By Clair L. Arneson

and THE GETTYSBURG TIMES, October 29, 1945

Note: Clair L. Arneson was a Forest Service employee assigned to the World War II Mapping Project. Most Forest Service job descriptions included the phrase "...other duties as assigned." During World War II, many employees were given new and very different jobs. This is one story of how the Forest Service directly supported the military.

In 1941, the U.S. Army knew that the United States had very poor topographic maps of the coastlines for defense purposes. The Army Corps of Engineers was commissioned to obtain up-to-date topographic maps of the coasts and 100 miles inland, as soon as possible. The Corps asked every Government agency with mapping units to assist with this gigantic effort. This project was called "Defense Mapping" and was changed in December 1941 to "War Mapping".

The Forest Service was uniquely qualified to make these maps inasmuch it had qualified engineers, two types of stereoscopic plotters that use contact 9-inch by 9-inch aerial photographs, plus mules for packing into very rugged mountains. The Wernsted and the KEK stereoscopic plotters were invented by Forest Service employees — Loggie Wernsted, Jasper King, John Elliott, and Philip Kail — and patented by the Department of Agriculture.

The Forest Service agreed to map coastal areas of the Los Padres and Six Rivers National Forests. Each Regional Chief of Surveys and Maps was instructed to transfer all qualified personnel to San Francisco for assignment. Jasper King was in charge of all personnel for the War Mapping project. The War Mapping headquarters was in the Massey Building in San Francisco, where the employees reported, until the field office was established in Maricopa, near the Los Padres Forest.

In the beginning, there were just two KEK plotters for training purposes, and as they were built in Denver, they were shipped to San Francisco, ending with about 20 KEK plotters. Loggie Wernsted, in Portland, built one plotter and sent it to the field office in Maricopa. Training was done in shifts in San Francisco.

The field engineers were assigned to the Los Padres to establish both horizontal (latitude and longitude) and vertical (elevation above sea level) control to be used to position the aerial photographs. The Forest Service packing mules from Montana were used in the rugged mountain area. The aerial photographs were made at the same time as the field surveys.

An additional field office was established at an old CCC Camp at Gasquet, east of Crescent City, on the Six Rivers National Forest. Inasmuch as Crescent City was on the coast, evacuation plans were made for all the employees and their families in the event of an invasion. Other crews were establishing flags and targets on the tallest redwood trees. One tree was 220 feet tall and required a tree-topper to build a platform that could be seen on the aerial photograph.

Triangulation work took us well into November, and we still had to identify the horizontal control stations and the benchmarks on the aerial photographs with a pinprick. This portion of the work was finished just before Christmas, and the field office was moved to Maricopa.

In about June, the mapping of the Los Padres was completed, and everyone was moved to Crescent City to finish the mapping there. Before the maps could be completed, additional vertical control was required in the thick redwood Forest. Crews would start from a known point (usually a highway) and, to find their way back they used a ball of string to mark the way.

In September 1943, the entire Mapping Unit with 45 employees, was moved to Gettys-
From The President

2005 will mark the 100th Anniversary of the Forest Service and will be commemorated with various Centennial Celebrations in Washington D.C. and across the United States.

The National Museum of Forest Service History is a non-profit, privately operated museum organization. The museum mission is to collect, preserve and interpret the national history of the USDA Forest Service for the education and enjoyment of the general public, scholars, and historical researchers.

The permanent museum, when completed, will be open to the public year-round. It will provide a centralized national facility for archives, official and professional memorabilia that portray Forest Service activities. These include research, technology development, cooperative forestry, state and private forestry, international forestry and the protection and management of the National Forest System.

2005 provides an excellent opportunity for the Museum Board to conduct a capital campaign to raise sufficient money to construct and operate the permanent museum in Missoula, Montana.

Currently, the board is working to significantly increase our membership base by contacting all Forest Service retirees and current employees. A large membership base is important to ensure full representation for the museum.

In 2003, Chief Dale Bosworth signed a Memorandum of Understanding to facilitate the coordination and cooperation to preserve Forest Service history. With this MOU in place, the permanent museum staff will provide assistance to all Forest Service units in the proper storage and display of Forest Service artifacts at all Forest Service units. I am asking all current museum members to encourage others to join the museum membership and help in our efforts to make this important project successful.

