The KENDALL KATWALK

"The Hardest Piece of Trail Ever Built"

By Michael Egan

The surface of the earth is soft and impressible by the feet of men; and so with the paths which the mind travels.

—Henry David Thoreau

One hour east of Seattle at Snoqualmie Pass, Interstate 90 crosses the Pacific Crest Trail, a hiking trail that runs from Canada to Mexico along the crest of the coastal mountain ranges. Compared with I-90, it is a very different—almost primitive—sort of throughway. North of the pass, the Pacific Crest Trail winds its way towards Stevens Pass through some of the most spectacular and accessible designated wilderness in the Pacific Northwest. Some 2,400 feet above Snoqualmie Pass, six miles along the trail, the hiker confronts the Kendall Katwalk, an amazing strip of trail blasted and carved out of the side of the cliff face. On one side the rock rises more than 20 feet straight up; on the other the cliff drops almost vertically several hundred feet.

While the vistas are positively stunning (on clear days), the very existence of the trail through this fragile area provokes questions over trail construction, forest management, and wilderness ethics. Its planning and construction in the 1970s were marked with flashes of design and engineering brilliance, tragedy, and more than a little controversy. In many respects, the Kendall Katwalk is among the first "modern" or futuristic wilderness trails in the Pacific Northwest. Prior to its construction, no engineering feat of this magnitude had been attempted in Washington's designated wilderness areas.

Trails represent some of the earliest marks that humans have scratched and worn into the face of the earth. Trails connected places where people had reasons to go; they were paths between villages and to sources of food and water, or routes that followed animal migration patterns. Trail locations were often so practical that many were widened to allow passage for livestock, then wagons, then railroads, and, during the 20th century, automobiles. As a result of aggressive industrialization in the 19th and 20th centuries, Americans sought refuge from the intensity of their new urban lives by turning to landscapes that remained free of mechanization.

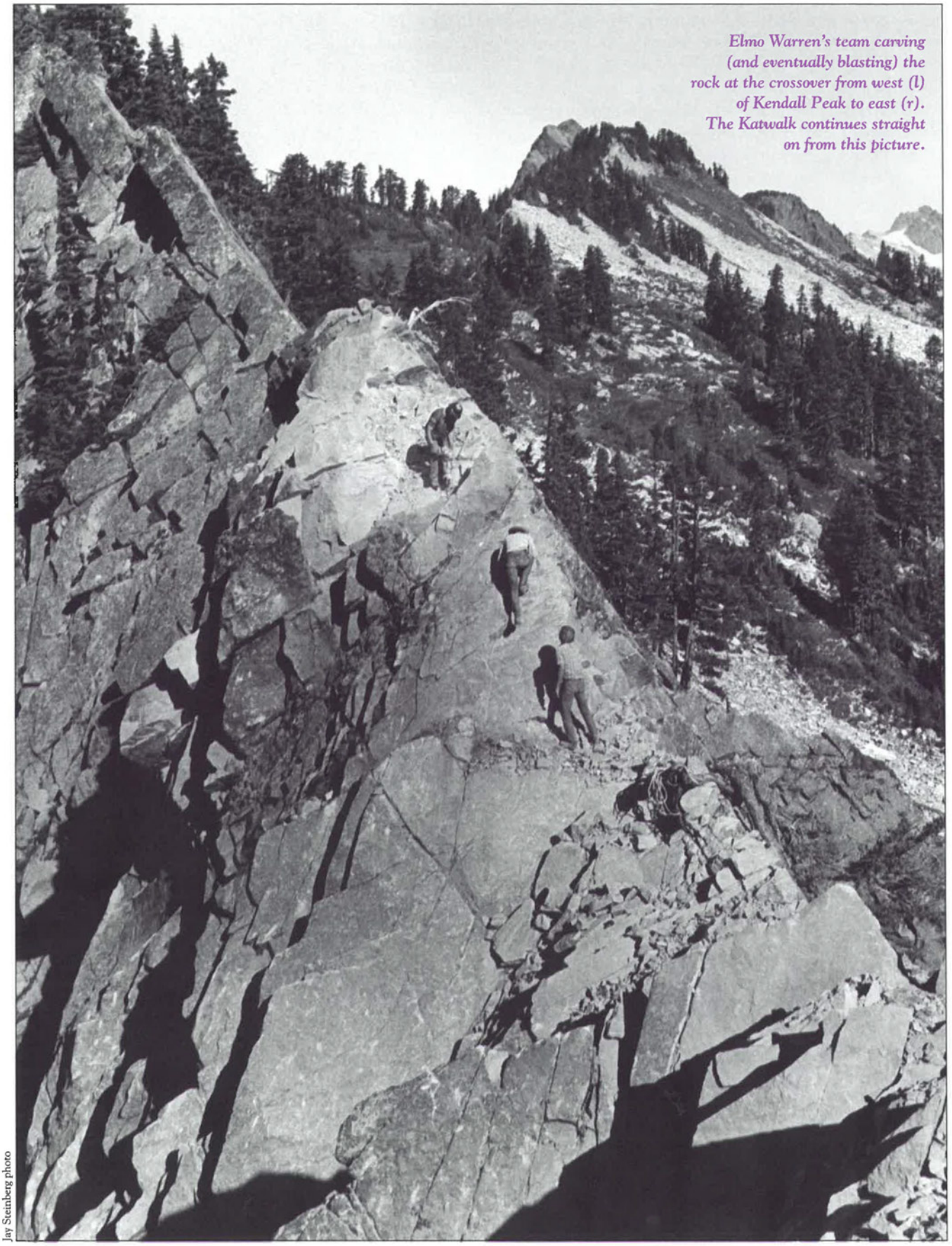
While the trail concept has changed in tune with technological advancement, the 20th century witnessed a renewed interest in the primitive trail as an avenue for pedestrian recreation. Reconstructing the history of the Kendall Katwalk also raises questions about our ideas of "natural" trails and wilderness experiences. The recreational trail is at once a natural, cultural, and technological phenomenon, yet we invariably only perceive trails as conduits through which we might experience nature.

