

The “Spotlight”...highlighting researchers at work

WARD MCCAUGHEY

“Don’t Sweat the Small Stuff”

Sharon Ritter, Research/Management Coordinator and ECO-Report Editor, BEMRP, RMRS, Stevensville, MT

Ward McCaughey has spent 99% of his career in forestry research. It appears the aptitude test he took in high school was right; he **should** be in forestry. Ward is a research forester in the Forests and Woodlands Ecosystems Program for RMRS. He has been on BEMRP’s executive committee since 2002. However, his association with BEMRP goes back to its inception in 1994 when he worked for Clint Carlson, Project Leader and the original lead scientist for the team that initiated BEMRP. Ward’s association with the Rocky Mountain Research Station goes back to 1974 when he supervised summer crews.

Ward grew up in Pierre, the capitol of South Dakota, a small city surrounded by farms, ranches, and Missouri River breaks. He fished the Missouri, hunted deer and antelope in the breaks and ranches, and pheasants in the fields. He worked summers either for his father’s floor covering business or on ranches. This background gave him a love of the outdoors, but it was vacationing in the ponderosa pine forests of the Black Hills that stimulated his interest in forestry.

For college, he headed west to the University of Montana in Missoula for his bachelors and masters, and Montana State University in Bozeman for his PhD. While majoring in forestry at the University of Montana, Ward worked summers and falls for Wyman Schmidt and Ray Shearer of the Intermountain Research Station. It was a long-lasting relationship, morphing from work as a seasonal summer crew leader to mixing work and schooling to conduct his master’s research on subalpine fir and Engelmann spruce, and later his PhD research on whitebark pine.

His study of whitebark pine was one of the first to look at factors affecting natural and artificial regeneration. He also worked on whitebark pine cone and seed studies, again relating his research to natural regeneration and nursery problems. The mid-1980s



One of Ward’s summertime fish sampling excursions in western Montana. (Photo by Randy Boehnke)

marked the beginning of interest in forest ecology approaches to whitebark pine research, with Station scientists including Ward, Steve Arno, and Bob Keane looking into this formerly underappreciated species. Ward continues his interest in whitebark pine research. He also continues monitoring spruce/fir forests he studied while conducting his master’s research. “These long-term studies are key to understanding forest ecology and effects of management activities,”

Ward takes special pride in his lodgepole pine research on the

Tenderfoot Creek Experimental Forest located on the Lewis and Clark National Forest. The Research Station conducted silvicultural treatments there in 1999 and 2000 to study the effects of restoring two-age lodgepole pine forest structure similar to what historically occurred on much of the area. However, work toward conducting those treatments actually began in 1988 when he, Wyman Schmidt, the Northern Region Office, and the Lewis and Clark National Forest planned research there. They assembled a team representing several National Forests, the University of Montana, Montana State University, Rocky Mountain Research Station, Northern Region Office, and Natural Resources Conservation Service. One of the key issues in the West is water, so they installed 10 flumes and collected several years of water quantity and quality data prior to doing any cutting. They measure stream flow, sediment production, water temperature and nutrients, and other measures of water quality and quantity. They also set up two SNOTEL sites (SNOW TELelemetry) for monitoring snowpack and related climatic data. The SNOTEL sites included snow pillows, which are 10-ft diameter bladders that measure water content of snow.

Ward has found it very rewarding taking Tenderfoot Creek EF from an experimental forest with no studies to the level where so many people want to use the site for hydrological, climatological, and ecological studies. Said

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Krista Gebert . . . (from page 10)

forecasting work earned her the Forest Service Chief's Award in 2003.

Another rewarding and challenging line of research is the Stratified Cost Index. This compares the estimated cost of the fire with what was actually spent. She reviews costs and sends a list of the fires that cost significantly more than estimated to the Fire and Aviation Management office in Washington, D.C. and they follow up with fire managers to learn why they were so expensive. This results in better tracking of fire expenditures by the fire managers and helps all participants understand what causes higher costs.

Krista is looking forward to working on ecosystem management research with BEMRP. She got a taste for it when she helped out with the Trapper-Bunkhouse project. In a project like that with multiple goals, there are always budget constraints. "That's the beauty of economics; providing information helps managers make decisions about tradeoffs. You can't do everything with the land, you have to make choices," she said. At Trapper-Bunkhouse there are fish culverts to install, trails to fix, hazardous fuels to reduce, roads to rehabilitate, and more. Yet there aren't enough funds to cover all of that. That's where economics comes in to help with those choices.

As a new BEMRP team member, Krista looks forward to branching out into a new realm and working more with field folks. She likes knowing when research she does is applied on the ground. Sometimes, researchers conduct their research, write their journal articles, and are not sure if anyone is actually using the results. That's one of the reasons she likes doing applied research: "Over the years, there's been a lot of direct interaction with management and that's given us a lot of research ideas. Working with managers is how most of our research topics came up, and we can see it put to use." She is excited that being involved with BEMRP will give her the opportunity to do more of this type of collaborative research.

Ward McCaughey . . . (from page 11)

Ward: "Development of the entire hydrology, vegetative, and climate monitoring system on the Experimental Forest has drawn researchers from all over the U.S. to install collaborative studies." He's excited about a new \$36,000 climate station that will collect data on hydrology, atmospheric oxygen, daily and seasonal carbon exchange, snow melt, atmospheric deposition, pH, particulates, and more. Ward has also been approached by the National Oceanic Atmospheric Administration to use Tenderfoot as one of eight sites in the United States to calibrate a Geostationary Satellite Server (GOES) atmospheric weather satellite using climate and snow data.

Setting up experiments and learning from them is intellectually stimulating. "Scientists go into the science field because it's their nature to learn through experimenting," he said. Ward loves working in Forest Service research, explaining, "We have flexibility and latitude in the types of studies we work on."

He also enjoys working with resource managers in the National Forest System, including the Northern Region Office, the Bitterroot National Forest, the Lewis and Clark National Forest, and BEMRP. He says that "Forest Service people are great people to work with. It's the best ecological organization in the world, well-known and respected in Europe because of our research publications and how we manage our forests."

Ward looks forward to the intellectual challenges coming up with the Trapper-Bunkhouse project, Northern Region Aspen Working Group, Whitebark Pine technical committee, and National Experimental Forests Managers Working Group, and ballroom dancing. Ballroom dancing? "I used to dance a lot in Bozeman and I'm looking forward to doing more of it here in Missoula." Ward's advice to everyone is, "Don't sweat the small stuff. Go out and do the best you can." That would apply to work, play, and dancing.

New Publication Available

The Rocky Mountain Research Station's leadership team recently awarded its Outstanding Scientific Publication award to Dean Pearson for his role as principal author and team leader of the publication *Biological Control Agents Elevate Hantavirus by Subsidizing Deer Mouse Populations* (Ecology Letters 9(4): 443-450, published in 2006, co-authored by Ragan Callaway of the University of Montana).

The paper looks at indirect risks of using exotic insects to control weeds. See the 2002-03 ECO-Report for an article about this research and last year's ECO-Report where we reported on an interview with Dean in which he talked about the surprising response to his findings (<http://www.fs.fed.us/rm/ecopartner/ecoreport.shtml>).