

PHANTOMS ON THE LAND: ANIMALS, GHOST TRAILS, AND
WILDERNESS IN YELLOWSTONE NATIONAL PARK

by

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ABSTRACT

Yellowstone National Park is a landscape of ghosts, with a plethora of purposefully unmapped trails in the sea of wilderness. These pathways and the associated maps that silence them unveil the lost stories of the manufacturing of a wild Yellowstone. Early Park administrators constructed a distorted cartographic narrative of a wilderness, one safely devoid of Native Americans and teeming with wildlife and geysers, ready for consumption by Euro-Americans. In comparing the contemporary landscape archive with cartographic sources that span early Euro-American fur trappers to the Army period in the Park, this paper traces the construction of Yellowstone wilderness through the emphasis on trails and wilderness landscapes. Ghost trails, present on the land but not depicted on maps, were an attempt by the mapmakers to create and control a uniform wilderness within the confines of Park boundaries. Maps by William Clark, John Dougherty, and Jim Bridger, along with exploration maps by W.W. de Lacy, administrative maps by P.W. Norris, and road maps by the Army Corps of Engineers, expose trail erasures that solidified a Euro-American wild Park. In revealing these cartographic exorcisms, we gain a better understanding of the formation of the Park and its resulting mythology as a remote wilderness, along with the materialization of power over the region's complex identity. Ghost trails expose traces of human values, notions of territoriality, and power over identity that attests to the complexities of demarcating and constructing Yellowstone National Park as a wilderness area.

WILDERNESS AND WONDERLAND

Yellowstone National Park is a landscape of ghosts covering many miles and environments in the upper Rocky Mountains. Unmapped trails lying dormant in the sea of wilderness unveil the lost stories of Yellowstone. The heart of the region is the volcanic caldera that produces geysers and mud pots bubbling skyward on top of an abundance of waterways creating an idyllic habitat for beavers. These fur-bearing rodents, along with geysers, initially lured Euro-Americans to the region in the nineteenth century. Before the Euro-American presence, Native Americans frequently used the area as a thoroughfare to reach the bison on the Midwestern plains.¹ Yellowstone National Park is often sold to the public as a remote wilderness area: large swaths of land devoid of people, teeming with wildlife, and just waiting to fix whatever ills modern life thrusts upon humans. Inherent within the idea of Yellowstone as a wilderness area is the implication that humans are somehow preserving nature for a greater good and that left untouched, the land will return to its former pristine state before human meddling messed it up. Yet, as historians have demonstrated in recent years, wilderness is a human construct.² One key way in which Euro-Americans, through settlement and administration, produced wilderness in the American West was by utilizing trails, and nowhere is this more apparent than within the boundaries of Yellowstone National Park. How did Yellowstone's administrators

¹ Mark Spence, *Dispossessing the Wilderness: Indian Removal and the Making of the National Parks* (New York: Oxford University Press, 1999), 46.

² William Cronon. "The Trouble with Wilderness; or Getting Back to the Wrong Nature' Uncommon Ground: Rethinking the Human Place in Nature." In *The Trouble with Wilderness; or Getting Back to the Wrong Nature' Uncommon Ground: Rethinking the Human Place in Nature*, 1st edition. New York: W. W. Norton & Company, 1996.

create the imagery of wilderness for the Park and what ends does this depiction serve? This thesis will argue that trails in particular can reveal the early process of wilderness construction in the years before 1918 when the National Park Service took over Yellowstone's administration.³ Even as the NPS took up the mantle of Park management, the mythology surrounding of Yellowstone as wilderness place had already been firmly established by previous administrators and tourists. Through the production, mapping, and erasure of trails before 1918, Park administrators played a vital role in producing the wilderness image of Yellowstone. Control over these trails enabled tourism, dispossession of the Native land claims, and power over the complex uses of the Park region.

When tourists and administrators depict Yellowstone Park, often the concentration is on the features accessible from paved roads, like Old Faithful, the Grand Canyon, and buffalo and elk jams at the Mammoth. Yet, behind these popular, nation-defining tourist attractions, the wilderness implicitly and powerfully still lurks in these images and in popular imagination, the unspoken incubator of the traces of wilderness the road-bound tourists see. This different landscape is always present in the conversations, photographs, and popular culture that collectively or together renders Yellowstone as wilderness place. The existence of a mythic wilderness beyond the paved roads validates the depiction of the Park as a wild place. In a way, this silent presence excuses the ecological harm and excesses inherent with the large numbers of tourists driving within the Park. The difference between Yellowstone and an animal farm with bison or elk is the

³ Although the National Park Service was founded in 1916, they did not take over administration of the Park until 1918.

backcountry, the wilderness silently looming in pictures and the imaginations of over three million yearly visitors.

Nevertheless, as William Cronon famously argued, wilderness-- at least in its modern ideological form-- is certainly a construct of human culture and industrialization, as the true artificiality of the Park and its associated wilderness is readily obvious. Yet, the image of wilderness remains a strong ideal in the photographs and the imaginations of the Park's true believers. From the early ennoblement of the region's thermal features by early explorers and administrators, to the direct marketing schemes implemented by the Northern Pacific Railroad, Euro-Americans have long constructed the Park as a wild space, fit only for tourism, not for settlement and development. "By the second half of the nineteenth century," Cronon notes, "the terrible awe that Wordsworth and Thoreau regarded as the appropriately pious stance to adopt in the presence of the mountaintop God was giving way to a much more comfortable, almost sentimental demeanor. As more and more tourists sought out the wilderness as a spectacle to be looked at and enjoyed for its great beauty, the sublime in effect became domesticated."⁴ Yellowstone National Park demonstrates this remarkable shift, and trails in particular were a significant agent for the domestication and creation of a wilderness within Park boundaries.

Before March 1, 1872, when President Grant signed the legislation creating Yellowstone Park, the region was included within the western territories of the United States.⁵ The primary draw for Euro-Americans to the area before the American Civil War

⁴ Cronon, 12.

⁵ "Yellowstone Act, 1872." *America's National Park System: The Critical Documents - Edited by Larry M. Dilsaver*. Accessed February 3, 2016. http://www.nps.gov/parkhistory/online_books/anps/anps_1c.htm.

was fur trapping and subsequently mining. Native Americans had been using the Yellowstone country for thousands of years as a thoroughfare to bison on the plains east of the Rocky Mountains and hunting and fishing grounds. Animals inhabited the area, creating pathways to and from grazing grounds and water sources. All of these activities created trails, with varying degrees of usage and visibility on the landscape. After 1872, particularly with an uptick in tourism, Euro-Americans created new trails specifically to view natural scenic and thermal features. At the same, they also erased older trails after 1872, particularly through renaming and mapping trails. The *ghost trails*, still present on the land but not depicted on maps, were an attempt by settlement-era mapmakers to create and control a uniform wilderness within the confines of Park boundaries. These trail deletions ultimately enabled Yellowstone's image as a wilderness, which is to say, a place devoid of unauthorized users and their resultant trails. Ironically, the preservation of the wild lay in maximizing control.

Yellowstone as a wilderness is often viewed as a static landscape, although scholars have soundly debunked this myth.⁶ Yet, between tourists wishing to see wild land and wild animals and National Park Service policies relating to the ecological policy

Aubrey L. Haines. *The Yellowstone Story : A History of Our First National Park : Volume 1*. Rev Sub edition. Yellowstone National Park, Wyo. : Niwot, Colo: University Press of Colorado, 1999.

⁶ Some of the more prominent analysis of the wilderness myth and Yellowstone are the following:

Karl Jacoby. *Crimes against Nature: Squatters, Poachers, Thieves, and the Hidden History of American Conservation*. 1 edition. University of California Press, 2001.

Paul Schullery, "Past and Future Yellowstones: Finding Our Way in Wonderland." Wallace Stegner Center Lecture | S.J. Quinney College of Law. Accessed September 23, 2015.

<http://www.law.utah.edu/event/wallace-stegner-center-lecture/>.

Paul Schullery and Lee Whittlesey. *Myth and History in the Creation of Yellowstone National Park*. Lincoln: Bison Books, 2011.

Paul Schullery, *Searching for Yellowstone: Ecology And Wonder In The Last Wilderness*. 1st edition. Helena, Mont. : Guilford, Conn: Montana Historical Society Press, 2004.

of “Natural Regulation,” the wilderness myth remains strong.⁷ Trails continue to enable the myth by masking the human environmental roles and the human hand in the formation of the landscape. Simply, the trails allow us to create the wilderness image and allow the administrators of the Park to continue to exert control over the myth. This wild image relied strongly on the existence of a so-called wild, remote, sublime region beyond the paved roads of the “Beltway” also known as the Grand Tour. By controlling trails - including erasing and abandonment - administrators controlled the idealization of a wild Yellowstone, packaging it as safe, yet also still a “wilderness” for tourism. An inherent tension between trails and wilderness mythology rests in the function and creation of trails by humans. The trail serves as both a tool of transport and as a conduit for humans to access the wild spaces beyond the paved roads. By its nature, the trail facilitates a wilderness ideal of the sublime wild, while at the same time allowing humans to access the mythical places. Inherent to this wilderness image lies the control over the trails, including changes over time of the visual representation of the trails in the maps. These maps demonstrate that through control and erasure of a visual representation of the trails, Park administrators formalized the romanticism of the wild Park. This paper will interrogate the creation, depiction, and utilization of trails in the formation of the idealization of Yellowstone National Park as a wilderness Park.

⁷ Kurt Alt, and Michael R Frisina. “Natural Regulation and Yellowstone National Park: Unanswered Questions.” *Rangelands* 22, no. 5 (2000): 3–6.
Charles Edwards Kay “Yellowstone’s Northern Elk Herd: A Critical Evaluation of the ‘natural Regulation’ Paradigm.” Utah State University Dept. of Wildlife Ecology, 1990.

Introduction to a Wild Park

Both historians and hikers often view trails as a simple method of funneling movement from a point A to point B⁸. However, trails as physical entities reveal much more about the landscape, movements within the landscape, and culture surrounding the trails than we assume. Trails act as a physical outlet for people and animals to leave a cultural imprint on the landscape. It is through the study of these trails that both the physical aspects and cultural aspects of landscape may be studied side by side. Trails in the Greater Yellowstone Ecosystem have a long history, reaching back for thousands of years.⁹ By having such a deep history within the landscape the trails gain historical weight, thus necessitating their integration into historical analysis. However, due to their long existence, it is extremely difficult to mark beginnings and ends. The basic definition of the word trail refers to the verb, rather than the noun, form.¹⁰ Here again, the transitory nature of trails is revealed through language usage. The diversity of trail actors lends itself to immense complexity, particularly when attempting to determine who created and maintained which trail. Diverse cast historical actors, including non-human animals, fur trappers, and Native Americans, in addition to Euro-Americans, energetically created and utilized trails within the Greater Yellowstone Ecosystem. This difficulty is only

⁸ This overlooking of trails within the historical record is beginning to change. For an example of newer works that center primarily on trails see: Sarah Mittlefehldt. *Tangled Roots: The Appalachian Trail and American Environmental Politics*. University of Washington Press, 2013. Although this text primarily concerns the grassroots and political movements to create and protect the Appalachian Trail, Mittlefehldt discusses at length the trail itself.

⁹ The Greater Yellowstone Ecosystem is normally used to designate the region around the now-Park. Typically, this classification is used to highlight ecosystems and regions associated with the Park that transcend the Park's boundaries. This title will be abbreviated to GYE.

¹⁰ "Definition of TRAIL." Merriam-Webster Dictionary Online. Accessed January 25, 2016. <http://www.merriam-webster.com/dictionary/trail>.

heightened with the age of the trail. Some route history, including creation dates, is easy to establish, particularly after the establishment of the Park in 1872. Before that date, the difficulty increases. Nevertheless, even with the challenges associated with studying trails, the unique perspective the trail material can potentially reveal outweighs the downsides.

The effort to market the Park region as a wilderness area began well before the Park's founding. One of the famous stories about the founding was the "camp fire" story.¹¹ Nathaniel Langford, an infamous Euro-American explorer and future Park Superintendent, describes a picturesque scene in which men resting around the campfire, through animated discussion, came upon the idea of a National Park.¹² The eminent Park historian Aubrey Haines states that in reality, the National Park impetus was directly connected to marketing by the Northern Pacific Railroad, arguing, "...agents of the Northern Pacific Railroad initiated the project to reserve the Yellowstone region as a park."¹³ Haines's text contains many intricate details of the founding of the Park, but suffice to say, his main point was that the Railroad was a primary player in the creation of the Park, especially in relation to the marketing of the thermal features and the associated "wonderland" in order to increase tourist revenues.¹⁴

¹¹ Nathaniel Pitt Langford. *Diary of the Washburn Expedition to the Yellowstone and Firehole Rivers in the Year 1870*. J. E. Haynes, 1905. <http://archive.org/details/diarywashburnex01langgoog>, 117-118.

¹² Ibid.

¹³ Aubrey L. Haines. *The Yellowstone Story: A History of Our First National Park : Volume 1*. Rev Sub edition. Yellowstone National Park, Wyo. : Niwot, Colo: University Press of Colorado, 1999, 165.

¹⁴ Haines, *The Yellowstone Story: Vol 1, 156-173*. The wonderland phrase was a popular marketing title used by the Northern Pacific, to draw tourists rather like that of an amusement park, worlds fair, or wild west show.

The marketing campaign of a wilderness wonderland figured heavily in the Railroad's promotion of their western lines, including the Montana railroads.¹⁵ Yet, without trails facilitating a wilderness experience, the vital wonderland image upon which the Northern Pacific's marketing strategy depended would have been drastically less effective. Trails enabled the Northern Pacific to brand the Park as a wilderness area to tourists, presenting the region as an accessible, safe conduit through which one could alternatively view geysers and ride a horse up a mountain. Yet, in this process of wilderness legitimization there exists an inherent tension between human-made trails and the supposed wild nature. Maps reflect this tension and facilitated the production of a wilderness image for Yellowstone by silencing other claims to the remote landscape and presenting the Park as a wilderness with only approved trails and roads. In sanctioning human trails, often overlaying them on top of animal tracks, Park administrators molded visitors' wilderness experience.

