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YOUR COMPLETE GUIDE TO THE PARKS

HAWAII'S NATIONAL PARKS

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WELCOME

Aloha! Welcome to Hawai'i, home to several National Park Service sites, including Hawai'i Volcanoes and Haleakalā National Parks and the U.S.S. Arizona Memorial at Pearl Harbor, which is part of the World War II Valor in the Pacific National Monument.

According to Hawaiian legends, **Hawai'i Volcanoes** is the home of **Pele honua mea**, a creative force with many forms. Her first home was on one of the smaller islands, **Ni'ihau**, but the goddess of the sea chased her from island to island, destroying each dwelling that Pele created. Pele finally found a haven in Halema'uma'u, in **Kīlauea Caldera**, where she resides today.

A legend of Haleakalā tells of how **Māui**, a Polynesian demigod, snared the sun because it was moving too quickly across the sky. Māui climbed **Haleakalā** and lassoed the sun's rays, making it promise to move more slowly. At sunset, the ropes still attached to the sun's rays can be seen stretching from the land to the sky.

Hawai'i National Park was established in 1916 and included land on both Māui and the island of Hawai'i. In 1961, it was divided into two separate parks: **Hawai'i Volcanoes National Park** and **Haleakalā National Park**. Both were created to preserve the region's unique volcanic features, early human history, and plant and animal life that is part of this special bio-region.

The **World War II Valor in the Pacific National Monument** preserves and shares the stories of the Pacific War, including the events at Pearl Harbor.

The National Park Service (NPS) is responsible for the protection of these great resources and their visitors. For nearly a century, the NPS has endeavored to

NPS



National parks in Hawai'i protect many unique plant species.

preserve America's parklands for future generations.

The NPS, Hawai'i Pacific Parks Association, Friends of Hawai'i Volcanoes National Park, Friends of Haleakalā National Park and concessioner Hawai'i Volcanoes Lodge Company work together to make your visit a memorable one.

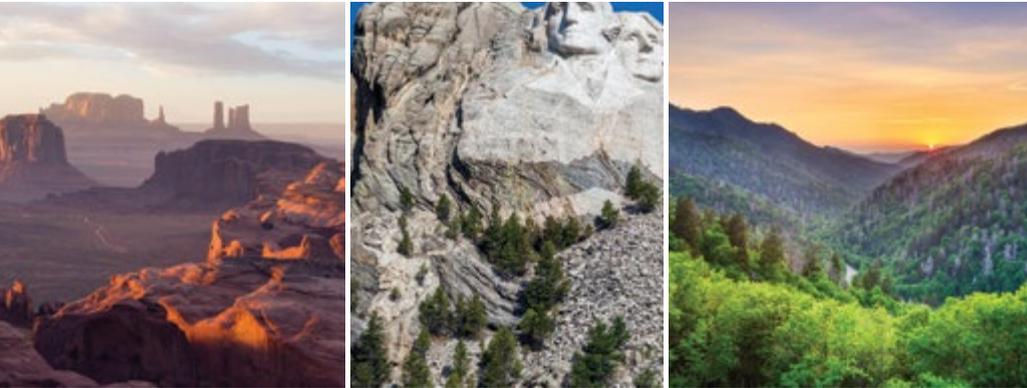
This *American Park Network* guide to Hawai'i's National Parks is provided to enhance your enjoyment and appreciation of these special places. It has been made possible by the support of the sponsors whose messages appear inside. **Enjoy your visit to the National Parks of Hawai'i!**

Zion National Park is the result of erosion, sedimentary uplift, and Stephanie Shinmachi.

Members of the National Park Foundation community, like Stephanie, volunteer in parks across America, supporting everything the National Park Service does, from conservation to education. Find your park and join today.



Join the community at nationalparks.org



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CONTENTS



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	Welcome	2
	What's New!	6
	Park Regulations & Safety	8
	Who's Who at the Park	11
	Hawai'i Volcanoes Plan Your Visit	12
	Hawai'i Volcanoes Sights To See	18
	Hawai'i Volcanoes Things To Do	21
	Hawai'i Volcanoes History	23
	Hawai'i Volcanoes Lodging & Dining	27
	Centerfold Map	
	Hawai'i Volcanoes Walking & Hiking	30
	Hawai'i Volcanoes Camping	33
	Haleakalā Plan Your Visit	34
	Haleakalā Sights To See	36
	Haleakalā Things To Do	38
	Haleakalā History	39
	Haleakalā Walking & Hiking	40
	Haleakalā Camping	42
	Preservation	44
	Nature & Wildlife	46
	Pearl Harbor	49
	Photography	52
	Just for Kids	54
	If You Only Have a Day	56

(Cover: Glowing stars and lava at Hawai'i Volcanoes National Park by Eachat/iStock.)

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WHAT'S NEW

“There is nothing so American as our national parks.”

— Franklin Delano Roosevelt

Access to parks is one of the things that's truly great about life in America. Not just national parks, like FDR stated, but *all* parks. Parks afford everyone, regardless of race, income, social status or age, the opportunity to escape the concrete jungle and step into the wild. It doesn't matter whether it's a small step into a local park or a giant leap into the backcountry. The effect is the same. Time in nature feels good. Other values that parks bring may be less obvious. Since we take care of the things we value, I'd like to highlight a few other benefits we all receive from public lands:

Economic Impact America's federal, state and local parks and public lands generate \$200 billion in annual economic activity and support more than one million jobs! You might help a dozen businesses during a weekend hiking trip. Imagine the impact of a week-long national park adventure. Parks raise property values, too!

