Hand-hewn railroad crossties made of lodgepole pine covering the ground in the Mill Creek area of the Uinta Mountains, ca. 1912–1913.

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U.S. Forest Service

"WOODEN BEDS FOR WOODEN HEADS"

Railroad Tie Cutting in the Uinta Mountains, 1867–1938

BY CHRISTOPHER W. MERRITT

A pencil inscription on the lintel of a dilapidated log cabin on Smith's Fork in the center of the Uinta Mountains reads "Wooden Beds for Wooden Heads," an identity expression of a mostly forgotten part of Utah, Wyoming, and even national history. Most Utahns are unaware of the rich logging history of their state, or how broad-shouldered, tie-cutting men, alongside women and even children, helped to shape the settlement of the American West beginning with construction of the nation's first transcontinental railroad. Between 1867 and 1938, loggers cut a low estimate of ten million railroad crossties from the densely forested slopes and terraces of the Uinta Mountains' North Slope (fig.1). In nearly 500,000 acres stretching from the Bear River on the west to Henry's Fork on the east, professional (full time) and subsistence or seasonal loggers harvested millions of lodgepole pines to feed the growth of the United States' railroad infrastructure. Although the Weber and Provo headwaters and several other smaller drainages in Utah also provided ties, the North Slope of the Uintas was uniquely situated to yield a more than adequate supply. From the 1860s to the 1930s, tie cutting was completed by hand with a broad axe during the winter; the ties were floated to market using major rivers and creeks during the spring thaw, and delivered to the railroads in summer.

As construction of the Transcontinental Railroad crossed southern Wyoming, the Union Pacific's need for wood was immense, with at least 5,200 crossties—2,600 trees—per mile of track. Measuring between seven and eight feet in length and seven inches on the faces, a railroad crosstie was

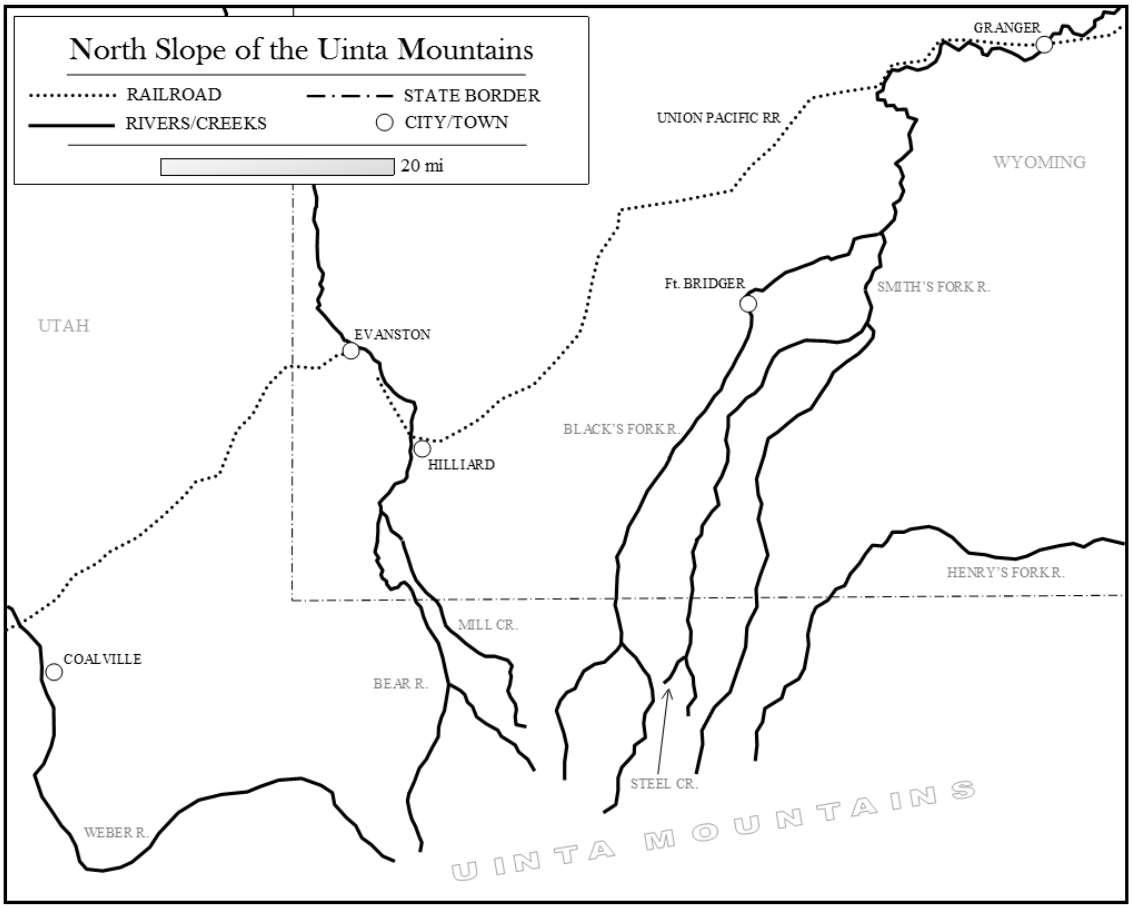

Figure 1. Tie cutting area of the North Slope of the Uinta Mountains, extending from the Bear River on the west to Smith's Fork on the east. Note that the Bear, Black's Fork, and Smith's Fork rivers all flow to the railroad line.

