CRM

CULTURAL RESOURCE MANAGEMENT
Information for Parks, Federal Agencies, Indian Tribes, States, Local Governments, and the Private Sector

VOLUME 20 NO. 1 1997

CRM and the National Trails System

U.S. DEPARTMENT OF THE INTERIOR
National Park Service
Cultural Resources

PUBLISHED BY THE NATIONAL PARK SERVICE

To promote and maintain high standards for preserving and managing cultural resources

An electronic version of this issue of CRM can be accessed through the CRM homepage at <http://www.cr.nps.gov/crm>

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***CRM* CELEBRATING 20 YEARS OF PUBLICATION**

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VOLUME 20 **NO. 1** **1997**
ISSN 1068-4999

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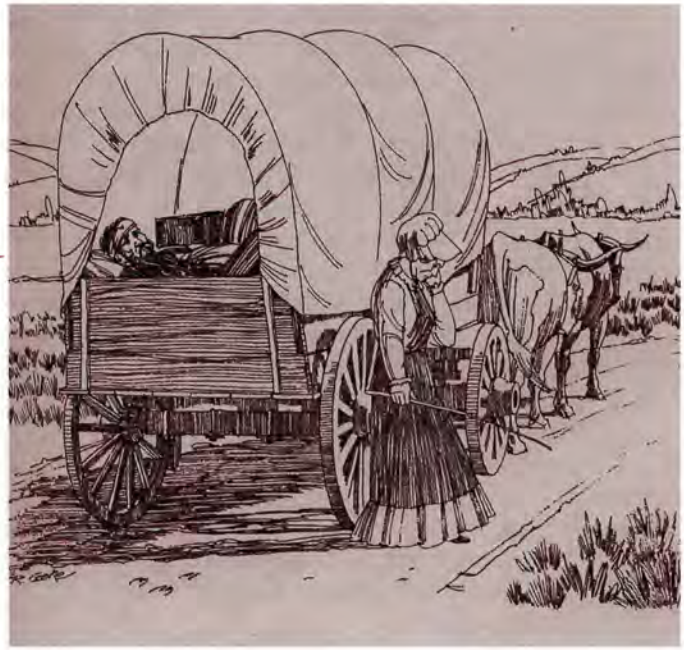
Dedication

This issue of *CRM* is dedicated to the memory of Merrill J. Mattes, longtime National Park Service historian. Best known for his books, *The Great Platte River Road* and *Platte River Road Narratives,* Mattes also served as the first site manager at Scotts Bluff National Monument (where he became friends with the pioneer photographer William Henry Jackson), was an advocate for the establishment of Fort Laramie National Historic Site, and performed as NPS Midwest Regional Historian in Omaha, Nebraska for many years. In retirement, he was a founding member of the Oregon-California Trails Association (OCTA), often being called before them to give insightful and well-received historic talks. A library containing much of his personal collection has been dedicated by OCTA in the National Frontier Trails Center in Independence, Missouri.

Merrill Mattes perfected the study of emigrant journals, which today provide such a rich and irreplaceable record of the 19th-century westerly migrations. To quote author Gregory Franzwa in a recent eulogy, "The man could not say no to anything which would benefit trail preservation.... One thing is certain. We have lost a giant. He will not be easy to replace."

Steve Elkinton

CRM and the National Trails System



Interpretive sign illustration (created by Roger Cooke); part of the Oregon Trail sites and segments interpretive program.

One small part of the 1960s, one small concept which has taken root and flourished, one small footnote to an age of massive environmental change is the idea of a national system of trails for the United States.

Before the National Trails System Act was passed and signed into law in the last days of President Lyndon Johnson's administration in 1968, the federal government's sole interest in trails was to provide safe and convenient access across public lands: fire lanes in national forests, visitor walks at Yellowstone and Yosemite, backcountry hiking routes through remote wilderness, even marked tour routes through national battlefield parks.

With passage of the National Trails System Act (P.L. 90-543), however, the federal government took the high ground in establishing a national system of trails, in recognizing, protecting, and managing its key components, and fostering cooperation with state governments, local jurisdictions, nonprofit organizations, and even individual citizens to nurture this set of trails.

The first two trails established by the National Trails System Act in 1968 were the Appalachian and Pacific Crest National Scenic Trails. Both had been in existence for decades, both were well known and well used, and both already enjoyed support and protection by the National Park Service and the USDA Forest Service. In fact, land use threats to the Appalachian Trail galvanized the trails community to support this legislation—however, political reality suggested that the law must establish a national system, not just protect one or two specific trails.

In 1968, Congress requested that 14 additional trails be studied for feasibility for future inclusion into the Trails System. Many of these were not primarily recreational hiking and horseback trails, but remnant routes of exploration, set-

tlement, or adventure, such as the Lewis and Clark Trail, the Oregon Trail, or the Gold Rush Trails in Alaska. As a result of those studies, and increasing public attention brought to commemorative historic routes, a new category of "national historic trail" was added to the National Trails System in 1978. In learning to administer such trails, Park Service trail managers—and their counterparts in the Bureau of Land Management and Forest Service—have had to learn about the full palette of cultural resource management skills.

Federal Administration of the Trails

Since 1968, the National Park Service has taken on an ever-greater share of responsibility administering and managing long-distance trails across America. Many of the core disciplines which form the foundation for the array of professional park management skills offered by the Park Service also benefit these trails: archeology, planning, cartography, interpretation, and the full range of both natural and cultural resource management disciplines. Similar professional expertise is available in sister federal agencies. Today, the Service administers 15 of the 20 trails established as part of the National Trails System; the Bureau of Land Management administers one and the Forest Service four. Therefore, the National Trails System is truly an interagency operation. There are a number of other differences which should be mentioned between traditional public lands management and trails administration:

All trails work is a partnership. Without vibrant nonprofit organizations, supportive state programs, and the assistance and recognition of local communities, it is almost impossible to bring these trails forward as real places to visit and experience.

Long distances. Few parks or forests cross state lines—but almost every trail does. Some span several NPS clusters and field areas. Keeping track of such long corridors on a regular basis is extremely challenging.

Ownership and control often lies with others. The Appalachian National Scenic Trail is an exception, where almost 70% of the trail corridor is federally owned. Along most of the other trails private landownership dominates. Most trail corridor protection is therefore carried out through outreach and persuasion, not regulation.

Authorities of the National Trails System Act

The origins of this special mix of opportunities and authorities stems from the National Trails System Act itself. It outlines four steps in establishing one of these trails: a Congressional amendment requesting a feasibility study; a study conducted by a land-managing agency (usually the Park Service); an amendment establishing the trail; and a comprehensive management plan to guide the partnership of agency, state, non-profit, and individual players who are involved in making these trails a reality.

Among the Act's distinct authorities are special instructions for feasibility studies and comprehensive management plans (including inventories of significant resources), the concept of "high potential sites and segments" (the most important parts of each trail corridor), official certification of sites and segment of trail open to the public, emphasis on partnerships and volunteers, and a variety of trail corridor protection techniques, including full fee acquisition for some trails (even eminent domain for the Appalachian and Pacific Crest National Scenic Trails) as well as exchanges and transfers, donations, interagency cooperation in the disposal of lands, and an emphasis of having states and others try first.

An agency assigned to administer a trail then applies the mission and authorities from that agency's organic act to its trails work.

National Trails System

Trail	Date established	Length (in mi.)	Agency
Appalachian NST	Oct. 2, 1968	2,150	NPS
Pacific Crest NST	Oct. 2, 1968	2,608	FS
Continental Divide NST	Nov. 10, 1978	3,200	FS
Oregon NHT	Nov. 10, 1978	2,170	NPS
Mormon Pioneer NHT	Nov. 10, 1978	1,300	NPS
Lewis & Clark NHT	Nov. 10, 1978	3,700	NPS
Iditarod NHT	Nov. 10, 1978	2,300	BLM
North Country NST	March 5, 1980	3,200	NPS
Overmountain Victory NHT	Sept. 8, 1980	310	NPS
Ice Age NST	Oct. 3, 1980	1,000	NPS
Florida NST	Mar. 28, 1983	1,300	FS
Potomac Heritage NST	Mar. 28, 1983	700	NPS
Natchez Trace NST	Mar. 28, 1983	110	NPS
Nez Perce NHT (Nee-Me-Poo)	Oct. 6, 1986	1,170	FS
Santa Fe NHT	May 8, 1987	1,200	NPS
Trail of Tears NHT	Dec. 16, 1987	1,800	NPS
Juan Bautista de Anza NHT	Aug. 15, 1990	1,800	NPS
California NHT	Aug. 3, 1992	5,665	NPS
Pony Express NHT	Aug. 3, 1992	1,966	NPS
Selma to Montgomery NHT	Nov. 12, 1996	54	NPS

NST=National Scenic Trail; NHT=National Historic Trail

Some General Principles

A close study of resource management being conducted to preserve and protect these trails reveals a set of principles which underlie most of this work:

Trail resource management is done through partnerships. Often this is interagency, often public-private, often involving many parties for a single project or an ongoing, multi-year program. Without vibrant partnerships, trails wither. The backbone of trail work are committed volunteers. Over one third of all NPS VIPs (Volunteers-in-the-Parks) are associated with the Appalachian Trail—much of it devoted to resource management. Throughout the National Trails System, every federal operating dollar is matched by at least three dollars' worth of volunteer time.

Trail resource management closely links both natural and cultural resource issues. Few sections of these trails are solely natural or cultural—most are tightly bound interactions of natural settings through which prehistoric and historic travellers passed. The trail story often hinges on the interaction of people to the desert or mountain or river crossing before them. Trail resource management, therefore, must almost always be an interdisciplinary effort.

Trails resource management is innovative. The special conditions of these long, sometimes discontinuous corridors (long distances, mixes of ownership, an absence of clear boundaries, newness in the public mind) invite innovation. Traditional ways of doing resource management are often too expensive or site-specific to be useful to trails. GPS, GIS, remote sensing, computerized databases, cultural landscape management techniques and other high-tech, cutting-edge assessment and management tools may offer the only hope of accounting for and interpreting these long, fragile corridors, and making them available for public enjoyment and commemoration as envisioned when the National Trails System was originated.

Trails resource management occurs both directly and indirectly. A good trail site inventory builds credibility; it can be an opportunity to involve supportive citizens and organizations. If done poorly, distrust among trail partners grows. Eroded trails or damaged waysides indicate neglect. Therefore, along national trails, resource management does not occur in a vacuum, but has many good results if done well. Constituent organizations which advocate the trails will grow and be more supportive—especially if they are involved in the management work. Interpretation, educational events, and commemorative reenactments are as important as hands-on treatments. Visitors will benefit from good trail stories based on sound research. Local, state, and national politicians will offer greater support for the trails if they see that trail resources are being recognized and protected, and that the public is benefitting through better interpretation.

Highlights of this Issue

The materials gathered for this "snapshot" of recent and current cultural resource work along components of the National Trails System follows a standard outline of good resource management: assessments and inventories, planning, management, and education and interpretation.

Most of the articles describe work along national historic trails, although there are many wonderful cultural resources and cultural resource challenges along national scenic trails. Some of the articles take a traditional approach, while others are provocative "thought pieces." Several authors take different perspectives on the same trail, such as Hawaii's Ala Kahakai, which is currently under study for possible inclusion in the National Trails System. The 1993 Oregon Trail Sesquicentennial has resulted in numerous studies and heightened public awareness of this important route, and some of these studies are described. Some just offer good, common-sense advice. Several articles are the result of important research or planning projects. Trails are complicated and change over time—and several authors examine both honoring the past appropriately and preparing for future change. Unfortunately, space does not allow representation of all 20 of the national trails.

Professionals from all agencies involved in the National Trails System have contributed, as well as a number of citizen partners. Also included is a description of another nation's trail system—Switzerland's—which closely parallels ours with both walking and historic route components. There is a tremendous (and largely untapped) opportunity to exchange trail corridor management ideas among many nations who are embarked on this linear conservation enterprise.

At the end of this issue are listed some of the current resources which make the National Trails System possible today: committed trails organizations, federal and state agency offices, web-sites, and publications.

Steve Elkinton, trained as a landscape architect, serves as Program Leader for National Trails System Programming, in the National Park Service's National Center for Recreation and Conservation. He assisted in assembling and editing articles for this issue of the CRM.

Stanley B. Kimball

A Trail Historic Resource Study
How I Did One

America has been experiencing a great "Trail Renaissance" ever since Congress passed the National Trails System Act in 1968 which now covers 20 national historic and scenic trails. Our trails are becoming better known, more fully appreciated, more carefully preserved, and more clearly marked with each passing year. Interest in this aspect of our national heritage continues to grow—there is no indication that it will diminish in the near future.

Since 1968 various bureaus, including the National Park Service, the Bureau of Land Management, and the USDA Forest Service, have been charged with the management, development, interpretation, and protection of these trails. Essential to the federal management of these trails are historic resource studies which document the history, background, and meaning of each trail, and discuss its time frame and relation to American history in general, something about the people who used the trail and their motivation, maps, illustrations, documents, and—most importantly—an inventory of historic sites along the trail. In 1991, I researched and wrote the *Historical Resource Study for the Mormon Pioneer National Historic Trail* under contract to the Denver Trails Office of the National Park Service.

I believe that the best approach to the preparation of such a study—and to the development of a historic site inventory—is to start with old-fashioned homework. Historians talk about a "literature search," meaning that the first thing to do is to locate and read what has already been written on the subject, to become well acquainted with the history of the trail, the physical trail itself, and the historic sites associated with it. To carry out this step, I sought to visit as many archives and other historical repositories as possible to discover useful primary source materials—especially maps, documents, trail accounts, and old photographs.

Part of this preliminary research involves studying old maps and transferring all significant data onto standard county maps of the one-half-inch-to-the-mile scale. Such maps are generally adequate for office and field research. (Some researchers may prefer the relatively new USGS maps of the 1:100,000 scale, i.e. 5/8 inch to the mile.) At times it is necessary to consult the USGS

Finished Historic Resource Study for the Mormon Pioneer National Historic Trail.

7.5 minute quads which are 2-5/8ths inch to the mile. Most indispensable, however, I found are the early General Land Office maps (the famous GLOS) and, equally important, the surveyors' notes for them. These all-important GLOS maps and notes are usually housed in state historical societies and are sometimes available on microfilm. When so available, researchers may, of course, make their own copies on a reader-printer.

I found it particularly important to consult as many published and unpublished contemporary trail accounts as possible. (I have had the good luck to annotate nearly 1,000 Mormon Pioneer Trail accounts.)

Then, after doing the requisite homework and tracing out the old trail and historic sites along the Trail on county maps as best as I could, it was time to get out of the office and archives, out "in the dirt" to experience the power of the places and the spirit of individual locales along this Trail—to test my thinking and mapping and perhaps even identify additional historic sites.

This takes time. I always consider my first field trip as simple reconnaissance, a chance to just try to understand the problem and then work to the solution. Only frustration will result from an attempt to do a historic site inventory during the initial field work. There are at least three categories of historic sites: known and marked, known and unmarked, and unknown and (obviously) unmarked.

We researchers need good boots, for it is necessary to get out and hike around. Sometimes

4x4 vehicles are required. (Incidentally, do not be afraid of getting lost. Be adventurous. I made some of my best discoveries—such as new ruts, the real Martin's Cove, the Three Crossings Gorge, and Porter's Rock—when I was not sure just where I was or in very difficult terrain.) Along the way I talk to many people about the Trail. Some locals, including ranchers, farmers, old timers, and postmasters, are remarkably well versed in their area, usually within a county, and willing to show students, a.k.a. "trail nuts," around and share their expertise. I have been guided around by foot, air, and in 4x4s.

I also visit trail-side museums, exhibits, and visitors centers. I often find that the historic site markers mentioned in preliminary research have since been destroyed or moved. It is a sad commentary on human nature that about one out of every 10 marksmen (usually not hunters) enjoy sighting their arms on historic markers and thus damaging or destroying them. Sometimes markers are also vandalized by four-footed critters—markers make excellent scratching posts. The BLM has experimented with vandal-resistant markers.

Trail-side folk are also very proud of their piece of our national heritage. So proud, in fact, that a good many legends and questionable sites crop up. It has always been my policy to be respectful and say something like the following, "Well, that could certainly be true. I don't think it happened to the pioneers of 1847, but it might have happened sometime during the subsequent 20 years of trail use." Everybody ends up happy.

I started serious study and work on western trails—especially the Mormon Pioneer Trail—about 1971, and have written many books and articles and delivered many papers on that subject since. I have also met some of the best people in the world doing this work. In fact, I have never met any person interested in or connected with our western trails who was not a fine person. I feel that there are several reasons for this, perhaps most significantly the fact that we are a self-limiting group.

Author Kimball examines dramatic wagon ruts at Guernsey State Park in Wyoming. Photo courtesy the author.

Mormon emigrants in Echo Canyon, Utah, 1860. Photo courtesy Union Pacific Archives.

A serious and fortunate researcher will, somehow, arrange to fly the trail in a fixed-wing plane or, best of all, in a helicopter—as I once did! In some areas, the BLM has old aerial photos and a stereoscope to help you see how the Trail may have changed over recent decades. Using such photos is the next best thing to actually flying the trails and of great value in site identification and inventory.

The resulting study document is one of which I am very proud. It fleshes out many of the important sites only mentioned in passing when the comprehensive management plan for the Trail was completed in 1981. At 226 pages, it provided me a single venue into which could be assembled the most important bibliographical and map references, photographs and map copies, even songs and portraits from the pioneer companies which are each individually listed. Not only does it provide an exhaustive baseline about the location, significance, and condition of remaining trail-associated sites, but it also tells the Trail story in a way which ties these sites together. Ideally, this historic resource study will be a sourcebook from which trail managers and interpreters will draw for decades to come.

Dr. Stanley B. Kimball is Professor of History at Southern Illinois University in Edwardsville. He also serves as historian for the Mormon Trails Association.

Helene R. Dunbar

Determining Significance
Hawai`i's Ala Kahakai

Hawai`i Island, showing the route of the Ala Kahakai from `Upolu Point to Wahaula Heiau.

Introduced by Senator Daniel Akaka and approved by Congress in 1992, P.L. 120-461 authorizes a feasibility study of the Ala Kahakai (Trail by the Sea) for possible designation as a National Historic Trail. The Ala Kahakai is unique: so far no other trail proposed for the National Trails System offers such archeological potential as well as scenic beauty. The 175-mile trail passes through nine existing or proposed state parks, and four national parks. Hundreds (if not thousands) of sensitive and fragile historic properties and features, located on county, private, and Hawaiian trust lands, are associated with the trail and contribute to its significance.

If the Trail becomes part of the National Trails System, land managers, planners, preservationists and Native Hawaiians will be faced with multiple challenges: assessing the significance of the Trail and its contributing resources under both the criteria for national historic trails and the National Register of Historic Places (36 CFR 60.4); an environmental assessment of alternatives for trail recognition; and a management plan for the protection and interpretation of the trail and its associated historic properties.

Trail at Mauna Lani. Photo courtesy NPS.

Polynesians successfully colonized the Hawaiian archipelago by about 400-500 A.D. Within 500 years, all the main islands were sparsely populated. The age of the ancient trail system, however, is uncertain. The west coast or leeward side of Hawai`i Island was probably frequented early for fishing and the gathering of resources, but permanent settlement (based on archeological evidence) probably did not occur until 900 or 1000 AD, by which time a coastal trail would have developed. With island unification in the 1400s (if not as early as the 1200s or 1300s when districts already tended to be polities) the system of coastal and connecting inland trails probably approximated its historically-known form (Cordy 1994:2).

At European contact in 1779, the island kingdom of Hawai`i was one of four kingdoms in the Hawaiian archipelago—the others being Maui, O`ahu, and Kaua`i. Hawai`i had a ruler and high chiefs, lesser chiefs (all nobles, or *ali`i*) and commoners (*maka`āinana*). By 1795, when Kamehameha I had conquered all the islands save Ni`ihau and Kaua`i, his kingdom included at least 300,000 people (Cordy 1994:2).

The Hawaiian political system was complex—probably larger and more hierarchal than any native system that developed in the mainland United States. It included elaborate respect behavior in the form of the strict *Kapu* system which separated the elite from the commoners and defined relations between them; a feudal land holding system with a hierarchy of overlords controlling the community lands (*ahupua`a*); a religious system with priestly orders and many types

of temples (*heiau*), at least one of which, the massive *luakini* or war temple dedicated to the war god Kū, required periodic human sacrifices; and a ruler at the pinnacle of both the secular and the religious systems (Cordy 1994:2).

The Trail Today

The Ala Kahakai is a 175-mile portion of the ancient coastal *ala loa* extending from `Upolu Point on the north tip of Hawai`i Island down the west coast of the island around Ka Lae (in the South Point National Historic Landmark) to the east boundary of Hawai`i Volcanoes National Park at the ancient shoreline temple known as Waha`ula Heiau. The term "*ala loa*" is taken from the writings of the traditional culture historian David Malo (1951:17) who said, "When a road passed around the circumference of the island, it was called the *ala loa*." (In this article the terms Ala Kahakai and *ala loa* are used interchangeably.)

"Ala Kahakai" is a conceptual designation coined for planning purposes and as a focal point around which advocacy groups, such as E Mau Nā Ala Hele rally for the preservation of Hawaiian trail systems (State of Hawaii, 1991).

The ancient *ala loa* circumscribed the entire island. It was a twisting single-file footpath, as opposed to later historic trails which were both wider and straighter, and located further inland. In some areas, the trail went up ridges and down valleys and was set back by coastal cliffs, including short bypasses by canoe where land barriers existed. In soil and sand areas, the trail often had no stone-work and was simply a trodden path. On smooth *pāhoehoe* (billowy lava) flows with little soil, the trail might appear as a worn depression in the lava. On rougher *a`ā* (clinker lava) flows, the trail was usually visible as a crushed path. Sometimes waterworn steppingstones were set into the path to make walking easier. Stone cairns and coral fragments sometimes marked trail segments (Cordy 1994:8).

