Europeans and their descendants have assigned medicinal value to hot springs—naturally occurring geothermal wells—for millennia. In Classical Greece, hospitals to care for the sick were built next to springs, while medieval Europeans often associated such springs with supernatural phenomena and miraculous cures. When European explorers fanned out across the globe, they often noted springs in their journals, many recording temperatures and the local folklore about them. By the 19th century medical theories actively promoted the curative powers of hot springs, leading to the establishment of hotels and clinics for wealthy clients across Europe and North America. A common prescription for arthritic ailments and organ disorders called for balneotherapy—spending a few days or weeks “taking in” high mineral content waters.

Hot springs are found throughout North America, but the area in and around Yellowstone National Park—established in 1872 and located in Idaho, Montana, and Wyoming—has a particularly high concentration. It should come as no surprise that with the rise of park tourism around the turn of the 20th century, hot springs resorts sprouted up throughout the region to cater both to park tourists and the immigrant communities who worked in the local mines and were familiar with such bathing traditions in their European homelands.

Although some of these resorts remain popular today as tourist destinations for both health and leisure, many early resorts are no longer in operation. What were these early hot spring resorts like? How were medical theories and bathing technologies spread to and promoted in the American West? Can this inform us about how scientific knowledge circulates through society and manifests itself in material forms and in marginal locations?

To begin our investigation into this nexus of tourism, medicine, and geology, we turned to a well-documented example—the LaDuke Hot Springs Resort. By studying its architectural remains, as well as contemporary newspaper accounts, diaries, photographs, and court records, we have begun to answer these questions and, we hope, to contribute to a historically contingent archaeology of science.
The LaDuke Hot Springs Resort was built in 1899 by Julius J. LaDuke, a French-Canadian immigrant. The small resort was located in south-central Montana on the east bank of the Yellowstone River on land that LaDuke had staked with a mining claim. Across the river the booming communities of Aldridge and Electric (formerly Horr) were home to Eastern European immigrants who worked in the nearby coal mines. These miners and their families formed one group of customers for LaDuke’s Resort.

Other customers came as tourists traveling via rail to Yellowstone National Park. The final rail stop was at nearby Cinnabar, where tourists disembarked to wait for the next available stagecoach to take them the remaining three miles to the park’s entrance at Gardiner. Before reaching Cinnabar, however, trains also stopped two miles north at Electric, just a short walk to the footbridge that crossed the river to LaDuke’s Resort. LaDuke clearly hoped that after traveling some 50 miles from Livingston weary travelers would welcome a short reprieve in his hot springs before trekking into the park.

The LaDuke Hot Springs still flow into the Yellowstone River today, boasting an average temperature of 145°F, similar to levels reported during the early 20th century. Much of the resort, however, is no longer discernible on the ground—it was probably destroyed around 1955 when the modern Highway 89 was constructed—and even where remains are visible, systematic excavation is impossible since the hot waters of the springs have weakened the ground surface.

Hot Springs

Found all over the world, on land and under the ocean, hot springs are wells of geothermal-heated groundwater. In volcanic zones hot springs are produced when magma, located deep within the earth’s surface, heats groundwater that has seeped through permeable soils and into bedrock. This interaction changes the water’s mineral content, increasing levels of simple silica, sulfur, calcium, lithium, and even radium and selenium. The heated water is lighter in weight than the cooler waters and rises to the surface through cracks in the earth. If the water nearing the surface remains at a consistent level of pressure, a hot springs is created. The constant circulation of water from the surface to the earth’s depths and back maintains the springs’ temperature. Hot springs in and around Yellowstone National Park are only one small part of a complex geothermal network that includes geysers, fumaroles (holes that allow hot smoke and gases to escape), and mud pots.
But using photographs, newspaper accounts, oral history, and some of the physical evidence still visible on the surface, we can reconstruct the resort’s plan.

