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PNW RESEARCH NEWS

June/July 1996

Hartmann Named New Institute Manager

Lawrence Hartmann was recently appointed the new manager of the Blue Mountains Natural Resources Institute, La Grande. He succeeds Thomas Quigley who is currently Team Leader of the Eastside Ecosystem Management Project in Walla Walla, WA. The institute, which is based in La Grande, is a partnership of Federal and State agencies, county governments, interest groups, businesses, Tribal governments, and universities in a 14-county area of northeastern Oregon and southeastern Washington.

Larry Hartmann

"The Blue Mountains Natural Resources Institute staff and those of us in the Station are extremely pleased to have someone of Larry's caliber join the Station to lead the institute," said Station Director Tom Mills in announcing the appointment.

Hartmann says he is looking forward to his new assignment and will enjoy living in La Grande with his wife LuAnn. "I'm excited by the concept of the institute because it puts science to work. It's a vehicle for facilitating research on user-defined natural resource issues, synthesis of research and knowledge, technology transfer, and on-the-ground demonstrations of science-based natural resource management. The institute also provides a forum for diverse publics to discuss natural resource results to the end use, including public land managers, private landowners, and the general public."

Hartmann was most recently Assistant Director for Planning and Application, Northeastern Forest Experiment Station in Radnor, PA, a position he held since 1991. From 1989 to 1991, he was a research social scientist for the Intermountain Research Station. He began his Forest Service career in 1982 as an outdoor recreation planner for the Southeastern Forest Experiment Station in Athens, GA. He has held a variety of research and management positions in natural resources since 1973 including work for the National Park Service, the California and Michigan Departments of Natural Resources, and teaching assistant positions at Michigan State and Texas A&M Universities.

He earned a Ph.D. in recreation resources development from Texas A&M University, an M.S. in park and recreation resources from Michigan State University, and a B.S. in wildlife and fisheries biology from the University of California at Davis.

Philip Briegleb, Former Station Director, Dies

Phil Briegleb

Philip Briegleb was called a renaissance man by many of his colleagues. He initiated a forest survey of the United States, helped develop several experimental forests in Oregon and Washington, and established laboratories in Bend, Corvallis, and Olympia. Briegleb died in Portland on June 20 at the age of 89.

Briegleb was Director of the PNW Research Station from 1963 to 1971. His Forest Service career began in 1929 at PNW Station as chief of the forest survey crew. He was a forester for the Northeastern Forest and Experiment Station from 1944 to 1946 and returned to the PNW Research Station as chief of the Division of Forest Management Research in 1946. Briegleb then moved on to the Central States Forest Experiment Station where he remained as Director until 1953. He became director of the Southern Forest Experiment Station in 1954 and remained in that position before assuming the directorship at PNW. He retired in 1971.

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The Executive Team: left to right, George Moeller, Billie Hansen, Tom Mills, and Fred Stormer.

Executive Team Notebook

Sociologists often cast the 1980s as the "me" decade and the 1990s as a vague transitional decade—a decade that finds society moving in all directions yet directionless. But for all the talk about lack of direction and meaning, some people are moving forward in accomplishing goals for themselves and for society. Those people are the men and women of the Forest Service and the volunteers who work with them and contribute thousands of volunteer hours each year.

Andy Carey, a Principle Research Biologist based at our Olympia Lab, recently earned the 1996 Volunteer Program National Award for Research. Under Carey's leadership, the volunteer hours at Olympia increased from 200 to more than 7,000 hours in the past 4 years. Botanist David Thysell and Wildlife Biologist Suzanne Wilson work with Carey in coordinating the volunteer/internship program for the Ecological Foundations of Biodiversity team. Thysell and Wilson conduct training classes for volunteers who range in age from 18 to 80 and come from a variety of educational levels and geographic locations. Many come from the United States and others from Europe.

Carey and company and all Station volunteers and Station staff who train the volunteers are to be commended for their time, energy, and enthusiasm! Your efforts not only stimulate volunteerism but bring the public's attention to the high-quality research produced by the Station. We thank you. Keep up the good work!