In order to accommodate horses, introduced to Hawai`i Island in 1803, curbstones were added to some prehistoric trails and in a few cases, the trail was widened where terrain permitted (Apple, 1965: Appendix 2). With horses becoming more numerous after 1840, new trails with curbstones were designed specifically for horse traffic. These were straighter, cutting off many former coastal settlements, and accommodated two horses abreast. By the early 1900s, further trail modifications and realignments were made to accommodate wheeled vehicles, first carts and carriages, and later cars and jeeps. Parts of the *ala loa* continued in use throughout the 19th and 20th centuries. The Ala Kahakai today combines elements of the surviving *ala loa* with later historic government trails that developed parallel to the ancient route, or that in some cases, were constructed over original trail segments.

Konane—ancient Hawaiian game similar to checkers. Many playing surfaces are found along the trail.

Significance of the Trail

Throughout the years of prehistory and much of the 1800s, transportation and communication within the Hawaiian kingdom were by canoe and by major trails. The *ala loa* linked the 600 communities or land units (*ahupua`a*) of the kingdom's six districts on Hawai`i Island: Kohala, Kona, Ka`ū, Puna, Hilo, and Hāmākua (Cordy 1994:2).

An *ahupua`a*, the basic unit in Hawaiian socio-economic organization, was a narrow land division usually extending from the mountains to the sea, cross-cutting all environmental zones. This provided residents with equal access via coast-inland trails to the necessities of survival: the bounty of the sea, the harvest of inland gardens, and products from the forested uplands. Hawaiian settlement patterns, however, tended to be dispersed along the coastline.

The Trail was associated with the many population centers of the island, nearly all the royal centers and most of the major temples, with battlefields and the movement of armies, and with annual taxation. Although used by commoners within their own *ahupua`a*, the *ala loa* served primarily as one of the major avenues for the rulers and chiefs to send messages, to gather intelligence, and to travel about the kingdom. Messengers (*kukini*) were sent out to call in other chiefs for meetings, to call for tribute, to gather in laborers to build public works projects such as temples, to spy on rival chiefs, and to summon warriors to battle. The *kukini* were elite warrior-athletes, often of chiefly descent, who were selected to undergo rigorous physical and mental training (Malo 1951:219-220).

The *ala loa* was traveled annually by nobles and priests (*ali`i*) carrying symbols of the god, Lono, during the *Makahiki*, a 4-month-long festival (from October-November to January-February) that uniquely integrated ancient Hawaiian religion, politics, economics, and recreation. In the first month, the annual tribute was gathered from the *ahupua`a* lands around the island. A long wooden image of Lono who symbolized peace and fertility was borne clockwise around the island in 23 days, accompanied by priests, attendants, and athletes

Trail worn down into lava from foot traffic over centuries.

for associated athletic events. The procession halted at the altar of each *ahupua`a* (the *ahupua`a* shrine). In each land unit, the *konohiki* (resident low chief who controlled the land for an overlord) assembled the tribute (feathers, pigs, chickens, bark cloth, and bundles of taro) near the *ahupua`a* altar. If the tribute was acceptable, a priest performed appropriate rituals and the procession moved on (Malo 1951:146; Cordy 1994:5).

Tradition provides the names of many rulers and events in prehistory that are associated with the *ala loa*; however, that portion of the ancient trail traversing the west coast of Hawai`i Island was particularly significant between the years 1779 and 1820, as the scene of a dramatic series of events that had lasting consequences for Hawaiian culture: Captain's Cook's fateful landing and subsequent death at Kealekekua Bay in 1779; Kamehameha I's rise to power and consolidation of the Hawaiian Islands under monarchical rule; the death of Kamehameha I at Kailua in 1819, followed by the overthrow of the national religious system; and finally, the arrival in Kona of the first Western missionaries in 1820.

Trail Resources

The corridor of the Ala Kahakai—it's cultural landscape—abounds with distinctive Polynesian-Hawaiian properties that have no counterpart on the U.S. mainland. Foundations of long abandoned fishing settlements and gardening terraces; ancient *ku`ula* (coastal temples dedicated to the fishing gods); a wide variety of *heiau* (temple platforms), some with associated *pu`uohonua* (places of refuge for women, children, and the elderly during war, or those fleeing punishment); *hōlua* slides (long inclined basalt tracks on which the *ali`i* competitively raced on narrow wooden sleds to test their courage and skill); *papamū* (stone grid-like surfaces etched with holes on which *kōnane*, an ancient game resembling checkers, was played); and numerous petroglyph sites are mute testimony to the *ali`i* travelers, priests, and messengers who trod this route for political ends, pausing here and there for rest and relaxation, and to the simple fishermen who paid homage to the god of the sea.

The Trail also skirts lagoons where the ancient Hawaiians practiced aquaculture. Some were natural inland ponds, or isolated shore ponds formed by a barrier beach parallel to the coast. The most spectacular fishponds, however, were the *loko kuapa* which consisted of great mortarless seawalls constructed of volcanic basalt and coral to enclose natural lagoons. Walled ponds were major engineering feats as well as symbols of chiefly power; most, in fact, were associated with chiefly residential complexes where they provided an important source of food, usually *`anae* (mullet) and *awa* (milkfish) for the chiefs and nobles. A few ponds have been revitalized, but many others have been partially destroyed by lava flows and *tsunamis* (tidal waves). Today, some ponds are habitats for endangered species of birds, shrimp, and native plants.

The royal centers of the kingdom nearly all lay along the *ala loa*—at Waipi`o in Hāmākua; Punalu`u in Ka`ū; Hōnaunau, Kealakekua, Kahalu`u, and Hōlualoa and Kailua in Kona; and Kawaihae and Kāpakai (near `Upolu Point) in Kohala. Their rulers played pivotal roles in Hawaii's political evolution from a complex chiefdom, to a monarchy, and eventually a modern state. In addition to the residences of the king and high chiefs, these centers each had major sacrificial temples (*luakini*), refuge areas (*pu`uhonua*), sporting grounds, and (in two cases) royal mausoleums (the Hale o Līloa in Waipi`o and Hale o Keawe in Hōnaunau). Several larger *heiau* and chiefs' complexes are designated National Historic Landmarks: Mo`okini Heiau at `Upolu Point, Pu`ukoholā at Kawaihae, and in Kona, Kaloko-Honokōhau NHP, Kamakahonu and the `Ahu`ena Heiau, and Pu`uhonua o Hōnaunau NHP. Larger populations were focused around the royal centers and chiefs' residences. One contrast noted in the literature of the 1800s was the difference between life at the courts versus rural life. The *ala loa* connected these extremes of Hawaiian life (Cordy 1994:4).

Other resources pertain to the historic period with cattle and sugar landings, old harbors and railroad beds, donkey trails, and tumbled down houses and churches. Still other segments of the Ala Kahakai pass through or by present day modifications to the coastal landscape: boat harbors, airports, luxury resorts, and towns.

Recognition, Ownership, Access

Significant sections of the prehistoric trail remain. That the potential exists for recreational trail links which would make a continuous Ala Kahakai was illustrated on National Trails Day in

1993 when nearly the entire trail route was hiked. Over one-half of the 175 miles proposed for national historic trail designation is in local, state, or federal land management. Some 9% has public access easements or dedications. Another 20% in private hands is defined as "ancient trails" (State of Hawaii, Highways Act of 1892), which, in Hawaiian governance, means these trails are open for use of the people within an *ahupua'a*. The 1892 Act protects the right of public access to these lands.

Interpretation and Protection

Trails link past and present experiences, creating the potential for a deeper appreciation of our history and environment beyond what the interpretation of individual sites can afford. The Ala Kahakai tells the complete story of island settlement, cultural evolution, and governance. It links natural resources (scenic values, trade and commerce, subsistence and resource procurement, etc.) and cultural resources (historic events, sites, and sacred/spiritual values).

Hawaii has strong historic preservation laws as well as a commitment to meaningful involvement of Native Hawaiians in the management of cultural resources. Planning for the protection and interpretation of a national historic trail, therefore, presents partnership opportunities among state, local, and federal agencies and the private landowners. Trail designation implies added public access to cultural and natural resources, which in turn increases the potential for adverse impacts to the resources. Many areas along the Trail are, in fact, still remote and poorly known archeologically. Therefore, prior to opening the Trail to full public access, environmental assessments must be written and approved; boundaries for the Trail corridor must be established; complete cultural resources inventories, especially of highly significant traditional cultural properties, must be undertaken; and a management plan be developed as required by the National Trails System Act and Hawaiian historic preservation law (Chapter 6E, Hawaii Revised Statutes).

Stepping stones removed from trail.

Ala Kahakai, Mauna Lani. Photo courtesy NPS.

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She is indebted to Meredith Kaplan, NPS Planner, Pacific Great Basin System Support Office, for technical assistance; and to Dr. Ross Cordy, Hawaii State Historic Preservation Division, for helpful insights on the ala loa *and ancient land-use patterns.*

Unless otherwise noted, photos were taken by members and friends of E Mau Nā Ala Hele on National Trails Day, June 1993.

Cynthia Orlando

The Object of Your Mission
Resource Management Planning

Among the many contributions that the Lewis and Clark Expedition of 1804-06 made to the development and knowledge of American society was an inventory of the natural resources of the region it traversed. The nature of the forests, wetlands, and streams in the area determined the location and habits, as well as the very survival, of the Expedition members. Fort Clatsop National Memorial, a small historic site at the western end of the Expedition's journey, is charged with protecting a variety of diverse natural resources that are a component of the historical and cultural values associated with Lewis and Clark's expedition almost 200 years ago.

The recently-completed *General Management Plan* for Fort Clatsop identifies four alternatives that address visitor use and preservation of the environment in which the Fort Clatsop "chapter" of the Lewis and Clark story is presented to the public. In the preferred alternative, the first major action proposes to complete the trail corridor between Fort Clatsop and the Pacific Ocean, the final segment of the 3700-mile-long Lewis and Clark National Historic Trail. Coupled to it is the need to provide protection of the scenic and natural resources which frame the park setting and trail corridor to the north, west and southwest of the existing park boundary.

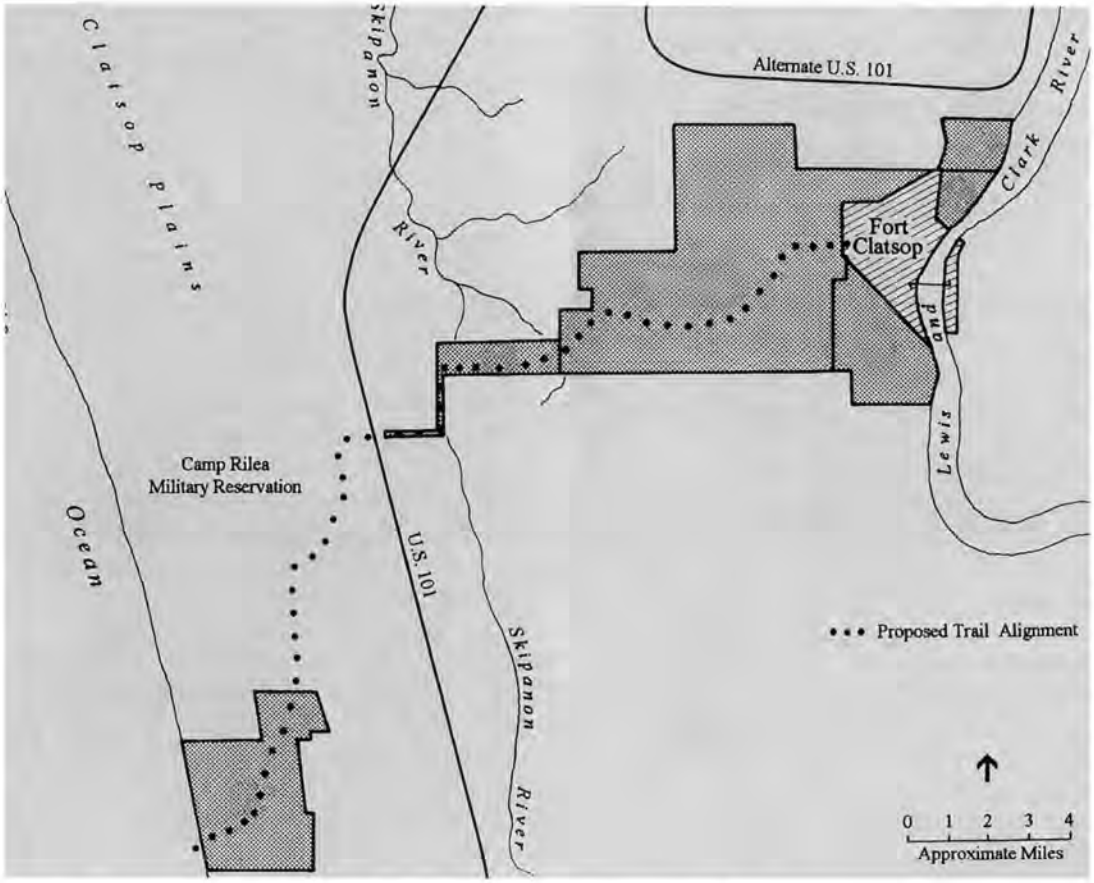
Of the principle objectives most vital to the implementation of the new *General Management Plan*, none is more important than to adequately protect and interpret the forested setting and forest ecology surrounding the core Fort area and through which the Trail will pass.

Today, the Corps of Discovery led by Lewis and Clark would be astounded to find a national memorial in their honor and the National Park Service preserving the vestiges of the natural splendor they saw in abundance nearly 200 years ago. For me, Thomas Jefferson's instructions to Meriwether Lewis (June 20, 1803 letter) was the beginning of the legacy we seek to perpetuate today and into the future:

> You will ... endeavor to make yourself acquainted with names of the nations and their numbers; their language, traditions, arts and customs.... [An]other object worthy of notice will be the soil, the face of the country, it's growth and vegetable productions; the animals of the country....

The spruce-hemlock-cedar forests and sedge-cattail tidal wetlands around Fort Clatsop strongly influenced and directed the activities and experience of the Lewis and Clark Expedition. As a consequence, these natural components of the environment are managed as a historic as well as a natural resource. For example, the entire park is listed on the National Register of Historic Places, including the tidal mudflats and forests that Lewis and Clark experienced. These natural resources are managed to recreate, as much as possible, this historic environment. A few noticeable changes are evident in

Fort Clatsop. Courtesy Research Library Fort Clatsop National Memorial, Astoria, Oregon. NPS photo by William S. Keller.



Site Map of Fort Clatsop.

certain intensively-used areas due to visitor safety as well as the degree of impact and alteration that occurred throughout the region before the park was established. In the non-visitor use areas, however, the management objective is a natural, healthy, and dynamic wetland and coastal forest environment similar to what Lewis and Clark may have experienced. Meeting these natural resource challenges has not been easy and has required an aggressive outreach and partnership program.

Tackling people's perception of the resources of Fort Clatsop has also been a challenge. Long identified as strictly a "historic area," this perception has often obscured the needs for natural resource management within the park.

Many entries in the Expedition's journals provide detailed inventory data of the flora and fauna from a period before European influence. A professional inventory program in 1992 has resulted in some interesting and unexpected resource finds.

It is difficult to assess species dependence, for example, on Fort Clatsop wetlands when no quantitative baseline research has been conducted. In addition, Geographic Information System (GIS) capability can now provide the analytic and graphic power to manage viewshed protection and archeological assessments during the development of a trail, re-forestation strategies, wetland restoration, and other resource management projects. However, it has only been in the last decade that the need for this type of research in historic sites has even been recognized.

How did planning enhance these management strategies? In one way, it highlighted the complex interface between natural and cultural resources. Most importantly, it strengthened the role of the park within the region and within the context of regional issues. We know that park boundaries do not necessarily protect all of the values that relate to park purposes and visitor experiences; Park Service activities may also affect activities on adjacent lands. Issues relating to the adequacy of the current park boundary are long-standing and documented in the historic and administrative record.

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Dorothy Sammons

Locating the California Trail at City of Rocks, Idaho

This study was conducted in 1995 under a challenge cost-share cooperative agreement signed by the NPS Long-Distance Trails Office in Salt Lake City, the City of Rocks National Reserve, and Idaho State University (ISU) to complete an archeological survey of the California National Historic Trail and its related segments in and around the City of Rocks. Trail segments included the original California Trail, the Salt Lake Alternate of the California Trail, and the Overland Stage Route, with related encampments and sites.

The study's purpose both encompassed research and made recommendations for future management. Its primary objectives were to accurately locate these trail remnants within the Reserve's boundaries and to identify what types of artifacts or resources are associated with them. It also intended (if enough material evidence of the trails and associated campsites remained) to analyze the spatial distribution of these sites with their environmental correlates, providing as a management tool a basic assessment of site location and conditions.

Environment

The City of Rocks National Reserve covers public and private lands near the upper Raft River Valley in south-central Idaho. As part of southern Albion Mountains, the Reserve is characterized by groups, lines, and isolated granitic monoliths and outcrops. Most of these formations, from which the City derives its name, are exposed in the largest and northernmost of three basins contained within Reserve boundaries. One basin is drained by Circle Creek and its tributaries. It is separated by a low divide from the next drainage to the south, a wide, gently sloping basin which leaves the Reserve through Heath Canyon, on the south side of Smokey Mountain. The third basin, Emigrant Canyon, is separated from the others by Twin Sisters Ridge. Emigrant Canyon contains an ephemeral—and today, a deeply entrenched—watercourse with three tributaries.

The vegetation within the Reserve characterizes this high cold desert environment. On the highest elevations are found Douglas fir, Engelmann spruce, and lodgepole pine. Utah juniper and pinyon pine grow on the slopes of the mountains and ridges; aspen can be found along streams and near springs. The lower portions of the slopes and the basins are covered by sagebrush and grass communities. Most of these areas have been extensively impacted by plowing and wheat cultivation and/or grazing. Agriculture and grazing have been conducted within the Reserve for nearly 100 years. The most important plant is the pinyon pine which, with the junipers, forms a recognizable plant community.

Two spurs of the California and Oregon Trails pass through the City of Rocks National Reserve. The main trail enters the Reserve in the northeast corner from the village of Almo, and follows the Circle Creek drainage for a short way before heading south toward the Twin Sisters. After crossing the Twin Sisters Ridge at Pinnacle Pass, the trail continues south and then turns west. At this point, the trail is joined by the Salt Lake Alternate which enters the Reserve from the southeast through Emigrant Canyon. The Salt Lake Alternate was also used in the late 1800s as a stage road and parts of it are still in use today. The two trails run together, paralleling and south of the current county road, and exit the Reserve at its southwest corner.

With the survey goal being to locate and assess the Trail and its associated features, the Trail itself defined the survey corridor. In each area where the Trail could be identified, it became the centerline of the survey. ISU Archaeological Field School students conducted a field survey of a 100 m.-wide corridor, with transacts 10 to 15 m. apart. When the section had been completed, we returned, surveying a second 100 m. corridor on the other side of the Trail, resulting in a 200 m.-wide survey corridor. In areas where the Trail was not readily visible, the transect spacing widened to 20 m. and a corridor approximately 400 m. wide was surveyed. (Not all sections of the Trail could be surveyed due to inholdings within the Reserve. Thus, crucial areas around Register Rock and along the combined California Trail/Salt Lake Alternate portion were not examined by the Field School.)

A hand-held Geographical Positioning System (GPS) unit was used during the archeological survey, recording the location of all archeological sites and isolated finds. In addition, GPS

readings were taken along the Trail (or the probable Trail) every 50 m. Archeological sites and isolated artifacts were recorded on Intermountain Antiquities Computer System (IMACS) forms.

History of Research

Research within the Reserve has focused on either the prehistoric or historic components of the past. A recent report (Historic Research Associates, 1995) provides an excellent summary of the historic resources within the Reserve, as well as of the body of primary and secondary sources which document historic lifeways at City of Rocks. Archeological investigations are documented in a series of reports by Chance and Chance (1990, 1992, 1993).

Archeological surveys in 1989, 1991, and 1992 (Chance and Chance 1990, 1992, 1993) recorded 65 sites. However, only 30 site forms completed by Chance and Chance are on file at the site archives at the Idaho Archaeological Survey, Eastern Repository, Idaho Museum of Natural History. In some cases, Chance and Chance recorded several finds under a single Smithsonian number, while counting them as separate finds. For example, the Taylor Springs Group includes Chance and Chance's field numbers 6, 7, 8, and 9, but are recorded on a single IMACS form as 10 CA 582. Other isolates or small sites appear to have been numbered and noted in Chance and Chance (1990), but not recorded on IMACS forms.

Chance and Chance do not specifically address the condition of the California Trail in their reports, other than to note that there are "more than half a dozen" intact segments (1990:30). They also noted 11 rock outcrops groups with emigrant inscriptions with "perhaps 200 names still legible," and perhaps thousands remaining in part (1990:30). Overall, most of the Trail is classified as an area of secondary archeological sensitivity, except where it intersects a high archeological sensitivity zone near Circle Creek. The Salt Lake Alternate Trail, which enters the Reserve from the southeast, and joins the main Trail south of Twin Sisters, is dismissed as "less interesting only because most of it is still in use as a motor road" (1990:30).

Following the archeological research of Chance and Chance (1993), and others, Historical Research Associates, Inc. prepared a *Historic Resources Study of the City of Rocks National Reserve* (HRA 1995), including field review, archival research, interviews, and reviews of previous research. HRA organized the material available on the Reserve into six major time periods: Native American Use, Fur Trade and Exploration, Overland Migration, the Stage Era, the Open Range Cattle Industry, and Settlement. The last era includes early homesteading when settlers tried irrigated farming within the Reserve, and later settlement which includes dry-land farming and stock-raising. Recorded archeological sites represent four of these six periods. Besides the California Trail and its associated inscriptions, there are prehistoric and possible historic Native American sites, a stage station in Emigrant Canyon, and homesteads. HRA (1995) addresses the nature and condition of cultural resources associated with two of these periods—the overland migration and settlement. Like Chance and Chance (1990), HRA does not specifically address the condition of the California Trail, other than to note the presence of single ruts in some sections and multiple ruts in others. HRA does, however, comment on the erosion affecting the many emigrant inscriptions and also on the importance of the historic view which the emigrants would have had of the City of Rocks or of the Twin Sisters ridge from their camps and travel route.

