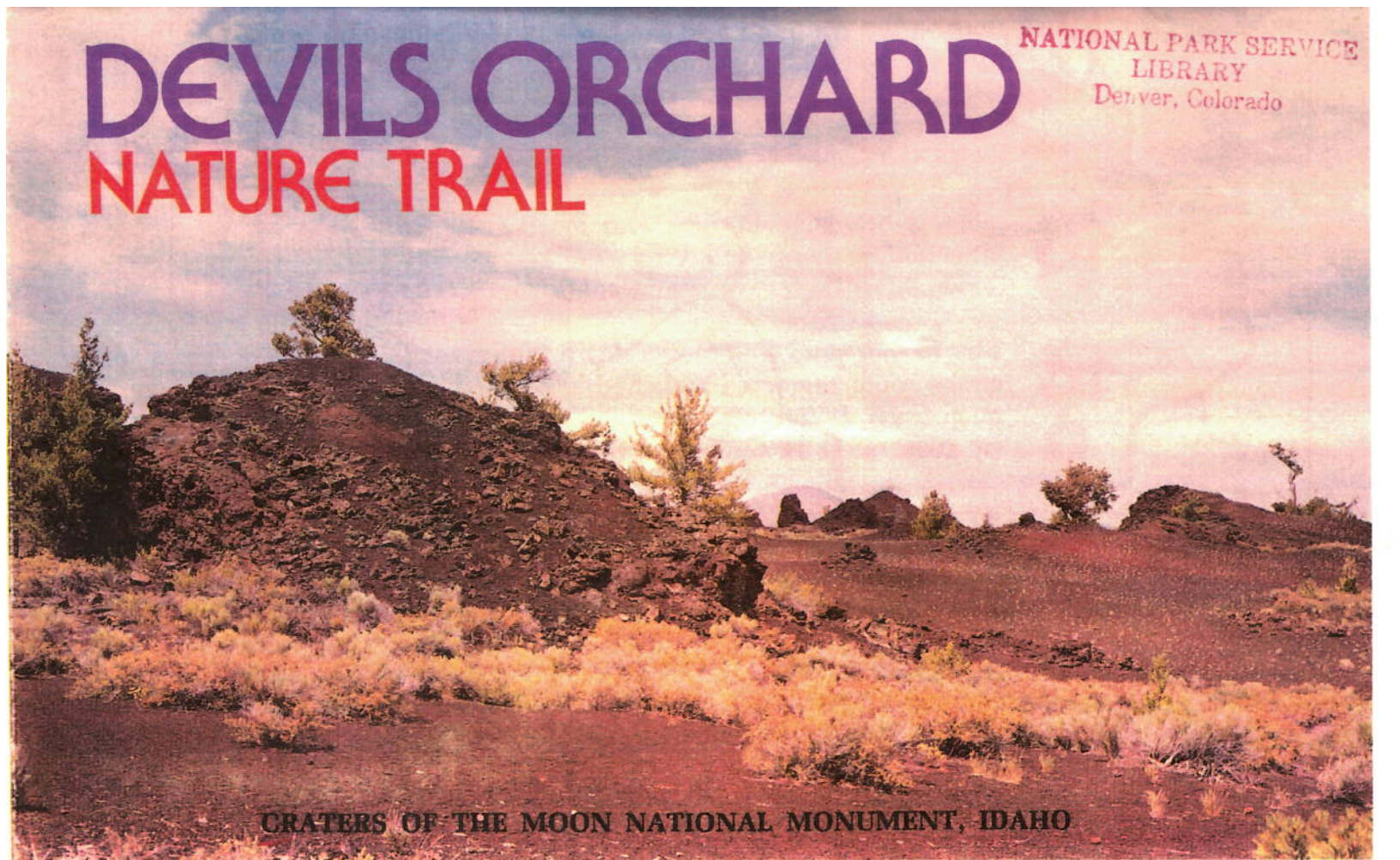


DEVILS ORCHARD

NATURE TRAIL

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CRATERS OF THE MOON NATIONAL MONUMENT, IDAHO

IT HAPPENED 2000 YEARS AGO

Glowing lava flows from cracks in the earth. Giant fountains of fiery froth rain cinders across the land. It happened here 2000 years ago. Then volcanic activity ceased, leaving a bleak and barren landscape. Slowly life returned. Today's plants and animals are still fighting for a toe-hold.

Walk the 20-minute trail. Discover how plants and animals invade and cover the rock, bringing life where none existed. But as you walk, remember, you are in a fragile place. Even foot-prints leave scars. Please stay on the trail.

- 1 Devils Orchard is changing. Several times volcanic activity killed all life. Each time life came back, each individual in turn. Succession is slow, but inevitable. This dead pine followed other kinds of plants; still others will follow it.