LaDuke built several different structures on the property. Newspaper accounts report that he first constructed the bathing complex, consisting of a large plunge bath with smaller single-sex private baths. Long concrete collection boxes, still visible on the surface today, replaced worn-out wooden tanks that LaDuke used to divert water from the springs. Too hot for immediate bathing, the water was stored in tanks and allowed to cool before flowing into the pools. The chance find of a photograph of a male bather demonstrates how visitors used the baths.

LaDuke later built a small hotel to the south of the bathhouse so visitors could spend the night. By 1902 the Wonderland Newspaper (published in Gardiner) mentioned both long- and short-term accommodation available at the resort. Contemporary photographs indicate that this building was entered from both the north and south, had two floors, and up to six rooms on each floor. Smaller structures to the rear of the lodge appear to be out-houses and buildings that we suspect housed fuel and a wagon and horses.

**Promoting the Hot Springs**

To promote the medicinal advantages of a visit to the hot springs, Julius LaDuke entered into a partnership with William F. Cogswell, a doctor from nearby Livingston. In 1899, he made Dr. Cogswell a part owner of the resort—selling him half of the springs for $500—and thereby secured the doctor’s expert validation of its medicinal value. He also, no doubt, received referrals from his patients. Soon after, advertisements promoting the springs’ health benefits began appearing in local newspapers.

Financial disagreements caused the partnership to last only four months. Court documents reveal that under the initial terms, LaDuke was to be paid half of the expenses of building the resort and $3 per day while Cogswell continued his medical practice in Livingston. For reasons unknown, Cogswell withheld payment, and as a result LaDuke filed his
Above, the resort consisted of a bathhouse (1), a hotel (2), and a swinging bridge (3) built later to bring guests across the river.

Left, the concrete trenches that channeled the hot water are still visible with their wood planks that trapped the steam and decreased evaporation levels.

Right, the resort boasted a large plunge bath as well as separate bathing facilities for men and women. Here, a male visitor scrubs down in one of the resort’s tubs.
litigation suit against the doctor. The dispute was settled in 1902 when Cogswell filed a quitclaim deed to Julius for $1 in lieu of paying the much larger debt.

Despite the brevity of this partnership, knowledge of the springs' medicinal benefits circulated widely throughout the region. For example, a 1902 article in the Wonderland cited them as the “equal of any springs in the west, and [they] are a positive cure for all diseases that hot springs are calculated to cure.” And, in 1905, the Wonderland reported that the “springs enjoy an enviable reputation for the relief of rheumatism, gout, neuralgia, sciatica and disorders of the heart, kidneys, stomach and nervous system. The proprietor Mr. Jules LaDuke promises to add many new improvements to the already commodious facilities for bathing now in vogue at the resort, and when these are completed it will be second to none of the resorts of the state.” Attracted to this combination of leisure and health, the region’s professional class—doctors, lawyers, and judges—frequented the resort with their families, and their endorsements appeared in local newspapers, bragging about the spa’s superior medicinal properties.

In attempting to draw customers, LaDuke faced some difficult logistical issues. For example, visitors from Gardiner had to travel five miles north by coach to reach the river crossing at Electric.
Newspaper reports and family records indicate that LaDuke was a typical turn-of-the-century entrepreneur who made and lost his fortune several times over. Born Julius J. LeDuc in 1842 in Beauharnois, a small village south of Montreal, Quebec, LaDuke immigrated to the United States in the 1870s, just as America's Western frontier was closing and entrepreneurial endeavors were growing.

During a decade of traveling through the American West, Julius married Elizabeth Kappes, only to see her die in 1879. He and his two small children soon settled in Conjos, Colorado, where he worked as a lumber dealer. Needing help with his expanding business and a mother for his children, he was joined by his brother Onesime, who brought Celina Bougie, a distant cousin, to become Julius's new wife.

