
National Park Service

U.S. Department of the Interior



Interpreting Cultural Resources at Craters of the Moon National Monument & Preserve



Table of Contents

Introduction.....	3
Interpretive Themes.....	4
Protecting Cultural Resources.....	6
Native Americans.....	8
Fur Trade and Early Exploration.....	12
Emigrants.....	13
Surveys, Mining, and Ranching.....	16
Robert Limbert.....	18
Park Structures.....	21
The Apollo Astronauts.....	23
Monument Expansion.....	25
Appendix I: Timeline of Events.....	26
Appendix II: Projectile Point Chronology.....	31
Sources.....	32

Volcanic geology is what makes Craters of the Moon a national monument. Every year visitors are awed, inspired, and inquisitive about the vast volumes of blackened lava that cover hundreds of square miles of Idaho's high desert.

The emphasis on the area's volcanism as the reason for designating the area a monument is clear in Calvin Coolidge's 1924 proclamation, citing the "remarkable fissure eruption together with its associated volcanic cones, craters, rifts, lava flows, caves, natural bridges, and other phenomena...of unusual scientific value and general interest."

Subsequent proclamations have emphasized the sagebrush steppe plant communities, especially those associated with kipukas. Yet consideration of cultural resources has remained largely secondary.

A land so rough and inhospitable to people that it was literally a question mark on the map one hundred years ago would seem to offer little in the way of cultural history. In all likelihood, recent eruptions of lava covered

sites once used by the Shoshone on their travels through the area. Since then, most travelers have done everything they could to avoid the uninviting lava fields.

However limited, the cultural record of the monument boasts an amazing range of groups and individuals that have alternately shunned and embraced the harsh terrain over thousands of years, and for a variety of reasons. It is this range of uses and emotions evoked by the terrain that makes understanding the cultural past of Craters of the Moon so important in relating a seemingly-dead environment to visitors today.

This document is not intended as a definitive primer of the monument's cultural history. It is a jumping off point, an introduction to further study of the people and cultures that are part of the Craters of the Moon story.

Lennie Ramacher
March 2011

Interpretive Themes

The following interpretive themes are identified in the Long Range Interpretive Plan as critical for achieving visitor understanding and appreciation of the cultural resources of Craters of the Moon National Monument & Preserve.

Wilderness & Western Landscape – Craters of the Moon contains vast areas managed to preserve their wilderness characteristics.

Subthemes:

- As one of the first areas in the National Park System to be designated a federal wilderness, Craters of the Moon established a precedent of preservation that has been imitated in many other areas since 1970.
- Most of Craters of the Moon is already designated as Wilderness or has been recommended to Congress for Wilderness designation (Wilderness Study Areas). Natural quiet, dark skies, and an immense relatively undisturbed natural landscape are a few of the important qualities of these areas.
- Effective preservation of the wilderness character of Craters of the Moon requires thoughtful decision making by agency staff that is informed by good science, interagency cooperation, public involvement and support.

History & Western Landscape – For thousands of years people have avoided, endured, and pondered this vast western landscape.

Subthemes:

- Ancient stone structures, well worn trails across the lava, and oral traditions indicate that Native Americans traveled extensively through this lava landscape. Members of the Shoshone-Bannock tribes continue an enduring relationship with this area.
- Oregon-bound pioneers followed Goodale’s Cutoff along the northern edge of the lava flows in the mid-1800s. Based on journal entries, the area left an indelible, but mostly negative, impression on these early visitors.
- Ranching and settlement were difficult at best in this arid high desert environment. Rock cairns and livestock trails serve as reminders of the long history of grazing practices here. This traditional practice continues today within the BLM Monument.
- Geologist Harold Stearns, who described the area as appearing like the “surface of the moon as seen through a telescope,” explored and studied the area and became an outspoken advocate for its preservation.

- Robert Limbert, Idaho taxidermist and explorer, hiked the length of the Great Rift in 1920. His efforts drew national attention to the fascinating volcanic formations here – and the need to protect them.
- Since 1924 the National Park Service has cared for Craters of the Moon and welcomed visitors. In 2000 Craters of the Moon entered a new era when the NPS and BLM began to cooperatively manage a greatly expanded monument.
- Notable modern-day visitors include the Apollo Astronauts who came to learn

basic volcanic geology in preparation for their moon missions. Recent geologic investigations that have found similarities between the geology of the Snake River Plain and the surface of Mars indicate that Craters of the Moon will continue to be an important place to further develop our understanding of the earth...and beyond.

Further reading:

NPS – *Long-Range Interpretive Plan*

Protecting Cultural Resources

Cultural artifacts are great tangible items from which to interpret and provide meaning about the resource. Visitors routinely inquire about objects such as arrowheads or pottery sherds. A limited number of artifacts are on display or can be seen by park visitors. Pottery and projectile points are in a sealed display case in the museum, and the Shoshone rock rings are conspicuously located along the trail to Indian Tunnel. While they make great tools for interpretation – most artifact inquiries are made only out of curiosity – the protection of these and all artifacts is of primary importance.

Beyond those few high profile objects, it is best to be general in referring to the location of known archeological sites. Several laws, including the National Historic Preservation Act, the Archeological Resource Protection Act, and NPS Management Policies, may require staff to withhold from the public

information about sensitive resources, including: archeological and cultural resources, commercially valuable resources, and rare, threatened, or endangered species. When in doubt, refer inquiries to senior park staff, such as the Cultural Resources Program Manager or the Chief of Resource Management.

I've found an arrowhead, now what do I do?

Like all park resources, collection of cultural artifacts is not allowed without a research permit signed by the superintendent. “Casual” collection of artifacts – whether by monument staff or the public – greatly diminishes the informational value of an object. In general, surface finds must be left undisturbed and reported to the Chief of Resource Management or Cultural Resources Manager. If a collected artifact is presented to monument staff, make

Without handling the objects, ranger Andrew Fitzpatrick photographed and noted the location of this archaeological site near the Tree Molds in 2009. Information relayed to the Cultural Resources Manager confirmed the Shoshonean origin of the artifacts.



every effort to record the precise location and as much other information as you can about the object.

An example of proper handling of a potential archeological site occurred in the fall of 2009. While hiking in the Tree Molds area Ranger Andrew Fitzpatrick came across what he suspected might be pottery sherds, similar to those on display in the museum. Rather than disturbing the objects by handling them, he photographed the site and took careful note of its location. Upon returning to headquarters,

Fitzpatrick then relayed that information to the monument's Cultural Resources Manager, who was able to locate the site and confirm their origin as Shoshone pottery sherds.