—The Executive Team

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Briegleb was born July 23, 1906, in St. Clair, MO. He earned a bachelor's and master's degree in forestry from the New York State College of Forestry at Syracuse. Briegleb was president of the Society of American Foresters from 1964 to 1965 and was given the society's William Schlich Memorial Medal in 1982 and its William B. Greeley Forest Award in 1984. He also was a member of the Council Society of American Foresters for two terms in 1956-59.

He authored more than 40 publications on forest management, mensuration, and forest resources. Briegleb also developed a handbook to assist owners of young timberlands. The family suggests remembrances to the Society of American Foresters Endowment Fund, 5400 Grosvenor Lane, Bethesda, MD, 20814-2198.

PNW News Briefs

George Moeller (Deputy Station Director, Programs) is a new member of the Alaska Region Leadership Team. The appointment marks the first time Research is formally represented on the team; previously representation was by whoever was available to attend meetings (held 3 times a year).

Consultants for the new **Oregon Ecosystems Exhibit** at the Portland Zoo include **Bruce Marcot** (Wildlife Ecologist, Portland), and **Jim Sedell** (Acting PM, Aquatic and Land Interactions). Sherry Sheng, Zoo Director, requested help from the Research Station as designers develop the exhibit. **Marty Raphael** (Team Leader, Olympia) and **Larry Bryant** (Wildlife Biologist, La Grande) have also provided information. The exhibit, slated to open in 1998, will have continuous additions added until 2000.

Pacific Resources Inventory, Monitoring, and Evaluation (PRIME) is the proposed name change for the Inventory and Economics RD&A Program. PRIME collects and analyzes forest resource information impacting the Pacific Coast States. Information users are located worldwide. Recent clients, as reported by **Tim Swedberg,** consist of a Japanese exporter interested in the quality and quantity of western juniper available for the manufacture of chests, ornamental boxes, and ceiling panels. An Australian businessman contacted PRIME for statistics on California eucalyptus. He was given information on the availability of the tree and told how to get data on California harvesting regulations. **Kathy Geyer** is Acting Manager for PRIME.

Alexis Walker (Secretary, Station Director's Office) is the new Civil Rights Action Group (CRAG) representative for Station Headquarters.

What is a Flood? A Report on the Andrews Forest Flood Pulse Field Study

What is a flood? Perspectives differ. Floods are viewed differently by those responsible for road systems. Fish communities and riparian vegetation all impact sediment production and transport. The flood of February 1996 in the Pacific Northwest exhibited the multiple dimensions of floods.

Over 90 scientists, technical specialists, and students gathered the week of June 24 at the H.J. Andrews Experimental Forest to address this question. The group studied landslides, stream geomorphology, riparian vegetation, amphibians, and stream ecosystems. During this intensive, interdisciplinary field program, called a "pulse," learning was shared around a campfire in the evening. Participants in the 1996 Flood Pulse came from Oregon State and several other universities, the PNW Research Station, the Willamette National Forest, the National Biological Survey, and the Fish and Wildlife Service. Scientists from Spain, Japan, and France also joined the pulse.

Dramatic flood effects and the wealth of background information for flood assessment make the Andrews Forest a terrific place to examine effects of the February flood. The National Science Foundation-sponsored Long-Term Ecological Research and the Forest Service Research programs at the Andrews provide a great deal of long-term data to characterize preflood conditions, including riparian and channel conditions, past landsliding, and populations of fish, invertebrates, and amphibians. Many of the initial efforts involved resurveying sites of preflood observations to assess change.

Although flood waters charged throughout the drainage network, the pattern of major channel and riparian disturbance was surprisingly patchy. Disturbance in small streams appeared to be binary: either little disturbance or major change by highly damaging debris flows containing large volumes of wood and sediment. Disturbance along large channels ranged from slight (typically along channels with rock-defended banks) to major (along unconstrained valley floors where lateral channel change was facilitated by large woody debris). Remapping of the lower 6 kilometers of Lookout Creek, which had originally been mapped in detail in 1986,

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Pulse participants examine plants at H.J. Andrews

Awards and Honors

Victor Van Ballenberghe (Wildlife Biologist, Anchorage) was named Distinguished Moose Biologist at the annual North American Moose conference in Banff. Van Ballenberghe also was appointed to another term on the Alaska Board of Game. He served a 3-year term from 1985-1988.