The two brothers enjoyed financial success during their Colorado years, owning a lumber mill, mines, and a toll road. But in 1889, Onesime was murdered during a business trip—a major setback for the family. The murderer, Abram Ortiz, was later arrested and hanged—the scaffold reportedly built with lumber from the LaDuke mill. The divorce record states that LaDuke had grown belligerent and distrustful, alienating his family and slipping into poverty, forcing him to move to the Park County Poor Farm where he eventually died in 1927. He was buried in an unmarked potter's grave in Livingston's Mountain View Cemetery.

A marriage photograph of Julius LaDuke and his second wife, Celina Bougie, was taken in 1882 in Centerville, South Dakota, near Sioux Falls. The resort two would later be constructed.
Newspaper reports and advertisements indicate that LaDuke reduced this expense by compensating large groups half of their coach expenses. Once they arrived in Electric, customers needed to cross the 150-foot wide river. At first, LaDuke used barges to bring guests across the river, but later installed a cable ferry, then a ferryboat, and finally a swinging footbridge. Although newspaper records show that LaDuke sought county funding to build a more reliable bridge, legal issues and a lack of funds resulted in his petition’s rejection.

**Celebrities and Calamities**

Like resorts today, hot springs occasionally welcomed celebrity visitors. On April 16, 1903, the *Wonderland* reported that President Theodore Roosevelt sidetracked his train at Cinnabar during his two-week vacation to Yellowstone National Park. Although no specific record exists, there is a strong likelihood that Roosevelt and/or his retinue visited LaDuke Hot Springs Resort since a newspaper reported that they found “life at Cinnabar a little dull and monotonous.”

Another potential celebrity visitor was the famous frontierswoman Calamity Jane, who earned her notoriety as a military scout, Indian fighter, rumored lover of Wild Bill Hickok, and a member of Buffalo Bill’s Wild West Show. Shortly before her death from pneumonia in 1903, the *Livingston Enterprise* reported that she was staying in Electric for a few days, possibly with the family of Tom Dorsett, a man from Electric she had married years earlier. Given her reputation, it is quite possible she crossed the river to bathe in the hot springs.

While the resort’s success increased LaDuke’s wealth and social standing, he also suffered some of the dangers of ownership. In 1905, his four-year-old son Lester fell into the springs during a walk to the baths. Published accounts describe how his older sister rescued him from the dangerous water, stripping him of his woolen bathing suit, and sending for a doctor from nearby Aldridge. Unfortunately, very little could be done to save him and he died the following day.

In another more infamous event, a woman named Averill arrived late one evening. Reportedly drunk and uncooperative, she bathed and then insisted on sleeping in a tent on the resort’s grounds. Although LaDuke at first hesitated, he eventually agreed to the sleeping arrangements, but when he returned to check on the situation he found only her clothes. Local authorities spent the next two days searching for the missing Averill, going so far as to detonate charges in the river in hopes her body would surface. They never found her, and given no sign of foul play, her disappearance was attributed to suicide.

**The Hot Springs’ Last Resort**

Hot springs resorts were typically short-lived business ventures. Ownership often changed hands several times and resorts were especially prone to burning down. After a decade of hard and often frustrating work, LaDuke faced multiple difficulties. As the mines began to close, the local residents had little money for recreation and tourist numbers also dwindled as the trains now traveled all the way to the entrance of Yellowstone National Park, eliminating unnecessary stopovers along the way. To make matters worse, LaDuke lost yet another son, Louis, to scarlet fever, and a daughter, Ida Susan, to consumption.

As LaDuke’s financial and personal troubles grew, the recently established Electric Hot Springs Company set out to build a large hospital and sanatorium only one mile to the north of LaDuke’s Resort. This enterprise, modeled on the palatial spas of Bavaria in Germany, was to have its own resident physician, Dr. Frank E. Corwin, a local doctor already employed 25 miles to the north at Chico Hot Springs.