Animals, Native Americans, and Euro-Americans were the primary trail actors within the Greater Yellowstone Ecosystem (GYE). All of these actors created and maintained trails. Although it is sometimes difficult to piece together who created which trails and when, the roles that all of these groups played and continue to play are significant. Many of the trails created by these groups, both human and non-human, are molded and shaped by the layout of the land itself. The land played both constructive and destructive roles in trail creation and maintenance, along with erasure. The complexity behind early trail creation mirrors that of the complexity of the spatial and physical

¹⁵ Haines, *The Yellowstone Story*, Vol 1 and 2, 1999.

formation of the Park, and indeed the formation of the United States. Although trails in and of themselves often obscure their own creators and maintainers due to repeated usage, the actors themselves retain significant power in the creation of pathways through the landscape of Yellowstone. Focusing on a few key trail actors helps us understand the importance of trails in the formation of Yellowstone National Park into a modern American wilderness.

A SHORT HISTORY OF TRAILS IN YELLOWSTONE:
FROM TOPOGRAPHY TO BUFFALO TO TOURISTS

Non-Human Trails

All trails are dependent on topography; the literal shape of the land that dictates where trails can and cannot go. Primarily, this guidance is through elevation, plant life, and geology. Similarly to the other actors addressed below, the power held by the land in trail formation is hinted at in many historical writings. For example, Nathaniel Langford's descriptions of bushwhacking during the 1870 Washburn expedition demonstrate the significant role the land played in trail formation.¹⁶ Langford describes ascending a mountain with Lieutenant Gustavus C. Doane to take elevation readings and scout the shape of Yellowstone Lake. This side trip would result in a temporary naming of the peak after Langford. Currently the mountain is named "Colter Peak."¹⁷ (See fig. 1.2) In describing the initial trail breaking, Langford states, "We followed along the high bank adjacent to the bottom through which the river runs... when we entered a heavily timbered ravine... being frequently obliged to dismount and lead our horses over the projecting rocks, or plunging through bushes and fallen timber."¹⁸ In the region Langford was bushwhacking through, in the northern part now known as the Thorofare, timber has

¹⁶ Nathaniel Pitt Langford. *Diary of the Washburn Expedition to the Yellowstone and Firehole Rivers in the Year 1870*. J. E. Haynes, 1905. <http://archive.org/details/diarywashburnex01langgoog>

¹⁷ To add to the confusion, there is currently a peak named Mount Langford, but it is a different one than the mountain that Doane and Langford climbed.

Aubrey L. Haines. *The Yellowstone Story : A History of Our First National Park : Volume 1*. Rev Sub edition. Yellowstone National Park, Wyo. : Niwot, Colo: University Press of Colorado, 1999, 121-124.

Lee H. Whittlesey. *Yellowstone Place Names*. A Montana Historical Society Guide. Helena: Montana Historical Society, 1988, 37-38, 106.

¹⁸ Langford, *Diary of the Washburn Expedition*, 58.

been historically very thick and dense.¹⁹ The impediments to Langford and Doanes' trek provided by the trees demonstrates the significant role that foliage played in early explorers trail creation and maintenance. Langford goes on to describe the difficulty the topography provided when he described reaching higher elevations, "...we reached a point...where we could no longer ride in safety, nor could our horses climb the mountain side with the weight of our bodies on their backs...we led our horses up the steep mountain side, when we again mounted and slowly climbed on our way, occasionally stopping to give our horses a change to breathe".²⁰ Although this is an example of bushwhacking, or going off trail, Langford's descriptions demonstrate the power the landscape had in dictating movement and trail formation. Elevation played a pivotal role in prescribing when the travelers could or could not ride their horses.

Additionally, the elevation drastically affected the expenditure of energy by both riders and horses, forcing them to take breaks they might not have otherwise taken. Plant life also figured prominently into Langford's incursion up the mountainside, providing critical landmarks and guidance signals. Langford's group used the tree line (or the "limit" of trees based on elevation and habitat) as a prominent landmark, to mark the shift between the mountaintop and the forest.²¹ The plant life also had a negative impact on the pair's forward progress in regards to the fallen timber blocking their way. Finally, the geology of the landscape was a significant actor in the two men's journey. The granite

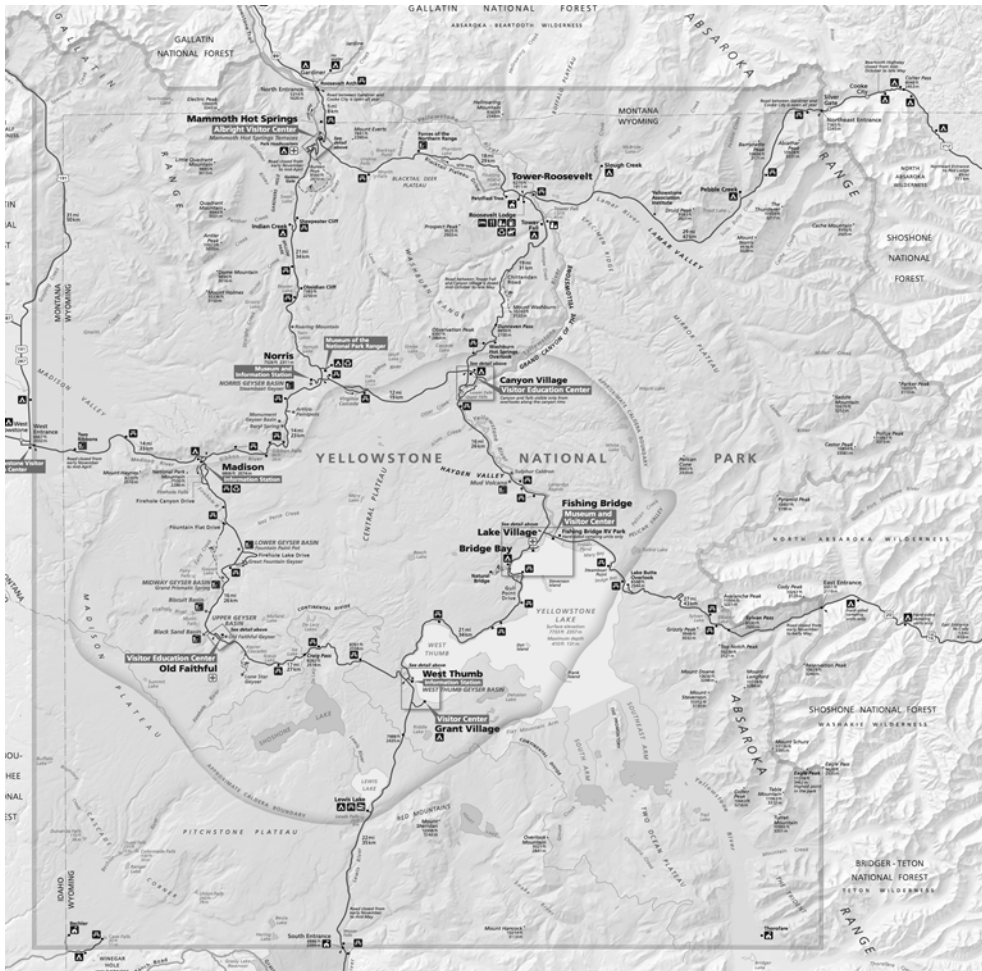
¹⁹ Haines, *The Yellowstone Story: Vol 1*, 121-124.

²⁰ Langford, *Diary of the Washburn Expedition*, 58.

²¹ The line of vegetation on a mountainside is also colloquially known as a *Tree Line*.

shale fields and the rocks hindered quick climbing by both horses and humans.²² In this sense, the landscape itself contributed to the trail creation system of the Park.²³

Langford's mountaineering description demonstrates all three trail shaping factors quite well.



²² Granite shale fields are notoriously difficult to traverse, due either to slick rock pieces or large boulders in the way.

²³ For more on material-human interactions in regards to movement see: Michel de Certeau and Steven Rendall. *The Practice of Everyday Life*. Berkeley: University of California Press, 1984.

Tim Ingold. *Being Alive: Essays on Movement, Knowledge and Description*. 1 edition. London ; New York: Routledge, 2011.

Fig. 1.1: National Park Service, “April 2014 Geospatial File”.



Fig. 1.2: Detail figure of portion of Southeast quadrant to locate Colter Peak, known to Langford as Mount Langford.

Although this small example from Langston and Doane’s trip was not necessarily following an established route, their experience with the material reality of the land holds true with many other Yellowstone travelers. The physical realities dictated by the landscape played a pivotal role in trail creation. While the example illuminated issues associated with elevation, plant life, and geology, the park’s geothermal features also drastically affected trail placement. The hot pots, pools, geysers, and mud pots were a major driver in pathway creations, particularly by Euro-American tourists. A large number of trails within the Park after 1872 were in place due to the desire to see the geothermal features and other scenic areas, as opposed to trails in place due to survival patterns like finding water or economic motivations like finding Beaver streams.

Although Langford and Doane’s side trip from the rest of the expedition was not in

search of a geyser, their experience reveals many of the important actors involved in trail creation, including animals.

Within the Greater Yellowstone Ecosystem and beyond, trails existed longer than humans due to animal movements within the landscape. Animals create trails - often called game trails - simply with their day-to-day movements and activities. These trails were, and still are, often used by individuals and parties bushwhacking through territory where human trails do not exist, do not follow the easiest route, or are poorly maintained.²⁴ Although the majority of these game trails are quite transient and may disappear quickly, some animals have a markedly longer lasting effect in trail creation and maintenance. The American Bison herds were particularly adept at leaving a lasting mark. Trapper Osborne Russell describes Bison, or Buffalo, trails as "...deeply indented trails...²⁵". Simply due to their physiology, browsing habits, and herd behavior, the American Bison is quite adept at leaving lasting marks upon the landscape. Even when they take dust baths by rolling, or *wallowing*, the bison can leave permanent indentations on the landscape.²⁶ These *wallows* are sometimes still visible on the land, even in places where the herds have not been for over a hundred years. While the precise degree to which Yellowstone was a historical habitat for Bison remains a subject of controversy, there is no doubt that animals played an important role in the creation and maintenance of trails within the GYE.²⁷

²⁴ Shane McClafin. Owner and lead guide of Sunrise Pack Station. Discussion with author, April 2015.

²⁵ Osborne Russell. *Journal of a Trapper: Or, Nine Years in the Rocky Mountains, 1834-1843*. Syms-York Company, 1921. <http://archive.org/details/journalatrapp00yorkgoog>, 124.

²⁶ "Bison Wallow - Wind Cave National Park (U.S. National Park Service)." Accessed February 14, 2016. <http://www.nps.gov/wica/learn/nature/bison-wallow.htm>.

²⁷ Principally, the controversy centers on whether or not the Yellowstone region is a historical year-round habitat, as opposed to a thoroughfare and summer grazing habitat.

Lord Windham Thomas Wyndham-Quinn Dunraven was another, quite notorious, user of animal trails in the GYE. An adventurer, reporter, and English nobleman, Lord Dunraven hired several locals to guide him on hunting expeditions around Yellowstone National Park.²⁸ Dunraven describes a hunting trip into the mountains, in which he took minimal supplies and stock for four people. On the trip, Dunraven describes the terrain as “steep” and quite difficult. Dunraven explains, “We at first experienced some difficulty in making our way. The creek bottom was quite impracticable...the slopes were so steep that the animals could scarcely retain their foothold on the slippery grass.”²⁹ The difficult terrain colored Dunraven’s experience, including the path they decided to take. Dunraven states, “We therefore made the best course we could below, and, by carefully picking the way, we got along safely enough, and *after a few miles struck a strong deer-trail leading in the direction we wished to go, and followed it.*”³⁰ Dunraven’s description of following the so-called deer-trail demonstrates the inter-species usage of trails. Most likely, the trail was used by many different ungulates, including deer and elk, which were also known as

Dr. Richard Keigley. “A History of Bison in Yellowstone National Park.” presented at the Hager Auditorium, Museum of the Rockies, Bozeman, Montana, October 14, 2015.

Charles E. Kay. “An Alternative Interpretation of the Historical Evidence Relating to the Abundance of Wolves in the Yellowstone Ecosystem.” In *Ecology and Conservation of Wolves in a Changing World: [proceedings of the Second North American Symposium on Wolves Held in Edmonton, Alberta, Canada, 25-27 August 1992]*. Occasional Publication / Canadian Circumpolar Institute 35. Edmonton, Alb: Canadian Circumpolar Institute, 1995.

²⁸ The Boteler brothers also ran a sometime-dude ranch just outside the Park’s boundaries. The spelling of the name is also recorded as Bottler or Botteller.

Windham Thomas Wyndham-Quinn Dunraven. *The Great Divide: Travels in the Upper Yellowstone in the Summer of 1874*. Chatto and Windus, 1876.

Mark M. Miller. *The Stories of Yellowstone: Adventure Tales from the World’s First National Park*. Rowman & Littlefield, 2014.

²⁹ Dunraven, *The Great Divide*, 149-150.

³⁰ *Ibid.* Emphasis added.

“wapiti.” As both Russell’s and Dunraven’s narratives demonstrate, many humans utilized animal pathways to navigate within the Park region.

Langford and Doane’s side trip discussed above also demonstrates wild animal agency within trail creation. After descending from the peak, the duo return to their horses and attempt to reconnect with the rest of their companions. Yet, after failing to meet up with the rest of the column, Langford and Doane realize the trail they were following was not a human made track. Rather, Langford states, “...we discovered that we had been following, from the base of the mountain, the trail of a band of elk that had crossed the line of travel of the pack train at a point near the base of the mountain, and in the dim twilight we had not discovered the mistake”.³¹ To their detriment, Langford and Doane were utilizing a non-human trail creator’s work, that of an elk band. The men were presumably exhausted and found what they thought was their trail in fading daylight, although it was a game trail. This multi-species usage reveals the complexity of trail formations. Both animals and humans create and utilize the other’s paths, but with different goals. Both species form complex material and cognitive maps around and with the trails. Different usages and maps often assist across species, yet, in Langford’s example, sometimes to the detriment of travel by rendering the landscape opaque. Although most accounts are not as explicit as those of Russell, Dunraven, Langford, and Doane, it is clear that animal trails were an important factor in human movement within the Park, particularly in the early Euro-American exploration and founding of the Park.

³¹ Langford, *Diary of the Washburn Expedition*, 62.

