



National Museum of Forest Service History Newsletter

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Forest Products Laboratory

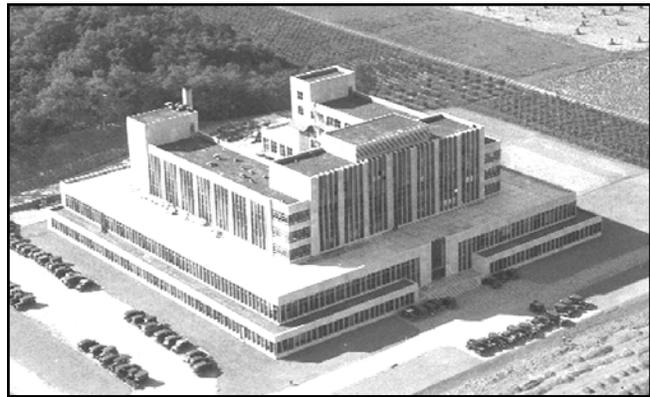
A Century of Research Working for You: 1910—2010

By James T. Spartz

Spartz is a graduate student in the Department of Life Sciences Communication, University of Wisconsin - Madison. He is a Writer / Public Affairs Specialist in the Office of Communication at the USDA Forest Service's Forest Products Laboratory, Madison Wisconsin.

Since 1910, the Forest Products Laboratory (FPL) has promoted healthy forests and forest-based economies through the efficient, sustainable use of American wood resources. From propellers and paper to construction materials and nanotechnology, the Forest Products Laboratory has helped make life easier, more comfortable, and infinitely more rewarding for nearly every American.

In 1907, McGarvey Cline, Chief of the Office of Wood Utilization in the U.S. Forest Service, proposed to colleagues that, to improve coordination among disparate centers of research, one main Forest Service research laboratory be established. By January 1909, Gifford Pinchot, head of the Forest Service, made an offer to the University of Wisconsin (UW) in Madison to be home to this new central research laboratory. The offer was accepted with much acclaim by UW President Charles Van Hise. Forester Pinchot then, surprisingly, retracted the offer in light of objections by Congressman James McLaughlin of Michigan and a separate offer from the University of Minnesota. Heated deliberation ensued. Eventually, a February meeting between Pinchot, Van Hise, and Wisconsin Senator Robert M. "Fighting Bob" La Follette, among others, at the exclusive Cosmos Club in Washington, D.C., turned the tide. On March 5, 1909, the day after President Taft's inauguration, Secretary of Agriculture James Wilson announced that Madison, Wisconsin, would indeed be home to the Nation's first central wood research laboratory (Nelson 1971).



Forest Products Laboratory

1930s



New Forest Products Laboratory

Centennial Research Facility
Dedication & Grand Opening June 23, 2010

The FPL made its home on the UW-Madison campus in what today functions as the Materials Science and Engineering Building. McGarvey Cline was named its first director prior to the official opening on June 4, 1910.

Early research priorities focused on timber testing,

See FPL, page 3

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Forest Service History**

A Nonprofit Corporation

P.O. Box 2772
Missoula, MT 59806-2772
Phone: 406-541-6374
Fax: 406-541-8733

E-mail:

nationalforest@montana.com

Web Site:

www.nmfs-history.net

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The *Newsletter* is published quarterly for the members and supporters of the National Museum of Forest Service History, a non-profit corporation dedicated to preserving the history of the U.S. Forest Service.

Membership Dues

Student	\$15
Individual	\$30
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Contributing	\$150
Sustaining	\$300
Organization	\$100
Lifetime	\$1,000

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Museum News

By Gray Reynolds

This spring Dave Stack and Dick Bacon met with Montana Governor Brian Schweitzer, executives of state agencies, leadership of the Forest Service, directors of professional associations, trustees of foundations, superintendents of schools, presidents of nonprofits, CEOs of businesses and USFS Retirees—to share plans for the National Conservation Legacy and Education Center. Each of these meetings had three common topics: the need to support a sustained national education and interpretative program based on our conservation legacy, an interest in working together to meet our \$12.7 million capital campaign goal and the potential economic impact of the Center's local and national reach.

2010 Annual Museum Membership Meeting is May 20 at the Marco Polo Restaurant in Vienna, Virginia. All members were notified by postcard this year. Joe Meade, Forest Service National Partnership Office Director, will be a featured speaker. In addition board members will report on aspects of the Center's development. Dave Stack will discuss architectural and exhibit plans for the National Conservation Legacy and Education Center; Jane Westenberger will give a progress report on the Conservation Legacy Education Committee and Lynn Sprague will provide a status report on the capital campaign.