Results of the 1995 Field Season

During the 1995 field season, three new archeological sites and 10 isolated finds were recorded and given Smithsonian numbers. (See box on p. 16.) Several other small sites were recorded but are not reported here, since they were either recent dumps or rock piles from field clearing—or had been previously recorded. The following is a brief summary of each cultural resource recorded during 1995:

10 CA 837 is a small site on the north side of Pinnacle Pass, just downhill from the pass and near an old jeep road. It contains a variety of rusted, flattened cans, and a few pieces of purple glass and white glazed ceramics. While the site may merely represent a dump, it may also represent a historic pinyon camp. A rusty and partially-flattened pail was found which contained a lump of pine pitch. Such pitch was and is still gathered by Shoshone and Bannock for attaching tools to shafts or handles, for waterproofing basketry, in making flutes, and as gum. This site may reflect historic Native American use of City of Rocks (although it should be noted that Euroamerican settlers have also harvested pine pitch).

10 CA 838 is a can and glass dump near the Salt Lake Alternate Trail, just east of its junction with the main Trail. Several dozen cans, bottles, and glass fragments are contained within a 33 square-meter area. Makers' marks on the bottles and jars indicate a probable date from the 1920s through the 1940s. The site, therefore, postdates the Trail and stage line through the area, but reflects the consistent use of the road up Emigrant Canyon as a motor route.

10 CA 839, a prehistoric site, is a sparse lithic scatter covering several hundred square meters on the north side of Circle Creek, south of

the Reserve entrance road. This lithic scatter may be related to an earlier find, 10 CA 440, a Desert Sidenotched point recovered from the top of the knoll just east of 10 CA 839. The lithic scatter contains at least two dozen secondary and tertiary flakes of volcanic glass. Only one cryptocrystalline flake was noted.

Assessment of the Trail Using Aerial Photos

The 1995 field reconnaissance used a collection of aerial photographs kept in the Reserve, starting from 1950, to analyze changes in erosion, destruction, or stability over the past four decades. The City of Rocks area was recorded in aerial photography eight times between 1950 and 1992. Although the photographs do not match exactly (overflights took place at different altitudes, different times of day, and possibly different seasons), they constitute a body of comparative data about the Trail and the general environment within the Reserve.

To compare these aerial photos, relevant portions of each were captured as computer images, using Image ProPlus 1.0 software, via a Sony super-VHS video camera. The zoom feature of the camera was employed to frame sections of the photograph which would give the most complete information for the area under study and which would be roughly comparable to other photographs of the same area from different years. Although the images were not manipulated further, we would have had the option under this type of software to control color differences, enhance contrasts, and highlight features within the photographs. Close-ups were also taken of sections of the 1950s aerial photographs in which the Trail remnants can be clearly seen.

Findings and Recommendations

From a literature search of the site archives at the Archaeological Survey of Idaho's Eastern Repository, a database of 55 archeological sites and isolated artifacts recorded within or near the City of Rocks National Reserve was developed. Several of these sites had both prehistoric and historic components, resulting in 69 different records entered into the database. For each component, several primary environmental factors were recorded, including elevation, slope, aspect, distance to nearest water and type of water (permanent vs. ephemeral), vegetation, and soil types. Of these variables, vegetation and soil type did not appear to be relevant to the analysis since (1) there are only a limited number of variants in each class, (2) vegetation has changed within the Reserve since prehistoric times and since emigration as well, and (3) the capability of the surveyors to record these variables accurately is untested. Cross-tabulations were made of the environmental variables and the different types of sites recorded.

The 1995 archeological investigations of the California Trail required a variety of computer applications in the field analysis and report production. The use of the GPS units in the field produced on-site UTM locations of the California Trail and associated sites. This digital information could then be entered into a database along with other pertinent site information for analysis. Although the City of Rocks database is too small for significant statistical testing, it indicates the potential for more rigorous testing of larger data sets.

The geographical information system (GIS) analysis of locational data from archeological sites at City of Rocks National Reserve has produced few surprises concerning the data, but indicates the potential of GIS analysis on this and similar data sets. For example, GIS analysis indicates the likelihood of the California Trail entering the City of Rocks from the north side of the knoll, rather than the south side.

The 1995 survey and analysis has documented the condition of the California Trail and some of its branches within the City of Rocks Reserve. Only some segments can be considered in excellent condition—several have faded or are fading rapidly.

Recommendations from this study include (a) nominating the entire Trail corridor within the

The 10 Isolated Finds

10 CA 840, a flat piece of metal (possibly a patch?) with four punched holes, one in each corner, on the California Trail just south of Pinnacle Pass.

10 CA 841, a partially buried metal object, on the California Trail south of Pinnacle Pass, just north of where the Trail crosses the Twin Sisters road.

10 CA 842, a bifacially flaked tool and a secondary flake, both of volcanic glass, east of the California Trail route as it crosses the second basin.

10 CA 843, a retouched flake of volcanic glass, east of the California Trail route as it crosses the second basin.

10 CA 844, a piece of metal of unknown function, buried and not easily removable, located just west of the California Trail route as it crosses the second basin.

10 CA 845, a whitish/clear quartzite flake located just east of the California Trail route as it crests the low rise south of Register Rock.

10 CA 846, the mid-section of a broken projectile point of fine-grained rhyolite found east of the California Trail near its crossing of the Twin Sisters Road.

10 CA 847, a possible Elko point of volcanic glass found just west of the California Trail as it parallels the unnamed drainage between Camp Rock and Register Rock.

10 CA 848 a possible Elko point (broken) of volcanic glass. 10 CA 849 a metal ring of unknown function, 2.5 cm high, located near 10 CA 847 and 848, just across an unnamed drainage from the California Trail.

Reserve to the National Register of Historic Places (under criteria A and D), (b) continuing periodic aerial photograph surveys at optimal times to capture subtle differences in ground moisture (early spring), (c) preserving the visual integrity of the approaches to Pinnacle Pass (including possible restrictions on intrusive rock climbing activities), and (d) continuing archeological surveys of newly acquired or previously unexplored parts of the Reserve.

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Dorothy Sammons is an archeologist in the Center for Environmental Anthropology, Idaho State University, Pocatello, Idaho. This article was condensed from the project report and an article by Ms. Sammons, "Mapping the California Trail: City of Rocks" which appeared in Tebiwa: Journal of the Idaho Museum of Natural History, *vol 26:1, pp 92-117 (spring 1996).*

This paper is the result of a cooperative effort among many individuals. I would like to thank the participants of the 1995 ISU Archaeological Field School, among whom are the students in the Shoshone-Bannock Resources Survey Organization national pilot program, for making the field situation so enjoyable. Kathleen Durfee, City of Rocks National Reserve, provided the aerial photographs and many insights into the history of the Trail. Tracy Bowlin of High Desert, Pocatello, ID, stitched the aerial photographs together and geo-referenced them for GIS analysis. Joe Mier, Idaho State University, created the slope and aspects maps from the DEMS, and assisted in the GIS analysis. The GIS analysis was conducted in IDRISI for Windows, published by Clark University, Worcester, MA. Image ProPlus, the image analysis software, is published by MediaCybernetics, Silver Spring, MD.

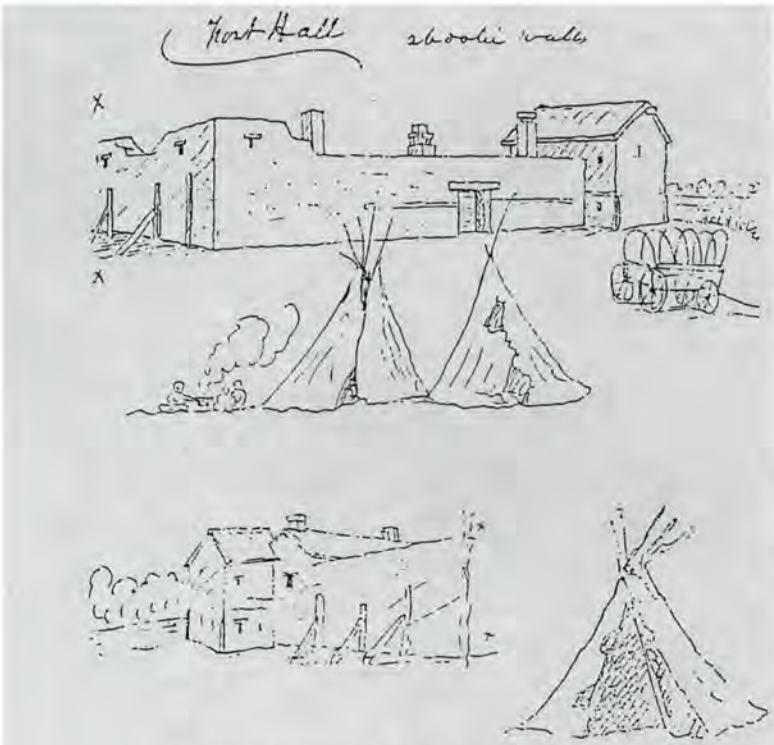
—D. Sammons

Interpretive sign illustration by Roger Cooke; the Oregon Trail.

Test Excavations at Fort Hall, Idaho
Summary Results

The Fort Hall National Historic Landmark, which is located on the Fort Hall Reservation in Bannock County, Idaho, is endangered by seasonal flooding of the Snake River. Consequently, The Archaeological and Historical Services (AHS) at Eastern Washington University was contracted by an inter-agency coalition for test excavations of the property, a National Historic Landmark (so designated in 1961), distinguished as a key trading post for emigrants along the Oregon and California Trails.

Dr. Jerry R. Galm was principle investigator for this project. Dr. Galm is director of the Archaeological and Historical Services (AHS) at Eastern Washington University in Cheney, WA. Bryn H. Thomas was the project lead archeologist under contract with NPS and the Bureau of Reclamation and manages the AHS office in Vancouver, WA. This summary of the full report, dated April, 1994, was made by Kristine Fairchild, Student Conservation intern in the NPS Trails and Greenways Division.



J. Goldsborough Bruff's sketches.

The inter-agency coalition, in cooperation with the Shoshone-Bannock Tribes, included the National Park Service, Bureau of Indian Affairs, and the Bureau of Reclamation. Volunteer labor assistance was provided by the Idaho State Preservation Office along with the federal agencies listed above.

The Tribes and the participating federal agencies are considering strategies to stabilize and protect this archeological resource. Testing performed by AHS complied with applicable federal rules and regulations pertaining to the protection and management of cultural resources, including the stipulations and agreements made with the Shoshone-Bannock Tribal Council. The excavations were conducted in a manner that met the Tribes' concerns: (1) That site disturbance be minimized; (2) That there be no disturbance of human remains or burials; and, (3) That all analysis take place on the Fort Hall Reservation. An agreement with the Tribe allowed for wood samples, historic artifacts, and items of non-Indian manufacture to be removed to AHS offices for analysis and reporting.

Fort Hall was constructed in 1834 by Nathaniel Wyeth, a Massachusetts businessman associated with the Columbia River Fishing and Trading Company. He developed plans for an American trading company that would compete with the Hudson's Bay Company by exporting barreled salmon and setting up a trading post. The Fort was a squared structure built with cottonwood logs and situated along the Snake River near the mouth of the Portneuf River above American Falls. The persistent competition from the Hudson's Bay Company (HBC) was one of the major factors contributing to the downfall of Wyeth's business. Wyeth sold the post to the HBC in 1837, just three years after it was constructed.

The Fort continued to function as a supply post for the Company's regional trapping brigades, and eventually became a mercantile center for trade. Fort Hall's most significant time period was the 1840s when it was renowned as a stop for emigrants along the Oregon Trail, and later 49ers hastening to the California gold fields. It also carried on a flourishing trade with Mormon settlers after their arrival in the area in 1847. The decline of the fur and mercantile trade, which also coin-

cided with increasing Indian hostilities, brought about the abandonment of Fort Hall in 1856. Seasonal traders and U.S. Army troops occupied the Fort, but that only lasted for a very short time. In 1862 and 1864, summer floods left the Fort uninhabitable.

In the early-20th century, local civic organizations and individuals developed an interest in commemorating the Oregon Trail emigration. There was, however, considerable confusion as to the exact location of Fort Hall. A stone monument was constructed by Ezra Meeker in 1906 at the site of the "Abodes," an 1864 stagecoach station, which some claimed to incorporate the remnants of Fort Hall. In 1916, this site was found to be incorrect, and the monument was correctly relocated in 1920. Difficulties identifying the correct location arose from contradictory historic references to places and distances and changes in the Snake River environment.

The 1993 test excavations sought primarily to verify as to whether or not this site is indeed the Nathaniel Wyeth (1834-1837) and Hudson's Bay Company's (1837-1856) Fort Hall, as the historical records suggest. In order to verify the location, archeological test excavations were conducted at the purported Fort site during the autumn of 1993 to see if they could corroborate a variety of 19th-century, first-hand descriptions of the Fort. Three 5x5' grid units and 60 subsurface probes were excavated. Adobe foundations from the southeast bastion, the west stockade wall, a building along the west wall, and artifacts associated with mid-19th-century Hudson's Bay Company sites were found. These data, along with a review of the historical descriptions of Fort Hall, support the conclusion that the National Landmark encompasses the Wyeth-Hudson's Bay Company Fort Hall archeological site.

Excavation of the southeast corner of Fort Hall. Analysis reveals the wood to be cottonwood. The adobe bricks are similar to those described in historical records.

Additional survey objectives were to determine the extent of archeological deposits and establish whether these deposits remain intact and possess archeological integrity. A variety of artifacts—items of Indian manufacture, pipes, buttons, glass beads, pottery shards, bottle glass, stove parts, hooks, nails, gunflints, horseshoes, and even an Army belt buckle—closely corroborate the architectural subsurface features. The findings were conclusive that the Fort site remains intact and does possess significant research potential.

A number of recommendations for future work at the Fort Hall National Historic Landmark are also offered in the event future investigations are initiated or approved by the Shoshone-Bannock Tribes' Fort Hall Business Council. These recommendations include: preparation of a site topographic map, completion of a remote sensing survey of the Fort Hall site, and the creation by the Shoshone-Bannock Tribes of an archeological repository for the records and artifacts from the 1993 excavations, past investigations (including private collections of Fort Hall materials, if they exist), and future investigations. (It should be noted that not all of these recommendations involve excavations and all are presented with the intent of promoting sensitive site stewardship and preservation.)

In conclusion, the findings of the AHS archeological excavations do not suggest changing the physical boundaries of the Fort Hall National Landmark property. Therefore, plans for any land-altering activities located within Landmark boundaries should take into consideration the archeological resources documented by the test excavations and those projected by the National Register of Historic Places nomination form for the site. This document should be submitted to the appropriate review agencies for their comment prior to initiation of any land-altering activities.

Fort Hall Monument.

Photos courtesy Shoshone-Bannock Tribes.

Douglas C. Comer

Webs of Significance
Trails From Above

Man is an animal suspended in webs of significance he himself has spun.
—Clifford Geertz, *The Interpretation of Cultures*

The aborigines of Australia have a practice that has mystified Europeans for centuries. Periodically and according to a schedule that makes no sense to the ranchers and businessmen of that country, they have gone on a "walkabout." To many Europeans, it has seemed that they wandered aimlessly through the countryside for months, leaving work in the livestock pens and shops undone. But the aborigines have been about more important work: remaking the world. Their travels have been guided by the ancient creation stories they tell themselves as they go; during dreamtime the ancestors of the ant people made this hill, the lizard people that valley. By reenacting the creation of the world they both recreate and find their special place in it. Without this reenactment, they believe, the world would end. Bruce Chatwin (1987) calls the paths taken by the aborigines *songlines* in his book of that name, a word that conveys how the aborigine, by the rhythm and intentionality of his movement, weaves together story and topography to create a sacred geography.

All photos by the author.

The low velocity radio controlled model airplane from which photographs are taken, being launched by its designer, James Walker.

Humans everywhere act in ritualistic ways that make landscapes into agencies by which culture is both propagated and transformed (Comer, 1996). What I have found since completing work on *Ritual Ground* is that aerial remote-sensing provides a perspective that helps us to see and document the profound interplay between landscape and culture. Richard Friedman, a geographical information system (GIS) specialist for McKinley County, New Mexico, who is constructing a data base for Chaco Culture National Historic Park, made the following statement after analyzing aerial photography of the park (Friedman, 1996, page 1):

> The ritual component of the prehistorically-built environment at Chaco Canyon may be described as essentially a composite of two forms of monumental architecture: the great houses and the so-called 'roads.' From a terrestrial perspective, the ruins of the great houses are the dominant reminders of the antiquity of the place. From the aerial perspective, however, the great structures appear caught in a great earthen web where they are dwarfed to a point of apparent insignificance.

Recently, we at the Applied Archeology Center of the NPS have been testing the utility of very low altitude aerial photographs of trails in the United States. We have been greatly assisted in this by James Walker of Brigham Young University, who has designed a slow-moving, radio-controlled model airplane from which photographs can be taken at altitudes as low as 150 feet, although the usual altitude for the photographs we have taken is 500 or 600 feet.

We have been using the low altitude photographs in conjunction with higher level photographs that are commonly available through government agencies and private firms. Every scale informs us about what to look for in all others, but the low altitude photos, because they provide great detail, alert us not only to archeological sites and features themselves but to the characteristic appearance of these, their *signatures*, in higher altitude and thus smaller scale imagery.

The aerial perspective suggests to me that the trails, like the songlines of Australia or the "roads" of Chaco, are best understood as networks

The Parting of the Ways, Wyoming, from the air. Visible are a medicine ring, immigrant campsites, and dark lines of vegetation demarcating Mormon Trail drainage features.

that link together significant sites in a way that is itself significant. Although Chatwin referred to such paths as songlines, an anthropologist would more likely call them *processionals*. They are with us today—notable examples being many of the trails in the United States' National Trail System—as they have been throughout history in all lands occupied by humans.

Trails West

A year ago I stood at a place along the Continental Divide in western Wyoming called locally "The Parting of the Ways." From my position on the ground, the Mormon Pioneer Trail ran straight to the southwest horizon and Salt Lake City, while the Oregon Trail on my right departed at about 45 degrees northwest. I could imagine a traveler pausing here 150 years ago before taking a decisive step toward one of two uncertain, yet clearly very different, destinies.

A look the next day at the aerial photos taken from 500' above the ground of this spot told me much that I had not expected about the groups that had once passed there. The first of these groups was one of which I had not anticipated finding a trace, a group that had regarded this high and windswept place not as an impediment in a path to a destination but as a destination itself. Native Americans had been frequenting the area of the Continental Divide long before the appearance of wagon trails, and were returning now to engage once more in traditional ceremonies. I had been standing perhaps 30 feet from a "medicine ring" that I had not noticed. These rings were (and are) places of meditation delimited by a circle of stones, typically constructed by Plains Indians at high and therefore holy places where visions are likely to be obtained.

Other circular areas, but unlined by rocks, could be seen in the photographs, too, spread along both trails on either side. Bureau of Land Management archeologist Russ Tanner later suggested these to be immigrant camping sites, and earmarked them for later study. These locations would be noteworthy because camping spots were generally located near water. Their presence here, away from water, hinted at long ago misfortunes; travelers that had been taken sick and could not go on until they recuperated.

In the photos, dark green lines were visible along the south edge of the Mormon Pioneer Trail, although not along the Oregon Trail. Similar lines departed somewhat perpendicularly to the south of the Mormon Trail. The dark lines were produced by thick vegetation growing in linear swales where water had collected. These swales appeared on later inspection to be part of a drainage system.

Jim Walker came up with a hypothesis to be investigated: We know that the Mormons intended to use their trail over and over again, moving people and supplies to and from Salt Lake City. We know also that wagons moving over wet trails produced ruts that eventually made the trails unusable. The Mormons, therefore, engineered the trails to remain dry.

His idea is supported by what can be seen in aerial photos we took of other sections of both the Mormon and Oregon Trails. The Oregon Trail in many of these photos resembles a braided stream, suggesting that wagons often fanned out to avoid the ruts of wagons that had gone before. The Oregon Trail was used in only one direction by those who expected never to return over it, and so there was no constituency with interest enough to sponsor the design and construction of the trail for reuse. The Mormon Trail, on the other hand, generally ran along a single track, and was intended from the outset as a two-way emigration and supply route.

This hypothesis is also bolstered by the fact that other trails that ran through the area shared the path of the Mormon Pioneer Trail whenever possible, and especially that the Pony Express favored the Mormon Trail over others that it might have followed, although these alternate trails sometimes offered a more direct route. An engineered Mormon Trail would have been much more free of the potholes and other surface irregularities that tripped horses, and therefore killed or injured many Pony Express riders. It was therefore a fast trail, capable of accommodating frequent traffic east and west, that enabled the backers of the Express to accomplish their stated goal of a weekly coast-to-coast run in 10 days.

The Pony Express Trail, in winning "the great race against time," as a newspaper headline of the day put it, was seized upon by many in the United States in those days just before the Civil War as a symbol that the country was joined

securely from East to West. After the war, it became an even more widely-accepted symbol of national unity. Anthony Godfrey (Godfrey, 1994, page 60) thinks the romanticization of the Pony Express was given a great boost by Mark Twain's portrayal of it in *Roughing It*, published in 1872. Though the Pony Express lost great sums of money for investors and the government by the end of its brief, 18-month life, it was a success as a "processional," one in which many people throughout the nation at the time participated thanks to lavish press coverage—and one in which we today participate vicariously through historic and popular accounts.

