

Osborne Panoramic Images

By Rob Hoeye

In the 1930's, the United States Department of Agriculture Forest Service (USFS) had over 3000 panoramic photographs taken from most of the lookouts and patrol points in service at the time. These photos, three each at 120 degrees and of scientific quality, were used to help with the detection and suppression of forest fires. The project and resulting technology were known as the "photo survey." Other forms of technology superceded the use of the photos and they fell into obscurity. Many advances in computer technologies have made it possible to capture, archive, correlate and make these images available to a very wide audience. Many other social and ecological factors have created a need for the public's access to the images. The product being described here is a continuation of the efforts begun in the late 1920's by the USFS, however, the uses today are far wider and the access far easier than the original team could imagine. One simply needs the Osborne Images CD described below and an internet-capable computer with a CD-ROM drive.

History of the Photos

In 1929, W.B. Osborne, a United States Forest Service Region Six employee and inventor, began work on yet another method which would improve the performance of the newly formed forest fire protection system. (He is known for creating the vertical scale firefinder.) He refined the swing-lens panoramic camera into a scientific instrument, the "photo recording transit," capable of accurately recording 360 degrees of scene which could translate into three thirteen-by-five inch negatives. The images contain graticules along each edge to record the azimuth and elevation of objects in the scene. The original use of the photos was to aid in communications about possible fire locations between the lookout and headquarters. *FOREST FIRE Control and Use*, Brown and Davis [Brown73] describes other uses, but all are related to the task of fire detection and control.

A group of Civilian Conservation Corps, "CCC" men led by Albert Arnst used as many as five of these cameras to record the views from almost all of the USFS fire lookouts (LO) and watch points in the region. The first wave took three years, from 1932 to 1935, \$20,837, 1923 man days, and 58,000 miles to photograph the 813 sites (roughly \$25.63 per site). Subsequent waves of site surveys happened as late as 1942.

The photographs were contact printed, mounted on cardboard as foldable triptychs and distributed. One complete set of all sites went to the Region office of Portland, a set of each forest to the corresponding Forest headquarters, a set for each district to each District office and each LO got its own. An acetate Vertical Angle Scale was included with each set. This scale is placed over the image so that the vertical angle to things seen in the image could be accurately determined. These proved very useful when creating the "seen area map overlays" described in Arnst's book [Arnst86] (some are located in the Oregon State Archives).

Sources indicate that many of the negatives were transferred to the National Archives-Photo Division, Washington, D.C. Mike Hanemann, retired USFS employee, photographer, and historic photo enthusiast, personally catalogued these holdings in the early 1990's. It is also reported that many of the negatives are still in the hands of the individual Forest headquarters. In 1985, Albert Arnst published a booklet entitled, *We Climbed the Highest Mountains* [Arnst86], which describes the history, process and uses of the photos. Many other texts and publications refer to the photos for specific uses.

In 1954, the aggregate set of mounted triptychs from the Region Six headquarters in Portland were logically transferred to Record Group 95 (Records of the USDA Forest Service) in the National Archives-Pacific Northwest Region, Seattle. The physical transfer actually happened in the mid-1990's. From 1954 to 1997, the photographs sat in their containers on their original mountings, decaying due to the acidity of the cardboard that they were mounted on. The prints are available for public access. However, the rules of accessing documents that are in the National Archives are fairly constraining. A researcher can have only one document from one folder from one container out at any given time. This limits the researcher's ability to compare images from neighboring sites. Also constraining are the hours and locations that these documents are made available. Further, the lack of geographical referencing (the images are stored by forest and site name order) limits the usefulness of the images to those unfamiliar with the regions' geographic names. (This is especially key when there are so many points with the same name.)

In the spring of 1997, with the encouragement of USFS researchers, IamWho Panoramic Imaging, "IPI," took the time in the National Archives, Seattle, demounting and scanning each and every photo at 100 dpi for a total of 3022 uncompressed images from 984 sites. More images were found in the Oregon Historical Society's library of photographs, located in Portland, Oregon. Still others await cataloguing at the Oregon State Department of Forestry in Salem. Work since then includes geo-referencing each image to one of the 995 sites gathered from the many data sources and creating the products described below. Many sources helped resolve ambiguity about the actual locations of many of the sites, notably, Mike Hanemann, who provided copies of USFS maps from the late 1930's. Each forest map has been annotated with the location of every triptych. An older edition of *Oregon Geographic Names* [McArthur74] helped in the cases where name changes occurred.

Osborne Images CD's

IPI offers two different versions of the CD. One contains all of the panoramic images of both Oregon and Washington (with a few from California) at a low resolution, 50 dpi. The higher resolution (at 100 dpi) is considered an academic version since it allows finer viewing of details, comparative studies, and better print quality, especially if cutting and pasting into other projects. Further, the academic version is spread across three CD's: Washington, Western Oregon (with several from Northern California), and Eastern Oregon (with many from SE Washington and Idaho). Many other supporting data, images, and stories are included. The CD is platform neutral, meaning the data and code are in web centric formats, making it compatible with most current platforms, PC, MAC, or UNIX (Sun, SGI, ...), which are internet ready.