DWARF BUCKWHEAT

- 2 When these cinders cooled, they were a ready-made plant bed. But they are coarse and hold little water. Some plants living here, such as the dwarf monkeyflower, grow, flower, and die in the early summer before winter moisture disappears. The dwarf buckwheat does it differently. The 4-foot roots system of this 4-inch high plant can find moisture all summer.

D205



DWARF MONKEYFLOWER



GLAND CINQUEFOIL

3

Life is much slower colonizing the rock of a lava flow. A little soil and moisture accumulates in the cracks. In the shallower cracks grow such plants as scabland penstemon and gland cinquefoil. Tansybush and syringia favor deeper cracks. And enough moisture persists in the deepest cracks for ferns to grow in the desert.

4

Pikas, marmots, and woodrats find ready-made apartments in the crevices. Weasels, hawks, and other sharp-eyed hunters make these sheltered homes necessary. Listen for the piercing "eek" of a pika as you walk the trail.

5

Time passes. Soil and organic matter accumulates in the cinder gardens. Where there is enough moisture, limber pines can grow. Fallen cones and needles decompose and are added to the soil. Now shrubs invade the open spaces. Eventually the pines are crowded out by other plants better adapted to the changed soil they helped create.

6

Antelope bitterbrush and rubber rabbitbrush are in the middle of the parade called plant succession. They are soil stabilizers able to withstand partial burial by growing elongated branches through wind-blown cinders. They catch and hold soil arriving on the wind. As the process continues, sagebrush appears and becomes important.



RUBBER RABBITBRUSH



ANTELOPE BITTERBRUSH

7 Antelope bitterbrush tastes as bitter as it sounds. Yet it is the favorite food of the monument's many mule deer. The bush shelters chipmunks, rabbits, and deermice. Look closely. It is also home for countless insects — insects that feed the birds. Without plants, none can live. All are connected in an intricate web of life.

8 The limber pine is both food and home. Birds nest in its branches and eat its seeds. As you walk, look for cone cobs. That's all that is left when a chipmunk finishes chewing a pine cone. And on a hot day, the tree shades the mule deer just as it does you.

9 In 2000 years there have been many changes. And there's more to come. As organic matter accumulates, sagebrush will become the dominant plant. As centuries pass, this area will more and more resemble the surrounding Snake River Plain.



DWARF MISTLETOE

10 Some plants live without soil. Dwarf mistletoe solved the problem of too little moisture and food by growing on the limber pine. It takes water and nutrients directly from the pine. It is a parasite and can weaken the tree so that it dies from other causes, but the mistletoe itself doesn't harm the tree much. The major effect is the growth of a grotesque mass of small branches called a witches broom.

11 Stop. Listen a moment. Do you hear any birds? Over 200 species live in the monument. Sit down and listen to the recording. Often wild birds answer the recorded calls. Listen and look for them.

12 Growth is slow in an arid land. Many plants develop protective devices to keep from being eaten. If you feel the tansybush (or fernleaf), it is sticky. Indians used it as an insect repellant. It probably serves the same purpose for the plant. The sticky, smelly substance probably keeps some insects away and less of the plant is eaten.



TANSYBUSH

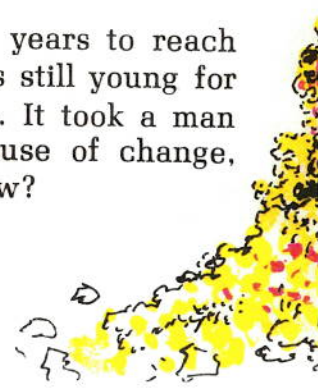
13 Lichens break down rock and make their own soil. But here only a little soil is contributed by the many-colored lichens. Most soil is blown in by the ever-present southwest winds.