central to the completion of the lines. But as anyone familiar with this landscape knows, available timber is in short supply along the railroad and modern highways. As it had done when it pushed across the Midwest, the Union Pacific and other railroad companies looked far afield for an ample supply of crossties. Beginning in the 1860s, loggers cut ties from the Medicine Bow, Routt, Laramie, Wind River, and Uinta Mountain ranges and used rivers and creeks to move them towards the railroad lines.[1] Tie cutting and river transport continued into the 1930s, when changes in technology and supply chains altered the flow of this wooden commodity. Forestry historian Sherry Olsen notes that "tie manufacture was on a grand scale in the Rockies, and tie cutting was one of the most rugged and most lucrative jobs of the mountain frontier."[2]

Despite its significance, tie cutting has received scant attention from historians. The retired forester L. J. Colton's reminiscent account of logging activity in the Bear River area of the Wasatch National Forest, published in the *Utah Historical Quarterly*, is the earliest published reminiscence on the topic but is limited in its scope to one era and drainage, and Thomas Alexander's history of the United States Forest Service in the Inter-

1 For more information on the industry in Wyoming, see Robert G. Rosenberg, "Woodrock Tie Hack District, Bighorn National Forest Cultural Resource Management Plan," Prepared for Bighorn National Forest, U.S. Department of Agriculture, 1999, 9–10; Joan Trego Pinkerton, *Knights of the Broadax: The Story of the Wyoming Tie Hacks* (Caldwell, ID: Caxton Publishers, 1981); William Wroten, "The Railroad Tie Industry in the Central Rocky Mountain Region, 1867–1900" (Ph.D. diss., University of Colorado Boulder, 1956).

2 Sherry Olsen, *Depletion Myth: A History of Railroad Use of Timber* (Harvard: Harvard University Press, 1971), 23.

mountain Region only touches on the tie industry along the North Slope.[3]

One problem for the historian is that the industry's transient labor working for wages at seasonal jobs is minimally represented in period documents or difficult to identify.[4] Consequently, few documentary sources detail the tie cutting industry of the North Slope, with only one census record, newspaper cuttings, draft cards, and a handful of other primary sources as the complete listing of historical records existing for this major industry.[5] A 1913 United States Forest Service report on the industry and an oral history of Forest Service ranger Archie Murchie are also insightful. The latter is the only historic personal account of the industry, albeit from an outsider's slant. The North Slope's geopolitical ties to Utah yet geographic and economic connections to Wyoming further limited the tie industry's presence in the historic record; apparently, much of the industry never filed paperwork in Summit County, Utah, and census takers from neither state ventured into the mountains until 1930.

It is into this relative void of historical research that archaeology, focused on the material remains of this industry, can offer a data source and perspective not seen in other scholarship or documentary resources. Forgotten cabins, rotting back into the ground from which their logs once sprung, are the tangible reminders of this lost facet of western history (fig. 2). Historical archaeology allows a place-based and tangible reconstruction and interpretation of the social history of diverse peoples based on material culture and available documentary resources. The historical archaeologist James E. Ayres published two well-researched articles on the industry, and he created a framework to understand the interconnectedness of the region's hundreds of tie cutting archaeological sites.[6] Forest Service and avocational archaeologists have documented over two hundred logging camps between Bear River and Smith's Fork, each providing clues to this unique industry and pattern of industry that exist outside the purview of historic records alone.[7] Unfortunately, looting, metal detection, vandalism, and catastrophic wildfires continue to damage and remove these material artifacts.

Euro-American logging in the Uintas likely began in 1843 with Jim Bridger and Louis Vasquez's construction of Fort Bridger on the Black's Fork River in Wyoming. The Mormons acquired Fort Bridger in 1855 to supply emigrants to Utah Territory and erected a sawmill in the Uintas to supply wood to the travelers and construction efforts. As a sutler for the U.S. Army, which later took control of Fort Bridger, Judge W. A. Carter erected several sawmills in the Uintas through the 1870s.[8]

None of these efforts ever supplied railroad crossties until 1867, when the Union Pacific Railroad's advance parties of graders started moving across southern Wyoming Territory. An 1864 reconnaissance report of the proposed transcontinental line by Union Pacific engineer Samuel B. Reed to company vice president T. C. Durant underscored the importance of timber

3 L. J. Colton, "Early Day Timber Cutting Along the Upper Bear River," *Utah Historical Quarterly* 35 (Summer 1967): 202–7; Thomas G. Alexander, *The Rise of Multiple-Use Management in the Intermountain West: A History of Region 4 of the Forest Service*, FS-399 (Washington, D.C.: U.S. Forest Service, May 1987).

4 For information on the West's transient laborers, see Carlos Schwantes, "The Concept of the Wageworkers' Frontier: A Framework for Future Research," *Western Historical Quarterly* 18 (1987): 39–55.

5 There are no known company records for the Standard Timber Company, the largest timber firm on the North Slope between 1912 and the 1940s. In 1940, an accidental fire in a Standard Timber barn in Millis, Wyoming, destroyed much of the company records. *Ogden Standard-Examiner*, June 21, 1940, 9.

6 James E. Ayres, "Logging Camps in the Uinta Mountains, Utah," in *Forgotten Places and Things: Archaeological Perspectives on American History*, edited by Albert E. Ward (Albuquerque: Center for Anthropological Studies, 1983); James E. Ayres, "Standard Timber Company Logging Camps on the Mill Creek Drainage, Uinta Mountains, Utah," *Proceedings of the Society for California Archaeology* 9 (1996): 179–82.

