Railroad Signatures across the Pacific Northwest

Carlos A. Schwantes

Inspired by a lifelong fascination with trains, blended with a historian's insight, Carlos Schwantes has written a pathbreaking photohistory of the impact of the railroads on everyday life in Oregon, Washington, Idaho, and Montana. He chronicles the complex and sometimes stormy history of the major and smaller railroads which fostered settlement, promoted tourism and economic growth, and helped to create the region's character. The book includes more than 200 photographs, most previously unpublished, that document the trains, towns, people, and landscape of the Northwest.

360 pp., 245 illus., 36 in color, tables, notes, bibliog., index
Clothbound, $39.95 until January 1, 1994; $50.00 thereafter

"A wonderful parade of how the railroad actually reached into the life of the Northwest, molded its communities and its citizens, and forever changed and shaped our images of the region."
—Alfred Runte

Available from your local bookstore or call 1-800-441-4115
From the Editor  2

History Commentary  3
Discovering the rich history of African Americans in the Pacific Northwest.
By Quintard Taylor

Kinsey Scenics 7
Landscape photographs by a Northwest master.
By Michael Vouri

Remembering the Old Ways  13
A Muckleshoot elder describes traditional Indian methods of procuring, preparing and preserving food.
By Kenneth D. Tollefson

Incarcerate or Cure?  17
The effect of the progressive era on Washington's mental health system.
By Russell Hollander

Our Nuclear Legacy 24
The Columbia Basin gave birth to the Hanford Engineer Works and a nuclear future full of unknowns.
By Michele S. Gerber

Tourists by Necessity 39
Oregon Trail passage through the "cosmic landscape" of the Snake River Plain.
By Peter G. Boag

Correspondence/Additional Reading 45

Columbia Reviews 46
Recent books of interest in Northwest history.
Edited by Robert C. Carricker
I'm back! Actually, I've been here all the time. The demands of supervising the design of the new museum and getting the private sector fund-raising campaign off the ground have taken most of my time the last two years, leaving little reserve for my column here in this space.

Our latest thematic series—the Overland Trail experience of the 1840s—continues in this issue with Peter Boag's essay on the most difficult passage on the trail to Oregon: the Snake River Plain of present-day southern Idaho.

Michele Gerber's contributions in this issue are an extension of our thematic coverage dealing with the 50th anniversary of World War II home front activities. Washington as we know it today is, in many respects, the result of developments during that vital period.

We are also pleased to present Quintard Taylor's personal reminiscence and survey of African-American history in the Northwest. In this regard, I'd like to acknowledge Taylor's fellow professor at the University of Oregon, Richard Maxwell Brown. Brown was the chairman of the 1993 Pacific Northwest History Conference, held last March in Eugene, and arranged to have Taylor participate in the program.

Beginning with this issue we will be adding the list of corporate and foundation contributors to the campaign for the new museum. They give an extra dimension to the regular feature we bill as "Special Friends and Members."

Finally, I would like to formally acknowledge the interest and support of the Washington State Legislature, which has provided the funding to construct the new museum. Groundbreaking will occur this fall and soon Washington's newest cultural attraction will be developing a profile on the skyline of Tacoma. We will feature updates on the new museum's exhibits in future issues of Columbia.

—David L. Nicandri
African Americans in Pacific Northwest History

EDITOR'S NOTE: This essay is derived from a luncheon address given by Quintard Taylor at the 1993 Pacific Northwest History Conference in Eugene, Oregon, last March.

The first Pacific Northwest History Conference I attended was 19 years ago in April 1974 at Pullman, Washington, when I served as commentator for a paper titled “A Conceptual Framework for Analyzing the History of Blacks in the Pacific Northwest.” One year after that conference I left the Pacific Northwest, not to return again until 1990 when I took my present position at the University of Oregon.

I came to Washington State University in 1971 to accept my first teaching position, in what was then the Black Studies Program. Because of my graduate training I was given the responsibility for teaching Afro-American history. I can still vividly remember one of those classes in 1971 when a student’s question inadvertently established the direction of my academic career. I was discussing some aspect of slavery in the American South when Billy Ray Flowers, a Portland native, raised his hand and asked:

“Why do historians, when they discuss the black experience, only describe events in the South and the urban Northeast—New York, Boston, Philadelphia, etc.? Why don’t you ever discuss the West or the Pacific Northwest?”

Being a young assistant professor with little tolerance of such “irrelevant” questions, I quickly responded and in the process revealed my glaring ignorance of the region that was now my adoptive home.

“Since blacks did not come to the region until World War II,” I proclaimed, “there is no African-American history in the Pacific Northwest.”

Billy Ray Flowers challenged me. He admitted he knew little about the history of black Portland or of the Pacific Northwest beyond his own family’s saga, which began in 1862. But he called on me, the historian, to seek out that history. I listened to this intense young student and later had conversations with other students from the region. None of them knew much about the area, but they were equally confident that black history was there “waiting to be discovered,” to use their phrase, if only a “real” historian would take up the challenge.

In 1972 I applied for and received a grant of $4,000 from Washington State University to research the history of blacks in the Pacific Northwest. I chose the regional approach because of the central location of Washington State University and its proximity to the states of Idaho, Montana and Oregon as well as Washington. Pullman is usually described as the “isolated university town in the southeastern corner of Washington,” so we were quite proud of being able to define ourselves as central to anywhere.

Armed with a tape recorder, a state car and student researchers, including for a brief while Billy Ray Flowers, I set out to reconstruct the history of the region. Between 1972 and 1975 we interviewed 50 families throughout the Northwest. Those taped interviews now constitute the Black Oral History Research Project housed at Holland Library, Washington State University.

The frequent research trips took me to what were for a native Southerner some strange, exotic places in search of black history—Butte and Great Falls, Montana; Pocatello and Twin Falls, Idaho; Pendleton and La Grande, Oregon; Roslyn and Centralia, Washington. Often there were surprises, such as occurred in my interviews of the Randolph King family of Twin Falls in 1973. Mrs. King was the descendant of Green Flake, the bodyguard of Brigham Young when the Mormon party reached the Salt Lake Valley in 1847. The Randolph family and other blacks in the area were still proudly practicing Mormons.

I remember interviewing State Representative Geraldine Travis on the floor of the Montana House of Representatives in January 1975, only hours after she was sworn in as the first African American to sit in the Montana legislature.

I remember well my surprise at discovering the King brothers of Tensed, Idaho—five men born into a family of African-American homesteaders who settled over 3,000 acres in 1889 in what came to be called King Valley. Each of the brothers inherited a share of the original homestead, and in 1972 the three surviving brothers still lived in the valley. King Valley was less than 20 miles from Pullman, yet virtually none of my associates suspected that any African Americans lived closer than Spokane.

With these and other discoveries I began to alter my views concerning the African-American historical experience in the region: I discarded the notion that there was a single black experience—that what happened to African Americans living in Mississippi in the 1880s or Chicago in the 1950s held for all black folks. Secondly, I began to assess what prompted African Americans to venture to the Pacific Northwest. Were they simply land-hungry pioneers or were more complex and compelling forces motivat-
ing them? I discovered that the white-black dichotomy was too simplistic. African Americans in the Pacific Northwest lived in an environment in which they interacted with Native Americans, Asians and some Chicanos. Three of the five King brothers, for example, married Indian women.

**OUR DECISION TO use oral history to reconstruct the experiences of African Americans in the region now seems innovative and daring.** Oral history as a field in United States history was in its infancy and its proponents promised profound new insights into the past. We were swayed much more, however, by what at that time was the absence of published work on African Americans in the Northwest and the belief, now clearly mistaken, that the small number of published articles reflected the paucity of primary sources. In 1971 the published field of black history in this region consisted of W. Sherman Savage's article “The Negro in the History of the Pacific Northwest,” which appeared in the *Journal of Negro History* in 1928; Daniel Grafton Hill's “The Negro as a Political and Social Issue in the Oregon Country,” which was published by the same journal in 1948; J. W. Smurr's 1957 essay, “Jim Crow Out West,” in *Historical Essays on Montana and the Northwest*; and Thomas C. Hogg's “Negroes and their Institutions in Oregon,” published in *Phylon* in 1968. In short, only four articles had appeared on black history in the Pacific Northwest.

We were alone in 1972, or at least we thought we were alone, in our interest in African-American history. Yet that same year a trickle of articles began to appear on black history. The first was Thomas C. Hogg's “Black Man in a White Town,” a study of the African-American community in Eugene, Oregon, from the 1940s through the 1960s, which was published in the *Pacific Northwest Quarterly* in 1972. The second article was Rex Myers’ “Montana's Negro Newspapers, 1894-1911,” in the *Montana Journalism Review* in 1973. Howard Droker’s “Seattle Race Relations During the Second World War” was published by the *Pacific Northwest Quarterly* in 1976, and the next year Mark J. Stern published “Black Strikebreakers in the Coal Fields: King County, Washington, 1891” in the *Journal of Ethnic Studies*. In 1979 William Lang's “The Negly Forgotten Blacks of Last Chance Gulch” appeared in the *Pacific Northwest Quarterly*, and my “The Emergence of African-American Communities in the Pacific Northwest, 1865-1910” became only the third article on the region published by the *Journal of Negro History*.

The trickle became a flood by the 1980s. The range of topics included black coal miners in Franklin, Newcastle and Roslyn, Washington; black Seattle in the 1920s and 1930s, which challenged previously-held assumptions regarding African-American community formation; both pre- and post-Civil War Oregon blacks; the campaign by World War II shipyard workers to integrate the Boilermakers Union; African-American migration to Washington during World War II; African-American women in the region; Pocatello's black community; and black soldiers at Fort Wright in Spokane at the turn of the century.

Only three years into the 1990s we have seen published an article on a black chaplain who served African-American troops in Montana in the 1890s; an article on white abolitionists and their black supporters in pre-Civil War Salem, Oregon; and an article that compares the historical experiences of Asians and blacks. We shall soon see a discussion of the career of Sam Smith, Seattle's first black city council member.


**The Frontier Era, 1788-1900**

The FRONTIER ERA marked the entry of African Americans into the region and the development of the first communities. Let me suggest four pioneers for this period whose personal sagas represent two distinct types of experiences of 19th-century black settlers. George Washington Bush, a Pennsylvania native, was one of the first settlers in Washington Territory in 1845. Washington, D.C.-born William Grose reached Seattle in 1861 after living in California and British Columbia. And A. E. Flowers, my WSU student's great-grandfather, arrived in Portland in 1862 from North Carolina in time to help establish the region's first African-American church. Sarah Gammion Bickford, another North Carolinian, arrived in Virginia City, Montana, in 1871; from 1888 to 1931 she owned and operated the city's water system and was one of its most prominent citizens.
As I said before, these four settlers reflect very distinct historical experiences in the frontier period. Bush and Bickford settled outside African-American population concentrations. They were thoroughly integrated into the surrounding white communities. Gorse and Flowers, however, both became leaders in the small but growing African-American communities of Seattle and Portland, respectively. I suggest this dichotomy because I believe both experiences say much about black history in the region. The majority of African Americans chose, like Gorse and Flowers, to live in black communities in the cities. But a significant number of blacks made their way as individuals in an overwhelmingly Euro-American setting. Although historians are quick to focus on the urban concentrations, we need to remember that the experience of black Americans in this region was also shaped by the interactions of such individuals as Bickford and Bush with their white neighbors.

The idea of freedom from racial oppression motivated many of these settlers regardless of their urban or rural setting. George Washington Bush’s desire for freedom from racial restrictions prompted his fateful move north of the Columbia to what became Washington Territory. Four decades later other African Americans seemed animated by similar ideas. Robert O. Lee, the first African American admitted to the bar in Washington, arrived in Seattle in 1889 from Mississippi, declaring he “had come seeking a place where race prejudice would not interfere with his prosperity.” South Carolina native I. Israel Walker claimed that he migrated to the Pacific Northwest to breathe its “free air.” Seattle newspaper editor Horace R. Clayton summarized the political freedom allowed in the region when he proclaimed in 1895, “We are the new frontier. And thousands of Negroes have come to this part of the country to stand up like men and compete with their white brothers.”

The frontier period saw the establishment of small African-American enclaves throughout the region. It may surprise many to know that Helena, Montana, has one of the oldest African-American communities in the region, second only to Portland, and that in 1900 its black contingent comprised a larger percentage of the total population than its counterparts in either Portland or Seattle. The town with the highest percentage of blacks at the time was Roslyn, where nearly half the population was African-American at the turn of the century. Small but vibrant African-American communities thrived in Boise, Pocatello, Butte, Great Falls, Spokane, Walla Walla, Tacoma, and Yakima. As in the case of Butte and Helena, these enclaves were often larger in 1900 than they were seven decades later.

Transformation, 1901-1940

The first four decades of the 20th century saw a decided transformation of black life in the Pacific Northwest. First there was the increasing concentration of African Americans in the largest cities of the region—Portland and Seattle. Not only was there internal migration of blacks from Helena or Roslyn to Seattle and Portland, but virtually all of the newcomers who arrived in the region after 1901 moved to the principal cities. Secondly, African Americans throughout the region saw an increase in residential segregation and social discrimination. To be sure, the Pacific Northwest was hardly Mississippi, but blacks here increasingly witnessed their exclusion from hotels, restaurants and theaters.

The Third Area of Restriction was perhaps the most crucial—employment. African-American women and men were limited to a range of low-paying jobs as maids, janitors, personal servants and waiters. Seattle’s employment statistics are suggestive of the consequences of discriminatory-based occupational concentrations for African-American workers. In 1910, 45 percent of the men and 84 percent of the women were domestic servants. Three decades later, though the black population had tripled, 56 percent of the men and 84 percent of the women still worked as servants.

Pacific Northwest African Americans could do little about their employment situation, but they did marshal their limited resources and called on white allies to challenge segregation and discrimination. The Seattle NAACP was established in 1913, and Portland organized a chapter the following year. These chapters, the first west of the Mississippi River, protested employment discrimination, residential segregation and school segregation. Occasionally, with the right leadership, the chapters scored modest successes. Beatrice Cannady, for example, who in 1922 became the first black female lawyer in Oregon, led the Portland NAACP’s successful campaigns to ban the film Birth of a Nation, to end school segregation in rural communities in northwest Oregon and to remove the notorious anti-black laws from Oregon’s statute books. Cannady is best known for a 1925 incident in which she defiantly walked through a line of angry Ku Klux Klansmen who had surrounded an East Portland school to protest her speech on school integration.

The Modern Era, 1941-1993

World War II ushered in another watershed in African-American history in the Pacific Northwest. Some 50,000 African Americans migrated to the region to work in defense plants. Although some returned home after the war, the majority stayed, prompting an increase in the
region's black population from 12,000 to 45,000 between 1940 and 1950. The wartime migration, which continues to this day, was decidedly uneven, favoring urban areas around the Puget Sound and lower Columbia Basin. Seattle's black population grew from 3,700 to 13,000 during the war years. Portland's population mushroomed from 1,900 to 22,000, although it fell to 10,000 by 1950. Bremerton grew from 77 to 2,100 and Vancouver from 44 to 3,300, indicating that smaller communities were swept up in the war-inspired population changes as well.