A Capitol Hill Reception is planned for May 20th at the Hall of States for corporate, nonprofit, congressional, and agency representatives. The American Recreation Coalition, Boone and Crockett Club, Forest History Society, National Association of State Foresters and the Society of American Foresters are co-hosting the event. The reception will acquaint the persons attending with our plans for the National Conservation Legacy and Education Center. The Reception is co-sponsored by Budweiser, Bud Select and Anheuser-Busch.

Welcome to the Board of Directors: Mark Rey, an Executive in Residence at Michigan State University and the former USDA Undersecretary for Natural Resources and Environment, joined the Board of Directors in April. The important work of federal agencies in making and implementing natural resource policy is a central theme to be presented at the Center. Mark will bring his years of policy experience on natural resource issues to support the Museum's goals.

The Conservation Legacy Education Committee was established in March. Jane Westenberger chairs the Committee. Doug Leisz and Ted Stubblefield are members. Dick Bacon and John Drake are advisors to the committee. In April the Committee met in Missoula. The committee is preparing a strategic plan for the Museum's education program.

Education BLOG: Volunteer Matt Bacon is coordinating a BLOG to gather education program ideas for the Education Committee. Current participants in the BLOG are university and secondary educators and NMFSH members. If you are interested in helping develop the NMFSH Education program, you are invited to become a member of the BLOG. To join the conversation, send an email to Matt Bacon at m7bacon4@gmail.com

Capital Campaign Status Report -- The Campaign Committee is making real progress in advancing the campaign to fund the construction of the Center. We have received \$3.35 million in contributions and pledges to date. This is 26% toward the campaign goal of \$12.7 million. We are working to obtain funds through the federal appropriations process and we have submitted grant applications for \$1.25 million to private foundations. Representatives from the Murdock Charitable Trust will be in Missoula on June 21 to tour the building site and visit with the Executive Committee. Members of the Campaign Committee are reaching out to industry leaders from agriculture, engineering, finance, fire fighting, forestry, oil and gas, mining, and ski areas as well as foundation, nonprofit and public agency grant makers to connect the interests of these organizations with the goals of the capital campaign.

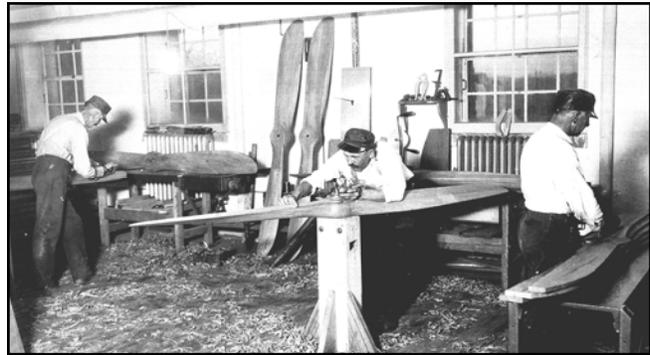
wood preservation, wood-based distillates, timber physics, pulp and paper, and wood chemistry. National defense initiatives were also an early priority. Research into highly absorbent charcoal for gas masks, aircraft engineering, the effects of humidity and temperature change on wooden and laminate propellers, and wood drying processes began by early 1917. FPL research also made significant contributions to World War II, the Korean Conflict, and continued through the 1960s to the modern era of Desert Storm.

Wartime efforts were multifaceted and produced two influential publications: *A Wood Aircraft Fabrication Manual* (U.S. Forest Products Laboratory, 1942) and the *ANC Handbook on the Design of Wood Aircraft Structures* (U.S. Forest Products Laboratory, 1944). Packaging experts also engineered remarkable savings in cargo space by redesigning boxes and packing material for wartime equipment. These and other FPL accomplishments in times of war are highlighted in a review published as *Forest Products Laboratory: Supporting the Nation's Armed Forces with valuable wood research for 90 years* (Risbrudt et al. 2007). <http://www.nmfs-history.net/programs/research.html>

Between 1931 and 1932, a new building for the Forest Products Laboratory was designed and built less than a mile west of the original building on the University of Wisconsin campus. According to *A History of the Architecture of the USDA Forest Service* (1999), the new FPL building typified the American Perpendicular or Modernistic Phase of the Art Deco style as applied to commercial design.

Walking through the tall hallways of the FPL today feels a bit like strolling through a sparsely decorated museum. Art meets science in the classic Art Deco lobby and main elevator, while throughout the building heavy wooden doors, filing cabinets, and desks speak to a past filled with the muffled sounds of research and filing performed by seven decades of scientists and their secretaries.