Other seemingly commonplace objects do merit consideration as cultural artifacts and need to be treated as such. Was that rusty can found under a clump of sagebrush left by a 1860s emigrant or casually left behind by a sheep herder 50 years ago? Until an NPS staff member with archeological training has looked at the object, it's best to treat it as an artifact.

All arrowheads are projectile points, but not all projectile points are arrowheads...

“Arrowhead” refers specifically to a point used with a bow and arrow. Of course, sharpened points were used by Native Americans on objects other than arrows. “Projectile point” is a phrase to describe all sharpened tools used for some form of spearing. The difference is simi-

lar to that between “lumber” and “two-by-four”: the terms are largely interchangeable, but one denotes a more specific use.

For much of the public, this distinction is probably academic. If a visitor asks if there are any arrowheads around, only worry about clarifying the two terms if it will help the interpretive opportunity.

Humans have inhabited the Snake River Plain since at least the end of the last Ice Age, first showing up in the archeological record 12,000-14,000 years ago. Members of the Shoshone and Bannock tribes and their ancestors had the most contact among native inhabitants with the lava fields of Craters of the Moon. The Shoshone were a branch of the Northern Shoshone that inhabited the upper Columbia River Basin, while the Bannock were a branch of the Northern Paiute. These two groups both occupied the Snake River Plain, intermingled, travelled and hunted together, and otherwise coexisted while speaking slightly different languages.

The Shoshone and Bannock did not live in large, highly-structured tribes with identified chiefs. Instead they tended to spread out into small, semi-nomadic groups or bands of two or three families in the summer, searching for food throughout the plain and into the mountain valleys. Camas root from the Camas Prairie, migrating salmon from the Snake River, and game such as deer and pronghorn were staples of their diet. Many of the common plants found at Craters of the Moon hold edible and medicinal qualities known and used by the Shoshone-Bannock and other tribes throughout the wider region.

By about 1700 the Shoshone and Bannock had acquired the horse, which allowed them to hunt for game such as bison farther afield on the plains of Montana and Wyoming. During winter the groups would coalesce into small villages generally centered around the Blackfoot and Portneuf rivers.

The archeological record indicates they spent considerable time at Craters of the Moon, though their movements may have been restricted somewhat by the rugged lava flows. Given the presence of archeological sites and the recent nature of the lava flows, it's likely they witnessed eruptions along the Great Rift. The following story illustrates likely first-hand knowledge of the eruptions.

Serpent Legend*:

Long, long ago, a huge serpent, miles and miles in length, lay where the channel of the Snake River is now. Though the serpent was never known to harm anyone, people were terrified by it.

One spring, after it had lain asleep all winter, it left its bed and went to a large mountain in what is now the Craters of the Moon. There it coiled its immense body around the mountain and sunned itself.

After several days, thunder and lightning passed over the mountain and aroused the wrath of the serpent. A second time flashes of lightning played on the mountain, and this time the lightning struck nearby. Angered, the serpent began to tighten its coils around the mountain. Soon the pressure caused the rocks to begin to crumble.

Still the serpent tightened its coils. The pressure became so great that the stones began to melt. Fire came from the

*Ella Clark, *Indian Legends of the Northern Rockies*, p. 193-194.



Evidence of Shoshone activity—such as this hunting blind made of lava rock—dot the volcanic landscape at Craters of the Moon.

cracks. Soon liquid rock flowed down the sides of the mountain.

The huge serpent, slow in its movements, could not get away from the fire. So it was killed by the heat, and its body was roasted in the hot rock. At last the fire burned itself out; the rocks cooled off; the liquid rock became solid again.

Today if one visits the spot, he will see ashes and charred bones where the mountain used to be. If he will look closely at the solidified rock, he will see the ribs and bones of the huge serpent, charred and lifeless.

Extensive archeological evidence suggests the Shoshone and Bannock frequently visited Craters of the Moon in the vicinity of today's loop drive and Highway 20/26/93. Formal surveys in 1966 and 1992 found cultural sites

from the base of the Pioneer Mountains south to Sheep Trail Butte to Carey Kipuka.

Archeological sites occur in a variety of habitats, including in or near lava tube caves, sagebrush, and limber pine communities. Most sites occur on younger lava flows (approximately 2,000 years old), and therefore hold artifacts indicative of recent occupation by the Shoshone-Bannock. Older artifacts have been found but in smaller numbers, indicating more sites were possibly covered by recent lava flows. Artifacts found include flakes from the shaping of projectile points and sites where tachylyte was quarried. The park museum collection holds over 5,000 worked stone artifacts, including bifaces, projectile points, manos and metates, and 85 potsherds.

Tachylyte was sometimes used to make projectile points in the absence of obsidian. Whereas obsidian forms from rhyolitic flows, tachylyte forms from basaltic flows, has a less-

Native Americans

glassy appearance and is not as fine-grained as obsidian. Made from basalt, tachylyte tends to have higher iron content, as well. Of the close to eighty obsidian-related artifacts found at Craters of the Moon, at least one of the points was made from tachylyte quarried from flows near the monument's present headquarters. Obsidian from sources throughout southern Idaho, including several artifacts from Big Southern Butte, have also been found in the monument. See Appendix II for a detailed chronology of projectile points of the region.

Other archeological sites include remains of hunting blinds and rock shelters.

Approximately half of the known archeological sites occur in big sagebrush plant communities. Given the frequency of game trails and wildlife supported in this area, it suggests the Shoshone and Bannock frequently hunted in these areas. In addition, numerous archeological sites are located in remote kipukas. Such sites indicate even remote areas were hunted, despite abundant sagebrush habitat outside the lava flows.

Lava tubes that held ice year-round were used by native groups to store meat. The constant, cool temperatures preserved meat much like a modern freezer. Cut bones of bison, deer, and other animals have been found in caves throughout the Snake River Plain. Other artifacts found at these sites include tines fashioned from antlers, scrapers, knives, and mats made of sagebrush bark.

Further reading:

David Louter – *Craters of the Moon National Monument: Historic Context Statements*

Ella Clark – *Indian Legends from the Northern Rockies*

Suzann Henrickson – *Craters of the Moon National Monument & Preserve Archeological Overview*

Paul Sneed – “A Preliminary Report of the Archaeological Reconnaissance of the Craters of the Moon National Monument”

Tachylyte (left), more opaque and coarse-grained than obsidian (right), was quarried from sites throughout the monument and used by the Shoshone and Bannock for making projectile points.