Conservation Trees produce the oxygen we need to survive, but did you know that they also help save money? It's estimated that trees in cities save \$400 billion in costs to retain stormwater. A single tree can store 100 gallons or more, which helps keep streets from flooding and reduces the need for artificial storage facilities. A tree can also absorb as much as three tons of carbon gas during its lifetime.



Mark, Joel & Alex – Support parks, stay healthy!

Take a deep breath in a park and you'll immediately know the value of greenspace.

Health & Wellness Studies show a high correlation between time spent in parks and improved health (and, in my view, happiness). You move more when you're outside, which decreases stress, makes you more fit and reduces the risk of many health issues, such as diabetes, high blood pressure and heart disease. Exercise (which parks inspire) also positively impacts your cholesterol levels. A few years ago, I started bicycling to work every day. A year later, my overall cholesterol went down while my HDL—the “good” cholesterol—went up. The results of a small change in your exercise routine can be amazing! Parks invite this change.

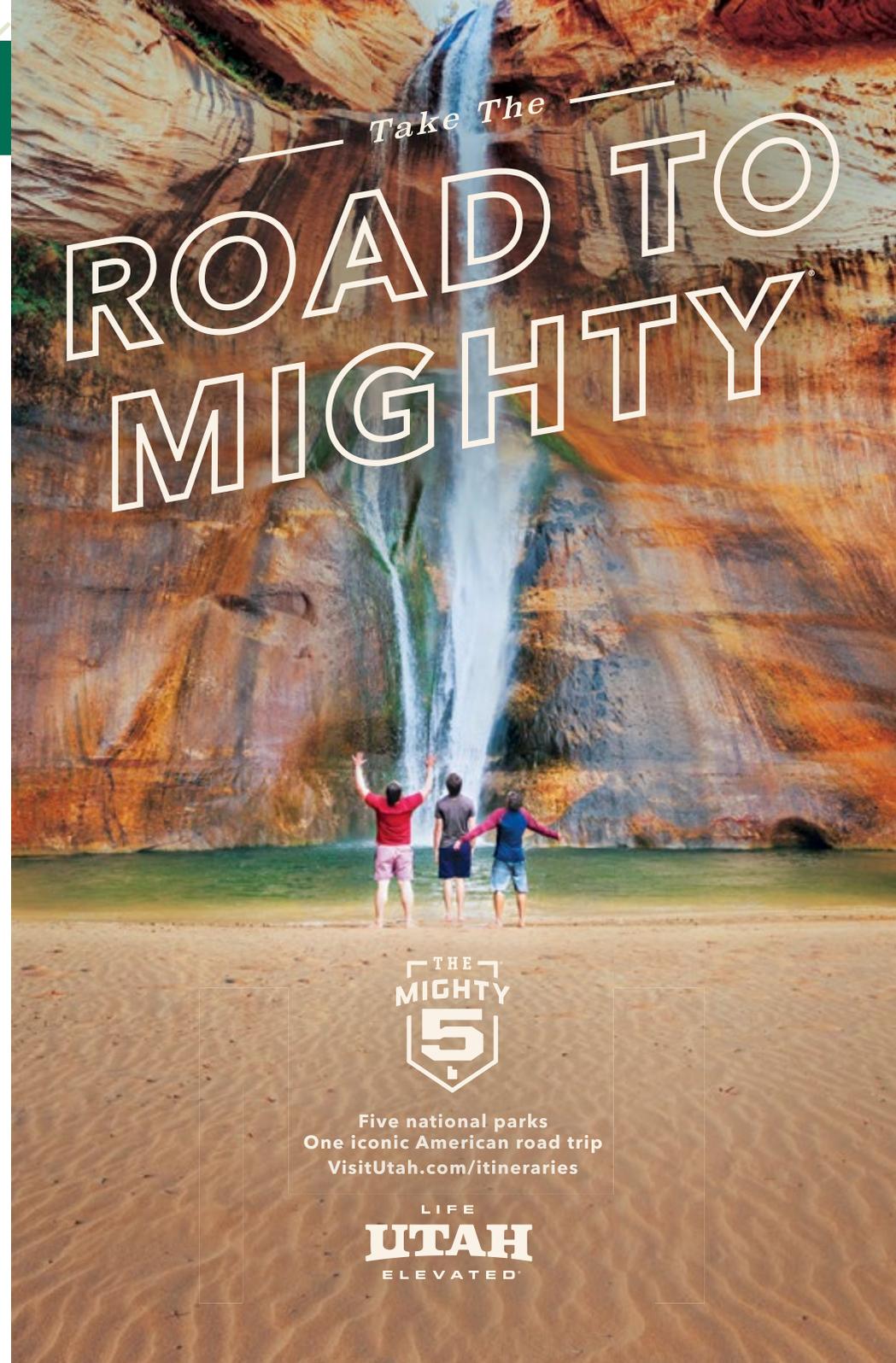
The value of parks is undeniable, so follow FDR's lead and support our public lands. It's the all-American thing to do. (Congress, take note!) You'll save the country money while improving our nation's health—and your own, too. Not a bad combination!

mark@americanparknetwork.com



GET CONNECTED AT YOUR FAVORITE PARKS!

Parks are about enjoying nature, but what if you want to share a great picture or are awaiting an important email? If you're looking to add connectivity to your park, or if you already have Wi-Fi and would like help adding content or generating sponsor revenues, please let us know at wifi@americanparknetwork.com.



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PARK REGULATIONS & SAFETY

The following safety tips and regulations are intended to enhance your enjoyment of Hawai'i Volcanoes and Haleakala national parks. These guidelines are designed to protect the park and you, its visitor.