Despite their apparent simplicity, the construction of modern recreational trails providing paths into wilderness areas is more complicated than simply cutting a route up mountainsides and through trees. As outdoor recreation developed and grew in the Pacific Northwest around the beginning of the 20th century, it became clear that the climate and geography of the region simply did not suit the kinds of trails enthusiasts had scrambled up in regions like the Northeast.

As tourists from the northeastern cities began hiking in the Catskills, White Mountains, Green Mountains, and Adirondacks, hotel landlords cut pathways up the sides of nearby peaks so that guests could scramble to the top and have a look around. The routes taken by these trails were steep, often ascending in a straight line from valley to summit. The acute angles of the trails made erosion inevitable, and topsoil invariably washed away, leaving the granite beneath as a more durable hiking surface.

It is a simple rule in trail construction: steeper trails result in more severe erosion. In the much wetter Cascade Range—and, it should be noted, on bigger mountains—problems of erosion were not so easily ignored. The soils in the Cascades were subject to much greater amounts of precipitation. The wear of feet tramping on these soft soils would have been absolutely disastrous on any kind of vertical trail. Whereas vertical trails in the Northeast catered to the recreationist's desire to get to the top of the mountain, horizontal trails, which climbed more gradually, were an ecological necessity in the Pacific Northwest. Attaining the summit my have been the chief northeastern ambition, but in the Pacific Northwest, emphasis was put on the process—not simply the attainment of the goal, but the journey itself. The scrambling that was so popular in the East necessarily became hiking in the West.

Trails were vital conduits for outdoor recreation, but they also served a critical role in stimulating sympathy for wilderness protection. When Clinton C. Clarke first conceived of his plan to spearhead a hiking trail that ran from Canada to Mexico along the Pacific Crest, he hoped to foster the same kind of wilderness protection that Benton MacKaye had attained in the establishment of the Appalachian Trail. Clark sought to tie together a series of new and existing trails



Elmo Warren's team carving (and eventually blasting) the rock at the crossover from west (l) of Kendall Peak to east (r). The Katwalk continues straight on from this picture.

Jay Steinberg photo

into a contiguous whole that he wanted to name the John Muir trail after the great naturalist and founder of the Sierra Club. While the name gained considerable support from California outdoor recreation groups, it was less popular to mountaineering clubs in Washington and Oregon. In a letter dated October 19, 1934, Dr. Harold C. Bryant of the Sierra Club suggested that Clarke find an alternate name for the trail, proposing the Cascade Sierra Trail, the High Pacific Trail, and the Pacific Crest Trail. Clarke adopted the last of these three.

