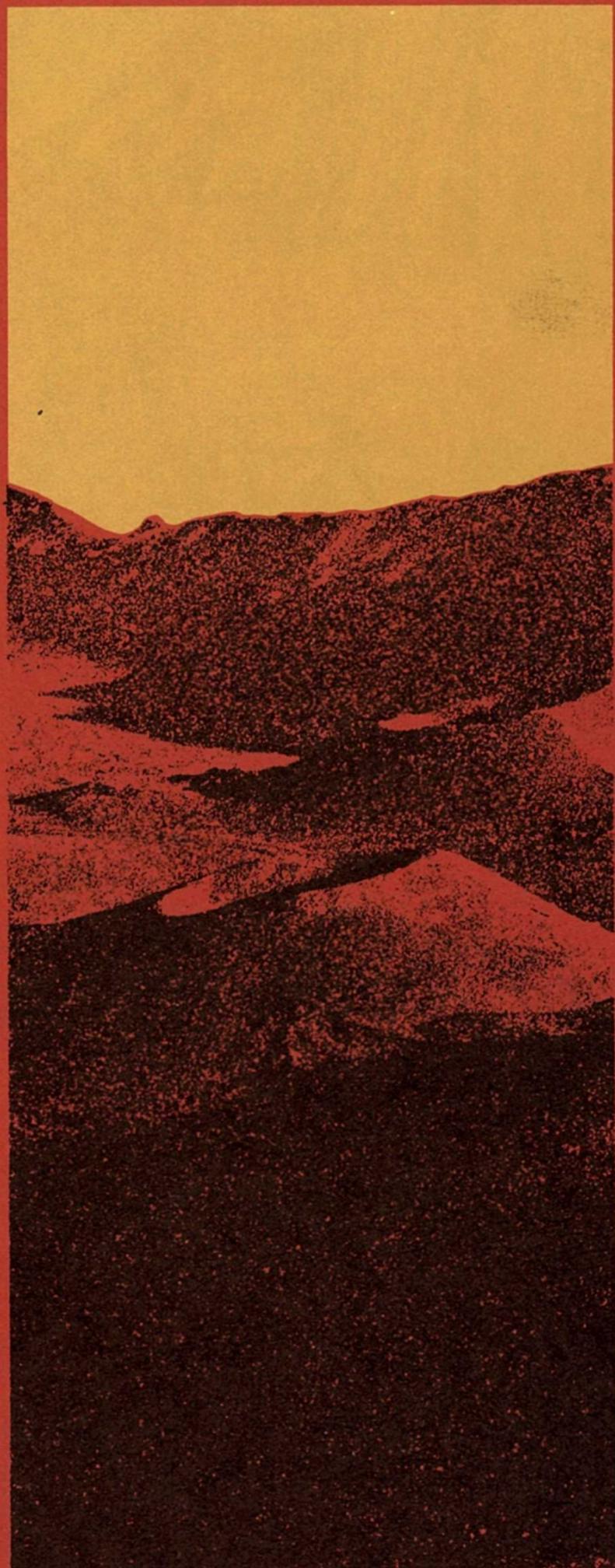


HALEAKALA



GEOLOGIC STORY



Haleakala crater, once a fiery, gaping depression, is now a cool, cone-studded aftermath of a violent volcano. Streaks of red, yellow, gray, and black trace the courses of recent and ancient lava flows. Volcanic rocks of endless variety slowly weather and erode, as natural forces reduce them to minute particles destined to be swept away by swiftly flowing, intermittent streams, or percolated through the porous volcanic rock.

Millions of years ago a disturbance occurred near the southeast end of a 1,600-mile fissure in the ocean floor, creating a volcano some 18,000 feet below the surface. Time after time, century after century, this submarine volcano erupted and spread about it thin new sheets of lava upon the old. Finally, building thus upon itself, its lava-spewing head emerged above the sea's churning surface. This was the beginning of the island of Maui.

The volcano head was now exposed to wind and rain, and the pounding, sometimes stormy, surface of the sea. Waves broke upon and tore at the new land, yet it slowly grew. At last, the mountain reached its greatest height, nearly 12,000 feet above the vast Pacific Ocean.

For a time, volcanic activity ceased, and erosion dominated. The mountain was now high enough to trap much rain from the east; thus streams soon coursed down its slopes. Two such rain-fed streams, eating their way headward, created large amphitheater-like basins near the summit.