Makua'ine Pa'i Kī'i



The endangered nēnē, or Hawaiian goose, is the state bird of Hawai'i.



PARK REGULATIONS

Take the time to read the park regulations and guidelines available at visitor centers. Here are a few key points:

- All **overnight hiking trips** in Hawai'i Volcanoes and Haleakala require **backcountry permits**. Camping and cabin permits are available up to one day in advance at the Headquarters Visitor Center, from 8 a.m. to 3 p.m. or at Kipahulu Visitor Center from 9:30 a.m. to 4:30 p.m. Permits for Hawai'i Volcanoes can be obtained at the Backcountry Office at the Visitor Emergency Operations Center at Hawai'i Volcanoes between 8 a.m. and 4 p.m., no sooner than the day before your hike. There is no charge for permits; they are available on a first-come, first-served basis. For further information about Hawai'i Volcanoes, call (808) 985-6000 or visit nps.gov/havo. For more information about Haleakala, call (808) 572-4400 or visit nps.gov/hale.
- Visitors in personal or rental vehicles wishing to view sunrise at Haleakalā National Park will need to make sunrise viewing reservations ahead of time at recreation.gov. The online reservation system has been implemented to ensure visitor and employee safety, protect nat-

ural and cultural resources, and provide a quality visitor experience at the summit during sunrise hours (3am to 7am). The cost is \$1.50 per car.

- The one-day, non-transferable sunrise reservation will not be sold at the park. It is only available online, up to 60 days ahead of a planned sunrise visit. To enter the Summit District between 3 a.m. and 7 a.m., the reservation holder must be present and show both the one-day sunrise reservation receipt (for that day) and a photo ID. The park entrance fee is separate and payable by credit card or park pass on the day of visit. The entrance fee is good for three days, with receipt.
- Please stay on trail to avoid harming the fragile roots of endangered plants.
- Please do not **vandalize**, deface, damage or remove any park features including plants, animals, archeological materials or lava; they are protected by law.
- **Archaeological features are fragile.** Climbing on or removing rocks from any



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archeological feature is prohibited. Natural features such as crater walls are unstable and **rock climbing** is not allowed.

- **Firearms** regulations vary by park. Check with the National Park Service or the park you plan to visit before your trip for most up-to-date information.
- **Fireworks** are not allowed in either park.
- Although it rains frequently in these parks, **wildfires** can occur year-round and are a serious threat to native vegetation. **Fires** are not permitted except in the pavilion located at Kipukapuauulu in Hawai'i Volcanoes or the NPS-provided grills at Hosmer Grove and Kipahulu campgrounds in Haleakalā. Do not smoke while hiking. Park only in designated pullouts to avoid fires caused by car exhaust systems. Heed posted fire danger warnings. Report all fires by dialing 911.
- For visitor safety and protection of the park's fragile resources, **bicycles** are allowed only on paved roads and not on cross-country terrain. Check with rangers for information about designated bike roads and trails.
- **Pets** must be leashed at all times. They are allowed on leash at Namakanipaio, Kipahulu and Hosmer Grove campgrounds. Pets are prohibited on Hilina Pali Road, at Kulanaokuaiki Campground, and on all trails and backcountry areas in both parks.
- **Park roads** are for leisurely driving only. The maximum speed limit in Hawaii Volcanoes is 55 mph on Route 11; elsewhere, slower speeds are posted. The maximum speed in Haleakala is 30 mph.
- Park regulations prohibit the disturbance of **wildlife** in the park. Slow down and use caution when approaching nene (Hawaiian geese) crossing signs. Please do not feed nene; this attracts them to

roadsides and parking lots where they are more likely to be killed.



SAFETY TIPS

The seacoast has strong winds, high waves and dangerous, unpredictable surf. Sea cliffs and coastal lava flows can be treacherous. A number of trails run along cliff edges, so watch your step and your children. Always take ample drinking water.

Volcanoes present a whole new class of **hazards** to park visitors, so be aware and take the time to orient yourself at Hawai'i Volcanoes National Park. Stay on trails. The surface of Kilauea is laced with deep cracks, many of which are hidden by vegetation. Recent lava flows are shell-like, and hidden voids can collapse easily. Fumes from volcanoes can compound respiratory or heart problems and are considered hazardous to infants and pregnant women. Heed the warning signs. During an eruption, avoid the hydrochloric acid mist created when hot lava meets ocean water. See a park ranger for current eruption safety information and follow instructions on warning signs and handouts.

Haleakala has variable **weather**. Be prepared for dramatic changes. It can be at least 20 degrees colder at the summit than at sea level. **Altitude** can be an issue—visitors with heart or respiratory conditions should check with a physician before visiting the park. Avoid altitude sickness by drinking lots of water. Sunscreen and sunglasses are also recommended due to very **high UV levels**. Finally, be aware of **flash floods**, as well as **leptospyrosis** and other pathogens that exist in Hawaiian streams.



WHO'S WHO AT THE PARK

It takes dedication and hard work to keep Hawai'i Volcanoes and Haleakalā national parks in operation. The flora, fauna and unique features of the land must be preserved and protected for future generations. Many organizations and volunteers are responsible for its stewardship.

NATIONAL PARK SERVICE (NPS)

The NPS is the federal custodian of Hawai'i Volcanoes and Haleakalā national parks. As an agency of the U.S. Department of the Interior, the NPS has the responsibility of preserving and protecting the environmental and cultural values of our national parks, protecting the wildlife therein, and providing for public use and enjoyment of the parks. For more information about Hawai'i Volcanoes, call (808) 985-6000; or visit nps.gov/havo. For more information about Haleakalā, call (808) 572-4400; or visit nps.gov/hale.