Significantly, the financial collapse of the Pony Express is most attributable to the Pyramid Lake War, "an event that no one foresaw or could have predicted" according to Godfrey (page 69). Players who were being driven off the stage of the national drama in the mid-19th Century, the Native Americans, suddenly reappeared when miners and the Pony Express company itself trespassed Indian land. Pony Express stations made easy targets for Indian raids, which produced fatal disruptions to service. The medicine rings that made a similarly unexpected appearance in our aerial photos remind us of the persistence of Native American cultural influence on national events.

The Ala Kahakai

Early in 1996 we looked for trails in an environment vastly different from that of the arid High Plains. Through a grant from the NPS National Center for Preservation Technology and Training, we tested the practicality of using low altitude aerial photography to locate archeological sites and features, including trails, in heavily vegetated, tropical environments. If the technique, perhaps with some modification, was found to be appropriate to such places, it would be used in projects upcoming in Southeast Asia, particularly in Cambodia where land mines, poisonous snakes, and other hazards made site survey and mapping by the usual methods dangerous or impossibly slow.

We found that many archeological features that generally could not be seen in the standard 1:26,000-scale aerial photos that can be obtained, for example, from the United States Geological Survey or the Department of Agriculture, were visible in the low altitude photographs. We later successfully produced maps from some of these photos by calibrating CAD digitizing programs to targets we had laid out on the ground or to known distances between objects that appeared in the photos. The accompanying photo is the aerial photo of a *heiau*, or temple site, on Oahu. The drawing is a CAD map produced from the photo in just a few hours of digitizing work.

The Ala Kahakai on the Big Island of Hawai`i, as it runs through the City of Refuge National Historic Park, goes through extremely rugged and heavily vegetated topography. In low altitude photos of about 1:500 scale, we could nonetheless often pick up the Trail, along with numerous features associated with the Trail: heiaus, platforms for houses or other structures, walls, and shrines, as well as later trails and roads that had been built over sections of the prehistoric trail. Although sometimes the greatest part of features were obscured by vegetation, visible segments and clues to the presence of features below vegetative cover (like differences in vegetative type and rigor) enabled us often to discern shapes.

We discovered, too, that where the nature of what can be seen in photos is questionable, digitizing the photos in CAD format provides a tool for future fieldwork. The resulting CAD files can be loaded into laptop computers, where they form a database that can be queried via standard CAD software functions. Doing so can provide distance and bearing from easily accessible or known points on the ground to features of an unknown nature visible from the air but that would otherwise be difficult to locate on the ground. The ability to quickly and accurately find locations of interest will be especially valuable in difficult or dangerous environments, like those found in Cambodia.

It is, of course, in the relationship of trails to archeological sites and features that we can see the operation of a trail as processional. Holly Dunbar (see her article) speaks of the association between the Ala Kahakai and features that represent prehistoric Hawaiian life in a wide variety of its aspects. Ross Cordy, the Hawaii State Archeologist, notes that from 1400-1700 A.D. the Ala Kahakai connected 600 or more communities (*ahupua`a*), over 100,000 people, many densely

The remains of Pu`u o Mahuka Heiau from the air.

populated housing areas, and almost all of the royal centers and major temples. It was used, says Cordy, by royalty to move armies and during an annual circuit of the island during which taxes were collected (Cordy, 1994, page 27).

The use of the Trail for taxation was embedded in elaborate ritual. An image of the god Lono was carried counterclockwise around the island in 23 days of the first month of the wet season in a ritual called the *Makihiki*, which has also been called the great Hawaiian New Year Festival (Sahlins, 1985, page 105), during which the world is renewed. The accompanying procession included not only priests and attendants but athletes who took part in ceremonial athletic events. The processional stopped at the alter of each *ahupua'a*, where local officials would present offerings (which from our perspective constitute "taxes"). By this ritual the world was remade and the power of the island's ruler legitimized.

The Applied Archeology Center, in cooperation with the National Park Service Pacific/Great Basin Area Office and the Bishop Museum of Hawaii, and with the donated services of Kristen Stout of Environmental Research, Inc., is currently examining aerial imagery pertinent to the association of the Ala Kahakai with archeological sites and features of great interest in the vicinity of Kealakekua Bay. Such sites include Hiiau Heiau and the spot where Captain Cook was killed by Hawaiians in 1779 (Cook, identified by the Hawaiians with the god Lono, was killed at about the time of the Makihiki), as well as the prehistoric agricultural complex known as the Kona Field System. From this examination we hope to determine more precisely the photographic scales best suited for identifying features of varying sizes in vegetated tropical environments and to devise better procedures for reconciling imagery of varying scales, both through producing overlays and by identifying signatures. We also will be looking for evidence that would indicate associations, and the nature of any associations, among the Ala Kahakai, branch trails, and the features of interest mentioned above as well as others we might observe.

A CAD drawing produced from the aerial photograph on p. 22.

Re-creation

From the air we can see that the trails mentioned in this article—those that led West, to the medicine rings, or around the island of Hawaii, as well as the songlines of the aborigines—trace paths that led not only from one point on the landscape to the next but to a sense of renewal among those who traveled them. I think that it is the need for renewal that brings visitors to these trails again today. Even now there are socially acceptable times for "walkabout." What we call recreation is often a rite of re-creation. "Rerides" of the Pony Express Trail, held many times since 1923 and increasingly popular; detailed reenactments along the Oregon, Santa Fe, and many other immigration trails West; and the re-use of *heiaus* in Hawaii and medicine rings in Wyoming are examples. The aerial perspective suggests that our own movements and the motives that impel them do not differ fundamentally from those of people from many other times and places. This being so, the understanding we gain from the study of human movement through other times and places will be an understanding of ourselves as well.

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Rose Wagner

Why Preserve Trails? A Wyoming Perspective

1852

May 9 ...We passed a new made grave today... a man from Ohio. We also met a man that was going back, he had buried his Wife this morning. She died from the effects of measles we have come ten miles today....

June 15 ...Traveled about three miles today and encamped on the account of four sick ones....

June 23 ... Sickness and death in the states is hard but it is nothing to be compared with it on the plains...

—From the diary of Lydia Allen Rudd in Lillian Schlissell, 1982, *Women's Diaries of the Westward Journey*, New York, New York: Schocken Books.

Thousands of people visited Wyoming for the 1993 Sesquicentennial of the Oregon Trail. In their trek through the state, they saw many of the same sights viewed by Lydia Allen Rudd when she and her husband, Harry, traversed the route in 1852. Following a passage carved out by the more than a quarter of a million pioneers who journeyed across the continent between 1840 and 1870, celebrants arrived by car, plane, bus, or other modern conveyance to commemorate the romantic dreams and the deadly realities of this historic course West.

The Oregon Trail—and subsequent trails—in 1990 approximately 10 miles south of Douglas, Wyoming. The trails ruts are indicated by darker vegetation. Photo courtesy Richard Collier, Wyoming Division of Cultural Resources.

Thanks to preservation efforts, 20th-century-adventurers are able to recapture much of the original mystique of the Oregon Trail.* They can gaze at Independence Rock as did Lydia who recorded in her diary, "I presume there are a million of names wrote on this rock...". They can travel along the river where the Rudds found "good grass and water grease for fule wood". They can take pause near Devil's Gate, which on July 5, 1852 inspired Lydia to write: "I went out to see this wonder and it surpassed anything that I ever saw in my life...".

It is true, of course, that the modern world has encroached upon the ambience of the Oregon Trail. Unlike the Rudds, today's travelers no doubt venture many more than three to ten miles a day. They do not pass other wayfarers digging graves for loved ones lost to the sickness in the plain. They do not forever leave behind family, cherished possessions, and friends. Many times, standing near ruts forged over a century ago, they experience what Lydia and Harry Rudd surely never imagined: power lines intruding on skyscapes, huge trucks speeding over paved highways, and subdivisions and smoke stacks breaking the smoothness of horizons.

Yet, in spite of these invasions and distinctive trademarks of the 1990s and even with some obvious failures, the Oregon Trail constitutes a Wyoming preservation success. While other exemplary and notable examples of our heritage are easily razed, permitted to deteriorate, or mangled by the latest fad in design or building materials, trail resources inspire loyalty and are—in more instances than not—preserved. Why has the Oregon Trail become a preservation accomplishment when so many important cultural resources have not?

Only a small part of the answer lies within the law and government activity. Federal legislation deals with cultural resources. It provides for a review and comment process which addresses the impact on cultural resources created by undertakings of federal agencies or their permittees. It sets out financial incentives available to owners for rehabilitation of historic properties. It establishes the prestigious National Register of Historic Places and National Landmark designations. But these laws apply to all cultural resources and are not specific to those associated with the Oregon Trail. In any case, federal law only promotes preservation; it does not in reality preclude the destruction of cultural sites.

On another level, Wyoming statues do provide for the maintenance of a few Oregon Trail related properties. But, while some state and local governments have adopted preservation legislation and their own financial incentive and designation programs in Wyoming, these laws are for all practical purposes non-existent.

It seems then that the answer to why many of the cultural resources associated with the Oregon Trail still exist lies in people. For it is popular interest and demand that have made the real difference in the preservation and protection of Wyoming's Oregon Trail sites.

*Across much of Wyoming, the Oregon Trail is congruent with the California, Mormon Pioneer, and Pony Express National Historic Trails. This discussion applies to sites and segments along all four trails—eds.

Beginning in the 1880s, people recognized the importance of this historic western passage. Groups held celebrations at significant points on the Trail and organized treks along the route. In the first decade of the 1900s, people and organizations began constructing protective barriers to shield pioneer graves and funding markers highlighting points of interest. Avid enthusiasts formed the Oregon-California Trails Association (OCTA), the membership of which now spans the United States.

This is not to say that trail preservationists and supporters have found their path to be smooth. Agencies, industry, and private owners sometimes cut swaths along trail ruts and downplay or ignore impacts to other trail resources. Government agencies charged with the maintenance of sites must fight for funding to perform their responsibilities. Still, the important point is that threats to trail resources spark protest. Many people put much energy into the preservation and documentation of Wyoming's historic trails. Now the question becomes: Why do these trail resources inspire public support while other cultural resources—an historic barn, a town's first pharmacy, or the old movie theater—do not?

Perhaps the answer is found partly in progress and growth. Many trail ruts were lost when communities grew up over them. Trail river crossing sites were abandoned when they were no longer financially viable and are now deteriorated: the historic movie theater comes down to make way for a mini-mall. Maybe a desire to leave one's stamp on the world also plays a role in this scenario. Rocks onto which pioneers etched their names have been vandalized by new generations eager to carve their own marks: signatures of our particular times—such as gilt lattice work and metal siding—mask the original stone, brick, or wood of the town's first pharmacy.

Deeply incised trail ruts near Guernsey, Wyoming. 1984 photo courtesy Richard Collier, Wyoming Division of Cultural Resources.

It could be that sheer numbers of people who perceive their lives as being affected by a resource determines what is preserved and what is not. Thousands of our forebears braved the hardships of the westering trails, and many credit these pioneers *en mass* with being not only the major impetus behind the westward expansion of the United States, but also the embodiment of the American dream of owning property and achieving wealth in a land of plenty. Although some of these same ancestors, individually or in small groups confronted numerous trials to build western communities and establish ranches or farms, perhaps these efforts are viewed as too localized to generate widespread enthusiasm for the sites which reflect this aspect of our heritage. Does the very nature and extent of our historic trails preclude provincialism?

Or, could it be that the myth of the West, via *Wagon Train*, *How the West was Won*, and other productions fires our preservation instincts and our willingness to honor buckskin-clad heroes and crinoline-skirted heroines? Certainly the image of James Stewart and Carole Baker boldly forging into untamed territory is more exciting than the picture of John Doe building the first general store in Anytown. Has Hollywood kept the Trail preservation momentum going?

Whatever the answer, it would give preservation and preservation planning a boost if we could isolate what motivates people to actively support particular cultural resources, bottle this phenomenon, and use it to foment our preservation programs.

Until that day, the best laid plans of mice and women may continue to go astray, just as did those of Lydia Rudd. Having survived the arduous wagon journey across plains and mountains, the Rudds reached Oregon in October of 1852. Lydia, who dreamed of owning land in her own right and evidently made the formidable trek with this plan in mind, notes in her diary that husband Harry became a partner in a mercantile business instead of acquiring property under the Donation Land Act of 1850 (which would have allowed him to claim 320 acres for her as his wife). Concludes Lydia, "I expect that we shall not make a claim after all our trouble in getting here on purpose for one... I shall have to be poor and dependent on a man my [whole] life time."

Rose Wagner is a preservation planner with the Wyoming State Historic Preservation Office in Cheyenne, WY. This article was adapted from "Preservation of the Oregon Trail in Wyoming: One Viewpoint" which appeared in The Western Planner, *15:1, Jan./Feb., 1994, pp. 3-4.*

Sandi McFarland

One Trail, Many Meanings
The Lolo Trail

I have spread my dreams under your feet; tread softly, because you tread on my dreams.

View of sheep driveway along the Lolo Trail in the Clearwater National Forest, 1933.

In order to plan and manage a trail corridor well, information is needed to identify exactly what is being managed. What is the Lolo Trail System? It has been defined as (1) the Lolo Trail of prehistoric times, (2) the Lewis and Clark Trail of 1805-06, (3) the Bird-Truax Trail, built in the 1850s, (4) the Nee-Me-Poo Trail of 1877, and (5) the Lolo Motorway built in the 1930s. This trail system was probably never one single trail, but constituted a braided trail system evident today along a 100 mile-long mountain ridge through the heart of the Bitterroot Mountains, traversing the Clearwater National Forest in Idaho. Today, both the Lewis and Clark and Nez Perce (Nee-Me-Poo) National Historic Trails also pass over it, although both of these National Historic Trails begin and end far to the east and west.

The Importance of Full Understanding

Because of the diversity of use over time, confusion has developed about the Lolo Trail System. The term "Lolo" is, in fact, overused, for it might apply to any one of these routes. Knowledge of the prehistory of the Lolo Trail System is not only lacking, but has often been inaccurately presented in interpretation to the public. Furthermore, the "Nee-Me-Poo Trail," as used in government documents, is inconsistently applied to both the pre-historic Buffalo Trail and the 1877 route across which the non-Treaty Nez Perce fled the U.S. Army—yet they are not the same in several places.

The designation of the Nee-Me-Poo Trail as a National Historic Trail further adds to the confusion of the history of this trail and its significance. This should be of concern to the Nez Perce people in portraying their heritage to the public. Their conception of Nez Perce history is certainly much richer than showcasing one tragic event in the lifetime of the people.

The full history of this trail is much different from what is being proposed by the designation of the Nee-Me-Poo as a flight trail. The limitations that are implied by this interpretation are indeed troublesome, for interpretation is being conducted in a manner in which the non-Indian chooses, with little regard to what really happened on the trail over thousands of years.

Why should interpretation efforts and environmental education be an integral part of the Nee-Me-Poo Trail? Perhaps a quote from the German poet Goethe will best capture this thought: *was mann ways, sient mann*, or "one sees what one knows." The Association of Interpretive Naturalists has broadened this out to: "What we understand, we value, we protect, and cultivate; and what we do not understand we neglect, waste, and fear."

The Lolo Trail was viewed as having national significance in 1962 when it was designated a National Historic Landmark, and subsequently listed on the National Register of Historic Places (NRHP) in 1966. In 1965, the Lolo Trail was designated a part of the Nez Perce National Historical Park by the passage of Public Law 89-19. The definition given the Lolo Trail by the NRHP is a trail running about 140–150 miles southwesterly from the vicinity of Lolo, Montana to the Weippe Prairie in Idaho.

Later national designations also overlie this route. The Lewis and Clark National Historic Trail was established in 1978, running from Wood River, Illinois, to the mouth of the Columbia River in Oregon. The Nez Perce (Nee-Me-Poo) National Historic Trail was established in 1986 and extends from the vicinity of Wallowa Lake, Oregon to the Bear's Paw Mountains Battlefield near Chinook, Montana. Across the Bitterroots, the 1877 Flight of the Nez Perce followed an 1850s Army-built track—the Bird-Truax Road—much of the way.

For the national historic trail, the official trail marker conforms to the shape established for trails within the National Trails System. The symbol is representative of the use of the trail as a travel route for Nez Perce families crossing the mountains to the Great Plains. The Nee-Me-Poo Trail is worn in places two to three feet deep and is one to two feet wide from long use and erosion.

How the Trail Evolved

Along this network of trails, what are we managing? We need to consider the human use of this trail from the beginning of time. If we concentrate on the Nee-Me-Poo Trail as the route used only during 1877, we are missing other major uses of this trail system. If we only look at a corridor so wide along this trail we will miss the feeder trails that lead to these ridges that were used for hunting and spiritual use. We can not manage the trail with blinders on.

The environment along the course of the Nee-Me-Poo Trail has been modified by a number of large and small scale natural and man-related phenomena over the last 12,000 years. Several phases of human occupation can be seen in the landscape into the present. Perhaps the most obvious changes that have occurred have taken place in the last 100 years in conjunction with grazing, logging, fire suppression, and forest recreation. The land has changed to reveal different meanings. Through the drama of its changing forms explorers have been mystified, settlers have tamed the land and cultivated it, and today's generation has conquered it with motorized vehicles.

Before white men came, before the 1877 Flight, the Trail was used by the Nee-Me-Poo in a variety of ways over thousands of years. Sections were used to access areas where task groups were sent out in their seasonal rounds to collect berries, medicines, food supplements, roots in the meadows, fish, and game. A number of feeder trails diverge from the Nee-Me-Poo Trail and go off to different drainages, lakes, areas that the Nee-Me-Poo used—they even dropped off down to the Lochsa River thousands of feet below.

The trail was an Indian highway that connected the Columbia Plateau with the Great Plains in an amazing trade network and commerce route.

Weitas Meadow along the Lolo Trail. These meadows provided game, water, forage for stock, and protection from mountain winds. They were favored camp sites.

The Nez Perce people were the major tradesmen of the Columbia Plateau. They moved a number of trade items from the Pacific coast across this trail (from such trade centers such as the Dalles, Oregon) to the Great Plains, and other items from east to west. The trail was used to reach buffalo hunting grounds where people stayed three years or more before coming home. Some went to visit friends and relatives in the Plains, since intermarriages had been taking place over centuries. Others traveled across for cultural sharing or religious events.

The Nee-Me-Poo Trail is characterized by a number of rock cairns which occur along the trail and are not known to exhibit any particular service. *Tum loyeets muh* is the Nez Perce term used in reference to these rock piles. It translates as "rocks stacked up." Some have said they serve as a place for messages, others say they are areas where young people have gone on vision quests and piled stones to keep them awake through the night vigil. Reverend David Miles, Sr. (personal communication, 1991) states that the rock piles signify an accompanying prayer. Sometimes, at a later date in their life, the men and women could return to this special place and put in a new stone as they sing a sacred song or songs and offer new prayers. This practice is called *tam-loy* or *Tam-loy yiic max*, which means, "wherein one left a memorial to oneself and found one's old self," or *Im matqu ya ko.*

Another view is where each stone held a significance to the individual. Some have recognized the stone piles to be trail markers, but perhaps they were left by herdsman or miners. Ralph Space notes the purpose of the Indian Post Office cairns is to mark the old trail which left the main divide and switchbacked down the mountains to the north. He describes the earliest historical reference to the cairns as found on a 1898 map which denotes the name Indian Post Office Mountain. Grant contends that the earliest recorded written record for the Indian Post Office is on O.D. Wheeler's "Trail of Lewis and Clark." It is noted that Wheeler traveled the trail in 1900 and reports two rock monuments. The Forest Service started piling rocks as trail markers as early as 1922 and continued to use them as trail markers and stands for heliographs through the years.

The first documented white men to cross the Trail were Lewis and Clark on their Voyage of Discovery, going west in 1805 and returning east in the spring of 1806. The Lolo Trail then became the main route to the Lower Snake River and the Columbia Plains for trappers and sealers. In 1831, a hardy trapper named John Work of the Hudson's Bay Company led his Snake River brigade of 30 to 40 people over the Trail.

The journals of Major John Owen provide further insight into the use of the trail as a fur trade route. He recognized the Lolo Trail as the most direct route to the Columbia River settlements and is said to have used it extensively. (Evidence of fur trapping can be found even today along the Trail with numerous trap lines of marten sets—some with the old wooden peg type. Trees can be seen with trapline blazes.) During the 1840s the fur trade dwindled and trapping ceased as a major activity. Without a demand for the product, and the mountain men and the fur trade now giving way to the increasing pressures of the white settlers, the fur trade became obsolete.

In the early 1850s, the 32nd Congress of the United States passed a law giving the Secretary of War authority to explore the western mountains for a possible railroad route extending from the Mississippi River to the Pacific Ocean. In 1853, the Steven's Railroad Survey explored the Trail.

Then the discovery of gold in the Clearwater River drainage of Idaho in 1860 brought an influx of miners across the Lolo Trail. A second rush occurred in the late 1860s with as many as 200 people filing into Moose and Independence Creeks with the rise of the new mining town of Moose City. This new town was accessible from the Lolo Trail where the terminus began near Cayuse Junction.

Further information is provided in John Owen's journals concerning the use of the Lolo Trail during the early settlement period. He describes meeting a number of small parties of miners and prospectors on the trail during his crossings. In addition, he provides information regarding the comments from parties in the Bitterroot Valley who were using or planning to use the Lolo Trail as a route in their travels. Apparently these early gold miners and explorers called the trail the "Northern Nez Perce Trail." In addition, some evidence of prospecting exists among the Nez Perce themselves, as found in a letter to L V. McWhorter dated 29, August 1926.

> I will be very glad to aid you or assist you, with all my ability, at any time... but I am feel sorry about you may not fine me at home. At certain occasion I may take trip up to mountains soon. Come back and go back again. Prospecting or fishing if nothing else.... Yours respectfully, S. Lott or Many Wounds.

With the coming of gold strikes came an era of criminals, opening another chapter in the history for the Lolo Trail. Highwaymen and thieves used the Lolo Trail to escape justice and rob travelers as late as 1904.

In his journals, Granville Stuart also refers to the use of the Trail to get from the Bitterroot Valley to the gold fields situated around Pierce City. After the Nez Perce Flight of 1877, the Army now felt the area was safe for homesteading.