Dorothy Sammons et al – “A Systematic Survey for Cultural Resources at Craters of the Moon National Monument”

Brigham Madsen – *The Bannock of Idaho*

Craig Skinner – “Origin of Obsidian Artifacts at Craters of the Moon” (available on park website)

Warren d’Azevedo – *The Handbook of North American Indians, Vol. 11: Great Basin*

Interpretive Opportunity:

How Indian Tunnel got its name

Several circles made of lava rock sit alongside the trail to Indian Tunnel and constitute the highest-profile artifact in the monument. The Sneed survey of 1966 found several lithic flakes – discarded during the process of shaping projectile points, also known as debitage – within the area. Sneed suggested the rings

could have served as windbreaks for a temporary camp near the cave, not unlike campers today that use stakes or backpacks to pin their tent to the ground in the campground.

Alternatively, the rock rings could be used as a tangible to discuss other lava rock structures built by the Shoshone-Bannock. Such structures include hunting blinds situated near many of the monument’s game trails.



Fur trappers found little to draw them to Craters of the Moon. Lack of water meant little habitat for the beaver trappers coveted. For that reason the lava fields served more as an obstacle to be circumvented on the way to the rich trapping country of the Big Wood and Big Lost river valleys. Many notable fur trappers passed near the monument, including Donald Mackenzie, Alexander Ross, Peter Skene Ogden, John Work, Nathaniel J. Wyeth and Captain Benjamin L.E. Bonneville.

Wyeth is noteworthy in regional history for having built Fort Hall on the Snake River north of present-day Pocatello. Unable to supply the fort properly, he eventually sold the fort to the Hudson's Bay Company in 1837.

Bonneville is generally credited with the first written account describing Craters of the Moon, having traversed the northern edge of the lava fields in the winter of 1833-34 en route to the Big Wood River valley. Written by Washington Irving, these words were attributed to Bonneville: "...where nothing meets the eye but a desolate and awful waste; where no grass grows nor water runs, and where nothing is to be seen but lava."

Perhaps the most harrowing encounter with the lava fields of the Snake River Plain belonged to a group of trappers of the American Fur Company that included Jean Baptiste Charbonneau, son of Sacajawea. The group of 22 trappers set out in the fall of 1830 from present-day American Falls seeking a quicker route across the plain to the beaver country of the central mountains. After stumbling upon the Great Rift, the group meandered among the rugged lava fields for several days before being turned back by the terrain and lack of water. Disoriented by thirst, Charbonneau became separated from the group and wandered the southern part of the plain for nearly two weeks before eventually finding his way back to the Snake River.

Further Reading:

David Crowder – *Tales of Eastern Idaho*

David Louter – *Craters of the Moon National Monument: Historic Context Statements*

Washington Irving – *The Adventures of Captain Bonneville, USA*

Following the general path used by bands of Shoshone-Bannock, overland emigrants skirted the northern edges of the lava fields as early as 1852. The first concerted effort to popularize the route began that year when John J. Jeffrey promoted the cutoff to enhance business at his Snake River Ferry near the mouth of the Blackfoot River. Travel along the route remained sparse throughout the 1850s, and Jeffrey abandoned his ferry business in 1854. A wagon train led by Winfield Scott Ebey that year left a rare, detailed early account of travels through Craters of the Moon.

Until the early 1860s, emigrants that passed through Idaho tended to use the well-established main route of the Oregon Trail, roughly paralleling the Snake River – and paralleled today by I-84 and I-86. After 1860, emigrants heading west used the old Jeffrey Cutoff more frequently, for two reasons. One,

the generally amicable relations with Native Americans up until then had badly frayed by the early 1860s. The growing stream of emigrants, along with their livestock, hunted the same game and ate the grass needed to support the Shoshone-Bannock and their stock. A second major influence was the prospect of work in the gold mines of the Salmon River and Boise Basin beginning in 1862.

That year Tim Goodale successfully led a huge wagon contingent across the old Jeffrey trail. Like many mountain men of the era, Goodale's familiarity with the region gained as a trapper and trader was put to use by emigrants seeking safe passage across southern Idaho. Knowing relations with the Shoshone and Bannock were strained, he set out from Fort Hall on July 22, 1862, with a wagon train composed of over 300 wagons and more than 800 emigrants, hoping



View of Goodale's Cutoff following the base of the Pioneer Mountains along the edge of the lava fields. The cutoff intersects with Highway 20/26/93 in several places between Arco and Carey.

Interpretive Opportunity:

Is it “settler” or “emigrant”?

One of the basic tenets of interpretation is presenting multiple viewpoints for consideration, leading to better appreciation of a particular site. The strained relations that developed between the Shoshone-Bannock and overland travelers in the 1860s provides a great opportunity for presenting multiple perspectives.

The common terms “settler” or “pioneer” that refer to those who came west on the Oregon, California, and Mormon Trails give little regard to those living in the areas they travelled through, in this case the Shoshone and Bannock Indians.

Describing the overland travelers as “emigrants” avoids what some might consider the distasteful connotation that they settled a wild, uninhabited land. After all, members of the Goodale wagon train did not stop and begin farming the land around Craters of the Moon, but continued to the Boise area and other points west.

This difference in terms sets the table for a discussion of the different meanings Craters of the Moon held for these two groups – something akin to ‘home’ for the Shoshone-Bannock, versus a detour for emigrants on the way to greener pastures. The result is another opportunity for visitors to connect with the resource.

the size of the contingent would guard against confrontation.

After passing the Big Lost River near present-day Arco, Goodale picked up several more wagons. The new total of almost 1,095 emigrants likely made it the largest wagon train to cross any section of the Oregon Trail. The Goodale wagon train arrived safely in Boise on August 9, the same day as the conflict between a group of Shoshone-Bannock and emigrants along the main route of the Oregon Trail at what later became known as Massacre Rocks.

Although travel by covered wagon gave way to other forms of transportation, Goodale’s Cutoff continued to be used by travelers. The trail was used to drive stock and as a stagecoach line. In 1903 Horatio Nelson Jackson travelled this road when he became the first person to drive an automobile across the continent. Travelers

today on US 20/26/93 follow a route very similar to the one followed by Goodale and his wagon train 150 years ago.

Goodale’s Cutoff is the monument’s only asset listed on the National Register of Historic Places. Artifacts left by emigrants and later travelers are limited to a handful of cans, bottles, horseshoes, and the like. Visitors today can hike or bike the cutoff with a day-use permit.

Further reading:

David Louter – *Craters of the Moon National Monument: Historic Context Statements*

Dayton Duncan – *Horatio’s Drive: America’s First Road Trip*



Images like this one, taken from a reenactment in the early 1990s, can help visitors comprehend the everyday trials emigrants faced on the trail.

Interpretive opportunity:

Mining the black vomit

Conjuring such a foreign past as overland travel for visitors today can be challenging. One method to bring the past to life is to incorporate passages from emigrant diaries into an interpretive program. Taking days to travel through the area, many emigrants kept incredibly descriptive written records of Craters of the Moon. Consider the following

passage from Julius Caesar Merrill from Sept. 4, 1864:

“Not a shrub, bird, nor insect seemed to live near it. Great must have been the relief of the volcano, powerful the emetic, that poured forth such a mass of black vomit.”