HAWAII PACIFIC PARKS ASSOCIATION

Hawai'i Pacific Parks Association is a nonprofit partner of six national parks in Hawai'i and American Samoa. Proceeds from membership programs, park stores and web sales support interpretation, educational programs, research projects, publications and cultural activities. For more information, call (808) 985-6051 or visit hawaiipacificparks.org.

PACIFIC HISTORIC PARKS

Pacific Historic Parks is the nonprofit partner of the U.S.S. Arizona Memorial at Pearl Harbor. The organization supports

interpretation, education and research programs, in addition to operating the park bookstore at Pearl Harbor. For more information, call (808) 954-8759; or visit pacifichistoricparks.org.

THE FRIENDS OF HAWAII VOLCANOES NATIONAL PARK (FHVNP)

The FHVNP is a nonprofit organization that promotes the restoration and appreciation of park resources. They provide educational opportunities and support park programs that enrich visitor experiences. To become a friend, call (808) 985-7373; or visit fhvnp.org.

HAWAII VOLCANOES LODGE COMPANY

Hawai'i Volcanoes Lodge Company, a partnership between Ortega Family Enterprises and Aqua Resorts, is the park concessioner and provides food, lodging, cabins, gifts, sundries and other visitor services. They operates Volcano House Hotel and gift shops, the cabins at Nāmakaniapaio campground, The Rim Restaurant, Uncle George's Lounge, and the End of the Road gift shop. For more information, call (808) 441-7750 or (866) 536-7972, or visit hawaiivolcanoehouse.com.

FRIENDS OF HALEAKALĀ NATIONAL PARK, INC.

This nonprofit organization assists the park by encouraging volunteers to participate in park projects, providing financial assistance, and implementing programs and activities to increase park awareness. For more information, call (808) 876-1673; or visit fhnp.org.



HAWAI'I VOLCANOES PLAN YOUR VISIT

Established in 1916, Hawai'i Volcanoes National Park is home to two active volcanoes, the Kīlauea and Mauna Loa.

PARK ENTRANCE

Hawai'i Volcanoes National Park is located 30 miles (48 km) southwest of Hilo and 95 miles (153 km) southeast of Kailua-Kona on the island of Hawai'i.

There is only one entrance, which is located off Highway 11, south of Hilo and east of Kailua-Kona.

ENTRANCE FEES

Your entrance permit is good for seven consecutive days. The entrance fee is \$20 per vehicle, \$15 per motorcycle and \$10 per hiker or bicyclist.

The Hawai'i Tri-Park Annual Pass is \$25 and allows entrance into Hawai'i Volcanoes, Haleakalā and Pu'uhonua o Honaunau for 12 months from the date of purchase.

EVERY KID IN A PARK

To help engage and create our next generation of park visitors, supporters and advocates, the Obama administration, in partnership with the Federal Land Management agencies, launched the Every Kid in a Park initiative. The immediate goal is to provide an opportunity for each and every 4th grade student across the country to experience their federal public lands and waters in person.

All kids in the fourth grade have access to their own Every Kid in a Park pass at **everykidinapark.gov**. This pass admits the pass owner and any accompanying passengers in a private

non-commercial vehicle to the park. You can obtain the pass by visiting **everykidinapark.gov** and you must print it and present it at the park. The Every Kid in a Park pass is valid until August 31, 2017.

GENERAL INFORMATION

The park is open 24 hours every day of the year, including holidays. For general park information, call (808) 985-6000, visit nps.gov/havo, or stop by the Kīlauea Visitor Center or Jaggar Museum on Crater Rim Drive. If and when eruptions occur in the park, temporary road signs direct you to safe vantage points. For eruption updates, please call (808) 985-6000.

PARK BROCHURE AND MAP

If you enter the park when the entrance station is open, you will receive a park brochure and map. If you arrive after business hours, pick one up at the Kīlauea Visitor Center. Keep it handy as a reference and for the useful maps it contains.

WHAT TO BRING

While touring the park, it is a good idea to wear a hat, sunglasses and sunscreen because the sun can be intense. Since typical weather at Kīlauea's summit is cool and rainy, it is a good idea to bring a warm jacket and rain gear. To better protect your feet from lava, wear sturdy, closed-toed walking shoes rather than sandals. Potable water and food are not readily available in some areas of the park, such as Chain of Craters Road. Potable water, grab-and-go

items and picnic supplies are available at Volcano House and in Volcano Village. When conditions permit, these items are also sold at the End of the Road gift shop, located at the end of Chain of Craters Road. Buy a reusable bottle and fill up before you go!

VISITOR CENTER AND MUSEUM

Kīlauea Visitor Center is located 0.25 mile from the park entrance. It is open from 9 a.m. to 5 p.m. daily. Please call (808) 985-6000 for more information.

The visitor center features the 20-minute park movie, *Born of Fire, Born of the Sea*, shown hourly, displaying volcano formation and geologic processes, native plants and animals, and early Hawaiians. Parking and restrooms are available.

The **Thomas A. Jaggar Museum**, located next to the Hawaiian Volcano Observatory, is situated three miles inside the park entrance, west of the visitor center on Crater Rim Drive. It is open daily

from 8:30 a.m. to 5 p.m. Please call (808) 985-6000 for more information.