The trail landscape was further affected in the 1920s by sheep and cattle grazing. The Nee-Me-Poo Trail from 1922 to 1945 was used extensively as a sheep driveway. As many as 35,000 sheep were grazed on the Clearwater National Forest. The first sheep to enter the upper Weitas and Cook Mountain country occurred in 1922 with a sheep driveway completed to Montana in 1924. Remnants of this sheep driveway are still visible along the Foot Rot Trail, where its junctions with the Nee-Me-Poo Trail are within a mile of Camp Martin, and was used as a stock driveway to Montana. Other visible evidence can be found along Lean-To-Ridge. Ralph Space reported two bands of sheep branched off the driveway that led to Rocky Ridge. Bald Mountain and Indian Grave were other grazing areas. About 26,000 sheep were grazed on the Clearwater National Forest in 1928 and about 35,000 by 1933.

The year 1925 heralded the introduction of cattle grazing on the Clearwater at Packer Meadows. Increased road construction enabled cattle to mainstream in the Forest in 1937 with permits being issued to graze cattle on Bimerick Meadows and at Boundary Peak. The Nee-Me-Poo Trail west of Bever Dam Saddle onto Weitas Meadows was used to drive cattle to their summer pasture at the Meadows.

The impact of grazing went unchecked for many years. By 1945, all sheep grazing had ended from pressure of the cattle livestock owners. Grazing by sheep and cattle had detrimental effects on the environment as was evidenced in many places along the trail.

Management Recommendations

The following management recommendations are offered as measures to conserve the many lay-

Typical ridgetop view from the Lolo Trail as it crosses the Bitterroot Mountains. Lewis and Clark called it a 'Sea of Mountains.' Note Bear Grass in foreground.

ers of scientific, historic, and public values recognized along this Trail. In light of the establishment and proposed development of the route as a national historic trail, the potential for adverse impacts to the cultural resources is dramatically increased. Almost by definition, this designation and the uses it may attract will encourage visitation to the Trail. Assuming that this encouragement is effective, traffic over the Trail will increase, resulting in an acceleration of specific adverse effects already taking place. For example, people hunting and collecting relics are literally "loving the resource to death."

Currently, undesirable conditions include a steady stream of traffic by hikers and horseback riders; mortality to trees when horses are tethered for extended periods; conveniences and services necessary to trail development (such as campground improvements); off-road vehicles (ORVs) damaging fragile mountain meadows, lake shores, and stream banks; mountain bikes accelerating erosion along trails; mud and horse manure on trails; and fire suppression on trails. Excessive use can lead to resource damage and a degraded recreational experience.

Excessive use can also stem from many different people seeking many different—often conflicting—experiences. Horseback rider vs. mountain biker vs. hiker vs. sightseer vs. traditionalist. The intent of the limits of acceptable change (LAC) process is to establish a clear measure of what constitutes acceptable cultural conditions in the form of measurable standards. This process would appear to be most appropriate in accomplishing management objectives and goals.

Thus, despite the positive virtues of developing the historic trail in the interests of public values, that action may also introduce and accelerate adverse impacts. Recreation offers the opportunity to experience unique features of scientific and educational value. Therefore, the establishment of the route as part of a national historic trail constitutes a direct impact, and the management recommendations discussed below should be recognized as measures to mitigate that impact.

Executive Order 11593 directs that federal bureaus "conduct agency operations to maintain, restore, and preserve cultural resources on federal lands ...." This suggests that measures be taken immediately to curtail ongoing adverse impacts to cultural resources. Every effort should be taken to conserve the environmental setting and to preserve the Nee-Me-Poo Trail.

Certainly the most important elements of good management plans involve clearly stated objectives. Objectives relate to specific conditions to be achieved. A good plan must address the need for coordination to address resource management activities and non-conformist uses. For example, balancing the values of a national historical trail with the goals of supplying timber in a national forest must be made carefully.

In order to confirm the identification of specific cultural resource features and further clarify issues relating to the Trail, an accurate database must be formulated, providing a basis for meaningful interpretation and management. Monitoring and restricting the location and subsequent development of camps is essential. Proper signing and interpretation are necessary if this is to be accomplished.

Another management consideration should include the prohibition of construction and development within the trail corridor. Consideration of impacts on the Trail as a repository of scientific data and as symbolically evocative of past human use simultaneously needs to be addressed. Specifically, the effects of ORVs on the cultural and natural landscape, the introduction of conveniences necessary to trail development, relic collectors who consider what they do as recreation in itself, and the protection and interpretation of cultural resources are all to be considered.

Managers should be challenged to guide, modify, and, if necessary, directly control trail uses to minimize adverse impacts. Vulnerability of the resource is greater at certain times. For example, early July, when vegetation is easily damaged, is often when weekend visitation is the heaviest. In order to minimize excessive negative impacts, restrictions should be selective as to times, places, and users having the greatest potential for damage. Another step would involve determining the limits of acceptable change and identifying the carrying capacity of the different segments of the Trail for different types of human uses. Carrying capacity has been identified by Hendee as the magnitude of use that an area can withstand without unacceptable change. Following this, a monitoring system should be devised to assure long-term management success.

Identification of significant events and places on the Nee-Me-Poo Trail will assist the Forest Service in an on-going program of cultural history investigation, with the ultimate goal of appropriate public use and full, accurate information.

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All photos courtesy of the author.

Donna Redding

Preserving the Iditarod Trail

Dogsled on the Iditarod National Historic Trail.

The Iditarod National Historic Trail represents the longest, most travelled gold rush trail in Alaska. It is Alaska's only national historic trail, and, although it crosses a wide variety of private, state, federal, and Native Alaskan lands, it is administered as one entity by the Bureau of Land Management. Segments of the trail have served as trade routes for Alaska's native peoples for centuries. Russian fur traders later used trail segments for building their trading network. Existing sections of trail were tied together after a series of gold strikes occurred near Nome, Flat, Ophir, and adjoining areas.

In 1908, the U.S. Army's Alaska Road Commission was directed to survey and mark the trail between the ice-free port at Seward and the boomtown of Nome on the shores of the seasonally ice-bound Bering Sea. During the height of its historic use, the main trail was dotted with roadhouses approximately every 20 miles (or a good day's walk). Many of these roadhouses still exist despite the ravages of man and nature.

All photos courtesy Bureau of Land Management.

BLM is responsible for the protection and preservation of the historic properties on many federal lands. It is also working to inform and educate the public about trail history. The reasons for this education effort upon trail history are varied. For example, few people know that the idea for the popular annual Iditarod sled dog race originated as a reenactment of an emergency medical serum run to Nome, not a gold rush event. In 1925, the lives of everyone living in and around Nome were in danger due to a diphtheria epidemic. Vaccine was heroically rushed to Nome by relays of dog teams; the system of roadhouses along the trail allowed these efficient relays. Without the background knowledge of the diphtheria epidemic, the Iditarod race becomes simply an isolated sporting event for those involved in it today.

Cultural Resources Along the Trail

There are over 300 known historic and prehistoric sites located on or near the Trail. The vast majority of these sites are located off the road system. In many cases sites are only accessible by helicopter or snowmachines in the winter. This situation has both positive and negative impacts upon these sites. The lessened access means less vandalism—however, monitoring and stabilization costs skyrocket. Remote locations do not always deter vandalism. For example, sometime during the winter of 1992 the roof of the Alaska Commercial Company Store in the town of

Left, the Alaska Commercial Company Store before roof removed in 1992.

Right, the Alaska Commercial Company Store after the roof had been removed, 1992.

Iditarod was removed for reuse by people on snowmachines. The damage was not discovered until several months later when a BLM crew in a helicopter was working in the area.

Management Directions

Because the gold rush associated with the Iditarod trail is so recent (1896-1927), a rich reservoir of journals, photographs, and oral histories exists. During the mid 1980s, the Bureau of Land Management interviewed people who used and lived along the Trail during the height of trail activity. (Many of these people have since died.) Unfortunately, many had not signed a release form so that this data could be published—once this problem is dealt with by finding and getting permission from the families of these people, transcriptions will eventually be available to the public. These collections are still on tape, but the BLM Anchorage District Office plans to have these interviews transcribed this winter.

A more recent oral history project occurred in conjunction with a building survey of the town of Flat. This work was conducted under a cooperative agreement with the State of Alaska's Office of History and Archaeology. When the building survey is complete, both the building survey and the oral histories will be published as companion volumes by the BLM Anchorage District Office.

Most recently, BLM assisted the U.S. Fish & Wildlife Service in getting a University of Alaska at Fairbanks field school in historic archeology set up at the abandoned village of Dishkaket. This village, located on the Innoko National Wildlife Refuge, was originally an Athabaskan village. When gold was discovered nearby, it became a hub for several Iditarod Trail segments. Results of the excavation will be forthcoming in a doctoral dissertation by Mary Ann Sweeney.

Directions for the future of BLM cultural resource management along the Iditarod Trail include National Register nominations, interpretive sites along a section of historic trail near the town of Girdwood, and the cataloguing of a collection of historic Iditarod Trail photographs in Nome.

Donna Redding is the staff archeologist at the BLM Anchorage District in Alaska. Previously she worked in the American Southwest, northern and southern California, and arctic and subarctic Alaska.

John Conoboy

Historic Trail Preservation by Handshake
Can Certification Agreements Protect Trail Resources?

On January 24, 1991, Oklahoma rancher Dan Sharp signed a certification agreement with the National Park Service making part of his ranch, Autograph Rock, the first certified trail on the Santa Fe National Historic Trail. While such certification involved a written agreement, it has no more weight than a verbal agreement and a handshake. Neither party is legally bound to the terms of the agreement. Either may back out of the agreement at any time and for any reason. The agreement spells out how both parties may work together in partnership and in good faith to keep the terms of the agreement in order to preserve the historic resources of the site and to make them available to the visiting public in a manner that protects the owner's property and rights.

What is Site and Segment Certification?

For historic preservation advocates who believe that to preserve a historic resource an agency or organization must own the land, or at least a preservation easement, such an agreement might appear to offer little or no protection. However, we believe that these agreements are central to protecting historic trail sites and developing sound partnerships in a manner consistent with the National Trails System Act.

The concept of site and segment certification originates in section 3(a)(3) of the National Trails System Act, which recognizes that "Only those selected land and water-based components of a historic trail which are on federally-owned lands and which meet the national historic trail criteria established in this Act are included as federal protection components of a national historic trail." It then goes on to state that "The appropriate Secretary may *certify* (emphasis added) other lands as protected segments of an historic trail upon application from State or local governmental agencies or private interests involved if such segments meet the national historic trail criteria established in this Act and such criteria supple-

mentary thereto as the appropriate Secretary may prescribe...."

One of the first trail management plans, the *Oregon National Historic Trail Comprehensive Management and Use Plan*, was completed in 1981. It provided for non-federal landowners and managers to apply for certification to the National Park Service through each State Historic Preservation Officer (SHPO). Certain information was required in the application process, but how such "certification" would occur was not specified. This program was not implemented.

The 1990 *Santa Fe National Historic Trail Comprehensive Management and Use Plan* (CMP) proposed that site and segment certification would occur through a voluntary, good-faith, written agreement between the owner/manager and the National Park Service. A sample application form was included in the Plan, although it was found not to work well and is no longer used. The certification agreement implements that language of the National Trails System Act with supplementary criteria from the CMP, and the agreement spells out how they will be achieved.

Certification applies to all non-federal trail sites and segments; however, for this article I will address only agreements with private landowners.

Compliance

The process is simple. A landowner can "apply" for certification by writing to the federal trail administrator's office (in our case, in Santa Fe, NM), phoning us, or just telling us that they want a site certified. Usually they have already read our "Certification Guide" and our CMP, which explains the process in some detail. If not, we send them copies. One of our staff visits the site to gather background information and discuss certification in more detail. We prepare a draft certification agreement and send it to the owner. If necessary, we negotiate with them and rewrite the agreement until a final document is developed that both sides feel meets their needs. Agreements may be for any term, but we use five years as a maximum length so that we will have to review and revisit the agreement with the partner.

The first sections of the agreement contains a summary of background information on the location, history, resources, and other characteristics about the site. Following this are sections on legal and policy compliance, administration, and resource management. These sections are the core of the agreement, because they outline how the partnership will work.

Because national historic trail projects undertaken at certified sites are in support of a federal program, they are subject to environmental and historic preservation review under the National Environmental Protection Act, Section 106 of the Historic Preservation Act, and more. Accomplishing compliance is the responsibility of the National Park Service. However, we use the expertise of the owner, local historical societies, the State Historic Preservation Officer, and others to gather the information and complete the compliance documents. For example, state agencies may agree to provide an archeologist or other professional to evaluate a site, an NPS staff employee may be used, or even qualified professionals from the private sector or universities may assist. In some cases, if a project involves another agency, it may take the lead in handling compliance.

The review process is the same as it would be if the project was being done on federal lands. All actions must be agreeable to the owner. Compliance does not apply to actions taken by the owner that are not related to the agreement, but under certification we ask the owner to consult with us regarding any action that might impact the site's resources. Owners are willing to work with us because the relationship is one of consultation, discussion, and a search for mutually agreeable solutions, not the imposition of regulations.

The administration and resource management sections contain the terms regarding who will do what and how it will be done. The goal is to work in good faith to use National Park Service standards for natural and cultural resource management, interpretation, and visitor use. Although we try to treat the site as if it was inside a national park, the terms must take into account the owner's needs to conduct their day-to-day business and protect their property and privacy. Terms include such actions as development of resource management plans, evaluation of carrying capacities when appropriate, avoidance of ground disturbance to

Community volunteers build a trail at Autograph Rock near Boise City, Oklahoma. This project was part of a site management and resource protection plan developed by the NPS and the landowner at a certified Santa Fe National Historic Trail site. NPS photo.

protect subsurface resources without consultation with the NPS and the SHPO, and more.

The site or segment owner agrees to allow the public onto the land to visit the historic site. How and when are spelled out in the agreement. Some owners do not mind relatively unlimited visitor access; others want to restrict access to certain times and/or with certain conditions. One couple in New Mexico is quite comfortable with signs along the highway directing the public to their site. At Autograph Rock, the site is only open at certain times, and visitors must go to the local historical society museum to learn if the site is open. If it is, they are given directions to and information about the site. Some owners prefer to only open the property up to organized tours at specified times. Such tours, however, must be open to the public.

Benefits of Certification

A major issue of concern to landowners is their potential liability if they open their historic sites to the public. Fortunately, most states have excellent laws which protect landowners from such liability when they open their lands for public recreation. In most cases, this applies only when there is no use fee charged. In addition, under the National Trails System Act, a landowner may be enrolled as a Volunteer-in-the-Park, which provides coverage under the Federal Tort Claims Act and, if appropriate, for workman's compensation for approved certified site activities.

Certified sites are eligible for NPS technical and limited financial assistance. Certification gives access to broader professional assistance than most owners can obtain on their own. We may visit a site with an historical architect to evaluate a structure and make recommendations to the owner, or with an archeologist to make recommendations for research needs. Partners at certified sites have access to a wide network of NPS professionals, training programs, and support.

Certification can provide other benefits, too. It brings a strong and favorable public image through recognition of the owners' efforts to preserve resources and provide for appropriate public use. The display of the national historic trail logo at the site lets people know that the property is part of a nationally-significant trail, and that protection, interpretation, and public use all meet the high standards of quality that the American people expect in NPS areas. Members of the community—especially school children—can benefit from the civic pride that comes with recognition and increased knowledge about the history of their area. Local efforts to obtain grants for historic preservation and other civic projects related to the trail can gain additional justification.

How Well is Certification Working?

Preservation of historic trail resources requires a big "toolbox" for agencies and trail organizations. Other methods are being used along the Santa Fe Trail to protect sites. A trail enthusiast in Kansas City donated his property to the Kansas City Board of Parks Commissioners. A landowner in Colorado has donated a trail site to the Archeological Conservancy. The site will be protected, but certification has also been requested by the Conservancy so that it will become part of the national historic trail. In New Mexico, a landowner has donated an easement on a trail segment to a land trust, which is also in discussions with several other landowners about easements. Certification has not been requested for the donated easement.

Certification agreements are working, and they are surviving the transfer of property from one owner to another. We have had one owner die. She willed her historic site to a neighbor she knew would protect it. The new owner promptly signed a new agreement. In some cases the community helps. When one certified Kansas historic site was sold, the new owners were promptly contacted by trail supporters in the community and they too agreed to continue certification.

Certification provides a positive way for a landowner to get help preserving trail resources without giving up any rights they have on their land. In time, some landowners may decide they would like to donate their site or an easement to a local historical society or land trust, or take other actions. Other owners will not. However, as long as the sites are certified, they will be protected through a partnership that has agreed to do the best we all can with the resources available. Almost all the landowners we meet along the trails are extremely proud that they own a piece of our nation's history, and they already want to protect it as best they can; but they also want to protect their property, their families, and their rights. Certification allows us to help them do better what they already want to do without compromising their other needs. Certification works because we have a mutual goal. We both know we will not always agree on the best course of action, but we are willing to discuss the issues, discuss our differences, and strive to do the best we can. And then we shake hands. On the Oklahoma panhandle, and along the rest of America's historic trails, a handshake is a mighty powerful tool.

With a background in resource management and ranger skills, John Conoboy serves as Chief of Interpretation and Resource Management in the NPS Long-Distance Trails Group Office in Santa Fe, NM.

David M. Gaines

Look Before Leaping Into a Rut
Conserving Historic Trails

Heavily eroding Santa Fe Trail ruts. NPS photo.

A continuing challenge—and one of the greatest challenges facing the National Park Service since its inception in 1916—has been the mission of simultaneously having to conserve natural and cultural resources while providing for their appropriate use and enjoyment by the public. This has not been an easy task, but we have learned much from our successes and failures. If there has been one overarching truth to emerge, perhaps it is that once historical integrity is lost, it cannot be regained.

Moving beyond the traditional realm of historic preservation, which includes buildings, structures, and artifacts, as well as gardens and important landscapes, we find a growing public interest in preserving and commemorating historic trails and routes upon which significant events played themselves out. This article does not address the preservation of historic landscapes associated with old trails, nor does it address associated campsites, archeological sites, structures, or buildings along the trail corridor. Instead, it deals directly with the conservation of the core of any historic route: the trodden "fabric," or remnant track, and specifically along the Santa Fe National Historic Trail.

Stretching between Missouri and New Mexico between 1821 and 1880, the Santa Fe Trail was first an international, and then a national, route of commerce and cultural exchange. Much physical evidence of its existence has been lost over time to agriculture, highway development, urbanization, or (more insidiously) to natural processes. Of the 1,200 miles of designated national historic trail, it is estimated that 200 miles of visible trail remnants remain, mostly in the cattle ranching areas of Kansas, Oklahoma, Colorado, and New Mexico.

Santa Fe Trail remnants still possess a high degree of cultural resource integrity. Called "ruts," or "swales," depending upon their degree of prominence, trail remnants generally do not appear the same today as they would have during their time of use. Wind and water erosion have deepened them, and airborne and waterborne soil particles have helped fill them in. Native grasses have helped to heal the scars, while channelized spring rains stimulate lush flower blooms within their confines. But although they do not look the way they did after decades of passage by tens of thousands of ox hooves and the 2.5-ton freight wagons they pulled, what does remain is just as important as the weathered ruins of a prehistoric structure or the meticulously preserved facade of an antebellum mansion. The trail itself is not an incidental side effect of transportation or human movement, but actually a worn, dusty landmark meant to be seen and followed with a sense of security and practicality. Seen as a human-made structure (although certainly one that changed and moved as conditions warranted), and the object of official survey during its day, it is appropriate to use the *Secretary of the Interior's Standards for Historic Preservation* in finding appropriate guidance for balancing preservation and use.

Although Santa Fe Trail remnants repose in soil, with none etched in stone as may sometimes be found on the Oregon Trail, ruts and swales can still be conserved, if not preserved, for future enjoyment and appreciation. On open range land, where most extant ruts are found, meandering cattle have been beneficial in keeping vegetation in check. But stabilization may also call for special methods to keep ruts from eroding further, such as re-vegetation, drainage improvements, or prescribed burning.

Visitor retracement directly on actual trail ruts should only be encouraged if the type of use (for instance, hiking, horseback riding, wagons) and expected levels of use, when considered together with a particular segment's soil, groundcover, and drainage character, are such that the physical character of the ruts will not be adversely altered. We generally try to discourage public use of trail ruts until we have had a chance to assess the particular circumstances in consultation with landowners, soils experts, and others, and arrive at sound conclusions. With much of the Santa Fe Trail remotely located and not expected to attract heavy visitation, in most cases we expect that hiking will not pose a concern, although it is possible

that horses and wagons could under certain conditions.

Where some of the trail has been used continuously over time and has evolved into two-track farm roads, the conservation/use issue ceases to be a concern, because the resource has already been irreversibly altered by the human use of motorized vehicles. If, on the other hand, the type of use and nature of the resources are such that a rut's condition will not lend itself to recurring visitor use without adverse physical impacts, it would be prudent to look at alternatives for public use.

Alternatives could include a parallel recreation trail, provided that this trail did not intrude on the historic scene. One such solution is the USDA Forest Service's creation of a Santa Fe Trail companion trail along 19 miles of the Cimarron National Grassland in southwest Kansas. Concerned about potential impacts to trail ruts and swales from hikers, horseback riders, and wagons, the Forest Service mowed a 12-foot-wide swath roughly 150-feet from the visible ruts, eliminating yucca and woody growth, seeding voids with buffalo grass, placing geo-web material at a few steep drainage crossings and backfilling over it, and creating a non-intrusive recreation trail defined mostly by its lower grass profile. If there develop signs that the modern buffalo grass tread is taking on the character of an historic trail scar, then the trail can be shifted while its former track heals.