Best Wishes,
Grey Reynolds

New Memorials
Donations received since the February 2004 Newsletter.

Barbara Sanderson in memory of Everett J. Sanderson
N. Rocky Mt. Retiree Assoc. in memory of Bob Milodragovich
N. Rocky Mt. Retiree Assoc in honor of Maynard T. Rost

Memorials
The National Museum of Forest Service History offers Forest Service History Memorials for those wishing to honor or memorialize people who worked for or with the Forest Service, living or deceased.

For a minimum $100.00 donation, we will collect the biography and a photo and maintain that record in our Forest Service History Memorial Book and on our web site. The Memorial Grove of trees at the National Museum of Forest Service History has also been planted in honor and memory of the people listed in the Forest Service History Memorial.

For more information and to obtain a copy of the nomination form, contact Executive Director Frank McKenzie, National Museum of Forest Service History, P.O. Box 2772, Missoula, MT 59806-2772, 406-541-6374, nationalforest@montana.com.
Mapping, from page 1

burg, Pennsylvania. J. E. "Jack" King supervised the Mapping Unit. The Soil Conservation Service mapping unit was behind schedule with its mapping project of the area, so the Forest Service completed this mapping by July 1944.

Then the Navy Hydrographic office requested help from the Forest Service mapping unit in making maps for use in the Pacific war area. As I recall, every fourth plane on a bombardment mission was also photographing the area. In turn, these photographs were sent by courier to Gettysburg to be used with existing maps to make charts for bombardment or invasion of the area.

Mount Suribachi, Iwo Jima—U.S. Army Mapping Service Map Produced by Forest Service
Provided by Ray Backstrom, Supervisory Cartographer, Region One. Symbols of Japanese Defenses added by Backstrom in 2001 for his Masters Degree Project.

The Forest Service War Mapping project completed highly detailed maps for the invasion and, later, the occupation of Japan, most of the charts for the bloody Iwo Jima campaign and scores of other Yankee targets in the Pacific.

Strict secrecy was observed in the work. The aerial photographs, which came to Gettysburg from the Pacific, were identified only by a project number and were always referred to by number. What the men did know of their work, they could discuss with no one outside the staff, not even their families.

The Gettysburg mapping crew never missed a deadline and had the satisfaction of rushing many topographic maps and charts under special navy guard to the Hydrographic office at Washington days ahead of schedule.

Stressed Accuracy

Other mapping services were doing similar work elsewhere in the country but the Gettysburg project was unique in many ways. Much of its equipment was developed here, new methods were found and the Gettysburg staff solved difficult problems in their own way as they arose.

An entire hotel was utilized. The lobby floor was covered by a huge "laydown board" measuring 16 x 52 feet, substantially built and painstakingly surfaced with plywood and dozens of coats of paint and enamel to offer the best possible working surface in the interest of accuracy—which the mappers strove to attain because of the big stakes they knew were being placed on the product of their work.

The mappers knew that American planes, ships and lives depended on their accurate indication of the contour of a shoreline, the location of a reef, the features of an atoll, the elevation and exact location of a hill, a building or a stream.

Used Captured Maps

One of the toughest problems faced by the mappers was to find maps or charts on which they could locate "control points" about which they could orient their new maps. In some instances captured Japanese maps and charts were brought here, old marine charts, some of them made 80 years ago, were pressed into use. Because of Japanese secrecy for years, few adequate maps of enemy territory were on hand when the war started.

The mappers here devised a system made standard practice for transferring control points between maps and the laydown board. Their plotting was done with a tolerance for error of five-thousandths of an inch. All of the maps had to be up to specification on accuracy. All of this group's work for the navy came from the Pacific.

The mappers had to learn how to handle the trimetrogon photography the navy developed. Instead of a single camera pointed in a vertical position, a battery of three cameras was used with one on each side of the vertical machine set at an angle so that the target area was photographed from horizon to horizon in each set of three photos.

