



United States Department of the Interior

NATIONAL PARK SERVICE

Craters of the Moon National Monument

P. O. Box 29

Arco, Idaho 83213

IN REPLY REFER TO:

K38(PNR-MI)

June 27, 1983

☐ Larson
☒ Walker

☒ Peasitt
☒ Hoffman

☒ Russell

☒ Schamp
☒ Pedersen

☒ Woodbury
☒ Yamamoto

Memorandum

To: Regional Director, Pacific Northwest Region
Attn: Chief, Interpretation & Visitor Services

From: Superintendent, Craters of the Moon National Monument

Subject: Craters of the Moon annual newspaper, 1983

Enclosed are several copies of the current Craters of the Moon Guide. This is published each season and is distributed as a free handout to park visitors. The printing this year was expanded to 30,000 copies to meet increasing visitation demands.

This issue was done in cooperation with a local newspaper which saved on costs, obtained professional design and resulted in distribution to the 25,000 newspaper subscribers in this area. This arrangement will be reported separately under management efficiency.

Robert J. Hentges

Enclosures

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Craters of the Moon Guide



Craters of the Moon National Monument
National Park Service

U.S. Department of Interior

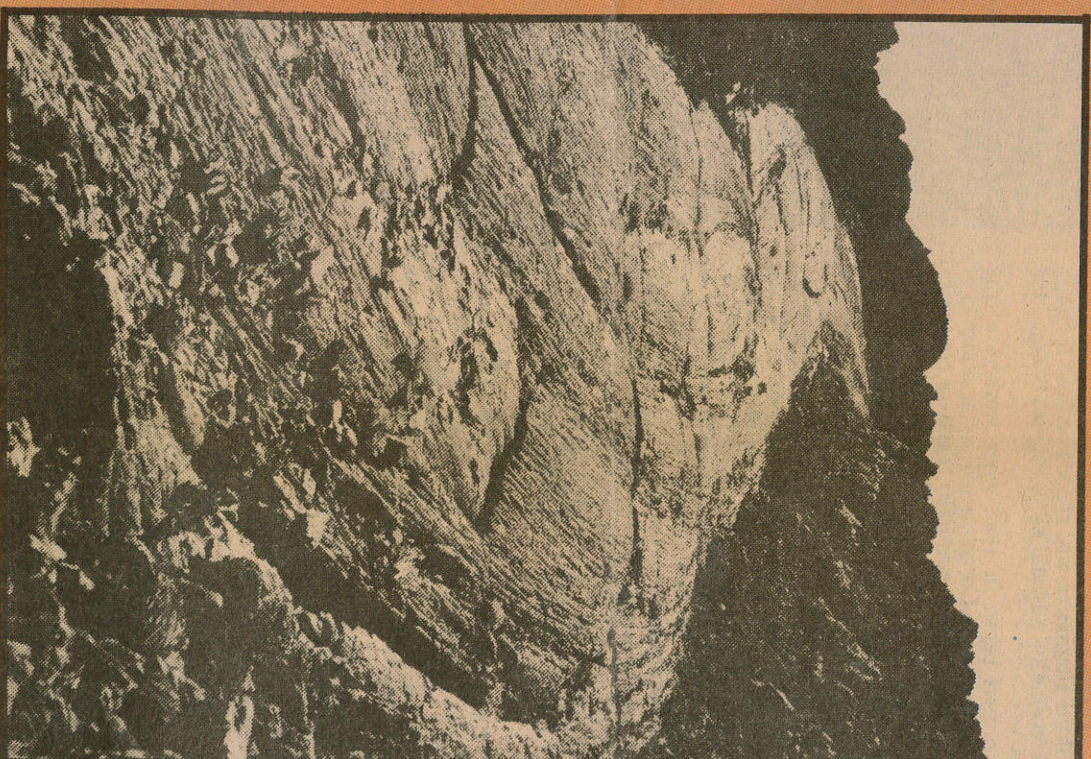
WELCOME

Welcome to Craters of the Moon National Monument. One of over 300 units in the National Park system, this 83-square mile area has been set aside to preserve all that is unique within its boundaries and to provide you and your family an interesting and exciting experience.