Several members of the Communications Group, Director's Office, recently received cash awards: **Doris Bills**, for implementing a new procedure to close out manuscripts quickly and efficiently; **Karen Esterholdt**, for performing extra duties in the absence of the Group Leader; and **Carolyn Wilson**, for compiling and editing the Station's annual report.

Richard Haynes (Program Manager, Social and Economic Values) and **Cindy Miner** (Communications Director) have been appointed to positions in the International Union of Forestery Research Organizations. Haynes is leader, forest sector analysis; and Miner is chair, technology transfer working group.

Bill Stein (Volunteer Principal Plant Pathologist, Corvallis) was given a certificate of appreciation from Chief Thomas for "outstanding service" and for a "caring, unselfish attitude and dedication..." Stein is completing several long-term studies, writing a revision of the woody plant and seed manual (an agricultural handbook that is a consistant best seller worldwide), and mentoring younger scientists and other professionals.

Fred Swanson locates the next field observation site.

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will help reveal patterns of disturbance controlled by features of the mainstem channel environment (change in channel direction), hillslopes, and tributary streams (such as debris flows and streamside slides).

Fish and amphibians in most parts of the Lookout Creek watershed where they had been observed before the flood in surveys done by Matt Hunter (Oregon State University, graduate student). In small streams with severe disturbance by debris flows, amphibians seemed temporarily wiped out. Watershed 3, on the other hand had a major debris flow, yet Hunter found several Pacific giant salamanders. Preliminary observations of trout in lower Lookout Creek indicate some depression of the preflood population, despite the absence of secondary channels that might serve as refugia.

Riparian vegetation disturbance was largely limited to alder and willow stands originating after the 1964 or subsequent floods. The mainstem of Lookout Creek transported large logs delivered by debris flows from tributary channels, trees that had fallen into the channel before the 1996 flood, and the toppling of perhaps less than a dozen old-growth streamside trees during the flood. Large woody debris played a variety of roles in riparian disturbance: large, transported logs clearly accentuated disturbance of riparian vegetation in many locations, but stable pieces elsewhere protected riparian vegetation. By summer 1996, vegetation recovery was already underway, including vigorous sprouting from rooted and transported willow parts.

Transport of large woody debris during the flood was documented in a video by Gordon Grant (Research Hydrologist, Corvallis Lab) and by the resurvey of marked pieces in various studies in the Andrews Forest and in Quartz Creek. One 1.5 meter-long piece traveled over 25 kilometers. The earlier observation that pieces longer than the bankfull width of the channel tend to be stable has been varified by a preliminary analysis of more than 2,000 tagged wood pieces in the different study sites.

Large, woody debris moved very little in some areas; in other areas all of the debris moved. Most of the wood originated from the active channel or the stream margin of the floodplain. During previous floods in Mack Creek, for example, more than 90 percent of the moving wood was retained in the active channel. Although significant flood-plain storage occurred during the 1996 flood, overall distribution of

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New Publications

Cortner, Hanna J.; Shannon, Margaret A. [and others] 1996. Institutional barriers and incentives for ecosystem management: a problem analysis. Gen Tech Rep. PNW-GTR-354. 35 p. (95-082)

Hoyer, Gerald E.; Andersen, Norman A. [and other] 1996. Levels-of-growing-stock cooperative study in Douglas-fir: report no. 13—the Francis study: 1963-90. Res. Pap. PNW-RP-488. 91 p. (95-078)

Lillybridge, Terry R.; Kovalchik, Bernard L. [and others] 1995. Field guide for forested plant associations of the Wenatchee National Forest. Gen Tech. Rep. PNW-GTR-359. 336 p. (95-187)

