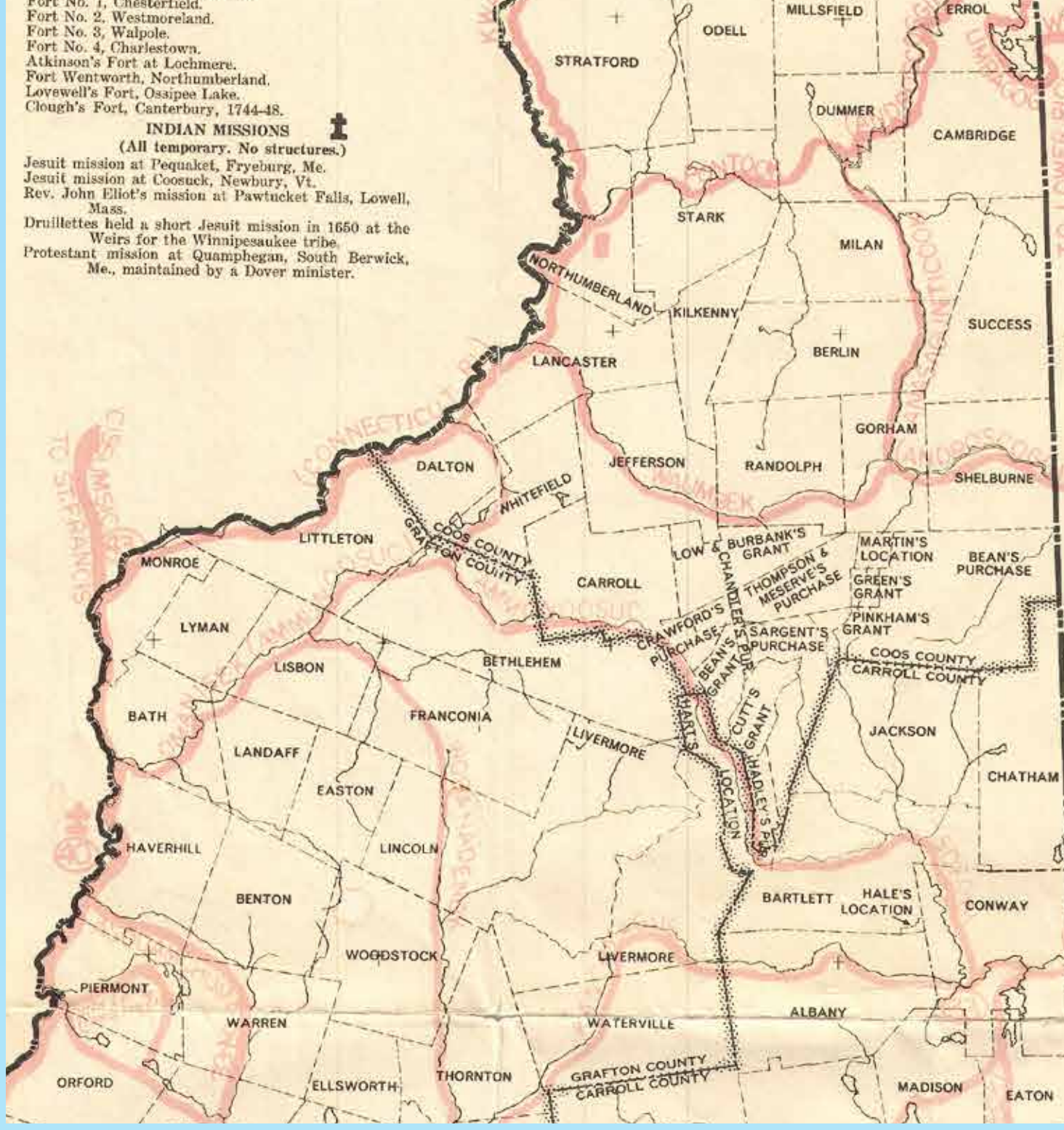


MOVED BY MOUNTAINS



The Abenaki Presence Endures

For millennia, Abenaki people traveled on foot and by canoe throughout the region for hunting, trading, diplomacy and war. The main routes followed river corridors, as shown in this 1958 map by historian and archaeologist Chester Price. By the late 1700s, colonialism, disease, warfare and European settlement had decimated native communities. Their main foot trails were taken over and later supplanted by stagecoach roads, railroads and eventually state highways.



Native footpaths were often faint to modern eyes and called for keen way-finding skills. Sometimes, natives bent saplings into directional markers, which grew into “trail trees.”



ALEX DELUCIA



JOHN PATRIQUIN, PORTLAND PRESS HERALD

Present-day Abenakis have revived their culture and transformed the making of baskets and canoes, the original outdoor gear, into art forms. Abenaki words endure in White Mountain place names, such as Pemigewasset, Ammonoosuc and Moosilauke.

An Abenaki landmark was made more accessible in 2015 when teens improved the trail to Mount Jasper in Berlin. This summit photo was taken near a 9,000-year-old stone mine, source of quartz-like rhyolite used in tool-making.



RAUNER SPECIAL COLLECTIONS LIBRARY, DARTMOUTH COLLEGE

Early Hikers Raked by Puckerbrush

In 1819, Abel Crawford and his son Ethan Allen cut an eight-mile path from what is now Crawford Notch to Mount Washington. The trail originally served their guests and later became the oldest continuously maintained recreational path in the US.

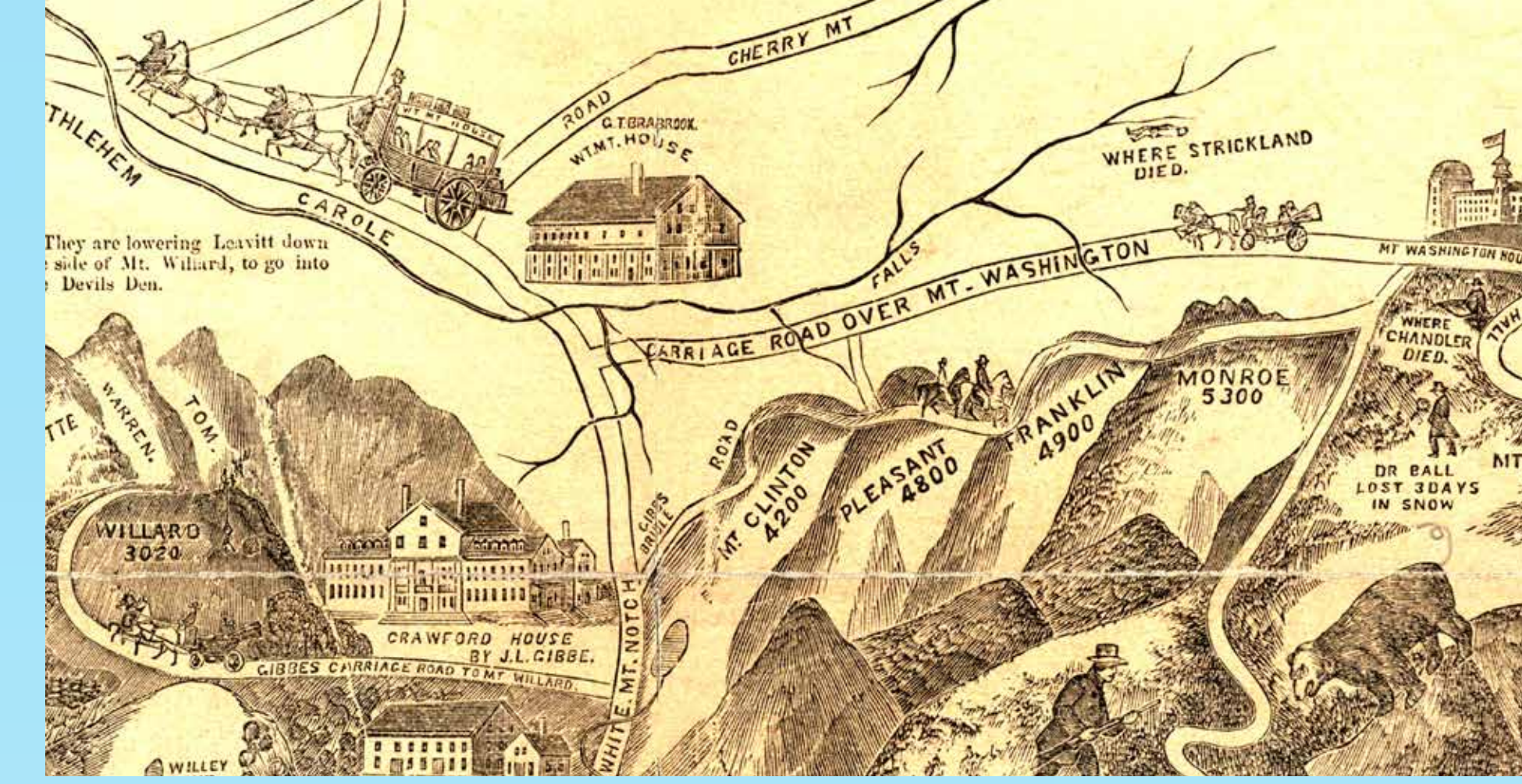
“One scrub differs from another only in its increasing fiendishness. It is an army of porcupines over and under and around you ... If your garments are not ironbound, you will become a traveling ragbag, a deplorable shade of your former self. And you must be prepared to be mutilated.”