Museum visitors can view ongoing videos of volcanic eruptions, geologic displays and working seismic equipment relating to the adjacent Hawaiian Volcano Observatory (not open to the public). There are also spectacular overlooks into Halema'uma'u Crater and Kīlauea Caldera near the museum. Parking and restrooms are available.

At both locations, the Hawai'i Pacific Parks Association operates bookstores that sell maps, books, posters and videos. For more information call (808) 985-6051 or visit hawaiiipacificparks.org.

BACKCOUNTRY OFFICE

All overnight backcountry hiking and camping requires a **permit**. Permits are free and must be obtained in person from the **Backcountry Office at the Visitor Emergency Operations Center**, located about 0.33 mile from the Kīlauea Visitor



ENTRANCE FEES AND FEDERAL RECREATION LANDS PASSES

A federal recreation pass is helpful if you plan to visit many national parks, forests or other federal lands. For information, call **(888) 275-8747** or visit **store.usgs.gov/pass**.

Type	Cost	Availability	Details
Annual Pass	\$80	General Public	This one-year pass is available on site, by phone or online (see above).
Senior Pass	\$10	U.S. residents age 62+	This lifetime pass is available on site or via mail order. ID required.
Military Pass	Free	U.S. military members and their dependents	This one-year pass is available on site. ID (CAC Card or DoD Form 1173) required.
Access Pass	Free	U.S. residents with permanent disabilities	This lifetime pass is available on site or via mail order. ID and documentation required.
Volunteer Pass	Free	250 cumulative volunteer service hours	Inquire locally to obtain information about this one-year pass.

Center just off Crater Rim Drive. The office is open daily from 8 a.m. to 4 p.m. Backcountry permits may be picked up up to one day in advance of a backcountry overnight trip. The park does not accept reservations or issue permits in advance.



VISITOR SERVICES

BANKING

Hawaii Volcanoes National Park is in a rural setting, and the amenities that towns may offer are far removed. ATMs are located at Kīlauea Military Camp and in Volcano Village, but the nearest full-service banks are in Pahala, Kea'au and Hilo, 25 to 30 miles (40–48 km) away.

EMERGENCIES

Call 911 for emergency fire, paramedic or police assistance, or to report accidents or injuries. Emergency 911 phones are available at the Ka'au Desert and Mauna Loa trailheads as well as at the Pu'u Loa turnout and Kulanaokuaihi Campground. There are no doctors stationed in the park. Report all accidents to a park ranger.

GAS STATIONS

There are no service stations located in the park. Gasoline and very limited automotive services are available at two stores in Volcano Village, just off Route 11 on the way to Hilo, one mile northeast of the park.

GIFT SHOPS

The **Volcano House** operates two gift shops, offering a large variety of reasonably priced gift items including native Hawaiian arts, volcano T-shirts, sweaters,

souvenirs and grab-and-go fare for one-stop convenience shopping. The **Crater View Gallery** showcases native Hawaiian arts and crafts including woodwork, jewelry, brassware, glassware, Aloha shirts, books, art and photographic prints and Hawaiian music CDs. Both shops provide shipping services.

When lava is active and accessible and visitation warrants, Volcano House, in conjunction with the Hawaii Volcanoes National Park, opens the **End of the Road gift shop**, located at the end of Chain of Craters Road. Water, flashlights, rain gear, snacks and cold drinks are available at the lava viewing parking area. Don't miss the unique opportunity to see where lava once entered the Pacific Ocean. *Note: Conditions change all the time, and you might just get lucky and see flows close to the end of Chain of Craters Road. Always check with park rangers for the latest conditions.*

LOCAL CRAFTS

More than 340 local artisans exhibit their creative works at the **Volcano Art Center Gallery**, located in the historic 1877 Volcano House hotel building, next to the Kīlauea Visitor Center. The building is listed in the National Register of Historic Places as Hawaii's oldest visitor accommodation. Today, the Volcano Art Center operates its art gallery under a special arrangement with the NPS and is a 501(c)(3) nonprofit educational and cultural organization. ♿

Visit the Volcano Art Center Gallery and experience an extension of the park's interpretive program. Discover fine and functional artworks inspired by the Hawaiian culture and the natural environment of the Kīlauea region. The gallery showcases the finest examples of painting, sculpture, photography, wood,

glass, ceramics, textile arts and basketry, which are available for purchase. Displays also share artist insights into their relationships with this active volcanic landscape, Hawaiian ecosystems and Hawaiian heritage. Hula and revolving shows are staged monthly featuring a particular artist or theme. A visit to the Volcano Art Center Gallery will inspire you to

learn more about the park and Hawaiian culture.

LOST & FOUND

The park's lost and found department is located at the Visitor Emergency Operations Center. Items may be reported or turned in to any park ranger or at one of the visitor centers.



A HAWAIIAN PRIMER & PRONUNCIATION GUIDE

Hawaiian was not a written language until missionaries devised a 13-sound alphabet. Islanders were discouraged from speaking Hawaiian in public, so it survived primarily through music. Today, this melodic language is more appreciated and is taught in schools.

Seven constants and five vowels make up the Hawaiian alphabet. Hawaiian, along with several Polynesian languages, uses two diacritical marks to change the pronunciation and meaning of words.

The **Kāhāko** is a macron, a short, horizontal line that is used over vowels. It indicates that a vowel sound should be elongated.

The **'okinā** is the single, open quote that appears frequently before vowels. It indicates a break between vowels, such as in the English phrase "uh-oh."