For much of the Santa Fe Trail's length, surface evidence of the Trail has disappeared. When that last recorded vestige of the Trail's weathered presence has disappeared, then it is possible to either establish a recreation trail, or, if documentation such as historic descriptions or graphics exists, simulate or re-create the historic appearance. Such efforts need to weigh any possible effects on data available from subsurface archeological values, including those of adjacent campsites, and so forth. Similarly, but at the other extreme, where the trail has become so deeply eroded that it ceases to resemble any notion of what constituted the Trail, then new, contemporary alternatives can be employed. Visitors should be informed that simulations or re-creations are exactly that, to help them understand what they are seeing and experiencing. Where recreation trails are employed, interpretive material should be available to help visitors envision what the trail once appeared like.

We have not (nor have the state historic preservation officers) supported the notion of preserving remaining trail remnants by encouraging unlimited public use in order to perpetuate something visible. But some see the continued presence of the rut as paramount and feel that compacting the soil or baring it prevents the rut's or swale's disappearance. Some may see this as similar to reconstructing or restoring a historic structure though we don't usually know what the original trail segment looked like in its prime. This is analogous to stacking new adobe blocks on a weathered ruin or taking a chisel to a petroglyph so that the essence is not allowed to melt away. For others, maintaining the sense of place, being able to stand in a rut and imagine the wagons passing by, is more important than whether or not the rut is weathered or modified by human intervention.

A new trail superimposed on original, though naturally altered, remnants is at best only a contemporary simulation of what was there, but at the cost of degrading and obscuring the historic remnant's intrinsic values - ones that can make it qualify for the National Register of Historic Places. Visitors on foot, horse, or wagon would likely be ineffective in matching the results of heavy freight wagons and oxen teams. Visitors may walk along the rut and create narrow social trails or walk on the sloped rut shoulder and not the low points. Such activity could actually hasten the disappearance of the rut. With so much of the trail no longer visible, it would be more appropriate to try to recreate or evoke a sense of the trail's presence on those areas where it is known the route passed.

The reality, though, is that too many people hold the remaining trail remnants in awe as weathered and aging touchstones with the past, and some do so to the degree that they do not want to even set foot on them. How would they react if they knew that on another trail visitors were allowed to walk by the thousands on a section that sees such extensive erosion that fill is brought in from another place once a year to raise the tread? What is hallowed ground if the ground is imported? For these people there is a great fascination for naturally altered trail remnants, no matter how subtle, than for those that have been disconnected from the processes of time and the marks of antiquity.

The remnants of the Santa Fe Trail will be around for a long time to come, and with more research into trail morphology, we may learn new ways to conserve them that are consistent with current preservation policy and practice. Trail conservation is going to evolve and catch up with the traditional liturgy because of the increasing national interest in the subject.

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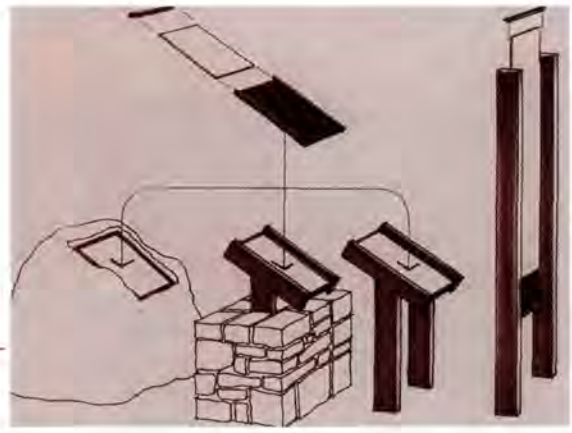
Cherry Payne

Pearls on a String
Interpreting Historic Trails



NPS guide on trail waysides illustrates various types of recommended bases.

The art of interpretation for parks and trails links people and places, tells stories, inspires, and ideally provokes passions. When interpretation is successful, visitors walk away with a new understanding—a new appreciation—of the meaning of the place they are visiting. They not only want to know what happened there, but what it means and why it is important. In addition, good interpretation develops constituencies—people who will speak out, telling others to visit these special places and advocating for their protection and preservation.

The interpretive process may contain many elements, such as information, orientation, education, entertainment, and even recreation. Each of these elements is important; but none is significant if it does not instill at least an intellectual desire to preserve the object being interpreted.

The interpretation of trails is no different than the challenge of interpreting at a specific park site; however, there are some unique aspects to national historic trails. While trails and historic roads are linear routes, sometimes extending over thousands of miles, national historic trails, as created by Congress, consist of individual sites located along the historic route. Think of a string of pearls—the string represents the route of the historic corridor, while the pearls represent the sites along the route where resources are preserved and the story of the trail is told. But trails inherently present obstacles of time and space to visitors. Unlike a string of pearls, the sites are not always adjacent to one another; oftentimes there are many miles between sites, or their historic relationships may be obscured by modern developments such as cities, subdivisions, and road realignments.

Similarly, it can be difficult to communicate the "big picture" with trails. Visiting trail sites can be reminiscent of the blind man describing the elephant: perceptions are created where one happens to encounter the trail, which may reveal only part of the story.

Some of the unique challenges to trail interpretation include issues such as historic context of the site, isolation of resources from other sites, visitor expectations, and site amenities—or lack thereof.

When visitors go to a park site, they often (but not necessarily) have expectations of what they will see and experience. These expectations may come from park literature, television or news stories, friends who have visited the site, or other sources. And, as simplistic as it may sound, visitors usually know when they get there. They pass a sign or pay an entrance fee which puts them on notice that they have arrived at their destination. From that point, their expectations begin to be reinforced or reshaped. Interpretive activities, be they personal or non-personal kinds of programs, then have a springboard from which to be launched.

Typically, trails do not have entrance stations, visitor centers, or even signs notifying visitors that they are "entering" a particular trail. It is not uncommon for visitors to trail sites to be "accidental tourists," stumbling upon a site, and only realizing its significance through interpretive exhibits. Their discovery may be a gem of delight in a trip that may have other purposes. They then strive to place the site into some sort of meaningful context, which means that almost every trail site, no matter how minimal the interpretation, must have basic information to orient visitors to the big picture.

On national historic trails, many times the sole interpretive element at a site is an outdoor exhibit providing information on a particular element or site—commonly called wayside exhibits by the National Park Service. Some trails have opted to develop standard orientation panels to provide the needed contextual information, while others include the information on a single wayside, along with site-specific information. There is no single formula, since each site, and each site manager's needs, are unique.

This issue is closely related to the issue of historical context. On the Santa Fe National Historic Trail, visitors can encounter historic sites and interpretive materials at a city park in Prairie Village, Kansas (a suburb of Kansas City), at a privately-owned ranch in New Mexico, 10 miles off a U.S. highway, or at federal sites administered by the USDA Forest Service, the U.S. Army Corps of Engineers, or the National Park Service.

If visitors are among the growing number of trail buffs who constitute an ever-expanding constituency group, their intent may be to explore a particular trail, to visit as many sites as they can,

and to learn its every nook and cranny. Their interest in a particular trail may be a serious avocation. For these folks, the trail, and its isolated sites, constitute an experience that harkens back to the original trail experience. On the Santa Fe Trail, traders spent eight weeks crossing the plains between New Mexico and Missouri, with stops at particular sites that were days apart. Serious trail visitors will relish the fact that it may take hours to move from one site to the next; with these visitors, the process evokes the story of the trail.

Yet, for others, the stop may be merely to break the tedium of a long trip made for purposes other than trail exploration. The challenge, which is not unique to trails, is to transform these people's momentary interest into captivation.

Every interpreter, every park, every historic site, addresses visitors' preconceived notions about what they will find at a site. For historic trails, one common misconception is that there is a recreational trail from one end of the historic corridor to the other. While there may be segments that are appropriate for recreational uses, it is impossible to travel the route as it was during its heyday. Modern intrusions such as highways, cultivated fields, private property, and other alterations make it almost impossible. But, this obstacle offers opportunity, in that all the historic trails have auto tour routes which roughly parallel the historic trail route. This provides a means for the modern traveler to explore the essence of a trail as they follow part of or all of the historic route. From an interpretive perspective, it may be easier to make those connections with people who themselves are involved in the same activity—travel—as those who made the historic trail significant in the first place.

Many trail sites are rural and isolated; in some cases, private landowners certify historic sites that they own and allow the public to them. Amenities—such as restrooms, water, picnic facilities, information stations—that the public may expect at more traditional sites often will be missing here. It is important, then, to communicate the relative isolation, potential hazards, weather concerns, road conditions, and other kinds of information that visitors need to know prior to visiting a particular site. But, because a trail can be over 1,000 miles long, and it is financially, if not practically impossible to place visitor centers and information stations every 50 miles or so, it can be difficult to communicate this kind of information to people planning a visit.

Most trails use similar strategies that any site would use to address these various issues. But, rather than focus activities at a visitor center or information station, trails must use media that can reach out to its constituents. In other words, we go to visitors, rather than visitors coming to us. Brochures offering information on the overall significance of the trail, the route of the auto tour route, and where to go for site specific information, forms the cornerstone of this effort. Orientation videos, slide programs, and traveling exhibits round out the effort.

Interpretation that is effective, that makes places come alive, is usually brief. It gets to the core ideas—what is really significant and compelling about a place. Trail interpreters should avoid the tendency to over-interpret. Too many exhibits, too many signs, too many non-historic elements placed at a site can detract from the visitors' experiences by overwhelming them with information, and not allowing them to experience the place. Interpretation should be just enough to stimulate the imagination of visitors. Good interpretation leaves visitors wanting to learn more, wanting to visit more trail sites, wanting to return again.

On the Santa Fe and Trail of Tears National Historic Trails, as well as most other national historic trails, auto tour routes have been defined which roughly parallel the historic trail. Agreements are then developed with the various state departments of transportation through which the trail passes to erect signs with each trail's distinctive logo along the highways. These signs serve to publicize the existence of the trail, as well as to confirm the route to those traveling along the trail.

As with any interpretive effort, the best and most effective interpretation is offered by people who want to share their passion for a resource. The trails program offers a unique, grassroots approach to protection and interpretation with the certification of sites (remember the pearls?). Private landowners, historical societies, businesses, and state and local agencies may certify their qualifying historic resource with the National Park Service. The resource then becomes a part of the national historic trail. Yet, how interpretation is accomplished at each site varies, depending upon the issues associated with access to and protection of the resource. Sometimes formal tours are offered; other times visitors must make arrangements to visit in advance; many times, a private landowner will informally greet visitors. But at each of these places, there is a person or people who love that resource and have worked hard to preserve and protect it. And when visitors have a chance to connect with those people, who not only are stewards of their lands, but are willing to share their knowledge and excitement with the public, some of the best interpretation happens.

Cherry Payne was the Interpretive Specialist for the NPS Long-Distance Trails Group Office in Santa Fe, New Mexico, before moving to San Antonio Missions NHS, Texas.

Brian Hayek

Stepping Back in Time Along the Appalachian Trail

A view of Greenbrier Lake from Annapolis Rocks. Photo by Michael Warren, courtesy Appalachian Trail Conference.

In October 1862, a young man wrote a letter to his father about a day he spent near what is now the Appalachian National Scenic Trail at Fox Gap in Maryland:

> We rushed onto them everyone for himself—all loading & firing as fast as he could see a Rebel to shoot at .... The firing encreased tenfold, then it sounded like the rolls of thunder—and all the time every man shouting as loud as he could. I got rather more excited than I wish to again.

The young man was William Brearley, a Union private in the Civil War. He was describing his first fighting action, at the Battle of South Mountain, a bloody ridgetop brawl in which nearly 40,000 men fought and more than 3,000 died.

From the Mahoosuc Mountains and the Kennebec River in the north to the Great Smoky Mountains in the South, the Appalachian Trail is physically challenging. On South Mountain, a 1,500-foot-high ridge that extends through Maryland from the Potomac River north to Pennsylvania's Cumberland Valley, the challenge is that and more. For, if a hiker takes some time on this ridge and cups a hand to the ear, he or she may still hear the revelry from a colonial roadhouse, the marching of British Redcoats, and the clash of Civil War bayonets.

Separating the Civilizations

The Appalachian Trail (known affectionately as the "AT") in Maryland, winding for 38 miles along the crest of South Mountain, is a modern guide along a great 18th-century cultural divide. A person who stood on this mountain in the early 1700s had a choice to make: to the east was the settled, safe seaboard—to the west, untamed wilderness. Those few who crossed the ridge were considered pioneers—from there on west they were on their own against the elements and the Indians they would encounter there.

The 18th-century pioneering spirit was strong, but when Indians teamed with the French in the 1750s to defend territory west of the Blue Ridge, the "climate" became hostile. England sent one of its best-known generals, Edward Braddock, with 1,000 British regulars to seize control of the land. As the ranks of red-coated British made their way west, they crossed South Mountain at Turners Gap (by the Trail, 17.2 miles north of Harpers Ferry, WV). Braddock and his men were the first recorded white men to cross through the Gap on what later came to be known as the National Road. First an Indian or game trail, the National Road (now U.S. Route 40A) became a major east-west thoroughfare during westward expansion.

The young George Washington was an aide to General Braddock during the British campaign. Although he warned Braddock that his men's brightly colored coats and method of fighting in ranks made them vulnerable to Indian ambush, Braddock ignored the warning. He was later ambushed and killed near Uniontown, Pennsylvania.

The (almost) Great Whiskey Rebellion

Some 50 years later, settlers near South Mountain found a different cause for which to fight. Frontier farmers here and elsewhere relied on whiskey as a medium of exchange. Sending grain to eastern markets was too costly; by converting grain into whiskey, the farmers found a commodity that was easily stored and transported. When a tax was placed on whiskey in 1794, western Pennsylvania farmers rebelled. Tax collectors were tarred and feathered or run off with muskets. Farmer-distillers in Washington County, Md., similarly enraged with the new tax, organized and marched on nearby Frederick. When they learned that 500 federal soldiers were waiting in the city, the rioters disbanded and returned to their homes.

Railroad in the Sky

Prior to the Civil War, the Appalachian Trail's South Mountain ridge was used as a segment of the "Underground Railroad" by which southern black slaves escaped to freedom in Canada. Hundreds of slaves escaped through Maryland during the mid-1800s, probably through the valleys that parallel South Mountain. While the thickly wooded mountains provided the perfect cover for fleeing fugitives, it also provided a perfect hiding place for bounty hunters. On the eve of the Civil War, raiders who escaped from John

Brown's unsuccessful attack on Harpers Ferry followed this route north.

The Civil War: The Battle For South Mountain

The major Civil War event on South Mountain's stony spine was a clash at three saddles in the South Mountain skyline: Crampton Gap, Fox Gap, and Turners Gap. After the battle of Second Manassas (Bull Run) in Northern Virginia, a significant victory for the Confederacy, the demoralized Union army was put under the command of General George McClellan. General Robert E. Lee of the Confederates decided to take advantage of southern momentum and crossed the Potomac River into Maryland. After a short occupation of Frederick, Lee divided his army. Some headed southwest to secure Harpers Ferry, the railroad, and the Chesapeake & Ohio Canal for the Confederacy—the rest moved northwest to Hagerstown, Maryland.

Lee's plans were detailed in "Special Orders No. 191," which he distributed to his generals. One of General D. H. Hill's staff officers wrapped a copy of the orders around three cigars and mistakenly left it behind in Frederick. Four days later, the Confederate strategy was in the hands of the Union army. Had McClellan moved swiftly with his new-found information, it is believed that he could have swept over South Mountain and caught a divided Confederate army. Instead, Lee, informed of the Union movements, ordered the defense of Turners Gap and recalled all but one of his Hagerstown brigades.

When the Union army was ordered to drive the Confederates off the mountain, the fighting began. The Confederate defensive line extended eight miles from Turners Gap in the north to Crampton Gap in the south. The fighting lasted all day on September 14, 1862, and was often fierce. Among those on the mountain that day was Union General Jesse Reno, who was killed at Fox Gap.

Photo and detail of the War Correspondents Arch at Crampton Gap. Photo courtesy Appalachian Trail Conference.

"This brilliant service cost us the life of that pure, gallant, and accomplished Christian soldier, General Garland, who had no superior and few equals in the service. The Yankees, on their side, lost General Reno, a renegade Virginian, who was killed by a happy shot from the 23rd North Carolina," wrote General D.H. Hill. A monument exists today near the spot at Fox Gap where Gen. Reno fell.

Colonel Rutherford B. Hayes was wounded at South Mountain; a musket ball broke his elbow. The future president spent the next couple of weeks recuperating at a private home in nearby Middletown.

In the end, the Union Army prevailed at South Mountain. With his army still divided and the Army of the Potomac (nearly 90,000 strong) just over the ridge, an anxious General Lee pulled his troops off the slope of South Mountain and regrouped about six miles west at Antietam Creek, near a small town called Sharpsburg. There, three days later, on September 17, 1862, the two armies clashed again in the single bloodiest day of the Civil War.

The Civil War: Wise's Well

Following the Battle for South Mountain, thousands of dead were left on the ridges, and the tremendous task of burial was left to the occupying Union forces. Although some specific facts of the story have been disputed, several accounts corroborate a ghastly use of an old well at the farm of Daniel Wise near Fox Gap, where much of the fighting took place. Samuel Compton, a soldier in the 12th Ohio Regiment, recorded this in his journal on September 16, 1862:

> On the morning of the 16th, I strolled out to see them bury the Confederate dead. I saw but I never want to [see] another [such] sight. The squad I saw were armed with pick & canteen full of whiskey, the whiskey the most necessary of the two. The bodies had become so offensive that men could only endure it by being staggering drunk. To see men stagger up to corpses and strike four or five times before they could get ahold, a right hold being one above the belt. Then staggering, as every drunk will, they dragged the corpses to a 60-foot well and tumbled them in. What a sepulcher & what a burial! You don't wonder I had not appetite for supper!

In all, more than 60 bodies were said to have been dumped in the well for the price of a dollar a head to Daniel Wise. They were later removed, and today nothing remains of the well or the farm.

The Old South Mountain Inn

Just west of where the AT crosses Route 40A, at the crest of Turners Gap, is the Old South Mountain Inn. Much of the history of the mountain itself surrounds the Inn, which may have been built as early as the 1750s. With its prominent position on top of the airy ridge, it was a major stopping-point along this country's first national east-west road. The Inn played host to many history-makers, including Presidents

Jackson, Harrison, Polk, Taylor, Van Buren, and Lincoln, when he was a congressman. The tavern was also a favorite haunt of Daniel Webster and Henry Clay.

South Mountain Inn was used as headquarters for D.H. Hill as he fought the Union in the Battle for South Mountain. In fact, he put cooks, carriage drivers, and dismounted aides out behind two cannons to make a show of there being more Confederate troops in the gap than there actually were (before General James Longstreet arrived from Hagerstown).

Owners changed through the years. One owner, Madeline Vinton Dahlgren, was a prominent Washington, DC, socialite. Her husband, Admiral John A. B. Dahlgren, developed the Dahlgren gun that was used by the armies and navies of both the Union and Confederacy. As part of her "sky farm," which included the Inn, Madeline Dahlgren had a stone chapel built in 1881, so that residents would have a nearby church. This chapel, now restored, is just a few steps away from the AT and open to visitors on weekends.

Today, the Old South Mountain Inn is again a place where weary travelers (including hikers) can enjoy food and drink. The Inn also is a focal point for many legends and folklore about the mountain.

The Milk Bottle and the Arch

About a mile north of Turners Gap, the Appalachian Trail leads the hiker past the first monument ever erected to George Washington. Although part of the foundation was laid on July 3, 1827, the 15-foot-high, milk-bottle-shaped monument was mostly built and dedicated on July 4 that year (15 more feet were added later). A journalist in Boonsboro, Maryland, wrote the next day:

> At the conclusion of our labors, about 4 o'clock, the Declaration of Independence was read from one of the steps of the monument, preceded by some prefactory [sic] observations, after which several salutes of infantry were fired, when we all returned to town in good order ....

The Monument has taken its place in history since that Fourth of July. "Wicked boys who did not know who Washington was" took delight in dislodging boulders from the monument and watching them roll down the mountain. Almost in ruins, it was used as a Union observation post during the battles of Antietam and Gettysburg. Since the Civil War, the monument has been twice rebuilt: once in 1881 and again in 1937 by the Civilian Conservation Corps (CCC). The CCC rebuilt it by laying a new foundation, removing and numbering its original stones, and replacing them in their original positions with a concrete bond.

Another substantial South Mountain monument stands in Crampton Gap, south of Turners Gap. The War Correspondents Arch is not easy for a hiker to miss: it stands guard directly adjacent to the Appalachian Trail at Crampton Gap. Erected in 1896, it was then the largest on any Civil War battlefield, yet it did not pay tribute to any regiment, soldier, or state. It was planned and built by George Alfred Townsend, a political journalist and columnist from 1866 to 1910, as a tribute to 157 reporters and artists who covered the Civil War from both sides of the conflict. The monument stands 50 feet high and 40 feet wide. Its chief features are a 16-foot-high Moorish arch with three smaller Roman arches above it.

Desiring an attractive location close to Antietam and other Civil War sites, Townsend (whose pen name was "Gath"), built not only the arch but an entire estate. Part of his original "Gathland" estate is now a Maryland state park.

Beyond the Topos

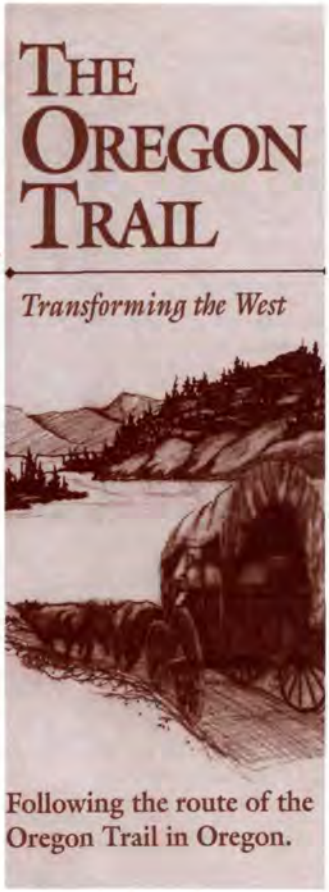
These are only some of the highlights of South Mountain's fascinating past. Hikers speak of mountains in terms of their ups and their downs, their springs, and their shelters. Just as interesting is their heritage. While South Mountain may boast a more varied history than other sections of the Appalachian Trail, every mountain has its own story to tell. How fascinating it is to listen!