The images are stored as minimum compression, highest quality JPEG files. Access to a particular image is made easy by a system of web pages. The image maps, portions of a map of Region Six from the 1930's, has many links and annotations to help the user and relates the site names with the actual locations. It also aids with navigation between sites. Without the maps, the user would need to already know the exact location of each site to get a "rewarding experience" from viewing the images.

The 1933 map of Region Six used in this product was also found in the archives. The location of each site was determined by correlating several databases including, the USGS Geographic Name Information Search (GNIS) data for Oregon and Washington and the names of each site from the triptych in the archives. The latitude and longitude of the sites were used to project the locations onto a copy of the 1933 map of Region Six.

To use the CD, simply place it into your computer's CD drive, launch your favorite web browser, and open OSBORNES.HTM file located in the root directory of each CD. Now follow the links to the forest, site and images you want to view.

Potential Uses of the CD's

Resource Planners and Landscape Architecture

Resource planners can and do use the images as reference for land use effects, and future land use planning. A landscape architect, the hands of the resource planner, will use the images as a reference for planned land usage as described in *Forest Landscape Analysis and Design* by Nancy Diaz and Dean Apostol [Diaz83].

Independent Researchers

Independent researchers can use the images to get a non-biased sense to the natural history of the land.

Ecology and Silviculture

Ecologists and silviculturists can correlate the historic images with current images taken from the same spots to show changes in ecology and land cover.

Anthropology and Archaeology

Many of the pictures contain images of humans, buildings, cars, animals, fields, trails, roads, (the list goes on).

Hikers, Sightseers, and Nature Enthusiasts

Hikers can use the CD to find and browse the view from popular hikes. Many of the hikes found in hiking trail books terminate at old lookout sites. An adventurer may want to "see" what they will view when they hike on their selected trail.

Hunters and Fishermen

Hunters are usually interested in assessing the best position and path for their sport. The images provide access to the scene hunters may not have time to personally visit. This "virtual tour" enhances their chances of success. Fishermen will find new lakes they may want to fish.

Photographers

Photographers can use the images and the inherent azimuth graticules to determine the best position for photographing a particular scene, e.g., incorporating the sun, moon and horizon. Without actually venturing to all possible sites, a photographer can use the images along with their own data about sun and moon positions, to imagine an image that would result from such a visit. This allows a photographer to select the best site for a desired effect.

Historical Photo and the History of Photography Enthusiasts

Those people interested in the images for their historical significance will find this catalogue interesting and easy to use.

Authors and Writers

Those writing about the CCC, the 1930's, or the history of the Forest Service can use the data and images to stimulate their own musings [Maughan96]. Others who wish to write explicitly about the photographs, photographers, history, and technology will need this CD.

Another type of writing, educational software, which teaches geography, geometry, natural history, or social sciences, can use the images as backdrop. (In each case, IamWho Panoramic Imaging requires that the writer enter into a special use agreement concerning the reuse and redistribution of the content.)

Physically Challenged and Virtual Travelers

People who cannot for various reasons hike or travel to the sites covered by these CD's will find the views rewarding, stimulating, and perhaps sentimental or emotional. You will be able to see Jack Kerouac's famous Hozomeen Mountain he wrote of in *Desolation Angels* [Kerouac65] from the Desolation Peak site on the Washington CD.

Citizens

Every U.S. citizen can leisurely or quickly visit the forest vistas of the 1930's.

Libraries

Provide access to the CD for those not willing to purchase a copy. Libraries can provide limited, shared access to the CD's.

Sources, References and Encouragement

American Resources Group, Vienna VA.

National Archives-Pacific Northwest Region, Seattle WA.

Oregon Historical Society, Portland OR.

United States Department of Agriculture Forest Service, Pacific Northwest, Region 6.

USGS Geographic Name Information System, GNIS, <http://www.usgs.gov/>

[Brown73] Arthur A. Brown, and Kenneth P. Davis, *FOREST FIRE Control and Use*, 2nd ed., McGraw-Hill, New York, 1973.

[Arnst86] Albert Arnst, *We Climbed the Highest Mountains*, Fernhopper Press, Portland, 1986.

[McArthur74] Lewis A. McArthur, *Geographic Names of Oregon*, 4th ed., Oregon Historical Society Press, Portland, 1974.

[Diaz93] Nancy Diaz and Dean Apostol, *Forest Landscape Analysis and Design* USDA Forest Service Pacific Northwest Region, 1993.

[Maughan96] Maughan et al., *Go Tell It on the Mountain*, Stackpole Books, Mechanicsburg, 1996.

[Kerouac65] Jack Kerouac, *Desolation Angels*, Riverhead Books, 1965.

Mike Hanemann, retired USFS employee and photographer.

S. Carrol Neuhart-Hoeye, M.A.E.

Ron Johnson, the late retired USFS employee, ex-Director, OR/CA/NV chapter, Forest Fire Lookout Association (FFLA).

Laura McCarthy, National Archives-Pacific Northwest Region, Seattle WA.

Jim Sedell, Director of Research, USDA/FS Pacific Northwest Research Labs.