7 Archaeological data are contained with the Uinta-Wasatch-Cache National Forest Heritage Program site records (Supervisor's Office, South Jordan, Utah), and the Utah Division of State History Antiquities Program Site Records (Rio Grande Depot, Salt Lake City, Utah), and are not accessible by non-archaeologists per federal and state laws for sensitive information.

8 William A. Carter, Jr., "Fort Bridger in the 70s," *Annals of Wyoming* 11 (1939): 111–13; William N. Davis, Jr., "The Sutler at Fort Bridger," *Western Historical Quarterly* 2 (1971): 37–53. A sutler is a civilian trader who received a contract from the military to provide goods and supplies to military posts or troops on deployment. See David M. Delo, *Peddlers and Post Traders: The Army Sutler on the Frontier* (Helena, MT: Kingfisher Books, 1998).

Figure 2. Collapsed log cabin barn that once held the four to six horses common to a tie camp during the 1910s–1920s, near Black's Fork River.
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Christopher Merritt

resources as he "looked upon the scarcity of timber as the most serious obstacle to be overcome in the building of the road through the mountains." Reed reported to Durant that to solve this issue he surveyed the Uinta Mountains where "on the head waters of the Bear River . . . there are large tracts of white Norway pine, suitable for railroad purposes, that can be rafted down Bear River to the line."[9]

Partners Levi Carter and General Isaac Coe received most of the initial contracts to supply railroad ties to the Union Pacific and operated in the Uintas through the 1880s. Coe and Carter supplied ties to the Union Pacific for prices ranging from $1.00 to $1.30 per tie, while paying only 35–60 cents to cutters. High profit margins and a monopoly to supply ties to the Union Pacific helped to cement Coe and Carter as the premier tie cutting corporation in Utah, Wyoming, and Colorado. Union Pacific's expansion into developing coal resources in Wyoming further provided opportunity for Coe and Carter to provide narrow gauge railroad ties and mine supports. Coe and Carter constructed at least three sawmills in the Uintas on Muddy Creek, Black's Fork, and at the confluence of Steel Creek and Smith's Fork, although these produced milled construction lumber and not railroad ties. Coe and Carter subcontracted the majority of tie cutting along the Bear River and its tributaries to independent loggers or smaller operations such as Evanston Lumbering Company and Burris and Bennett. Fewer ties

9 Reed likely is referencing the dense stands of lodgepole pine when he writes about white Norway pine, as they are visually similar to an untrained land surveyor. Samuel B. Reed, *Union Pacific Railroad: Report of Samuel B. Reed of Surveys and Explorations from Green River to Great Salt Lake City* (New York: Union Pacific Railroad Company, 1865), 11.

Figure 3. Standard Timber Company crews constructing aspen and willow cribbing to protect irrigation canals from being filled with railroad crossties in the Mill Creek area, ca. 1912–1913.
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came out of the Black's Fork and Smith's Fork drainages to the east.[10]

While not strictly constructed for use in the tie cutting industry, the thirty-mile Hilliard Flume and six-mile Howe Feeder Flume along the Bear River played a pivotal role in the development of timber on the North Slope. Built in 1872, the Hilliard Flume floated ties, poles, sawed timber, and firewood from the headwaters of the Bear River in Utah to Hilliard, Wyoming, near the railroad grade. The elevated flume, sometimes as high as twenty feet off the ground, was an engineering feat and tourist attraction for travelers on the Union Pacific. The flume was largely dismantled during the 1880s and 1890s after the timber supply in the area had been exhausted, and the salvaged materials were used as building supplies for ranches in Wyoming.[11]

While the flume had enabled timber to be

10 Scott Thybony, Rober G. Rosenberg, and Elizabeth Mullett Rosenberg, *The Medicine Bows: Wyoming's Mountain Country* (Caldwell, ID: Caxton Press, 1985), 60; James E. Ayres, "Transcription of Bill of Exceptions, Case of Amos Mosher vs. The Hilliard Flume and Lumber Company," 1975, Uinta-Wasatch-Cache National Forest Supervisor's Office, South Jordan, Utah; James E. Ayres, Transcription of "Bill of Exceptions, Case of B. F. Woods vs. The Hilliard Flume and Lumber Company," 1975, Uinta-Wasatch-Cache National Forest Supervisor's Office, South Jordan, Utah. In 1882 approximately 80,000 railroad ties for the Oregon Short Line railroad, 25,000 for the Utah and Northern railway, and 35,000 mining props for Rock Springs coal mines floated down the Black's Fork River by Coe & Carter. See "Local Intelligence," *Uinta Chieftain*, June 3, 1882, 3.

11 Katie Toponce, *Reminiscences of Alexander Toponce, Pioneer* (Salt Lake City: Century Printing Company, 1923), 190; Frederik E. Shearer, ed., *The Pacific Tourist: An Illustrated Guide to the Pacific Railroad, California, and Pleasure Reports across the Continent* (New York: Adams and Bishop Publishers, 1879), 107.

transported nearly year-round, the loggers in the Uintas generally operated on a seasonal round with cutting occurring in the fall and winter. Heavy spring melt swelled the rivers and allowed cutters to float their ties to market. From 1867 to 1938, the Bear River, Black's Fork, and Smith's Fork witnessed many years of spring tie floats, some reaching upwards of 500,000 crossties per year or roughly one million trees[12] (table 1). Tie drivers, called river rats in other logging areas of the United States, followed the flow from the mountains all the way to docks at Granger, Hilliard, Almy, and other locations along the Union Pacific railroad. Tie drivers used long hooked poles called pickaroons to dislodge jams of ties and keep the flow moving downstream. Seasonal floats were the cheapest method to get the nearly half-million ties to the railroad grade but wreaked havoc to downstream irrigation canals by choking them with ties once a year. After 1912, the Standard Timber Company constructed, without much long-term success, protective cribbing at diversion points for canals to prevent this damage (fig. 3). This yearly cycle of ties damaging irrigation canals led to several lawsuits in the twentieth century and helped lead to cessation of floating ties off the North Slope in 1939.[13]