"Fairly Satisfactory"

In his letter of "congratulation and appreciation," Admiral Nimitz spoke highly of the manner in which the Hydrographic office "habitually" met navy deadlines. "The efficiency and promptness which the Hydrographic Office has filled the needs of the unanticipated and varying operations has been and is an important contribution in offensive action against the Japanese forces," the Pacific chief wrote.

H. C. Cain, engineer in charge of photo-cartographic control at Gettysburg ventured the opinion that "we feel the work we turned out has been fairly satisfactory."

Museum News
Dave Stack

Member Involvement — We need more members to become actively involved in the effort to preserve Forest Service history in all sections of the country. Small efforts by many produce large results. The Internet and telephone can bring us together. Some projects — like writing an article for the newsletter or developing a survey of Forest Service units to identify historic artifacts — could be done from any location. There are also literally hundreds of other Forest Service collections and personal items scattered through the country that should be preserved at the national or local level. You can get involved as a Museum member and volunteer to assist the Museum and local Forest Service units' efforts to preserve Forest Service history.

F.S. Grant — The Museum has received a $41,850 Grant through the offices of Larry Payne, Director of Cooperative Forestry in Washington D.C. The Museum is required to contribute an additional $11,250 in cash or in-kind matching contributions. The grant will be used for 1) Collections inventory and preservation; 2) To prepare a booklet and two brochures which describes our mission and programs; 3) Survey agency units in partnership with the WO for artifacts; 4) National Communications Plan; and 5) Summer Visitors Program.

Harvey Mack Collection — The Museum, Angeles National Forest and Forest Service Region One have reached agreement on the documents needed to transfer the collection from the Angeles NF to the Museum. Harvey Mack, an employee of the Cleveland NF, assembled and displayed the collection during the 90s. The collection was moved to the Angeles NF and stored in 2000 for budgetary reasons. This is a very valuable collection. When it arrives in Missoula, the Museum will assume the responsibility for its care.

Museum Collection — We hired curator Beth Humble to work part time with volunteers to begin the inventory and preservation of the existing archives and artifacts. We are using a portion of the Forest Service grant to pay for this work. Missoula are members who could VOLUNTEER some time for this project, please call the Museum office (541-6374).

GMR
Dave Stack and John Drake will have an opportunity to talk with Chief Bosworth and other leaders during a management review of Region One on May 13th in Missoula, MT. We will give a brief overview of the Museum and provide recommendations regarding the management of the Forest Service History Program and implementation of the National Agreement.

Capital Campaign — The Museum has asked the Montana Congressional delegation for $1.5 million in federal funds toward construction of a national museum to preserve Forest Service history. Cost of the initial facility is estimated to be $3 million. We will have to raise another $1.5 million to match the federal appropriation.

Forest Service
Centennial Activities

Char Miller Lecture Series
Dr. Char Miller, history professor at Trinity University in Texas and a Pinchot Institute Senior Fellow, will give a series of lectures around the country about the environmental and political history that developed and shaped the Forest Service. Dr. Miller is available to give 30 lectures, September 2004 - July 2005. The Museum is co-sponsoring with Region One a lecture in Missoula on September 29th — details to follow.

Centennial Congress
A National Centennial Congress in Washington, D. C. January 2005 and Regional Centennial Forums, late 2004 are being planned. Various themes have been determined, and each forum has a planning team in place.

Folklife Festival
June 29-July 10, 2005 on the Mall, Washington D.C. The festival is a living cultural exhibition - that generally includes musical performances, craft demonstrations, and illustrations of work lore. A wonderful opportunity to show off the skills and work traditions of the Forest Service to a million visitors.

Video
A video of the history of the Forest Service, will be shown at locations nationwide. The two-hour history includes "Roots of Conservation" (1865-1910), "Struggle and Growth" (1910-1946), "Getting Out the Cut" (1946-1970), and "Old Growth, New Forestry" (1970-2000)

Centennial Postage Stamp
There is strong interest in having the US Postal Service issue a commemorative stamp in recognition of the 100th anniversary of the Forest Service in 2005. The Postal Service is currently reviewing the Forest Service application.

