



ADMINISTRATION

Park Sarvice, U.S. Oppartment of the Interior. A superintend-ent, whose address is Hawaii and the Interior. A superintendent, whose address is Hawaii and Sarvice, His offices are at park head-quarters. Hill entrance.

As the Nation's principal conservation agency, the Oppartment of the Interior has responsibility public lands and natural resources. This includes fostering the viscus tase of our lend and the viscus tase of our lend and the viscus tase of our lend and the second section.

National Park Service U.S. Department of the Interior

E Pele el
O Goddess of the hunning stone
Life for me. Life for you.
The flowers of fire wave gentl
Here is your offering...

FIERY ISLANDS IN THE SEA

FIERY INLANDS IN THE NEA

The Hawaiians of old told many myths and stories about
their homeland, and the myth recounted above is just one
of many about Pele, the volcano goddess. The early
sustyrelles were fine poets, perceptive observers of people,
and excellent students of nature. They were aware of many
things about their Islands that are being explained only by
things about their Islands that are being explained only
of Pele's homes, for example, agrees with the relative ages
assigned on the islands by geologies—Nithian and Kanadia
are indeed the oldest, the island of Hawaii is certainly the
younges. But now geologies and wolcanologies can tail
a fact that the original Hawaiians would have had no way of
knowing. By including shoulds and onlis between Nithia
and Ocean Island, the Hawaiian Chain has been extended
the beyond the limits known to its first inhabitianus. And

workings have these islands were make.

The first begin—The islands in the Hawaiian archipelago are only the very top of immense mountains that have been built up from the bottom of the sea during the last 25 million years. They have been created by eruptions of molten rock forced up from earth's manule through fractures in the planes' that in crust, which here is the planes' that in crust, which here is the planes' that in crust, which here is the planes' through the crust planes of the planes' that is the planes' that in crust, which here is Bernarth this region, in earth's mantle, a deep-seated source of hear mets the rocks around it. This find rock, called magma, then rises through the overlying crust to produce the volcances. Magman that flows from volcances over the surface of the earth is alled laws.



mountain will continue to grow. But the Hawaiian Islands rest upon a portion of earth's crust known as the Pacific Plate, and this plate is moving slowly toward the north-west, at the rate of 5 to 8 centimeters (2 to 3 inches) each year.

The fire dies—Because of this movement, contact between the source of magma and the conduits within the volcano cannot be miniatined. After a time, that contact is kept only with difficulty, and in a sense, the mountain is starved to death, gradually perhaps, but incorably. Surface cruptions of lava occur less frequently after contact is broken, and the volcano may remain domain for long to the contact of th

intervals. Utimately, the volcano cesses to grow: it becomes extinct.

At present, the volcanic mountains Kilauea and Muuna Loa here on the island of Hawai' are linked most directly to the source of magain beneath the Padice Plate. The other of the participation of the participatio

are dormant, availing the time when magan might rise within them and law will flow again from their vents.

The moment recrease into the ess. The older, north-watermore sides have read long since, work as well web action of the ocean through which they rose. The sea has claimed their bodies, and soon it will roll over their heads. Their successors, too, are doomed to this same fate. Many forces have destroyed those older islands. Even while they were growing, their own immense weight caused the ocean flow to say under them, and they began to sink. He can lost to say under them, and they began to sink. He can lost to say under them, and they began to sink. He set so continued they are sent as the set of the set is continued with a sent and the set is continued with a sink of the set is continued work produced to the set is continued as a set of the set is continued as a set of the set is continued to the set is continued to the set is set in the set is the set is the set of the set is th

HAWAI'I—THE BIG ISLAND

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By far the largest island in the archipelage, Hawai'i is also one of earth's most proligious volcanic constructions. The ocean floor lies more than 5.000 meters (18,000 feet) below its beaches; the highest point on Manua Rea is 4,205 meters (13,796 feet) above sea level; and Manua Loa is 4,139 meters (13,606 feet) high Measured from the ocean floor, these shield volcanoes are considered to be the greatest mountain masses on earth. Geologists also tell us that it took Manua Loa about 5 million years to attain its sate: 2 million to reach the surface of the ocean and perhaps another million to make that vast mound of stone states of the control of the

past Cape Kumakahi and into the sea beyond. Several eruptions have occurred in the summit crater of Halemauman also, and a few have broken out along the southwest iff zone extending into Ka'us.

Since 1969 repeated eruptions have created a new State 1969 repeated eruptions have created a new State 1969 repeated eruptions have the created a new process of the control of the first years of its esistence.

Manan Illis's wints poured out enough lava to fill up two pit craters, to bailed a new laws bidd 122 meters (400 feet) above the level of the surrounding area; to busy of its crates, to beliancets (12 meters) of park road—busying some sections of it under more than 90 meters (300 feet) of rod, to over-4500 betterse (1000 acres) of park of rod.—busying some sections of it under more than 90 meters (300 feet) of rod, to over-4500 betterse (1000 acres) of park of rod.—busying some sections of it under more than 90 meters (300 feet) of rod, to over-4500 betterse (1000 acres) of park of rod.—busying some sections of it under more than 90 meters (300 feet) of rod, to over-4500 betterse (1000 acres) of park of rod.—Busying some sections of it under more than 90 meters (300 feet) of rod, to over-4500 betterse (1000 acres) of park of rod.