Splash dams were a common means of damming a small stream or river to create an impoundment upstream. Each dam's interior was lined with lumber and had at least one large gate or sluice opening (fig. 4). During the spring thaw, tie cutters pushed the parked ties into the reservoir. Once the reservoir was full of ties, they would open the sluice gate and let the ties burst forth into the channel. A dam still chokes the Stillwater Fork of the Bear River that once diverted water into the Howe Feeder Flume of the Hilliard Flume, although water has found its way through the tangled mess of logs and cribbing.[14] Only one intact splash dam on the North Slope dates to the 1860s and 1870s. Others at Mill Creek and Steel Creek are in fair condition given their constant exposure to damp and wet conditions.[15]

The last decades of the nineteenth century signaled a decline of the tie industry. Construction of the Denver & Rio Grande Railway led to a shift of tie cutting in the Weber and Provo river drainages, with ties floated to Echo and Wanship on the Weber and down Provo Canyon on the Provo. Construction of Union Pacific's Oregon Short Line spur lines from Echo Canyon to Park City led to tie cutting and floating along the Weber River, while on the Denver and Rio Grande Western Railway, construction on the west flank of the Wasatch Mountains led to cutting along the Provo River and floating into Provo. On those rivers, declining demand, poor remaining wood quality, and low river flows led to the last documented drive in the early 1890s. A national economic recession in the 1890s led to the Union Pacific cancelling all contracts with Coe and Carter and to the company shutdown in 1895. It is likely that during the next few years tie cutting continued as a minor industry, as existing railroads still needed annually between 200 and 300 replacement ties per mile of track. Likely due primarily to patterns of low demand, little to no historical evidence points to tie cutting and driving on the North Slope between 1895 and 1912. According to a 1915 article in the *Timberman*, "from 20 to 30 years ago many of the streams of the Uintah range were driven for ties and mining timber."[16]

Tie cutting witnessed a resurgence nationally after 1900 and on the North Slope after 1912 due to

12 An article in 1915 indicated that Standard Timber cut approximately 700,000 ties on the North Slope, although no other documentation establishes this. "Salt Lake and Utah," *Lumberman* 16, no. 7 (1915): 50. The first recorded mention of automobiles hauling railroad ties off the north slope of the Uinta Mountains occurred in 1934, as there were 100,000 ties stranded due to water shortages. *Ogden Standard-Examiner*, July 5, 1934, 15. While specific data for the number of ties floated each year is not currently available, newspaper articles suggest that between 1930 and 1935 the Standard Timber Company annually cut between 200,000 and 300,000 ties from the Uintas. *Ogden Standard-Examiner*, September 29, 1935, 12.

13 George Loff, "Tie Driving in Wyoming," *Cross-tie Bulletin* 3 (1922): 12; F. S. Baker and A. G. Hauge, "Report on Tie Operation, Standard Timber Company, Uinta National Forest, 1912–1913," 33, unpublished report on file at Uinta-Wasatch-Cache Supervisor's Office, Salt Lake City.

14 James Ayres, "Howe Flume National Register of Historic Places Nomination," 1978, on file at Antiquities Section, Utah Division of State History.

15 Archaeological Site Forms (42SM21 and 42SM70), on file at Antiquities Section, Utah Division of State History.

16 Lyndia Carter, "'Tieing' Utah Together: Railroad Tie Drives," *Utah History Blazer* (July 1996): 10–11; Thybony, et al., *The Medicine Bows*, 63; "Salt Lake and Utah," 50.

TABLE 1. NUMBERS OF RAILROAD TIES FLOATED DOWN BLACK'S FORK AND SMITH'S FORK OF THE GREEN RIVER

Black's Fork	*1882*	105,000	*Uinta Chieftain*, June 3, 1882, 3
	1915	400,000 [1]	*Salt Lake Telegram*, May 17, 1915, 2
	1916	500,000 [2]	*Ogden Standard-Examiner*, May 20, 1916, 5
	1919	250,000 [3]	*Salt Lake Telegram*, December 24, 1919, 1
	1920	450,000 [4]	*Salt Lake Telegram*, February 18, 1920, 2 and July 28, 1920, 2
	1921	450,000	*Salt Lake Telegram*, May 17, 1921, 5
	1929	180,000 [5]	*Ogden Standard-Examiner*, July 23, 1929, 2
	1935	175,000	*Ogden Standard-Examiner*, June 3, 1935
Smith's Fork	*1929*	180,000[5]	*Salt Lake Tribune*, May 15, 1929, 7
	1935	250,000	*Salt Lake Telegram*, May 27, 1935, 10

[1] Tally were those hung up from a poor flow year in 1914 but freed in 1915.

[2] Newspaper account notes that most of the 500,000 estimate are ties, though not all.

[3] Ties cut in spring 1918 but hung up due to poor flow.

[4] Almost all were hung up during the year due to low water, and did not make it to market that year.

[5] *Ogden Standard-Examiner* article states that 180,000 ties were floated on the Black's and Smith's forks, but it does not provide specific numbers per river.