Share a particularly apt quote, or better yet, have a volunteer read one from a card during a program, to open the door for a potentially powerful connection to the past.

Fred Dykes – *Jeffrey’s Cutoff: Idaho’s Forgotten Oregon Trail Route*

James McGill – *Rediscovered Frontiersman: Timothy Goodale*

Julius Merrill – “Julius Caesar Merrill Diary 1864”, tech files

Nellie Slater – “Diary and Travels of Nellie Slater”, tech files

Warren d’Azevedo – *The Handbook of North American Indians, Vol. 11: Great Basin*

Surveys, Mining, and Ranching

Following the ebb of emigrants along Goodale's Cutoff, Craters of the Moon received few visitors. Explored sporadically by local stockmen throughout the late 1800s, the "Cinder Buttes" were first surveyed by a geologist working for the United States Geological Survey (USGS), Israel (I.C.) Russell, in 1901. Originally dispatched to the Snake River Plain to compile a report on water supply for the development of agriculture, Russell became fascinated with the geology of the plain.

Of particular interest to Russell was Craters of the Moon, which he first spotted from atop Big Southern Butte. Russell spent weeks exploring the northern section of the lava fields between Big Cinder Butte and the Pioneer Mountains, including a brief foray into at least one of the Spatter Cones with a wooden ladder fashioned from local materials. In addition to tracing the origin of several of the lava flows, he is credited with naming the Blue Dragon Flow for its blue varnish and scaly texture.

The development of irrigation projects following passage of the Carey Act in 1910 brought more settlement to the area. Despite the influx of newcomers, over twenty years elapsed before the area was again studied by a trained geologist. In the meantime, several citizens of Arco and the surrounding area explored the lava fields. Among them were

This water trough at Little Prairie is one of the few remnants left indicating the area's pre-monument use as a grazing area for livestock.

Era Martin, Robert Limbert, and Samuel Paisley, who would eventually become the monument's inaugural custodian. But it was a survey and subsequent report by USGS geologist Harold T. Stearns in 1923 that validated the area's volcanic features as worthy of national protection. By proclamation under the Antiquities Act, President Calvin Coolidge established the national monument on May 2, 1924. Stearns returned in 1926 for a more extensive study of the area from Big Cinder Butte south. The buttes and lava features found there compelled Stearns to recommend expansion of the monument, which occurred in 1928.

As a group, the geologists and early explorers left little physical evidence of their travels through Craters of the Moon beyond field notes and reports. A few cairns were constructed as prominent markers during their



exploration. Benchmarks that dot the lava fields were put in place during the 1925 General Land Office boundary survey led by Max Gleissner of the USGS.

The trail that leads into the heart of the Craters of the Moon Wilderness today began as a cattle trail. The “road”, such as it was, led to the Little Prairie Waterhole and was developed by Era Martin about 1920, prior to the monument’s establishment. Martin also constructed a cement water trough for his cattle near the waterhole. Along with the fading road, it is one of the few signs left by ranchers in the heart of the lava fields. Grazing continues today as a major use in portions of the BLM Monument such as Laidlaw Park.

Lead and silver mines were scattered across the Pioneer Mountains on lands adjacent to Craters of the Moon, with most mining activity taking place between the 1880s and the 1920s. The Martin Mine, the only active mine within the original NPS Monument, consisted of nine claims located on Little Cottonwood Creek.

First worked about 1922, most of the activity occurred in the 1920s and produced mostly silver and some quantities of gold. The infrastructure consisted of seven woodframe buildings including the engine room, a bunkhouse, and a blacksmith shop. The mineshaft, located directly under the streambed, continually flooded and was difficult to work. All but abandoned, most of the mining claims were invalidated in the early 1960s. The Craters of the Moon Natural History Association purchased the final claim in 1967. The buildings were torn down in the 1980s and the sites rehabilitated in 1994, erasing most signs of mining within the monument.

Further reading:

David Louter – *Craters of the Moon National Monument: Historic Context Statements*

Harold Stearns – *Memoirs of a Geologist: From Poverty Peak to Piggery Gulch*



Worked just prior to the establishment of the monument in 1924, the Martin Mine site was located on Little Cottonwood Creek. Structures associated with the mine were removed in the 1980s, with additional landscape rehabilitation completed in the early 1990s.

Robert Limbert

Few individuals had as direct an impact on Craters of the Moon as Robert Limbert, as evidenced by the fact that the visitor center is officially named for him. A taxidermist by trade, Limbert operated one of the most successful Boise taxidermies in the early 1900s. His interests and love of the outdoors led to pioneering work as an explorer, photographer, writer, and guide. Limbert was one of the first to explore and promote Idaho's natural wonders as recreational destinations.

By the late 1910s he became interested in the remote region of southern Idaho shown on maps only as "the rolling lava plains" and set out on the first of several trips to Craters of the Moon. After two brief excursions into the northern reaches of the lava fields, Limbert set out from the town of Minidoka in May, 1920 to explore the interior of the lava fields. He was accompanied by a friend, Walter Cole, and an Airedale terrier named Teddy.

Their route brought Limbert and Cole north towards the Pioneer Mountains, roughly tracing the north-south Great Rift. The group travelled fairly quickly through the sagebrush area north of Minidoka until running into the jagged, time-consuming a' a lavas. Several days of travel over the rough terrain left Teddy's paws cut and bleeding, and Limbert was forced to cut strips from his leather jacket to make booties to protect the dog's feet. Slowed by the lava terrain and the party's willingness to explore and photograph the area, the entire trip lasted 17 days and ended when they met up with several locals near today's headquarters area.

During this and subsequent trips, Limbert's photographs and journal entries did more to



Robert Limbert's efforts to establish Craters of the Moon as a national park unit were so instrumental the monument's visitor center is named for him.

document the area than any record kept up until then. During the 1920 trip alone, he took over 200 photos with the bulky Graflex camera he lugged along. These records culminated in a series of articles Limbert wrote and submitted to various publications, including the *Idaho Sunday Statesman* and most prominently, *National Geographic*. It was the latter article, which appeared in March, 1924, that raised the area's profile considerably for consideration as a national park. Limbert also sent a scrapbook of photos of the trip to President Calvin Coolidge. Two months later, Coolidge

Interpretive Opportunity:*Limbert's legacy in pictures*

Many of the best photographs documenting Craters of the Moon in its pristine state are available thanks to Robert Limbert's photography. Images taken by Limbert of the Spatter Cones in the 1920s showed the features prior to their erosion by a steady stream of visitors and unchecked use. By the early 1980s more than two feet had eroded from the top of the delicate cones.