Ultimately the two valleys met, creating a long erosional depression. At the same time, a series of submergences and emergences of the shoreline occurred, with the final submergence creating several islands from one—as they are today.

When volcanic activity resumed, lava poured down the valleys, nearly filling them. Cinders, ash, volcanic bombs, and spatter were blown from the vents forming multi-colored symmetrical cones as much as 600 feet high.

Thus was created a water-carved depression partially filled by lava, which bears a superficial resemblance to true volcanic craters.

A Dormant Volcano. It has been a few hundred years since the last volcanic activity occurred within the crater. About 1790, however, two minor flows at lower elevations reached the sea and altered the coastline. In geologic time, these last eruptions were quite recent. Earthquake records indicate that internal adjustments are still taking place in the earth's crust—Haleakala could erupt again. At present, no volcanic activity of any form is visible in the crater, or at any other place on the island of Maui.

LIFE STORY



The Hawaiian Islands, thousands of miles from a continental land mass, support a complex system of plants and animals. More than 90 percent of the native species are found nowhere else. What events took place to create this assemblage of life so severely restricted in range?

A tiny seed caught among a bird's feathers, fern spores borne aloft by strong winds, and insects cast ashore with floating vegetation are means by which life can cross an ocean. For every individual which successfully survived the seas, thousands, perhaps millions, failed. But time was not a critical factor, and thus over millions of years several hundred forms of life established populations on the new islands, after surviving the almost impossible.

Time and extreme isolation were essential for the development of Hawaii's native life. Separated from the remainder of its kind and living in a strange environment, a small breeding population is especially subject to evolutionary change. In some instances, these have been so pronounced that it is difficult, if not impossible, to trace ancestries to continental forms.

On the other hand, all mammals save a small brown bat, arrived through man's intentional or accidental aid. Being unnatural, their presence has upset the natural balance of the islands to an important degree. Wild pigs, brought in by early Hawaiians, root today through the wet areas of the park. Goats, introduced by Europeans, browse along the crater walls. Predatory mongooses, released to control rats and mice, also inhabit the park—and the native items on the menu of the mongoose are endless.

The golden plover is famous for its migratory flights to and from Alaska. (It is commonly seen from September to May.) You may also see the apapane, iiwi, and amakihi, which are among those birds native only to Hawaii. The iiwi is one of the most beautiful of all Hawaiian birds, with a bright scarlet body, black wings and tail, and inch-long curved bill. The apapane is also scarlet, but has a white belly and black legs and bill. The bright green and yellow amakihi is known for the speed at which it searches for nectar and insects. However, most of the birds you will see along park roads—pheasants, chukars, skylarks—are also introduced forms. These, too, have taken their toll of native birdlife—as the carriers of bird diseases and competitors for territory (and food, in some cases).

Among the plants, the silversword (ahinahina) is almost as well known as the crater itself and is typical of Haleakala. At an age of 7 to 20 years, the plant develops a cluster of 100 to 500 yellow and reddish-purple flower heads, each consisting of hundreds of florets. The flower stalk begins developing in May or June and reaches a



height of 3 to 8 feet in July or August. As seeds develop, the remainder of the plant slowly dies and only a dry decaying skeleton remains by late autumn.

Silverswords are most readily seen along the park road at Kalahaku Overlook. For the more adventurous persons, fine groups of these plants in various stages of growth may be seen on the Silversword Loop Trail within the crater.



Maui, the demigod, the son of Hina, went to the great mountain which the sun passed over each day and, as the sun's rays crept over the mountain, Maui snared them and held them fast with his ropes. "Give me my life," pleaded the sun. "I will give you your life," said Maui, "if you promise to go more slowly across the sky." And to this day, the sun is careful to go slowly across the heavens; and the great mountain is known as HALEAKALA—"The House of the Sun."



SEVEN POOLS

This addition to the park includes the Kipahulu Valley from the eastern edge of Haleakala Crater at Pohaku Palaha down to the sea. The lower end of this 8-mile-long strip contains Oheo Gulch with its Seven Pools and the small tributary valley heading at Waimoku Falls. The upper valley receives as much as 300 inches of rain annually and has abundant rare plants such as the apeape, with circular leaves up to 5 feet in diameter, and birds such as the endangered Maui parrotbill and Maui nukupuu.

A slow, winding road, Hawaii 36, circles east of Maui, providing access to several small villages such as Keanae, Hana, and Kaupo. Driving time from the Wailuku-Kahului area to the Seven Pools is 3-4 hours.