JOURNALIST CHARLOTTE E. RICKER'S ACCOUNT BUSHWHACKING ACROSS TWIN MOUNTAIN IN 1882, WHILE WEARING A VICTORIAN SKIRT. (“THE WILDERNESS: WILD PLACES AND RUGGED PEAKS FIRST VISITED BY WOMAN” WHITE MOUNTAIN ECHO.)

In this woodblock by Marshall Field, Ethan Allen Crawford is depicted carrying a bear, one of the many legends that gave the White Mountains an allure that attracted luminaries, such as Daniel Webster, Henry David Thoreau and Nathaniel Hawthorne.

“As I was standing on an old log chopping, with my axe raised, the log broke, and I came down with such force that the axe struck my right ankle and glanced, nearly cutting my heel cord off; I bled freely, and so much so that I was unable to stand or go.”

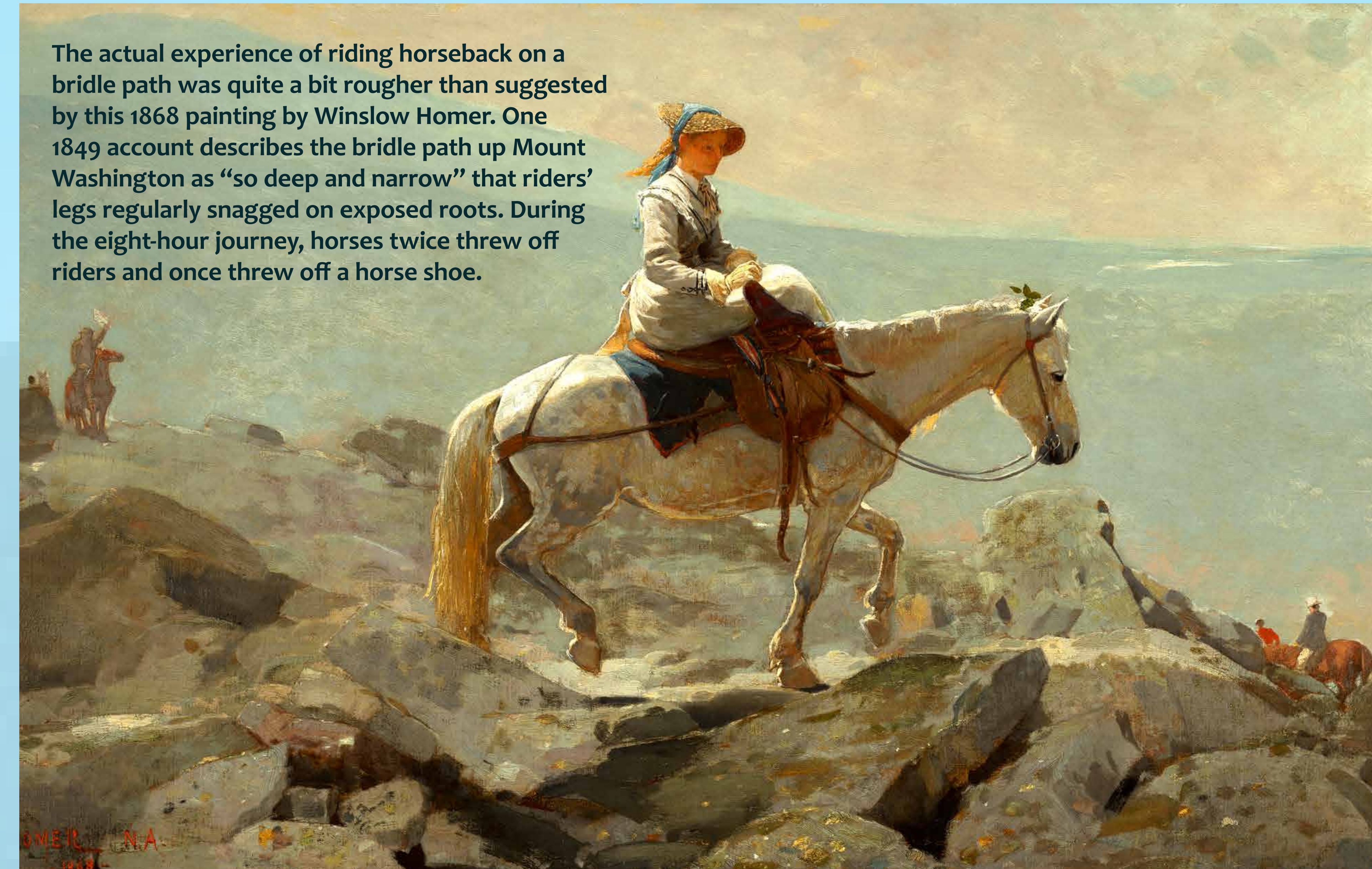
ETHAN ALLEN CRAWFORD DESCRIBING AX INJURY WHILE CUTTING A TRAIL TO THE TOP OF MOUNT WASHINGTON IN 1823 (LUCY CRAWFORD'S “HISTORY OF THE WHITE MOUNTAINS” 1846)



CLAY'S BROOKS MEMORIAL LIBRARY, MOUNT WASHINGTON OBSERVATORY

Grand Hotels Build Trails for Profit

The actual experience of riding horseback on a bridle path was quite a bit rougher than suggested by this 1868 painting by Winslow Homer. One 1849 account describes the bridle path up Mount Washington as “so deep and narrow” that riders’ legs regularly snagged on exposed roots. During the eight-hour journey, horses twice threw off riders and once threw off a horse shoe.



WINSLOW HOMER, CLARK ART INSTITUTE

In the first big wave of trail building, hotel owners financed the construction of bridle paths to fill hotel beds and cater to a growing leisure class infatuated by “the sublime” in paintings and writings. This inset is from a larger 1859 map and drawing by Franklin Leavitt.

Hiker-Built Trails Deepen Pride of Place

By the late 19th century, trails were being built by walkers for walkers in the most spectacular settings. Hiking clubs developed distinct identities, local loyalties and enduring legacies.



WONALANCET OUT DOOR CLUB

For example, the Wonalancet Out Door Club developed its identity around its trademark blue sign posts, its land conservation advocacy and more recently, an absolute fidelity to using hand tools in designated wilderness areas.

The profusion of trail sign types reflects the parochialism of backcountry management in the Whites. Clubs cling to distinct signs as important to club identity, a potent tool in mobilizing volunteers and resources.



EARL GILBERT



WHITNEY SILBERBLATT



WONALANCET OUT DOOR CLUB

A shining example of the transformative power of trails was the awakening of Wonalancet from sleepy backwoods hamlet into a lively hiking center in the 1890s. It was largely engineered by the indefatigable Kate Sleeper, pictured here, who moved to the area to open an inn and became post master, trail promoter and land conservationist.