Limbert's photos were used to help restore some of the erosion. Rocks were put back piece by piece and formal trails were constructed to limit future damage. By documenting what he



saw, Limbert was able to influence the preservation of the features that so intrigued him.

declared Craters of the Moon National Monument on May 2, 1924.

Many of the monument's landmarks bear names that Limbert gave them almost a century ago. The list includes: Echo Crater, named for the acoustical qualities of the crater; Trench Mortar Flat, reminiscent of gun barrels poking upright out of the cinder fields, and; Bridge of Tears, a natural bridge that received the name after a member of a later expedition stood up too suddenly while passing underneath.

Limbert's last major expedition into the lava fields came in 1926 when he and a group of mountaineers from Washington set out to search for the Lost Valley. The area was one reportedly used by bands of Shoshone and Bannock as a safe redoubt in times of war

amidst the unyielding lava flows. Comprised of men and women, the group spent approximately two weeks hiking south of Big Cinder Butte along the Great Rift, searching for the somewhat mysterious locale.

Limbert's journal of the trip described an obsidian quarry, a cave, and colorful cliff walls, along with coordinates to the area he believed was the Lost Valley. Due to the remote location and arduous terrain surrounding it, the area has been rarely visited since. A 2006 expedition located the Limbert party's camp inside a series of cinder cone craters known as Blacktail Butte in the NPS Preserve. While there, expedition members found a scene that matched exactly a picture Limbert had taken during his trek eighty years before. Because archeological sites dot the

valley, references to the area should remain general when discussing it with the public.

Further reading:

David Clark – *Idaho's Two-Gun Bob Limbert*

Steve Wursta – *Among the Craters of the Moon: The Life & Adventures of Robert W. Limbert* (film)

Steve Wursta – *The History of Idaho's Redfish Lodge: The Jewel of the Sawtooths* (film)

David Louter – *Craters of the Moon National Monument: Historic Context Statements*

Robert Limbert – “Among the Craters of the Moon”, *National Geographic* (available on park website) and other articles in the tech files

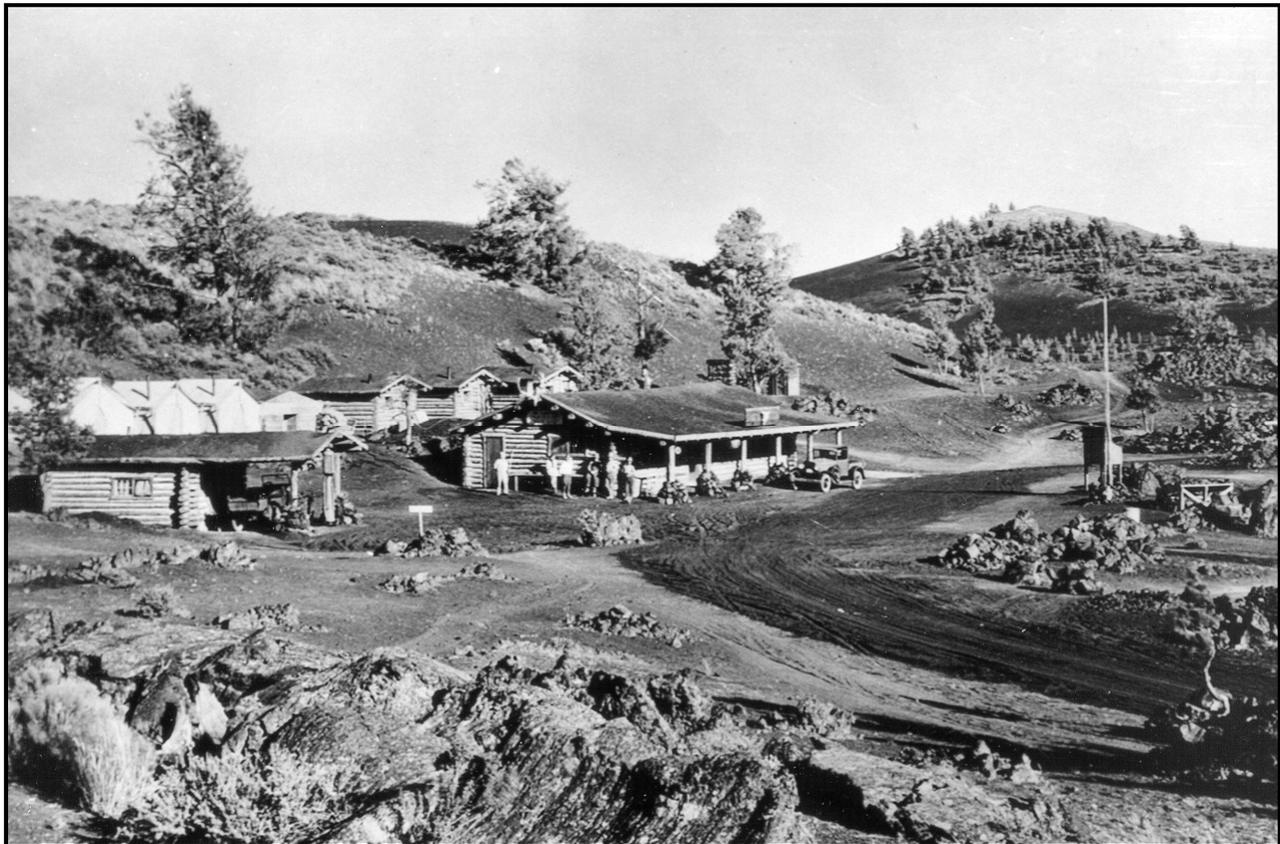
Robert Limbert's original papers in the Boise State University Library Collection

The monument's headquarters have occupied three locations. The original headquarters was comprised of a one-room building that served as custodian quarters and visitor center. Named Cinderhurst Camp, the headquarters was located at Registration Waterhole, approximately halfway between North Crater and Paisley Cone. After the waterhole suddenly went dry three years later, headquarters was moved to near the campground entrance in 1927, where it resided until the late 1950s. Comprised of the superintendent's cabin and outhouses, it sat directly across from the park's concession buildings.

The concession was situated just east of today's entrance station and completed in 1927. Made up of a gas station, cabins, and the Crater Inn, perhaps the most notable feature of the complex was the Inn's chimney made of porous lava rock that leaked smoke. Never a consistent moneymaker, the Inn changed hands four times before removal in November 1958.

Following the initiation of Mission 66 legislation to improve the physical plant of parks nationwide, construction commenced on the majority of buildings found in the park today. The visitor center, maintenance building,

View of the Crater Inn, gas station, and cabins. The structures were situated across from the campground near where the entrance station is located today. The concession changed owners several times before it was removed in 1958.