Animal roles in the production of trails are complex. These non-human creatures create the trails by forging through brush and timber to blaze a path of least resistance to reach a desired spot on the landscape. Often these trails are the result of travel from water source to food source to safe sleeping grounds to hunting territory. These trails serve to keep herd and pack space defined and navigable. Many of the animal trails are greatly affected by contours of the land, but they are often directly affected by species physiology as well. Significantly, as in the case of Russell's buffalo, some trails are easily distinguishable between species when viewed by travelers, primarily based on how the trail appears on the ground. Bison trails are quite deep, especially when large herds are present and moving from place to place. The prominent trails are due in part to the physiology of the Bison species. Their tough, large split hooves, coupled with their immense body weight, contribute in part to the deep trails the herds form directly into the dirt. The browsing habits of the Bison, preferring grass to sage or trees unlike elk, also contribute to pathway formation.³² The herd habits of Bison also contribute to trail formation in that they frequently group closely together, following fellow herd members. The combined effects of the eating and herd habits, along with Bison physiology, result in longer lasting, deeper trails than other game paths.

Most likely, Russell's herds were moving to and from the Great Plains grazing grounds. Other animal trails are more difficult to easily distinguish and sometimes resemble nothing more than a slight indentation onto bare dirt. Smaller game animals like deer and antelope are typically associated with these trails, or even smaller animals like

³² Dr. Richard Keigley. "A History of Bison in Yellowstone National Park." presented at the Hager Auditorium, Museum of the Rockies, Bozeman, Montana, October 14, 2015.

wolves or coyotes. These species typically keep smaller herds or packs than the larger ungulates, thus resulting in the fainter trails. Nevertheless, animals are a significant creator and maintainer of trails, even in contemporary times. Historical and contemporary humans often utilized animal tracks to move through the landscape.³³ These non-human pathways frequently led to water sources and found the easiest way around rough terrain. Animals also utilized human trails as well, but with varying degrees, typically based on snowfall amounts, weather, presence of humans, and availability of food. This behavior is easily seen in contemporary animals both within and outside of the Yellowstone Park boundaries, although the Yellowstone usage is significantly higher due to acclimation to human and cars.³⁴ Before the creation of the Park and the massive influx of landscape consumers, many of the trail needs and patterns between animals and humans converged. These conjunctions often meet many of the same needs – easy travel to and from resources, while establishing and maintaining territorial boundaries. Russell’s bison trails again illustrate this point of convergence. The bison were creating and using their paths most likely to move between water, pasture, and safe sleeping spaces. The fur trappers were also using the buffalo trails to move between ideal habitats, albeit those of economic species of the beaver and human territories. In this sense, there is some

³³ Author personal experience, trip into the Mirror Plateau in Yellowstone Park, July 2012. Shane McClafin conversation, April 2015.

³⁴ A plethora of examples exist to support this, but this instance is one of my favorite examples; *Black Bears Chase Tourists in Yellowstone National Park*. Yellowstone National Park, 2015. <http://www.cbsnews.com/videos/black-bears-chase-tourists-in-yellowstone-national-park/>. Jethro Mullen. “Bison Attacks Woman Taking Selfie in Yellowstone Park.” *CNN*, July 23, 2015. <http://www.cnn.com/2015/07/22/travel/yellowstone-woman-bison-attack-selfie/index.html>. Dr. Richard Keigley. October 14, 2015.

similarity between the usage patterns but there is also significant divergence between what the species seek to gain from the paths.

This animal-human habituation leads to notorious incidents of buffalo tossing tourists into the air, bear maulings, and other collisions between different sentient animals and different understandings of the goals for the contemporary Park. Historically, the numbers of accidents between animals and humans has risen as visitation and habitation numbers within the Park have gone up, due both in part to the rise of human numbers and animal acclimation. Thanks to the significant increase in animal-human habituation, the Park's non-human residents approach human visitors and residents with less fear, resulting in more animals willingly engaging with humans, sometimes in a violent manner. Outside of the Park, accidents occur at lower rates because animals are less habituated to humanity's presence or view humans as predators or a source of danger. This different acclimation leads to animals being less willing to engage with humans, preferring to run away or avoid humans altogether. Significantly, animals in the backcountry or otherwise far away from popular tourist spots display fear or avoidance behavior more typically associated with non-Park animals.³⁵ This behavior variance, while useful in explaining human-animal interactions within the Park, also assists in unraveling the history of trail creation by identifying differences between animal groups. It is within the differences that animal trail creation highlights the significant role that wild, non-human actors have in pathway creation. For example, backcountry bison trails are dictated by factors like water availability, new or disappearing thermal features, and

³⁵ Author trip into the Mirror Plateau region of Yellowstone Park, July 2012. Dr. Richard Keigley. October 14, 2015.

terrain. Bison and Elk closer to popular tourist areas often follow paved roads and boardwalks, creating their own trail in conjunction with humans. Generations of animals maintain these trails through continued usage, wearing down hopeful plant growth and pounding down dirt to continue the existence of their trails. Although both the back and frontcountry pathways are animal instigated, their behavioral differences result in different trail formations. Even with these fluctuations, wild animals were and remain prominent actors in trail creation and maintenance within the Park.

Particularly in terms of violent encounters between humans and animals, trails serve as products of both similarities and differences between the species. Both animals and humans wish to move efficiently through the landscape, but their goals are often quite dissimilar. While many animal species' paths are created through survival needs – water, shelter, food – many of the human trails, particularly post-1872, were created to enhance travelers' wilderness experience, including the viewing of wildlife. These inherent differences in the function of trails, especially when animals become a tourist attraction, contribute to the interspecies violence on the trails. This very violence contributes to the Park's image as a wilderness. Because of the potentially dangerous encounters with so-called wild animals looming down the path, the tourist feels as though he or she is participating in an adequately "wild" experience within the Park. Without the potential bear mauling or bison goring, the wilderness myth would not have as much power. Trails lend power to the wilderness myth by bringing humans closer to the wild animals, often at their own peril.³⁶ Yet, non-domesticated animals are not the only animal

³⁶ Whether or not the animals of Yellowstone are domesticated is hotly debated. Some experts claim that they are, in that they have been trained to accommodate human behavior. Yet, there are examples,

players within the trails of Yellowstone. Equine species play an important role within the trail development of the Park.

Domesticated animals like horses and mules played a significant role in the Park's trail creation. These influential actors within the landscape are often overlooked, or viewed in a mechanical fashion, as simply a device used by *Homo sapiens*. Although this idea is not necessarily incorrect, it obscures the important role equines played in trail creation within the Park, even previous to 1871. The human-equine relationship is an ancient and intimate one, and this relationship extends to way finding and path building. Introduced by Europeans, the adoption of the horse by Native Americans drastically altered their movements, and by proxy, their trails.³⁷ The usage of equine bodies as transportation units throughout the GYE both enabled and limited trail creation and utilization.

A significant trend that becomes apparent in the manuscripts and papers of Yellowstone explorers and early administrators is the successful usage and inherent difficulties in using horses and mule for transportation. The successful usage by early Park visitors is often hidden within their writings. For example, an early Park tourist from Helena, Wilbur Edgerton Sanders, meticulously recorded the selection and names of pack

particularly from Grizzly bears, that counter this claim. At the very least, it is easy to say that the non-domesticated animals of the Park are acutely aware and accommodate human behavior into their daily lives.

³⁷ Many texts acknowledge the dramatic shift adoption of the horse played in Native American culture. However, the equine role in trails is often overlooked.

Pekka Hamalainen. *The Comanche Empire*. New Haven: Yale University Press, 2009. 15-20.

Elliott West. *The Last Indian War: The Nez Perce Story*. 1 edition. Oxford University Press, USA, 2009. 15-17.

and saddle horses that he and his friends used for a trip into the Park in 1880.³⁸ Sanders' description of the horses demonstrates the inherent benefits and challenges of using horses and mules to traverse the Park region. During his trip, Sanders' mentions the horses when they would misbehave, cause a "ruckus", or somehow impede the trip's progress. Particularly, the horse called "Bauly", which Sanders stresses many times was not his horse, plagued the trip and its members. For instance, Bauly would often roll with his pack on, thereby impeding the pack trains' attempts to break camp in the morning or make good time getting to the next campsite.³⁹ This horse would also choke on his picket line, a tie-out for easy grazing⁴⁰. Most likely, Bauly had gotten his rope wrapped around his neck and panicked, pulling against the rope and further tightening the picket line. Although tangling hooves and feet with the picket line is more common, choking on a picket line takes some skill, or bad luck, depending on the mood and intention of the horse.⁴¹ Sanders does not clarify whether Bauly was acting out against his human owners or if the horse was not well trained or not very bright. The disdain that Sanders felt towards the horse does not indicate precisely the root of the dispute, but at the very

³⁸ W.E. Sanders. "Archives West: Wilbur Edegerton Sanders Papers, 1875-1896." Montana Historical Society. Collection 47, Box 2, 1887-1889. <http://archiveswest.orbiscascade.org/ark:/80444/xv57460>.

³⁹ A horse will roll with their pack on for several reasons; sheer obstinance, poorly distributed load, uncomfortable pack, lack of training, or early morning jitters. Rolling with a pack on can be fairly serious, for both the pack and the horse. At best, it will result in having to reset and retie the load. At worst, it could break the mannies (packs) or injure the horse or mule. Judging from several statements made within Sanders diary, the most likely scenario is that Bauly was both obstinate and the mannies were poorly packed.

Sanders, Diary of W.E. Sanders, 1878-1880, Vol. 1, 209-223.

⁴⁰ Ibid.

⁴¹ Most horses easily learn to accommodate the picket line. It is quite rare for a horse to continue to get tangled up, much less wrap it around their neck.

least Bauly was not a valued member of pack string. Bauly's misadventures led to serious questioning of the degree to which he was an experienced packhorse.

Nevertheless, Bauly's story demonstrates the inherent problems and advantages that the usage of equines brought to Yellowstone Park explorers. The horse's antics caused serious problems for the trip, through delay, damage to packs, and generally just creating issues for the trip. Yet, without Bauly or the other horses, the intrepid men's trip would have been much more difficult and impossible to complete in the several months time that they traveled during the summer of 1880. Although it is hard to say if they would have even made the trip without horses, the fact remains that the usage of literal horsepower enabled their tourism through the Park. In 1880, without their horses, and with a decided lack of tourist infrastructure within the Park, the Sanders group would not have been able to as readily access the Firehole basin, reach the shores of Yellowstone Lake, or return back to Helena. These trails were intended for and used by horses, albeit within a human-equine relationship. In reality, these pathways were animal trails utilized by both humans and horses.

Sanders is not alone in highlighting the issues raised by horses, both as individuals or as a species, while overlooking their enabling of travel within the Park before automobiles. For instance, the bodies of horses empowered travel through the carrying of packs and riders, but they also limited the trails and terrain those riders could attempt. Further, to return to Dunraven's example, the horses were slipping on the grass due to the steep slopes of the creek bed.⁴² Although it is unfair to say that humans would

⁴² Dunraven, *The Great Divide*, 149.

not have had similar difficulties, the horses and their riders were experiencing the physical limits of the equine body, or more appropriately, the lack of traction allowed by their hooves. Dunraven does not articulate if the traction issue was related to the shoes of the horses slipping on wet grass, or if it was simply too steep. Most likely it is a combination of the two factors. Yet, the horses also enabled Dunraven to traverse wide swaths of land chasing after big game, including following game trails. This allied relationship demonstrates the power of inter-species trail usage.

This allied relationship was crucial in creating many trails within the GYE. For instance, the trails created by Buffalo encountered by Russell were highly significant. These trails were most likely created when the Bison were traveling to and from water. Dunraven and Langford's examples are less easily identifiable. For example, their bushwhacking created trails because they wished to hunt elk or obtain a mountaintop view. Nevertheless, these trails could also be interpreted as creations deliberately intended to sell Yellowstone as a wild "wonderland". Dunraven and Langford trails are closer to unintended after effects rather than the carefully managed tracks of deliberate construction, often shaped by the needs of their horses.

Human Actors

Humans played a central role in creating the park's trails, but they rarely if ever did so in isolation from other animals. Those readers wishing to delve further into the history of humans in Yellowstone are encouraged to visit Aubrey Haines surveys, along

with Mark Spence, Elliot West, and Karl Jacoby's texts⁴³. In this brief dissection, several significant historical groups that left their marks on the land are discussed. Native Americans, early Euro-Americans, and Park administrators after 1872 were all prominent trail producers. Although it is often difficult to parse historical evidence on trails between groups, discussion of the separate groups is necessary to unravel the complexity of the Park's wilderness myth.

Native Americans have utilized the GYE region for thousands of years. Archaeological sites date some of the earliest signs of human presence to around 10,000 years ago.⁴⁴ Nevertheless, Native usage of the area remains a highly contentious issue, particularly in relation to land access rights. Even the degree of historical usage by Native Americans remains under some dispute by historians and administrators.⁴⁵ Yet, due to trails and archaeological finds, strong evidence demonstrates continued use by Native Americans. A point of contention is whether they traveled through Yellowstone year round or wintered in the GYE, but that debate does not figure strongly within this

⁴³ Haines' surveys, *The Yellowstone Story, Vol 1* and *2*, are considered the primary historical texts about Yellowstone.

Spence's, *Dispossessing the Wilderness*, West's *The Last Indian War*, and Jacoby's *Crimes Against Nature*, are all excellent academic texts concerning Yellowstone and other National Parks.

⁴⁴ Douglas H. MacDonald, Jordan C. McIntyre, and Michael C. Livers. "Understanding the Role of Yellowstone Lake in the Prehistory of Interior Northwestern North America." *North American Archaeologist* 33, no. 3 (January 1, 2012): 251–89. doi:10.2190/NA.33.3.b.

⁴⁵ The following works are a good introduction to works about Native Americans in the Park, particularly in tracing the historiography.

Aubrey L. Haines. Yellowstone Library and Museum Association, and United States. National Park Service. *The Bannock Indian Trail*. [Yellowstone National Park] : Yellowstone Library and Museum Association, in cooperation with the National Park Service, U.S. Dept. of Interior, 1964. <http://archive.org/details/bannockindiantra36hain>.

Aubrey Haines, *The Yellowstone Story*, both volumes.

Wayne F. Replogle. *Yellowstone's Bannock Indian Trails*. Yellowstone Interpretive Series ; No. 6. Yellowstone Park, Wyo, Yellowstone National Park, 1956.

Mark Spence. *Dispossessing the Wilderness: Indian Removal and the Making of the National Parks*. New York: Oxford University Press, 1999.

