

BLM

Valley of Fires Nature Trail

New Mexico • Roswell Field Office



**“In all things of nature there
is something of the marvelous.”**

Aristotle

Welcome to the Valley of Fires Nature Trail

We hope you enjoy the Nature Trail. If you venture into the lava, please wear suitable footwear. The lava is like walking on broken glass and is unforgiving to skin and clothing if you slip and fall. A hat and water are recommended for extended hikes.

1. Lava overlook (see map on back for numbered trail stations): 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 1,500 to 5,000 years ago, making this one of the youngest lava flows in the Continental U.S. (Although Mount St. Helens erupted in the 1990s and is building a lava dome in its crater, it did not cause a flow of lava across the landscape.)

The lava flowed south down the Tularosa basin, burying everything in its path except for the land you are standing on and a few other islands called Kipukas. The flow is 2 to 5 miles wide and 44 miles long. In places, the lava is 165 feet thick and has a surface area of 127 square miles. The lava is olivine basalt, similar to Hawaiian lava flows. The hill you are standing on is made of Dakota Sandstone, pushed up from the floor of an ancient sea 130 to 140-million years ago.

2. Little Black Peak can be seen through a sighting tube in front of you to the north. 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, and a variety of lily family members: stool, banana yucca,

and beargrass. 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 bird 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: roadrunner, quail, gnatcatchers, towhees, cactus wrens, and sparrows. There are also great horned and burrowing owls, turkey vultures, ravens, harrier, 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-scrabble lava. A large variety of plants grow in the soil around the lava's edge but only the very rugged, hearty, drought-tolerant plants, and cacti grow on the lava surface.

5. You are on top of a pressure ridge, formed as the lava surface cooled and hardened, while still 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. The blocky, jagged lava is called a'a' (pronounced ah-ah).



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 plant roots and decay. The plants growing in this environment are algerita (small holly-like leaves), gray-green four-wing salt bush, apache plume, little-leaf sumac, and one-seed juniper. Also growing in the lava, are sotol (the 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 gila, flea-bane (a small white daisy), purple verbena, blue penstamon, 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 in age. 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-forming 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 collapse area contains jagged "aa" 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. After the lava beneath moved on, the surface collapsed, resulting in this chaotic scene. A collapsed gas bubble is located on the right.

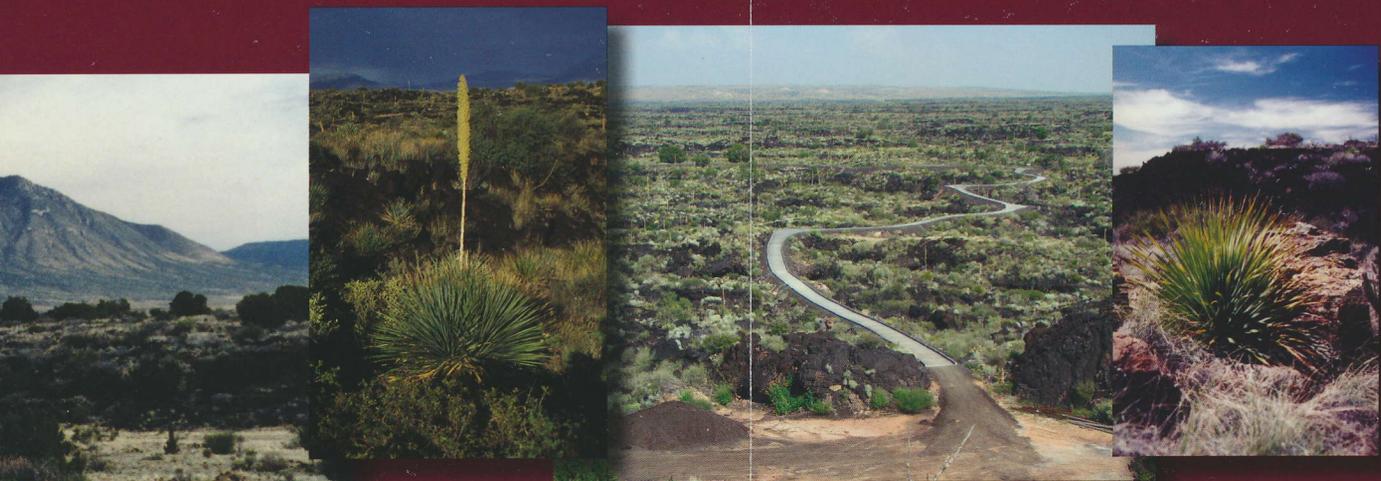
12. The dead juniper tree has a purpose in the lava landscape. It provides a perch for birds of prey, shelter for smaller birds, and animals and a food source for insects. As it breaks down, it falls into cracks and provides nutrients for new plants and nest-building materials for small animals.

13. The collapse 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 bat, common cave myotis, smallfooted bat, and the big brown bat. 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 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.



Please stop by the visitor center to learn more about the plants and animals in the area. There are many informative books and other items available, including T-shirts, post-cards, posters, our always friendly staff, and volunteers.





Thank you for visiting Valley of Fires Recreation Area. The Bureau of Land Management appreciates your interest in this natural resource.

Remember to leave no trace of your visit, enjoy your travels, take only photographs and leave only footprints.

Photos: Paul T. Happel Photography and Celina Martinez, BLM

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