointments include: Sergey Rabotyagov, Assistant Professor working closely with the Precision Forestry Cooperative, effective June 16, 2007; Sergey Rabotyagov, Assistant Professor of Natural Resources Economics, effective October 16, 2007; Research Associate Bethany Bannoff, Jeffrey Hatten, and Brian Minder, and affiliate faculty, E. Peter Lancaster and Steven Trudel.

Recently appointed to endowed professorships, effective September 15, 2007, were Ronald Bero, Distinguished Professor in Paper and Pulp Science, and Tom Hinkel, David R.M. Scott Professor in Forest Resources.

The College is one of 45 founding members of the United Nations Food and Agriculture Organization’s Fire Management Actors Alliance established in May 2007. The Alliance works to improve fire management and to reduce damage from wildfire.

ONRC Celebrates Rosmond Forestry Education Endowment

Over 100 friends and alumni met in Forks, Washington at the Olympic Natural Resources Center on July 28, 2007 to celebrate the newly endowed fund established by the Rosmond family in memory of alumni Fred Rosmond (’39). The endowment will help fund community forestry education in the Forks area. Rosmond and his brothers established the Rosmond Brothers sawmill in Forks in the late 1940s; the sawmill shipped high-quality red cedar products to customers around the world. Rosmond was a civic leader and longtime member of American Foresters. He also collected tree seeds during his travels and personally planted trees in his one-acre property in Forks. 32 species are now found in the Rosmond’s residential “arboretum.”

Rare Care Programs Expand to National Forests and Parks

Rare Plant Care and Conservation (RarCare) staff and volunteers are collecting seeds from several rare and endemic alpine plants found in North-Cascades, Mt. Rainier, and Olympic National Parks. The seeds will be held in the UW Botanic Garden’s Miller Seed Vault for ex situ conservation and research. Beginning in 2006, Rare Care will work with the National Park Service to monitor rare plant populations in North-Cascades National Park. Rare Care is also working with Mt. Baker-Snoqualmie National Forests and Parks in Washington to establish rare plant populations in North Cascades National Park. Rare Care Programs Expand to National Forests and Parks.

One of twelve 1957 graduates of the College’s logging engineering program, Randall soon began working internationally. For ten years he worked overseas for timber companies, government development agencies, and conservation NGOs. At the Rosmond Endowment event in Forks, Washington in July, Randall reflected on his connection with the College. “Many things brought me to the College and a desire to work outdoors on projects around the world.”

A five-month assignment in southern Chile exposed Randall to the “amount of human activity” in Chile’s natural resources — and asks: how can we most effectively steward this landscape for a sustainable future?

The College recently achieved its Campaign ‘07 fundraising goal of $117.2 million. Thank you all of us of our generous supporters!
College Welcomes Dr. Renata Bura

Renata Bura, Assistant Professor in natural products chemistry, was selected from a pool of finalists candidates in a nationwide search and is one of eleven finalists chosen in a nationwide search. She will be working in a newly created position created by a generous gift from Mary Ellen and W. Richard Denman.

Bura received a BSc in applied chemistry and biology from Ryerson University in Toronto and a MSc in chemical engineering and applied chemistry from the University of Toronto. She earned her PhD in forest products biotechnology at the University of British Columbia (UBC), studying the bioconversion of corn fiber to ethanol. After receiving her doctorate, Bura was a post-doctoral fellow at UBC, working on biomass conversion to bioethanol in collaboration with universities and government agencies. She also worked with UBC research laboratories on molecular biology and protein research and on the enzymatic hydrolysis of biomass.

The conversion of biomass into ethanol is a promising field of research on which Bura will be collaborating with faculty and students at the College. Sources of biomass include invasive species from the forest floor, small diameter timber, agricultural machinery, and other organic cellulosic-rich material. “Biomass goes through a short pretreatment period, at which point the material is fractionated into cellulose, hemicellulose, and lignin,” Bura says. The hydrolysis process then uses enzymes to convert the cellulose and hemicellulose to sugars. Fermentation, which can be done in conjunction with or following hydrolysis, is the next step. “Fermentation for bioconversion is somewhat akin to making beer;” Bura says. “Sue is used to ferment sugars and convert them into carbon dioxide and ethanol, which is an alcohol that can be readily used to fuel vehicles.”

Bura is a co-founder of a newly created UW Bioenergy Group that includes CFR faculty Rick Grandolfo, Bill McKean, Sharon Doty, and Kevin Hodgson. Other bioenergy initiatives at the College with which Bura is involved include collaboration with UW and PWF faculty on converting wheat straw, poplar, and giant reed threes to ethanol and other chemicals. In collaboration with Sharon Doty, Bura is working on the screening and characterization of bioenergy microorganisms able to convert free carbon sugar to ethanol. Bura is also looking at biomass to biochemical production from a sustainability point of view in collaboration with CFR faculty Monica Mossel, Dorothy Paun, and ClareRyan. Her industrial collaborators include Weizhegauer and Natureworks.

“In my somewhat limited free time, Bura says, “I enjoy playing tennis, cycling and hiking in the natural beauty of Washington.”

Dean’s Message continued

These challenges shape the changing societal values of a growing, urbanizing population — a population increasingly aware of the environmental implications of climate change, biodiversity loss, invasive and endangered species, wildlife issues, water quality, and forest health, while growing increasingly remote from roots in an agrarian society.

How can academic programs in forestry and natural resources step relevant to this shifting environment? The concept of sustainability provides a set of tools to ensure flexibility and relevance in changing times. Sustainability requires action or processes that produce desired products and services over long periods of time. A natural approach that seeks a dynamic equilibrium, it integrates an interdisciplinary set of social, ecological, and economic disciplines. It facilitates an understanding that there will always be many stakeholders with multiple and often conflicting goals, and that although science is necessary to find the proper balance among social, ecological, and economic needs, it is by no means sufficient. Value preferences expressed through economic, political, and legal systems will often largely determine the ultimate balance.

A successful natural resources education in this environment must include a solid preparation in bio-physical and socio-economic sciences, communication, and critical reasoning; an understanding and appreciation of interdisciplinary collaboration and integration; discovery and learning at a variety of spatial scales, and the ability to embrace the knowledge that there will always be uncertainty. This is the spirit in which we have continued to transform our programs; our success in the 21st century depends on it.

E. Bruce Bave

Upcoming Events Calendar

NOVEMBER 2, 2007
Centennial Colloquium, DEAC, SEATTLE

NOVEMBER 2, 2007
Centennial CFR Alumni Networking, UW-CARB 156

NOVEMBER 3, 2007
Centennial Research Showcase, UW-CAMPUS

NOVEMBER 3, 2007
Centennial Gala, Don James Center, UW-CAMPUS

NOVEMBER 13, 2007
Dairy and Forestry Issues Seminar, UWGL, CLOB

CFR News

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

Email: CFRnews@uw.edu Phone: 206-543-3075

This newsletter can also be found on line at http://www.washington.edu/alumni/addresschange.html.