Elliot West. *The Last Indian War: The Nez Perce Story*. 1 edition. Oxford University Press, USA, 2009.

analysis for several reasons. First, a winter excursion precludes usage of landscape trail archives. The Yellowstone region, particularly in the caldera and southern regions, experiences extremely heavy snowfall. This precipitation obstructs easy travel through the area and its trails, often wiping out already established trails during the annual spring melt. Therefore, any trails established or traveled on during the winter are impossible to parse out from summer usage. Second, the trails of Native Americans were often coopted by Euro-Americans. This subsuming of movement patterns effectively erased a large amount of the record of Native American movement within the Park.

The mutual pathway travel reveals the importance of Indian trail creation and knowledge within the GYE. Although Native American methods are often difficult for non-tribal members to access, within the historical record some knowledge remains about Native trails within the Park. Although a complete mapping of Native trails within the GYE is impossible, due in part to their subsuming by Euro-Americans and disuse, there are several prominent historical examples that demonstrate the important role Native Americans played in trail creation. For example, Shoshone and Bannock tribes, due to a significant loss of Buffalo west of the Continental Divide, began using northern parts of the Park as a way in which to reach the Buffalo remaining east of the Rocky Mountains.⁴⁶ Historically called the Bannock Trail by a multitude of sources, the historian Rosenberg describes the major pathway as starting in now-Idaho that “crossed the Targhee Pass” and passed through the northern range of the Park before crossing into the “Absaroka Range

⁴⁶ Haines, *The Yellowstone Story, Vol 1*, 26-28.
Robert G. Rosenberg. *Trails of Yellowstone*. Draft. Rosenberg Historical Consultants, 2013, 6-11.

into the Clarks Fork Valley.”⁴⁷ Most likely, this trail began after 1840, due to the loss of Buffalo from traditional hunting grounds.⁴⁸ The elusive Nez Perce trail also exists as an example of 19th-century Native American trails within the newly minted Park boundaries.⁴⁹ In 1877, in an attempt to reach the Crows or Sioux tribes in the plains of Montana Territory while being pursued by the U.S. Cavalry, several Nez Perce bands entered the Park and spent several weeks there.⁵⁰ Following several ill-fated encounters with white tourists, the Nez Perce lost their cavalry pursuers, resulting in the Nez Perce trail becoming very muddled and unknown to Euro-Americans. This trail continues to remain somewhat of a mystery within the current Park, ironically even becoming somewhat of a tourist attraction in and of itself.

Nevertheless, portions of Native American camps and known trails continue to exist in the Yellowstone landscape and in archaeological archives.⁵¹ As Native Americans interacted with an increasing number of Euro-Americans in the American West, the trails within the Park transformed. Ironically, the arrival of Euro-Americans and their threat to traditional hunting herds increased the necessity for Native presence within the Park, due to the game found within the boundaries. Historian Mark Spence states, “Larger alliances of Shoshone, Bannock, and other western slope tribes moved

⁴⁷ Rosenberg *Trails of Yellowstone*, 10.

⁴⁸ *Ibid.*

⁴⁹ Haines, *The Yellowstone Story, Vol 1*, 26-28.

Rosenberg, *Trails of Yellowstone*, 7-10.

West, *Last of the Indian War*, 2009.

⁵⁰ Rosenberg, *Trails of Yellowstone*, 7-10.

⁵¹ Robin J.M. Park, *Results of Excavation of the Donner Site 948YE252) Southeastern Yellowstone Lake*, 2013, MacDonald, Douglas H. And Elaine S. Hale (editors), *Yellowstone Archaeology: Southern Yellowstone*. University of Montana Contributions to Anthropology 13 (2). University of Montana Office of Printing and Graphics, Missoula, 116-152.

through Yellowstone in the 1860s as they competed with the increasingly powerful Sioux, Cheyenne, and Arapaho for shrinking herds of buffalo on the plains...⁵². This increased pressure led to a direct uptick in the importance of the elk in Yellowstone, particularly after the buffalo began to diminish in numbers after 1865 when "... the development of small agricultural settlements and mining camps along the western slope of the mountains laid waste to important fishing, hunting and gathering places."⁵³ What Spence demonstrates is that due to increased environmental and territorial pressure, many Native tribes were increasingly traveling to and utilizing the Yellowstone region. This uptick in usage resulted in the production of more trails, although yet again, it is often difficult to define older trails versus trails formed after Euro-American formation of the Park. Older Native trails in the Park are difficult to locate/recover due to environmental degradation and active Euro-American erasure.⁵⁴ The Nez Perce and Bannock trails exemplify typical Native American trails within the GYE – created as they moved through the land in search of Bison or safer territory, not to facilitate a wilderness experience.

As difficult as Native American trails are to locate, early Euro-American trails are just as elusive to identify in the landscape record. The primary fur trapping period in the future Park area was from 1807 to around 1840.⁵⁵ Most likely this lack of evidence is related to several key behavioral traits associated with trappers and miners. First, they often traveled in small groups or alone. Osborne Russell's trip is an excellent example of

⁵² Spence, *Dispossessing the Wilderness*, 49.

⁵³ *Ibid.*

⁵⁴ For specific examples, please see the Ghost Trails section on page 33.

⁵⁵ Haines, *The Yellowstone Story: Vol 1*, 35-52.

this tendency. During his forays into the GYE, Russell was traveling in a group that was relatively small in number, often fifteen or less.⁵⁶ Although Russell often describes groups of trappers numbering over twenty or thirty, these large assemblages of people would frequently break up into smaller groups. It was within these smaller groups that Russell would make his famous trips into the future Park region. Jim Bridger also typifies this behavior, often traveling in small groups or singularly. What this individualist behavior means in reference to trails is that trapper trails were often closely guarded secrets due to economic reasons. In other words, a large amount of trail knowledge and creation was directly tied to the trappers' knowledge of locations of beaver - or their fur-bearing paychecks. The beaver are thus yet another non-human animal who affect trail development, particularly before the Park's founding in 1872. The Euro-American mining forays into the Park follow much of the same patterns of the Fur Trappers - in that their trails were created as aftereffects of chasing mineral wealth within the GYE. There are trails within the GYE that are identifiable as potentially used by fur trappers. But like the Native Americans, the trappers' trails were historically used by different groups passing through Yellowstone. These early Euro-American trails begin to mark important, conscious shifts into forming deliberate pathways, thus becoming a powerful tool in the construction of the wilderness idea.

⁵⁶ Russell, *Journal of a Trapper*, 7, 44, 51, 86, 93-94.

FORMAL TRAILS

The shift to more deliberate trail creation began in force not with the founding of the Park in 1872, but rather with the work of the Park's first advocate Superintendent, P.W. Norris. Although there were other Superintendents before Norris, including Nathaniel Langford, none matched his drive toward building infrastructure and developing the Park for tourists. Haines describes the scale of trail growth experienced under Norris: "...there were 32 miles of road and 108 miles of trail within its borders; when he was replaced five years later... there were 153 miles of road and 204 miles of trail."⁵⁷ What these trails and roads demonstrate specifically for the Park is that Norris was promoting the wilderness myth through creation of and control over movement within the landscape. In building roads and trails, sometimes referred to as *bridle paths*, Norris promoted a wild, yet safe, idealization of the Park, although it was truly neither.⁵⁸

Norris's trail building as evidenced in both his and W.E. Sanders' accounts demonstrates the historical shift from consequential to deliberate trail making in Yellowstone Park. In 1880, during Sanders' trip with Baully the horse, the party spent several days attempting to find the trail up to Mammoth Hot Springs to head back to Bozeman.⁵⁹ The way was difficult and food sources, principally Pronghorn Antelope, were scarce, and the party was becoming quite frustrated. When they happened upon a

⁵⁷ Haines, *The Yellowstone Story*, Vol. 1, 246.

⁵⁸ To further confuse the matter, Norris sometimes uses the terms interchangeably - although predominately the term *bridle path* seems to refer to trails that Norris either built or improved himself. At the bare minimum, they were not roads, which could accommodate wagons.

⁵⁹ Sanders, 1880 Diary - formal , 200-225.

wagon being built by one of Norris's crews, they were overjoyed.⁶⁰ Sanders states: "Wednesday, Aug 4th...we followed a pretty rough trail through forests of dead and fallen timber...when we came to a wagon road which Norris, Supt. of the Park, is having put through to the Mammoth Hot Springs. We followed it for some 15 mi when we struck Lower Basin."⁶¹ Meanwhile, Norris describes many wagon road and trail building attempts, a large number abandoned in his 1880 report.⁶² What this literal crossing of trails demonstrates is the shift between consequential trails and deliberate trails. The first path that Sanders took was a consequential trail, especially with the heavy and fallen timber. In other words, if the track had been one of Norris's bridle paths, most likely the trail crews would have cleared at least some of the timber. Sanders' first trail is an excellent example of the consequential trail, existing as an effect of movement on the landscape. The second trail, or more accurately, road in construction, represents what later trails would become - pathways with a purpose. Simply, these tracks exist to serve a greater purpose than movement across the land. Norris's wagon road was designed to provide easier access to the Fire Hole basin, a large collection of thermal features, including the ever-popular "Old Faithful." The roads and trails that Norris constructed represent the creation of wilderness through the encouragement of tourism. By providing easier access to the landscape of Yellowstone, Norris was participating in the effort to

⁶⁰ Sanders, 1880 Diary - formal, 213.

⁶¹ Sanders, 1880 Diary - informal, Aug 4th, no page numbers.

⁶² P.W. Norris. *Annual Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior for the Year 1880*. U.S. Government Printing Office, 1880, 13. Interestingly, both Norris and Sanders mention meeting and traveling with the photographer Calfee while inside the Park. Although Sanders may have included his supposed meet-up as a story-telling device, these mentions serve to corroborate the dating between the two accounts.

stylize Yellowstone Park as a wild, non-human landscape that was nonetheless easily accessible to humans.

The development of a Park administration, tasked with improving and protecting the wilderness area, had a significant impact on the form and function of the Park's trails. As the Sanders-Norris example demonstrates, the trail and road system were integral to determining movement and usage patterns within the Park boundaries. This importance demonstrates the crucial role trails played in building and maintaining the wilderness myth. Deliberate trails were a particularly powerful tool in the hands of administrators bent on increasing tourism into the wonderland of wilderness.

GHOST TRAILS: PHANTOMS ON THE LAND

Tourism enticed many visitors to the region after the Park's establishment in 1872. This shift in usage resulted in the Park's administrators constructing a distorted cartographic narrative of a wilderness that was safely devoid of Native Americans and teeming with wildlife and geysers.⁶³ Nevertheless, the land has preserved many of the trails formed by early Euro-Americans, Native Americans, and animals. As Euro-Americans began actively working and using the region, the need for legibility of the landscape became very apparent, especially considering the complex landscapes and actors of the Greater Yellowstone region, including animals and Native Americans. Maps became a primary method of visualizing the landscape, including trails. These 2-D maps portraying a complicated 3-D subject eventually became a powerful transmission tool supporting the wilderness narrative surrounding the Park.

By comparing the contemporary landscape archive with cartographic sources that span the early Euro-American period to post-1872, we can trace the construction of Yellowstone wilderness through the emphasis on blank *terra incognita* landscapes. When contrasting these two archives, blatant trail omissions appear. These *ghost trails*, present on the land but not depicted on maps, were an attempt by the mapmakers to create and control a uniform wilderness within the confines of Park boundaries. These exorcisms enable Yellowstone's idealization as a wilderness, devoid of unauthorized users and their resultant trails. In omitting these trails, mapmakers established the wild Park while

⁶³ Ibid, 60.

erasing conflicting claims to the landscape of Yellowstone in order to exert control over the complex space through trails and their cartographic representations.

Trails and paths saturate Yellowstone National Park, yet vast majority of the Park's millions of visitors never visit the backcountry.⁶⁴ These front country tourists visualize Yellowstone as a wilderness area, full of danger and wonder, and as a place to escape from their fellow humans, but rarely venture into the backcountry areas. Maps perpetuate this front versus backcountry dichotomy by seldom depicting the myriad of trails that permeate the hinterlands of the Park. In erasing some trails and retaining others, Park administrators suppress unacceptable pathways within the landscape, thus creating and maintaining a *backcountry*. Some estimates place the backcountry as over 90% of the Park's territory, while less than 1% of visitors trek past the five-mile demarcation.⁶⁵ Maps with large blank spaces emphasize and perpetuate this ideal of Yellowstone as a wilderness, while retaining power and control over the landscape through trails.

This erasing trend permeates Yellowstone's history. By only depicting the paths deemed worthy of visualization on a map, the Park's administration exerted control over remote and wild environments. Despite the official erasure, the physical landscape has retained evidence of these forgotten trails in the form of a natural archive.⁶⁶ The trail map

⁶⁴ Shane McClafin (owner and lead guide of Sunrise Pack Station, a horse-packing company in Yellowstone for over 25 years) in discussion with author, April 2015.

⁶⁵ "Stats Report Viewer - Monthly Public Use Report." National Park Service, October 2015. <https://irma.nps.gov/Stats/SSRSReports/Park%20Specific%20Reports/Monthly%20Public%20Use?Park=YELL>.

⁶⁶ Ulf Buentgen, "Dendroclimatology" (workshop, Dendroclimatology and Paleoclimatology at Princeton Institute of Advanced Studies, Princeton, NJ, September 14-17, 2015). Original concept discussed at workshop concerns the use of proxy data and traditional archives to corroborate and reconstruct historical climates. I believe this concept of natural archives can extend beyond just climate reconstruction and may be used to corroborate or challenge historical narratives.

record demonstrates the numerous methods that Euro-Americans used for removing specific Yellowstone pathways from public knowledge. Many of these trail erasures were unconscious or seemingly innocent, and relied upon complex knowledge exchanges between local and administrative mapping sources. Nevertheless, these procedures, whether through renaming, erasure, or errors, demonstrate the development of the Park's wilderness idealization through erasure. From fur trapping maps made by William Clark, John Dougherty, and Jim Bridger, to exploration maps by W.W. de Lacy, and administrative maps by P.W. Norris and the Army Corps of Engineers, trail erasure demonstrates Euro-Americans' solidification of Park image and power as a wilderness area through removing trails from maps.