Cookbook
A heritage cookbook is being prepared to pay tribute to the decades of dedication by Forest Service employees. We are currently looking for recipes using unique cooking methods such as Dutch-oven and open fire. Contact Beth King in Region 4 by calling (801) 625-5487 or email bking01@fs.fed.us if you have any questions or recipes.

Breaking New Ground
A compilation of major accomplishments of Forest Service employees that benefit the public. They will be available for use in exhibits, speeches, posters and will be provided to outside sources, such as TV and Radio.

Additional information on these activities can be found at http://www.fs.fed.us/newcentury/NCS_projects.htm
REGION 1 CENTENNIAL PROJECT

For the upcoming centennial in 2005 the Region One Preservation Team is emphasizing project work on four of the earliest Region One structures, constructed prior to 1910. This is not intended to exclude the over two hundred historic structures in the Region that are actively managed but it is to ensure that some of our earliest structures are brought to a usable, maintainable condition. This work will be completed in 2004. Buildings included are Bull River Guard Station, Kootenai National Forest, Moose Creek Cabin, Helena National Forest, Main Boulder Ranger Station, Gallatin National Forest, and Judith Ranger Station, Lewis and Clark National Forest.

If you have an interest in being involved in the preservation of these structures please contact the Heritage staff on the individual forests or the Historic Preservation Team at 406-329-3477 or email kmattewh@fs.fed.us. The projects will be on going until the end of October.

The Bull River Guard Station was constructed in 1908 as a Rangers house/office. The proposed future use is a cabin rental with on site interpretation of early Forest Service history.

Bull River Guard Station
Built in 1908, Kootenai NF, Montana

It received extensive work in the early 1990s including a new roof, log replacement, foundation replacement, floor repair/replace, and window and door repair. Work to be completed is limited to the interior and would include four weeks of fieldwork and four weeks of shop time.

MEMBER FEEDBACK

Moon Trees, Feb. 2004 Issue

Wm. D. Hurst, Albuquerque, NM
The Douglas Fir moon tree planted on the Civic Plaza in Albuquerque grew into a beautiful tree 30 or so feet high. When the city revamped the Plaza in the 1990’s the tree was dug up carefully, balled and stored with the intention of replanting it at the end of the revamp job. The tree didn’t survive despite the efforts of the City Forester to save it. We all felt a deep loss.

Moon trees not included in the article: Capitol grounds in Santa Fe, NM believed to be a Douglas Fir; and at a City Park in Carlsbad, NM.

Ralph Mumm, Duluth, GA
Reports a moon tree was planted at the Federal Building in Elkins WV.

Gary Brown, Missoula, MT
Reports a moon tree was planted on the University of Montana Campus in Missoula, MT.

Administrative Histories, Feb. 2004 Issue

Thanks to members Jim Grace, John P. Case, and Dave Scott who reported additional administrative histories of Forest Service units since the last newsletter.

Region 1 Custer NF, Nez Perce NF
Region 2 Black Hills NF, Nebraska NF, Routt NF and White River NF
Region 4 La Sal NF and Payette NF
Region 6 Gifford Pinchot NF and Willamette NF
Region 8 Daniel Boone and Ozark-St. Francis NF
Regions 7, 8 & 9 The Land We Cared For Research Central and Southern Rocky Mountain Research Stations
### Monetary Donations
**11/1/04 to 2/4/04**

We apologize for not listing all donors in the last issue. For some reason persons toward the end of the alphabet were omitted. We will acknowledge donations after Feb. 4, 2004 in our next newsletter.

- John Spencer, Jr.
- Robert P Spivey
- David M. Spores
- Lynn Sprague
- David M Stack
- Irene Stam
- Garfield M Thorsrud
- Robert & Beverly Tokareczyk
- Everett Towle
- Bud Veirs
- Dick Venable
- Jimmy Walker

- Helen M Waters
- Karl F Wenger
- Lillian Wenger
- Roy E Wenger
- Robert N Werner
- Allan & Joyce West
- Arvin L White
- Whit Whitfield
- Robert W Williams
- Archer W Wirth
- Richard & Shirley Woodrow
- Thaddeus Yarosh
- Ken I Young
- Rodney F. Young

A huge thanks goes out to all those listed above. Your help is very much appreciated and needed.