Park Structures

residential quarters, and the brick restroom in the campground were all completed by 1958. Their classic design illustrative of Mission 66 architecture makes each of these structures eligible for the National Register of Historic Places.

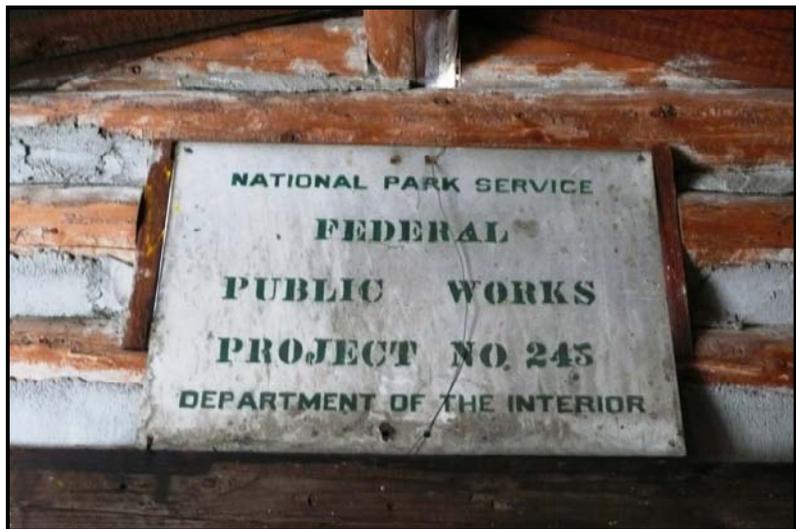
A couple of the earliest buildings are still in use today. Most prominent is the log comfort station in the campground, completed in September 1934 and built with funds from the Public Works Administration during the New

Deal. A log storage shed constructed around this time is still in use in the maintenance boneyard. These buildings also have been determined eligible for the National Register of Historic Places.

Further reading:

David Louter – *Craters of the Moon National Monument: Administrative History*

Constructed during the New Deal era, the log storage building still houses materials in the boneyard. It is one of the few remaining early park structures in use today.



Craters of the Moon gained brief but lasting national notoriety at the height of the Apollo program's effort to land humans on the moon. Shortly after the feat was completed on July 20, 1969, the focus of the program turned from getting to the moon to studying the lunar surface up close. To that end, astronauts working in the Apollo program were sent around the world to study volcanic "moonscapes" to become familiar with volcanic features they could encounter on the moon's surface.

On August 22, 1969, members of the Apollo 14 mission explored Craters of the Moon for a crash course in volcanic geology. Pilots by training, they studied the volcanic features in order to identify the most scientifically important rocks from the moon's surface. Images taken from their visit indicate they studied areas people can still explore today, including Buffalo Caves and viewing the Great



Apollo Astronauts Edgar Mitchell (left) and Alan Shepard (center) study the Great Rift from near Buffalo Caves.

Rift from the Broken Top Loop trail. In addition to Craters of the Moon, the astronauts visited other volcanic locales including Iceland and Hawaii. Contrary to popular belief, they did not test equipment or drive the moon rover across the terrain.

The four Apollo astronauts that visited Craters of the Moon in 1969 were:

Interpretive opportunity:

Craters of the Moon vs. craters on the real moon

Visitors often find this connection to the space program intriguing – and in fact, many who were alive during the moon landing ask specifically about the astronauts' training here. However, the moon's craters differ from Craters of the Moon's surface for two major reasons.

The first, and most significant, is that the lunar surface is covered with impact craters. Meteors and other space objects slammed into the moon creating bowl-shaped depressions in the surface. Craters of the Moon's craters are the re-

sult of volcanic eruption, and unlike impact craters, generally sit above the general topography.

The second major difference is the age of the craters on either surface. Most of the moon's craters formed early on in the solar system's life when more objects hurtled through space and crashed into celestial bodies. A lack of atmosphere and plate tectonics preserve the moon's impact craters, some of which are billions of years old. The earliest volcanic eruptions at Craters of the Moon are only 15,000 years old, and some like Big Craters are barely more than 2,000 years old.

The Apollo Astronauts

Eugene Cernan, who spent more time on the moon than any other human and was the last person to set foot on the moon.

Joe Engle trained for the Apollo 17 mission but was ultimately replaced in favor of a scientist for the final Apollo mission. Engle served NASA beyond the Apollo program, eventually commanding two Space Shuttle flights.

Edgar Mitchell's only spaceflight was the Apollo 14 mission. He served on the Support and Backup crews of several other Apollo missions.

Alan Shepard was one of the original seven astronauts named to the Mercury program in 1959 and the first American in space. Along with Mitchell, he was a member of the Apollo 14 mission.

In 1999, the three surviving members of this group (Shepard died the previous year) returned to Craters of the Moon as part of the 75th anniversary celebrations.

Further reading:



Eugene Cernan (left) and Joe Engle (center) learn about volcanic geology with the help of a trained geologist. Broken Top is visible in the background.

Arco Advertiser – “Astronauts have good day’s work”, tech files

NPS – *Return to the Moon* (film)

NPS – “Astronauts Visit Craters of the Moon”, www.nps.gov/crmo/historyculture/astro.htm

Like the debate over whether or not Craters of the Moon should be designated a national park or monument, the debate over the size and scope of the protected area has continued off and on almost since Calvin Coolidge's 1924 proclamation.

A series of modest but notable expansions added to the monument shortly after the initial proclamation. A 1928 proclamation expanded protection to geologic features such as Grassy Cone and Vermillion Chasm. It also provided a reliable water source for the monument in Little Cottonwood Creek drainage. The addition of Carey Kipuka occurred in 1962 by proclamation of President Kennedy. In 1970 the Craters of the Moon Wilderness was created by Congress. Along with Petrified Forest National Park, the two units became the first wilderness areas in the National Park System. While the designation neither added nor removed land from the monument, the congressional act afforded the highest level of preservation to approximately 80% of monument land.

Efforts to expand and re-designate Craters of the Moon a national park continued throughout the late 1960s and into the 1990s, with legislation introduced to Congress in 1989. However, it was not until the waning days of President Clinton's second term that expansion finally came to fruition. Proclamation 7373 signed on November 9, 2000 expanded the monument to approximately 750,000 acres, or about the size of Yosemite National Park. The "new" monument:



Secretary of Interior Bruce Babbitt (left) listens while USGS Geologist Mel Kuntz discusses the Great Rift. Most of the 55-mile rift was brought under the protection of the expanded monument in November, 2000.