As Yellowstone Park gained official status, human pathways began to disappear from the maps of the so-called wilderness areas, but not from the physical landscape. These trails range from small tracks leading to a vista points made by early Park explorers and administrators to trails left by the Nez Perce tribes in 1877. Yet acknowledgment of these trails is sparse on historical or contemporary maps. Although some contemporary users travel these trails because they know about them through word of mouth, the vast majority of Yellowstone visitors only experience the backcountry as an abstract, impenetrable wilderness that they see on a map. This forced perspective results in the silencing of much of the territorial knowledge about the region.⁶⁷

In recovering the history of Yellowstone's ghost trails, we gain better understanding of the formation of the Park and its resulting mythology as a remote

⁶⁷ J.B. Harley, *The New Nature of Maps: Essays in the History of Cartography*, (Baltimore, Md: Johns Hopkins University Press, 2001), 86.

wilderness, along with the materialization of power over the area's complex image. This knowledge is vital to moving forward into a more inclusive and popularly accessible National Park. In revealing the exclusions and past erasures from maps, contemporary trails and maps can be seen in a different light. Ghost trails expose traces of human values, notions of territoriality, and power over idealization that attest to the complexities of demarcating and constructing Yellowstone National Park.

HOT SPRINGS AND BRIMSTONE: EARLY EURO-AMERICAN FUR TRAPPING AND AGE OF EXPLORATION MAPS

While early mapping of the Park area was scattered and spotty at best, several maps from the initial era of exploration do exist. Before being designated a national park in 1872, Native Americans and Euro-Americans had years, and millennia in the case of the tribes, to accumulate information about the Yellowstone region. To date, no early Native American map comparable to the Western cartographic tradition has surfaced that depicts the Park, although oral histories shed light on the Park's early geography and usage patterns. Indeed, fur trappers and early Euro-American explorers garnered much of their early knowledge of the region from tribes, creating conglomerate maps as fur trappers explored *new territory*.⁶⁸

An obvious example of this knowledge subjugation is the Lewis and Clark expedition and their reliance on the topographical guidance from the Shoshone women Sakagawea. Euro-American reliance on Native American knowledge is common throughout the exploration history of the American West. Typically centered on economically driven navigations needs such as fur trapping, early Euro-American maps of the region were collaborations, made with many contributors and knowledge sets, including Native Americans and missionaries. Although it is often difficult to identify individual contributors to such maps, their aggregate knowledge generated complex patterns of exchanges. Thus, specific Native contributions to early Euro-American mapping are difficult to identify, especially in relation to the future Park area.

⁶⁸ Bruce H. Blevins, *Mapping Yellowstone* (Martino Fine Books, 2014), 11.

Nevertheless, early trappers and explorers often relied on vital tribal knowledge and assistance to both survive and map the American West.

William Clark's maps present an excellent example of early aggregate knowledge mapping. After returning from the infamous expedition to the Pacific Northwest, President Jefferson appointed William Clark as an agent in Indian Affairs. In his St. Louis office, Clark maintained a living map of sorts, adding details when fur trappers and explorers returned with additional knowledge gained during their expeditions.⁶⁹ This topographical and territorial information gleaned from both individual experience and advice from Native Americans helped to fill in *terra incognita*. Clark's manuscript map did depict the future park region, but has significant topographical errors like the incorrect shape of Yellowstone Lake (see fig. 2.1). Other editions of Lewis and Clark maps, along with a few other early Euro-American maps from the era depict the region that became the Park, but with few accurate topographical details suggesting limited knowledge of the area. Nevertheless, as more Euro-Americans ventured into the Yellowstone region and utilized Native American geographical knowledge, the accuracy of the topographical, floral, and faunal information increased, even in regards to locations that the mapmakers did not visit. The park region already had a large amount of topographical and toponymic data, including the labeling of the now Yellowstone Lake as "Eustis" Lake, before the latter half of the nineteenth century.⁷⁰ Unlike Latour's

⁶⁹ Blevins, *Mapping Yellowstone*, 12-13.

⁷⁰ Blevins, *Mapping Yellowstone*, 14. Most likely, the name Eustis came from James Madison's Secretary of War William Eustis, although it has not been confirmed. Some sources have the Lake as being named after Jefferson's Secretary of War, but as the Secretary's name was Henry Dearborn, Sec. Eustis as the namesake remains more likely.

“immutable mobiles” with communicative technologies that transformed the cartographic sciences into powerful tools of empire, these maps expose the collaborations and negotiations that made Western expansion possible.⁷¹

As more Euro-Americans traversed the region, their collective mapping of the Park region grew in accuracy. Most likely, the famous fur trapper John Colter likely provided much of the information about the Yellowstone area, as he had made a foray into the area in the winter of 1807-1809.⁷² A former member of the Lewis and Clark expedition, Colter spent many years in the Louisiana territory searching for and trapping beaver. His practical knowledge of the landscape, along with his information gained from Native tribes is an example of localized knowledge creating administrative maps of the Yellowstone region. Clark’s map does note that there were “Hot Springs Brimstones” north of the lake, along the dotted line that marked Colter’s route. The shape of Colter’s route helps to explain the misshapen lake, as he never went fully around the body of water. Instead, he skirted the western shore, thus explaining why the map does not picture the southern and eastern arms, as they are not visible from the western side.⁷³ The exact route that Colter took, along a determination of whether he was traveling west or east is under debate, but the geographic information on Clark’s map demonstrates that Colter did travel through the future Park region. This trip would spark the usages of “Colter’s Hell” although later nineteenth and twentieth century Romanticism greatly distorted the use of

⁷¹ Bruno Latour, “Visualization and Cognition: Drawing Things Together,” in *Knowledge and Society Studies in the Sociology of Culture Past and Present*, ed. Henrika Kuklick and Elizabeth Long (Greenwich, CT: JAI Press, 1986), 1-32.

⁷² Aubrey L. Haines, *The Yellowstone Story: A History of Our First National Park: Volume 1* (Rev Sub edition. Yellowstone National Park, Wyo.: Niwot, Colo: University Press of Colorado, 1999), 35-38.

⁷³ Haines, *The Yellowstone Story*: vol. 1, 37-38.

the term. The phrase was originally used by trappers to describe a region that is close to the now Cody, WY, as opposed to the mythological term that was used to describe the entire Park by tourists and the Northern Pacific Railroad.⁷⁴

Although Clark's map is not geographically correct concerning the gross topography of the Yellowstone region, it does highlight knowledge exchanges and patterns that took place in the nineteenth century. Simply, this map demonstrates the collaboration and local/administrative knowledge exchanges that enabled the exploration and navigation of the region's environment. William Clark never traveled within the future park's boundaries, yet due to his facilitation of topographical knowledge exchange through his collaborative map, Euro-Americans had at least an estimate of the general geographical features, especially of rivers and lakes. Clark's manuscript map reflects the central role that waterways played in Euro-American exploration and economic exploitation of the American West. The prominence of fur trapping in the early nineteenth century explains the water-centric worldview. For early fur trappers and explorers, waterways provided income sources, as well as navigation and transportation networks. They used rivers to trap fur-bearing animals, primarily beaver; rivers also served as a geo-referencing tool to orient trappers in the landscape and were a primary mode of long-distance transportation in the western United States. Additionally, this map demonstrates the complex role that topographic knowledge exchanges played in the Euro-American expansion west of the Mississippi. By utilizing a collective knowledge of geography and pathways, Clark enabled further economic exploration and expansion

⁷⁴ Ibid, 37.

westward. Mapping local knowledge from fur trappers and explorers, in addition to Native American contributions, administrators then contributed to a positive feedback loop of landscape information.



Figure 2.1 William Clark, Clark's Map of 1810, 1810, Beinecke Rare Book and Manuscript Library at Yale. Map depicting western United States.



Figure 2.2 Left, detail of area of future Yellowstone Park region. Higher resolution images of the maps may be found at <https://montana.box.com/s/i6kvccnjc4kx5ek87hnskyn8hwx6ui48>

The 1811 John Dougherty croquis map continues the collaborative nature of these early maps. Dougherty was a fur trapper who traveled the Upper Missouri and the Columbia river basin.⁷⁵ This map includes details that demonstrate his working knowledge of its major landmarks and climatology, as well as information that fellow fur trappers would find helpful (see fig. 2.2). For example, the area directly west of Heart Mountain on the map is the area now designated Yellowstone Park, as opposed to Clark's map. Although this region is mostly blank, the location of rivers, a lake, as well as information about poor winter grazing conditions in the future Park region, demonstrate

⁷⁵ "Dougherty, John (1791-1860), Letter Book, 1826-1829 Finding Aid." Manuscript Collection. Accessed October 18, 2015. <http://shs.umsystem.edu/manuscripts/invent/2292.pdf>. Mark Kelly, *Lost Voices on the Missouri: John Dougherty and the Indian Frontier*. (Leavenworth, Kan.: Sam Clark Publishing Co., 2013), 710-711.

that Dougherty had a working knowledge about the area. Furthermore, Dougherty repeats some of the errors from Clark's map, indicating that he likely saw Clark's manuscript or a copy. Remarkably, this map does not show pictorial representations of landforms other than rivers, although there is some recognition through notations (see fig. 2.1 and 2.2). For instance, the map recognizes Heart Mountain and "Devil's Mountain" as circles, not prominent rock formations.⁷⁶ The descriptions that the mountains unfit for horses or buffalo, as well as the geo-location of beaver demonstrate the communal nature of the map. Dougherty intended this map not as a guide to the topography, available on maps like Clark's, but as a practical guide, giving information that he viewed as helpful to fur trappers and explorers beyond the topography. The only topographical information disseminated was about major landmarks, most likely to provide the users with location references with which to orient themselves.

The Dougherty map was a cartographic guidebook, disseminating useful information for travelers in this new land. Dougherty most likely constructed this map for fellow fur trappers. By noting relevant information to trappers and their survival, Dougherty was intentionally mapping for a select group. For instance, instead of labeling the topography with information like elevation, the map notes details normally written in diaries or travel guides. The locations of beaver and buffalo literally take up more space on the map than geography. Through catering to the practical needs of his audience, Dougherty was actively assisting in both spreading the knowledge of the land and its

⁷⁶ Devil's Mountain is now known as Devil's Tower.

conditions, as well as the enabling the expansion of Euro-Americans into the western North American continent.

Dougherty's inclusion of information about both landforms and general conditions also demonstrates that he was utilizing information from a variety of different sources. These different sources include other maps, like Clark's map, as well as information gleaned from other trappers. Even though a single individual physically produced the map, it is the conglomeration of many different knowledge sources. Although the Clark map is a better example of the interplay and exchange between the localized knowledge and administrative sources, Dougherty simultaneously acted both as an administrator and as facilitator of local Euro-American knowledge. By utilizing both his own and

Although the map's textual information would be useful to all travelers, both the geographic information itself and the silencing of topography narrow the utility of this map for general audiences, leaving very few who would find it useful. In short, Dougherty used localized knowledge of the area, both his own and others, to draw and write a map for other fellow experts. The map's intended use sets it apart from Clark's map. Nevertheless, the Clark and Dougherty maps both used collaborative knowledge to map the American West, including the future Park region. Both maps facilitated localized knowledge exchange about topography and climate, both creating and informing regional experts.

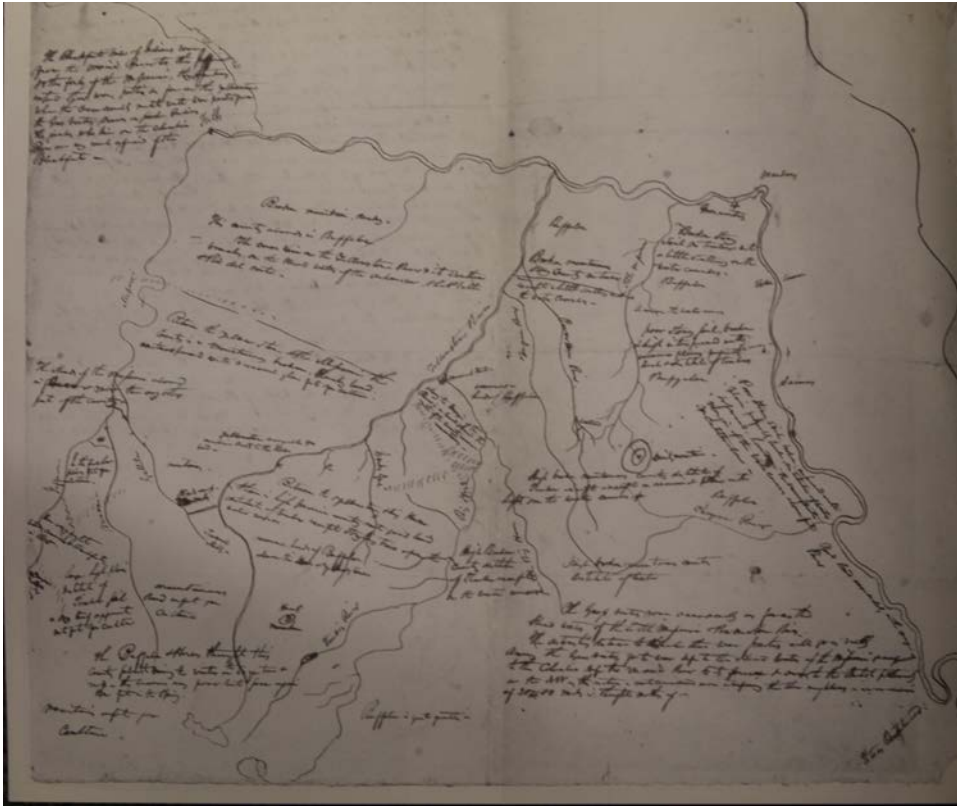


Figure 2.3 John Dougherty, Sketch of Part of the Missouri & Yellowstone Rivers with a Description of the Country &c. 1811 approximately. National Archives.