KELLY-ANNE CERINI



STEVE SMITH

Pre-European Colonization

Native Americans develop trails in river corridors where highways are today, following the Saco, Swift, Pemigewasset, Ammonoosuc, Androscoggin, Moose and Israel Rivers.

1771

Lancaster road agent Timothy Nash uses ropes to bring a horse and barrel of rum through rugged Crawford Notch, validating the commercial potential of a road linking upper Connecticut River Valley to Portland.

1809

Mineralogist George Gibbs arranges to have a path cut up Mount Washington, likely through Tuckerman Ravine. It is quickly eclipsed by improvements in the western approach to the summit.

1819

Abel Crawford and his son Ethan Allen Crawford cut a trail from Crawford Notch to top of Mt. Washington. Two years later a second, more direct path is cut along the current route of the Cog Railway which becomes the far more popular route.

1826

The White Mountains leap into public imagination as a dangerous frontier when an landslide rumbles down one side of Crawford Notch and kills the Willey household of nine. Writers and artists later burnish the allure of the White Mountains.

1840

Abel Crawford is the first person to reach the summit of Mount Washington on horseback following the original Crawford Path. Bridle paths are developed on Mt. Moosilauke, Mt. Moriah, Mt. Willard, Mt. Pleasant, Bald Mt. in Franconia, Mt. Lafayette and Mt. Osceola.

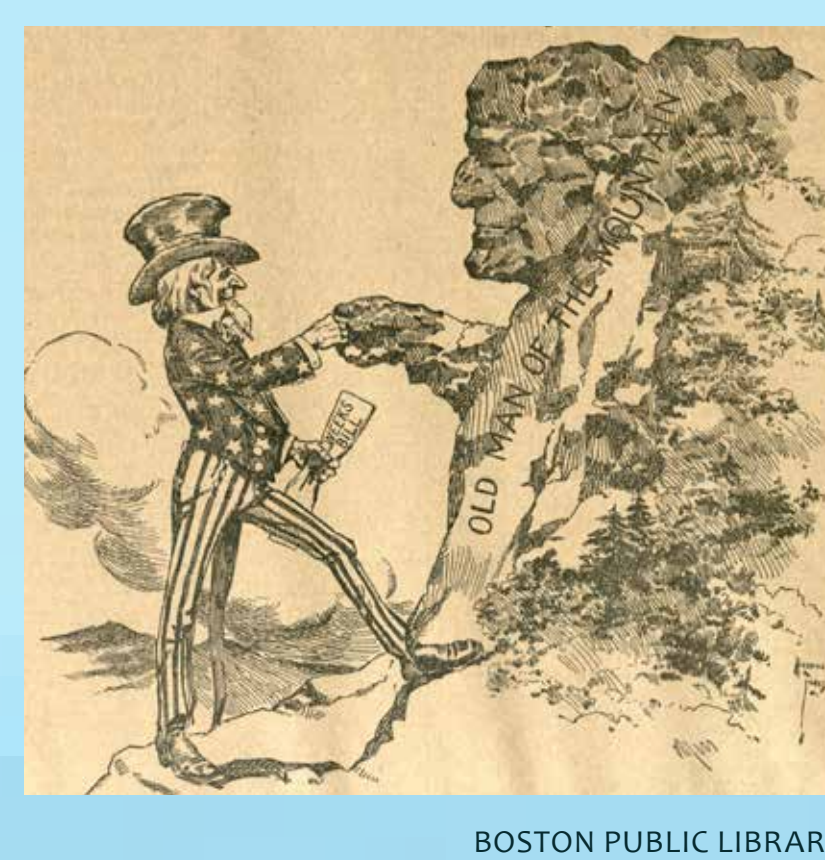
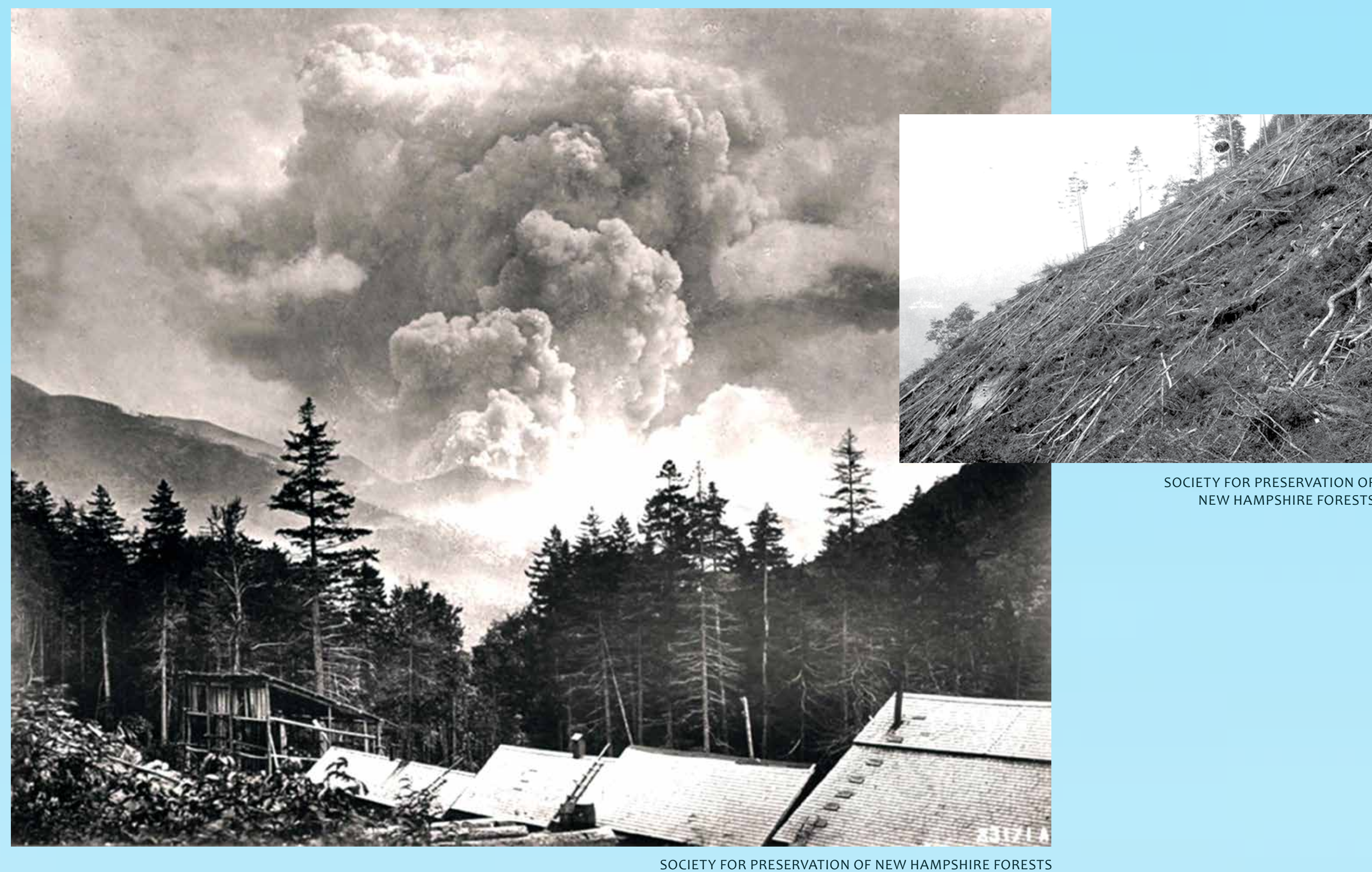
July 23, 1851

The first train pulls into the station in Gorham, opening up the east side of Mount Washington to hotel and trail development. Grand Hotels, such as the Glen House in 1852, sponsor trail development as a lure for visitors and revenue.

For two centuries, the devoted trail builders of the White Mountains have made grandeur accessible to others.

Outrage Culminates in New Status for Trails

Industrial scale logging obliterated trails, sometimes irretrievably, beginning in the 1880s. The public was outraged by clearcuts as far as the eyes could see and wild fires that burned for weeks. But it took 30 years of agitation by citizens, preachers, local officials and finally industrialists to bring plunder to an end.