80 heartner (200 acres) of the inlined's are relatively genile. Violent outbrats—characterized by tee-mendous explosion, destructive earthquakes, cloud of optionous gases, showers of hot mud, and rains of empted ordes—have courted only twice in rod.—The cuption of 1924 seems to have been cussed by the build-up of great stem pressure, generated when ground water came in contact with hot rods below the calders. The stemp ressure below out a great part of the volunici conduit's plug of solidified rods, scattering stones and other debatis for several licionnees. The explosion enlarged the debats for several licionnees. The explosion enlarged the feet of the control of the park of the control of the park of the section of the park of the volunici conduit's plug of solidified rods, scatterin



future. Some have ventured to say, however, that before volcanic activity on Harvii Island ends, the entire surface of Munsa Los and Kilanca will be covered again, at least once, with fresh lava.

And occanographers have found evidence suggesting that sameday Pole may abandon her present homes completely. She has built many mountains upon the ocean's floor to the wortheast. One such seamount is already about 4,600 meters (13,000 feet) high. If ever the lifts any of these above the surface of the wave, beyond the reach of vindictive Na Makao of Sahai, who can tell what new monument to herself Pele may not build?









LAVA TUBES

Lava tubes (left and below) are made when a crust forms over the surface of a phenches flow, and the surface of a phenches flow, and the surface of a phenches flow, and the sub-mental still advances that the surface of the surface of



ERUPTION BULLETINS
You can get up-to-date information about on-going eruptions or potential activity by calling (808)
957-7997 day or night. The automatic answering service is updated whenever Kilauea or Mauna Loa show signs of change.
Because eruptions are the most exciting events at lawaii Volcanoes, temporary road signs will direct you to access or vantage points where you can confront the power of these events when conditions are safe.

safe.
FOR YOUR SAFETY
Be aware of these special hazards at Hawaii
Volcanoes.
Please stay on trails. The surface of Kilsue is
laced with deep cracks, and many of these are
hidden by vogetation. Recent lava flows are shelly
and collapse easily.
Fumes from volcanoes can compound respiratory
problems. If in doubt, heed the warning signs.
A number of trails tie along the edges of cliff tops,
so keep children under control.

SEAFARERS FIND THE ISLANDS

Pole may well have been one of the deities who helped the first Hawaiians to find these islands. The gods of all the first Hawaiians to find these islands. The gods of all the pole of the stands of

Hawaiias home.

They came from islands to the south—Archeologists have concluded that those discoverers came from central Polynesia, probably from the Marquess Islands, shown 2000 kin speed to the property of the Polynesia, probably from the Marquess Islands, shown 2000 kin speed to proper the property of the Polynesia smays as 50 men, women, and children may have made the voyage, living aboard a great double cance. For them to have discovered Hawaii' was feat enough. To have survived the difficulty years after they landed upon these inhospitable coats was an even greater desired, the work of the property of the pr

The islands bore distinctive flora and fauna—Though acking in edible plants, the islands they had found were tot utterly barren. Despite their isolation from other acific islands and the continents, Hawai'l's volcanic moun-

Although they look good enough to eat, the bright enough to eat, the bright enough to eat, the bright enough to eat, the colorful berries—sometimes white, pink, red or mehogany brown—have been used to make leis. You're most likely to see this hardy shrub along dry ridges, at both high and low elevations.



This dainty little wrenlike bird, called 'elepaio, is one of the friendliest natives in the park. A member of the Old World flycatcher family, it lives on insects found on tree leaves and stems and builds its deep nest out of lichens held together with cobwebs.



tains had acquired an amazing number and variety of plants and animals—with the exception of mammals. Only but and seeds preceded man to these islands, the plants are considered to the seed of the plants as soon as the growing sheld volcanoes appeared above sea level, seeds or spores or eggs of living creatures or the complete organisms themselves were carried here by ocean currents, high winds, or far-flying birds. Very few of those hapless migrants survived in that brutal new environment, but every now and then one wanderer discovered in exhibiting itself and theretybe became the ancestor of a line of descendants that thrived and multiplied.

succeed in establishing itself and thereby became the ancestor of a line of descendants that threved and multiplied.

Their progenty, meeting no natural enemies and no competitors for space or food, evolved over time according to the progenity of the progenity

But these native plants and animals, while they added the relief of color to the sere volcanic landscape and provided materials for shelter or ornament, could not have fed the Marquesan voyagers—who themselves were the first successful settlers of the human species.

fed the Marqueans vogages—who themselves were the first successful settlers of the human species.

The travelers brought many things from home—Unless the capitors of that first expedition came fully equipped to found a new colony, they would have been quipped to found a new colony, they would have been distinguished to the capital set of the capital set

Guerous came from other islands; then explorers from the continuous—Sometime between 1200 and 1400 second in the continuous—Sometime between 1200 and 1400 second in the south resulted the old that selow the land of Hawaii—loa. A new wave of Polynesians sweet up from the south, this time from Tahiti and its neighboring islands. These later voyagers, arrogant and aggressive, took over the lands and the achievements of their gentler pecursors in Hawaii. Claiming descent from the greater goods, the invaders became the conquerors and rulers of some the continuous continu

isolation that had protected for so long these remote islands and their shethered popole, plants, and animals.

Traces of early Hawaiian settlement remain on the land—in Pele's realm today, little evidence of the early Hawaiian popule can be found. They did not intrude much upon the precision sent we animal of Kalinez, probably behavior to the supplementary of the process of the process of the popular popular behavior to the plants of the plants

HAWAI'I VOLCANOES TODAY

HAWAIT VOLCANOES TODAY

Today, this national park, created primarily to preserve the natural setting of Mauna Los and Klauca, is also a refuge for those native plants and animals that still survive the carcuadments of civilization.

Here, too, scientistic and the processes and effects of the control of the processes of effects of the swell part of the processes of the processes

—O. A. Bushnell



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Back-courry complex.
Hiers wheten and caloin are available, but you must register at park heads quarters for overaging and an engine at park heads quarters for overaging and park heradguarters and as highly recommended. Deck water supplies before you start. Many trails are easy walks, but to be written and the park of the park o

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