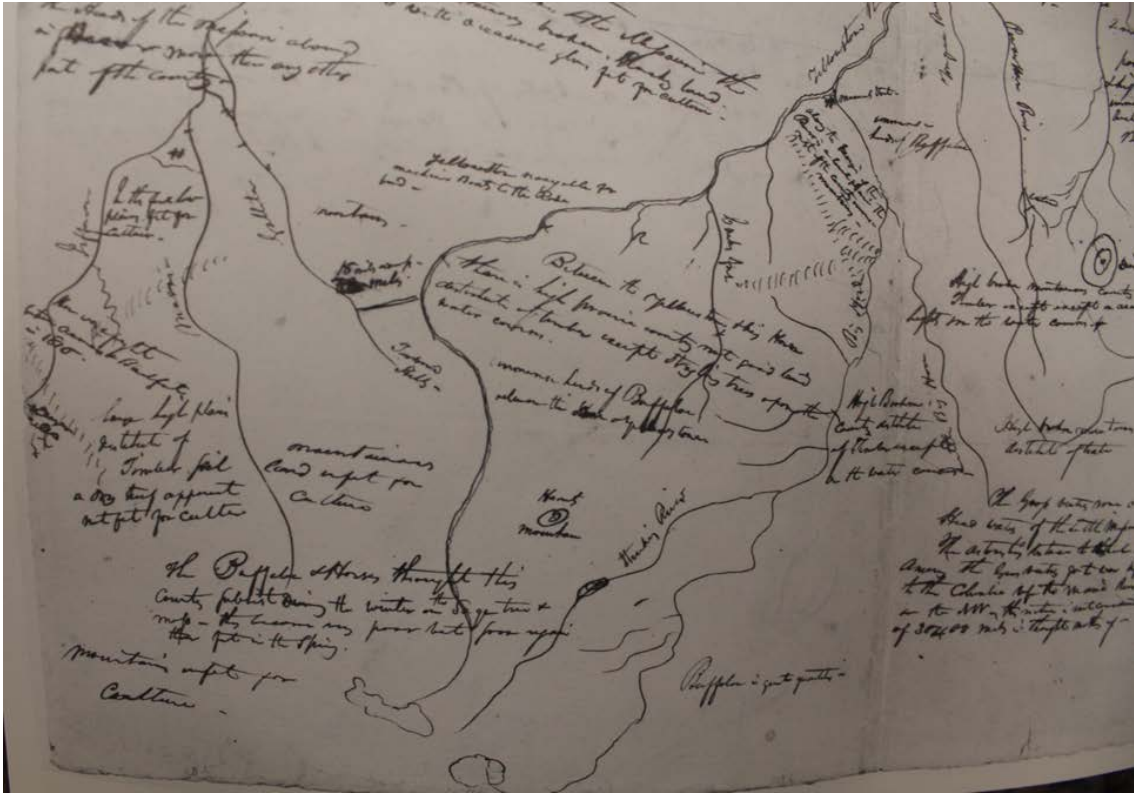


Figure 2.4 Detail of future Yellowstone region on Dougherty map.

The theme of complex exchanges and interactions recurred frequently in the course of Yellowstone cartographic history. The efforts of Jim Bridger and Father Pierre De Smet further represent collaborative mapping examples. In 1851, as Native Americans, trappers, missionaries, and the Army gathered for treaty negotiations, Bridger and De Smet drew up several maps, including a croquis, or scribble map, and a more refined map. Both of these individuals were experienced voyagers in the American West, as De Smet traveled extensively as a missionary and Bridger was a famed mountain man. In 1851, they met at Fort Laramie and produced several maps, one of which U.S. Army used in negotiations with the Native American tribes (see fig. 3.1).

As De Smet recalled,

When I was at the council ground in 1851, on the Platte River, at the mouth of Horse creek, it was requested by Colonel Mitchell to make a map of the whole Indian country, relating particularly to the Upper Missouri, the waters of the upper Platte, east of the Rocky mountains and of the headwaters of the Columbia and its tributaries west of these mountains. In compliance with this request I drew up the map from scraps then in my possession. The map, so prepared, was seemingly approved and made use of by the gentlemen assembled in council, and subsequently sent on to Washington together with the treaty then made with the Indians⁷⁷

These scraps are one of the maps drawn with Jim Bridger, the renowned mountain man, trapper, and explorer. Although the manuscript map underwent some editing by De Smet before submission to the Army, the croquis map drawn up by Bridger and De Smet represents a significant knowledge pattern in relation to the region of the future Park (see figure 3.1). This map, albeit crude, is perhaps one of the best examples of collaborative knowledge in maps of the future Park region. Although Jim Bridger was illiterate, his physical experience within the landscape of the American West was unmatched among Euro-Americans. The rivers and lakes are more appropriately orientated than the Dougherty or Clark maps and there are more landmarks in the Park region (see fig. 3.2). The correction of the placement of Henrys Lake is a perfect example of the appropriateness of these comparisons.⁷⁸ This adjustment is significant because it

⁷⁷ Aubrey Haines, "Yellowstone National Park: Its Exploration and Establishment (Part I)." *The Exploring Era (1851-63)* Online Book. *History: The National Park Service*, 1974.

http://www.nps.gov/parkhistory/online_books/haines1/iee1c.htm Haines cites the letter as appearing in Merrill J. Mattes, *Colter's Hell and Jackson's Hole* (Yellowstone Library and Museum Association, 1962). He states "The quotation is from a letter written to officials of the Department of the Interior, July 1, 1857, in regard to their suggestion that the map should be printed. De Smet's rebuttal, "In my humble opinion, therefore, it can be of very little service for your purposes, in which accuracy of instrumental measurements and observations seems to be absolutely necessary ..., " probably relegated his very useful map to the obscurity of the official files."

⁷⁸ Although it seems intuitive for Henrys Lake to have an apostrophe in the name, traditional usage consistently eliminates it. Haines, *The Yellowstone Story: Vol.1*, 375.

demonstrates the increased sophistication of the mapmaker's geographical knowledge of the area. Neither of the previous two maps had listed Henrys Lake. Significantly, the map also details both Colter's Hell and the "stream to the Columbia", which De Smet later relabels on his larger manuscript map.



Figure 3.1 Jim Bridger and Pierre De Smet, De Smetiana Maps C8 10, 1851. Jesuit Archives in St. Louis Missouri.

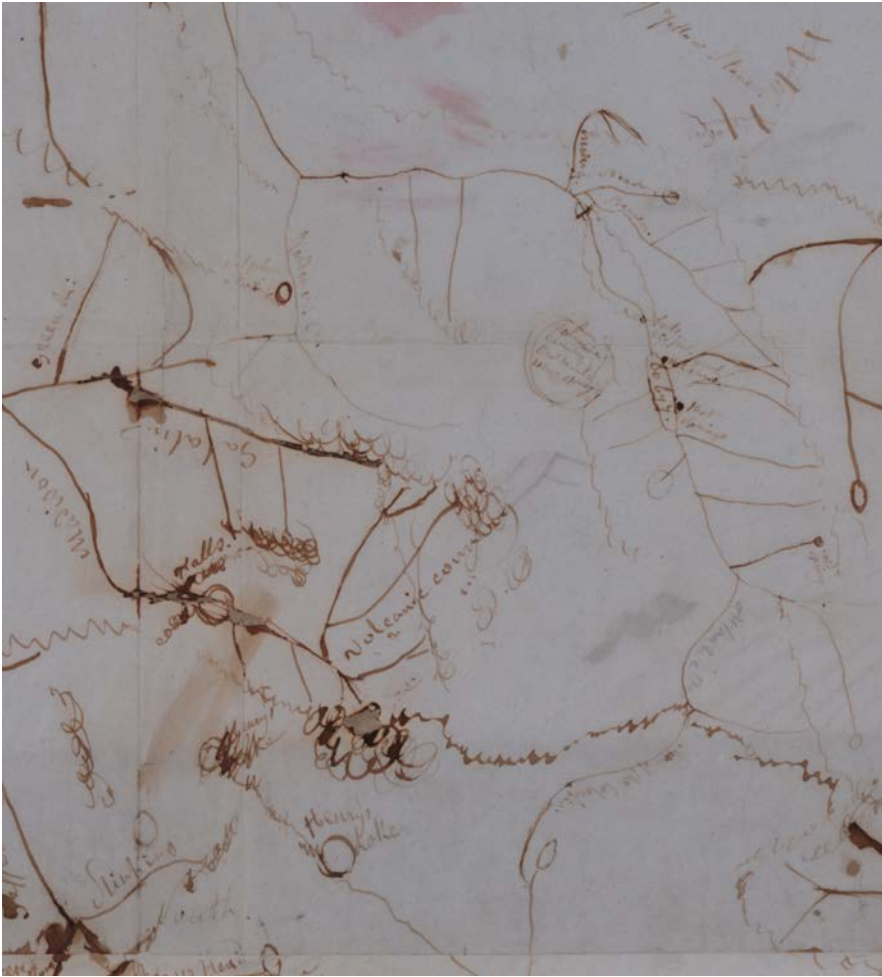


Figure 3.2 Detail of future Park region.

The Colombia, later be known as "Two Ocean Creek", marks the continental divide in the lower portion of Yellowstone Park. Although ridiculed for many years for claiming the "dividing spring" existed, later explorers vindicated Bridger.⁷⁹ The creeks presence on the croquis map supports Bridger's contribution to the map as he had habitually used the dividing spring as a landmark.⁸⁰

⁷⁹ Haines, *The Yellowstone Story*, Vol I, 49-50.

⁸⁰ *Ibid.*

The maps editing also proves its collaborative nature. Due to his illiteracy, Bridger would not have been able to label the various landmarks, waterways, and beaver locations. Nevertheless, these details also support the premise that Bridger did provide some of the knowledge for the map production. The relative accuracy of the geographic details and the location of beaver on the map demonstrate that the mapmaker had intimate knowledge of the area's geography. Additionally, the different pen strokes on the page suggest that at least two different people were filling in the details. The crudeness of several of the river lines also imply that the cartographer was not adept at using an ink pen, as opposed to the penmanship of the labels that suggest a degree of education and training. Therefore, at least two different cartographers, most likely Jim Bridger and Father De Smet, made the map. The Jesuit would later use this croquis map to create a more sophisticated manuscript map, likely used in the 1851 treaty negotiations.

The collaboration between these two individuals to create a cartographic depiction is further demonstrates the collaborative nature critical to the mapping of the American West. Jim Bridger contributed valuable knowledge about the physical landscape, while De Smet contributed respected academic knowledge of cartography.

Ghost trails, or erased pathways, also haunt these maps through the silencing and subsuming of Native American trails and knowledge of the landscape. The geographer J.B. Harley describes cartographic silencing as an active process that "...can reveal as much as it conceals and, from acting as independent and intentional statements, silences on maps may sometimes become the determinate part of the cartographic message."⁸¹ By

⁸¹ J.B. Harley, *The New Nature of Maps*, 86.

silencing trails in the maps, cartographers created ghost trails, present on the land but not the maps. For example, all three maps concentrate heavily on Euro-American trails and spatial knowledge formation, with little acknowledgment of the contributions or trails of Native Americans. Nevertheless, tribal knowledge and trails are present in the labels, and in a few territorial designations. All three maps, in a concealed manner, designate tribal names like "Blackfeet" on territories, to tell the user the most likely location of the tribes. However, there is no acknowledgement that the mapmakers gained much of the geographical and animal life knowledge from both Euro-American exploration and from the tribes themselves. Although the maps give a minor acknowledgment of tribal presence on the landscape, the process of silencing their claims to the land had begun. The next generation of Yellowstone cartographers enthusiastically continued this process. Ghost trails were materializing.

LOCAL EXPERTS, LOCAL ADMINISTRATION

The next major cartographic period in the Park's history straddles the divide between the major "exploration" expeditions post-1865 and the creation of the Park in 1872. Although the Native Americans, fur trappers, and miners knew the Yellowstone region well, the high number of survey and exploration expeditions that blazed their way through the territory post-1865 designated the era of the Park's history as the exploration period. It is in this time that the practice of "ghosting" trails, or removing them from maps to control the image of the region, becomes very active. The tradition of a collaborative knowledge exchange set in place by previous regional cartographers like Clark, Dougherty, Bridger, and De Smet continues in this period but it is with the knowledge exchange that ghost trails emerged.

The maps of W.W. de Lacy and P.W. Norris demonstrate the creation of ghost trails through mapping. Both men were present in the Park region after 1860 and in the case of Norris, instrumental in the formation of Yellowstone National Park. Essentially employed as a civilian contractor for both the Army and the Railroad, de Lacy gathered information from both personal expeditions and reports from other individuals.⁸² Often reviled by his contemporaries, primarily for his significant cartographic errors like deletion or misplacement of prominent geographical features, de Lacy's work represents the transition between the collaborative mapping of Clark and Bridger, and the rise of scientific mapping in the latter half of the nineteenth century. His 1865 map is cruder

⁸² Haines, *The Yellowstone Story*, 101-103.

than the 1870 map, with fewer topographical features, hand drawn titles, and watercolor borders.

Although some scholars have dated this map to 1865, it is difficult to date due to de Lacy's depiction of certain features.⁸³ For example, Bozeman was founded around 1864, but the town is not included in either the 1865 or the 1870 map. Additionally, de Lacy's selection of which geographic features to depict is, at best, sporadic. Very few establishments outside of the mining districts are depicted, even though de Lacy had traveled in the future Park region before the publication of the mining district map (see fig. 4.1).

The 1865 map depicts sites of major gold and silver strikes, but there is no consistent description of mountains, even in relation to mineral discoveries. Some cross-hatching exists in the general region of major mountain ranges, including following portions of the Continental Divide, although the lines do not follow the Divide correctly. Major lakes, at least that de Lacy was aware of, are depicted, although often incorrectly. "Hot springs" marks the Yellowstone region even though there was significant knowledge about the area, including de Lacy's own expedition and the lake, which he named after himself.⁸⁴ The exclusion of major trails and roads, both Native American and Euro-Americans, create ghost trails with this map.

De Lacy's 1870 map presents a drastic change from his earlier map (see fig. 4.2). The topography and waterways are more sophisticated, along with more emphasis on

⁸³ For more dating discussion, please see Richard L. Saunders, "W.W. deLacy's 1865 map of the territory of Montana" *Imago Mundi*, 54, no 1. (2002): 129-134.

⁸⁴ This lake was later renamed Shoshone Lake by another expedition.

local landmarks. The future Park region includes more specific, geographical features, including a more accurate representation of lakes. De Lacy also noted several Native American tribes and territories, especially in reference to specific waterways. Although the increased sophistication is due in part to a difference in the maps intended depiction of a larger territory rather than mining districts, the evolution of the detail also mirrors the growth of de Lacy's knowledge of the area. De Lacy lists varied information sources on the back of his map. These diverse sources are significant in that they represent the continued composite of information that was present in the previous era's maps.

These maps are also hybrids of local and administrative knowledge; however, they mark a shift in the role of the administrator to both local and administrative expert. De Lacy, as both explorer and administrator, represents the trend that began with Lewis and Clark of sending forth administrators of knowledge to create local experts. By staying in the region instead of returning east, de Lacy's maps mark the shift from local knowledge informing an outside administrator to local administrators actively engaging in the production of new cartographic work.