We encourage you to explore the monument and discover such unusual features as squeeze ups, blue dragon lava, lava tubes, tree molds and lava cascades.

Rangers are on hand to accompany you on guided hikes or assist you in any way possible.

Have a pleasant and safe visit!



Spatter cones receive facelift, access limited

Almost every visitor to Craters of the Moon stops at the spatter cones.

Since these geologic features represent the best example of this type of volcanic formation within the continental United States, it is easy to understand their attraction — an attraction that results in a major problem for park management.

When you visit the spatter cones, consider the problem: a fragile geologic feature that, because of interest to people, has been overused to the point of rapid deterioration and erosion. To allow visitors to continue uncontrolled exploration of the cones ensures further adverse impact on a unique resource.

The deterioration of the spatter cones is but one of the problems addressed in the Resources Management Plan prepared for the monument. This document is a comprehensive maintenance, protection, monitoring and research plan for the monument's natural resources.

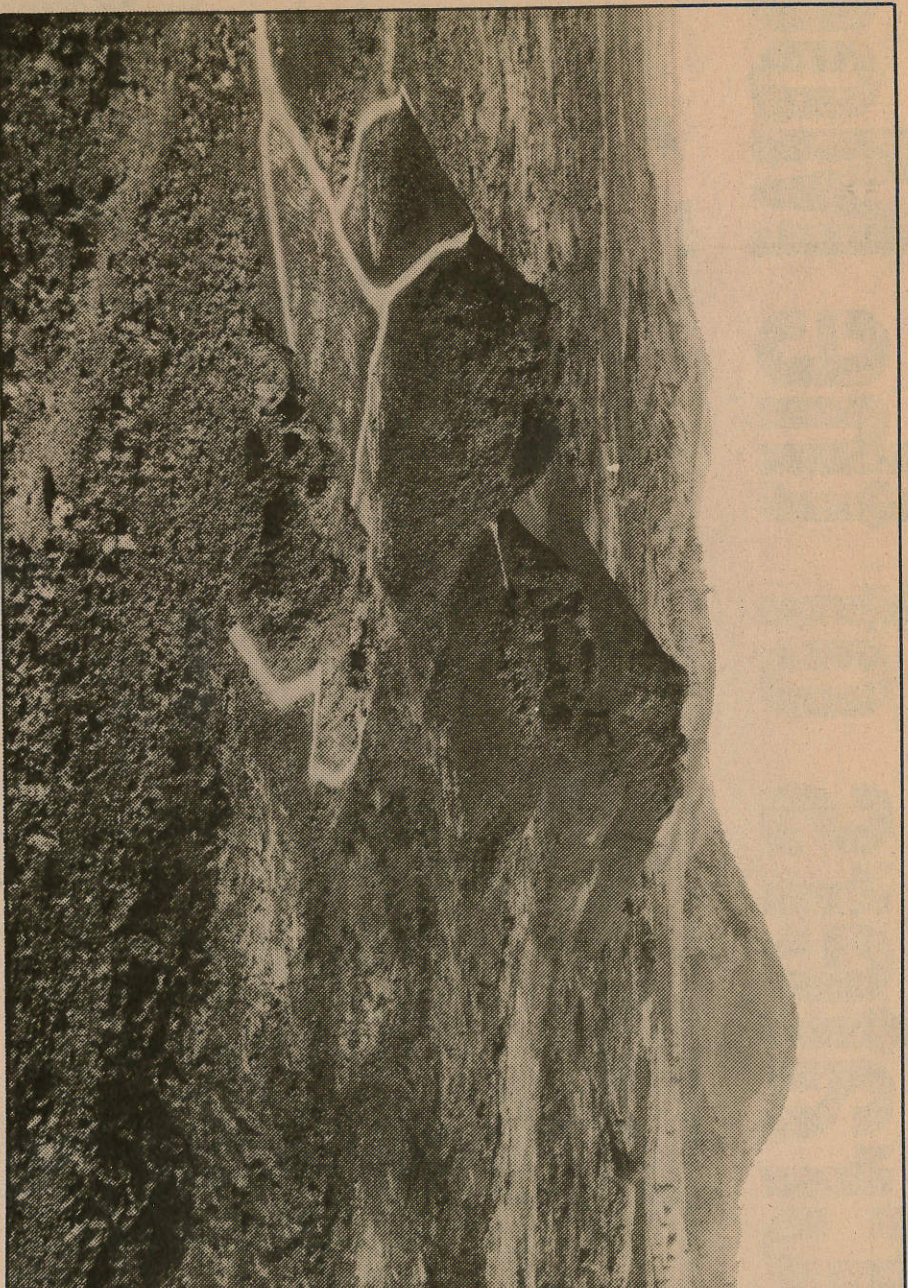
The environment construction project at the spatter cone area commenced after the careful consideration of three alternatives:

- (1) Allow unrestricted visitor access.
- (2) Restrict all visitor access.
- (3) Limit visitor access to certain spatter cones.

The third alternative was chosen because it would limit deterioration and still allow visitors to enjoy the features.

The project began in 1982 when workers of the Youth Conservation Corps started on the removal of several of the common use trails that were contributing to the erosion of the cones. Construction will continue in 1983, when new trails, railings and barrier walls are installed. The goal is to provide visitor access with a minimum amount of impact on the area.

Entrance into this area is restricted to those spatter cones accessible by a developed trail. With the removal of the old trails and construction of new structures, some inconvenience may be experienced. Your cooperation and support is necessary for us to obtain our goal: to preserve this unique geological feature for the future.



SPATTER CONES have had such incessant use it has lead to the need for protective measures to preserve these very fragile features.

Tips to better photography at Craters of Moon

Viewed from the lens of a camera, Craters of the Moon is not an easy subject to photograph. To capture the image you want on

film, you may have to alter your techniques. Here are a few suggestions that may help:

- **Look for color** — The dark

blacks and browns are an excellent background for any colorful subject. And, if you look closely, there are small patches of color

everywhere. The orange and yellows of the lichens, the green of the limber pines, and at the site of old steam vents, splashes of red cinders. Or look to the wildflowers for a multitude of colors. Whether shooting the vast fields of purple monkey flowers or concentrating on the sunny yellow of a single blazing star, these plants can provide all the color needed to enhance a photograph.

- **Put an interesting subject in the foreground** — A photograph of a cinder cone may be improved if another subject is included in the overall view. It will not only add to the composition of your photo, but will also provide a better sense of perspective for the viewer. Wildflowers are ideal for this purpose, but if you include a gnarled and limber pine or the twisted features of a lava flow, your photo will be much more unique.

- **Get close to your subject** — The dull hues of the cinders take on an iridescent glow when observed up close. The surface of the Blue Dragon lava appears bland until you move in and it is really a rich, cobalt blue in color. If you focus on the very small, it is much easier to fill the frame with color.

- **Shoot early and late** — The surface of the lava reflects a large amount of light. This can easily wash your photograph out. Using the low light of early morning or late evening will eliminate this effect and increase the contrast of your subjects.

- **Use the right film** — Those that emphasize blues and greens

may be the best choice for photographing the cinder cones and lava features in the monument. Film that enhances the reds and yellows may be preferred for your more colorful subjects. Also consider using black and white film. The rugged surfaces of the lavas can produce dramatic contrasts in light and dark.

- **Try different locations** — from ground level, a lava flow appears flat and uninteresting but when viewed from the top of a cinder cone, it takes on a new look. The pahoehoe and aa lavas, collapses, sinks and monoliths now stand out and can be captured on film.

- **Look for the right day** — Spectacular photos of Craters of the Moon often result from being in the right place at the right time. Unusual cloud formations, sunsets, sunrises and the first snow of winter are conditions that lend themselves to achieving satisfactory results. It just requires time and patience.

Photographing scenes of Craters of the Moon can be a difficult task, but if you keep these suggestions in mind, it may be as easy as pushing the shutter button.

Shadows

DARK COLORS of the landscape at Craters of the Moon National Monument are not easy to photograph and call for some special photographic technique. It helps to get as close as possible to the subject, yet get something in the

foreground for depth perception. Lighting is important, so choose the best days, take pictures during the early and later hours avoiding mid-day, and select the correct type of film.



Any questions?



