

The Role of Experimental Forests in Science and Management

Theresa B. Jain



Happy 100 years to the Priest River Experimental Forest (PREF)! PREF, which is managed by the Research and Development Branch of the USDA Forest Service, celebrated its centennial in September 2011. It was established in northern Idaho to provide useful information that would improve forest management in the western part of District One at a time when US forestry was in its infancy. In 1911, there were only a handful of university studies on forest development in the United States and little was known about tree establishment and growth, the impact of fire, or how to sufficiently supply wood products for a growing nation.

Forestry pioneers Gifford Pinchot and Raphael Zon recognized the need for better forest management and proposed dedicated forest locations be created to study the ecology and silvics of various tree species. Since then, Forest Service Research and Development has established 79 Experimental Forests (EFs) and Ranges throughout the United States. EFs are long-lived laboratories where Forest Service scientists and collaborators discover, synthesize, and demonstrate new knowledge for managing forests and ranges in the United States and worldwide. Since PREF was established, more than 600 publications from PREF studies have provided information on basic forest ecology, vegetation establishment, fire danger and behavior, silvicultural methods and systems, forest growth and yield, watershed function, and tree genetics, to name a few.

These major contributions to forestry were worthy of a centennial celebration, which was held Oct. 8–10, 2011. With more than 170 people in attendance, we celebrated the place that meant so much to the life and work of the over 200 researchers and families who called PREF home for part of their lives. The celebration began with a reenactment of the inspection party led by Chief Graves 100 years ago. Scientists, the Deputy Chief, the Panhandle National Forests Supervisor, and others entered the compound on horseback and riding in horse-drawn wagons. There were also exhibitions throughout the headquarters area of the forest highlighting PREF's 100 years of research contributions. During evening dinners and entertainment there was plenty of time for reminiscing and sharing stories about people, their work, and research trials and tribulations.

We also celebrated the people who worked at PREF and the surroundings (e.g., trees, dinner table, and laboratory) that encouraged so many to be creative and productive. As stated by Kathy Graham in her history of PREF- (Graham 2004), "it takes a special personality to be a forestry researcher, and those who have made significant impacts on research have that rare combination of curios-

ity, determination, patience, and knowledge. But they also must be self-confident and in general display a 'do it my way' attitude. Often this strong-willed attitude influenced the direction of the research and the methods employed. They had no instruction book then and are still creating it now." This was certainly true for Harry T. Gisborne, whose concepts of fire danger, fire behavior, and forest fuels are still used today. Charles E. "Mike" Hardy, now 95 years old, shared captivating stories of what it was like to work with Harry and his colleagues at PREF from 1921 through 1949. In addition, for one young researcher in the early 1950s, PREF inspired him to think about ways of describing how forests grow. Albert Stage, in his long and distinguished career, went on to develop the Prognosis Model (Forest Vegetation Simulator), which today is used worldwide. Chuck Wellner was a scientist who spent many early mornings observing the growth and development of white pine forests. Harry T. Gisborne was his mentor, and Chuck passed on his passion and knowledge to other young scientists such as Russ Graham, Albert Stage, and Dennis Ferguson. PREF and other EFs provide an ideal setting to create and maintain this legacy of scientific mentoring.

Finally, we celebrated the invaluable contributions of PREF and all Forest Service EFs and Ranges in producing relevant and timely information on the ecology and management of forests. Jim Guldin, from the Southern Research Station, highlighted this when he showed how Forest Service EFs have contributed ecological (basic and applied) and silvicultural knowledge for more than 100 years in forests such as the longleaf pine on the Palustris EF in Louisiana, eastern white pine on the Penoscot EF in Maine, oak and yellow-poplar on the Bent Creek EF in North Carolina, ponderosa pine on the Fort Valley EF in Arizona, Douglas-fir on the Wind River EF in Washington, lodgepole pine and aspen on the Fraser EF in Colorado, and western white pine on PREF and Deception Creek EF in Idaho.

As Raphael Zon had intended, EFs and Ranges are dedicated locations and outdoor laboratories essential for observing and studying ecosystems over decades. In this day and age of quick gratification and need for instant results, these outdoor laboratories are vital locations for observing and studying how ecosystems develop and change over time. To paraphrase Bob Marshall, who worked at PREF from 1925 to 1928, a 100-year-old western white pine is a young tree that has centuries to live. This can also be true for 100-year-old EFs; they too have many centuries to contribute to the science and management of forests.

Literature Cited

Graham, K.L. 2004. *History of the Priest River Experimental Station*. Gen. Tech. Rept. RMRS-GTR-129, Fort Collins, CO. 71 p.

Theresa B. Jain (tjain@fs.fed.us) is research forester, US Forest Service, Rocky Mountain Research Station, 1221 South Main, Moscow, ID 83843. The author acknowledges Dr. Russell T. Graham and Kathleen Graham for their inspiration and long-term commitment to Priest River Experimental Forest.