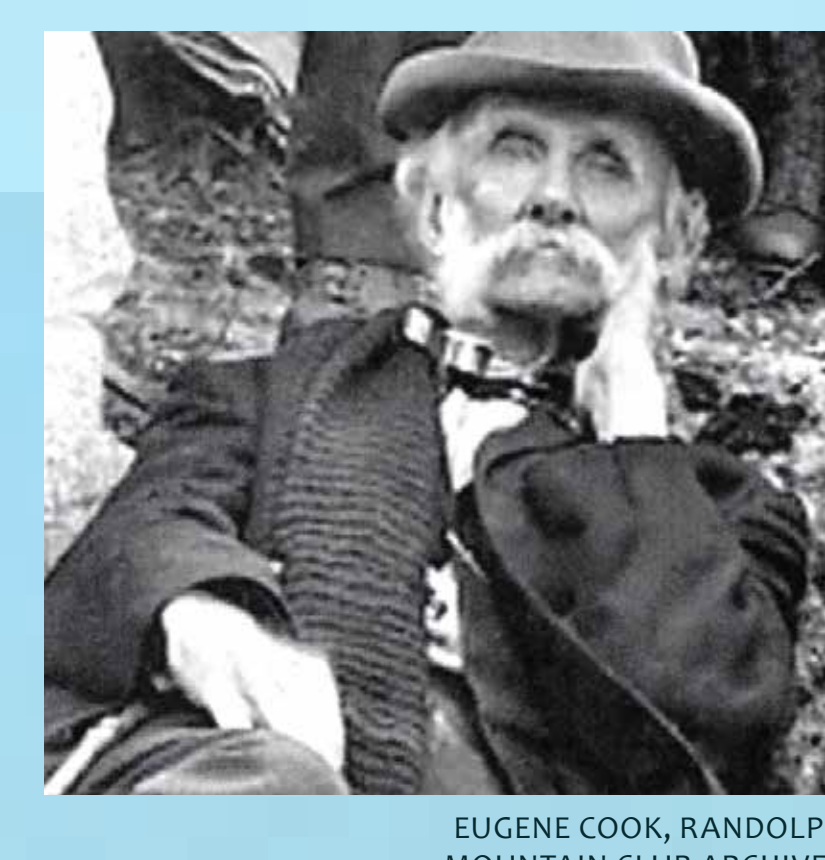
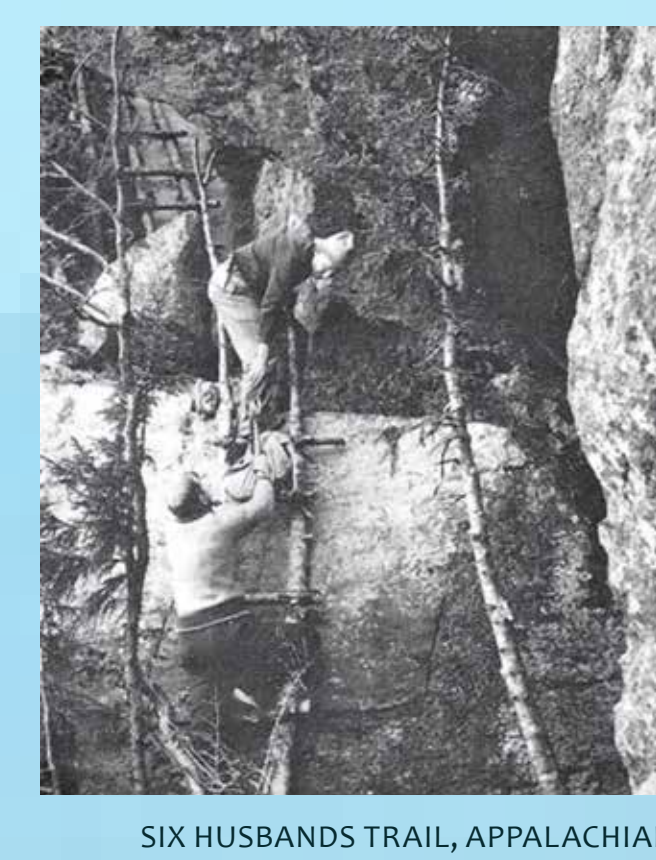
A cartoon from the front page of the Boston Herald in 1911 envisions a more harmonious era with passage of the Weeks Act, named after John Weeks, US Representative from Mass. and a Lancaster NH native. The act authorized for the first time acquisition of private land for national forests. In the new White Mountain National Forest, old railroad beds in Zealand, Pemigewasset and Wild River valleys were repurposed as hiking trails.



Rayner Edmands, an MIT-trained engineer, advocated gradual, engineered paths inspired by the burrow trails of western miners. “Always rising, never steeply,” was his motto. One of his masterpieces is the Gulfside Trail, a granite sidewalk through talus slopes on Mount Adams.

How Rugged Should a Trail Be?

A lively debate sprung up at the end of the 19th century between advocates of gentle paths and advocates of strenuous scrambles. This great age of trail building revolved around the Ravine House in Randolph, a lodging house with a buoyant social scene.



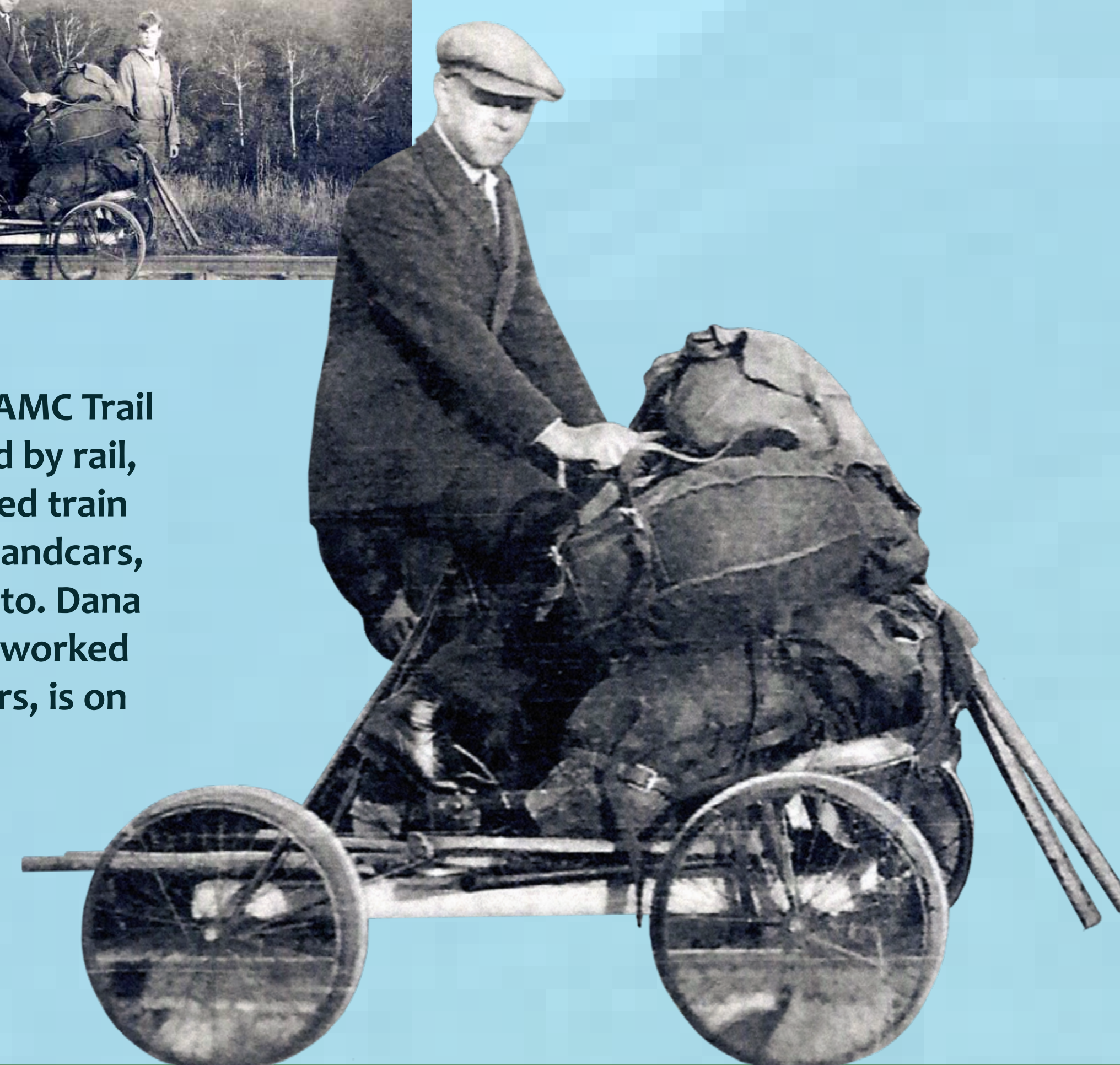
Eugene Cook, a fun-loving authority on chess and figure skating, advocated rustic trails that challenged the imagination. The best example is Six Husbands Trail on Mount Jefferson built by a team led by Warren Hart. Though Cook and Edmands socialized and played music together, they refused to walk each other's paths.