The fourth floor's north wing has a string of offices with beautiful hardwood floors. These are not government extravagance, however. Several combinations of wood species and design applications were laid out as test flooring to measure changes due to temperature, humidity, and general use. At the end of this long hallway is the Center for Wood Anatomy Research. Through its heavy wood door sits over 100,000 wood specimens representing about 18,000 tree species from every corner of the globe—the largest collection of its kind. A piece of white oak recovered from a shipwreck near San Julian, Argentina, is believed to be from one of Magellan's ships, which sank during a storm in 1520. A specimen taken



Supporting U.S. Army, World War I

from what has been called a boat-like structure 13,000 feet up Mt. Ararat in Eastern Turkey is believed by some to be from Noah's Ark. These samples and many others sit near a bit of Thor Heyerdahl's Kon Tiki; chunks from the USS Constitution—branded "Old Ironsides" during the War of 1812; and samples from King Tut's tomb. A vast range of human and pre-human history is represented in this one small corner of the FPL.

The wood anatomy unit essentially began the day Eloise Gerry walked through FPL doors in June 1910. Though the Forest Service wasn't interested in hiring a woman at the time, as Gerry recalled, "there wasn't any man willing to come and do the work" (McBeath 1978; p. 129). She became the first woman appointed to a professional staff position at the FPL and the first woman in the United States to specialize in forest products research.

The year Gerry stepped down as project leader, 1924 was also the year Aldo Leopold became assistant director at the FPL under Carlisle P. "Cap" Winslow. Leopold's organizational abilities and talent for writing proved a boon for the lab; though, as a forester amid an orchard of scientists, he seemed a "fish out of water" within the confines of a laboratory (Meine 1988, p. 234). Despite what may have been tenuous comfort working within the confines of a research laboratory, Leopold's articles, published for professionals and lay people alike, established him as the Nation's foremost spokesman for the preservation of wild country and the wise utilization of forest resources (Meine 1988, p. 243). Leopold, among other duties, supervised the FPL's effort to reduce wood industry waste at the mill—by some estimates 66 percent—and encouraged the use of "inferior" species of trees until his departure from the FPL in June 1928.

An early synthesis of the combined expertise in wood and forest products research came in the form of the *Wood Handbook—Wood as an Engineering Material*, first

published in 1935. A centennial edition of the *Wood Handbook*, its seventh, will be published in 2010.

New advances at the FPL include the 87,000 square-foot Centennial Research Facility. Aside from expanding the physical research space, social changes are also afoot. Retirements in the next decade will create turnover as baby-boomers move out and younger scientists move in to replace them. FPL director Chris Risbrudt looks forward to this sea change as an opportunity for FPL veterans to pass on the skills and knowledge accrued over many decades of service.

“Science is the accumulation of basic and applied knowledge,” says Risbrudt. “We stand on the shoulders of giants here at FPL, and our tradition of passing on knowledge continues to benefit not only the Forest Service but the broader community of science.”

Even though some research has been slowed or eliminated by budget cuts in recent decades, Risbrudt is optimistic of the progress ahead. “With our new facilities, we will be able to maintain cutting-edge research efforts and attract a new generation of researchers.”

In addressing questions of any change to the FPL’s core mission, Risbrudt says that the FPL has gone through changes in the past but “fundamentally, we travel in the same direction set forth in 1910. We will continue to focus on the advancement of forest health and forest products ingenuity while staying well-grounded in the realities of good science and sound economics.”



Art Deco lobby, circa 1940s

Notes:

This article with references is available on the NMFSSH webpage <http://www.nmfs-history.net/programs/research.html>

An expanded version of this article was first published in the *Forest Products Journal*, Vol. 59(10), October, 2009.

FPL Centennial Research Facility

The USDA Forest Service Forest Products Laboratory (FPL) has been an international leader in forest products research for nearly a century. The Centennial Research Facility dedication and grand opening will be June 23, 2010. This 90,000 square foot combined research facility consolidates research activities, allowing for maximum collaboration between scientists and with outside partners. The multi-use laboratory is a combined research facility that will house state-of-the-art equipment and laboratories for four major areas of research:

The multi-use laboratory is a combined research facility housing state-of-the-art equipment and laboratories for four major areas of research:

Wood Preservation

- Microbiology and chemistry laboratories
- Pilot-scale pressure treatment facility

Durability

- Custom-made stainless steel weathering chamber that mimics actual weather conditions, including temperature, humidity, sunlight, wind and rain
- Laboratory to study moisture transport properties of wood products

Engineering Mechanics

- Strong floor and wall systems to perform full-scale testing of wood-framed building mock-ups and large wood structural members
- Open-bay floor areas accommodate large testing equipment