The influx generated both hope and despair among the region's black residents. African Americans were pleased that the increasing numbers meant greater political clout and more dynamic community leadership. But they also realized that the influx intensified black residential concentration and for the first time created in Seattle and Portland at least de facto school segregation. By 1950 it was apparent that the Pacific Northwest's largest cities now had racial ghettos that differed only in size from New York's Harlem or South Central Los Angeles.

These conditions prompted the 1960s civil rights movement in the Pacific Northwest. This entirely local effort by African Americans and sympathetic whites and Asians generated such leaders as June Smith, president of the Seattle NAACP; Tacoma NAACP president Jack Tanner; Pasco city council member Arthur Fletcher, and Portland activist William Mcclendon.

These leaders orchestrated direct-action campaigns to challenge the worst examples of racial discrimination. Typical of these campaigns was the 1964 downtown business boycott organized by the Seattle chapter of the Congress of Racial Equality. CORE, noting that downtown stores had hired no blacks even though African Americans comprised 30 percent of their customers, said that over 5,000 workers would be hired downtown during the next 12 months and asked that 1,000 of them be blacks.

CORE announced its boycott with a statement that declared: "the proposals are . . . neither racial quotas nor rigid demands. They are negotiable suggestions put forward as first steps toward the ultimate aim of full integration of the downtown work force." Then, invoking the imagery of Southern civil rights campaigns, CORE issued a call to battle: "An aroused community will present its just grievances through the persuasion of popular protest, the strength of economic pressure and the power of public opinion. We shall overcome!"

The boycott and picketing lasted until January 1965 when a number of stores agreed to hire African-American sales personnel. Such direct action efforts also integrated residential neighborhoods in Portland and Seattle and focused attention on the de facto segregation in the school districts of each city. The civil rights movement in the Pacific Northwest was not an overwhelming victory against racial discrimination. Of course, neither was the Southern campaign. But it did serve notice that black concerns in the region could no longer be ignored. Moreover, it energized and politicized an African-American community that had long been complacent about its status. Finally, it illustrated that the 1960s battle for racial justice was not simply a Southern campaign—that battle had to be waged in every corner of this nation, including the Pacific Northwest.

When I set out with a tape recorder to interview elderly African-American residents 20 years ago, I could not have imagined black folks in this region having such a complex, multifaceted history. I envisioned working on this project for perhaps a year and then returning to "traditional" African-American history, focusing on the South or the urban East. But reconstructing the history of African Americans in the Pacific Northwest proved to be a much larger project.

Despite the numerous publications on the subject since 1972, historians still have much to research. Yet I am pleased to know that other historians are writing about African-American history in the region. I am especially delighted that a new generation of graduate students from Bellingham and Missoula to Eugene are now engaged in researching the field. I hope the work that our generation continues to produce can be a foundation for the next generation's efforts. After all, nothing we write should be the last word on the history of African Americans in the Pacific Northwest.

Finally, I want to thank Billy Ray Flowers for giving my career a sense of purpose and direction. Keep raising the questions, Billy Ray, wherever you are.

—Quintard Taylor
"Thunderings of a falling monarch soon to echo through the woods, 1908." Taken from an original stereograph view.

The loggers [Kinsey] photographed, gathered around bunkhouse stoves or posing before gigantic old-growth firs, were enthusiastic customers of his mountain or seaside vistas.
Twice [Kinsey] went on major climbing expeditions in the Mount Baker and Mount Rainier areas, lugging the primitive equipment of the era on his back. . . .

When Darius Kinsey packed in hundreds of pounds of photographic equipment to primitive logging camps, there was always room for a bundle of his favorite scenic prints to sell for a buck apiece to the loggers. Kinsey is best known for his documentation of the logging industry in the Pacific Northwest between 1890 and 1940. But the loggers he photographed, gathered around bunk-house stoves or posing before gigantic old-growth firs, were enthusiastic customers of his mountain or seaside vistas.

Whether it was Mount Baker shimmering in summer reflection over the waters of Baker Lake, a stand of old-growth cedar dwarfing logging trucks and steam locomotives, or Ansel Adams-style studies of Yosemite Falls, they sold—and still sell—like sourdough flapjacks.

The Whatcom Museum in Bellingham acquired the Kinsey collection in January 1979 and since then has worked exhaustively to conserve and copy fragile glass and film negatives. More than 4,000 original negatives survive. The collection is now under the care of archivist Craig Garcia who, after more than eight years with the work, has found new markets for the images from Germany to Japan.

Kinsey started documenting early settlement life and the logging industry in 1894. In partnership with his wife Tabitha he set up his first studio in Sedro-Woolley in 1897. While Darius packed, log-trained or drove his old Franklin car in to the camps, mills and homesteads, Tabitha remained in the darkroom developing the prints or stereoscopic views that Darius sold to loggers and photo enthusiasts.

The Kinseys did so well that in 1906 they moved to Seattle, where their business flourished for another 34 years. The result is one of the most extensive and valuable documentations of Pacific Northwest logging history and forest scenics in existence.

The collection was combed in February 1990 when the Whatcom Museum organized an exhibition titled "Darius Kinsey: Scenics." Pacific Northwest shots made up the bulk of the images selected, including views of nearby Mount Baker, Mount Rainier and other points in the Cascades, some seaside views, and the ubiquitous frames of railroad rights-of-way on Chuckanut Drive. His exploration also revealed prime shots of Yosemite Falls, El Capitan and Half Dome, not to mention the sights of Yellowstone and Glacier national parks.

Hundreds of hours and anecdotes lie behind these photographs. Twice he went on major climbing expeditions in the Mount Baker and Mount Rainier areas, lugging the primitive equipment of the era on his back—most often the large eight-by-ten-format camera he used for scenics.

On a journey to Mount Baker in 1903 the Kinseys missed by mere "inches" being wiped out by an avalanche, according to their daughter, Dorothea Kinsey Parcheski. A story in the September 13, 1903, edition of the Seattle Post-Intelligencer documented the expedition of Sedro-Woolley people who almost reached the summit before they were forced to turn back because of deep crevasses and tumbling snowbanks. At one point in the trek, Kinsey reported:

OPPOSITE PAGE, BOTTOM:
Darius Kinsey with a variety of the large format cameras that he used, including a stereo camera on the lower left, c. 1920.

We were all looking at a small snow slide, several of which occurred within an hour, when the whole south peak seemed to be giving way. The break began about 800 or 900 feet from us and extended to within 100 feet... Large chunks of ice 30 or 40 feet square went rolling down the mountain.

Only moments earlier Tabitha Kinsey’s entire “Alpine stock” tumbled down a snow field and sailed into oblivion, “going over the ice like a thing of life, soon disappearing forever in a seemingly bottomless pit.”

That was Tabitha’s last mountain climbing trip.
A trip up Mount Rainier earlier in the year also is well documented. The Post-Intelligencer recounted a night spent in a “driving blizzard, 8,000 feet up” the side of the mountain at the Camp of the Clouds and a “narrow escape from instant death from an avalanche.” Kinsey claimed to be the first climber up the mountain that year and described how it required ten hours to cut a trail from Paradise Valley to the camp. The avalanche ripped through an area where he had been set up only moments before. The reporter concluded the piece with a warning from Kinsey urging climbers to take care wading the Paradise River—water that appeared only a foot and a half deep was over three feet deep.

All this for more pictures, always more pictures, Parcheski recalled. Vacation excursions to Yellowstone and Yosemite seemed to be more business ventures than fun for the family.
The bulky gear required a complicated packing system that included a sheet metal carrier Kinsey had constructed on the side of his automobile. There was room for “everything,” his daughter recalled: food, equipment, chemicals—the works. A portion of the carrier opened to form a table. Each family member had a role to play at setting up and breaking camp.

“My mother, brother and I knew what we were supposed to do,” Parcheski said, “and we did it. No fooling around. But Mother did not enjoy those everlasting camping trips . . .”

Many a long-suffering, late-20th-century spouse could identify with Tabitha. After a five-month camera tour of the United States Kinsey’s wife was so exhausted that one of her eyebrows turned snow-white, her daughter recalled.

Darius Kinsey, Jr., remembered the Franklin being so loaded down on the Yosemite trip that the family had to get out to push on the upgrades and hang on tight as the brakes slipped heading down. “That car wasn’t much for power or brakes,” Kinsey understated.

The younger Darius recalled an Easter vacation trip to the Cascade Mountains. The family spent the night in an Index, Washington, hotel and woke up in the morning horrified at the sight of a foot of new snow. Nothing as minor as snow or family outcry could turn Kinsey from his purpose, and the Franklin struggled up the unplowed road.

“But we managed to go through, up to an area where he could take some pictures, and he got some beautiful photographs of that mountain,” Kinsey, Jr., remembered.

Even during family outings in the country Kinsey was known to jump out of the car on a moment’s notice, set up on the shoulder of the road or disappear up a trail. In the Columbia River Gorge he once took off through the brush, rattlesnakes and all, and came back without a scratch to a family worn by boredom and worry.

During their excursions the family might wait for hours. Tabitha would chew him out, but to no avail, his children recalled—he just had to get that one more, “perfect” shot.

Nearly a century later the results justify the wait. From a breathtaking panorama of the Columbia River Gorge to the timeless lure of Table Mountain reflected in Picture Lake, just off the Mount Baker Highway, and a Skagit River rope-and-pulley ferry with mist-shrouded hills looming above—the scenics reflect Kinsey’s sensitive yet commercially aware eye. That’s where Darius Kinsey excelled: in pursuing his craft as a business with an accent on quality. He believed in printing scenics from the original negatives, not in copying the work of other photographers of the era. If that meant personally visiting and shooting faraway vistas, so be it. In Kinsey’s own words, “We’re in the view business exclusively.”

His painstaking efforts paid off. Kinsey was well-recognized in his own time. The Skagit County Times reported in 1900 that the “finest display of scenic photographs ever exhibited on the Pacific Coast” was on display at the post office. Kinsey was highly praised for his artistic skill in capturing views of the Columbia River Gorge to the timeless lure of Table Mountain reflected in Picture Lake, just off the Mount Baker Highway, and a Skagit River rope-and-pulley ferry with mist-shrouded hills looming above—the scenics reflect Kinsey’s sensitive yet commercially aware eye.

That’s where Darius Kinsey excelled: in pursuing his craft as a business with an accent on quality. He believed in printing scenics from the original negatives, not in copying the work of other photographers of the era. If that meant personally visiting and shooting faraway vistas, so be it. In Kinsey’s own words, “We’re in the view business exclusively.”

His painstaking efforts paid off. Kinsey was well-recognized in his own time. The Skagit County Times reported in 1900 that the “finest display of scenic photographs ever exhibited on the Pacific Coast” was on display at the post office. Kinsey was highly praised for his artistic skill in capturing views of the
Among the biggest Kinsey fans are the Japanese, who use the imagery for their fashion, sports, photography, popular mechanics and computer magazines, annual reports and posters. Kinsey’s images still thrive. Kinsey’s photographs appear on book covers (most recently on the dust cover of Thomas Pynchon’s *Vineland* and Murray Morgan’s *The Last Wilderness*), in magazine advertisements and medical encyclopedias, and even on jigsaw puzzles. Money earned from sales of one-time rights—more than $20,000 in 1989—is plowed back into conservation of the collection.

Among the biggest Kinsey fans are the Japanese, who use the imagery for their fashion, sports, photography, popular mechanics and computer magazines, annual reports and posters. To the Japanese Kinsey images apparently encapsulate what they perceive as the “frontier.” And frontier apparently sells. It is a strange dichotomy: loggers with bucking saws and axes dwarfed by old-growth cedar appearing dead center in a brochure promoting a major department store chain; or pioneers, posing uneasily before a crude cabin, in a broadside lauding sound equipment.

Then there are the puzzles. Never has the word been better applied. Imagine, if you will, a Kinsey image of a turn-of-the-century train trestle, one of those paradigms of crossed timbers towering above a fog-shrouded gorge, in 2,200 pieces. Kinsey would have loved it.

Former newspaper reporter/editor Michael Vouri is public affairs officer and occasional history exhibit curator for the Whatcom Museum of History and Art in Bellingham.
By Kenneth D. Tollefson

REMEMBERING the OLD WAYS

While most Native American traditional cultures are either extinct or threatened, for a few there at least remains the memory of the old ways in the minds of elders who were born nearly a century ago. Consider Louis Starr, one of the last of his generation to receive from his elders specialized training in traditional subsistence living, a term that perhaps does not adequately convey the complexity and sophistication of his culture. Starr was born on the Muckleshoot Reservation on September 6, 1898, to an Upper Duwamish father and a Snoqualmie mother and grew up on a small prairie near the present Muckleshoot tribal headquarters. He was the great-grandson of Chief Nelson, who was alive when the Point Elliott Treaty of 1855 was signed. What follows is based on two extensive interviews with Starr, focusing on his experiences and memories of the traditional food cultures of Puget Sound natives: acquiring, preserving and preparing the bounty of land and sea.

Unlike the Plains Indians whose mainstay, the bison, was utterly depleted by the advance of white migration, the Puget Sound tribes were able to utilize, in part, their traditional food sources well into the 20th century. In the case of Louis Starr and his people, the skills and even the sources of food remained intact into the period of intensive white settlement. In his advancing years Louis Starr shared his memories of hunting, fishing, gathering and preparing foods, as well as the skills required for such subsistence living.

Some of Louis Starr's earliest memories went back to fish camps, where he sat on the shoulders of older men as he watched them catch the large salmon migrating up the local streams. One of these fish camps was located on the Cedar River below the present town of Ravendale. Occasionally fishermen constructed grass mat shelters along a stream to provide shade and protection from bad weather. In earlier days migrating salmon were so numerous in the stream beds that they resembled a huge river of back fins worming their way up water arteries carved by melting mountain snows. Many of these fish weighed over 30 pounds. On one occasion young Louis hooked a salmon so large that it literally pulled him out of his dugout canoe.
On the Cedar River the spring salmon fishing season began in early April when its waters were lower and clearer for spearing fish. Since the Cedar River flows out of a lake and over a longer course than either the Green or White rivers, its waters carried less silt and debris from the spring rains and melting snow. Salmon were frequently impaled upon 14- to 16-foot fishing spears constructed from one long shaft and two diverging shorter shafts with removable barbed harpoon points attached to the end of each shorter shaft so that a harpooned fish could be played and pulled ashore or into the canoe.