Note that these numbers are based on available historical data and are not comprehensive.

a growing economy and a rapid expansion of existing railroads and a growth of new spur lines. By the early 1900s, nearly one-fifth of America's annual timber harvest was going to the railroad industry, and demand was only increasing—between 1890 and 1919, the need for crossties expanded from 64 to 145 million per year. Of course, this demand was not uniform across the Intermountain West; the Uinta Mountain headwaters of the Provo and Weber rivers were not heavily cut for ties after the 1890s. This changing landscape of railroad construction and maintenance led to intensification of logging on the North Slope through the arrival of the Standard Timber Company. Organized in 1912 in Lincoln, Nebraska, by D. M. Wilt, Standard Timber Company established its headquarters in Evanston, Wyoming, and began preparations for cutting over the North Slope. To kick off this venture, Standard Timber signed a contract in 1912 with the Union Pacific to supply seven million ties within nine years.[17]

Wilt was a longtime logging company operator in Colorado but had been chased out of that state for timber poaching—cutting on Federal Reserve lands without permission or royalties. After decades of heavy private and corporate abuse of grazing, timber, and mineral lands held in the public trust, the federal government had enacted the Forest Reserve Act of 1897 to provide for the protection and conservation of watersheds and natural resources. With the creation of the United States Forest Service (USFS) in 1905, the government took greater command of forest and timber resources. Due to the lack of homesteading lands in the North Slope, much of the mountain range became variably part of the Ashley, Wasatch, and Uinta national forests. The only remaining inholdings of private land resulted from the 1862 and 1864 Railway Land Grant Acts that transferred ownership of public domain lands to railroad companies to spur railroad construction. These lands were granted in a checkerboard pattern of alternating, one-mile-square sections for a distance of ten miles on each side of the railroad line.[18]

17 Olsen, *Depletion Myth*, 4; Nelson C. Brown, *Forest Products, Their Manufacture and Use* (New York: John Wiley & Sons, 1919), 263; Baker and Hauge, "Report on Tie Operation, Standard Timber Company, Uinta National Forest, 1912–1913," 1.

18 Ayres, "Standard Timber Company Logging Camps on the Mill Creek Drainage, Uinta Mountains, Utah," 179–80; Alexander, *The Rise of Multiple-Use Management*

Figure 4. Overview of a splash dam at Mill Creek. Archaeology suggests it was constructed before 1890 given the lack of modern nails, but was reused by Standard Timber Company after 1913.
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U.S. Forest Service

In the winter of 1912–1913, Standard Timber Company established its North Slope logging headquarters on Mill Creek, a tributary of the Bear River approximately 35 miles south of Evanston. At this location, Standard Timber constructed a two-story log cabin commissary and a number of supporting buildings, including a blacksmith shop, accounting office, doctor/dentist office, storerooms, and cabins for temporary housing (fig. 5). The Mill Creek Commissary held all the provisions a tie cutter would need: tools (axes, saws, pickaroons, and tie sleds), canned foodstuffs, clothing, and personal items like harmonicas. A 1913 report by two USFS employees illustrated that the costs of these goods at the Mill Creek Commissary were at least twice that of a comparable store in Ogden, Utah. This demonstrated to the USFS employees that Standard Timber Company was gouging its workforce to maintain high profits. The lack of a different consumer option meant a fifty percent markup for Standard Timber.[19]

Unlike the previous decades of cutting ties on the North Slope, with individuals working for themselves and controlling their own production, Standard Timber offered work to tie cutters but did not make them formal employees.[20] These loggers, sometimes known as gyppos, were assigned timber stands for cutting and worked alongside tie cutters, haulers, and drivers as part of a complex system of tie production and delivery.[21]

in the Intermountain West, 21; Robert Athearn, *Union Pacific Country* (Lincoln: University of Nebraska Press, 1976), 32.

19 Baker and Hauge, "Report on Tie Operation, Standard Timber Company, Uinta National Forest, 1912–1913," 41–44.

20 R. T. King, *The Free Life of a Ranger: Archie Murchie in the U.S. Forest Service* (Reno: University of Nevada-Reno Press, 1991), 74.

21 "Haulers" would pick up finished ties from stacks placed along the edges of strip roads and take them to areas near creeks or splash dam reservoirs, while

Figure 5. Mill Creek Commissary in background, with tie cutters piling, or banking, finished railroad crossties to be floated downstream in the spring, ca. 1912–1913. The splash dam would be a few hundred yards to the right (north).

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By spring of 1913, Standard Timber had at least 150 loggers working the Mill Creek drainage. To avoid paying royalties to the Forest Service, the company focused its initial logging efforts on those lands owned by the Union Pacific. By 1915, however, those lands had been worked over, forcing the company to cut on USFS lands through contract and permits, working east towards the Black's Fork River.[22]

Without use of any flumes, the loggers shifted back to a winter cutting and spring floating cycle. Cutting in winter was beneficial for two main reasons. First, this allowed tie cutters to shift employment during the summer months to other pursuits such as farming or to follow the ties to market on drives. Second, and most importantly, heavy snowfall in the Uintas allowed the transport of ties from the cutting fields to banking areas along streams through use of horse-drawn sleds. These two-horse team-drawn sleds carried several dozen ties at a time, sliding across the thickly drifted snow and ice. A lasting reminder of this winter logging cycle are hundreds of high-cut stumps, or those lodgepole and spruce trees that had been cut sometimes as high as six feet above the ground (fig. 6).

The Standard Timber Company loggers and others venturing into the mountains focused their blades on lodgepole pine and spruce of a certain size and age. To maximize efficiency in cutting, loggers focused on trees that measured between eight and ten inches in diameter at chest height. Felling was done with a single-man saw and with a broad axe used to trim the log into a squared railroad tie. A sin-

"drivers" would follow the ties during the spring float and break up log jams and keep the product moving to market.