Brian Hayek is a hiker and writer from Catonsville, Maryland. He participated in the 1993 Mountain Club of Maryland hike across the state. This article was adapted from "Stepping Back in Time: A Hike Through History on the Crest of Maryland's South Mountain," which appeared in the Appalachian Trailway News, *March/April, 1995. Information about South Mountain was gathered from many sources, including Paula Strain's* The Blue Hills of Maryland, History Along the Appalachian Trail on South Mountain and the Catoctins. *Ms. Strain is a member of the Potomac Appalachian Trail Club.*

Old South Mountain Inn. Photo courtesy Appalachian Trail Conference.

Karen Bassett

Saving the Old Creates Something New
The Oregon Trail



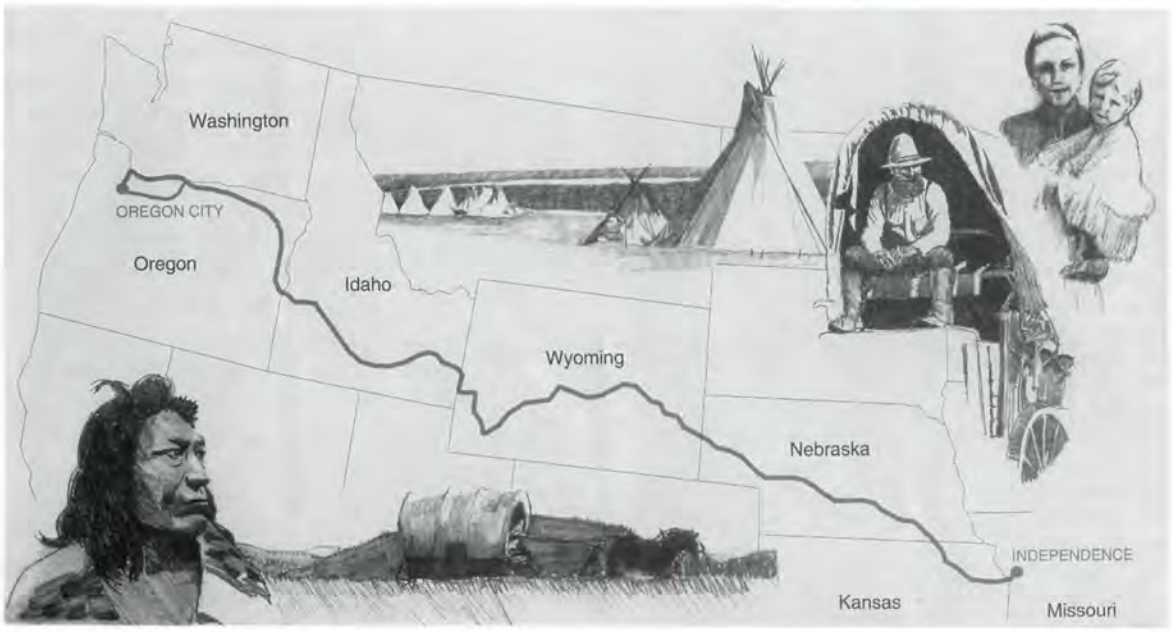
Following the route of the Oregon Trail in Oregon.

In 1993, the Oregon Trail Sesquicentennial gave the State of Oregon an opportunity to integrate celebration and interpretation to foster preservation. Here's the story:

In the 1840s, the Oregon Territory was "way over there," across the Missouri River and far out West beyond the edge of the settled United States. An idealized vision of Oregon, with the promise of free land and good soil, filled Midwestern farmers' imaginations, and what they imagined was a place of boundless opportunity where those with the gumption to make the journey could plant their crops and live well, safe and happy. The enticing idea of this place pulled people westward away from everything they had known before, and between the 1840s and 1860s, an estimated 350,000 men, women, and children packed up and moved west from Missouri through what later became the states of Kansas, Nebraska, Wyoming, and Idaho. Some went to California for gold; others, about 50,000 or so, went on to Oregon.

One-hundred and fifty years later Oregonians (many of whom are descendants of the Oregon pioneers) celebrated the Sesquicentennial of the "Great Migration" of 1843, the first organized effort by Euroamericans to settle the Oregon Country. Celebrating the past inspired Oregonians to preserve what still existed—segments of the Oregon Trail and a few interpretive sites. To this were added miles and miles of marked trail remnants, four interpretive centers, and enough interpretive sites to nearly triple the number existing before the celebration began.

More often than not, 20th-century farmers and many others mistook the 19th-century emigrant road for just any old road—a freight road or maybe a farm-to-market road. In too many cases, unwitting workers (including one local utility company who thought the emigrant route was an ATV trail) plowed the ruts under. Miles and miles of the Oregon Trail are now gone. Yet, miles of the Oregon Trail still exist, and in 1978, Congress designated the Oregon Trail's route and remnants as a national historic trail. The Oregon



The Oregon Trail: Transforming the West. Map to Oregon Trail sites and hiking segments, and interpretive brochure produced by the Oregon Trails Coordinating Council.

Marking the Oregon Trail. Oregon-California Trails Association members (in the distance) marking the ruts near Well Spring on the Columbia Plateau, a favorite resting place along the Oregon Trail. The old Oregon Trail marker stands beside OCTA's Carsonite marker which is used across the entire length of the Oregon Trail.

National Historic Trail ribbons through 547 miles of Oregon's landscape, through sagebrush steppe and over mountain ranges and rivers.

In 1982, an Oregon farmer plowed under a rut segment on the Columbia Plateau. In so doing, the farmer helped inspire several Oregon Trail enthusiasts to begin efforts to actively preserve the Oregon Trail. The group organized as the Oregon-California Trails Association (OCTA). By 1984, when the group met in Oregon City, Oregon, for their second annual convention, OCTA's membership had grown to 600 persons. OCTA's activities, coupled with the opening of Oregon City's Oregon Trail Interpretive Center, drew the attention of Oregon's Governor Victor Atiyeh, who saw the Oregon Trail as a resource deserving attention and protection. By executive order, Governor Atiyeh appointed the Oregon Trail Advisory Council to monitor the condition of the trail and submit a proposal identifying existing and potential interpretive sites along the trail.

The Council members assessed potential interpretive locations, identifying additional sites, and recommending that the state work with both federal agencies and local communities to develop a Trail-wide coordinated interpretive presentation. The Oregon Trail Advisory Council also suggested that four communities (Baker City, Pendleton, The Dalles, and Oregon City) work with private and public partners to develop major interpretive facilities describing the Oregon Trail's story from a variety of perspectives, working toward a more authentic interpretation of the story itself. (The Advisory Council also recommended that the Confederated Tribes of the Umatilla people tell their own story in their own words.)

OCTA Volunteers in action.

Oregon Trail Interpretive Kiosk. The Oregon Trail interpretive kiosks were installed at sites along the length of Interstate 84 in Oregon in preparation for the 1993 statewide commemoration of the Oregon Trail's Sesquicentennial.

The Oregon Trail Advisory Council was (and is) comprised of several of Oregon's preservation champions, each of whom had existing commitments within the public and private sector. To ensure that the Advisory Council's vision was implemented, the group recommended that the Oregon legislature appropriate funding for the Oregon Trail Coordinating Council, a group specifically mandated to oversee and coordinate the interpretive sites and segments program along the Trail (building an infrastructure around which to celebrate and to leave a solid interpretive presentation as a legacy of the commemoration) and to

OCTA volunteers and Oregon Trail ruts crossing the Columbia Plateau. The Columbia River flows in the distance.

work cooperatively across the state (and with the other Oregon Trail states too) to pull together the state's biggest celebration ever, the Oregon Trail Sesquicentennial.

Pre-commemoration interpretive development took nearly two years, from 1990 well into 1993, and resulted in myriad opportunities and partnerships. In places whose names still ring of the Oregon Trail story—Emigrant Springs, West Tollgate, and Farewell Bend—the Oregon Trail Coordinating Council (OTCC) worked with chambers of commerce, local historical societies, cities, port authorities, the Bureau of Land Management, the Forest Service, Oregon State Parks, and the Oregon Department of Transportation to secure funds for the interpretive sites and segments program. The OTCC worked with local communities and state agencies, coordinating site and interpretive development.

OCTA volunteers and Oregon Trail ruts crossing the Columbia Plateau. The John Day River flows in the distance.

Adding together direct state funding, federal funding (especially from the Intermodal Surface Transportation Efficiency Act of 1991), and corporate and community matching dollars, communities raised more than $300,000 to fund the sites and segments program. The money was invested in renovating 11 Oregon Trail interpretive sites and in developing 13 new interpretive sites (including kiosks at state parks, waysides, and rest areas). Through the combined efforts of the OTCC, USFS, and BLM, a coordinated series of interpretive signs in 47 different locations along the Oregon Trail combine to tell the Oregon Trail story.

Amid all the Sesquicentennial development, OCTA's stalwarts continued working with land owners, governmental agencies, archeologists, and historians to identify and mark more than 24 miles of Oregon Trail remnants on public and private land. OCTA worked with the National Park Service, the USDA Forest Service, and the U.S. Navy to develop more than 25 miles of hiking segments on three distinct Oregon Trail remnants (in the Umatilla National Forest, along the Navy's Boardman Bombing Range, and on the Mount Hood National Forest).

Work continues on the major interpretive facility components (the four centers represent more than $50 million in state, federal, and private investment) and the last of the four facilities is scheduled to open in late 1997.

So far, Oregon's effort has been a rousing success in terms of preservation and promotion of the Oregon Trail in Oregon. The commemoration provided an opportunity to interpret Trail resources, to give meaning to the old ruts winding across farmers' fields, through forests, up mountain slopes, and across rivers. It also provided an opportunity for hearty discussion among descendants of both the emigrants and the Native Americans to discuss the Trail's impacts—then and now. Finally, the interpretive effort implemented in preparation for the Oregon Trail's Sesquicentennial provided a model for activities on Oregon's other national historic trails (the Applegate Branch of the California National Historic Trail commemorating 150 years in 1996, the Lewis and Clark National Historic Trail commemorating 200 years in 2005–6, and the Nez Perce National Historic Trail) and state-designated historic trails. In projects initiated through OTCC funding, interpretive developments along all of Oregon's historic trails are now key components of the state's commemorative planning and heritage tourism programs.

Karen Bassett serves on the staff of the Oregon Trails Coordinating Council in Salem, Oregon.

Robert Sweeny

Reenactments and Living History
A View from the Stage

What's the point of living history and reenactments? After all, they are a modern simulation of past events, either a dramatic event like battles, voyages, treks, marches—or everyday life such as cooking, farming, schooling, building. Like the computer modeling of sunken ships and tornadoes, reenactments are imperfect substitutes for the real things, intended to give our modern world an inkling of the forces at work, and to help us understand the past's contributions to the present.

Let's be clear, too. We are not talking about graduate programs for historians—we're talking about teasers and eye openers, hooks and grabbers to make the past come alive. Some might see this as more entertainment than history. If you know your stuff, it's both. Looked at this way, this is the public's history, not just historians'.

Often citizen enthusiasts are the keepers of the lore, the story tellers. We take our places because we feel a special connection, we have a touch, a deep insight into what history means to us. This is not about foolishness or fanaticism, but devotion and inspiration.

Supporters of national historic trails got into reenactments and living history almost without meaning to. After all, ordinary people worked very hard for these trails—routes too long and disjointed for conventional parks. The national historic trails are extensions of historic sites pushed out into events that defy the usual idea of a compact park or reserve. These trails commemorate travels that changed our nation and world: explorations, migrations, routes of flight and despair, traces of fear, of hope and anticipation.

For an organization formed to promote a trail as a national trail, reenactment and living history are natural, part of the scene almost without planning or forethought. When the people who formed the Overmountain Victory Trail Association (OVTA) started, they first walked the route to dramatize it. Bill Stronach and the late Rip Collins of North Carolina, Harry Smith and the late Tom Gray of Tennessee, wanted to attract the attention of people living along the route today, for their ancestors created the original on their successful march to the Battle of King's Mountain in 1780.

The original timetable of the March (starting in late September in Elizabethton, TN, to walk two weeks over the mountains and piedmont to Kings Mountain in early October) reenacted for the nation's 1976 Bicentennial seemed a simple way to start. Period dress seemed logical to set the proper mood. A reenactment was started. To convince the public of the Trail's importance, talking about its history inevitably followed. Living history was added to the equation. OVTA arrived at its structure without any plan other than commemoration.

After the nation's birthday in 1976 and the March's 200th anniversary in 1980, the way was no longer so clear for OVTA. The national historic trail designation ensured continuing national notice and limited public access. What to do next?

Alma Gray, widow of Tom Gray and the group's 1990 Grand Marshal, once remarked that OVTA by 1990 had accomplished more than the modest goals her husband envisioned in 1975 when the march reenactments began. In the earliest days, living history was mostly one-on-one, an individual passing on thoughts on the history and its importance to another individual or a small group.

The 1992 Grand Marshal Hank Weaver expanded the scope of living history in 1988 when he developed a format for presentations to school and public groups. Reenactors agreed in advance to talk on set topics in a set order. They would cover both the history of the events and the people. The program would end with a demonstration of the flintlock rifle, an inclusion enjoyed by the public and reenactors alike.

The annual reenactment and living history program of the Overmountain Victory Trail Association has successfully visited schools and communities again and again, talking to about 50,000 students and adults in the last 15 years. Teachers keep asking them back; the public keeps asking them back.

How do you capture a glory road? You follow it! How do you understand history? You try to reproduce it!

Here's a picture: The entire high school student body in the auditorium at the North Carolina School for the Deaf at Morganton, North Carolina, right at the midpoint of the Overmountain Victory

National Historic Trail. Every student's hands are raised in the sign language expression for applause as the half-dozen men and women dressed in approximations of 1780 frontier clothes finish their presentation. Faces in the audience and on the stage are full of smiles and hope.

The real secret to successful living history is people telling a good story. The number one thing a reenactor needs is a passion for the subject. From that desire to tell a given story comes a commitment to study and study and never stop studying. Yes, knowledge is necessary. One should look for people able to tell a story. They don't have to be Mark Twain, but they must understand how to begin, tell the story, and end with a flair. Let's be honest, the cliche of the "dull expert" is true. Remember, we're not going to teach people facts—we're going to make them want to learn facts. We want to give them a vibrant taste of history. We want them to want to know more!

Seek honesty and humility, for history is not just one story. You can bet there will be contrarians in your audience. There will also be people there who really know more than you do, and are willing to share it. Involve people who are passionate but not obnoxious. The audience deserves the presenters' respect, too.

What about scripts? They are good for pageants and dramas, but wears thin quickly when repeated or when prolonged interaction takes place.

A mix of performers is good. After all, audiences are almost always mixed. This isn't political correctness, either, but practicality. After all, how many of us socially and economically share the lifestyle of George Washington or Thomas Jefferson? We can, however, relate to the farmer, the housewife, the inn keeper, the ordinary man, woman, and child.

What about authenticity? There's no easy answer. One doubting teacher remarked that living history put "odd ideas" in children's heads. No doubt. You can't understand life at the time of the American Revolution in 30 minutes. But you can inspire a life-long interest if the listeners' appetites are whetted.

Absolute accuracy is always the goal. However, corners get snipped. What about accuracy in dress? The same holds true. Are only home spun garments acceptable? Do we insist on actual clothes from 19th-century Oregon for Oregon Trail events? Can uniforms made in 1862 even be found today for Civil War reenactments?

To foster accuracy, briefly state how your dress and tools, your techniques, differ from the historic period being portrayed. Why not admit when you're guessing and don't know? After all, if we're not reading from letters and diaries, we're not really using authentic words of the period.

Safety must be our first thought. We need simple rules, evenly and consistently applied. The National Park Service, of course, has rules and procedures for the hazards of every implement from flintlocks to washing boilers and combines. The best protection is having serious people who will spend time making their presentations safe and then thinking "safety first, safety always."

Here's a picture we want to avoid: a third grader terrified at the procession of flintlocks carried into his school. His fears were eased, however, when we talked about the measures we took for safety and how we meant him no harm. But some schools do not allow weapons—even for historic demonstrations.

In closing, an inspiration: Page McClelland, 1991 OVTA Grand Marshall, and a group from OVTA visited a high school history class. One girl in the class sparked the responses of the other students, leading discussions, delightful in her enthusiasm. As the group left, the teacher surprised Page by explaining that this child was not a class leader, but usually a foundering student. She had taken fire in a few minutes of living history.

That is living history at its best!

Robert Sweeny is a technical writer. He traces his interest in history to his grandfather who took his grandchildren on historical tours at every chance. Mr. Sweeny was an Overmountain Victory Trail Association reenactor and writes and talks about the Revolutionary War campaign associated with the Battle of King's Mountain, South Carolina.

Jennifer Jones

Keeping the Legend Alive
How Can We Help the "Lost Generation" Find the Value of Historic Trails?

Although it is hard to miss, many agencies and organizations in the cultural resource management business seem not to have noticed that they have a new, important audience in which to instill an appreciation of historic trails—one sporting tattoos and multi-colored hair, with a fondness for body piercing. Agencies and organizations, please meet Generation X.

A number of studies have concluded that this generation differs from its predecessor, the Baby Boomers, in several important ways. Understanding those differences is critical to the success of activities designed to teach the public about historic trails, especially interpretation and environmental education. After all, "know your audience," is one of the most basic communications principles. Agencies and organizations that want to make sure Generation X-ers, who will soon be making critical decisions about the future of our historic trails, value them as much as Baby Boomers do, need to understand the distinctions and tweak their communication strategies to account for them.

Defining Generation X

Don't be embarrassed if you have never heard of "Generation X." Lots of people have not, even though they have kids who are part of it! The term "Generation X" was coined by author Doug Coupland who wrote a novel by that name in 1991. It refers to the 50 million Americans born between 1965 and 1983. This age group has also been dubbed the "Lost Generation," the "Baby Busters," and "Twenty somethings," although the last term is falling out of favor as the oldest members of this generation turn 31 this year.

Many trail tour groups consist largely of retired history buffs. Will such audiences continue to grow?

Even "grown-ups" who are not familiar with the term Generation X have probably noticed that there is something different about today's young adults. But what is so unique about Generation X that warrants agencies and organizations adapting their communication strategies in new, unprecedented ways? While sweeping generalizations about any generation are bound to be oversimplified, trend data from national studies demonstrate that today's young adults differ from Baby Boomers in many important ways. Here are highlights about our newest audience from the April 1995 issue of *American Demographics* magazine:

* Economic Prospects—Between 1983 and 1992, the median weekly earnings of young men who were full-time workers fell 9% in constant dollars. Over the same period, inflation adjusted earnings of young women slipped 4%.
* Education—Young adults are flocking to two- and four- year colleges at record rates. The percentage of 18-to-24-year olds currently enrolled in college or having completed one or more years of college is 11% percent higher than a decade ago.
* Family—From 1977 to 1993, the percentage of women in their 20s living with their parents rose from 17% to 24%, while the proportion of young men living with their parents increased from 30% to 35%. Between 1970 and 1993, the number of unmarried couple households rose from 500,000 to 3.5 million, while the ratio of unmarried couples to married couples increased from 1 per 100 to 6 per 100.
* Arts—The percentage of young adults who read any novels, short stories, poetry, or plays in the previous 12 months fell from 60% in 1982 to 53% in 1992 while the number who visited an art museum or gallery increased from 23% to 29% during the same time period.
* Leisure Time—While 82% of 18-to-24 year-olds reported attending a movie in the past 12

months, only 33% had visited a historic park or monument. The proportion of young adults who went camping, hiking, canoeing, or took part in other outdoor activities fell from 51% in 1982 to 43% in 1992.

What Does It All Mean?

What do all these numbers mean for those of us concerned with protecting historic trails? In one sentence: **Although Generation Xers are more educated than previous generations and actively seek visual learning experiences, they have less interest in visiting historic areas and participating in outdoor recreation and have less money to do so.** In other words, agencies and organizations cannot count as much on today's young adults to come to us to learn about historic trails—we have to go more to them. That means increasing emphasis on off-site interpretation and environmental education.

Telling the Story in a Different Way

"Today, more and more young people have less and less of an opportunity to know a natural place," according to Sam Ham, Professor of Environmental Communications and International Conservation at the University of Idaho in Moscow. "Therefore the prospect of arguing convincingly that places like historic trails ought to exist becomes increasingly difficult."

Professor Ham believes that to teach people like Generation Xers, who have less direct experience with natural and cultural resources than earlier generations, to value historic trails, agencies and organizations should increase off-site interpretation. He defines that as presenting messages to people in their own environment, as opposed to places where natural and cultural resources are located or visitor centers. Off-site interpretation can be accomplished through traditional means like setting up exhibits at special events and placing stories in the mass media. But technological advances have also created exciting new opportunities for off-site interpretation.

Trail expeditions can be hot, tiring, and complex logistically. Will future generations take the time to enjoy remote trail resources?

One example is the Internet. This network of computer networks offers agencies and organizations the opportunity to reach hundreds of millions of people worldwide in their homes, workplaces, and schools at a very low cost. Although many agencies and organizations have established home pages on the Internet's World Wide Web, most contain very little in the way of interpretive information about historic trails.

However, a history buff named Tom Crews created his own Pony Express National Historic Trail web site that illustrates the potential of online interpretation. The site features the history of the trail; the location of stations along the way; 1860s news articles from papers like the Sacramento Daily Union; and biographical information about Pony Express Riders like Johnny Frey, the first rider west out of St. Joseph, Missouri. One of the most interesting sections, called "People, Places, and Vocabulary," offers facts about various aspects of the Pony Express like the *mochila*, the Spanish word for knapsack, in which the mail was placed. The site features attractive graphics, historic photographs, and a minimum amount of large, easy to read text. People who have Internet access can find it at *http://ccnet4.ccnet.com/~xptom*.