- encompasses nearly all of the 55-mile long Great Rift along with its three associated lava fields – the Craters of the Moon, Wapi, and King's Bowl lava fields;
- is co-managed by the NPS and the BLM, with the three young lava fields administered by the NPS while sagebrush rangelands surrounding the lava fields are administered by the BLM;
- is managed to focus front-country use in the developed area of the original NPS monument so as to maintain the primitive, undeveloped feel of the backcountry area.

Further reading:

David Louter – *Craters of the Moon National Monument: Administrative History*

NPS/BLM – *Craters of the Moon National Monument & Preserve Management Plan*

Appendix I: Timeline of Events

- ~13,000 - 7500 y. a. Early Holocene period with first evidence of human activity in the Eastern Snake River Plain. Hunted megafauna included mastodon, mammoth, and short-faced bear. Projectile points were large-stemmed points of Clovis, Folsom, and Haskett type.
- ~7500 - 1500 y. a. Middle Holocene to Late Holocene period. Two caves within the BLM Monument from this time period have been excavated. Projectile points from this period range from Northern Side-notched to Elko types.
- ~2000 y. a. A volcanic eruption creates the Broken Top Flow, the most recent eruption to take place on the Great Rift.
- ~1500 - 700 y. a. Late Holocene period. Use of bow and arrow and smaller projectile points. Ceramic artifacts appear around this time. Excavation at Baker Caves I, II, and III indicate human use during from this time period.
- The Shoshone build rock rings at Indian Tunnel.
- 1805 Lewis and Clark cross northern Idaho en route to the Pacific Ocean.
- 1820 - 1856 Peak of the fur trade in southern and central Idaho.
- 1830 Jean Baptiste Charboneau, member of the Lewis and Clark expedition, gets separated from a brigade of fur trappers and nearly perishes trying to cross the Snake River Plain from south to north.
- 1833 Army Captain Benjamin Bonneville explores the area with instructions to report his findings to the War Department.
- 1862 Tim Goodale leads 1,095 emigrants and 338 wagons across a cutoff of the Oregon Trail that came to bear his name.
- 1901 Israel (I.C.) Russell with the United States Geological Survey explores the area and provides the first geologic description of what he calls the Cinder Buttes.
- 1920 Robert Limbert hikes the entire length of the Great Rift and widely promotes the region for status as a national park.
- 1923 USGS Geologist Harold Stearns describes the area as the most recent example of a fissure eruption in this country and recommends it be preserved as a national monument.
- 1924 Robert Limbert's "Among the Craters of the Moon" article is published in *National Geographic*.

*Most of the Timeline of Events appeared originally in *Craters of the Moon National Monument: Administrative History* by David Louter, p.371-375.

- Calvin Coolidge proclaims Craters of the Moon National Monument, bringing to a close several years of public lobbying.
- 1925-1927 Custodian Samuel A. Paisley, the monument's first custodian, improves the loop drive so visitors can see the monument's principal sites, establishes the first headquarters at Registration Waterhole, and creates the first museum display.
- 1926 Park visitation is 4,600.
- 1927 Water levels in the monument drop, prompting the original headquarters to be relocated near the present campground.
- The monument's concession is built. Crater Inn, several guest cabins, and a store and gas station are located across from the new headquarters.
- To add a water source and to include exemplary features, the Park Service completes an expansion study.
- A troop of Boy Scouts discovers Boy Scout Cave.
- 1928 Calvin Coolidge signs a proclamation expanding Craters of the Moon to twice its original size.
- 1930 Herbert Hoover signs a proclamation to add a spring in Section 28 but it is left out of added portion.
- 1931 Land exchange act is passed to eliminate private holdings in northern unit, leading to the completion of the water system that year.
- Custodian Burton C. Lacombe enters duty, marking the first career agency employee.
- Custodian Lacombe establishes the monument's first grazing policy by designating a stock drive path in the north end.
- 1933-1939 Land exchanges are finalized.
- The New Deal comes to the monument. Emergency work relief programs improve visitor services by repairing and building roads, trails, and structures.
- 1935 The monument's first seasonal ranger enters duty, and the first museum prospectus is written.
- 1936 An act passes to excise the majority of Section 16 from the monument's northern unit, eliminating grazing, mining, and administrative threats and burdens.
- The Park Service conducts formal studies to extend the monument's road system to the south.

Appendix I: Timeline of Events

- 1941 Franklin D. Roosevelt signs a proclamation transferring a strip of highway in the monument to the state of Idaho, leading to the improvement and realignment of the roadway.
- 1942-1945 World War II sends the monument into decline.
- 1949 The National Reactor Testing Station (later known as Idaho National Laboratory) is established near Arco, bringing growth to the region surrounding the monument. This occurrence, along with the postwar travel boom and highway improvements, increases visitation to Craters of the Moon and causes its management to enter a critical stage after years of neglect.
- 1952 Craters of the Moon's first permanent ranger position is created and filled.
The Park Service acquires two tracts of school lands within the monument.
- 1956-1958 Mission 66 arrives at the monument, making it one of the first in the region to receive the program's blessings. The comprehensive program forms a watershed in the area's management. Among the changes, a new headquarters complex is constructed, the road system is paved, the administration is reorganized, and the concession service is eliminated.
Visitation reaches 100,000.
- 1959 As part of the Mission 66 plan, the Interpretation Division is created and staffed by a park naturalist. The monument's natural history association is also formed.
- 1961-1967 The Mistletoe Control Program runs its course destroying thousands of limber pine and raising protests from monument managers concerned about the ecological impacts.
- 1962 The destruction of the Devil's Sewer lava tube and degradation of the spatter cones symbolize decades of unchecked impacts to geologic features.
President John F. Kennedy signs a proclamation adding the Carey Kipuka, demonstrating the monument's commitment to preserving all elements of a volcanic environment.
- 1963 Superintendent Daniel E. Davis ends the "Posse Dash" during Opening Day ceremonies to protect sensitive volcanic resources.
- 1964 Park Naturalist Edgar P. Menning writes the first interpretive prospectus.
- 1964-1966 A new era in resource management dawns with the preparation of a revised master plan, a wildlife management plan, a wilderness study, and the first resource management plan.