Even before arriving at the monument, your curiosity may have been aroused by the very name itself, "Craters of the Moon." It simply implies something very foreign and mysterious. To be greeted by such an unusual landscape further peaks your interest, but leaves many questions. We have tried to answer some of the most common questions, but encourage you to contact a ranger for more information.

Where's the volcano?

After driving through a land covered with mile after mile of black, rugged lava flows, you may have arrived at the monument expecting to see one gigantic volcano, with symmetrical, steep slopes and a crater at the top — something like Mt. St. Helens. But the volcanoes at Craters of the Moon do not fit that description. Why? Because the eruptions here were of a basaltic lava, a type of lava with a low viscosity (very fluid) from which explosive gases can easily escape. Since high gas pressures are not present, the eruptions tend to be very mild and produce small cinder cones. Instead of one large volcano, a series of over 25 volcanoes are found at Craters of the Moon.

When did the volcanoes erupt?

Craters of the Moon is the site of the most recent eruptions on the much larger Snake River Plain. Volcanic activity occurred on this Plain for many millions of years. But Craters of the Moon was formed by eruptions that started only 15,000 years ago and represents the last period of active volcanism in this area. The most recent activity occurred 2,000 years ago and a walk on North Crater Trail allows you to see one of these younger flows.

Does anything live on the Craters?

With less than 17 inches of annual precipitation, temperatures reaching 95 degrees in the summer and below zero in the winter and sparse vegetation, Craters of the Moon is certainly a difficult place to live. Yet there is a surprising diversity of plants and animals that have adapted and even flourish under these harsh conditions. Over 300 plant species, 26 mammals, 1 amphibian, 5 reptiles and 140 birds live here during at least part of the year.

Who planted all the flowers?

In the late spring, hundreds of tiny wildflowers adorn the cinder slopes of the monument. Because they are so evenly spaced, they appear to have been planted in neat rows. Not so! Plants must compete for a very limited amount of water; consequently, they cannot grow too close together

and survive. One plant will usually dominate others and this prevents other plants from growing nearby.

Why is ice in caves in summer?

During thaws, snow melts and drains through the porous roof of the caves. As the temperature drops at night, the accumulated water freezes and forms ice stalactites and frozen pools. As the temperatures rise, the lava rock, with hundreds of tiny airholes, acts like a giant ice chest, keeping the caves cool and preserving the ice for most of the summer.

Did astronauts really train here?

The second group of astronauts to walk on the moon did visit Craters of the Moon in 1969. This included Capt. Alan Shepard, Cdr. Edgar Mitchell, Lt. Col. Joe Engle and Cdr. Eugene Cernan. Although they did not actually train here, they did study the volcanic rock that they knew was similar to the rock found on the surface of the moon. They were also able to explore a very unusual and harsh environment in preparation for their future trip.

Is the wind always this strong?

No — sometimes it's worse. Because Craters of the Moon is higher than the surrounding area (5,900 feet in elevation), it intercepts the prevailing southwesterly winds. Afternoon winds can be expected every day, but usually die down in the evening.

How was the monument named?

Local legends and man-made references to the landscape resembling that of the surface of the moon. Some even referred to the area as the "Valley of the Moon." It became commonly known as Craters of the Moon when this name was used in an article for a national magazine by Robert Limbert, the man who first thoroughly explored the monument in the 1920's. The name was made official in 1924, when 53,000 acres were set aside as a National Monument.

Will the volcanoes erupt again?

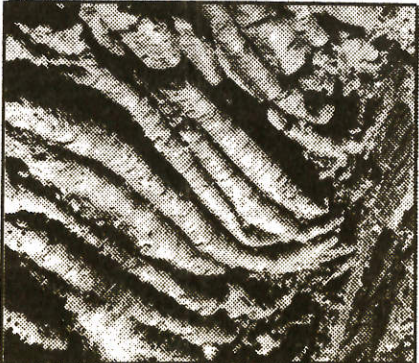
Craters of the Moon is classified as a dormant rather than an extinct volcanic area. This means that geologists still regard it as a place where there is a distinct possibility of another eruption occurring. The volcanoes here cannot be considered dead, only sleeping. Indications of pending eruptions such as earthquakes, the opening of steam vents and ground swelling have not occurred recently. However, there is little reason to believe the volcanoes could not become active in the near future.