The springs available to this new resort, however, were not hot enough to meet the sanatorium’s needs. As a result, the company apparently approached LaDuke about purchasing his resort and his water rights so that water could be
piped downriver to their new facilities. Although, LaDuke was probably interested in selling, he did not sell the resort directly to Corwin’s Electric Company. Instead, he sold it to John H. Holliday for $6,000, who, in turn, sold it to Corwin 20 days later for a mere $1 and guaranteed employment. This odd arrangement may suggest that LaDuke and the Electric Company were at odds over water rights and that Holliday went behind LaDuke’s back to strike the deal with Corwin.

After the sale water from the springs was diverted into long concrete trenches, still visible on the surface today. The hot water was then channeled down a wooden flume, short portions of which still exist next to the river between mile markers six and seven, to the Corwin Springs Hospital, as the sanatorium later became known. It operated from 1909 until 1916, when the buildings mysteriously burned down on Thanksgiving Day.

Today along Highway 89 a U.S. National Forest sign identifies the area where LaDuke’s Resort stood. A small rest stop provides a view of Devil’s Slide—a conspicuously shaped slice of red sedimentary rock running vertically down a cliff—and has storyboards that explain the geothermal mechanics behind the hot springs.

Although a seemingly bucolic location, this spot has continued to generate controversy. In 1981, Malcolm Forbes, the publisher of Forbes Magazine, sold a 12,000 acre ranch to the Church Universal and Triumphant (CUT), a religious organization that combines elements of several religious and philosophical traditions. The next year, Welch Brogan sold the surface water rights to the LaDuke Hot Springs to Michael Kaufman, a CUT member from California. Nine months later, Kaufman resold the rights to CUT for $10. Citing its medicinal qualities, the church wanted to expand the springs by drilling and hoped to pipe the water to their headquarters to heat their offices and for use in a swimming pool. In 1992, however, environmentalists and park officials, worried about the effects such drilling would have on Yellowstone’s geothermal system, introduced a bill to the U.S. Congress to prevent drilling within a 15-mile perimeter around the park’s border. Although the bill failed, the church abandoned their drilling plans at LaDuke Springs and then eventually sold portions of their property to the federal government. Today the
Church holds the surface rights to the water that flows only from the concrete tubs. Recently the National Forest Service granted an easement for an underground pipe to cross federal land so the water can flow the one mile to Corwin Springs.

Mineral hot springs remain popular destinations throughout the Rocky Mountains. Although contemporary scientific research has not provided overwhelming proof of mineral water’s therapeutic value, some in the medical community, especially naturopathic doctors, encourage their patients with arthritis and orthopedic problems to frequent these springs. Despite this lack of scientific clarification, however, hot springs provide a welcome relief for a society plagued by stressed-related health issues. Smaller retreats cater to patrons seeking the waters’ health benefits, while larger resorts offer massage, personal fitness, and entertainment. The LaDuke Hot Springs Resort, though not as large and complex as contemporary spas, was an early instance of medical tourism. Our upcoming research will help us understand how bathing practices changed as new medical theories circulated in the American West.

Benjamin W. Porter recently received his Ph.D. from Penn’s Department of Anthropology. He is a Co-Director of the Dhiban Excavation and Development Project in Jordan and now teaches at Princeton University, where he is writing a book exploring social life in marginal communities.

Athena May Porter, a genealogist who has been researching family histories since 1983, lectures regularly on genealogical research throughout Montana. She lives in Billings, Montana, and has recently co-authored a notebook-style, personal medical records organizer called Medical Memories™. Athena May is LaDuke’s great-granddaughter and Benjamin is his great-great grandson.

Acknowledgments

Thanks to Doris and the late Bill Whithorn, for the detailed information and images they contributed to this project; local historians Carol Woodley and Jerry Brekke; Ken Britton and Cheryl Taylor of the Gallatin National Forest Service for their willingness to search for essential details; and to Brian Sparks, John Fryer, and Warren McGee for sharing their knowledge. Jennifer Jacobs Porter, Joseph W. Porter, Stephen Jacobs, and two anonymous reviewers provided additional assistance in our research.

For Further Reading