### Important Dates in History
- 1905 Forester Reserves transferred from Dept of Interior to Agriculture (Act of Feb 1, 1905)
- 1905 Bureau of Forestry renamed Forest Service (Act of March 3, 1905)
- 1907 Reserves Renamed National Forests (Act of March 7, 1907)
- 1930 Districts Renamed Regions

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### HARD TRIP TO MILESTOWN FROM THE BITTERROOT

From Milestown (now Miles City) Newspaper, April 25, 1920.

P. W. Stephenson, special surveyor, and an assistant, G. L. Siedel, who arrived a couple of days ago from Missoula, to survey unsurveyed homestead land in the Custer national forest, had a tough trip, they report, spent more than two weeks on the way, had to dig their Ford truck out of deep snow drifts on the continental divide, were pulled, out of numerous mud holes by teams, and as a fitting finale, while climbing the hill on the Moon Creek trail, got stuck in the mud Thursday and were forced to make an all night camp.

Mr. Siedel took a few snapshots of the car as it was stuck in mud in the Bitterroot valley east of Missoula. Mud completely hides the wheels from view in the photos, and both of the travelers state that for thirteen miles they were towed by horses until they finally got over the bad road.

Reaching the pass over the summit of the Rockies, they were warned to hold up for a time, until the deep snows melted, but wishing to come on through, they kept traveling. The snow had begun to melt, and before going any considerable distance they were overtaken by, their Nemesis, the Ford reached an exceptionally soft spot where the snow was about a dozen feet in depth, and dropped, almost out of sight, they say.

Help was secured, but it took some labor and several hours' time to get under way again, but it was finally accomplished and the journey continued. Rain fell during the entire trip they report, and when they at last reached the Moon creek road and started up the hill, the wheels gummed up with stiff mud, which refused to come off. Camp was made, and the mud guards had to be taken off and the wheels scraped before they could make it on into Milestown.

The party plans to leave here as soon the roads dry up sufficiently to make travel possible.

*From J.R. Stephens Collection*
Membership Application

Fill out, detach, and mail to: National Museum of Forest Service History, P.O. Box 2772
Missoula, MT 59806-2772

Name: __ Mr. __ Ms. __ Dr. __________________________ Address: __________________________

City/State/Zip: __________________________ Daytime Ph.: __________________________

E-mail: __________________________ □ New □ Renewal

Membership Categories Annual Dues

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Profession*: __________________________ Age*: __________________________

Income Range*: $__________/yr. Educational level*: __________________________

*These are optional

The Company Store

Get your NMFSH merchandise here!

Reduced Prices on Posters!

“Guardian of the Headwaters” by Monte Dolack: A print (left) dedicated to the men and women of the Forest Service on the 100th Anniversary of the USDA Forest Service, 2005. $20.00+$6 S&H unsigned, $75.00+$6 S&H signed and numbered, 25¢ for postcards.

NMFSH Cap: White w/ forest green bill and NMFSN logo, or solid green w/ white logo, cotton, adjustable, $12 ppd.

NMFSH Sweatshirt: Stylish, heavyweight, cotton/polyester sweatshirt. Forest green with cream logo. (L&XL only) $25 ppd.


“Conservation Motifs” Note cards: same design as the poster (with envelope) $1 each ppd.

“They Hired Out To Be Tough” Booklet: A short history of the FS published by the NMFSH. $5.00 each ppd.

Send check or money order only to: National Museum of Forest Service History
P.O. Box 2772
Missoula, MT 59806-2772
Please allow 3 weeks for delivery of all items
Coming Events

Annual Meeting of the Museum
2004—Missoula MT
August 26

2005- Portland OR during Retiree Reunion Sept 7 to Sept 9

Dr. Char Miller Lecture
Gifford Pinchot's biographer will lecture in honor of the Forest Service Centennial at the University of Montana, on Sept. 29, 2004 (We'll confirm date and provide details at a later date). Sponsored by the Museum & Region One, USFS.