Unlike Benton MacKaye and the Appalachian Trail, Clarke is not universally recognized as the father of the Pacific Crest Trail. Indeed, many felt that Catherine Montgomery of Bellingham introduced the first discussion of a continuous trail from Canada to Mexico in 1926. The idea caught on, and when Fred W. Cleator became supervisor of recreation for the Forest Service's Pacific Northwest division in 1928, he began to develop what was then called the Cascade Crest Trail by making additions to the Skyline Trail in Oregon and connecting it to trails in southern Washington. Regardless of the trail's origins, the intent was consistent. Trail construction offers two benefits to nature protection. First, trails reduce the ecological impact of humans visiting fragile landscapes; and second, trails make wilderness experiences accessible to more people, thereby arousing the desire to join the crusade to protect wild nature. Contributing to the cultivation of environmental sensibilities, trails were intentionally routed and designed to provide as many panoramic views and vistas as possible for the hiker. In so doing, the wilderness movement gained support, but also significantly qualified or made problematic the popular image of wilderness as something necessarily scenic and pertaining to human aesthetic interests.

It was this question over scenic value that prompted the relocation of the Pacific Crest Trail and the construction of the Kendall Katwalk after the passage of the National Scenic Trails Act in 1968. Earlier, in 1928, the United States Forest Service had begun conducting surveys of the high country in the interest of constructing a connected trail system through Washington state. In 1935 the Forest Service completed a thorough reconnaissance of the whole route of what was then known as the Cascade Crest Trail, stretching from the Canadian border to the Columbia River.

The survey counted 531 miles of trail, most of it in National Forest lands along the Cascade Crest, but it was hardly a contiguous trail. Rather, it was an unconnected series of haphazard trails carved out by indigenous people, trappers, miners, stockmen, foresters, and animals prior to the trail's conception. The initial trail location analysis made by the Forest Service in the 1930s proposed a quick climb from Snoqualmie Pass, up Kendall Peak, and across the crest line. The trail would then zigzag past several lakes on the east side of the crest on its way to Waptus Pass.

Interestingly, this first location analysis is not significantly different from the trail that exists today. Due to a series of factors likely relating to safety and cost, the 1935 location analysis was rejected and an alternate route on the west side of the crest was chosen. While the trail that was actually built proved easier, safer, and less expensive to construct, problems with the location would plague the Cascade Crest Trail until it was moved in the 1970s.

From a scenic point of view, the trail lacked panoramic vistas as it followed the Middle Fork of the Snoqualmie River many hundred feet below the crest line. Writing in the *Mountaineer Annual* in 1954, Joseph T. Hazard wondered about "the Crest Trails finding better country" through this area. While scenic vistas had long been of vital importance to the National Park Service, the Forest Service's emphasis was still on safety; in a 1950 "Recreation Resource Plan" for the Snoqualmie National Forest, the plan insisted that "basic needs are safety rather than aesthetic appeal."

The more significant problem, however, was the need for annual maintenance work in that same area because the trail was invariably wiped out each spring by snowslides. This recurring—and unavoidable—problem with the trail's location was the main factor contributing to its relocation in the 1970s. The cost of annual maintenance proved too great and the opportunity to raise the trail to the crest was welcomed by the 1960s. With funds from the National Trails System Act and technological advancements in trail construction practices in the decades since construction of the old Cascade Crest Trail, it was now possible to achieve safety as well as aesthetic appeal.

The 1968 National Scenic Trail Act required that much of the Washington section of the Pacific Crest Trail receive a lift, both figuratively and literally. While the trail's standards had been revised and significant portions of the trail needed extensive maintenance, it was deemed that much of it had to be relocated out of the heavily used valleys and closer to the mountain range's crest. Over the next ten years more than half of the Pacific Crest Trail between Stevens Pass and Snoqualmie Pass was relocated to more scenic high country. Indeed, the trail's landscape was to change in order to adapt to the new legislative environment of American wilderness policy, which catered as much to aesthetic values as it did to environmental protection.

The first location analysis for the new Pacific Crest Trail that included the Kendall Katwalk was submitted in September 1971. The joint project, shared by the staffs of the Snoqualmie National Forest and the Wenatchee National Forest, relocated the trail to near the actual crest in order to meet the directives set out by Congress. While the old route stayed almost exclusively within Snoqualmie National Forest, the proposed new trail snaked its way back and forth between the two forests. As a result, the section from Snoqualmie Pass to Ridge Lake "was mutually agreed to be the responsibility of the Snoqualmie and the next section, from Ridge Lake to Deception Pass, the responsibility of the Wenatchee," since these sections of the trail lay primarily in the national forest in charge.