Black rock unique story

On their first visit to Craters of the Moon, many visitors feel that the stark scenery is so incredibly unique it takes on a beauty all of its own. Others may see only so much "black rock." Whatever your impression, we encourage you to learn more about the significance of the events that have occurred here.

You may look at this "black rock" in a new light if you understand how it was formed. Although all of this rock is made of the same basic elements or materials, changing conditions during eruptions resulted in very different lava forms — cinders, pahoehoe and aa. All began as magma from within the earth's core, but add a large amount of gas and the magma erupts explosively, forming small cinders. Reduce the amount of gas and the hot magma simply wells to the surface and flows downhill to produce the smooth pahoehoe lava. Cool the pahoehoe lava and it becomes thicker until larger cinders form, leaving the jagged formations known as aa flows.

If you take the time to look, the "black rock" represents a truly unique record of the geologic history of the earth.



PAHOEHOE LAVA is one of several different forms of lava to be found at Craters of the Moon.

Watch rocks, cave ceilings

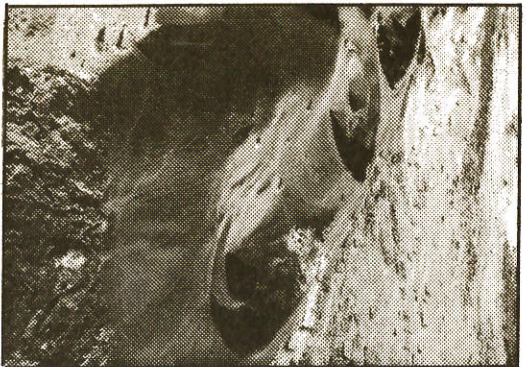
Craters of the Moon is unusual in many ways. It also has a few unusual safety hazards that you should be aware of. The key to an enjoyable experience is having a safe visit.

First, watch those rocks! All lava rock is sharp and jagged. Taking a fall will almost certainly result in cuts and scrapes. When traveling in the lava, stay on the trails, slow down and use caution. Sturdy shoes and long pants are recommended.

Also, it's hot here! The temperature seldom reaches 100 degrees in the summer, but when coupled with high elevation and dark landscape that easily absorbs heat, the threat of dehydration and heat stroke exists. Wear a hat, appropriate clothing and carry water.

And, finally, the caves can be very hard on the head! With the exception of Indian Tunnel, all the lava tubes are extremely dark and the ceilings very low. Carry a flashlight with fresh batteries at all times.

If you keep these few things in mind and observe the trail signs and warnings, your visit to Craters of the Moon should be a safe one.



SHEEP TAIL BUTTE with its multiple vents is one of several cones that can be seen in the wilderness.

Hiking in wilderness rewarding

For the hardy individual, a backpacking trip into the Craters of the Moon Wilderness Area can be a very rewarding experience. However, traveling in this 68 square mile wilderness is unique when compared to almost any other area.

Travel here is considered "desert hiking" and the sometimes hostile environment and difficult terrain can make unusual demands on hikers. During the hike, you can expect to cross cinder fields, flows of smooth and jagged lavas, cinder cones and areas best described as a twisted mass of volcanic rock.

Desert conditions (this is classified as a high desert) result from several different influences. Water is at a premium. Precipitation is mainly restricted to snows in the winter and the porous lavas allow it to drain away by late spring. Although this area is above 5,000 feet in elevation, summer temperatures often reach 90 degrees or higher. These conditions are largely responsible for the shrub and grass vegetation that predominates the area.

To insure that none of these elements becomes a problem, backpackers need to plan ahead. Boots that will hold up under rugged use are a necessity. Clothing that will offer protection from the sun should be worn. All water must be carried in and two gallons per person per day is recommended. Restrictions on wood fires means that a gas stove must be brought along for cooking.

Anyone who plans to stay overnight in the wilderness must first register. Backcountry Permits can be obtained free of charge at the visitor center where rangers will be available to provide further information.

The wilderness offers solitude and the opportunity to explore a volcanic landscape few others visit. It provides the chance to experience spatter cones, tree molds, lava flows and cinder cones in a totally unaltered state. While the Craters of the Moon Wilderness does present a few unusual problems, it should not discourage the experienced backpacker from planning a trip. With thorough preparation, it will be both an enjoyable and safe experience.