PRONUNCIATION OF HAWAIIAN

Consonants

p/k/h/l/m/n as in English
 w after i and e, like v
 after u and o, like w

Vowels

a like a in another
 e like a in ace
 i like e in eagle
 o like o in ocean
 u like u in tune

A Guide to Words

Hawaiian	English
aikāne	friend
akua	god, goddess
aloha	greeting, love
anu	cold, cool
hahana	hot, warm
honō	bay, valley
honua	land, earth
ka'ao	legend
kahawai	stream
kai	sea
kakahiaka	morning
kama'āina	native born
kōkua	help, assistance
le'a	joy
mahalo	thanks
mahimahi	dolphin fish
makai	toward sea
malihini	newcomer
mauka	toward mountain
nalu	wave
nani	pretty
no ke aha?	why?
'ohana	family
palaoa	whale
pau	stop, quit
pilikia	trouble
pō	night
pua	flower, garden
puka	door, hole
waena	center, middle



Volcano Art Center

Local Hawaiian arts and crafts, such as pottery and jewelry, are available at the Volcano Art Center.

MEDICAL & DENTAL SERVICES

First-aid facilities are located at the Kīlauea Visitor Center and the Eruption Information Center at the end of Chain of Craters Road.

The nearest hospital is located in Pahala, 25 miles (40 km) southwest of the park. The nearest full-service hospital is in Hilo.

PETS

The nearest kennel is located in Hilo, 30 miles (48 km) northeast of the park.

PICNIC & CAMPING SUPPLIES

Grab-and-go fare is sold at Volcano House in the park. The shops in Volcano Village sell groceries and camping supplies.

POST OFFICE

A post office is located at Kīlauea Military Camp, a Joint Services Recreation Center, located one mile west of Kīlauea Visitor

Center. It is open weekdays from 7:15 a.m. to 11:30 a.m. and from noon to 3:15 p.m.

The main post office is located on Old Volcano Highway in Volcano and is open weekdays from 7:30 a.m. to 3:30 p.m.; and on Saturdays from 11 a.m. to noon.

PUBLIC PHONES

Public phones are located at Kīlauea Visitor Center, Volcano House Hotel, Jaggar Museum and Namakanipaio Campground.

RELIGIOUS SERVICES

Religious services are available in nearby towns.

SPECIAL SERVICES †

Major park buildings and their adjacent facilities that are wheelchair-accessible are indicated by the † symbol. These include Kīlauea Visitor Center, Volcano House, Jaggar Museum and Volcano Art Center

Gallery. Park interpreters can provide information and often lead hikes for those who need special assistance. For special services related to hula performances, contact Volcano Art Center. Visitors may borrow a wheelchair from Kīlauea Visitor Center, Jaggar Museum or the ranger station at the end of Chain of Craters Road.

The one-mile, fully accessible Sulphur Banks Trail invites visitors of all capabilities to explore the park’s thermally-active areas of steam vents and solfataras.

A paved path meanders through steaming meadow and ‘ohi’a forest. At Sulphur Banks, the trail transitions to a five-foot-wide raised boardwalk that extends 1,000 feet, protecting natural geothermal processes and allowing visitors to peer into steam vents and be at eye-level with sulfur crystals.

A portion of the Earthquake Trail, a one-mile stretch of the Crater Rim Trail, is wheelchair-accessible with assistance. Thurston Lava Tube (Nāhuku) has a paved trail leading through a fern forest. Steep stairways lead into and out of the lava tube, but the lava tube is not accessible.

Restrooms are wheelchair-accessible. Campsites at Nāmakanipaio (on Highway 11) and Kulanaokuaiki (on Hilina Pali Road)

have wheelchair-accessible restrooms. The campgrounds are open year-round on a first-come, first-served basis. No reservations or permission is needed.

Call (808) 985-6000 for more information. Crater Rim Drive and Chain of Craters Road offer scenic vistas of the volcano and its forests from several roadside pullouts.

TRANSPORTATION

Most visitors come by car, but you may also take a chartered bus tour by making arrangements with various tour operators based in Hilo and Kailua-Kona.

The only public transportation to the park is offered by the County of Hawaii’s Hele-On Bus. Service to the park is offered Monday through Friday on the “Ka’u-Volcano-Hilo” bus line.

The bus departs the Hilo downtown terminal five times daily from 5 a.m. and 4:40 p.m. and departs from the Kīlauea Visitor Center parking area five times daily from 6:10 a.m. and 5:50 p.m.

The trip is one hour and ten minutes in one direction. The ride is free; luggage, backpacks and bicycles are \$1 each. The \$2 island-wide Hele-On Bus schedule is available at heleonbus.org.

IMPORTANT NUMBERS	
Park Headquarters and Information	(808) 985-6000 nps.gov/havo
Emergencies	911
Camping Information	(808) 985-6000
Dining, Lodging and Cabin Reservations	(808) 441-7750 (866) 536-7972
Eruption Update	(808) 985-6000
Lost and Found	(808) 985-6000
Special Services †	(808) 985-6000++



HAWAII VOLCANOES SIGHTS TO SEE

According to Hawaiian tradition, it took Pele-honua-mea, Pele the sacred earth person, many eons to create her marvelous home, fashioned with red-hot, flowing rock. You are now a guest of Pele and the wonders she made are for you to treasure and respect.