Michael Egan photo

This is the view of the Cascade Mountains looking east from the Kendall Katwalk. Construction of this section of the Pacific Crest Trail raised questions about trail ecology, forest management practices, and wilderness ethics.

The 1971 location analysis recommended a route that was virtually identical to the original 1935 suggestion, which had been rejected. The 1971 plan would require some difficult and expensive construction but would keep the trail as close to the crest as possible. In an effort to meet the Pacific Crest Trail's location criteria as laid out by Congress, the basic route plan climbed out of the timbered bottomland quickly, using switchbacks to gain elevation while limiting the risks of erosion, and traversed the last three and a half miles to Ridge Lake in true alpine country.

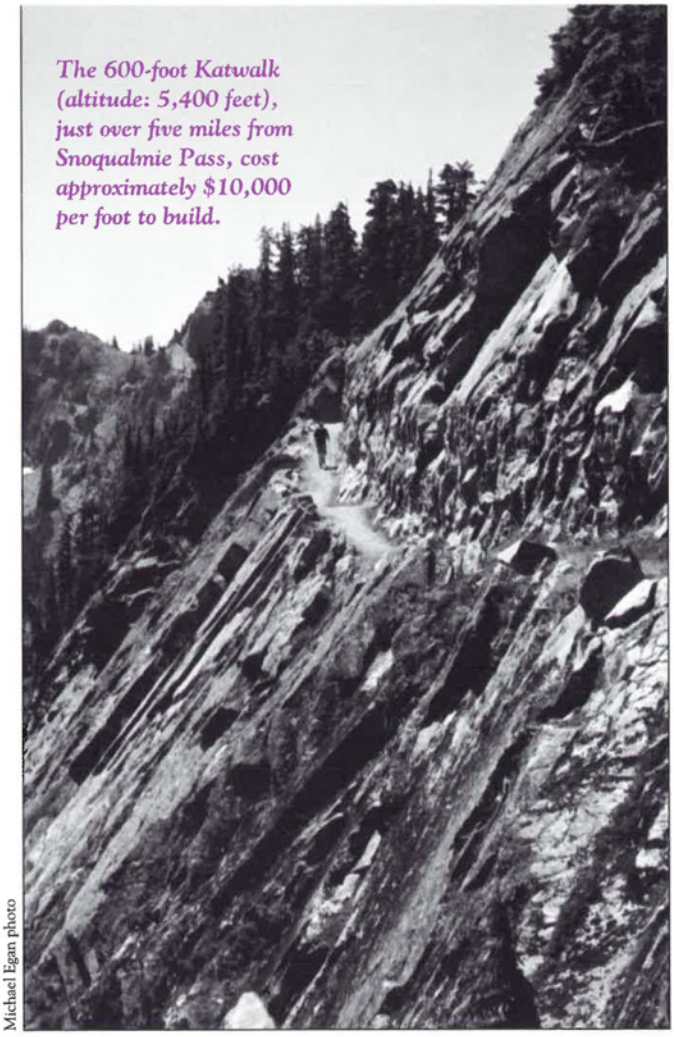
The only major concern in the location analysis was how to cross from the western side of the crest on the Snoqualmie side to the Wenatchee National Forest on the eastern side. No ideal place for this crossing of the crest could be found that also adhered to the congressional stipulation that the trail climb quickly from the pass. Making this transition would require ingenious planning and original engineering. Both were realized in the construction of the Kendall Katwalk, which contractor Elmo Warren would call "the hardest piece of trail ever built."

Even before the trail was contracted, Forest Service planners recognized the difficulties involved with their chosen route. In the location analysis study, the short stretch from mile 6 to mile 6.1—what would become the Katwalk—consumed a significant part of their description. The difficulty in the construction was twofold. First, in order to traverse the crest, a significant block of stone would have to be blasted. Initial planning suggested that instead of clearing the rock, a tunnel could be built through it. Questions then arose regarding how to keep the tunnel free of snow; snow in the tunnel likely would not melt in even in the height of summer. Putting doors on either side of the tunnel was recommended, but engineers then pondered how to ensure that the doors stayed shut while the interior of the tunnel remained lit. Ultimately, such plans were scrapped in favor of blasting the passage from the west to the east side of the crest.