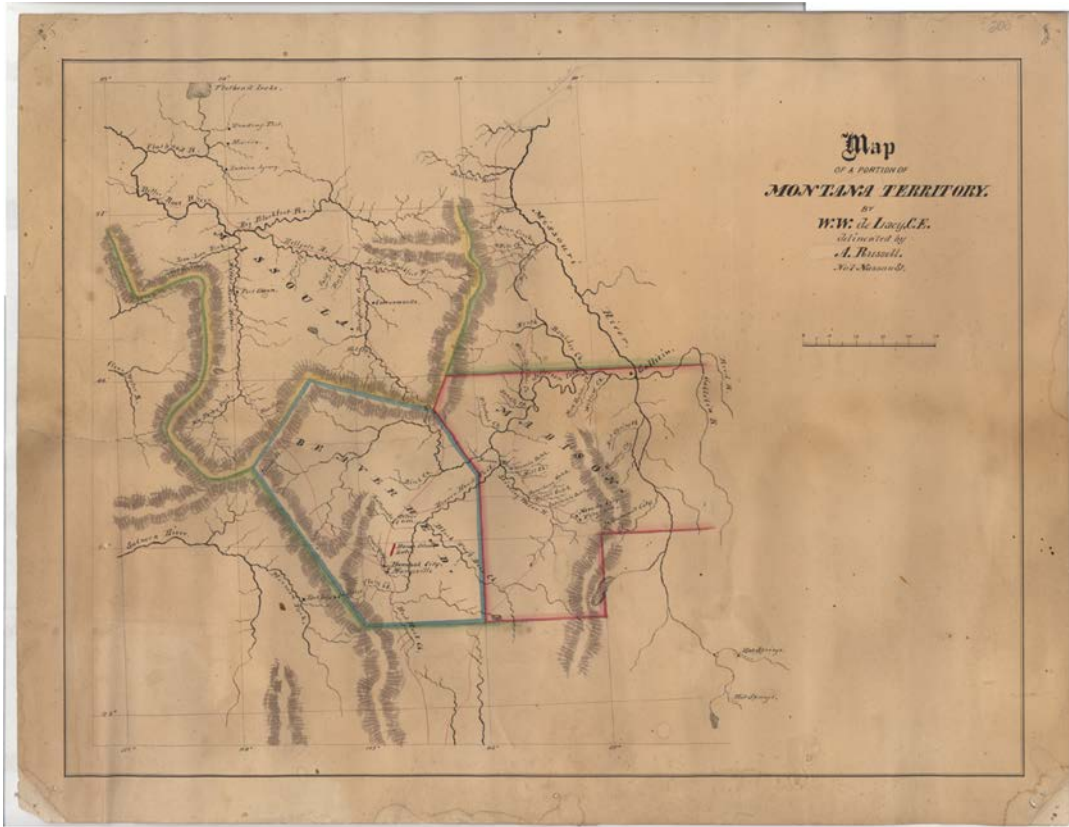


Figure 4.1 W.W. de Lacy, De Lacy 1865 Map: Map of the Territory of Montana with Portions of the Adjoining Territories. 1865? Montana State University Special Collections.

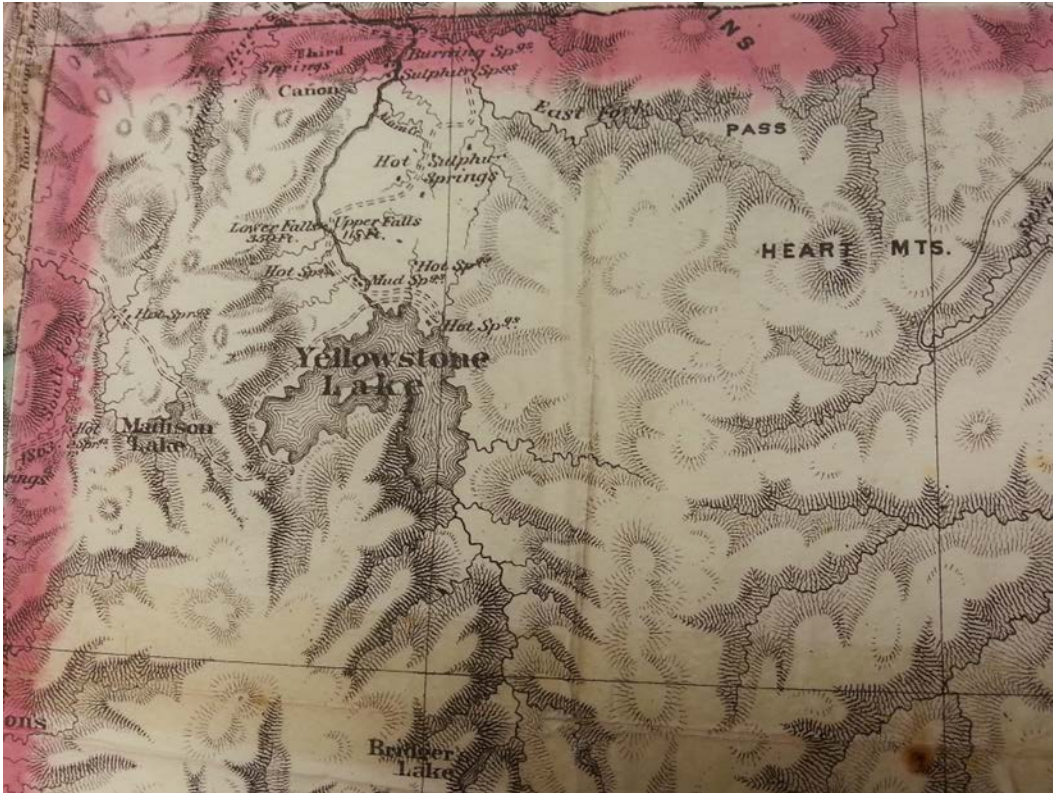


Figure 4.2 W.W. de Lacy, Map of the Territory of Montana with Portions of the Adjoining Territories. 1870. Montana State University Special Collections.

Further evidence of this shift in mapmaking is offered by P.W. Norris's tenure as park Superintendent from 1877-1882. As the most active early Superintendent of the Park, he was a prolific cartographer. The 1878 proposed trail map expressly demonstrates the creation of ghost trails in the area (see fig. 5.1). This manuscript map depicts Yellowstone National Park's trails and contemporary roadways in 1878. The topography is cruder than other Norris maps, or even previous exploration maps produced by the Hayden or Washburn expeditions. Both old and proposed trails are marked with a dotted line. The sparseness of the map, with the exception of the word "Park" is most likely due to Norris' concentration on the trail system as the central topic and not on the topography.

Norris drew many of the proposed trails without knowledge of the landscape. For example, Norris depicts a proposed trail from the lower portion of Yellowstone Lake region now known as Two Ocean Plateau area, ending at Heart Lake. Jim Bridger and Osborne Russell explored and described the “splitting creek” as early as 1835 and their contemporaries subsequently ridiculed them for the tall tale. However, in 1870 members of the Hayden expedition officially discovered Two Ocean Creek.⁸⁵ Home to thick timber difficult to traverse and explore, even in modern times, yet Norris's proposed trails within the Two Ocean area cut right through this problematic country (see fig. 5.2). Norris described the attempt to match the landscape to the map when he stated:

In this [August Expedition] and other scouting expeditions much valuable knowledge was obtained of the precipitous densely timbered regions bordering the Yellowstone Hart, Lewis, and Shoshone Lakes upon both the Atlantic and Pacific slopes of the main divide, which at this point is peculiarly tortuous, but no direct route across it from the Upper Fire Hole Basin to the Yellowstone Lake. The evident necessity of such a route has, from the commencement of explorations within the park, led to greater efforts and more failures than any other trail seeking with it, and the discovery of such a route was one of the main features of my season's plan. Hence, leaving my party engaged in constructing a loopholed, earth-roofed log-house and other improvements in the Upper Geyer Basin, I, alone, or with only one scout, commenced searching for a route, during which I found the odometer left in 1873 by Captain Jones and Professor Comstock, upon the vertical face of the main divide overlooking Shoshone Lake, where seemingly only Noah's Ark or Bridger's famous foraging crow would have ever left or be likely to remove it, and amid the dense snow-crushed, storm-twisted, knotted and gnarled thickets of the continental divide, traces of Everts, Hayden, and other explorers, but no practicable route across it, and returned to the Fire Holes.⁸⁶

⁸⁵ Haines, 49, 202-203.

⁸⁶ P.W. Norris "Report of the Superintendent of the Yellowstone National Park to the Secretary of the Interior for the Year 1881" *Archives.org*, 1881, Accessed April 28, 2015, 44, https://archive.org/stream/annualreportofsu1881unit/annualreportofsu1881unit_djvu.txt

Although his annual report followed two years after the proposed trail map, Norris was still attempting to make the area's landscape match its cartography. In his attempt to force a trail over heavy timber, along with many of his other abandoned roads, bridle paths, and trails, Norris was a creator of ghost trails in the landscape.

The 1879 map reveals other important ghost trails as well. The "old trail" marked in the northeast section of the Park is most likely a Native American trail known as the Bannock Shoshone trail used to cross the Rocky Mountains to access the Buffalo country in the Prairie (see fig. 5.3). Norris silenced the Native American presence and historical claims to the Park area when he renamed a trail known to be Shoshone to simply *old*, turning Native claims into "ghosts". This silencing is perhaps the most prominent in the 1879 map, stripping an entire people of their claim to land.⁸⁷ Additionally, the proposed trail up Pelican Creek to Amethyst Mountain follows the most likely route of the Nez Perce tribes as they attempted to reach the Crow Nation in 1877.⁸⁸ Norris used mapping and trail names to silence tribal presence in the Park. This erasure is most likely due to Norris' desire to encourage tourism in the Park after the 1877 tourist deaths at the hands of the Nez Perce tribes.⁸⁹ Moreover, by renaming the trails and silencing through the maps, Norris was actively asserting control over Yellowstone Park. These maps were not only representative of the Euro-American presence and control over the area, but were also tools to de-legitimize Native claims to the Park. This map reflects the overall trend in the American West of native removal from the National Parks.

⁸⁷ Spence, *Dispossessing the Wilderness*, 48,56-60.

⁸⁸ Elliot West, *The Last Indian War: The Nez Perce Story* (Oxford University Press, USA, 2009), 226.

⁸⁹ *Ibid*, 219-226, 241.

Nevertheless, the de Lacy and Norris maps share several important cartographic characteristics and historical trends. The maps have a similar topographical aesthetics, ghost trails, and hybrid local-administration knowledge control. Both men were an administrator in the Park region and considered local experts to varying degrees by their contemporaries, breaking previous mapping collaboration of regional knowledge taken east like the Clark and Dougherty maps. In creating administrative knowledge, de Lacy and Norris facilitated their development as local experts.

The maps also reveal differences in the men's spatial orientation of their localities and knowledge. De Lacy orients the Park region within states and territories, whereas Norris firmly separates Yellowstone from state or territorial jurisdiction. De Lacy, an employee of the territorial government, oriented his maps with a wider spatial gaze whereas, Norris, as a federal superintendent, firmly delineated the Park as a distinct space. These maps represent the officialization of geographical knowledge into a hierarchical administration, as opposed to the preceding collective mapping efforts.

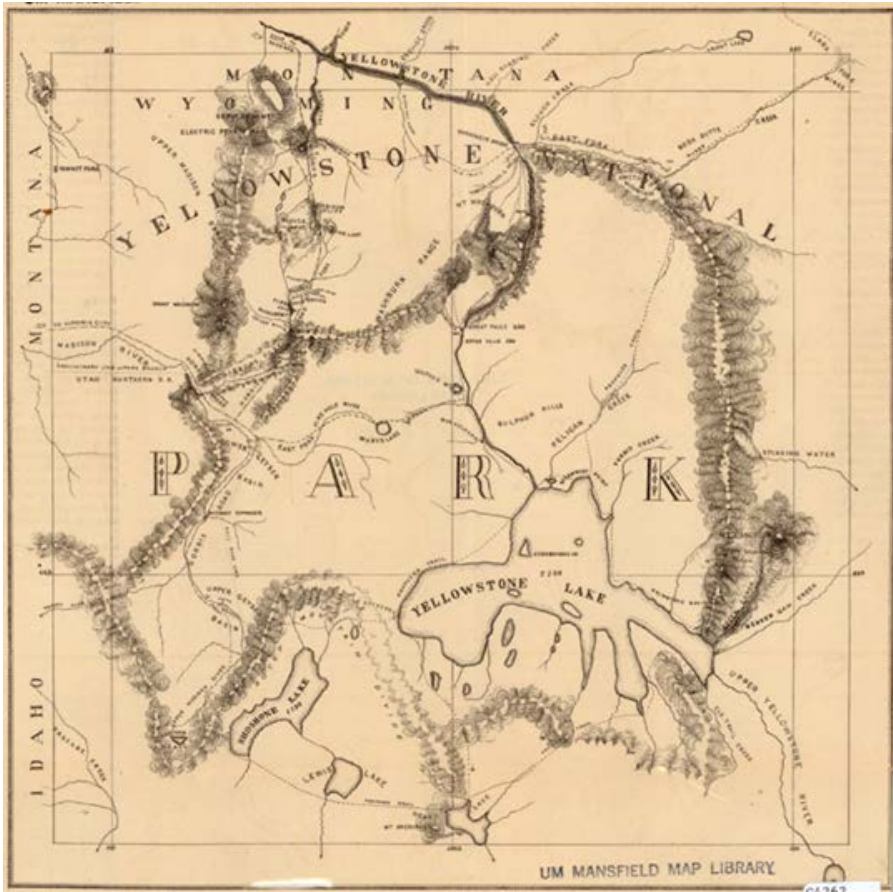


Figure 5.1 P.W. Norris, Yellowstone National Park, 1879 Map with proposed trails. 1879. University of Montana Mansfield Special Collections.

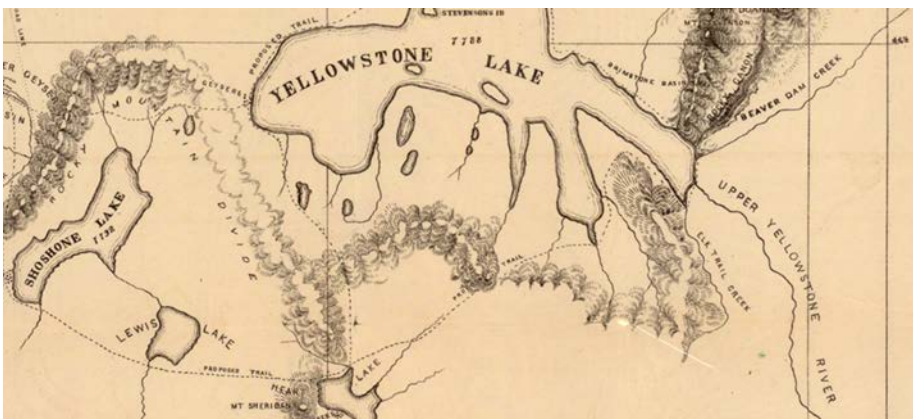


Figure 5.2 Detail of southern portion of Yellowstone Lake and Thorofare region.