Fish spears were cheap and effective since they were made from local resources, and once a fish was speared it was seldom lost. The barbs were made from elk horns, the points from deer horns and the shafts from yew wood. The harpoon head was fastened to the shaft with cordage made from “sweet grass” obtained east of the mountains and said to be more durable than rope. Later, a nail was used for the harpoon point and wood strips eventually replaced the deer horn barbs.

A crew of men generally fished a section of stream. Some men speared fish from the bank while a two-man canoe crew worked in the middle of the stream. Four general conditions contributed to good fish spearing: clear water, a light-colored stream bed, shallow water and penetrating sunlight. The head fisherman stood in a canoe and speared fish while his companion held the canoe straight and steady in the turbulent waters near rapids or in other shallow areas where the water flowed swiftly and the dark fish were visible. Fishermen wore dark clothes and blackened all of their equipment—canoes, paddles, fishing lines and fishing nets—because dark objects minimized the chance of bright reflections or flashes of light that could frighten fish away.

Poles were used by the river-canoe crew (one or more paddlers) to propel their craft through the swift waters near rapids ideal for spearing fish. Each member of the crew had a different job to do. While the men fished, women and children cleaned and cut salmon into strips for smoking or drying on rocks over a fire. It took very little heat but a considerable amount of smoke to preserve fish. Smoke penetrated the meat and for months kept it from spoiling. Too hot a fire caused the meat to overcook and frequently fell into the fire. Salmon roasted for immediate consumption was placed on wooden frames and cooked slowly, with the flesh toward the fire, until the grease dripped from the bottom end. When the meat became lightly crusted it was moved farther from the fire. Obviously, great skill was needed to catch, clean and preserve each species of wild meat in the traditional Indian way. Each kind of meat was prepared differently; even meat of the same species was prepared differently depending on its fat content, size and age.

All participating workers in a fish camp were entitled to an equal share of the catch. Smaller families received fewer fish while larger families received more. Though the methods have changed dramatically and resources are threatened, Puget Sound Indians continue to rely on salmon for a considerable portion of their diets.

Clams provided a second significant subsistence resource. Clams were harvested from April to August. Due to lower tides, June and July were especially good months for gathering clams on the beaches of Puget Sound. During those times families moved to the shores of the sound for several days each month. Large quantities of butter clams were steamed or smoked for later use. Dried clams were used like money with local Indians or for trade with the Yakima Indians.

Muckleshoot Indians cooked clams in underground pits, using heated stones six to eight inches in diameter to line earthen ovens. As the clams cooked, their juices ran down over the stones, producing steam heat. Seaweed, gunny sacks and canvas were put over the clams to hold in the steam, creating a pressure-cooker effect.
Once sufficiently steamed in these underground pits, the clams were shelled and placed on racks for smoking. Split cedar sticks were tied together by large strips of cedar bark 10 to 15 feet in length to form a portable smoking screen that could be rolled up for transport. A small, slow fire was used to smoke the clams as "hard as rocks." Smoked clams were put into 100-pound flour sacks and transported either by canoe or wagon to the Muckleshoots' inland homes. A family generally smoked four or five sacks of clams at a time. Partially dried clams were sorted out and later dried at home. Most of these dried clams could be kept for months and were consumed by local families. Horse clams were dried rather than steamed. These clams were placed on stakes stuck into the ground and hung over the fire. When dried they were strung together and hung from the rafters for storage.

The Duwamish Indians dug clams on both sides of Puget Sound. Their largest clam bed was near the present site of Federal Way. An extensive shell midden nearby attests to the productivity of that section of the beach. Louis Starr dug clams at the Federal Way site for almost 75 years (1905-1980). In fact, Duwamish Indians dug clams all the way from Browns Point near Tacoma to Seattle— wherever they "could find a good beach." Clams are still a favorite source of food to many Muckleshoot Indians.

Deer and bear hunting also provided a source of subsistence food. Individual Indians shot deer in the lowlands near their homes whenever they needed fresh meat. However, for their winter's supply of smoked venison they came together for communal deer hunts in the mountains. Mountain venison had a different flavor than lowland venison because the deer consumed different plants.

Deer hunters usually headed into the mountains early in the autumn and camped there until they acquired their designated winter's supply of venison. Hunting crews would select a direction and comb that section of woods for deer. After a deer was killed the hunter who made the "lucky shot" would bleed and gut the animal, cut up the meat and store it in a tree out of the reach of wild animals. Later, when the hunters arrived back at base camp they would take their pack horses to collect their caches of meat. When each section of woods was "hunted over," the crew picked a new section and repeated the process until they reached their winter's requirement.

At the base camp the men constructed temporary shelters by setting two saplings, each with a fork at the top end, into the ground and then placing a ridge pole in the fork. Smaller forked sticks were placed a short distance away in each side of the taller ones to spread the tree boughs, brush or skins that were placed on the ridge pole to form the roof-wall for protection from the cold and rain. A fire was built at one end of the shelter to provide heat, light and cooking facilities. The hunters slept under fur blankets. A few permanent camps in the mountains included "pole huts" resembling settlers' log cabins.

The hunting party then constructed a table rack twenty to thirty feet long by six feet wide made from sticks two inches thick and built an alder wood fire under it. After the fire burned down to form coals, they laid strips of venison on the rack. Once dried, the meat was packed on horses and taken home. Any meat found to be inadequately dried was re-cooked later at home. A hunter generally packed home a fresh deer for immediate consumption. At age ten Louis Starr went on his first mountain deer hunt. His job was to tend the grazing horses while the hunters were away from camp.

Until the 1940s the Upper Duwamish Indians also hunted bear in the moun-
While the men hunted, the women and children picked huckleberries, dug roots and gathered herbs for teas and medicines. Huckleberries were picked into large baskets and laid out in the sun on large cattail mats for drying. Camas roots were dug with a short two- and-a-half-foot stick and laid out in the sun to dry, much as potatoes, or placed in baskets and hung from the ceiling in their homes to dry. Dried camas roots were frequently mixed with king salmon to form a tasty dish. Huckleberry leaves were picked and dried for making tea.

The Upper Duwamish traded clams, seaweed, deer and other products with the Yakima Indians for dried roots, sun-dried salmon, horses and saddles. Formerly, the Yakima brought their sheep and pack horses over the mountains to graze on the western slopes almost to the present community of Enumclaw. They packed jars of fruit, huckleberries and smoked meat to Lester for shipment by railroad back to the Yakima Reservation. Much of the trade over the mountains stopped after World War II due to increased employment and decreased subsistence resources.

Louis Starr was taught to fish, dig clams, hunt and preserve food so that he could take care of himself and his family. When his trail hunting days were over he continued to hunt from a truck to secure his winter venison. His mother told him "if you [don't] learn to take care of yourself you will end up in need." He learned to care for himself as well as a family of 13 children, 31 grandchildren, 33 great-grandchildren and 8 great-great-grandchildren. He raised several grandchildren after their parents died.

Louis Starr continued to carve and pass on his skills to younger family members into his 90s. He carved a 28-foot river canoe, with the help of his son and grandson, for the Muckleshoot Tribe during the Washington State Centennial Celebration. He also constructed a 16-foot fishing spear for the centennial. He loved the water and the woods and asked to be taken up to the lakes in the mountains to fish just two weeks before he died on June 29, 1991. He was given a new fishing rod and reel for the occasion, but before he could use them he came down with the flu and died of complications.

He is remembered for his cultural knowledge, his carving skills and his great personal and physical strength. He was a logger, a champion Indian wrestler and a leader in the Indian Shaker Church. He said that he was the last of the youths to receive a traditional Indian education and is recognized as the last chief to live on the Muckleshoot Reservation. As one elder commented at his funeral, “His teachings will live in our hearts.”

Kenneth D. Tollefson is Professor of Anthropology at Seattle Pacific University.
Incarcerate or Cure?

The progressive era, roughly from the turn of the century to our entrance into World War I, was a period of intense reform activity in the United States. Progressives confidently grappled with a broad range of issues associated with urbanization and industrialization. They battled against economic inequality and fought for social justice, efficiency in government and social welfare reform. The progressives "can do" spirit was shared by the medical community, which had good reason to be stirred by a spirit of optimism. Medical research seemed poised on the threshold of major advances. It seemed only a matter of time before such ailments as cholera, tetanus, hookworm and yellow fever were conquered.

There was, however, one medical specialty area where optimism was not warranted as the progressive era opened: institutional psychiatry. The apparently disappointing results of moral treatment, the preeminent therapy of the 19th century, left institutional psychiatry in a state of disarray. Moral treatment was actually more a style of institutional management than a precise therapy. It emphasized a kind, humane attitude toward patients, free of coercion, while encouraging discipline and structure. However, even as institutional authorities recognized that the spirit of moral treatment should be integral to mental hospital work, they also realized that moral treatment alone was simply not sufficient to meet the needs of most patients. A viable therapeutic program to complement the institutional atmosphere of warmth and understanding envisioned by moral treatment simply did not exist.

Worse still, by the turn of the century it was becoming increasingly difficult to find mental hospitals where the reality of patient care even approximated the rhetoric of moral treatment. Most public mental hospitals were overcrowded and understaffed. An atmosphere of chaos and terror was all too common on many wards. The brutality that frequently characterized life for chronic or recalcitrant patients only served to confirm the concern of many that all was not right with the nation's mental hospitals.

In fact, institutional psychiatry tottered on the brink of therapeutic nihilism. The situation was bluntly summed up by Dr. Charles G. Hill in his presidential address at the 1907 meeting of the American Medico-Psychological Association (now the American Psychiatric Association). "Our therapeutics," he bluntly declared to his colleagues, "[are] simply a pile of rubbish."

Mental hospitals were fast becoming a nationwide network of huge and at times scandalous holding tanks. They were a frequent source of embarrassment to the state governments that supported them financially and to the physicians who were responsible for their day-to-day operation. In the late 19th century and the early years of the 20th century mental hospitals became "an embarrassment and a rebuke" to humanitarian impulses that traditionally guided American philanthropy.

Redefining the Mission

Difficult to find mental hospitals where the reality of patient care even approximated the rhetoric of moral treatment. Most public mental hospitals were overcrowded and understaffed. An atmosphere of chaos and terror was all too common on many wards. The brutality that frequently characterized life for chronic or recalcitrant patients only served to confirm the concern of many that all was not right with the nation's mental hospitals.

In fact, institutional psychiatry tottered on the brink of therapeutic nihilism. The situation was bluntly summed up by Dr. Charles G. Hill in his presidential address at the 1907 meeting of the American Medico-Psychological Association (now the American Psychiatric Association). "Our therapeutics," he bluntly declared to his colleagues, "[are] simply a pile of rubbish."

Mental hospitals were fast becoming a nationwide network of huge and at times scandalous holding tanks. They were a frequent source of embarrassment to the state governments that supported them financially and to the physicians who were responsible for their day-to-day operation. In the late 19th century and the early years of the 20th century mental hospitals became "an embarrassment and a rebuke" to humanitarian impulses that traditionally guided American philanthropy.

Redefining the Mission

The State of Washington was not spared from the political and therapeutic turmoil that surrounded mental hospitals throughout the nation. Washington's preeminent progressive governor, Albert E. Mead, who served from 1906 to 1910, was personally and politically committed to mental hospital reform. Using Mead as a case study can help us better understand the difficulties faced throughout the nation by those who wished to initiate reform of state mental hospital systems.

In the end Mead found that virtually the only possibility for reform lay in redefining what constituted a successful
The original permanent buildings at the Washington State Hospital for the Insane. The administration building is at center, with wards on either side. The wards were filled beyond capacity soon after they were built.

The desired final product at the beginning of the progressive era, a higher percentage of recovered patients, was all but abandoned by the end of the progressive era. It was replaced by a more attainable final product—a productive patient population. The change meant that institutional operations could be measured by a standard that reflected well upon politicians and physicians alike. The policies that were adopted to achieve the new final product satisfied the reform impulse of progressive politicians in a manner that could be justified on therapeutic grounds.

Public provision for the insane quickly became a major government enterprise. By the mid 1870s almost half of annual government expenditures went to support the hospital. It was the largest item in the territorial budget. By 1890 overcrowding at the hospital led to the establishment of a second institution, Eastern Washington Hospital, at Medical Lake near Spokane. Nearly two-thirds of annual state expenditures then went toward supporting the insane. By 1907 Washington's mental hospitals were aptly characterized in the Seattle Times as "the most important bit of philanthropy the state is engaged in."

State Hospital Needs

For all this, by the turn of the century, barely three decades after the establishment of the first permanent asylum, all was not well with the Washington mental hospital system. There were periodic complaints about staff brutality toward patients, political interference in institutional affairs, and inefficient management of institutional resources. No doubt, many of the complaints were justified. But the complaints only added to the frustration caused by the fact that the state could not seem to build new ward buildings fast enough to keep pace with the steady increase in the number of people committed to the hospitals.

By 1904, after 33 years of steady growth in the state's mental hospital system, the number of institutionalized patients had jumped from 14 in 1871 to 837. Superintendent A. H. McLeish of Western State Hospital reported that it was "in a badly congested condition on the male side." A basement of one building, as well as a vacated carpenter's shop, were being used as wards. "We have crowded in beds on all the wards," McLeish reported, "and by allowing 30 patients to each ward, which is all the air space should permit, we have room for about 400 patients, whereas we have 510 patients on these wards." An estimated increase of 100 male patients over the next biennium at Western only threatened to make an already critical situation worse. Overcrowding was also a serious problem at Eastern, where lack of space necessitated discharge of some patients "before they had entirely recovered."

Rectifying the situation was no easy task. New construction could not keep pace with demand. For example, at Western Washington Hospital new buildings to relieve overcrowding on the male wards were completed between 1905 and 1907. But only a year later a new superintendent, A. P. Calhoun, reported that the new wards would soon be filled. Moreover, there were now "enough patients sleeping in the halls and corridors at the present
time on the female side to almost fill a
new ward." Calhoun concluded that
there was a "dire need" for a third state
mental hospital to accommodate ex-
pected future increases in the number
of patients.

Overcrowding was caused
by a number of factors. New settlement in the
state combined with nat-
ural growth created an increasingly
large at-risk population. The ineffect-
iveness of available therapies made it
inevitable that large numbers of the
at-risk population who were eventually
institutionalized would become chronic
cases. Finally, the mental hospitals
were called upon to function as homes
for the elderly who, "having a few
harmless delusions and being unable
to support themselves, are adjudged
insane." These were people who could
be cared for at home or in county
infirmaries, "as well, if not better than
in the crowded wards of an asylum." But the economic incentive for the
counties was to send these people to
a state-supported hospital, if at all possible.

Given this situation, what was the
best that could be hoped for? There were
two alternatives. On the one
hand, perhaps all that could be reason-
ably expected of a state mental hospital
was that it be an "orderly place for dis-
orderly minds." The emphasis here was
not on treatment and cure but in assur-
ing that efficiency and decorum char-
acterized the operation of the institu-
tion, as was expected of every other
state enterprise. A well-managed, mod-
ern facility where buildings and pa-
tients were kept neat and tidy was an
achievable standard in which the state
might take some pride.