The problem of crossing the crest, however, paled in comparison to the problems involved with then progressing 600 feet along the cliff face toward Mount Thompson. Warren and his team accepted the contract to mark and blast the rock and build the Katwalk. The previous summer Warren and his team had built the trail from Snoqualmie Pass up to the Katwalk. They settled the second summer at Gravel Lake, on the west side of the crest, at the northern end of the contract; their gear was airlifted in by helicopter. Another helicopter flew in and dropped beer bottles full of red paint along the cliff face to mark where the trail was to go. Warren had 1,000 feet of cable packed by mule up along the newly built trail to the Katwalk. Using 80-pound, gas-driven Pionjar drills, which only drilled holes 1¼ inches deep, Warren and his crew began slowly making progress across the cliff's face. Over the space of the entire season, the Katwalk began to take shape. Eventually, Warren and his team had created a six-foot-wide trail along some 600 feet of cliff.

Construction on the new Pacific Crest Trail, however, was not free of hazards or tragedy. Ironically, the Katwalk—the most dangerous and difficult strip—was built easily enough, but just north of the Katwalk, at Ridge Lake, serious injuries and one fatality occurred on a trail section contracted to Sprague Brothers Construction Company of Eugene, Oregon. In August 1975 two young crewmen slipped from an eight-inch pioneer trail and pitched headlong over a cliff and onto a rockfall. Both suffered serious injuries and needed to be rescued by helicopter.

The following year Sprague Brothers suffered a tragedy when in early September James Watson was clearing rock from the trail after dynamite had blasted a route through the cliffs. Without warning, the wall above him came loose and swept him off the trail and onto the rocks below. With Watson's death, Sprague Brothers despaired and stopped



The 600-foot Katwalk (altitude: 5,400 feet), just over five miles from Snoqualmie Pass, cost approximately $10,000 per foot to build.

Michael Egan photo

work for the season. They refused to finish the job until this dangerous segment was relocated.

The Forest Service resurveyed a 2,000-foot route from what has become known as Watson Pass to a point several hundred feet below where Watson was killed. This route crossed a mining claim, and right-of-way was difficult to acquire. Instead, the Forest Service asked if Sprague Brothers would be willing to "sub out" this stretch of their contract. Sprague was more than relieved to get rid of it. Warren started work on that section in late July 1977 and finished by mid September, thus completing the final stage of the new Pacific Crest Trail.

The decision to build the Katwalk and its design were far from universally agreed upon. Uriel L. Corbin, the regional trails supervisor in Portland, opposed the Katwalk's construction on the grounds that it was both expensive and unsafe. Corbin, a longtime ally of and advocate of the Pacific Crest Trail, preferred improving the old trail and introducing new techniques that might make the trail better able to withstand the snowslides that destroyed it on an annual basis. Corbin also expressed concerns about snow levels at the high altitude but finally conceded after Larry Barrett, the forest supervisor for Snoqualmie National Forest, insisted it was the only proper route.

Many outdoor enthusiasts familiar with the area also expressed surprise and concern about the Forest Service's recommendations, fearing that the inevitable popularity of the trail—given its relative proximity to Seattle—would endanger the ecological integrity of the beautiful but fragile alpine meadows the trail proposed to cross just before reaching the Katwalk. Recreationists from the Seattle area assumed the new trail would follow Gold Creek up to the crest, an easier incline leading away from the alpine meadows. Gold Creek reached the crest just before Huckleberry Mountain but beyond the Katwalk, thereby removing a major engineering obstacle from the trail's construction. Indeed, at least one contractor was so concerned about the location—both the ecological harm to the meadow and the danger of building the Katwalk—that he refused to submit a bid.

In retrospect, Corbin's misgivings about the trail location were justified. Even though he bowed to pressure from Barrett and other local rangers and foresters, Corbin's concerns over cost and safety should perhaps have been taken more seriously. The Kendall Katwalk was certainly expensive; estimates suggest that the 600-foot Katwalk cost as much as $10,000 per foot. Corbin's other concerns have been equally recognized as the Katwalk regularly opens late in the season due to poor weather conditions and excessive snow. Nevertheless, the Kendall Katwalk is a remarkable engineering feat. While the cost of its construction was high, the costs for subsequent maintenance and reconstruction have been negligible. Because it is above treeline and has flat trail bolstered on either side by solid rock to reduce erosion, there has been almost no maintenance required on the Katwalk in the past 20 years. In effect, the Katwalk is an archetype of the ideal trail for the coastal Pacific Northwest from the perspective of land managers. It is durable to weather conditions and the high volume of foot traffic. As an open cliff face, the Katwalk also allows for ample breathtaking scenery.

