

that interrupted the steady out-pouring of lava. The lava contains pressure ridges, collapsed lava bubbles, extensive fissures, pits, collapsed lava tubes, and rock shelters. Little Black Peak has some intact lava tubes radiating out from it.

### History

Prehistoric humans found shelter here, collected plants for food and fiber, hunted, and trapped animals. Occasional bits of pottery and spalls of stone testify to visits by Native Americans of the Jornada branch of the Mogollon Culture. The region subsequently was to become the domain of the Mescalero Apache, whose resistance to intrusions of immigrant settlers led to the establishment of nearby Fort Stanton in 1855.

### Passes

The Golden Age, Senior and Disabled Passes are good for free day use and half price on camping.

The America the Beautiful pass is good for day use only.

### Facilities

The Bureau of Land Management maintains and manages the Valley of Fires Recreation Area. Located four miles west of the town of Carrizozo, NM, on US Highway 380. Valley of Fires offers both camping and day use. The campsites have both 30 and 50 amp electrical hookup, water, sun shelters, tables, trashcans, and barbeque grills. Two of the sites are accessible, as are the bathrooms. Showers are provided in the main bathroom. An RV dump station is also available. Two group shelters are wheelchair accessible and available for use by reservation. The ¾-mile Malpais Nature Trail provides a close-up look of the lava surface.

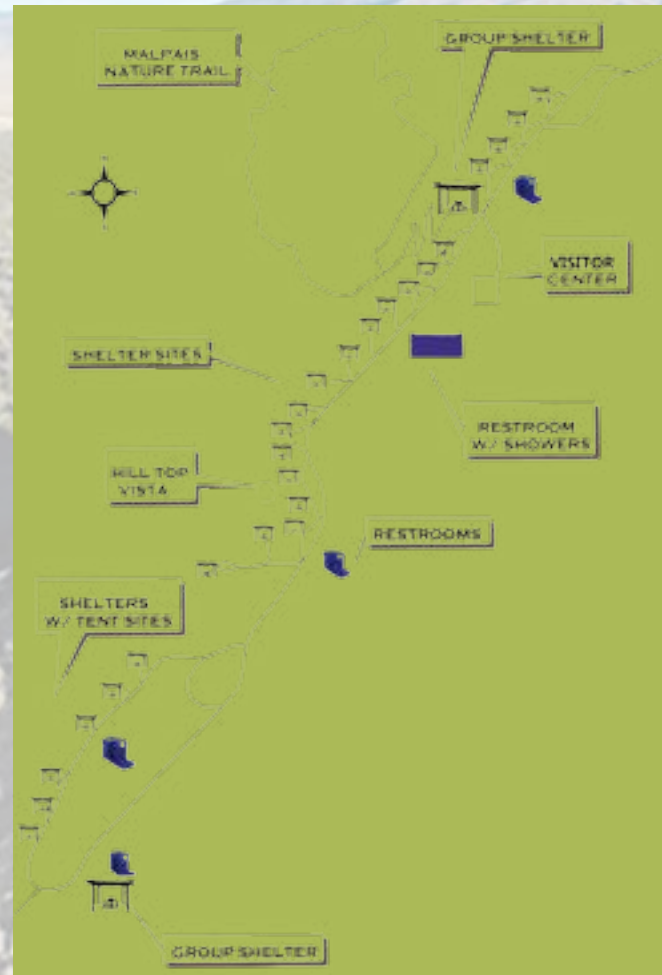
### Camping and Day use Fees

Camping with electric (Sites 2 through 13 & 15)	\$18
Camping no electric (Sites 1, 14 & 16 through 19)	\$12
Tent Camping (Sites 20-25)	\$7
Dump Station	\$15
Showers	\$6
Group Shelters	\$25



U.S. Department of the Interior  
Bureau of Land Management

# Valley of Fires Recreation Area



### Good Camping Manners

- All pets are welcome but must be on a leash at all times
- Keep a clean camp and leave a clean camp
- Dispose of gray water at dump station
- Motorized vehicles prohibited in campground
- Quiet hours are from 10 p.m. – 6 a.m.
- Never leave a burning campfire



*Pets must be kept on a leash.*



## Welcome to the Valley of Fires Nature Trail!

As you venture into the lava, please wear suitable footwear. The trail is an easy, self-guided, one-mile, paved loop. A hat and water are recommended for extended hikes. The lava is like walking on broken glass and is unforgiving to skin and clothing if you slip and fall. (See map below for numbered trail stations.)



1. The harsh and beautiful Carrizozo Lava Flow developed from extrusions in the Earth's relatively thin crust in the area. Lava vents extruded lava which flowed on the Earth's surface about 2,000 to 5,000 years ago, making it one of the youngest lava flows in the continental U.S. (although Mount St. Helens erupted in 1980 and is building a lava dome in its crater, it did not cause a flow of lava across the landscape).

2. Little Black Peak, to the north, can be seen through a sighting tube in front of you. The Peak is probably the last vent that opened in this area and is higher than the rest of the lava flow. The plants around you are typical of the Chihuahuan Desert. Characteristic plants are creosote, mesquite, sotol, banana yucca, bae grass, and a variety of the lily family. Also common in the area are prickly pear cactus, walking stick cholla, and hedgehog cactus.