Trail-building Blitz Links Maine to Moosilauke

Linking local trail networks into a single unified system began about 1910 and took nearly 20 years of sustained, grueling exertion. The final linkages through endlessly dense stretches of puckerbrush on Garfield Ridge, the Mahoosucs and Kinsman Ridge were among the toughest miles in the Whites.



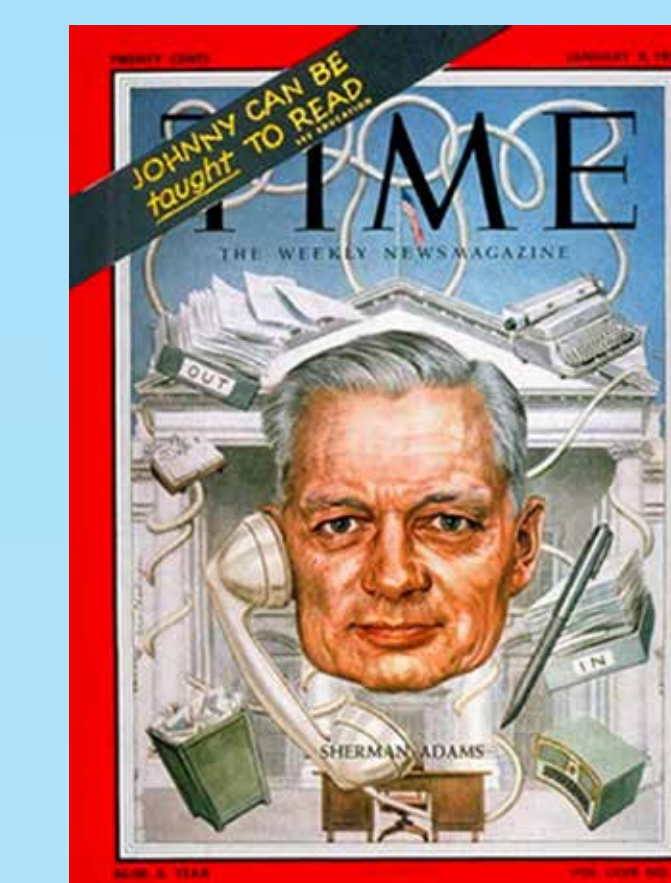
Before 1923, AMC Trail Crew traveled by rail, both scheduled train service and handcars, as in this photo. Dana Backus, who worked for three years, is on the right.



The leaders were four coat-and-tie professionals who became known as “The Old Masters.” In this 1906 photo, Brooklyn high school Latin teacher Paul Jenks is at far left, Boston lawyer Charles Blood is in the middle, and Dartmouth College librarian Nat Goodrich is at far right. Missing is Wesleyan College Latin professor Karl Harrington. Also pictured are George Blaney and Albert Kent.



A member of the Dartmouth Outing Club runs a string line on what will become Hurricane Trail on Mount Moosilauke in 1935. String lines were established after many route options were explored to guide trail cutting.



High productivity and esprit began with Sherman Adams, the acknowledged leader of the 1919 crew, and was nurtured by mentorship of The Old Masters. Adams later became a lumber company executive, New Hampshire governor and chief of staff in the Eisenhower administration.

Legendary Crew Keeps its Mojo

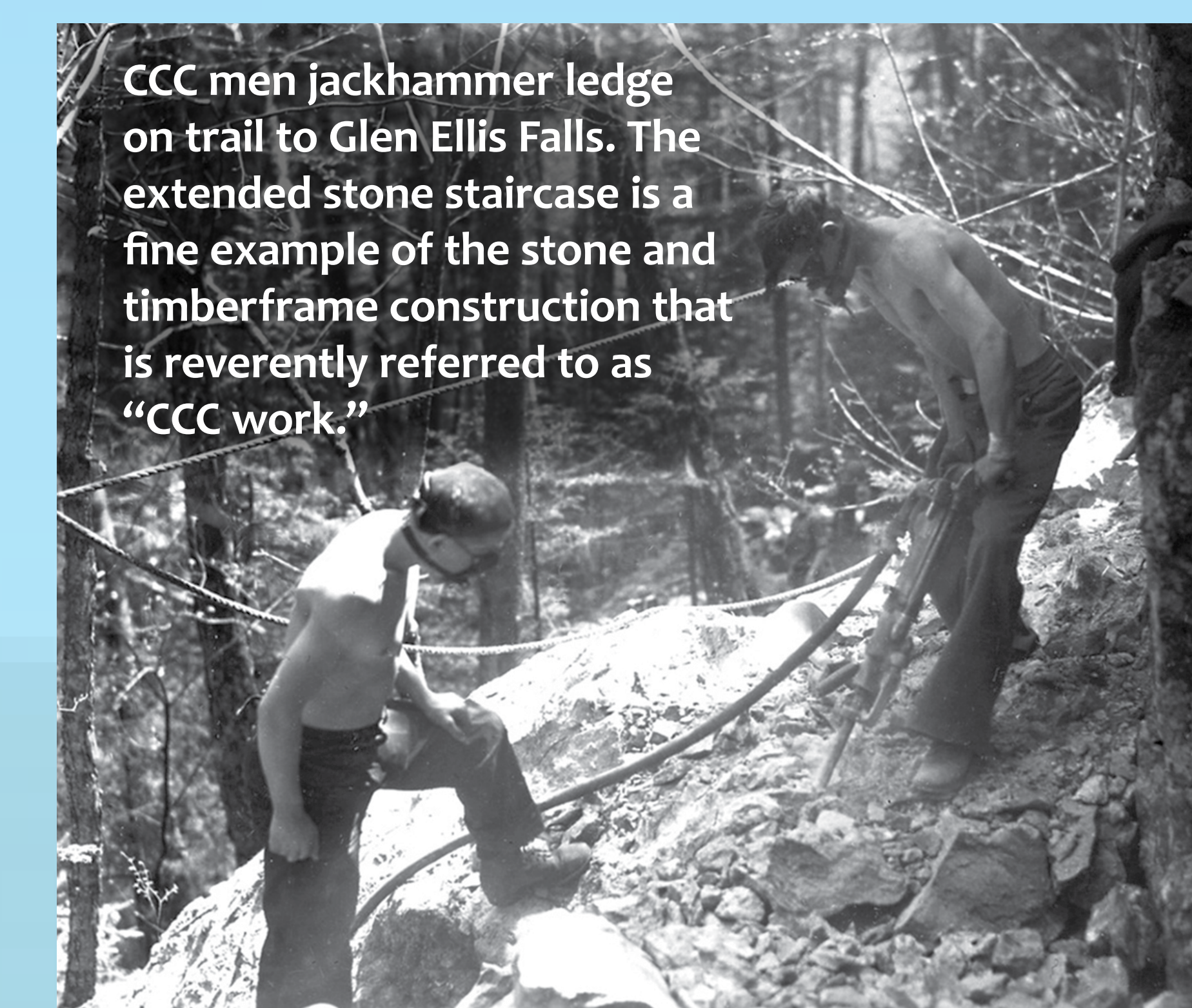
The AMC Trail Crew became renowned for an intense, high-spirited work ethic. How this culture is continually replicated despite low pay, spartan living conditions, and yearly turnover is perhaps worthy of a thesis paper. A confluence of factors may contribute.