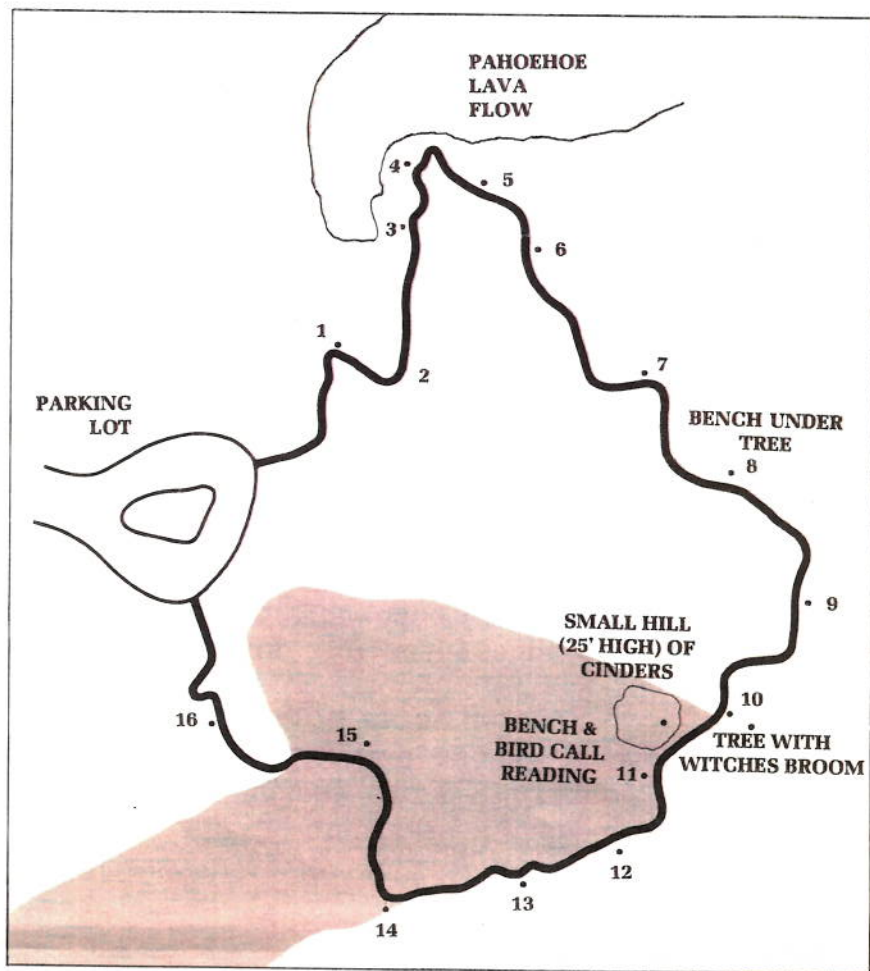


LICHENS

14 This limber pine was blown down, but managed to survive when some of the roots remained attached. One of the branches has become the main trunk of the tree, meeting the challenge of survival. The struggle for survival is an important factor in determining what plants or animals can grow in a certain place.

15 How many rings are there? It had taken the tree 200 years to reach maturity and was only 376 years old when cut. That is still young for limber pines that live to over a thousand years in age. It took a man only a few moments to cut it. Man is a powerful cause of change, good and bad. How will today's changes affect tomorrow?



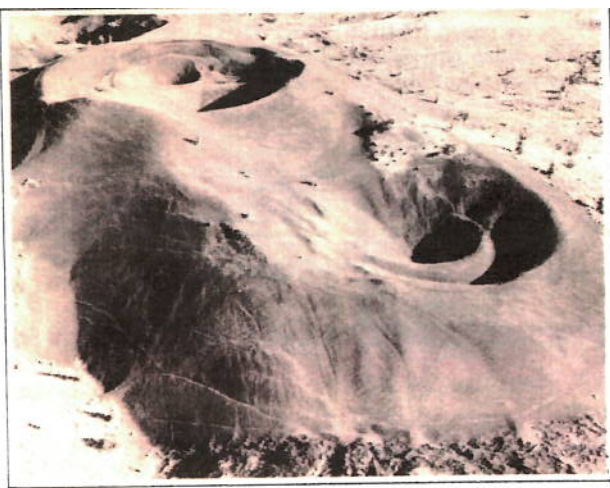


Shaded area contains many large crater wall fragments; remainder of area (with exception of lava flow on north) is mixed cinder beds and weather lava outcroppings. Clumps of bitterbrush and rabbitbrush are scattered throughout the area. Limber pine are found randomly through the area.

WHAT WILL THE NEXT 2000 YEARS BRING?

ANOTHER ERUPTION?

16 Perhaps. And the slow, inexorable process of plant invasion and succession will begin once more. If there is no eruption, the slow march to sagebrush and grass will continue.



SHEEP TRAIL BUTTE — South of the Loop Drive lies the Craters of the Moon Wilderness Area. Hikers in this little-explored area see features seen by few other people. A wilderness hike will never be forgotten. Ask a park ranger for details.



BIG CRATERS — Big Craters Butte is well named. This cone is topped by a line of five craters, one more than a quarter-mile across. It is reached by a short walk from the Spatter Cones Parking Area. Or take the longer Big Craters-North Crater Trail and see a lava lake as well.

CRATERS OF THE MOON NATURAL HISTORY ASSOCIATION is a non-Profit organization pledged to assist the National Park Service in the preservation and interpretation of the scenic and scientific features of Craters of the Moon National Monument.

As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities to protect and conserve our land and water, energy and minerals, fish and wildlife, park and recreation areas, and for the wise use of all those resources. The Department also has a major responsibility for American Indian reservation communities and for the people who live in Island Territories under U.S. administration.

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