22 Baker and Hauge, "Report on Tie Operation, Standard Timber Company, Uinta National Forest, 1912–1913"; "Salt Lake and Utah," 50.

Figure 6. The author stands beside a high-cut stump, approximately 5'8" tall, located near Archie Creek Camp, 2015.
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gle tree yielded two eight-foot lengths with seven-inch faces (sides). According to the 1913 Forest Service report, a tie cutter could fell and buck upwards of twenty railroad ties per eight to ten-hour day (fig. 7). With Standard Timber Company paying 17 cents per first-rate cross tie, the average tie cutter made about $3.40 per work day. By the early 1920s, though, surplus workers and abundant supplies of crossties had decreased wages by 25–30 percent, according to a 1922 report.[23]

When tie cutters moved into a new area for harvesting, they constructed their own cabins and supporting structures, which cut into their profits. Constructing and furnishing each cabin with doors, bunks, tables, windows, and a stove cost about $23.34 and required about twenty-two days of labor. Tie cutters used the Standard Company commissary to acquire tools, food, and clothing. With a normal tie camp in the 1910s comprised of at least three cabins, and supporting about three to six men, the costs quickly escalated.[24] Archaeological evidence suggests that these cabins ranged in size from ten by ten feet for small individual or dual-occupancy cabins to twenty-five by forty feet for barns and cookhouses (fig. 8).[25] Interiors of cabins covered with logs individually numbered in lumber crayon provide evidence that tie cutters often deconstructed, moved, and rebuilt cabins as they moved from one area to another.[26]

23 "Conditions in Railroad Tie Industry Discussed at Producers' Annual," *Southern Lumberman*, February 4, 1922, 40.

24 Baker and Hauge, "Report on Tie Operation, Standard Timber Company, Uinta National Forest, 1912–1913," 23.

25 Archaeological site data is contained with the Uinta-Wasatch-Cache National Forest Heritage Program site records, located in South Jordan, Utah, and the Utah Division of State History Antiquities Program Site Records in Salt Lake City, and is not accessible by non-archaeologists per federal and state laws for sensitive information.

26 Personal communication with James Ayres, August 3, 2014.

Figure 7. Tie cutter sporting an ascot, bucking a tie, or cutting it into two eight-foot lengths in the Mill Creek area of the Uinta Mountains.
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U.S. Forest Service

From 1912 to 1916 most of Standard Timber logging efforts reportedly focused on the Mill Creek area, with a second commissary constructed on the Main Fork of the Black's Fork River, approximately ten miles east, finished in 1916. From the twenty-two-cabin Black's Fork Commissary, which is still the most visible and visited historic site on the North Slope today (though on private land), tie cutters moved into the headwaters of the East, Middle, and West forks of Black's Fork. Cutting continued on these streams throughout the 1920s. A final commissary was established on Steel Creek, a tributary of Smith's Fork, in 1920 or 1921. Steel Creek was eight miles east of the Black's Fork Commissary and was the major hub of cutting activity from the Wyoming/Utah line all the way up to tree line at 10,000 feet. As seen from the location and dates of commissaries, tie cutting in the post-1900 period generally moved west to east. No tie cutting was likely done on Henry's Fork, further east, due to the river's course, which would have floated railroad ties over 70 miles downstream of the railroad, too far to be hauled to the railroad sidings at Green River, Wyoming. Standard Timber Company operated additional cutting areas in the Wind River Mountains of Wyoming and floated ties over 130 miles to tie pullouts at Green River City throughout the 1920s and early 1930s.[27]

A remarkable shift in the labor force occurred between 1867 and the 1910s. From what little historical evidence exists, most nineteenth-century loggers on the North Slope were only part-time cutters. Many ventured back to farms and ranches in Wyoming or Utah during the summer months. Most appear to have been of Anglo-Irish or European descent, although we know little about the nationalities and backgrounds of the men and women who worked

27 After 1903, ties pulled out at Granger, Green River, and other locations were likely sent for preservation treatment at the Union Pacific facility in Laramie. Quincy Craft, "Timber Conservation in Wyoming," *American Forestry* 26 (1920): 740–41.

and occupied in nineteenth-century tie cutting camps. With the arrival of Standard Timber in 1912, foreign-born professional tie cutters and loggers from Sweden and Finland began to dominate the labor force. It appears that some might have been experienced loggers from the Midwest, but others directly emigrated from Europe to Wyoming. Due to the lack of any federal or state population census until 1930, limited demographic information is available.

World War I draft cards dated 1917–1918 provide information on the nationality of loggers at the Black's Fork Commissary, which included a majority of Swedes and Norwegians, with additional cutters and tie drivers from Bulgaria, Austria, Turkey, Finland, Russia, Germany, and Canada. The military exempted from the draft nearly all Standard Timber loggers due to the national strategic need for railroad ties.[28] The sole 1930 Federal Census, erroneously labeled "Henry's Fork Tie Camp"—almost certainly the Steel Creek Commissary—provides evidence of the shift in demographics.[29] Unlike the 1910s, the majority of those enumerated at the camp were American born, with those from Sweden, Finland, Norway, Canada, and Germany rounding out the national backgrounds. Interestingly, though, nearly all of the American-born workers had parents whose birthplaces were in Sweden or Finland. In many cases tie cutting, and logging in general, was a family affair, and these second-generation immigrants were continuing the tradition. Ranger Archie Murchie's accounts include stereotypic views of Swedish and Finnish immigrants and even a number of 1930s-era derogatory comments about transient "Okie" loggers from Oklahoma and Missouri.