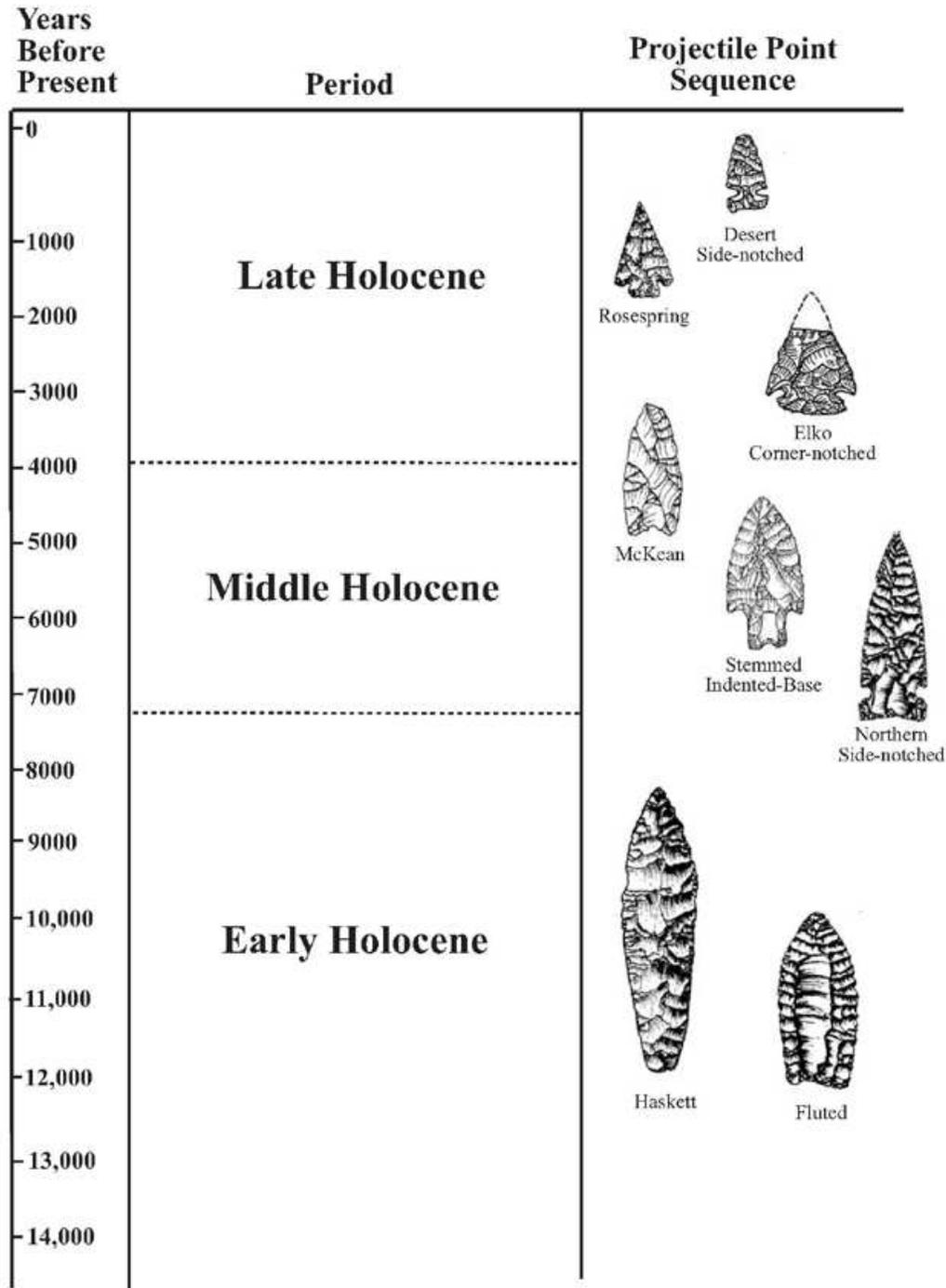
- 1966 The first archaeological reconnaissance is undertaken.
- 1967 The first mule deer study is completed.
- After decades of negotiations, the Park Service acquires title to the Martin Mine lands, the last of the private lands within the original monument.
- 1969 NASA astronauts Alan Shepherd, Edgar Mitchell, Eugene Cernan, and Joe Engle explore the monument while training to visit the moon.
- 1969-1973 Superintendent Paul Fritz proposes expansion of the monument and park status, resulting in a draft master plan.
- 1970 Congress creates the Craters of the Moon Wilderness, the first in the park system along with Petrified Forest National Park.
- 1974 Goodale's Cutoff is entered in the National Register of Historic Places.
- 1976-1977 To prevent sheep trespass, the first fencing project in the northern unit is completed.
- 1978 The monument issues a special-use permit to Curtis Barker with the hopes of resolving the sheep trespass problem.
- After being combined in the early 1970s as Interpretation and Resource Management, this division is separated by Superintendent Robert J. Hentges.
- 1982-1984 The spatter cone rehabilitation project takes place to restore the cones after years of deterioration.
- 1983 The second mule deer study is finished.
- 1984 Changes in federal regulations abolish the special-use permit and force the monument to seek options in the trespass grazing issue.
- The monument signs a cooperative law enforcement agreement with the state of Idaho to protect the mule deer herd from illegal hunting.
- 1987-1992 Monument expansion and park designation resurface. The movement, headed by Congressman Richard Stallings, leads to a NPS study and legislation.
- 1988 The Park Service submits a northern unit boundary revision proposal to the Department of the Interior as a way to solve grazing, hunting, and other resource protection issues.
- To combat continued trespass grazing, the monument completes a second fencing project in the northern unit.
- 1991 A U.S. Attorney General ruling on the trespass grazing issue leaves boundary revision as the only viable solution.

Appendix I: Timeline of Events

Idaho National Engineering Laboratory and the monument sign an agreement to jointly fund gaseous pollutant monitoring. The agreement caps at least ten years of work by monument managers to develop a comprehensive air quality management program.

- 1992 The Department of the Interior and the state of Idaho sign a water right agreement, ending six years of negotiations as part of the Snake River Adjudication.
- A second archaeological study begins.
- The monument creates a Resource Management Division.
- The Park Service produces a general management plan for Craters of the Moon, the first such document to comprehensively address issues and problems facing the monument's resources, visitors, and facilities in over twenty-five years.
- The Devils Orchard trail is rededicated as the first completely accessible monument trail.
- 1995 Annual visitation is 237,000.
- 1997 New museum exhibits are installed.
- 1999 The Park Service celebrates the monument's 75th anniversary.
- 2000 President William Clinton expands the monument significantly to encompass nearly all of the Great Rift and the Craters of the Moon, Wapi, and Kings Bowl lava fields. The expanded monument is cooperatively managed by the National Park Service and the Bureau of Land Management.
- 2002 The NPS-administered areas of the expanded monument are designated a National Preserve by Congress.
- 2004 The Snow Cone Trail at the Spatter Cones is rebuilt and rededicated as a fully accessible trail.
- 2004-2005 The Visitor Center is rehabilitated and expanded, adding more office space and a multipurpose room.
- 2010 A solar photovoltaic system is installed in the headquarters area to produce non-greenhouse gas-emitting energy.

PROJECTILE POINT CHRONOLOGY FOR THE EASTERN SNAKE RIVER PLAIN



*Suzann Henrickson, *Craters of the Moon National Monument & Preserve Archeological Overview*, p.18.

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