Professor Ham encourages agencies and organizations to experiment with new interpretive techniques but stresses that the underlying goal should stay the same. "The general goal of interpretive services, in whatever form they take, ought to be to leave people with the idea that historic trails are worthy and important to have," said Ham. "People should walk away feeling glad these trails exist."

Increasing off-site interpretation of historic trails does not mean doing away with on-site interpretation. Proof that demand for on-site interpretation remains strong lies in the fact that in July 1996, the Bureau of Land Management's National Historic Oregon Trail Interpretive Center in Baker City, Oregon, welcomed it's one millionth visitor (see sidebar article).

"There is a lot of diversity out there in terms of what people respond to when it comes to interpretation," said Professor Ham. "We've got to provide opportunities across the spectrum knowing that people will self-select based on the types of experience that they are seeking."

In the Classroom

The best time to instill appreciation of the value of historic trails in people is when they are very young and forming opinions. The best place to do that is the classroom. For those reasons, in addition to increasing off-site interpretation, agen-

Interpretive facilities must be engaging for new generations—or such places will be ignored and become obsolete.

cies and organizations need to enhance their support for environmental education and curriculum guides.

Elaine Theiss has been teaching 4th grade in Marsing, Idaho, for eight years. She teaches her students about the Oregon National Historic Trail as part of an Idaho history unit. At a recent teachers' workshop on the Oregon Trail in Melba, Idaho, Theiss said she believes the studies that indicate that young people today respond more to visual images and hands-on experiences than the written word are right-on when it comes to teaching kids about historic trails.

"If a teacher just stands up at the front of the classroom and talks about a historic trail, or assigns the students dry, textbook reading with no supplemental activities, they just don't respond," said Theiss. "What really works are activities that put kids in the shoes of the pioneers, that let them experience what it felt like to walk on the trail, stubbing their toes on sagebrush and dodging snakes."

As examples of effective ways to teach kids about historic trails, Theiss cites *Wagons Ho*, a traveling living history demonstration that gives students a chance to saw wood, help prepare dinner in a dutch oven, and rope livestock like the pioneers did. She says interactive games like *Idaho Bingo*, a twist on the traditional game where kids match facts about Idaho history, including historic trails, with clues from the teacher also work well.

Theiss has also used high-tech tools like the Oregon Trail computer game, a simulation where kids play the role of a pioneer and have to make choices as they travel on the trail, choosing what kinds of supplies to buy and which routes to take. She says the game gives students a good feel for what the trail was like because the game shows them the consequences of their decisions, including the possibility of disease and death to all in their wagon party.

Although Theiss encourages agencies and organizations to experiment with new technologies and techniques to support environmental education, she urges them to remember that they do not need to wow kids with the latest high tech gadgets to teach them to value historic trails.

"You do not have to razzle-dazzle them with a laser show," said Theiss. "They just need something that relates to their own life and has meaning to them."

Where Do We Go From Here?

So, now that we know that we have a new audience to introduce to historic trails, and we have got some ideas about how to reach them, what are we going to do about it? Understanding that we need to develop new strategies and techniques is one thing; doing it is another—especially for those of us who have been around a while. One of the things that could hurt the ability of federal and state agencies to connect with Generation Xers and other young people is the inability to hire them. As budgets and staff continue to be cut, particularly in communications, agencies will have to rely on aging Baby Boomers to ensure that Generation Xers (plus the as-yet unnamed generation beyond) to value historic trails. That makes it imperative for current agency employees to keep their skills sharp.

"Continuing education is so important, especially now, because skills that are fresh one day become obsolete the next," said Professor Ham. "Agencies need aggressive continuing education programs with strong incentives that have real meaning for employees."

Learning about new audiences and keeping up with new techniques and technologies is not easy. In fact, it is hard work. But finding ways to help the "Lost Generation" discover the value of historic trails will be worth it in the long run. After all, that girl with the nose ring and that guy with the ankle tattoo are the ones who will decide the fate of our beloved ruts.

Jennifer Jones serves as Public Affairs Specialist in the BLM Idaho State Office in Boise, ID, responsible for cultural resource outreach activities. She graduated from the University of California at Irvine in political science and has also worked with the USDA Forest Service and DOI Bureau of Reclamation.

Photos courtesy the author.

Interpreting History for Visitors of All Ages

Since it opened in May 1992, the Bureau of Land Management's (BLM's) National Historic Oregon Trail Interpretive Center in Baker City, Oregon has drawn more than one million visitors from every state and territory in American and more than 65 foreign countries.

The $10 million, 23,000-square-foot interpretive center is perched on Flagstaff Hill, offering spectacular views of the broad Baker Valley and the Elkhorn Mountains. The main attractions are life-size displays that depict the trail experience. One re-creation of a typical trail scene shows pioneers, struggling to get their wagons over rocks and ruts, stopping to mop sweaty brows. Motion sensors triggered by approaching visitors activate recorded messages of realistic pioneer voices and creaking wagon wheels.

Right, entrance to BLM's Oregon Trail Interpretive Center near Baker City, Oregon.

Above and below, full-scale displays of life along the Trail make history come alive for all ages. Photos courtesy BLM.

"We want visitors who go through the center to feel like they have been on the trail," said Amy Galperin, BLM Lead for Interpretation. "We want them to know that the trip on the Oregon Trail was tough and to understand some of the reasons that pioneers kept making it."

Many displays are designed to provide visitors with hands-on experiences. One such display, designed to show the difficult decisions pioneers had to make about what to take and what to leave behind, offers visitors the opportunity to fit wooden blocks that simulate items like water, tools, and family heirlooms, into a model wagon.

Quotes from pioneer diaries breathe life into several exhibits. A row of buttons at a camp display gives visitors a choice of subjects including camp cooking, fun on the trail, and illnesses and cures. When visitors push a button, the lights dim, and they hear a corresponding message recorded from a pioneer journal.

Outside the visitor center, living history displays re-create an Oregon trail wagon encampment with three replica wagons. Volunteers dressed like mountain men are there on weekends to share their knowledge and demonstrate skills. Another living history display features a working hard rock lode mine similar to the ones that once stood on the ridges and mountains of northeastern Oregon.

Visitors who want to see the real thing can walk on a 4.2-mile trail system that loops around Flagstaff hill to a series of viewpoints and historic sites, including still visible wagon wheel ruts.

The Oregon National Historic Trail Interpretive Center is located off Interstate 84, five miles north of exit 302. It is open daily from 9 a.m. to 6 p.m. For more information, write or call the National Historic Oregon Trail Interpretive Center, P.O. Box 987, Baker City, Oregon 97814; 541-523-1843.

A. Antonietti

Trails and Historical Ways in Switzerland

Switzerland is known internationally for its trails—especially in the High Alps. In recent years, however, Switzerland has come to pay close attention to its historic roads and trails, some dating back several thousand years—such as the route of Hannibal's March. Like the National Trails System of the United States—made up of both recreational and historic routes—Switzerland's current approach to trails offers several important lessons paralleling our own trail efforts.

The steep bare stone cut by the glaciers in the granite of the Aare has few lichens growing on it. As the rock was so slippery, steps had to be cut in it. Holes for posts were also made beside the path, which according to the "hospice order" of 1559 should have been used for constructing a railing.

In Switzerland, we differentiate between trails, footpaths, and historical trails. At the initiation of a group of citizens, a federal law regulating footpaths and trails was enacted in 1985, the Federal Law Relating to Footpaths and Trails or "FWG". It governs the planning, lay-out and maintenance of coherent networks of footpaths and trails. A key aim of this law is to make the community paths to the bus stop, to school, to shops and to the nearest park attractive. It instructs the cantons (Swiss equivalents to U.S. states) to develop effective plans for a trail system and to design, maintain, and register trails. The trails should be attractive and suitable for hikers, as well as safe and free to all users. The cantons can draw from the work of a 60 year-old private organization, Swiss Trails.

For the most part, the law is carried out by local governments which work closely with Swiss Trails. Although cooperation takes place with Swiss Trails, the government maintains authority over the trail system. Local units of government protect their trails by coordinating land-use planning. Then staying within the scope of regional and top-level state direct planning, local administrations and private groups consider trail protection when planning land-use.

In principle, **footpaths** (meaning those within housing projects and settled areas) are governed and handled the same as trails. The aim of the federal law concerning footpaths and trails is the same for footpaths—to make them attractive and to avoid unnecessary motor use. Where possible, historical footpaths are being integrated into the trails.

The designation and protection of **historic trails** occurs not under the FWG but rather under the 1966 *Federal Law Relating to the Protection of Nature and the Natural Heritage* or NHG. Historical trails are considered cultural monuments and as such are governed by the Swiss constitution article in the NHG which protects cultural monuments.

The Federal Office of Environment, Forests, and Landscape (FOEFL) has placed Professor Doctor Klaus Aerni from the University of Bonn's Geographical Institute in charge of the Swiss Historical Transportation Inventory (IVS). This national inventory defines national points of significance, classified as national, regional, or local according to their physical location and historical functions.

The inventory project began in 1983 and should end in 2003. At the moment, 2.5 million Swiss franks (equal to $1.97 million U.S.) are annually available for the project. The inventory covers almost all of the historical transportation trails and roads across Switzerland. It is based on a passage of the NHG which states:

> By the inclusion of an object of national importance in an inventory of the [Swiss] Confederation it is demonstrated that it deserves to a special degree undiminished preservation or, in any case, the utmost care. Deviation from undiminished preservation within the meaning of the inventories may only be considered in the fulfillment of a federal task if certain equivalent or overriding interests of similar national importance oppose it. (NHG Article 6)

The inventory of historic roads and paths seeks to document and evaluate the remnant traces of such transportation routes after two centuries of road building and modernization. It is built carefully on existing bibliographies, detailed mapping, field reconnaissance, and a database of related sites, with special attention paid to areas in conflict with other values (development, roads, etc.) The inventory also makes recommendations

about appropriate contemporary uses and protection strategies for each inventoried resource.

Non-profit and Volunteer Organizations

In the 1930s, Swiss Trails, a non-profit organization, began the construction of a marked trail system. Before the FWG came into effect, Swiss Trails, which has offices in the cantons as well as a main national office, had worked with authorities and had obtained financial support for a trail system with a government order that called for better securing and developing a trail system.

Swiss Trails, along with its many volunteer co-workers, carries the main burden for maintaining the trails. It is financed with member-dues, sponsorships, and public funds. The federal government supports the main office of Swiss Trails with 280,000 Swiss Franks (about $220,000 U.S.) each year to run the office. They also lead hiking tours and actively market hiking to the public. The trails are of great tourist importance, securing the support of many local tourist organizations to expand the trail system.

Frequently, youth groups and apprentice groups organize work camps to construct and maintain the trails. Occasionally, part of the army or civil servants can be put to work on the trails.

As far as historical trails are concerned, a specific non-profit organization does not exist. However, historical trails have a close relationship with other trails because some can be used as part of the national trails system. The restoration of historical trails is similar to that of national trails—youth groups, civil servants, and non-profits help maintain and construct them. Swiss tourist agencies have produced various brochures concerning the historical trails.

In this woodcut by Emil Rittmeyer (1860), a driver follows his two horses loaded with two side-packs. The animals are wearing muzzles and harness with a bell collar. Their shoes are fitted with wrought-iron calks in front and back to prevent slipping on rock and ice.

Private organizations such as Swiss Trails, the Swiss Habitat Protectors, or private-transportation organizations have a right of appeal against decrees issued by the cantons and federal authorities. Thus, they can require that decisions taken by the lower authorities be reviewed by a higher authority up to the level of Federal Council and Federal Court. The environmental organizations make responsible use of this right and have a high success rate in their appeals.

Current Trail Use Patterns and Trends

Along with daily walks, day trips, and weekend trips, long trips are increasingly being organized and commercial ventures are being offered. A few trips have a hiking or trekking character while others have a historical aspect (mule or walking trips along historical paths of the Alpine pass). Hiking organizations are offering individual trips and guided trips for members. In addition, they are offering trips available to the public, which accept contributions rather than mandatory fees.

Hiking suggestions are printed regularly in magazines and papers. For the last 10 years, we find virtually nothing but suggestions to attain a public means of transportation via the trail system. For hikers, the recommendation to abandon auto travel highlights environmentally friendly tourism.

Increasingly, volunteers are marking historical ways across Switzerland with special colors, consequently eliminating the need for the government to officially regulate trail marking. For example, historical (cultural) ways are marked with brown signs, hiking paths with yellow signs, mountain paths with red, and alpine hiking with blue. Specifically, the Jakobs Trail been marked with brown signs. This trail began in the Middle Ages at the times of the pilgrims who wandered across Europe converging on Santiago de Compostela in northern Spain. In addition, historic Alpine trails are being marked, such as those that began as horse and mule trails. A current project is the Simplon Ecomusuem which is being built at the historic pass between Valais and upper Italy where the old historic path is being restored.

Protecting Land and Sites Along Swiss Trails

Essentially, land is protected by land-use planning guides, many of which are interested in protecting trails. As a rule, the concern for natural preservation guides whether or not and where technical constructions such as highways, power lines, vacation-home development, and ski slopes are built. Under Article 3 of the NHG, the government shall issue building permits providing that the native landscape, historical sites, and cultural monuments are preserved. The acquisition of protected lands takes place only in exceptional cases and in small areas.

Sometimes trails go through private lands. Private owners can be reimbursed by the government if their income is reduced by trail activity or if the trail makes it difficult for a farmer or private owner to conduct business as usual. If they can

prove that this is the case, then the government should reimburse them.

Economic and Tourism Value of Swiss Trails

More than 30% of the Swiss population has indicated that hiking is a popular sport, which makes hiking a central theme of the Swiss tourist advertising. In the past year, advertising focused on announcing the Swiss historical trail system (*Bekanntmachung historisher Wege.*)

Hiking is of high importance to the Swiss economy. To date, however, direct proceeds from hiking have not been especially high. This does not mean, however, that future possibilities are ruled out. For example, the hiking industry may increase in economic importance since free time among the public is increasing. As city populations who are seeking natural enjoyment wander into the countryside on Sundays, they may or may not spend money in the rural areas. If they do not, rural areas will not benefit from the increase in hiking. However, many persons hike without backpack food supplies and, consequently, will stop in to eat at local restaurants along the trails. Since trails exist in relatively sparse areas, hikers that stop in to eat or make purchases in local restaurants and rural households can be of great importance to those local communities.

International Trail Connections

Non-governmental hiking organizations in the European Community have organized an international hiking union. They have plotted a European system of trails. However, the umbrella organization—Europische Wandervereinigung Eintrages Verein—does not have a source of funds and is thus confined to coordinating events and serving only as an information clearinghouse.

In recent times there has been a move to restore old bridle paths in Switzerland. Hikers over various Alpine passes can once more admire the old pathbuilding techniques.

The Inventory of Switzerland's Historical Transportation Routes of National Importance (IVS), which is being compiled by the Geographic Institute at the University of Bern, is well-received and is being partly imitated by other countries. Parts of the Swiss trails are historic Roman roads and trails. As a result, IVS has contacted other countries about them. The Council of Europe has initiated the "Jakobs Trail through Europe" program.

Major Problems Facing Swiss Trails

The major problem facing trails is the asphalting and distress of hikers due to the increase in motor vehicle traffic on the trails. Article 7 of the FWG states that trails should be replaced if much of the trail's surface is unsuitable for walkers. (The cantons regulate the procedures to close trails and decide which they are they obligated to replace in their respective areas). Since the trails have been altered by motor vehicle traffic so that they are no longer suitable for hikers, then it is important to find other means to open safe trails to hikers.

Hikers and motorists have not yet become used to sharing trails with one another, especially in the case of mountain bikes on narrow paths in the woods or in the mountains. We need measures to promote communication between the groups.

A few trails raise certain problems of conservation, such as damage to sensitive vegetation and disturbance of wildlife. In such cases, trails must be closed off or moved.

Historical trails can fall into disrepair if they are not being used a lot. Unfortunately, narrow passes are often growing in. Therefore, we are trying to integrate the historical trails into the rest of the trail system to guarantee their maintenance.

Because of trail decline, all of the canton and local governments must take measures and provide finances to remedy this problem.

Dr. A. Antonietti is the Vice Director of the Swiss Federal Office of the Environment, Forests, and Landscape (FOEFL).

This article is adapted from a letter from Dr. Antonietti to Steve Elkinton, dated September 15, 1994, translated by Crystal Fortwangler, along with a 1984 paper by Dr. K. Aerni and H. Schneider of the Geographic Institute of the University of Berne entitled "Old Roads and Trails—Significance and Preservation." Dr. Antonietti's address:
Vizedirektor
Bundesamt fur Umwelt, Wald und Landschaft
3003 Bern
Switzerland

For Further Information

Trail Contacts and Organizations

Amigos de Anza
c/o Heritage Trails Fund
5301 Pine Hollow Road
Concord, CA 94521
(510) 926-1081 or (510) 672-5072;
FAX (510) 943-7431

Appalachian Trail Conference
P.O. Box 807
Harpers Ferry, WV 25425
(304) 535-6068, -6331; FAX (304) 535-2667
email: appalachiantrail@charitiesusa.com
<http://www.Fred.net/Kathy/at.hml>

BLM Iditarod Trail Office
c/o Anchorage District
6881 Abbott Loop Road
Anchorage, AK 99507
(907) 267-1207; FAX (907) 267-1267

Continental Divide Trail Alliance
P.O. Box 628
Pine, CO 80470
(303) 838-3760; FAX (303) 275-5366
email: BruceWard@aol.com or CDNST@aol.com
<http://www.CDTrail.org>

Florida Trail Association
P.O. Box 13708
Gainesville, FL 32604
(352) 378-8823 or 800 343-1882
<http://www.florida-trail.org>

FS Nez Perce Trail Office
Northern Regional Office
Federal Building
P.O. Box 7669
Missoula, MT 59807
(406) 329-3654; FAX (406) 329-3132

Ice Age Park and Trail Foundation, Inc.
P.O. Box 423
Pewaukee, WI 53072-0423
(414) 691-2776 or (800) 227-0046
email: iaptfexdir@nps.gov
<http://www.execpc.com/~iat/>

Lewis and Clark Trail Heritage Foundation, Inc.
P.O. Box 3434
Great Falls, MT 59403
(406) 453-7091; FAX (406) 454-5492

Mormon Trails Association
c/o 9179 S. Judd Lane
West Jordan, UT 84088
<http://www.indirect.com/www/crockett/index.html/>

Natchez Trace NST
c/o Natchez Trace Parkway
Rural Route 1, NT-143
Tupelo, MS 38801
(601) 680-4016; FAX (601) 680-4033

Natchez Trace Trail Conference, Inc.
P.O. Box 1236
Jackson, MS 39215-1236
(601) 965-0045

National Frontier Trails Center
318 West Pacific
Independence, MO 64050
(816) 325-7577

NPS Appalachian National Scenic Trail Office
c/o Harpers Ferry Center,
Harpers Ferry, WV 25425
(304) 535-6278; FAX (304) 535-6270;
email: appa@nps.gov

NPS Long-Distance Trails Office—Madison
700 Rayovac Drive, Suite 100,
Madison, WI 53711
(608) 264-5610; FAX (608) 264-5615

NPS Long-Distance Trails Office—Salt Lake City
324 S. State St.
P.O. Box 45155
Salt Lake City, UT 84145-0155
(801) 539-4094; FAX (801) 539-4098

NPS Long-Distance Trails Group Office–Santa Fe
P.O. Box 728
Santa Fe, NM 87504-0728
(505) 988-6888; FAX (505) 986-5225

Nez Perce National Historic Trail Foundation
P.O. Box 20197
Missoula, MT 59801
(515) 294-1273 or (406) 329-3479
<http://www.ee.iastate.edu/~russell/npnht/npnhtf.html/>

North Country Trail Association
49 Monroe Center, NW, #200B
Grand Rapids, MI 49503
(616) 975-0831; FAX (616) 975-0957
<http://www.people.delphi.com/wesboyd/ncnst.htm>

Oregon-California Trails Association
P.O. Box 1019
Independence, MO 64051-0519
(816) 252-2276; FAX (816) 836-0989

Oregon Trails Coordinating Council
1115 Commercial St., NE
Salem, OR 97310
(503) 339-9243; FAX (503) 378-6447
<http://www.isu.edu/%/oregontrail.html>

Overmountain Victory Trail Association
c/o Sycamore Shoals State Historic Area
1651 West Elk Avenue
Elizabethton, TN 37643
(615) 543-5808

Pacific Crest Trail Association
5325 Elkhorn Blvd., #256
Sacramento, CA 95842
(800) 817-2243 or (916) 944-4748/4650
email: 71204.1015@compuserve.com
<http://www.gorp.com/pcta>

Partnership for the National Trails System
2302 Lakeland Ave.
Madison, WI 53704
(608) 249-7870; FAX (608) 257-3513
email: nattrails@aol.com

Santa Fe Trail Association
Santa Fe Trail Center
Rte. 3
Larned, KS 67550
(316) 285-2054
<http://vyne.nmhu.edu/sftrail> or
<http://history.cc.ukans.edu/heritage/research/sft-index.html>

Trail of Tears Association
c/o Paul Austin American Indian Center of Arkansas
1100 N. University, #133
Little Rock, AR 72207
(501) 666-9032

Ironic Twist of Faith

Interpretive sign illustration by Roger Cooke; the Oregon Trail.

Trail Publications

The following list is a selection from hundreds of books and journals which tell the stories of America's long-distance trails.

Black, Patti Carr, 1985, *The Natchez Trace*, Jackson: University of Mississippi Press.
A beautifully illustrated travelogue and history of both the Parkway and the Trace.

Burch, William R., Jr., ed., 1979, *Long Distance Trails: The Appalachian Trail as a Guide to Future Research and Management Needs*, New Haven, CT: Yale University, School of Forestry and Environmental Studies.
The proceedings of a 1977 symposium outlining key issues for trail use and resource management.

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