On the other hand, there was the
emerging progressive spirit. That spirit
is apparent in a report issued by Henry
Drum as he prepared to retire from
Washington's Board of Control in
1902. "We are not doing our full duty,
either to ourselves or the state, if we are
content with 'institutions running
smoothly and conditions satisfactory,'"he declared. The state's mental hospi-
tals were "mere caretaking asylums,"
whereas they could be "actual hospitals
for the insane."

Toward that end Drum recom-
manded that the state free institutional
physicians from administrative duties,
establish training schools for atten-
dants, offer medical internships and or-
ganize pathology labs. The superinten-
dents of the state's mental hospitals
supported the recommendations for the
reform of ostensibly medical institu-
tions, but lacked a political leader with
the enthusiasm and skill to follow
through on these reform proposals.

Mead Takes Office
IT WAS LEFT TO Governor Albert E.
Mead to provide the political lead-
ership necessary to translate the progres-
sive spirit into a program for practical
reform at the state's mental hospitals.
Mead took a special interest in mental
hospitals. In his youth Mead served "for
upwards of eight or ten years as an at-
tendant or nightwatch" in an Illinois
mental hospital. Prior to governorship
he visited "some of the leading [mental]
institutions of the western states" to
familiarize himself with the latest mental
hospital practices. Mead was eager to
apply his experience, as well as the rec-
ommendations of superintendents else-
where, to the task of improving the
Washington mental hospital system.

Mead's determination is clear from
his inaugural address. He promised to
promote modern treatment and hu-
mene living conditions in the state's
mental hospitals "to the end that those
whose minds are temporarily clouded
may again see the sunlight of intelli-
gence and be restored to reason and to
their friends, families and homes."

Clearly, Mead would not be content
with a custodial approach to institu-
tionalization in a mental hospital.

Mead's first step to improve
Washington's mental hospitals was to

Newly-built women's building at Eastern
Hospital for the Insane, c. 1911.
At Western, even if the superintendent was freed from all administrative duties, he and each of his assistant physicians could still be responsible for more than 300 patients apiece. The situation was much the same at Eastern where a physician “cannot but imperfectly look after the number of patients under his charge. He can do but little more than administer to their immediate wants with no time to study their cases or keep records that are of any scientific value.” Indeed, case records were no more than abbreviated ward notes written by attendants.

But the problem went deeper than overwork. At Western questions were raised about the competency of medical staff even if their case loads were lightened. After meeting with the superintendent and first assistant physician at Western, Elmer Heg, secretary of the Washington State Board of Health, concluded, “It does not seem to me... that in either case their opportunities have been sufficient nor their experience broad enough to justify placing upon either of them the responsibility of directing the care and treatment of the patients... and then expecting to obtain the best results.” The inspectors at Eastern were more circumspect in commenting on the qualifications of the medical staff, although they did conclude that the situation at the institution, “which is unfortunately too common in the west, makes these institutions not hospitals in reality but houses of detention.” They declared, “We believe a radical change in the treatment of the insane should be made in this state.”

**Mead’s Reform Proposals**

Mead was eager to follow up on a call for “radical change in the treatment of the insane,” although he proved uneager to remove institutional physicians. Within three months of receiving the reports from the Board of Health he reiterated to the legislature, “The duty of promoting means for the recovery of patients committed to state hospitals for the insane is paramount to the obligation of providing places for their detention.”

The most encouraging new treatment available was hydrotherapy. Undoubtedly, Mead supported the requests of the superintendents of the state’s mental hospitals when in 1908 they urged that the legislature appropriate funds for hydrotherapy equipment. Hydrotherapy, Calhoun advised the legislature, was “recognized by practically all authorities to be the best means of handling acute cases.” Superintendent John M. Semple of Eastern Washington Hospital “urged in the strongest manner the absolute necessity of providing at once for the installment of approved hydrotherapeutic apparatuses.”

Within a few years of the equipment’s installation it was evident that hydrotherapy was not a solution to the goal of promoting recovery among mental hospital patients. “It appears to be a more pleasant way of allaying maniacal excitement in many cases, and in that respect is an advantage,” Semple concluded in 1912. Semple only echoed a growing feeling among superintendents throughout the nation when he suggested that there was little reason to believe that hydrotherapy would lead to a substantially greater number of recoveries.

Mead advocated other reforms. He urged that husband and wife teams be employed as attendants on male wards in order to encourage better behavior among patients through a more home-like atmosphere. He thought that training schools for attendants should be established at the state mental hospitals to improve patient care. He called for a system of county-supported detention hospitals for short-term stays and time for observation to determine if a person was sufficiently ill to necessitate commitment to a state mental hospital. Mead proposed a state infirmary that could help relieve the mental hospitals of the burden of providing care for elderly patients. Finally, he called for a higher salary scale to attract better medical personnel.
Mead met with almost no success in implementing these proposals. Husband and wife teams were considered a therapeutic fad. Training schools for attendants were acceptable in theory but the follow-through was half-hearted. It required too much time and money to thoroughly train attendants in view of the fact that so many were transient workers. Counties were not enthusiastic about establishing detention hospitals, no doubt because they would be expected to bear the cost. A bill to establish state infirmaries passed in the Senate but failed in the House of Representatives, apparently due to concern about the cost of the facilities to the state. Nor were budget-conscious legislators eager to raise salary levels to attract more experienced personnel at a time when they were already being asked to fund new medical positions and approve costly building projects to relieve overcrowding.

Even if all of Mead’s proposals had been implemented there is little reason to believe that they would have substantially altered the custodial character of the state’s mental hospitals. There were, in fact, no medical or psychological treatments available that could substantially increase recovery rates and no alternative residences willing to take patients who were languishing on hospital wards.

Work as Therapy
Mead was personally and politically committed to mental hospital reform. Moreover, to relieve overcrowding he had to find a way to make construction of yet a third mental hospital palatable to state legislators. In late 1908 Mead began to advocate a new reform program to meet these objectives. He proposed that the state organize mental hospital patients—along with state training school, reformatory and penitentiary inmates—into agricultural labor forces “to produce all of the fruit, vegetables, milk, butter, poultry, etc. required for consumption in the various State institutions.”

To be sure, by 1908 mental hospital patients were already laboring in the state’s institutions. In 1904 the Board of Control noted that even though mental hospital patients were not required to work “a great many of them prefer working to remaining on the wards.” The board concluded that “light work has not been detrimental to their recovery, but on the other hand occupying their time and attention has been beneficial.”

Also in 1904 Superintendent W. J. Howell of Eastern Washington Hospital reported that the institution was managed economically only because of produce received from its own farm. The labor force for this important institutional enterprise came from the patient population.

Superintendent Calhoun reported in 1908 that “male patients are employed on the farm, garden, lawn, greenhouse, engine room, carpenter...”
shop, tin shop, blacksmith shop, etc., while female patients are given employment in the sewing room, dining rooms, laundry, etc., and are also allowed to do fancy work if they care to.” The difference was that, whereas in the past work was considered an optional activity for patients, Mead proposed that agricultural laboring become a central, state-sanctioned part of an institutional program for patients. The official sanctioning of that policy had important implications for the form and function of the state mental hospitals as well as for all charitable and correctional institutions in the state.

Mead's plan for mental hospitals was part of a broader program to make the state’s charitable and correctional institutions “more nearly self-supporting.” Undoubtedly, the prospect of making all state institutions, but especially mental hospitals (the most costly state institutions), less expensive to operate made Mead’s proposal attractive to legislators. However, as Mead pointed out to the Washington Conference on Charities and Corrections at its 1908 meeting, economy was not the only advantage to the proposal.

Work, Mead argued, was beneficial to patients. He added that the nation’s “most eminent alienists favor the employment of insane patients in light labor.” Farming was not usually thought of as light labor, Mead acknowledged. However, “it could be made so by division among so many hands.” Farming, he declared, could provide year-round activity that “would be beneficial to the health of the patients and would also tend to arouse their interest in something other than the particular hallucinations which becloud their minds.”

Superintendent Calhoun took Mead’s proposal one step further and called for the establishment of an industrial department at Western Washington Hospital. Farm work would be for male patients. The industrial department would primarily engage female patients in the “manufacturing of carpets, rugs, baskets and other profitable occupations.” Industrial departments were “very popular in the East,” Calhoun informed the legislature. They “furnish . . . employment to many stupid, chronic cases.” Moreover, “[t]he department could be very aptly classed under ‘treatment,’ as it is a means of re-education.”

The idea of transforming the state’s mental hospitals through the use of patient labor and in the name of therapeutic benefit proved irresistible. The change would be beneficial to patients and advantageous to the state’s purse. Within two years of Mead’s proposal a site for a third state mental hospital, Sedro-Woolley, was selected mainly on the basis of its suitability as farmland.

The new institution, Northern State Hospital, would be organized so as to maximize use of patient labor and thus minimize state expenses. The state was determined that the new mental hospital would not become another long-term economic drain on public resources. Even before the major institutional buildings were constructed more than 100 chronic patients were transferred from Western Washington Hospital and employed in a wide variety of labors “from gardening to slashing, making posts, shingle-bolts, etc., in fact all kinds of labor connected with cleaning up the place.” Superintendent McLeish of Northern State Hospital was certain that such outdoor activity was “conducive to good health” among the patients.

During the 1920s all of the state’s mental hospitals were transformed into work-centered institutions. A review of annual reports submitted by the hospitals clearly shows that such issues as farm output, acreage under cultivation, amount of livestock, and needs for new barns, piggeries and chicken coops became prominent. No one suggested that farming or industrial labor would actually cure patients. Indeed, the question of cure was rarely raised. All that institutional authorities claimed was that work was beneficial to patients, especially chronic patients, who now had a productive use for their time while under institutional supervision.

The Mead Legacy

TESTIMONY TAKEN DURING A 1921 INVESTIGATION OF WESTERN AND NORTHERN STATE HOSPITALS SERVED TO HIGHLIGHT THE INSTITUTIONAL MODEL THAT DOMINATED
thinking about state mental hospitals by the close of the progressive era. The investigation was organized to look into charges of staff brutality at both hospitals. However, the line of questioning soon led to a review of the hospitals' general organizational structure.

In response to queries concerning the priority given to medical treatment of patients as compared to other institutional activities, William Kellar, superintendent of Western Washington Hospital, simply denied that any institutional departments were subordinate to the medical department. Rather, he declared "the medical department is just as much a department, as far as I am concerned, as the engineering department, or the farm department, or the poultry department."

A committee member commented, "I have always thought an insane asylum was an institution to give the insane some personal attention, and cure them and get them out of there." He found no support from among institutional personnel who testified. That was not how employees understood the hospitals' mission. The committee member asked a former attendant at Western, "What is the superintendent supposed to do? Is he running it there as a chicken ranch, or is he supposed to be running a hospital?" The response was that the superintendent was in charge "of the entire institution."

The message was clear: the hospital was only one department of the larger institution. There was no special place for the medical department. The committee member incredulously but correctly concluded that the superintendent "is running a hospital and running a dairy and running a chicken ranch and running an electric plant, and everything else." This was the new world of the mental hospital.

By the early 1920s it was clear that Mead's proposal for labor-intensive institutions had a significant impact by helping to redefine the form and function of the state mental hospitals. At the turn of the century the mental institution was modeled after the efficiently-run municipality of diverse functions, one of which was to tend to the medical needs of its residents.

The superintendent was the equivalent of a mayor whose concern was the efficient operation of all departments within his jurisdiction. Efficiency in government, a progressive goal across the nation, was applied to the miniature city of the mental hospital. Production of goods and services was the standard of good citizenship for the residents of these state-supported communities. It became the responsibility of the superintendent and all other institutional staff to promote this standard of good citizenship among patients for the ultimate welfare of the hospital community as well as for the benefit of its individual members.

Russell Hollander is Professor of Psychology at Saint Martin's College in Lacey, Washington. His research interests include the history of Washington's mental health services as well as historical issues related to the development of public policy for mental health and mental retardation services. He received the Frank R. Bruel Memorial Prize for excellence in scholarship in social welfare history.
By Michele S. Gerber

The Hanford Engineer Works Comes to the Columbia Basin

One surprisingly temperate day in late December 1942, Colonel Franklin T. Matthias flew over the lowland desert plain of the Columbia Basin in south central Washington. His fellow scouts, DuPont Corporation engineers Gilbert Church and A. E. S. Hall, had not been able to obtain clearance to board Matthias' military aircraft. So they drove and walked around the tract that lay west of three tiny, dusty towns called White Bluffs, Hanford and Richland. All three of the engineers were strangers to the sandy territory that newcomers usually saw as lean and sparse. Yet, to those who chose to stay and wrest a living from this open land, its comforts became sufficient. There was the bounty of the grains and fresh fruits that the ashy, volcanic soil could produce, the closeness of caring friends, and the beauty of the giant rivers and tiny desert flowers.

As Matthias, known to his friends as Fritz, and the DuPont engineers explored the triangular tract, they noted the presence of gravel, shale and sandstone underlaid by hard basalt. Then they observed the huge Columbia River, which rushed in a big, southeastward arc past all three of the tiny towns. It was winter, yet the ground was not snow-covered nor the river blocked with ice. Downstream from Richland about six miles they checked the big loading docks and warehouses along the Columbia at Pasco, a larger town of 3,900 inhabitants. They noted the profusion of railroad and electric power lines from Spokane and Grand Coulee Dam to the north, and from Portland and Seattle to the south and west. This district, while remote and nearly empty, obviously was well-connected to the outside world.

Well pleased, they left. On New Year's Eve, back in Washington, D.C., Matthias told Lieutenant General Leslie R. Groves, chief of the top-secret Manhattan Project:

We were unanimously enthusiastic about the Hanford area... We studied and looked... and recommended the... Hanford site... as being far more favorable in virtually all respects to any other.

Groves ordered government real estate appraisers to assess the costs of buying out the farms and moving the people. He told colleagues that the Hanford region was "the best site in general and, more specifically, best in regard to safety." Thus, in only a month's time and by a few men, one of the most significant decisions in American history was made.

Surprise at Site Selection

When Leslie Groves and Fritz Matthias reached the decision that would change the Columbia Basin forever no one in the region even knew that they
had visited. Behind the scenes, however, events moved quickly. The federal appraisers, working swiftly, evaluated the lowland soil as "mediocre to poor in quality and condition . . . low in organic matter." The costs of condemning this land and moving out the approximately 1,500 people living within the tract of interest, they believed, would not be prohibitive. The necessary legal procedures were instigated in February. On March 6, 1943, the affected residents learned that history and geography had come together in an unpredictable nexus and that they would have to leave their homes.