Composite Sciences

- Compounders, extruders, injection molders, and hot presses

Welcome New Members

2/13/2010 to 5/12/2010

Robert W. Bates
William A. Derr
Veto "Sonny" LaSalle
Patty Limerick

Elizabeth Slown
Gibbs Smith
David Wanderaas

New Life Member

William A. Derr

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Vern Thompson
Charly & Shirley Tiernan
Marilen & Sara Trotter
Charles & Alvera Valach
Maryor C. Wilson
Jean Woessner

Forest Service History Memorials

Memorials established to HONOR current and former employees, partners and groups since the last newsletter:

Mary Barr — nominated by Pacific Southwest FSX Club

Cleve C. "Red" Ketchum — nominated by Dave Scott

Stan Stevenson — nominated by Pacific Southwest FSX Club

Forest Service History Memorials honor the living or memorialize deceased persons. For a minimum \$100 donation, we will format the biography and a photo submitted and maintain a record in our Forest Service History Memorial Book and on our web site.

Capital Campaign Donations

2/13/2010 to 5/12/2010

Rolf Anderson
James Caswell
William A. Derr
Sam Halverson

Reid Jackson
James F. Naylor
Del Radtke

Breakfast on the Pacific Coast Trail

The Forest Supervisor and the Packer

By Gordon Jesse Walker

Walker worked 31 years on the Rogue River NF in southern Oregon, mostly as a packer. He retired in 1983. He wrote and published several books about packing mules and horses and about his Forest Service experiences, including Load 'Em Up, Tie 'Em Down, and Six Years with a Government Mule. This story is about a pack trip with the Forest Supervisor in 1973.

One year, about Christmas, Harv Seeley, Forest Supervisor of the Rogue River NF, and I got together in his office and picked a date to inspect the Pacific Crest Trail. The days would be the 22nd, 23rd, and 24th of August, 1973. I felt mighty important that day as we sat there making plans for a trip so far in advance. One thing for sure, every activity between then and later would fit around those three days, not in them. On Wednesday, August 22, we headed east from Red Blanket trailhead toward the Sky Lakes country. Harv rode Spook; I rode Patches, and of course, Big Red tagged along behind with his big ears flopping, carrying about 200 pounds of things we needed.

We covered the first two miles rather quickly. The stock clattered across two or three narrow bridges and their shoes

caused clanging sounds as we passed over rocky areas. Pumice dust rose from our horses' feet and caused us to squint our eyes and breathe with our mouths closed. The trail was built along the mountainside and around, in, and out of sharp little ravines, some of which had a stream of water cascading down across the trail. The timber was indeed tall. To our left, we could pick out a green-on-white park boundary sign nailed on a tree.

Now and then, the trail passed through a rocky cliff, a perfect place for yellow jackets to build their nests and I told Harv to watch out. About three miles up trail, we started across one of these sites. Spook stopped by a ledge of rock for just a moment. He had bumped against a loose slab of rock and riled up a nest of the yellow beasts. I saw them boil up and shouted at Harv to take off and move out. The nest was right under Spook's belly. I couldn't get past Harv and Spook. It was nearly impossible to turn around and take off down the trail. The nest literally exploded. The last I saw was a yellow mass about two feet across and Spook started moving out with Harv riding like a veteran.

See RIDE, page 7

Remembering Gary G. Brown

1933—2010



The National Museum of Forest Service History mourns the loss of Gary G. Brown who was a driving force for the creation of a museum to honor Forest Service history. As a long-time Missoula resident, a former Montana State Forester and president of the National Museum of Forest Service History from the founding in 1988 to 2002, Gary spearheaded the establishment of the organization and led the Museum through its formative years.

He guided us through the establishment of the Museum's collection and archives that today includes more than 21,000 letters, photographs, journals, reports, maps and artifacts that range from uniforms to fire-fighting equipment. He worked with the Forest Service to select Missoula as the site of the Museum's permanent home and joined with volunteers to reconstruct the historic Ranger Bungalow Ranger Station. He reached out to many organizations including the Society of American Foresters and the Retirees Association to build a corps of volunteers who are dedicated to passing on to future generations the stewardship responsibilities for the nation's majestic forest and grasslands.

including the Society of American Foresters and the Retirees Association to build a corps of volunteers who are dedicated to passing on to future generations the stewardship responsibilities for the nation's majestic forest and grasslands.