Below the Kipahulu rain forest, from approximately 1,300 feet above sea level down to the Seven Pools, the scene is pastoral with rolling grasslands accented by guava thickets. Seven Pools and Wailua Cove are major scenic attractions along this unspoiled coastline. Delightful streams cascading through small forested valleys, crashing breakers on the black lava shore, and precipitous coastal topography grace this section of the island. Several varieties of ginger are a part of the understory in forests of kukui, breadfruit, monkeypod, and mango. Beach naupaka, false kamani, and pandanus abound along the coastal cliffs.

Camping facilities are limited and this section of the park is pleasant for backpack camping. Swimming in the Seven Pools is a popular pastime though the water is usually quite cool. Enormous quantities of water engulf the Oheo Gulch during storms, usually in the autumn and winter. Other activities include trail hiking to scenic vistas, fishing along the coastline, and picnicking.

TRAILS

No roads lead into the crater, but 30 miles of well-marked trails are available. The trip in and out can be done in 1 day by conditioned hikers. For the inexperienced hiker, a 2- or 3-day trip, staying overnight in a cabin, is advisable. You should wear comfortable, durable, hiking shoes and carry a canteen, light raincoat, sun hat, and suntan lotion. A self-registration system is provided for hikers entering the crater at the Halemauu and Sliding Sands trail heads.

Short walks: (1) Along Halemauu Trail—1 mile from the highway to the crater rim. Views of Keanae Valley and Koolau Gap. (2) Down Sliding Sands Trail—be careful not to travel too far, as the return climb is exhausting at this altitude. (3) To the top of White Hill—one-quarter mile from Haleakala Visitor Center. (4) Hosmer Grove Nature Trail—one-quarter mile. Labels describe native and introduced plants and animals.

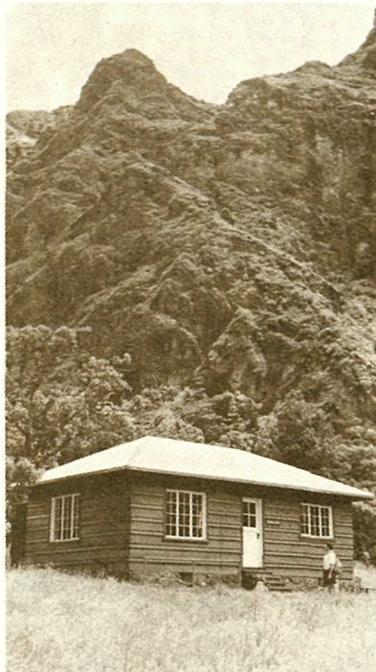
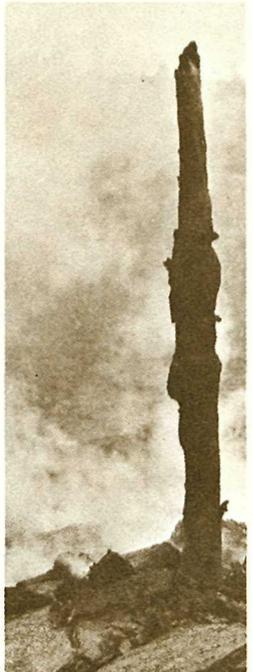
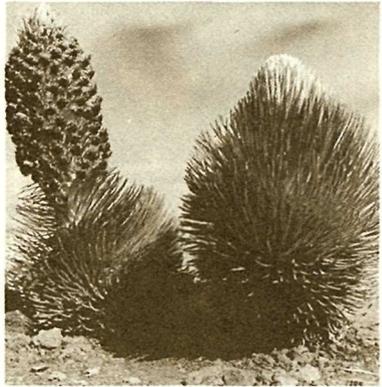
Horseback trips: Information about guided horseback trips into the crater can be obtained by writing to the superintendent. No guide service is available, or necessary, for those riding their own stock. However, horses are not rented for unguided trips into the crater. Fenced horse pastures are near each cabin.

1-day trips: (1) Down Halemauu Trail to Holua Cabin and return. A ½-day, 8-mile trip. (2) Down Sliding Sands Trail and return to the park road via Halemauu Trail. A 12-mile, 8-hour trip, recommended for good hikers only.

2-day trips: Down Sliding Sands Trail to Kapalaoa, Paliku, or Holua Cabin. On the second day, return via Halemauu Trail. The 20-mile round trip to Paliku Cabin is recommended only for good hikers or those on horseback. The Sliding Sands Trail is not recommended for return from a crater trip.