McCool, Stephen F.; Haynes, Richard W. 1996. Projecting population change in the interior Columbia River basin. Res. Note PNW-RN-519. 14 p. (95-199)

Miller, Richard E.; Obermeyer, Edmund L. 1996. Initial and continued effects of a release spray in a coastal Oregon Douglas-fir plantation. Res. Pap PNW-RP-487. 11 p. (95-086)

Miller, Richard E.; Reukema, Donald L. [and other] 1996. Ammonium nitrate, urea, and biuret fertilizers increase volume growth of 57-year-old Douglas-fir trees within a gradient of nitrogen deficiency. Res. Pap. PNW-RP-490. 12 p. (94-149)

Pacific Northwest Research Station. 1996. 1995: A year in review for the Pacific Northwest Research Station. Annual Report. 88 p. (96-028)

Publications continued on page 6

Flood damage near Look Out Creek on the Andrews.

Julia Jones, OSU, leads graduate students on a field trip at the Andrews.

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storage in the active channel and flood plain is consistant with patterns observed in previous years. A 20-year series of maps of the main fifth-order channel of Lookout Creek documents a channel mostly cleared of wood by the 1964 flood as new debris floated in from upstream and from streamside old-growth forests. The channel complexity progressively increased between 1964 and the 1996 flood when the system was again simplified by the fluvial transport of large wood pieces.

A study site for the examination of the hyporheic zone (flood plain ground-water system) along lower McRae Creek had more than a meter of downcutting. This seemed to have lowered the ground-water level below the rooting zone of alder remaining on the gravel bar where past studies documented water flowpaths and nitrogen cycling. This is leading to new ideas and questions about how modest vertical change in channel position may strongly influence the extent of below-ground interactions between channels and streamside vegetation. All of these studies are in progress: stay tuned for further results.

See the Andrews Forest Long-Term Environmental Research (LTER) Homepage for further information and photographs of study sites. The address is http://www.fsl.orst.edu/lter.

—Fred Swanson,
Lead Administrator,
H.J. Andrews
Experimental Forest

Notable Events

Apollo 11 was launched in July 1969 and made the first moon landing. People worldwide watched the takeoff on television. The week of July 16 is Space Week.

The Smithsonian Institution was established in August 1846. President James K. Polk signed an act making it official. James Smithson, a British citizen, left his fortune to the United States, spelling out in his will how the money should be used.

Quotation of the Month

Tell me, I'll forget; show me, I may remember; involve me, and I'll understand.

—Chinese Proverb

Published by The Communications Group, Pacific Northwest Research Station, P.O. Box 3890, Portland, Oregon 97208. Sherri Richardson, editor, telephone 503/326-7132.

Publications continued from page 4

Pacific Northwest Research Station. 1996. Recent publications of the Pacific Northwest Research Station, fourth quarter 1995. Sta. Misc. 24 p. (96-068)

Warren, Debra. 1996. Production, prices, employment, and trade in Northwest forest industries, third quarter 1995. Resour. Bull. PNW-RB-212. 130 p. (96-067)

Williams, Clinton K.; Kelley, Brian F. [and others] 1995. Forested plant associations of the Colville National Forest. Gen. Tech. Rep. PNW-GTR-360. 375 p. (95-186)

For copies of these publications, call Doris Bills (503/326-5648). Distribution number is given in parentheses.

Notable Events

Elwyn Brooks White (E.B. White) was born in Mount Vernon, NY, in July 1899. He wrote articles and humorous poetry for the "New Yorker" magazine and the children's books, "Stuart Little" and "Charlotte's Web."

Mary McLeod Bethune was born in Mayesville, SC, in July 1875. She founded the Daytona Normal & Industrial Institute for Negro Girls, which later became Bethune-Cookman College. President Franklin D. Roosevelt appointed her advisor on minority affairs in the 1930s.

Edmond Hoyle died in August 1769. The birth date of Hoyle, who became England's leading authority on the rules of card games and chess, is unknown.

The first major earthquake recorded in the Eastern United States occurred in Charleston, SC, in August 1886.

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