Blasted as it was across the face of the cliff, one might question the "natural" appearance of the Kendall Katwalk in designated wilderness. The use of machinery in its construction seems to violate concepts of wild nature, but of course the issue is more complicated than that. Does the quality of the trail, its likelihood for longevity, and its relative cost-effectiveness make up for this seeming aberration of the spirit of federal wilderness legislation, which prohibits the use of mechanized or motorized equipment in wilderness areas? Can any work in the wilderness really be justified if "wilderness" is to be recognized as such? But trail construction might be excused on the grounds that it is for the greater good. Given the growing popularity of outdoor recreation, recreationists will explore wilderness with or without trails, so the trail ensures that increased visitation is safe and reduces the ecological impact of foot traffic on the fragile soils. As Clinton C. Clarke noted, allowing for greater access to natural areas might help increase support for further protection of the region's natural and beautiful landscapes.

Michael Egan, a native of Vancouver, British Columbia, is assistant professor in the history of science, technology, and the environment at McMaster University in Hamilton, Ontario.

COLUMBIA

The Magazine of Northwest History

A quarterly publication of the

WASHINGTON STATE HISTORICAL SOCIETY

VOLUME NINETEEN, NUMBER FOUR

■

David L. Nicandri, *Executive Editor*
Christina Orange Dubois, *Managing Editor & Graphic Designer*
Patricia Erikson, *Associate Editor*
Mark Vessey, *Editorial Assistant*
Robert C. Carriker, *Book Review Editor*
Carolyn Simonson, *Copy Editor*
Amy Coggins, *Membership Secretary*

RESEARCH CONTRIBUTORS
Elaine Miller, Edward Nolan, Joy Werlink

FOUNDING EDITOR
John McClelland, Jr.

■

COLUMBIA (ISSN: 0892-3094) is published quarterly by the Washington State Historical Society.

All articles appearing in this journal are abstracted and indexed in ***Historical Abstracts*** and ***America: History and Life***. *EDITORIAL CONTRIBUTIONS:* Inquiries and submissions should be directed to **COLUMBIA**, WSHS Research Center, 315 N. Stadium Way, Tacoma, WA 98403; 253/798-5918. All unsolicited manuscripts and photographs submitted must include return postage (in stamps) and suitable packaging to ensure their safe return. Although reasonable care will be taken with materials received, no responsibility can be assumed for unsolicited materials, including photographs. *BOOK REVIEWS:* Address all review copies and related communications to Robert C. Carriker, Department of History, Gonzaga University, Spokane, WA 99258. *POSTMASTER:* Please send address changes to Washington State Historical Society, 1911 Pacific Avenue, Tacoma, WA 98402.

WWW.WASHINGTONHISTORY.ORG

♲ Printed on recycled paper.

COLUMBIA

THE MAGAZINE OF NORTHWEST HISTORY ▪ WINTER 2005-06

To Our Members 2

History Commentary 3
Young Erskine Scott Wood's summer visits with Chief Joseph.
By Robert H. Ruby

Figureheads of State 7
The foibles and failures of Washington's territorial governors.
By Robert E. Ficken

History Album 16
Dear Santa....

Paul Robeson at Blaine 17
A music legend lifts his voice against injustice at the Peace Arch.
By Robert Keller

Images of Northwest Logging 23
Clarence Garner's paintings portray the lumber industry in its glory days.
By Lynette Miller

From the Collection 27
A family portrait by Howard Chandler Christy.

John Ordway 28
"Orderly sergeant" of the Lewis and Clark expedition.
By Thomas D. Morgan

Northwest Nisei in Tokyo 31
What was it like for a Seattle-born soldier of Japanese descent to serve in Japan during the Allied occupation?
David J. Jepsen

The Greatest Dude in Congress 36
James Hamilton Lewis's short-lived career as a Washington politician.
By Eldon Barrett

The Kendall Katwalk 38
A 600-foot engineering marvel on the Pacific Crest Trail.
By Michael Egan

Correspondence/Additional Reading 43

Retrospective Review 44

Columbia Reviews 46

COVER: "Portrait of Free Enterprise," c. 1950 (oil on board), by Clarence ***L. Garner. A number of*** *Garner's paintings document Pacific Northwest logging techniques and practices between the 1890s and 1930s. The mill in this painting has a short flume to carry logs to the mill pond. Some flumes were much longer and higher, carrying huge amounts of wood. The famous Thielsen flume in the Blue Mountains of Oregon carried 50,000 board feet of lumber a day. See related story beginning on page 23. (Washington State Historical Society)*