ACTIVE VOLCANOES

The park encompasses two active volcanoes, Mauna Loa and Kīlauea. Mauna Loa, measured from its base (on ocean crust) to its summit, is technically taller than Mauna Kea (a volcano located just outside the park), making it the tallest mountain in the world. Mauna Loa rises 13,677 feet (4,169 m) above sea level and descends more than eight miles (13 km) below it. But Mauna Kea, at 13,796 feet (4,205 m), surpasses it in overall height when measured from sea level. In volume, Mauna Loa is the world's most massive mountain. Its 21,592 cubic miles (90,000 cubic km) are more than 100 times the size of Mount Rainier in the state of Washington. Mauna Loa has erupted 33 times in the last 150 years. During the last 1,000 years, its lava has covered more than 824 square miles (2,133 square km)—40 percent of Mauna Loa's land area. Its last eruption occurred in 1984, and threatened the city of Hilo.

Mauna Loa's much smaller neighbor, 4,000-foot (1,219 m) Kīlauea, might go unnoticed except that it is one of the world's most active volcanoes. For more than 100 years, Kīlauea was almost continuously active. During this period, the pit crater Halema'uma'u was a lava lake (the draining of the lake caused a violent steam eruption in 1924). Since then, Kīlauea has erupted

intermittently, both at the summit and along its flanks (or rift zones) a total of 40 times. The current eruption began on January 3, 1983, and is Hawaii's largest and longest flank eruption in recorded history. There is no indication when it may end. The current summit eruption began March 19, 2008 and continues. The lava lake at Halema'uma'u is below the surface, but visitors can see a dramatic plume of gas and steam by day, and a red/orange glow from it at night from several vantage points in the park, particularly Kīlauea Overlook and the Jaggar Museum Overlook (the closest you can get). Because the plume contains hazardous volcanic materials, gases, and even volcanic glass, the south portion of Crater Rim Drive is closed.

During the past 1,100 years, lava flows have buried 500 square miles (1,300 square km)—more than 90 percent—of Kīlauea's surface. Visit hvo.wr.usgs.gov for current volcano information and photographs.

CALDERAS

Both Mauna Loa and Kīlauea created **summit calderas** (or craters) when lava drained from an underground magma chamber, causing the unsupported volcano summit to collapse. Moku'āweoweo, Mauna Loa's caldera, is three miles long, 1.5 miles wide and up to 600 feet (183 m) deep. The caldera at Kīlauea is 2.5 miles long, two miles wide and 400 feet (122 m) deep. When viewed by missionary William Ellis in 1823, it was more than 800 feet (244 m) deep. Lava flows from and near Halema'uma'u have, over the years, filled it to its present level. The most recent summit flows were in 1974 and 1982.

LAVA FLOWS

Kīlauea's ongoing eruption changes every day. Flowing lava is sometimes visible at the end of the Chain of Craters Road. For up-to-date information about where (and if) active lava flows exist, talk to park rangers at the Kīlauea Visitor Center.

PIT CRATERS

Collapses that are smaller than the summit caldera collapses are called pit craters. Halema'uma'u at Kīlauea is an example. Pit craters can occur both in the summit region and along rift zones. The upper-reaches of Kīlauea's East Rift Zone are dotted with these depressions, giving the name "Chain of Craters" to the road



TYPES OF LAVA

You will see two types of lava in Hawaii: **'a'ā** and **pāhoehoe**. 'A'ā is rough and chunky, while pāhoehoe is smooth and ropy. Lava may vary in color from shiny black to dull brown. Both types have the same chemical composition, but pāhoehoe is hotter and more fluid than 'a'ā at the time of eruption.



'a'ā lava



pāhoehoe lava

Christian Newton

U.S. Geological Survey

that leads from the volcano toward the sea. The road was blocked by lava flows in 1986, reopened, and then blocked again in 1987.

STEAM VENTS

When groundwater reaches rock of sufficient temperature, steam forms. This is particularly common in the summit area and along the rift zones where magma (underground lava) is near the surface. Air temperature and humidity affect the visibility of steam escaping from cracks in the lava flows, so the visible amount may vary considerably from day to day.

SULPHUR BANKS

Sulphur deposits, left where volcanic gases have seeped out with ground-water steam, may be seen in or near the caldera of Kīlauea.

KĪPUKA

When flows move downhill as rivers of lava, they frequently leave isolated "islands" of untouched ground. Hawaiians call these areas in lava flows "kīpuka." It is within these kipuka that many interesting native plants and animals have evolved.

NA PALI

Fault scarps, or **pali** (Hawaiian for "cliff"), are common throughout the state. In the park, small ones are prevalent around the summit caldera while larger ones are found between summits and the sea. Grand examples, including the Hilina Pali, can be seen while descending Chain of Craters Road. These cliffs normally form slowly over long periods of time, but increments of several feet may develop suddenly as ground shifts along fault lines or during coastal subsidence.



Wasif Malik

The black sand beaches and cliffs of Hawai'i Volcanoes make for amazing photos.

THE SEACOAST

Most of the seacoast within the park is made up of rugged cliffs interrupted with occasional small, temporary beaches. Wave action continually erodes the base of the cliffs, undermining them and causing large chunks to fall off. Uneven erosion of rocks of varying hardness sometimes results in the formation of sea arches.

BLACK SAND BEACHES

When hot lava spills into the sea it shatters into black sand and is carried by currents along the coastline. If the sand is deposited in sites protected from heavy wave action, unstable beaches may form. *Note: Swimming at these beaches is dangerous and could be life threatening.* The life span of black sand beaches is variable; some may last a few days; others for centuries. In 1992, lava covered the black sand beach at Kamoamoa just five years after it formed.

TREE MOLDS AND LAVA TREES

Tree molds form when lava engulfs a tree and later cools around it, forming a crust. Usually the tree burns out, leaving a hole, or "tree mold," in the lava. Lava trees form similarly, except the lava that surrounded the tree drains away, leaving a hardened, misshapen crust around the tree.