Dominance of the tie cutting industry by northern Europeans led to unique cultural facets of life on the North Slope. As Forest Service ranger Archie Murchie described, loggers "played all Scandinavian music, and, of course, did Scandinavian dances. They had one dance they danced a lot—they called it Hambo, as close as I can pronounce it. They danced a lot, and most times they had a few whiskey bottles passing around too, which added to their good time." While no examples have been found archaeologically, Murchie mentions that camps organized by Finnish tie cutters possessed log cabin saunas that provided a cultural continuity for the loggers and also a warm respite to the sometimes-frigid conditions of the Uintas' long winters.[30]

Oral histories and census records provide a small glimpse into the inner workings of those camps and alter the perception of all-male logging camps. "There were no women in the camp," Murchie recalled, "so they would take turns on who would be the women and who would be men for dancing. Sometimes they'd tie a ribbon or handkerchief around the fellow's arm, and he was a woman." While a colorful anecdote of a seemingly womanless landscape, Ranger Murchie's oral history does not reflect other historical evidence to the contrary. Murchie contradicts his own statement to describe how the wives and children of the loggers assisted in the peeling of bark from felled trees and helped to stack, or park, ties along roads for pick up in 1934–1935. In 1913, of the 181 individuals discussed in the report, there were only 20 women, many of whom appeared to be wives of the loggers in the satellite camps surrounding the Mill Creek Commissary.[31]

In 1916, Mrs. A. Pearson gave birth to the first documented baby (a boy) on the North Slope at the Mill Creek Commissary.[32] By the 1920s and 1930s, logging on the North Slope had definitely become a family affair, with women and children appearing in census records and oral histories. At the Steel Creek Commissary, where a small school operated for at least one year in the 1920s, the 1930 census shows 13 women and 20 children in addition to the 65 men. A thin sheet-iron corset hook found by archae-

28 U.S. World War I Selective Service System Draft Registration Cards, 1917–1918, data online at ancestry.com from National Archives and Records Administration, Washington, D.C.

29 *Bureau of the Census, Fifteenth Census of the United States, 1930*, National Archives and Records Administration, Washington, D.C.

30 King, *The Free Life of a Ranger*, 79. Archaeologists have documented sauna remains in Northern Michigan associated directly with Finnish hardwood logging camps. John G. Franzen, "Northern Michigan Logging Camps: Material Culture and Worker Adaptation on the Industrial Frontier," *Historical Archaeology* 20 (1992): 90.

31 King, *The Free Life of a Ranger*, 79; Baker and Hauge, "Report on Tie Operation, Standard Timber Company, Uinta National Forest, 1912–1913," 33.

32 *Wyoming Times*, March 30, 1916, 8.

Figure 8. Tie cutter's camp on MacKenzie Creek, near Mill Creek, ca. 1912–1913. Note the cross country skis leaning against the cabins. These were used to access the cutting fields in the winter.
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U.S. Forest Service

ologists at a tie camp near Mill Creek Commissary provides tangible proof of the presence of women at these camps, although we must always be wary of assigning gender to certain artifacts (fig. 9).[33]

From an archaeological perspective, there is yet more to be learned about camp life and demographics within these remote logging camps that could challenge and support the historical record. As noted by Murchie's description of drinking during Scandinavian dancing at Steel Creek, workers consumed large quantities of alcohol. Standard Timber Company, however, prided itself on running a dry camp and did not provide any alcohol at the commissaries, at least according to the 1913 Forest Service report.[34] Artifacts at dozens of sites on the North Slope tell a different story: Standard Timber employees consumed significant amounts of

33 Christopher W. Merritt, Rachelle Green, and Tom Flanigan, "Preliminary Report on Uinta-Wasatch-Cache National Forest Archaeological Collections," Uinta-Wasatch-Cache National Forest, Supervisor's Office, Salt Lake City, Utah, 2011.

34 King, *The Free Life of a Ranger*, 79.

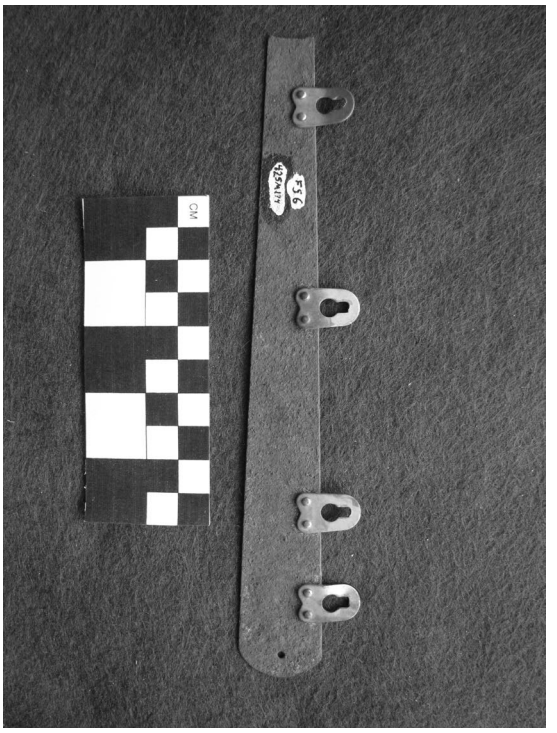

Figure 9. Corset hook recovered from a tie cutter camp on MacKenzie Creek near Mill Creek, possible evidence of women or a uniquely dressed man.