The next weekly issue of the Kennewick Courier-Reporter proclaimed:

RICHLAND, WHITE BLUFFS AND HANFORD ARE TO BE TAKEN BY HUGE WAR INDUSTRY . . . MASS MEETING CALLED AT RICHLAND TO EXPLAIN THE WAR PROJECT TO RESIDENTS.

Shock was the common reaction. People also felt a powerful curiosity as to why the federal government would want this arid, wind-blown, difficult place. They hoped for answers at the Richland meeting but were told that the military plans for the region could not be disclosed. In subsequent discussions with Army engineers who were taking their homes, explanations remained elusive. Matthias, affable yet forceful, disarmed questioners with a smile and the simple answer: "If I told you what the government is doing, I'd be court-martialed tomorrow."

Years later, of course, the residents of the Columbia Basin, along with the rest of the world, learned why the region seemed ideal to American military planners. The secret endeavor quickly became known as the Hanford Engineer Works (HEW).

The Manhattan Project

The project conducted at the Hanford site had its genesis in early 1940s research carried out by the federal Office of Scientific Research and Development (OSRD). The earliest OSRD studies in atomic physics concentrated on the highly fissionable (divisible) but rare isotope uranium 235 (U-235). In March 1941 a research group headed by physicist Glenn T. Seaborg at the University of California produced the first submicroscopic amounts of plutonium 239 (Pu-239).
supplies officer Leslie Groves was named to head the MED.

As the fragile, dusty territory of eastern Washington lay waiting to discover why the Army engineers were so attracted to it, scientific developments were proceeding rapidly. Most of the nation's prestigious pioneers in physics had been assembled by the MED at the University of Chicago's Metallurgical Laboratory (Met Lab). They were brilliant, but they had to work amidst awesome uncertainties. Usually the equipment needed for their processes was not even designed, much less manufactured. And there was the question of maintaining health and safety in the presence of large quantities of new, deadly and poorly understood radioactive substances. Yet it was Groves' philosophy that "nothing would be more fatal to success than to try to arrive at a perfect plan before taking any step." The MED plunged ahead.

Site Criteria

In August and October 1942 physicist and key bomb developer J. Robert Oppenheimer emphasized to MED officials the extraordinarily hazardous and toxic nature of the gases generated in plutonium's chemical separations phase. The need for a remote and isolated site was discussed. At the same time the DuPont Corporation, a large Delaware-based chemical and engineering firm, was considering General Groves' urgent request that it become the prime industrial contractor for the Hanford project. In November company president Walter S. Carpenter reluctantly accepted the assignment but voiced the opinion that, "for safety's sake...because of...unknown and unanticipated factors" in the plutonium production process, the plants that would manufacture this deadly substance and its toxic by-products should be located far from the populous East Coast or Midwest.

In his memoirs Groves has been very candid about the radiological dangers that were known to MED officials:

Reactor theory at this time did not overlook the possibility that once a chain reaction was started, it could...get out of control and increase...to the point where the reactor would explode. We knew, too, that in the separation of plutonium we might release into the atmosphere radioactive and other highly toxic fumes which would constitute a distinct hazard...I was more than a little uneasy myself about the possible dangers to the surrounding population.

Additionally, the War Department's first public report on the Manhattan Project confirmed the early knowledge of danger. According to this August 1945 document, the Hanford site was selected partly for its "isolation...[because] at that time [late 1942], it was conceivable that conditions might arise under which a large pile might spread radioactive material over a large enough area to endanger neighboring centers of population."

As soon as the decision was made in December 1942 to move the plutonium production facilities far from the densely-populated East Coast, DuPont officials, Colonel Kenneth Nichols—Manhattan Project deputy chief—and Matthias met to develop site criteria. The place would have to be very large and remote, with a hazardous manufacturing area in a rectangle of at least 12 by 16 miles. Laboratory facilities would have to be situated at least 6 miles away from the nearest pile or separations plant, and there could be no existing towns of more than 1,000 people closer than 20 miles to these structures.

HE ENGINEERING requirements demanded abundant working water (estimated at 25,000 gallons per minute) and a dependable electric power supply of at least 100,000 kilowatts. In most crucial respects the open, arid Columbia Basin seemed ideal. When Matthias and the DuPont engineers found the place two weeks later they realized that the tract's composition of shale and sandstone underlaid by hard basalt would make a strong foundation for the massive concrete piles. They also noted that the plentiful gravel could be used for road-building and concrete.

Prior History of Radiation Risks

When the MED decided to seize the land and build the nation's plutonium manufacturing facilities there, it also resolved to generate there the largest amounts of radioactivity and radioactive waste ever produced on earth. Prior to the undertaking at Hanford only minute amounts of plutonium had been produced under controlled laboratory conditions. Now thousands of pounds of it would be fabricated.

Prior to the MED-sponsored atomic research in the early 1940s, the world had learned some painful lessons about radioactivity. In 1895 German physics professor William C. Roentgen published his discovery of x-rays, along with an explanation of how to produce them. Within a year a medical x-ray center had been founded in nearly every American city, and there were many x-ray machines in private physicians' offices. Doses were measured by guesswork and many quack practitioners also used the machines.

Users quickly reported such side effects as hair loss and skin burns. The medical community knew by 1903 that x-rays sometimes produced deeper side effects—cancer, sterility and "damage to the blood-forming organs." World War I greatly expanded the demand for medical x-ray services. Soon afterward concern about the dangers of x-rays infected the public as a series of news reports documented a disproportionate number of deaths among radiologists.

Damaging health effects from radium were recognized first in the mid 1920s. Radium, a naturally radioactive element that undergoes a spontaneous atomic disintegration ("decay" or stabilization) into lead, was discovered by Marie and Pierre Curie in Paris in 1898. Although Marie Curie, as well as her
daughter Irene, later developed cataracts and died of leukemia, no connection was traced to their work with radium. Throughout the early 20th century radium was hailed as a miraculous medical restorative. It was used widely in patented tonics as a cure for ailments including rheumatism, indigestion, hemorrhoids, high blood pressure, diabetes, baldness and nervousness. It also was used to produce watch dials that glowed in the dark. The advent of World War I increased the demand for these luminous dials. Most of the watches were made by the U.S. Radium Corporation of Orange, New Jersey, and most of the dial painting was done by young women working in home “studios.” They painted by hand and pointed the tips of their brushes by moistening them between their lips. At the war’s end the company sought to sustain itself by switching to the manufacture of novelties such as luminous doorbells, light switches and clocks.

By the end of 1924 at least nine of the young women painters employed were dead. Autopsies performed on two of the dead women showed their bones to be highly radioactive. The lungs of painters still alive contained radon 222, arising from the decay of radium 226. Public awareness of the hazards of radium thus greatly increased.

Health Effects Largely Unknown

WHEN THE MANHATTAN Engineer District was formed in 1942 it sought to expand the basic knowledge about the health effects of radiation. It also strove to develop methods of shielding workers and the public from the puzzling hazards. The MED developed monitoring instruments and trained doctors and “health physicists” to work at the huge Hanford facilities. The new field of health physics researched the biomedical effects of ionizing radiation and devised methods of shielding and monitoring radiation workers.

DESPITE THE INTENSE research efforts of the MED and the Met Lab, however, there was a lot about the biomedical hazards and effects of radioactivity that simply was not understood in the World War II era. A 1946 DuPont report confirmed: “At the time the [Hanford] Project began, there were no established tolerance limits for certain of the hazards which would be encountered.... Product hazards were not completely understood.”

There was an overall, though nonspecific, knowledge of danger. All of the various radionuclides that would be produced by the process at Hanford had not even been characterized. MED scientists did not know how these isotopes would interact and compound, nor how they would behave in soluble versus insoluble form. They did not comprehend how they would concentrate in the food chain in plants and tissues of insects, river plankton and algae, fish, birds and mammals. They did not know if, or to what extent, it mattered whether various radionuclides entered living organisms by inhalation, ingestion through food or contact with the skin, nor what the excretion curves would be. They did not know the dilution factors of wind and river water, and they did not know the absorption rates or capacity of the sandy earth on the Hanford site.

The Delicate Balance

MANHATTAN PROJECT officials, moving swiftly to seize the dusty, triangular tract in the Columbia Basin, weighed a delicate balance. There were far fewer people living in all of eastern Washington than in Knoxville, Tennessee, (continued on page 34)
By Michele S. Gerber and Eric J. Campbell

HANFORD'S OMNIPRESENT STORAGE TANKS

EDITOR'S NOTE
The Hanford site's storage tanks are frequently under discussion in the contemporary press. In the following photographic essay the history of commonly-referenced installations is highlighted.

Throughout Hanford's history, high level wastes have been stored in underground tanks, and tank space has always been limited. Of 64 single-shell tanks (SSTs) built during World War II (B, C, T and U tank farms), half of these tanks were 100 percent full and the other half were 40 percent full by late 1946. A huge expansion at the Hanford Engineer Works took place in 1947 with 46 SSTs of BX, BY, and TX tank farms; and from 1950 to 1952 (the Korean War Expansion) with 18 additional tanks in TY and S tank farms.

In 1952 the opening of both U-Plant (the Metal Recovery Plant) and the REDOX (reduction extraction) Plant introduced new complexities in tank wastes. U-Plant's mission to recover wasted uranium out of SSTs created unexpectedly large volumes of chemically complicated wastes. In an attempt to conserve tank space, Hanford Works scientists "scavenged" the new U-Plant wastes with ferrocyanide salts and nickel. The addition of these chemicals caused the cesium-137 in the wastes to precipitate to the bottom of tanks, thus rendering much of the remaining liquid waste volume available for evaporation. Today the presence of...
ABOVE: Steel was scarce during World War II, but due to Hanford’s high priority for materials procurement it received the carbon steel needed for its radioactive waste storage tanks. This September 1944 photograph shows progress on the steel shells in one of the first four tank farms. Each had 16 tanks—12 with a capacity of 500,000 gallons and four (visible at far right) with a capacity of 55,000 gallons. Each weld joining the steel plates was checked by x-ray to verify its integrity.

BELOW: Just as work on Hanford’s first three atomic reactors progressed at different speeds, some waste tanks were completed before others. The tanks in this photograph, also from September 2, 1944, had finished steel shells, and some already had their covering of reinforced concrete. About three weeks later the world’s first full-scale atomic reactor, B Reactor, went into operation.

The storage tank photographs reproduced here are courtesy of Westinghouse Hanford Company.
ABOVE: Concerns about the size of the nation's nuclear arsenal led to a major expansion of Hanford from 1947 to 1949. It included the construction of two more reactors and 42 new waste storage tanks. On February 27, 1948, workers pour the concrete base for one of the 18 tanks in the TX tank farm. At a capacity of 750,000 gallons each, the TX tanks were the largest built at Hanford at that time.

BELOW: Post-war construction at Hanford was no less urgent once the decision to expand was made. This August 13, 1948, photograph shows TX Tank Farm, located near T-Plant, nearly ready to be covered with soil. TX Tank Farm was the principal processing facility at that time. The pipes on top go through the concrete to the steel shell inside; they connect to ventilation and monitoring equipment.
Hanford's environmental monitoring program turned up evidence in the mid 1950s that radioactive waste in some tanks was leaking into the surrounding soil. As a result, when more tanks were needed later that decade, they were built with two steel shells instead of the one-shell design used for the first 149 tanks. The improved design has been used at Hanford ever since. This 1969 photograph shows the construction of Hanford's first two double-shell tanks.

Ferrocyanide in 24 (known) tanks from the U,Plant mission constitutes a difficult clean-up challenge at the Hanford site.

The initial operations of the REDOX Plant brought the first self-boiling wastes to Hanford’s S Tank Farm in mid 1952. Radioactive wastes will “self-boil” when the decay process of the radionuclides generates enough thermal heat to cause the entire liquid volume to reach the boiling point. The new SX Tank Farm, then under construction, was fitted with air-lift circulators and mechanical augers, thermocouples and interconnected condensers to accommodate self-boiling wastes. This 15-tank farm, in addition to the 6-SST A Tank Farm, was built during the 1953-55 Eisenhower Expansion years. These and all subsequent SSTs and DSTs (double-shell tanks) at the site have been constructed to accommodate self-boiling wastes. The last four SSTs were built in 1963-64 in AX Tank Farm. Since that time 28 DSTs have been constructed and four new DSTs currently are planned.

Over the years at the Hanford site, tank waste minimization has been an important goal. Evaporators 242-B and 242-T began operations in 1951. Larger, more efficient evaporators, 242-S and 242-A, opened in 1974 and 1976, respectively. All are currently shut down, but 242-A is undergoing upgrades in preparation for reopening.
ABOVE: Hanford's best-known waste tank, 101-SY, is closest to the bottom of this 1974 photograph. It has received much attention in the past few years because of concerns that gases generated by and accumulated within the waste might be flammable. Solving this issue is the United States Department of Energy's top priority.

FACING PAGE: The basic design of Hanford's radioactive waste storage tanks has endured through decades—a single (through 1964) or double (since 1968) shell of carbon steel surrounded by reinforced concrete. Sizes varied from 55,000 gallons to 1 million gallons. This 1978 photograph shows 1-million-gallon double-shell tanks. These tanks are 75 feet in diameter and about 46 feet in height. Hanford has 28 of these.

In 1990 a division was created at the Hanford site to focus specifically on tank waste operations, safety and remediation. In 1992 its responsibilities were broadened to include waste disposal planning. Led by Dr. Harry Harmon, a Ph.D. chemist, this Tank Waste Remediation (TWR) Division is pioneering new sampling and investigative techniques to analyze the contents of each of the 177 Hanford site tanks. Based on the results of such analyses a technical remediation plan for each tank will be developed. Today, 66 SSTs are listed as "assumed" leakers, meaning that leaks have been detected near or between them. However, because the source of any given leak sometimes cannot be determined with precision, some of these "assumed" leakers actually may not be seeping. No DSTs at the Hanford site have leaked.

Michele S. Gerber and Eric Campbell are employees of Westinghouse Hanford Company.
alone; and yes, Enrico Fermi had maintained control of the world's only self-sustaining atomic chain reaction achieved thus far. And the scientists assembled at the Met Lab were brilliant—they were aware of and working on the problems of protecting people from the effects of radiation.

All of those affirmatives stood in the Hanford site assets column. The hazards, however, were very large while the knowledge base was small and the Columbia Basin was deceptively complex. In this fragile place you did not slit and displace whole segments of the desert without causing the land to swirl up to punish and confound. You did not pump and dump huge volumes of liquids where only a few inches of water had entered or left in the past without causing the water table and the drainage patterns to shift. You did not bring in thousands of people and immense tonnage in materials and equipment onto this stark and lovely desert without changing, perhaps forever, the delicate balance of life.

Four Construction Booms

As soon as the Manhattan District of the Army Corps of Engineers arrived en masse in the Columbia Basin in March 1943, it produced a huge construction boom. In just over two years it built the massive Hanford plutonium production complex and the new government-owned village of Richland.