Crew life reinforces the mountaineer's ethos that nature's grandeur is often experienced as an ordeal. Crew members pull on wet boots in the morning or sweat all day in a cloud of black flies knowing they might be lucky enough to sleep under the stars that night with a meteor shower streaking the heavens.



It's intoxicating for young people to be loaded with responsibility, given some direction and sent into the woods for a week at a time to solve problems on their own.



City Boys Build Durable Legacy

For a brief span during the Depression, the White Mountain echoed with the sounds of chopping, sawing, shoveling and hammering. The jobless multitudes that entered the Civilian Conservation Corps were mostly unskilled city boys, but they quickly became celebrated for their productivity and high morale. CCC-built roads, bridges and park improvements opened the White Mountains to the automobile age.



“There were long hours of continuous hammering at what seemed like an impenetrable tangle of jackstraws, in an effort to punch a six-foot hole for clearance,” AMC Trailmaster Jack Hutton wrote in an *Appalachia* article about cleaning up after the 1938 Hurricane. In this photo, Haven Fifield pauses while clearing blowdowns on Kinsman Ridge Trail. The AMC effort was dwarfed by the 1,400 men that the CCC mobilized.



Enrollees learned axe skills in part from Woodsmanship for the Civilian Conservation Corps, an instructional pamphlet illustrated by Rudolph Wedelin.

1859

“The White Hills” by Thomas Starr King becomes an immediate and continuing success. King popularized mountains as places to experience the “sublime.”

1861

A carriage road replaces the bridle path on Mount Washington. Eight years later, the Cog Railway replaces the carriage path on the west side of Mount Washington.

1873

The White Mountain Club of Portland, Maine becomes the region's first hiking club, followed by formation of the Appalachian Mountain Club (1876) and a dozen others in the region.

1875

Charles Lowe and William G. Nowell build the Lowe's Path, the first trail built for walkers by walkers for enjoyment not for revenue.

1876

Moses Foster Sweetser publishes the first hiking guide, “The White Mountains: a Handbook for Travelers.” Early guidebooks contain almost no route description but lavish descriptions of views.

1880s

The summer community in Randolph builds 50 miles of trails in eight years under the leadership of Charles Lowe, William G. Nowell, Eugene Beauharnois Cook, William H. Peek and Laban M. Watson.

1890s

Kate Sleeper and Charles Fay develop a network of trails in the Sandwich Range.

1890s

Frank L. Carpenter and Karl Pomeroy Harrington develop a network of trails in Franconia Notch and North Woodstock.

MOVED BY MOUNTAINS



Garbage, Mud, Erosion Spur Innovations

In the 1960s, an influx of wilderness seekers brought unwilderness-like conditions to the White Mountains.



Enlightened environmental ethics led to the closing of outhouses and canpits, as in this photo. They were replaced by composting facilities and solar-powered composting toilets.

"We rarely pass a shelter without finding its canpit overflowing with paper, food, watermelon rinds, etc. The result is always a messy, smelly, and disgraceful comment on the hiking public."

ALAN THORNDIKE
(APPALACHIA DEC 1, 1966)

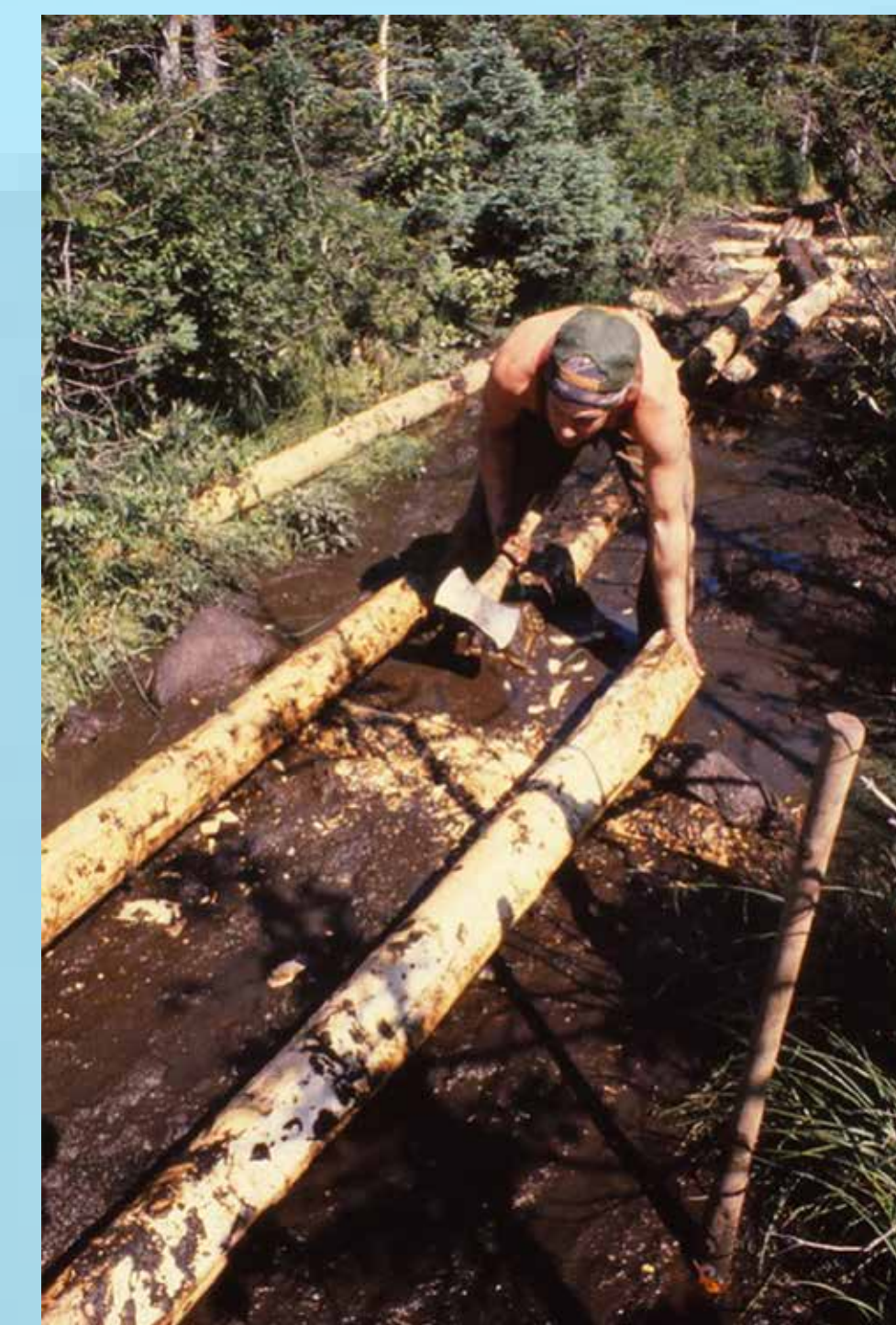
Trail erosion in the early 1970s inspired inventive trail reconstruction techniques. Initially, log ladders were installed, but were soon eclipsed by more durable rock steps.



AMC TRAIL CREW ARCHIVES



AMC TRAIL CREW ARCHIVES



REUBEN RAJALA

Heavy hiker traffic turned summit bogs into expanding muddy slogs. Split log bridges were pioneered as a more efficient use of timber than old-fashioned corduroy-style construction.



AMC TRAIL CREW ARCHIVES

Women interested in trail building were initially relegated routine tasks, such as brushing out overgrown trails, as in this photo. Under pressure in the 1970s, organizations began to roll back discrimination. In the 1990s women claimed leadership positions and changed the culture of trail building.



Bob Proudman personified the inventive era of backcountry management. A daring climber and wilderness advocate, Proudman served as AMC Trails Supervisor for most of the 1970s. He co-authored a handbook that popularized new techniques and went on to a career with the Appalachian Trail Conservancy.