“Gary’s strong desire to see this Museum become a reality has carried us to where we are today with plans to build the National Conservation Legacy and Education Center,” said Gray Reynolds, current NMFSSH Museum president. “Thanks to Gary’s vision and perseverance, he rallied people from across the nation to support building a national educational center dedicated to celebrating the rich history and conservation legacy of the U.S. Forest Service, its partners and cooperators. We have lost a dear friend and leader. May his memory continue to inspire us all.”

I pushed Big Red out of my way. Patches was beginning to get the message. The big horse plunged off the trail down the mountainside with long, high jumps. Yellow jackets were beginning to make their point. Big Red caught about 20 or 30 somewhere around his britchen and lower belly. Patches was being stung some place because his mouth was open and his eyes were as big as saucers. He carried me down the steep hill for about 70 feet and then jumped a downed tree about four feet high. He was kicking and bucking by now and, to say the least, it was nip-and-tuck to stay in the saddle.

I had been bucked off before, real hard too, but no government horse had enough to him to get the job done. The only time I ever left the saddle was when one turned over with me. Anyhow, when Patches jumped the log, two yellow jackets stung me in the back on my neck. Now, I am allergic to bee stings. The last time I got stung, my body swelled up about one-half inch deep all over. Immediately, I took a pill to counteract the poison.

I told Harv about what might happen. He really got concerned and kept close watch on me. He was perfectly willing to stop the trip, call in a helicopter and take me out, but I assured him everything was OK. The worst thing that happened was that I fell asleep in the saddle somewhere on the Oregon desert and never came to for several miles. Harv's voice finally woke me.

That night, we made camp at the west edge of Cliff Lake in Seven Lakes Basin, about two hours before dark. I unpacked Big Red while Harv unsaddled Spook. We were the only ones at the lake that night. It took me about a half hour to pile the saddles and rigging at the spot where my bed would be and took the horses and Big Red up the mountain-side to a nice little hidden meadow.

The smell of the campfire smoke reached my nostrils. The aroma of fresh boiled coffee filled the air. Soon, I was at Harv's side watching as he moved from one side of the fire to the other, preparing our meal. Harv is the best camp cook I've ever camped with.

After supper, we talked and enjoyed a sip from the little jug he pulled from his saddlebags. The evening was beautiful. The moonless sky shone with stars, their brightness reflected in the waters of the lake, with the shimmering light from our campfire being dominant.

Next thing I knew, Harv was starting a morning fire. My bed felt so good, and I was in no mood to get up. However, here was the Forest Supervisor already up and ready to go. I was supposed to be tough, but here was the proving ground. So, nothing else to do but roll out, put on my hat, haul on my pants and meet the day with a big fake grin on my face.

Harv greeted me with a hearty "Good Morning" and we set about pulling loose ends together. I went up to look over our horses and mule. It was sort of dark and I had to watch my step in a place or two. Patches nickered and Big Red snorted when I walked up. They stood still as I put on their halters and coiled up the stake ropes.

Harv was working busily around the flames preparing breakfast. The smell of boiling coffee and frying bacon dominated all other odors. I sorted out the different smells coming to me from Harv's breakfast fire and one began to stand out above all the others. It was potatoes, eggs and a little onion mixed in for flavor. Harv had put plates out and had poured me a cup of coffee. He was stirring a frying pan filled with the most wonderful breakfast I have ever seen! The potatoes and eggs were approaching a golden brown. Boy, did they smell good! Harv kept asking if he should call them done, and didn't seem to pay any attention each time I told him yes.

Harv moved the pan toward the edge of our rock ring fire and gripped the handle a little tighter. Suddenly, the most awful thing happened right before my eyes. The collapsible handle released. The pan tipped forward and spilled its contents into the fire. We both stared in disbelief and it took a moment for the sad truth to register. Harv was the first to break the silence with, "Oh God, I think I'll cry." Quickly, he handed me the nearly empty pan and said, "You take what stuck to the bottom." He grabbed a fork and started stabbing some of the chunks that hadn't been consumed by the fire. After the impact of the initial shock wore off, we had a good laugh, ate what few other things we had prepared and broke camp.

That night, it started raining about an hour before dark and we had to hit the sack to stay dry. The next day, we rode from Island Lake to Highway 140 where a truck was waiting for me, and Harv's wife was there to pick him up.



Editors Note: This story is from *We Had An Objective In Mind, the U.S. Forest Service in the Pacific Northwest, 1905 to 2005 - A Centennial Anthology*, published in 2005 by the Pacific Northwest Forest Service Association to celebrate the Forest Service Centennial. The book can be ordered from the Old Smokeys website www.oldsnokeys.org. Thanks to Rolf Anderson, editor of "We Had An Objective In Mind," for selecting this article.



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