Atomic policy drifted after World War II ended. In 1946 the General Electric Company (GE) relieved the DuPont Corporation as the prime operating contractor at Hanford. On January 1, 1947, the civilian Atomic Energy Commission (AEC) took over from the military MED. The AEC simplified the name Hanford Engineer Works (HEW) to the Hanford Works (HW).

In August 1947 GE and the AEC announced plans for a gigantic expansion of Hanford's plutonium manufacturing capabilities. The new endeavors, the largest peacetime construction project in American history up to that time, cost more than the erection of the entire wartime Hanford complex. This building boom, which took place in the Columbia Basin from 1947 to 1949, had no sooner ended than two more growth surges occurred. Known as the first and second Korean War expansions, these latter swells took place in 1950-52 and 1953-55. The Korean War years (1950-53) witnessed a doubling of the plutonium production facilities at Hanford.

Following the hectic construction years of 1947-55, Cold War exigencies accelerated weapons production rates at Hanford and the other American atomic defense plants. Power levels and output at the Hanford complex remained high through at least 1964.

The Production Cycle

During World War II three reactors (called piles) were built along the Columbia River at HEW to irradiate uranium fuel rods. Strung along 16 miles of the waterway's west bank, reactors B, D and F composed Hanford's "100 Areas." At the rear of each reactor sat large retention basins designed to hold effluent (cooling water exiting the piles) long enough for the short-lived radionuclides to "decay," or stabilize.

After the uranium fuel slugs were irradiated they were "pushed" out the rear of the HEW reactors and dropped into thickly shielded casks filled with 20 feet of water. Here, and at special "cooling" areas about five miles away, the rods sat while their radioactivity partially decayed. Then they were transported by rail to Hanford's "200 Areas," two chemical separations buildings, officially termed cell buildings but dubbed "canyons" or "Queen Marys" by Hanford workers, that were 800 feet long, 65 feet wide and 80 feet high. Each contained a row of 40 thickly shielded concrete cells. Each

LEFT: Colonel Franklin T. Matthias (left) and two top-level Hanford engineers review press coverage of the Manhattan Project just after the secret was released on August 6, 1945.

FACING PAGE: Newspaper headlines in Richland, Washington, the day that the world learned the purpose and mission of the Hanford Engineer Works and other Manhattan Project sites. Prior to this day less than one-half of one percent of Hanford's workers knew of the site's ultimate product.
News Spreads Slowly, Surprises Everyone Here

Jubilation And Satisfaction Follows Revelation Of Product Manufactured Here

Richland was about the last place in the manner to hear the news of the bomb. As in other parts of the country it was the housewives who first heard the news over their radios, and looked to their husbands in the hope of telephone calls which kept the world's bombing.

In town, the stories were all creased and imagined, and few people talked on the street. It was The TIDELVILLE LADY reporter who spread the word to most of those unprepared. Disbelief was soon followed by indifference. Everyone felt the same anxiety—"we'll have to know what we will do if this is all over, and how the war will end and continue." It was the war and the people.

To everyone everyone knew what a bomb was, but no one knew what was going on. No one knew what was being made. "I don't know where it is," they explained. "We have a bomb now," and a military person almost two years away said, "and we're not sure what it is."

President Truman released the secret of Hanford Product Information this morning, and the Hanford Engineer Works is one of the three plants in the country manufacturing the new bomb.

President Truman Releases Secret of Hanford Product Information Made Public This Morning

SPECIAL—Today President Truman, in an official White House release, broke the biggest secret of World War II—and perhaps the greatest secret of any war—when he informed Americans that the U.S. Army Air Force had released on the Japanese an Atomic bomb containing more power than 20,000 tons of TNT—and that the Hanford Engineer Works is one of three plants in the country manufacturing the new bomb.

How Much Damage?

How much damage was done by the bomb dropped this morning on Japan was a question in everyone's mind today in Richland.

The bomb, made in the Hanford Engineer Works, in Oak Ridge, near Knoxville, Tennessee, and an unnamed installation near Santa Fe, New Mexico, produces more than 2,000 times the blast of the largest bomb ever used before.

The bombs blast even the landscape out of sight. Nothing is impossible. The first bomb was dropped on Hiroshima a few hours ago. Observers report that the explosion was thousands of times greater than an earthquake and may charge the course of civilization.

Atomic power was released against the Japs in answer to their refusal to their illumanated last week. Sources of the power is said to be oil, coal, and power produced by the great dams in the Northwest and Tennessee.

In making the announcement, President Truman said that the bomb has added new and revolutionary increase in destruction on the Japans. Mr. Truman went on to say that "it is an Atomic bomb. A harrowing of the universe, the force from which the sun draws its power."
separations area, 200 East and 200 West, also contained a network of underground tanks ("tank farms") and test wells for storing and monitoring high-level wastes. Sixty-four such tanks were built during World War II. Less concentrated liquid wastes were at first poured on low spots on the ground and later entered the ground through open-bottomed structures called cribs. In 200 West Area one plutonium finishing building refined the final HEW product, a wet plutonium nitrate paste, for shipment to Los Alamos.

The Hanford Complex also contained a smaller "300 Area." It contained fuel and equipment fabrication shops, repair and maintenance buildings, and "process improvement" (research and development) structures. A fuel element jacketing process conducted in this area, located only six to eight miles north of Richland, discharged wastes bearing uranium and heavy metals into the groundwater and the Columbia River.

The Rush to Produce

Production of the first batches of plutonium at Hanford were rushed. The principal shortcut taken in the initial nine months of operations was that of cooling the irradiated fuel slugs for very brief periods before dissolving them in the chemical separations facilities. (Cooling, or decay, time is a prime determinant in the amount of off-gases, particularly iodine 131, that are generated by fuel dissolving.) Cooling times for irradiated slugs were continually shortened between February 1945 and the end of World War II, as the three reactors operated at top capacity.

In June and early July 1945 production sped up for the world's first bomb test, "Trinity," conducted in New Mexico. Another "accelerated" manufacturing push occurred in late July to ready the material for the Nagasaki bomb. The exact amount of cooling time during this period is unknown or classified, but it was less than 30 days.

After the Japanese surrender the production rate in Hanford reactors was cut nearly in half. Still the manufacture of plutonium went forward, and cooling times for the hot fuel rods were kept at under 50 days. For the Columbia Basin the unfortunate legacy of the rapid and intensive production rate of 1945 was a total of over 340,000 curies of radioiodine released into the atmosphere in that year alone. In 1946, with a somewhat slower manufacturing schedule but still inadequate cooling periods, at least 76,000 curies of I-131 were discharged from Hanford.

Secrecy

Secrecy was an extremely important constant in the conduct of affairs at early Hanford. In Washington, D.C., the original Hanford project was so strictly classified that even the Joint Chiefs of Staff, the State Department, prominent senators and Vice President Harry S Truman were not informed. News coverage about Hanford was censored tightly, and everything was placed within the restricted classes of the wartime Code of Fair Practices. Newspaper editors throughout the Northwest were contacted during 1943 and asked to "cooperate . . . by not asking questions . . . or speculating" in print about the huge and mysterious structures being erected in the south central Washington desert.

The real purposes of the Hanford endeavor also were hidden from most of the engineers and all of the construction and support personnel who worked there. Colonel Matthias's wife Reva recalled that even among the few high-level officials who did understand the plant's mission the "famous HEW line was 'I can't tell you,' or 'Don't say anything to anyone.'"

Diaries and private notes were forbidden, and recruiting firms scouring the country for the understaffed enterprise were directed by the MED to word their advertisements in ways that were vague as to location and job description. On-site work was kept compartmentalized to disclose as little as possible. When prominent scientists came to Hanford to consult on problems of
engineering and physics they used code names. Enrico Fermi was Mr. Farmer, Arthur Compton was Mr. Comas, and Eugene Wigner was Mr. Winger. Activities and goals at wartime Hanford also were kept secret from local and state Selective Service boards, courts, other government agencies, civic leaders, and from the stockholders and some officials of the subcontractor companies involved.

Noisy but Quiet

By early 1956 eight reactors and four massive separations facilities stood on the Hanford site. Through 1963 the exigencies of the Cold War competition with the Soviet Union pushed plutonium manufacturing even higher, and a ninth defense production reactor was built. The facilities that the MED had conceived as temporary and expendable grew and became entrenched.

Hanford was busy and noisy and industrious; yet to the outside world it was silent. Policies of strict secrecy prevailed throughout the period, just as they had during wartime. Of the thousands of workers that streamed into and out of the plant every day, many did not know much about their work except that it was important to follow some rigid and basic procedures. They were proud of their work and excited about the enormous buzz of activity in their region. Those who chose to come and stay in the Columbia Basin, like many newcomers before them, often fell in love with the windy, isolated place. They did not question the secrecy, and they came to trust that the complicated operations of the plant would not hurt them. As the years went by more and more people filled the neighborhood.

Richland Population Unique

Among the many people who came to the Columbia Basin in the two decades beginning in 1943, Richlanders most defined the region's new image. Richland residents on the whole were well-educated, prosperous, healthy and relatively young. They led the nation in average birth rate and displayed an optimistic, active and outgoing community spirit. They came to symbolize the huge atomic complex itself. Richlanders were proud of their role in national defense and believed that their work contributed to world peace.

Pride in the atom became evident in Richland in August 1945, as soon as residents learned of the role of their city in producing the world's first atomic weapons. The Japanese surrender of August 14 produced rejoicing in Richland. The village newspaper enthused: "PEACE! OUR BOMB CLINCHED IT."

Richland's victory celebrations were covered in newspapers and on radio programs throughout the nation. The little city basked in the praise of the entire country. National reporters who came to cover the jubilation noted the "combination of confidence, efficiency, warmth and contentment" in the government town. Colonel Matthias expressed local feelings succinctly: "We of the Hanford Engineer Works are proud of our job. We are proud of our community."

AFTER THE DRAMATIC victory General Groves appeared in Richland and lauded the Hanford employees. At the close of the year the Associated Press, Time magazine and the Portland Oregonian named the "story of Richland and the making of the atomic bomb" the most newsworthy story of 1945. They said it was even more important than the German and Japanese surrenders. Time paid tribute to all Hanford workers: "To each and every man and woman who made the slightest contribution to the project in Richland, a SALUTE."


Among Richland residents in the early years of the atomic age, few people, if any, doubted that the Columbia Basin was safe. In mid 1949 Richard Neuberger, a reporter for The Nation, visited Richland and questioned inhabitants about "rumors of pits of evil residue, many stories deep . . . so virulent it cannot even be dumped into the sea. Is it unstable? Might it blow up? . . . How dangerous is it?"

Instead of worry, Neuberger found confidence and optimism. "I thought the morale of people was high," he concluded. Later in 1949 the University of Michigan Survey Research Center conducted a study of "the attitudes of people toward the radiation hazards that exist, or are assumed to exist, in atomic energy developments."

Overall, the research project demonstrated, inhabitants near atomic sites, including Hanford, were "taking atomic energy in their stride . . . They do not fear it more than people elsewhere . . . [There is] no anxiety which could be attributed to fear of radiation or plant disaster." Residents were so confident, the researchers concluded, because they felt "reassured . . . [by the] care and precautions exercised by those
in charge.” Many others since have agreed that morale was excellent.

Veiled Warnings?

Although they were confident and content, there was much that Richland did not know about their community and region. Some scientists at the Hanford plants had access to disquieting information. In terms of what is known today, it may be pertinent to question some of the public statements that were made in those years and to ask whether they could have had double meanings.

For example, in classified memos written in mid 1945, health physicists at Hanford discussed experiments that suggested that “the administration of inert [stable] iodine prior to the giving of carrier-free radioiodine very significantly reduced the uptake of the latter by the thyroid.” Herbert Parker, director of Health Instruments, the division at early Hanford responsible for environmental monitoring and radiation protection, secretly suggested the “promotion of the use of iodized salt through public education.” At nearly the same time Richland’s community newspaper announced: “Medical Department Recommends Use of Iodized Salt.” Encouraging dietary intake of the salt as “merely a matter of good nutrition,” GE physicians advised:

Inland regions with little rainfall [such as the Columbia Basin] tend to have lower iodine content in the water and soil . . . The body needs a certain amount of iodine . . . we recommend that you use iodized salt.

By mid 1947 Hanford chemists discovered that airborne radioactive contamination, particularly Pu-239, deposited more readily on sagebrush than on sand or other desert flora. They submitted these conclusions to the Health Instruments Division in secret on July 1. Five weeks later Richland’s Public Health Section issued warnings to villagers to remove sagebrush plants from their yards. The spindly desert weed, GE officials explained, “aggravates allergies [and] . . . often harbors ticks” that could spread Rocky Mountain spotted fever. Soon afterward Hanford researchers discovered that the Russian thistle plant could present an “aerial radiation hazard” because of its pronounced ability to translocate subsurface contamination up through its branches and stems. In Richland residents were asked to destroy these plants to decrease the pollen level.

Could other official public statements made in Richland be taken at face value, or were they veiled warnings? Why were Richland told by GE in January 1948 that air samples were being collected in the village in order to study “pollen concentrations in the air to determine varieties, abundance and seasonal appearance of hay fever pollens in this locality?” At that same time Hanford scientists were establishing a network of air sampling stations and expanding the local air monitoring and animal assay programs. With radioiodine streaming out of the 200 Area stacks, falling on forage and raising the radioactivity levels in animal thyroids, was it a coincidence that no chickens or livestock were allowed in government-owned Richland? Or that no land within the town limits was available for pasture? Why was Richland’s entire milk supply brought in from Ellensburg and Yakima areas under an exclusive contract?

Did the knowledge that radioactive contamination levels in the Columbia River were rising prompt a GE warning in the summer vacation season of 1947: “The wells throughout the desert region of the northwest are usually shallow . . . only water from known pure sources should be used.” Why did Richland officials struggle with messy and problem-ridden well fields when they could have tapped the Columbia River, as did neighboring cities, for the domestic water supply?

History Unclear

For nearly two decades major plant expansions and other nearby construction endeavors went forward at Hanford. We can record the statistics and events of these giant enterprises. Also, we can record much about the early government town of Richland—the optimism, the vigor, the pride. However, there is a great deal that we can never know about that time and place. We do know that huge waste releases streamed by and through the little village. We know that the AEC promised safety and openness and that the people believed these pledges. We know that Hanford scientists maintained vigilant records of contamination levels in the Columbia Basin’s air, water, fish, vegetation, wild game and other animals, and that they tried to protect public health to the extent that their technology and limited authority over production schedules allowed.

Possibly, veiled warnings were issued to guard Richlanders against hazards that could not be named. Possibly, cautions to village residents to use iodized salt, to cut down sagebrush and Russian thistle in the town, to drink only well water and imported milk, to hunt far from Hanford and to wash or discard local fruit actually were ways of telling residents to avoid contact with radioactive and chemical wastes. There is a large gray area that lies between the asking and the answering of questions about these matters. Amidst these questions and uncertainties the Columbia Basin, the rest of the United States and the world have lived Hanford’s nuclear history.