AMC TRAIL CREW ARCHIVES

Campsite caretakers were hired to educate hikers and model wilderness ethics. "His [caretaker's] function is to show hikers how to enjoy the mountains without destroying them"

STEVE PAGE, LEFT, HIRED AS THE FIRST CARETAKER AT LIBERTY SPRINGS (APPALACHIA DEC 1, 1970)

Booming Bootleg Trails Overrun Managers

Beginning in the 1980s, mountain bikers and backcountry skiers – feeling unserved by traditional trails – built their own. These unsigned and unmapped trails stirred a backlash from land managers and eventually resulted in an uneasy alliance. But by then more than 50 miles of bootleg trails laced the backcountry – most in Smarts Brook and Franconia regions – with no clear plan for funding or maintaining them.



TYLER RAY

Granite Backcountry Alliance organizes huge work parties of 50 or more volunteers - including kids, as in this photo - to cut new backcountry ski trails. New glades have been developed with the permission of cooperative landowners in Randolph, Gorham, Chatham and Intervale.

Mountain bike trail design is unlike any other. Some trails are rough and unimproved, as in this photo, others are banked and "flow-y".



CHRIS MCCAY

"There is a common cause to unify and develop a national program to protect the rights of citizens to travel on foot through natural settings, unfettered in pursuit of this most fundamental recreational activity."

ROBERT D. PROUDMAN
(1977 AMC FIELD GUIDE TO TRAIL BUILDING AND MAINTENANCE)

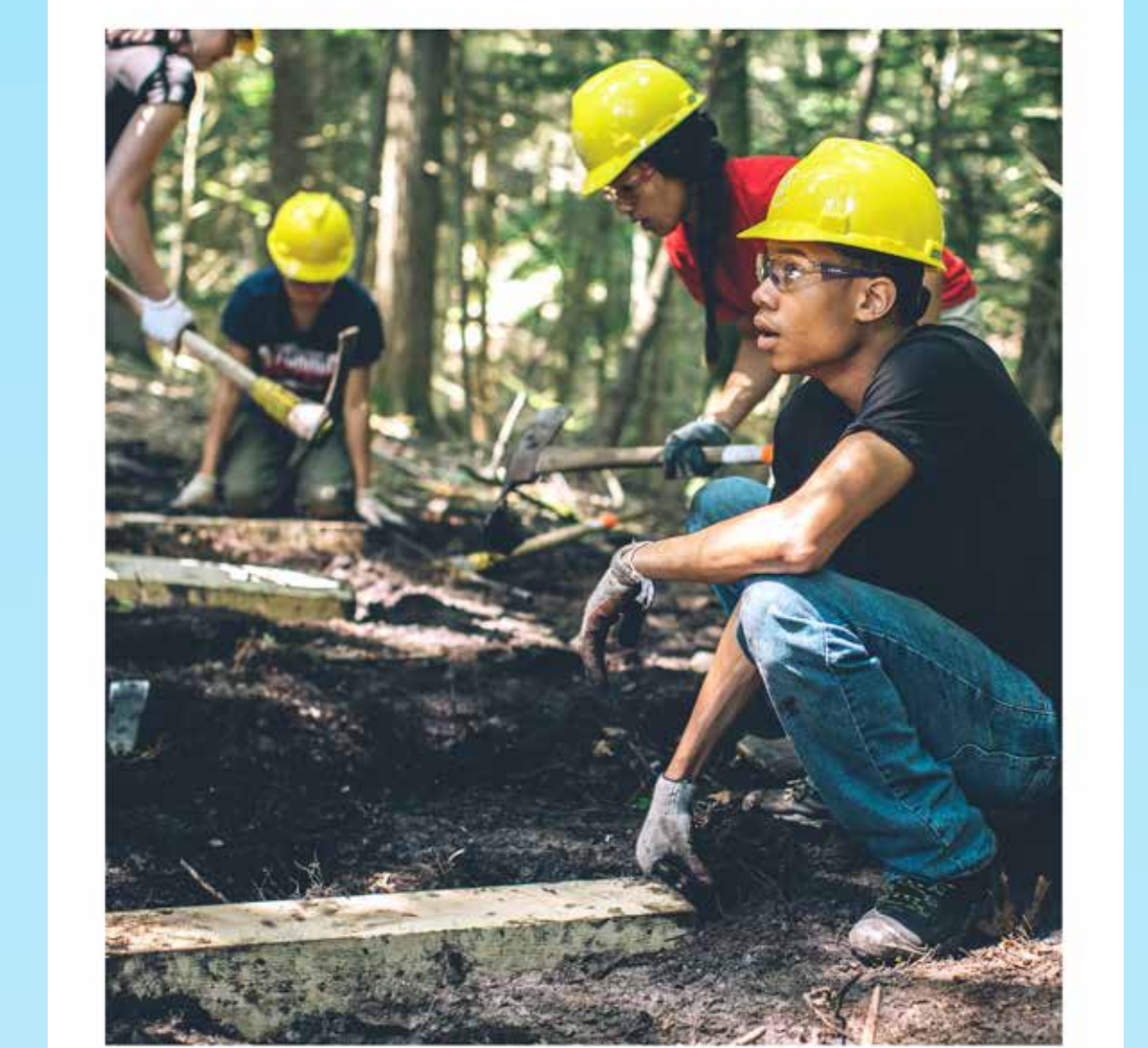
A Movement Builds

The White Mountains trail building ethos spread widely. Reuben Rajala, AMC Trails Supervisor 1979-1993, developed service trips, cooperative agreements, promotional events, and a multi-faceted volunteer program centered at Camp Dodge which has become one of the largest in the country.



AMC'S COMPLETE GUIDE TO TRAIL BUILDING AND MAINTENANCE // 5th Edition

PROVEN TECHNIQUES • SAFETY GUIDELINES • EQUIPMENT TIPS



APPALACHIAN MTN CLUB // AMC SKILLS SERIES RYAN HARVEY

The AMC's trail building field manual, a pioneering publication when it was first published in 1977, is now in its fifth edition.

1907

Owls Head Fire destroys more than 10,000 acres and becomes a rallying cry for protecting White Mountains from indiscriminate logging.

1911

Passage of the Weeks Act leads to the creation of the White Mountain National Forest in 1918.

1919

The Appalachian Mountain Club hires seven young men from Dartmouth and Flushing high school in NY to maintain the club's trails. Not the first of its kind, but it becomes the longest continuously operating trail crew.

1933

Wildwood NF-1, the First Civilian Conservation Corps camp, is established near Mount Moosilauke. Altogether 17 CCC camps are opened in the White Mountains, including Camp Peabody in Gorham, which opened in 1935.

Sept 21, 1938

A hurricane sweeps through New England and virtually shuts the White Mountains. It takes years to reopen some trails and some are closed permanently.

1940

AMC purchases a farmhouse in Whitefield to consolidate trail operations in a single location. It is later named Hutton Lodge in memory of Trailmaster John Hutton, who died on Iwo Jima.

1953

AMC trail crew constructs a 36-foot cable suspension footbridge with stone pier abutments across the Peabody River in the Great Gulf. The project significantly upgrades the crew's technical capacity.

1964

The Wilderness Act is signed into law. Eventually, seven wilderness areas are designated, encompassing one fifth of the land area in the White Mountains. Shelters are torn down, motorized vehicles and chain saws are banned, hiking group size is restricted.

“So summer after summer, hot, dirty, redolent of [bug] dope, we struggled through blowdowns and scrub while the white string unrolled behind. Always there was the odor of balsam, the song of thrushes, the drift of cloud shadows.” NAT GOODRICH, IN 1925, ON BUILDING A UNIFIED TRAIL NETWORK

Monster Storms Galvanize Collaboration

The frequency of monster storms wrenched trail building into a new era in the early 21st Century. Tropical Storm Irene (2011), Hurricane Sandy (2012) and Halloween Storm (2017) caused destruction on a whole new scale. Bridges were blown out, rain-saturated slopes collapsed, trails were dismembered beyond recognition.



The Dry River, normally 35 feet below the bridge deck, left this debris after Irene.