3. The lava flow provides habitat for many animals and birds species. Watch for desert cottontail rabbits, dark-skinned lizards, and other small, dark-skinned animals. These dark-skinned and dark-haired animals have adapted their coloration to the lava to survive, blend into the environment, and hide from predators. More often seen are a variety of birds including road-runners, quail, gnatcatchers, towhees, cactus wrens, and sparrows. There are also great horned and burrowing owls, turkey vultures, ravens, harriers, red-tailed and Swainson's hawks, and golden eagles.

4. Notice the abrupt change in the variety of plants at the lava's edge and on the hard-scrabbled lava. Large varieties of plants grow in the soil around the lava's edge but only the very rugged, hearty, drought-tolerant plants. Cacti grow on the lava surface.

5. You are on top of a pressure ridge, formed as the lava surface cooled and hardened, while molten lava underneath continued to move under the crust. The cooler lava surface pushed against the sandstone, bending upwards. As it solidified, it developed a large crack along the ridgeline. Look for other pressure ridges along the trail.

6. Many of the large holes you see along the trail are gas bubbles that collapsed as the surface cooled. On both sides of the trail is a seemingly disorganized jumble of pressure ridges, collapsed bubbles, and lava tubes.

Hawaiian words are used to describe the types of lava. The ropy-looking lava is called pahoehoe, pronounced 'paw-hoey-hoey. Scattered throughout are a few small areas of a'a, pronounced ah-ah – a'a is blocky, jagged lava.

7. Do you see the plants growing in cracks, depressions, and other cavities in the lava surface? Time produces soil from weathering lava particles, wind-blown dust, precipitation, and the chemical action of the plant root and decay. The plants growing in this environment are algerita (small holly-like leaves), gray-green four-winged salt bush, apache plume, little-leaf sumac, and one-seed juniper. Also growing in the lava are sotol (the

*The noun "Carrizo" is a tall North American reed having relatively wide leaves and large plume-like panicles. It is widely distributed in moist areas and used for mats, screens, and arrow shafts.*

yucca with the tall flower stem), along with walking stick cholla (the jointed cactus), and prickly pear cactus (with the large pads).

8. Annual and perennial flowers grow in great variety on the lava flow in the spring. Most common are scarlet gilia, fleabane (a small white daisy), purple verbena, blue penstemon, salmon pink globe mallow, purple and yellow feather dalea, and white peppergrass (which resembles cultivated alyssum).

9. Native American people of several different cultures lived in the area prior to the arrival of European settlers. Food, water, shelter, and other subsistence materials were sought on a daily basis. The lava flow offered a great variety of useful plants for food and fiber, as well as grinding stones from the hard lava. Seed pods of the banana yucca, fruit of the prickly pear cactus, other fruits, and berries were used by Native Americans who knew how to prepare and process them.

10. This graceful juniper is estimated to be over 400 years old. Note the soil-filled cracks out of which it grows. Roots of plants cause the lava to break down into particles which become part of the soil-form process. The protective nature of small and large cracks allows water to collect, soil to accumulate, and offers habitat to plants and animals. In some locations, ferns and mosses can be seen growing in north-facing nooks and crannies.

11. This collapsed area contains jagged a'a and rippled pahoehoe lava surface as well as buckled pressure ridges. During the time the lava was flowing, an area such as this was like a thin roofed dome, resulting in this chaotic scene. A collapsed gas bubble is located on the right.

12. The dead juniper tree has a purpose in the lava landscape. It provides a perch for birds of prey, shelter for smaller birds and animals, and food for insects. As it breaks down, it falls into cracks and provides nutrients for new plants and nesting materials for small animals.

13. The collapsed feature along the trail at one time may have been a lava tube, formed as a result of molten lava flowing in a channel-like fashion underneath the cooled lava surface. Near Little Black Peak, at the north end of the flow, there are eight intact lava tubes which are

considered a type of cave. These caves provide habitat for four species of bats: western big-eared, common cave myotis, small-footed, and the big brown. All of these insect-eating mammals are about the size of your hand or smaller.

14 Look at the lava along the edge of the flow. You can almost imagine super-heated molten lava being pushed along and rolling towards the Kipuka (a Hawaiian word meaning an area of higher ground) and cooling. If you look close, you can see the lava curling back like a wave as it meets a shore of cool dirt and sandstone rock.

There are many informative books, Valley of Fires Souvenirs, and other items available in our bookstore and visitor center including t-shirts and postcards. You can also stop in to talk to our friendly staff and volunteers.

## Geology



One of many cinder cones found in the area.

As you look west from the campground, the Malpais dominate the view of the Tularosa Basin. This may be the youngest lava flow in the continental United States. Scientific evidence tells us that the most recent flow occurred about 2,000 to 5,000 years ago. The lava spewed from volcanic vents at the northern end on at least two occasions and flowed south along the floor of the Tularosa Basin for 44 miles. As molten lava flowed southward, it covered the original valley floor of gypsum and stream gravel. The recreation area's campground is on one of the larger kipukas (higher ground, forming an "island"). Pahoehoe, covers over 125 square miles. The lava is more than 160 feet thick near the center. Little Black Peak marks the origin of a least one major flow and its cinder cone is the result of an explosive episode