Michele S. Gerber is a historian for Westinghouse Hanford Company. She has taught college-level American history, worked for public and private historical agencies and consulted on numerous historical projects. This article is reprinted from her new book, On the Home Front: The Cold War Legacy of the Hanford Nuclear Site, with permission of the University of Nebraska Press. (Copyright © 1992 by the University of Nebraska Press)
Overlanders in the Cosmic Landscape of the Snake River Region

By Peter G. Boag

Architect Christian Norberg-Schultz has identified three types of landscapes: romantic, classical and cosmic. The latter of these geographer John A. Jackie characterizes as "infinite extensions of monotonous plain embraced by encircling vaults of sky. . . . They want for visual surprise and mystery. They are too easily known. . . . Infinity is a word that characterizes such places." Landscape visualization theory aside, overlander Esther Belle Hanna was more down to earth when she described Idaho's Snake River Plain on July 28, 1853, as "the most desolate and barren region on our whole route, & provided the most difficult set of circumstances that mid-19th-century migrants encountered on the journey west. Overlanders came to the region—a broad, open desert—during the summer when conditions were at their warmest and driest. And by the 1850s this section of the trail west had acquired a reputation as the most dangerous. For instance, Jared Fox, an 1852 migrant, noted on entering the plains:

Now we come to the digger Indians & it is expected some of us will get robbed or killed. . . . We are cautioned to go in large trains. Now calls for patience, vigilance, courage, by night & by day. It is said that we are liable to have a ball or arrow at every crook & turn or rock or bush we come to. . . .

Those traveling all the way to Oregon endured about 450 miles and one month of the Snake River Plain. Those heading

Tourists BY Necessity

For overland migrants, vertical landscapes, such as City of Rocks, broke the monotony of the seemingly endless horizontal plains of the Snake River region.
to California turned off about a third of the way through.

Circumstances of travel were not the only difficulties overlanders needed to overcome on the Snake River Plain. The monotonous scenery itself proved another formidable obstacle. Upon entering the region in the east overlanders' moods were usually cheerful. Emigrants found the landscape inviting for a number of reasons. First, for those heading to Oregon, the entrance onto the Snake River Plain signified, in a way, the last leg of the journey. The travelers realized

- American entrepreneur Nathaniel Wyeth built Fort Hall in 1834 near where the Oregon Trail later entered the Snake River Plain. By the time overlanders came West, the Hudson's Bay Company owned Fort Hall, and it became an important rest stop for weary pioneers.

they were now in the Columbia River region. Edward Evans Parrish announced on September 12, 1844:

To-day we passed over the divide between the waters of Bear River and those of Lewis [Snake] River. We are now drinking not only western waters, but the waters of the Columbia or Lewis River.

Declared P. V. Crawford in 1851, "Here, north and west, an extensive sandy ridge plain opens out to view and here we begin to descend Snake river, whose waters we follow to our destination." Another reason for relatively pleasant outlooks was that this place—the junction of the Rocky Mountains, Columbia Plateau and Great Basin regions—provided varied and even refreshing scenery. George Belshaw related in 1853, "then we came out of the mountains and into a fine little valley... this is the Valley of Snake or Lewis river fork of Columbia plenty of snow to Our left all Day."

Amelia Hadley proclaimed in 1851, "Struck a beautiful plain in which is called snake river valley." Narcissa Whitman related in 1835, "We have been in the mountains so long find the scenery of this valley very greatful to the eye..."

As overlanders proceeded across the Snake River Plain, however, the monotonous nature of the scenery overwhelmed them. Visualization theorists inform us that when perceptual stimulus falls below a certain threshold, thereby failing to excite awareness, the sensing system becomes habituated. Both simple and complex landscapes can invite loss of acuity and result in the interpretation of a landscape as boring. This explains much about the overlanders' reactions to the Snake River Plain as they moved across it.

Within a few days of their initially positive responses, the above-mentioned informants, for example, responded quite differently. Amelia Hadley declared, "It seems the nearer we approach Oregon the worse roads we have, and a worse more rough looking country." And George Belshaw proclaimed, "The country here is very poor nothing but wild sage and Rocks soil good for nothing." Other overlanders agreed.

Esther Belle Hanna noted, "The country all along presents the most barren appearance nothing but sage. Hundreds and thousands of acres with no vestage of anything but this hateful weed." Maria Belshaw recorded, "Nothing but dust, rocks and sage brush and dead cattle." Amelia Knight responded, "As far as the eye can reach it is nothing but a sandy desert, covered with wild sage brush, dried up with the heat."

George Taylor declared, "General Appearance of the Country Covered with Sand and Sage Brush Inhabited with frogs Lizards and Indians." Abigail Scott lamented, "The country barren and sterile in the extreme." Her father Tucker echoed, "The country all around extremely barren." Jared Fox confided, "But a general thing it is a barren country." And P. V. Crawford noted, "The country here is extremely barren," adding the ultimate insult, "not even sage."

There is indication that some mid-19th-century Americans undertook the westward overland migration for purposes of adventure. In general, however, potential migrants did not undertake the trip lightly. Once on the trails west, however, adventure abounded. The late John D. Unruh, Jr., termed the "overland pilgrimage... nothing less than the discovery of a fantastic new nation," especially its scenery.

According to John A. Jackle, sightseeing is a search for stimulating views, an endeavor that is the antithesis of work and "represents a breaking of usual social ties and thus gives a sense of psychological freedom... Tourists seek to escape from environments seen as mundane, to escape the drudgery of everyday places." The individual searches for both prospect (beautiful views) and refuge. Because of the forbidding and monotonous nature of the general Snake River
landscape, overlanders became tourists by necessity, searching for favorable prospect and refuge as relief.

As overlanders' eyes scanned the immense horizon of the Snake River Plain they searched for that which could relieve the monotony—especially those elements of landscape that provided vertical relief, such as distant mountains. Overlanders typically referred to the "three buttes" and the Teton range, the former rising directly from the plains, the latter bounding the eastern horizon. Abigail Scott declared:

Off the N.E. in the distance was plainly visible the three Tetons with their lofty (snow capped) summits reared high above all the surrounding mountains, and at the same time the three Buttes were visible in a N.W. direction from us presenting a truly romantic and poetical appearance.

Esther Belle Hanna noted, "We have a delightful view, off to our right are the 3 [Tetons]... 151 miles distant." Margaret Frink related in 1850, "Fifty miles distant, northwest, the 'Three Buttes' rise high and bold out of the lava plain and can be seen for a long distance." And Giles Isham wrote in 1849, "You see the three tuntos North West of Fort Hall noted land marks of the mountaineers...

Waterfalls and the canyon of the Snake River were other vertical elements of the landscape that attracted overlanders' aching eyes. In 1853 George Taylor remarked "Above Salmon Falls on the North Side of the River there is some Perpendicular water falls of Over one thousand feet in height the Most Beautiful A Person Could Imagine."

In 1847 James Raynor disclosed, "A drive of five miles brought us to the falls, which are grand. The water falls 38 feet..." William Watson declared in 1849:

Here are the greatest natural curiosities that I ever saw; the first one boiling out of the top of a bluff pouring down some two hundred feet, looking very beautiful. Within one mile below are ten more gushing out of the side of precipitous bluffs, one of them gushing out in a thousand different places, presenting some of the wildest grandeur...

Abigail Scott related in 1852, "A beautiful spring gushes out from the bank in plain sight on the other side of the river and tumbles over the rocks... These bluffs are at least one thousand feet high..." and "To day saw several bluffs on the other side of the river. Some of these have a fall... of four or five hundred feet." And in 1853 Rebecca Ketcham noted:

A beautiful waterfall on the opposite side of the river coming right out of the mountain about half way up. Looked at it through the spy glass. Mr. Gray thought the bank on the opposite side 1,000 or 1,200 feet high.

Whereas the infinite horizontal of the Snake River Plain produced boredom in overlanders, vertical landscapes—mountains, canyon walls, and waterfalls—provided prospects worthy of positive comment. These elements of Snake River scenery also granted overlanders refuge, or at least the possibility thereof. Rebecca Ketcham related:

A long distance from the opposite shore the streams sink in the ground and are not seen till they come pouring out of the rock

- Thousand Springs, issuing from the basalt canyon walls
- of the Snake River, was among the more curious
- landscape features overlanders chanced upon. Emigrants
- often remarked how the sight refreshed drooping spirits.
precipice into the river. How I did wish I could be there to see them more closely.

Maria Belshaw proclaimed of one waterfall, "It was a splendid sight of the west, especially for us while traveling through this dreary country." Esther Belle Hanna similarly enthused:

The falls here are very pretty falling over about 12 feet, there is a succession of them several miles down the river. We are now on the bank close by them, how I wish I could draw, what a beautiful picture I could make.

And while sitting on the bank near American Falls, Abigail Scott wrote in 1852, "I love this spot as It corresponds with my feelings."

The landscape feature known as City of Rocks, which borders the southern reaches of the Snake River region and lies along the route to California and southern Oregon, provided overlanders with refuge and a form of prospect best described as vista—a scene that is bounded or enframed. City of Rocks proved one of the most popular sights on the westward journey. In 1850 James Bennett noted that "hundreds of names are inscribed" there. And of all the individual sights in the Snake River region, overlanders spilled the most ink on City of Rocks in their journals. In 1849 Bernard Reid responded:

There were sphynxes and statues of every size, and haystacks and wigwams and castles, and towers, and pyramids and cones and projecting turrets and canopies, and leaning columns . . . a thousand varieties of fantastic shapes. The dell is bounded on the south by an immense wall on which rise at intervals tall conical towers of bare rock. Through this wall we passed by a grand gateway guarded on either side by one of those gigantic watch towers. I call them the "Pillars of Hercules."

Four days later Elisha Douglass Perkins declared:

Piles of white & brown rocks of all shapes and sizes . . . . Camped against a huge rock standing entirely isolated from its fellows & being nearly perpendicular for 100 feet in height. We are in a valley filled with just such immense detached pieces. Some are conical in their shape looking like huge loaves of white sugar others are composed of 3 or 4 pieces on top of the other & looking as though a child could push them over and send their huge masses thundering below. Near & just above us is another great Syrian mass on top of which are several hawk's nests & the birds have been whistling at us all the Evening. This again must have been once in a state of great excitement & commotion far exceeding even that usually attending the eve of our presidential elections. How these masses became broken off & sent into the valley below or piled one upon another to the height of 100 to 200 feet I leave to others to determine.

Margaret Frink wrote a year later:

During the forenoon we passed through a stone village composed of huge, isolated rocks of various and singular shapes, some resembling cottages, others steeples and domes. It is called the "City of Rocks," but I think the name "Pyramid City" more suitable. It is a sublime, strange, and wonderful scene—one of nature's most interesting works.

The same year John Steele reported:

Here were pyramids of white granite that would rival the world renowned wonders of the Nile; rocks in the form of castles with chimes and turrets, spires rising probably five hundred feet, and nicely balanced on the point of some of them large pieces of granite. Altogether the picturesque grouping, the wild mountain background, the clear, cold streams and flower-decked meadows, presented a scene over which one would delight to linger, yet find it difficult to describe.

And in 1857 Helen Carpenter recorded:

On this level, and the hills which encircled it, were the most beautiful and wonderful white rocks that we ever saw. This is known as the City [of] rocks and certainly bears a striking
resemblance to a city. To be sure it was a good deal out of the usual, for the large and small houses were curiously intermingled and set at all angles, but it only made the place more charming. There was everything one could imagine from a dog house to a church and courthouse. While the stock was being cared for the women and children wandered off to enjoy the sights of the city. When they returned to camp a stern and well merited reprimand awaited them. "How could you do such a thing? Did not you know there might be an Indian behind every rock?" etc. etc. We were so spellbound with the beauty and strangeness of it all that no thought of Indians entered our heads. Some of us, at least, are too young and thoughtless for our surroundings. The older ones did not forget to make all the possible arrangements they could for the safety of the camp.

Quaint wonderlands such as City of Rocks allowed emigrants to forget the troubles of overland travels and offered their eyes relief. Those who visited the City of Rocks, however, did so only because this landscape lay directly on the route to California and southern Oregon. In a sense, those who marveled there were accidental tourists.

Overlanders who best fit the definition of sightseers and tourists were those who deliberately took time out of their westward journey to search for unusual scenery. An excellent example of an overlander who became a tourist by purpose was Rebecca Ketcham, who originated in Ithaca, New York, and joined William H. Gray’s wagon train for Oregon in the spring of 1853.

Ketcham was unusual in a couple of ways. First, she traveled as a single female. Second, she went to great lengths to see the sights of the Snake River region. For example, one evening after dinner, while encamped on the eastern edge of the Snake River Plain, Ketcham announced that she “could not resist the inclination” to “see the view.” She started for the top of a high mountain and found the journey was “far beyond any hills I had gone up or down before. I think I went all of half a mile strait up.”

When she reached her destination she felt “disappointed, for it was so smoky I could not see distinctly at all.” But she also reported, “I think the view must be splendid if seen when the air is clear. However, I could see the blue outline of two of the three Tetons at least 64 miles from us, and the vast place between us.”

A few days later, when her wagon train came within two miles of American Falls, Ketcham declared, “Of course we all wanted to get as good a view as possible,” and she “jumped out and ran ahead of the rest.” Once the others arrived she and a friend walked an additional “half mile to see” the falls “from all points.”

There are other examples of tourists by purpose. A year before Ketcham visited American Falls, Polly Coon “and several others went down to the shore & climbed upon the rocks which jetted over the foaming waters looking down some 30 feet....” About sunset on July 7, 1849, in the Raft River area, James Pritchard found his “way to the top of one of the nearest peaks, from the top of which I had a most spacious view of the surrounding country.” A year later, in the same vicinity, John Steele and Thomas Hunt set out to ascend Pilot Peak. . . . Through a ravine we worked our way above pine and fir, where cliff towered upon cliff; at times we crept around a projecting point, we seemed suspended in mid-air, and from the dizzy height hardly dared to look into the awful abyss below.

In general, migrants’ positive responses to Snake River landscapes were reserved for vistas rather than panoramic scenes, for it was the expansive scene that generally proved boring. The exceptions to this rule come from those individuals—Rebecca Ketcham, John Steele, James Pritchard, James Bennett and the like—who took precious time and energy away from an arduous trip purposely to seek out panoramas, usually from a mountaintop on the periphery of the Snake River Plain.

Distancing themselves from the mundane level of the
ABOVE: Emigrants devoted more journal space to City of Rocks than to any other single feature of the Snake River region, often likening the formations to strange and enchanted ancient ruins and pyramids.