A reconnaissance outing revealed Irene caused “mass wasting,” or slumping of over-saturated slopes of Dry River banks. Rebuilding all the damage was so prohibitive that crews rerouted two miles of Dry River Trail through the stream bed itself.



KLEMENTOVICH PHOTOGRAPHY

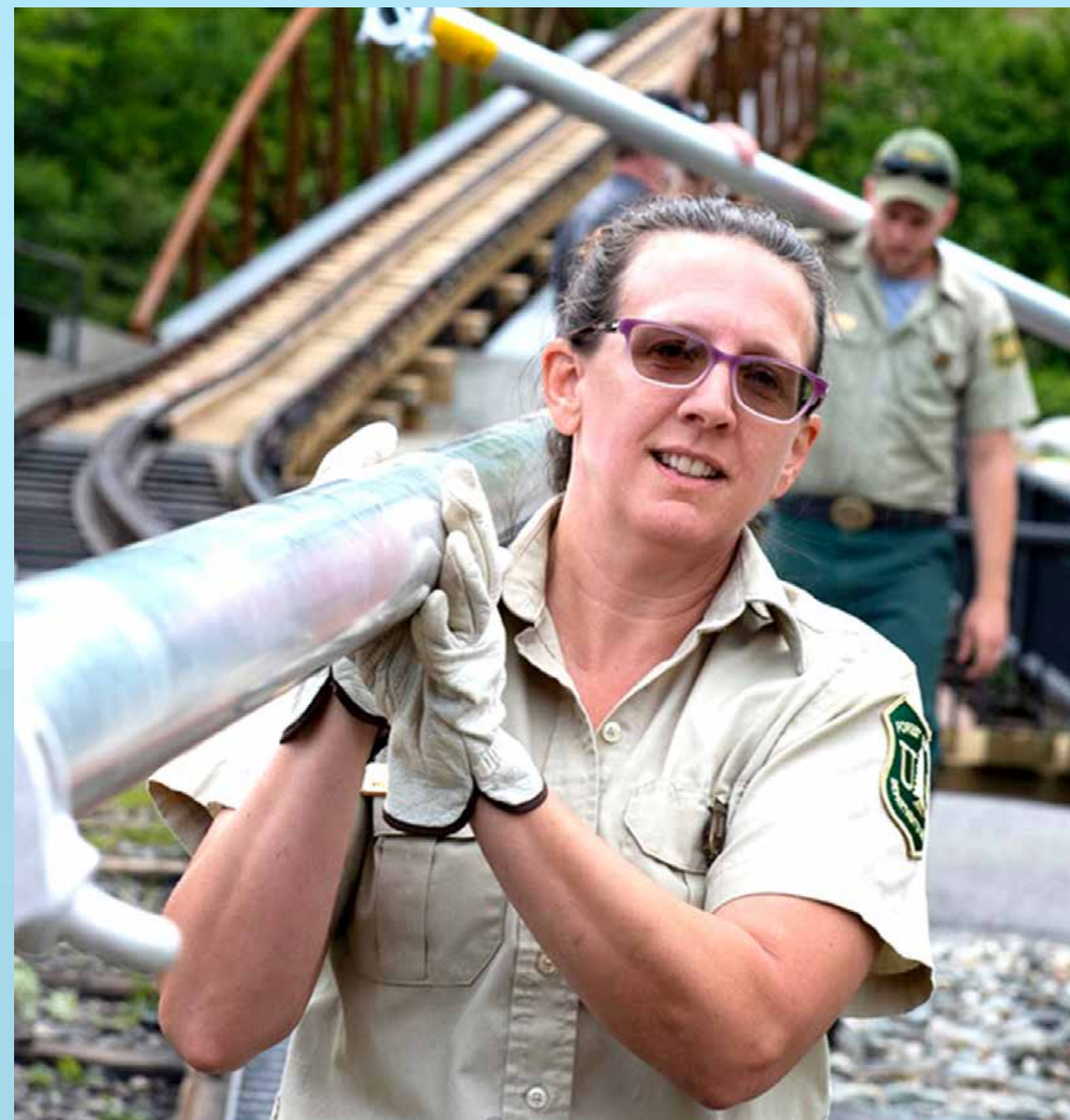


KLEMENTOVICH PHOTOGRAPHY

Crews used highline rigging to “airlift” rocks over fragile alpine vegetation in this 2018 photo of reconstruction of Crawford Path.

The devouring of trail resources by monster storms galvanized a new level of teamwork and fundraising among trail groups unaccustomed to working together. AMC’s Pro Trail Crew joined seven other trail groups in rebuilding Crawford Path, a signature project of the White Mountain Trail Collective that began in 2018.

The US Forest Service took the lead in developing the partnerships, training and mentoring to join disparate groups into an effective team.



CRISTIN BAILEY, USFS



AMC ARCHIVES



MARK DANNENHAUER

Now, as then, three-piece, hand-forged axes are treasured.



MARK DANNENHAUER

Yesterday and Yesteryear

Sixth Crew (1924)

Work week:	Six days
Pay:	Starting at \$6/week
Tools:	Axes, long-handle clippers, cross-cut saws, scythes, machetes
Typical tasks:	Chopping out blowdowns; cutting back brush to a standard trail width
Daily wear:	Wool flannel shirt, khaki trousers, hobnail boots, (waist-long oil slicker for rain)
Bug protection:	Bandana
Training:	“Training was very simple. If we were unskilled as axmen, we soon learned.” – Fred Fish (1924)
Base of operations:	Whitefield, in a third-floor garret of a farmhouse outbuilding
How got job:	Through private family or club connections
Off-season:	College (Harvard, Dartmouth, Wesleyan)

99th Crew (2017)

Work week:	Five days
Pay:	Starting at \$423/week
Tools:	Axes, rock bars, pick mattock, Pulaskis, cable rigging, grip hoists, chain saws, hazel hoes, generators to power rock drills, hand rock drills, rifting hammers for cutting steps.
Typical tasks:	Building rock steps, replacing wooden drainage systems with rock waterbars, building bog bridges. Chopping out blowdowns takes a week or two at the beginning of summer.
Daily wear:	T-shirt, Dickies pants, Limmer boots, hard hat.
Bug protection:	Bufs
Training:	Usually lasts a week, includes wilderness first-aid, axe care and maintenance, practice in chopping and other tool use.
Base of operations:	Pinkham Notch Camp, second-floor bunkhouse on top of tool shop
How got job:	Through open process, on-line application followed by telephone or in-person interview.

1970

Liberty Spring Shelter is torn down and is replaced by tent platforms. Caretakers promote a new environmental ethic among campers. During this period, camping fees for backcountry sites and volunteer trail adopter programs are started.

1977

Shelter caretaker Joan Chevalier breaks gender barrier as first woman hired as member of AMC Trail Crew. In 1995, Rachel Wheeler becomes first woman to be hired Trail Master.

1982

US Forest Service authorizes use of Camp Dodge as a center for trail volunteers. AMC grows the program over the years and now provides opportunities for nearly 1,500 volunteers each summer with programs tailored by age, affinity group, rigor level, available time and income.

1998

A February ice storm damages the trails throughout the region. Nearly half the 600 miles of trails maintained by USFS sustains “moderate to severe damage.” Federal money mobilizes an expansion of volunteer and hired crews.

2000

Three hikers in wheelchairs and two on crutches reach Galehead Hut in a show of support for Americans with Disabilities Act. US Forest Service creates eight fully accessible trails, most along the Kancamagus Highway.

2007

The completion of the 39-mile Grafton Loop Trail, built on private land with handshake agreements, spurs the major conservation initiative in the Mahoosucs. The effort becomes a model for how trail development can catalyze, rather than follow, land conservation.

2011

Raging flood waters from Tropical Storm Irene blow out major sections of trail, particularly along Dry River and Rocky Branch. The massive diversion of resources necessitated by Irene and subsequent monster storms Hurricane Sandy in 2012 and Halloween Storm 2017 cause major reassessment of priorities.

2018

White Mountain Trail Collective forms to mobilize new private and philanthropic resources and coordinate trail maintenance and construction throughout the region.