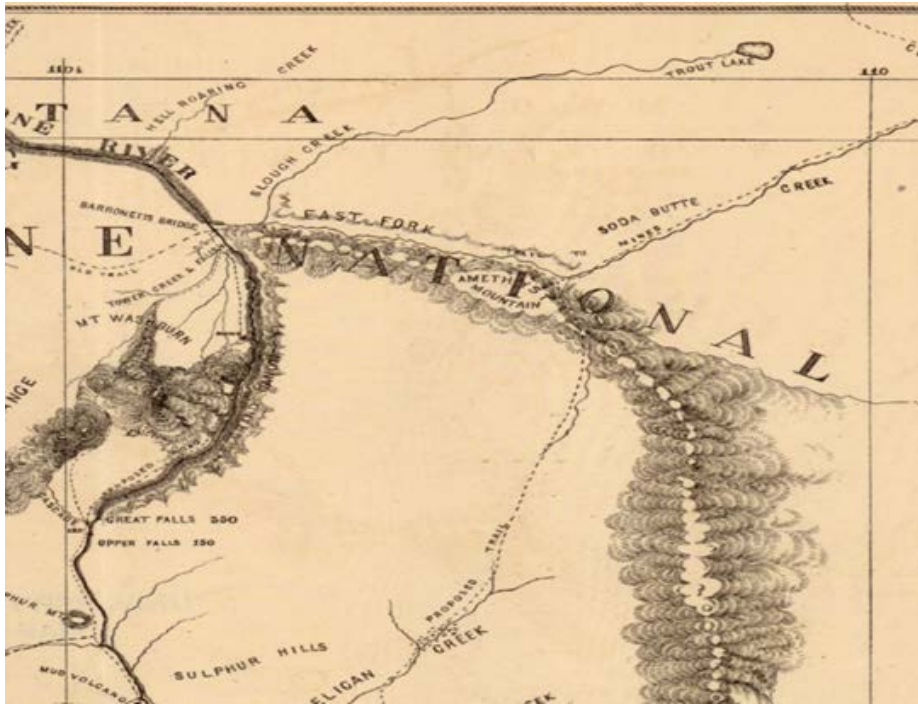


Figure 5.3 Detail of northeast corner of "old" trail and Soda Butte region.

GHOST TRAILS AND THE ARMY

Following Norris's administration, the Park came under control of the United States Army due to mismanagement of the Park by superintendents who were purely political figureheads, with very little budget allocated by Congress. The Nez Perce killing of tourists in 1877 and perceived threat from Crow and Shoshone tribes, as well as American poachers and miners within the Park heavily influenced the government's decision to introduce a military administration into the Park. The Army assumed administration in 1886, just over four years after Norris left as superintendent. Remarkably, the three subsequent superintendents all lasted less than Norris's entire term combined.⁹⁰

During the Army's administrative years, the Park's trails would continue the trend set by Norris and de Lacy of the creation of ghost trails, both knowingly and unknowingly. Particularly in the period, the inter-agency disputes and complex system of governance of the Park created many phantoms--both on the landscape and on maps. The Army was especially adept at creating local experts from administrative roles that resulted in varied usage patterns. For example, stopping poaching of Yellowstone animals became a central goal during the Army years, especially of elk and bison along the northern border. To accomplish this goal, the army instituted backcountry and winter patrols that the later Park Service used as a model for their governance of Yellowstone and other parks.⁹¹ The Army also drastically increased the border surveys and placements

⁹⁰ Haines, 260-261.

⁹¹ Ibid.

of markers, as well as general land surveys. The increase of activity brought with military control was due in part to relatively more secure funding sources, as well as a firmly established social and work hierarchies.

Nevertheless, with regards to movement patterns within the Park, the army instituted one of the largest changes through a drastic increase in the sophistication and mileage of the road system within the Park. The work of the Army Corps of Engineers transformed the wagon tracks and log roads to literally "slick" systems that ferried large amounts tourists around the Park.⁹² These roads were often slicked down with oil or water to reduce dust. When the Army handed over the roads to the Park Service in 1918, the park contained "278.8 miles of main road, 24.8 miles of secondary road, and 106.5 miles of approach road..."⁹³ The Army increased the accessibility of the Park to automobiles and the growing American tourist class.⁹⁴ Nevertheless, this large upsurge in roads also spawned ghost trails, as trails and bridle paths moved from the primary routes within the Park to a tertiary level.⁹⁵ An 1893 road construction map of the future main thoroughfare called the "Belt Line" demonstrates this shift of gaze, as well as the creation of a front country (see fig. 6.1). This published map contains significant marginalia and demonstrates the shift in gaze, as well as ghost trails, due to a consolidation of the administration over the image of the Park. Although the trail system drastically expanded

⁹² Aubrey L. Haines, "Chapter 17, The Work of the Corp" *The Yellowstone Story, Revised Edition, Volume II: A History of Our First National Park*. (Yellowstone National Park, Wyo. : Niwot, Colo: University Press of Colorado, 1996).

⁹³ *Ibid*, 253.

⁹⁴ For more on how automobiles shaped American wilderness see Paul Sutter's book *Driven Wild How the Fight against Automobiles Launched the Modern Wilderness Movement* (Weyerhaeuser Environmental Book. Seattle: University of Washington Press, 2002).

⁹⁵ Robert G. Rosenberg, *Trails of Yellowstone*, (Draft. Rosenberg Historical Consultants, 2013), 2-3

during the early years of military administration, this map does little to acknowledge that fact. Rather, the map notes only a few trails of significance. Although the focus on roads explains the lack of trail depiction, the notation of a few trails on the map suggests more than cartographic simplicity. By only showing the road system, both developed and projected, the map shifted the gaze from trails to roads and delineating front country from backcountry. Where previous maps' spatial depiction had not differentiated between different landscapes based on their accessibility to tourists, this map actively creates spatial divides based on the dominant modes of transportation.

This delineation created many ghost trails, both within the landscape and the map itself. For example, one of the few trails depicted is the same one that Norris listed as a proposed trail across the Mirror Plateau to the Amethyst Mountain region (see fig. 6.2). This trail, which is most likely the contemporary trail called the Lamar River trail, is present on the Norris map as a proposed trail. Significantly, this trail was most likely the route that the Nez Perce took in 1877, and the same trail that Norris proposed on his 1879 map. Yet the presence of any trail on a road map is contradictory to the intention of showing the road system mid production. The choice of trails pictured as opposed to the ones silenced raise questions regarding movement patterns and landscape depiction. By selecting to only picture a few trails like the trail from the Mirror Plateau to Amethyst Mountain, the Army Corp of Engineers were conducting value judgments about which movements within the landscape to depict.



Figure 6.1 United States Army Corps of Engineers. Yellowstone Road Construction Report Map, 1893. Montana State University Special Collections.



Figure 6.2 Detail picture northeast corner of the Park.

These judgments created a multitude of ghost trails, both through the road construction and the map itself. The multitudes of trails on the landscape were "ghosted" by the essential erasure from this map. For example, the Mirror-Amethyst trail had some connectors to other areas of the Park, including the Hoodoo Basin and areas outside of the Park. By erasing some connecting trails while depicting others, the map created ghost trails.⁹⁶ These small, little used trails connect larger trails, are difficult to find unless one has a previous knowledge of the connector's location. It is difficult to determine the exact reason behind the ghosting of the trails, unlike the Norris or de Lacy maps. Nevertheless, a few factors present as likely motivations.

The Corps was making a strong case for Euro-American administration of the Park through the construction of the road system. By emphasizing the construction of *modern*

⁹⁶ Rosenberg, *Trails of Yellowstone*, 23-26.

roads intended to streamline tourists through the land instead of laboring slowly on tough trails, the Army was making an argument for their continued administration of Yellowstone, as opposed to civilian control of the Park. Centralization of the road construction over that trails accomplished this deliberate shift in focus in the administrative gaze of the Corps. Another potential explanation for the choice in trail depiction is that most the trails depicted are fire trails. The Army used these trails to scout for fires or provide access to burning fires. Nevertheless, the dates of firelane establishment contradict this idea because the major push and usage of "firelanes" did not begin until after 1909.⁹⁷ As this road map predates the active period for Army firelanes, it is unlikely that fire management precipitated the trails selection. Furthermore, the map does not designate the trails as firelanes, which would be expected with the "military as administrators". Therefore, the most likely explanation is that the Army wanted the Park's major routes still noted as reference points for the road crews and surveyors. Unfortunately, the movement patterns within Yellowstone deemed less important, namely connecting or less important trails, relegated to the role of phantom trails. The map also continues the theme of collectivized cartography. For example, although the map is a printed map from either the General Land Office or the Army Corps, the map exhibits prominent marginalia or hand drawn modifications. This marginalia reveals the collective knowledge exchanges and creation necessary to control the Park's space. The administration, whether from the Corp or the General Land Office, enabled the broad depiction of the road system. Nevertheless, the individual, or more likely individuals,

⁹⁷ Ibid.

creating the marginalia were utilizing knowledge of the landscape and the road system to correct and modify the map. For example, the red markings designating the degree of road completion or maintenance level mark routes that are not even originally marked on the sub-levels of the map. The map modifier was literally redrawing the map and the road system. The hatch marks by the Pitchstone Plateau support this redrawing on a local level as well. The local administrator, whose exact identity is difficult to determine due to a drastic change of personnel in 1893, relied on local knowledge and information in order to correct the proposed routes and anticipate new work.

CONCLUSION

Ghost trails are generated from maps and the land in subtle and unconscious ways. These landscape and cartographic phantoms rely on exchanges of local and administrative knowledge for their creation. This intricate knowledge dialectic for creating ghost trails involves a variety of factors with cartography. Topographic errors, deliberate silencing through omission or renaming, and knowledge exchanges all contributed to the trails that haunt the landscape and maps of Yellowstone. Although the deletion of trails from maps often do not have an obvious motivation for silencing or removing tracks from maps or the land, many of the erasures result in hierarchical valuation of the claims to the landscape idealization of the land. The renaming of the Native trails to “old” trails is a perfect example of silencing of trails in order to erase Native claims to the land. This rechristening also serves the purpose of facilitating the mythical wilderness of Yellowstone by erasing evidence of earlier humans in the Park. Tourists could safely stroll along appropriately named trails and roads, feeling as though they are wilderness adventurers, trekking into a previously unconquered backcountry.

Norris was not the only Euro-American whose maps assisted in the creation of the wilderness image of Yellowstone. The maps of Clark, Bridger, and Dougherty reveal the early construction of Euro-American spatial concepts of the Park region. By emphasizing information crucial to navigating the landscape, like the locations of animals and grazing information, as well as waterways, these maps provided opportunities to assimilate information collected as Euro-Americans expanded west. Nevertheless, even though these maps acknowledged the existence of Native Americans, by emphasizing white

exploration and knowledge over tribal claims, these maps began the active silencing of both Native presence and trails, thus beginning the process of creating ghost trails. This approach began the system of knowledge appropriation, enclosing the land, and control of movement patterns within the landscape. These factors combined to assist in creating the wilderness mythology surrounding Yellowstone Park by obscuring previous users and inhabitants.

The Norris map continues these patterns of knowledge and trail appropriation. The most obvious examples from Norris are the Shoshone trails and the “new” trails on the proposed trail map. By emphasizing a flexible landscape with a prominent white administrative presence over that of Native or local trails, Norris continued the production of both local –administrative knowledge, and ghost trails. Norris appropriated the local knowledge gained from previous explorers and Native Americans in the Park. He needed the local knowledge to administer the Park, as well as become a local expert in his own right. This hybridization of the administrator facilitated the creation of ghost trails through the changes in the valuation of the landscape. By creating and renaming trails, Norris changed the valuation of the land from one of material value to one of cultural value relating to creation of wilderness imagery.

The Army built upon this valuation issue with their emphasis on and attempted creation of ordered, streamlined, space. By bounding the space with roads, the Army created the delineation between the front country and the backcountry. Additionally, this juxtaposition relied upon the collective information in order create the ordered Yellowstone space. This road system created ghost trails through the valuation of

movement patterns. In placing a higher value and emphasis on the roads over the trail systems, the Army placed a higher cultural value on the more streamlined movement patterns that roads made possible. Enabled by complex knowledge exchanges, this map hierarchy created ghost trails on both the map and physical landscape. Ghost trails haunt the land and maps of Yellowstone, forcing questions of knowledge ownership, exchanges, and control of movements. These specters compel deeper interrogation of maps and the land, along with popular conceptions of wilderness.

Trails and cartographic ghost trails reveal wilderness imagery in its infancy. By examining the development and construction of trails – both human and non-human – the intricate relationship between trails and Yellowstone’s wilderness mythology can begin to be unraveled. This revelation exposes the fragility of the supposed naturalness of the Park. Simply, trails, along with ghost trails, reveal to humans both their role in facilitating the wilderness image and where the material and animal worlds affect the human. In doing so, valid questions about management, access, and usage are raised, specifically in reference to human involvement in the landscape off the paved roads.

The Army utilized the erasure of trails and implementation of roads to facilitate control of movement/bodies within the park. These ghost trails and road system encouraged the myth of an untamed landscape, one in which a tourist could make the trek past both wild animals and wild land. Yet, even as Norris and the Army were building and erasing trails to create this National Park, their very actions enabled human access to and erection of the wilderness. On the surface this does not seem a contradiction, but without trails, humans could not access the very wilderness the Park intended to create.

This inherent tension between the intent and usage of trails demonstrates the tension that the myth of wilderness within the Park creates. Tourists are sold on the idea that the Park is a place of wild land and wild animals, yet they can stroll peacefully along a dirt track within this untamed place. Although the land and its residents, both human and non-human, have undergone extreme changes since the founding of the Park, trails still soothe the visitor in accepting the myth of wilderness. By identifying the role of trails and maps in creating the wilderness image of Yellowstone, a greater understanding of the complex relationships between animal, man, and nature could be better understood. Perhaps, this increased awareness would lead to a more sustainable and inclusive Yellowstone National Park.

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