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Midwestern beer produced by Schlitz, Blatz, and Miller and bottled by William Franzen and Sons in Milwaukee. Stoneware whiskey crocks emblazoned with the cobalt-blue logo of a distributor in Evanston are found at nearly every camp. Archaeologists also found numerous pint-sized whiskey flasks at the bases of stumps in the cutting fields, far from camp, forming an image of a person taking a break during a long winter's day to imbibe with something stronger than water.[35] Of course, bottles of these types might have been used to hold water for keeping saws cool and for use in sharpening, but they likely first contained something far more stimulating.

Archaeological sites and artifacts are all that remain of this once-prosperous industry that dominated the Uintas for nearly a century. After years of dealing with legal proceedings from irate ranchers tired of having their canals and ditches fouled by the seasonal floats, Standard Timber manager Malcolm McQuaig announced the end of winter cutting and tie floating in October 1939.[36] The following year, 1940, the Union Pacific Railroad discontinued the use of hand-hewn and river-driven ties; the last known sawmill-manufactured ties floated down the Wind River of Wyoming in 1946.[37] Introduction of gasoline-powered chainsaws, diesel sawmills, and heavy trucks into the logging world radically changed the way trees were cut. All these factors led to the abandonment of the traditional industry of hand-cut railroad ties, at least on an industrial level. Standard Timber Company continued operations in the 1940s, and slowly faded to memory. In the post–World War II period, logging transitioned toward a broader suite of products and milled products, with workers traveling from nearby towns or living in makeshift and portable frame cabins. In his autobiography, retired USFS forester Isaac E. Smith noted that the new timber sales on Smith's Fork in the late 1930s and early 1940s "was well opened up with roads built by the Forest Service and strip roads left by the tie hacks," which facilitated the use of trucks, and "our 1 ½ ton trucks were driven along the strip roads and loaded by hand," replacing the horse-drawn sleds of the previous eras. The heyday of the tie cutter had passed.[38]

Today, the legacy of tie cutting covers nearly every ridge, valley, and bench on the North Slope of the Uinta Mountains. Decades of archaeological research have identified over 200 sites containing the remnants of over 500 cabins that range in date from the 1860s to the 1950s. In other areas the loggers never left, as evidenced by the Suicide Park graves on the Wyoming/Utah state line on Smith's Fork. The graves of three tie hacks, who were reputed to have committed suicide due to being infirm or elderly, rest peacefully under aspen trees and

35 Unpublished archaeological artifact catalog for Steel Creek and Mill Creek Commissaries, and MacKenzie Creek Camp, on file at Uinta-Wasatch-Cache National Forest Supervisor's Office, South Jordan, Utah.

36 *Ogden Standard-Examiner*, October 1, 1939, 3.

37 Rosenberg, "Woodrock Tie Hack District, Bighorn National Forest Cultural Resource Management Plan," 9–10.

38 Isaac E. Smith, "Autobiography of Isaac E. Smith," 1979, 47–48, on file at U.S. Forest Service Region 4 Headquarters, Ogden, Utah.

a ramshackle pole fence. While it is unclear if the remains of Ole Olson, Charlie Mattsen, and Jack Rose actually rest within this solitary graveyard, the site portrays the harsh life and unforgiving circumstances of tie cutters past their prime.[39] Collections made by archaeologists have helped our understanding of the types of food and drink they consumed, and the discovery of harmonica reeds, Swedish language newspaper clippings, and canned fish can tell a more human story than can historical documents alone. Work by the Forest Service and others continues to document and catalog the remains of these contributors to the building of the West.

Looters and vandals in search of bottles and cans have decimated many of these sites' archaeological deposits, with those looters taking significant pieces of American history and turning them into objects of status or wealth. For example, the original Coe & Carter camp on the Black's Fork River was systematically looted in the 1980s with entire trenches cut through standing cabins.[40] In other sites, walls of cabins have been torn down to fuel campfires or for simple pyromaniacal joy. During a volunteer project in 2000, archaeologists spent weeks mapping the Mill Creek Commissary site, only to find that overnight someone had excavated several yards of soil, displacing thousands of artifacts and destroying the mapping system.[41]

An uninformed traveler of the Mirror Lake Highway might pass a solitary cabin, roof fallen and barely visible above the shrubbery, and never even realize the contribution of its former occupant to the completion of the Transcontinental Railroad and the arrival of a truly continental flow of goods, people, and ideas. As is not uncommon in archaeology and history, the story of the North Slope cutting industry will never be completely documented and explicated, but that is part of the fun and mystique of getting hands on with the past. Thanks to the work of dedicated historians and archaeologists and the continued preservation efforts of Forest Service personnel, the tie cutting industry will continue to be interpreted and preserved until the last log decays into the earth to feed the next generation of lodgepole and spruce.

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WEB EXTRA

Visit history.utah.gov/uhqextras to take a guided tour with Christopher Merritt at several tie-hacking and logging sites on the North Slope and to view a gallery of historic photographs of tie-hacking operations and color contemporary photographs of the archaeological remains. We also offer an interview with Dr. Merritt to discuss the tools, methodologies, and insights of historical archaeology.

39 Death records for Rose and Mattsen suggest they were actually buried in Robertson, Wyoming. No record of Jack Rose's death exists. See Death Certificates at the Utah State Archives and Records Service, Salt Lake City, Utah.

40 Personal communication with James E. Ayres, July 21, 2012.

41 Charmaine Thompson, notes for site 42SM70, August 2000, on file at Uinta-Wasatch-Cache National Forest, Supervisor's Office, South Jordan, Utah.

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