RIGHT: This City of Rocks formation was called "The Covered Wagon" by some imaginative overlanders.

cosmic landscape, these individuals described the aesthetic significance of "the vast place," "the wild grandeur of the interior," the "spacious view," and "the grand and beautiful scenery." Their compatriots—such as Amelia Hadley, George and Marta Belshaw, Amelia Knight, George Taylor, P. V. Crawford, and Esther Belle Hanna—who stuck closer to the beaten track, concluded of the general setting: "same scenery prevails," "desolate as ever," "barren waste," and "the most desolate and barren region on our whole route, & extends 150 or a thousand miles."

When these individuals commented positively on landscape in the Snake River region it was of particularly unusual features they chanced upon directly on the route. These elements of landscape included waterfalls, springs, a single mountain peak, and especially City of Rocks. All of these are specific features. They offered prospects we would call vistas rather than panoramas, and they provided relief from the dreary country of the Snake River. They did not, however, change these overlanders' convictions about the whole of the Snake River Plain. When overlanders reached the western edge of the region their opinions remained staunch. In 1853 Esther Belle Hanna confided, "Saw Fort Boise this morning... The whole of the route in this distance has been one continuous desert... No one can imagine the barren and desolate appearance of this part of the country unless he could see it." At the same place, but a year earlier, Jared Fox claimed, "The country is yet barren," and Cecelia Adams, "Country looks about as desolate as ever."

For mid-19th-century emigrants the Snake River Plain proved one of the most demanding segments of their journey west. Part of the adversity was due to the monotonous aesthetic quality of the general landscape. For relief overlanders searched the horizon for unusual prospects, typically vistas that offered vertical elements; or else they looked for singular landscapes such as City of Rocks.

Both vertical vistas and uncommon scenes provided refuge for aching eyes. Occasionally, emigrants purposely scaled mountain peaks to behold panoramas from vantage points above the level of the plains, in the process breaking the routine of monotonous landscape perception. Emigrants usually chanced upon scenes, but sometimes they sought them out. Whether tourists by accident or tourists by purpose, overland trail migrants who traveled through the cosmic landscape of the Snake River became tourists by necessity.

Peter G. Boag, a Portland native, is Assistant Professor of History at Idaho State University where he teaches western American and environmental history. He is the author of Environment and Experience: Settlement Culture in 19th-Century Oregon (Berkeley: University of California Press, 1992).
CORRESPONDENCE

Doggers and Setters

I found the article on "Timber & Water, A History of the Cowlitz County Lumber Industry" (Summer 1993) most interesting and accurate from the written standpoint. However, the titles on some of the photographs were inaccurate and detracted from the general high caliber of the article.

The photograph on page 37 captioned "View of workers setting machinery at the end of the Longview mill green chain, c. 1929" actually showed doggers setting the dogs on the carriage on a large cant at the head end of the mill.

"Longview mill worker setting headrig carriage, c. 1938," photo on page 38, is also inaccurate. Most of the hand doggers had been removed from the carriage by 1938, and only the setter remained to set the machinery, both to secure the log by dogging it automatically and to set it out into the band mill, which established the depth of the saw cut. In this case, the Longview mill worker is setting out the knees on the headrig carriage. Some of the words are there; however, they don't denote the action.

The content of the article was good, but the captions on the photos were done by someone unfamiliar with the lumber industry.

Harry E. Morgan, Jr.
Tacoma [Ed.—The captions were, in fact, not written by the author, Robert Ficken.]

Forty-Year Typo

I received my Summer 1993 Columbia yesterday and, as usual, was delighted with the professional quality involved. It is interesting, timely and actually historical! I particularly enjoyed the article on "The Old Skagit Tour." I did the tour in 1938, and I shall never forget Jeanette McDonald singing "The Indian Love Call" as we watched the multicolored lights on the waterfall of Gorge Dam.

One bone to pick, however, lies in the school names story. On page 33 it says: "Roeder School in Bellingham was named for Captain Henry Roeder who, with Russell Peabody, landed on the shores of Bellingham Bay in 1892 and built a sawmill there."

Roeder and Peabody "landed" ("muddied" would be more accurate since they had to wade ashore through the tide flat) on December 15, 1852.

Keith A. Murray
Bellingham

Additional Reading

Interested in learning more about the topics covered in this issue? The volumes listed here will get you started.

Incarcerate or Cure?


Remembering the Old Ways


Kinsey Scenics


Our Nuclear Legacy


Tourists by Necessity

As the Yakima Nation works to find ways to integrate its rich traditions into the context of the 21st century, those of us who share the Yakima homeland on the eastern slopes of the Cascades need to better understand how the Yakima lived and how they viewed their world. We can come to appreciate the Yakima people's heritage through their oral history. Donald Yakima stories.

Hines used the collected papers of J. L. McWhorter, a cattleman from West Virginia who settled in the Yakima Valley in 1903. McWhorter, called Old Wolf by the Yakima Indians, became quite fluent in Sahaptin and was thus able to collect the oral literature of the tribal elders. Hines has organized the McWhorter papers into ten thematic strands that are intended to make Yakima stories more accessible to the modern reader.

The stories use some of the Sahaptin terms that were provided to McWhorter by his informants and are accompanied by McWhorter's elaborative notes. Hines has included a glossary of some of the Sahaptin terms used and has wisely cross-indexed the stories to similar tales told by other Plateau Indian tribes.

Two Sahaptin terms that appear in Hines's work but are not in the glossary may be central to our understanding of modern Yakima people. The first is *tahmahnawis*, a concept somewhat akin to the European notion of a guardian angel. *Tahmahnawis* is a force that is able to distill the universal and timeless aspects of human existence down to a particular moment in an individual's life and give that moment special significance. The second term is *tah*, a word that is roughly comparable to spiritual strength and vigor.

Hines's work is a compendium of beautiful and humorous Yakima stories of old. Still, we must not forget that the Yakima people, along with the rest of us who share this land, are even now, with *tahmahnawis* and *tah*, singing the song and dreaming the dream that will take us into the future.

Miguel de Darrah y Ortega is an administrator at Heritage College in Toppenish, Washington. He is also a commissioner for the Washington Commission for the Humanities.

**Ghost Voices:**
Yakima Indian Myths, Legends, Humor and Hunting Stories
Reviewed by Miguel de Darrah y Ortega.

**On the Home Front:**
The Cold War Legacy of the Hanford Nuclear Site
Reviewed by Thomas Moak.

Many books have been written about activities on the home front during various wars. With the history of the Hanford nuclear reservation tied directly to the development of the atomic bomb for World War II, one might presume that a book about the home front at Hanford would be about the immense wartime construction project there in 1943-45 that helped the Allies win the war.

Instead, this work deals with how subsequent construction and experimentation at Hanford in the 1940s and 1950s contributed to the winning of the Cold War. The Hanford Project was constructed in great haste during wartime, with decisions by necessity having to be made rapidly. Today the results of many of those decisions are finally being learned. With the release in 1986 of over 19,000 pages of previously secret documents on the Hanford site, the post-war role of Hanford can be thoroughly analyzed for the first time.

The picture is not necessarily a pretty one. Gerber methodically examines the environmental legacy of the nuclear build-up at Hanford. A critic of past government secrecy, Gerber elucidates what happened at Hanford within the context of the Cold War era. The book is primarily devoted to a discussion of how releases of atomic wastes and particulate matter at Hanford in the 1940s and 1950s impacted the surrounding soil, air and water, including the Columbia River.

The present-day massive waste cleanup at Hanford that is fueling the economic revival of the Tri-Cities is a testament to the Cold War atomic legacy of Hanford. Scientists, historians and the public will continue to debate whether it was all worth it.

Because of the complexity of its subject matter, this book is not an easy read. But anyone with a concern for public policy issues related to nuclear weapons, the environment and the Cold War will find Gerber's work invaluable and enlightening.

Gerber currently works as an environmental historian with Westinghouse Hanford, the prime contractor at Hanford. She wrote *On the Home Front*, however, prior to her employment in that position. The work was supported by a grant from the American Association of State and Local History. The book is abundantly referenced with over 70 pages of notes and includes a helpful glossary of acronyms, abbreviations and technical terms. An annotated bibliography would have significantly improved the book's research value.

Thomas Moak is a librarian at Mid-Columbia Library in Kennewick, Washington, and former president of the East Benton County Historical Society.
**The Curve of Time**

**Down the Wild River**
Reviewed by Dawn Maureen Burns.

For 15 summers during the 1920s and 1930s Muriel Wylie Blanchet navigated her 25-foot sailing vessel through the coves and inlets of Vancouver Island. She had many adventures but no serious mishaps in spite of rough seas, fog and storms. On these voyages her crew called her “Mummy.”

Widowed in 1927, Mrs. Blanchet continued to live on Vancouver Island with her five children. During the winter she homeschooled her sons and daughters in the family cabin, but in the summer she took them on coastal cruises up and down the island. Like Mark Twain, she believed that school should not interfere with a person’s education. On the water “Mummy” served as skipper, navigator and engineer. On land she assumed the duties of naturalist, tour guide and protector. The family enjoyed so many memorable moments that during the past 25 years it has achieved near-classic status. This reprint by The Seal Press makes Mrs. Blanchet’s only book, first appeared in 1961, the same year she died at age 70.

Readers below the 49th parallel overlooked The Curve of Time when it was first published. Canadians, however, received it so warmly that during the past 25 years it has achieved near-classic status. This reprint by The Seal Press makes The Curve of Time available once again at a very reasonable price. Written in a direct, unaffected style, the narrative ebbs and flows effortlessly from practical matters to thrilling moments. Charming and humorous, it will appeal to Pacific Northwesterners who have explored Vancouver Island’s coastal cavities on their own as well as to young families who only dream of doing something like this themselves.

A worthy companion to The Curve of Time is Constance Helmericks’s Down the Wild River. Helmericks went to Alaska in 1945 as a young bride and 20 years later took her two teen-aged daughters on a canoe trip all the way to the Arctic Ocean. Like Mrs. Blanchet, Mrs. Helmericks traveled with youngsters to exciting locations, published widely before writing her book (including a cover story for Life magazine), and knew how to tell a good tale. Down the Wild River was first published in 1968 and is now reprinted for the first time.

**Current and Noteworthy**
By Robert C. Carriker, *Book Review Editor*

Oregon State University Press has just issued the first two volumes in the Oregon Literature Series. *The World Begins Here: An Anthology of Oregon Short Fiction*, edited by Glen A. Love (Corvallis: Oregon State University Press, 1993; 320 pp., $32.95 and $18.95) is a mosaic of the ethnic and racial diversity of Oregon’s literary heritage. Not all the names of the authors are as familiar as those of Ken Kesey, Barry Lopez and Craig Lesley, but the material they present is no less articulate and engaging. *Many Faces: An Anthology of Oregon Autobiography*, edited by Stephen Dow Beckham (Corvallis Oregon State University Press, 1993; 352 pp., $32.95 and $18.95) allows 40 Oregonians from four regions of the state to tell their own stories.

Oregon Graphic Names saw first light in 1928 at the hand of compiler Lewis A. McArthur. As Oregon grew, so did the book. McArthur revised and enlarged his volume for a second edition in 1944; his wife put the finishing touches on the third edition in 1952; and his son, Lewis L. McArthur, has made necessary adjustments for subsequent revisions, including the recently published sixth edition (Portland: Oregon Historical Society Press, 1992; 957 pp., $29.95). An essential reference tool for historians, geographers and writers for 65 years, the sixth edition ballooned to its present size because it retains the lore of Oregon in each of its precisely accurate citations.

The Catholic Sentinel has been Oregon’s official Catholic newspaper for nearly 125 years. In its long run as the oldest continuing Catholic newspaper on the West Coast, the Sentinel has had numerous publishers, editors, writers and copy kids, but until now, never a historian. That void has been filled with Defender of the Faith: The History of the Catholic Sentinel, 1870-1990 by Wilfred P. Schoenberg, S.J. (Portland: Oregon Catholic Press, 1993; 432 pp., $29.95). Of special interest is a controversy with the Ku Klux Klan over Portland’s private schools in the post-World War I period.

When H. L. Davis won the 1936 Pulitzer Prize for *Honey in the Horn*, critics hailed his novel about homesteading in Oregon as a new voice about the Pacific Northwest. Son of an itinerant schoolteacher in the high-desert town of Antelope and later The Dalles on the Columbia River, Davis set his first work of fiction in the geography and time-frame, 1906 to 1908, that he knew best. The University of Idaho Press, the sole distributor for this title, has issued a reprint edition with an illuminating new introduction by Professor Merrill Lewis of Western Washington University (Moscow: University of Idaho Press, 1992; 400 pp., $19.95). Early reviews of the book likened Davis’s puckish writing style to those of Bret Harte and Mark Twain, and his anecdotes and exaggerations to those found in the Paul Bunyan story.

**ADDRESS ALL REVIEW COPIES AND RELATED COMMUNICATIONS TO:** Robert C. Carriker, Department of History, Gonzaga University, Spokane, WA 99258.
On the Home Front
The Cold War Legacy of the Hanford Nuclear Site
Michele Stenejhem Gerber

"Really the first history of the bureaucratic and institutional development of atomic weaponry and power [and] how these are embedded in the larger public and national sphere... not only an important scientific story but an important political; national, and human story."—Peter Gould, author of Fire in the Rain: The Democratic Consequences of Chernobyl.

This first complete history of Hanford was made possible by the recent declassification of tens of thousands of formerly secret government documents relating to the construction, operation, and maintenance of the site.

$35.00 cloth

Available at bookstores

On the Home Front
The Cold War Legacy of the Hanford Nuclear Site
Michele Stenejhem Gerber

"Really the first history of the bureaucratic and institutional development of atomic weaponry and power [and] how these are embedded in the larger public and national sphere... not only an important scientific story but an important political; national, and human story."—Peter Gould, author of Fire in the Rain: The Democratic Consequences of Chernobyl.

This first complete history of Hanford was made possible by the recent declassification of tens of thousands of formerly secret government documents relating to the construction, operation, and maintenance of the site.

$35.00 cloth

Available at bookstores

The Pacific Northwest
An Interpretive History
Carlos A. Schwantes
Washington, Oregon, and Idaho comprise a hinterland even today, but one with a distinctive history. Schwantes examines the networks of trade, transportation, and communication that unify the region and also its internal geographical, political, and religious divides.

$15.95 paper

Mountain Men and Fur Traders of the Far West
Eighteen Biographical Sketches
Edited by LeRoy R. Hafen
Selected by Harvey L. Carter
$10.95 paper

Trappers of the Far West
Sixteen Biographical Sketches
Edited by LeRoy Hafen
Selected by Harvey L. Carter
$8.95 paper

Lewis and Clark among the Indians
James Ronda
$10.95 paper

In Mountain Shadows
A History of Idaho
Carlos A. Schwantes
$35.00 cloth

Yukon
The Last Frontier
Melody Webb
$15.95 paper

University of Nebraska Press Lincoln, NE 68588-0520 • 800-755-1105