3- and 4-day trips: Entry via Sliding Sands Trail and return via Halemauu Trail. A 3-night trip stopping at Kapalaoa, Paliku, and Holua, in turn, is excellent.





WHEN TO VISIT THE PARK. Weather varies considerably; summers are generally dry and moderately warm, but come prepared for occasional cool, windy weather. Winters tend to be cool, wet, and windy.

Conditions for viewing scenery change during the day. At sunrise, it is cool and the light is poor; but the crater is usually free of clouds to mid-morning, and again in late afternoon and evening. Cloudy conditions prevail during midday, but frequently will improve for short periods, permitting at least partial views of the crater.

Mornings are best for viewing the neighboring islands and West Maui. And, weather permitting, afternoons are best for observing and photographing the crater.

HOW TO REACH THE PARK. The Hawaii Visitors Bureau, with offices in Honolulu, Hilo, Lihue, Kahului Airport, and at 3440 Wilshire Boulevard, Los Angeles, CA 90005, will supply information about trips to and from the Hawaiian Islands.

The shortest road distance (26 miles) from Kahului Airport to the park is via Hawaii 37, 377, and 378.

SERVICES AND FACILITIES. No overnight accommodations, meals, groceries, or service stations are available in the park. (If you rent a car, be sure the gas tank is full.) The nearest restaurant and lodge is 12 miles toward Kahului and the nearest service station is 18 miles.

Information can be obtained at Haleakala Visitor Center or park headquarters. Publications, slides, and post cards may be purchased at both places.

Visitor Center: Haleakala Visitor Center has exhibits describing the geology, archeology, and ecology of the park. **Overlooks:** Shelters with orientation panels and exhibits are at Leleiwi, Kalahaku, and Puu Ulaula.

Camping and picnicking: Facilities are maintained at Hosmer Grove near the park entrance. Tables, fireplaces, a cooking shelter with barbecue grills, drinking water, and a short nature trail are available.

Back-pack camping in Haleakala Crater is permitted in designated areas by permit only. No open fires are allowed and campers must have minimum shelter equipment for cold and wet weather.

Crater Cabins: The National Park Service maintains three cabins within the crater for visitor use. Each cabin has bunks, blankets, water, cookstove, firewood, and kerosene lamps, and accommodates 12 persons. These cabins can be reached only by foot or horse. To reserve cabins, write or telephone the superintendent. Give an outline of your proposed trip, including the number in your party, and exact dates. Specify which cabin you want to use each night. Reservations are limited to 3 nights. The person in charge of your group must be 18 years of age or older.

GLOSSARY

Haleakala (HA-lay-ah-ka-LA)	house of the sun
Halemauu (HA-lay-MA-oo)	grass house
Hanakauhi (HA-na-ka-oo-hee)	maker of mists
Holua (ho-LOO-ah)	sled
Kalahaku (KA-la-HA-koo)	meeting place of leaders
Kapalaoa (KA-pa-la-OH-ah)	the ivory ornament
Kaupo (KA-oo-PO)	to land at night
Koolau (KO-oh-la-oo)	windward side of the Hawaiian Islands
Leleiwi (LAY-lay-EE-vee)	carved figure of the bowsprit of a canoe
Paliku (PA-lee-koo)	vertical cliff
Puu (POO-oo)	hill
Puu ulaula (POO-oo-OO-la-OO-la)	red hill

THIS IS YOUR PARK. *This park was set aside for the enjoyment and inspiration of present and future generations. Enjoy it while you are here, and preserve it for those who will come after you. By observing the rules, you can accomplish both these aims.*

Place all papers, bottles, cans, and other waste in trash cans. Leave all plants and rocks undisturbed. Stay on the trails. Observe the speed limit. Be very careful with fire.

ADMINISTRATION. Haleakala National Park, established as part of Hawaii National Park in August 1, 1916, gained separate status in July 1, 1961, and is administered by the National Park Service, U.S. Department of the Interior.

A superintendent, whose address is Haleakala National Park, Box 456, Kahului, Maui, HI 96732, is in immediate charge of the park.

As the Nation's principal conservation agency, the Department of the Interior has basic responsibilities for water, fish, wildlife, mineral, land, park, and recreational resources. Indian and Territorial affairs are other major concerns of America's "Department of Natural Resources." The Department works to assure the wisest choice in managing all our resources so each will make its full contribution to a better United States—now and in the future.

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