Guided walks and talks

The interpretive program at Craters of the Moon is designed to provide each visitor with the opportunity to better understand and appreciate the many different facets of the monument. We hope you will be able to join us during your stay.

Cave exploration

Morning walk 10:00 a.m.
Afternoon walk 2:00 p.m.

Meeting place: Cave parking area

A paved trail begins your adventure across the lava flows. It leads through clinkery mounds of aa orropy seas of pahoehoe lava. A half-mile later, you leave the path to enter the unique underground world of a lava tube. Born of molten rocks and flooding lava, these caves are now just the opposite: cool temperatures, refreshing air currents, dripping moisture and a place to escape the hot sun.

Because of the dark interior of the caves, a good flashlight is a must. A hat will also protect your head from both the sun and the sharp lava rocks. Since all the cave walks involve some climbing or crawling, this is no place for sandals or flimsy shoes. Allow 1½ hours.

Evening program

Every evening at 9:30 p.m.

Meeting place: Campground amphitheater

Cool temperatures, a glowing campfire, starlit skies and a relaxing atmosphere; the ingredients for the perfect end to your day at Craters of the Moon. Each night a different program is presented. It varies from wildlife and survival, or the powers of nature or our volcanic origins. We might even take a look at the sky through a telescope. Check at the visitor center for further details and then follow the lighted path in the campground to the amphitheater.

You will want to dress for the cool evenings and may want to bring a flashlight. Bring the whole family. Allow 1 hour.

Note: In the event that the campground is closed because of construction, this program will not be presented. Check at the visitor center for schedule.

Visitor center

Open daily

8:00 a.m. to 8:00 p.m.

(mid-June to Labor Day)

The visitor center is an ideal place to start your visit to Craters of the Moon. The exhibits located here will orientate you to the area, explain the origins of the volcanic formations and point out some of the outstanding features. There is someone on duty to answer any of your questions. If you need help or assistance of any kind, it may be reported here.

Often a telescope is set up to view the sun in the afternoons. If you have never seen sunspots, you may have the opportunity to do just that.

Rangers in the park

As you tour the park, you are encouraged to contact the rangers you may see at the various points of interest along the loop road. They may be found in the North Crater, Devil's Orchard or Spatter Cones areas. Every evening, there will be a ranger in the campgrounds to answer any questions you have on the things you have seen during the day.

Guided walks

PARK RANGERS guide visitors to Craters | and explorations, conduct evening campfire of the Moon National Monument on walks | programs and operate the visitor center.



For your information when visiting the park

CAMPING — A 51-site campground is available for overnight camping. There are restrooms and water available, but no electric hookups or dump stations. Camping is on a self-registration system basis and instructions for registering and payment of fees are located on the registration board at the entrance to the campground.

FIRES — All wood fires are prohibited within the monument. The reason for this is that the only trees found within the area are the picturesque limber pine that are

important as a soil builder for plants and as a shelter for wildlife. Grills are provided at each campsite and charcoal is available at the visitor center.

ROCK COLLECTING — Everything in the monument is protected, and it is to be left unchanged for others to enjoy. Let photographs and memories be your only souvenirs.

DRIVE ON ROADS — No vehicles, including motorcycles and bicycles, are allowed to drive off the paved roads.

PICNICKING — Picnic tables are provided at the visitor center area or you are welcome to use any unoccupied table in the campground.

WATER — Water is available only at the visitor center and the campground. If you are going to be in other areas of the monument for long periods or will be hiking any of the trails, we suggest that you carry plenty of water.

BACKPACKING — A major portion of the monument is classified as wilderness and is

accessible only on foot. If you wish to backpack into this area and stay overnight, you must first obtain a Backcountry Use Permit. These permits and maps of the area are available at the visitor center. No permit is required for day use.

MOTELS, GAS, and GROCERIES — These are not available at the monument. They can be obtained in Arco, 18 miles to the east, or Carey, 24 miles to the west.

This publication was made possible through the cooperative efforts of The Post-Register in Idaho Falls and the Craters of the Moon Natural History Association. Reproduction of all or part of this material is prohibited without the prior consent of Craters of the Moon National Monument.