RAINFOREST

The windward side of Kīlauea, with annual rainfall of more than 100 inches, has a distinctive rainforest. The 'ōhi'a lehua tree forms the canopy, while the tree fern, or hāpu'u, grows beneath. The tree fern was important to ancient Hawaiians, who used pulu, the brown, silky hair covering the unfurled fronds, to embalm the dead. In the mid-1800s, pulu was used to stuff mattresses and pillows. Much was sent to the mainland for this purpose, and was even used at hotels in Yosemite National Park.



HAWAI'I VOLCANOES THINGS TO DO

Although Hawaiian tropical weather is fairly consistent year-round, there is some variation. Winters tend to be slightly wetter, summers slightly warmer, and precipitation and temperature vary according to location and time of year. Precipitation is always greater on the windward sides of Kīlauea and Mauna Loa. In the park, annual rainfall varies from 20 to 100 inches (50–250 cm). Temperature, which varies by elevation, may exceed 90°F (32°C) at sea level. At the summit of Kīlauea, temperatures are at least 20 degrees colder than at sea level and wind chills can drop temperatures below freezing at any time of year. The top of Mauna Loa, sometimes covered by snow in winter, is usually freezing cold, even in summer. It is wise to bring warm clothing if you plan outdoor activities on or near the top of either volcano.

PARK PROGRAMS

Before going to see the volcano, take time to become acquainted with the exhibits at Kīlauea Visitor Center, open from 8:45 a.m. to 5 p.m. daily. A 25-minute introductory film about the park is shown at the center on the hour from 9 a.m. to 4 p.m. daily. It will help you understand the features you will see in the park. Check with rangers at Kīlauea Visitor Center front desk for additional programs conducted on the half-hour. You can also obtain firsthand information on any special activities planned or consult a schedule of activities posted on bulletin boards outside of Kīlauea Visitor Center and Jagger Museum.

TOURING

If you have a few hours to spend, a drive down **Chain of Craters Road** will

NPS



Learn about park plants and wildlife during a ranger-led program. Ask at a visitor center for a program schedule.

broaden your understanding of the park's principal attractions. The 40-mile (64 km) round-trip drive takes about three hours from Kīlauea Visitor Center. Food and gas are not available along the route. Gas stations and general stores are located in Volcano Village, one mile from the park entrance station on Highway 11 toward Hilo. Details about this drive (and others) are available at the Kīlauea Visitor Center.

An eruption on the East Rift Zone, which began on January 3, 1983, is still active. Halema'uma'u became active again on March 19, 2008 with a small explosive eruption and erupts currently. Scientists tell us that some eruptions in prehistoric times lasted more than 40 years. There has been no indication of when this one may end, so you may have the opportunity to see it.

Along Chain of Craters Road, you will cross broad flows that came from **Mauna**

Ulu (or “Growing Mountain”) from 1969 to 1974 and see short sections of the old road not covered by these flows. You can hike to **Pu’u Loa Petroglyphs**, marvel at the rugged seacoast with its occasional sea arch, see the island’s newest black sand beaches scattered along the coast and stop where lava flows from the current eruption have blocked the road. Nearly nine miles of the road east of this point have been covered since 1986.

If you are spending several days in the park, other short drives can take you to some spectacular, less-visited sections.

Hilina Pali Overlook is reached by driving over a narrow, paved road that branches off from Chain of Craters Road. Use Hilina Pali trailhead or Keauhou Trail (beginning at the Mau Loa O Mauna Ulu parking area on Chain of Craters Road) for access to Halape, which is a backcountry site reachable only by a rigorous hike. A campground, Kula-naokuai, is located near the Mauna Iki trailhead. Please call (808) 985-6000 for updated information.

Hilina Pali Overlook, perched on top of the fault scarp of the same name, is also a starting point for hikes to the sea and provides excellent views of the coast 2,200 feet (671 m) below. On clear days, the southernmost point of the United States, **Ka Lae** (South Point), is visible.

Another scenic drive is **Mauna Loa Road**, reached from Highway 11 just beyond the Volcano Golf Course, about two miles from the park entrance. Attractions along this route include the **Tree Molds**, **Kipukapuau** and a pleasant koa forest. The road becomes narrow and winding above Kipukapuau, ending at the 6,662 foot (2,031 m) level with a spectacular view. From here begins the 18.3-mile

hike to the summit cabin on the south rim of Mauna Loa’s caldera at an elevation of 13,250 feet (4,039 m). Please see the “Walking & Hiking” chapter for more information about these and other hikes.

GUIDED TOURS

Land-based tour operators can show you the park both by car and on foot. For more information visit the Hawaii Island Visitors Bureau online at gohawaii.com/bigisland or the Hawaii Ecotourism Association online at hawaiiecotourism.org.

SPECIAL EVENTS

From hula concerts to ‘Art in the Park’ and other cultural presentations, many special events are available throughout the year and a number of additional events have been added in 2016 to celebrate the park’s 100th anniversary. For more information, check the park website, nps.gov/havo, or contact the Kīlauea Visitor Center or the Volcano Art Center. For a current listing of hula arts events in the park, visit volcanoartcenter.org.

NIGHTLIFE

Throughout the year, the park operates its **After Dark in the Park** series of interpretive programs. Check the park website for a current schedule.

The evening programs are educational in nature and may range from a talk about whale watching to a lecture on geology.

The Volcano Art Center also occasionally sponsors artist receptions, concerts and visual arts performances in the evening.

Uncle George’s Lounge at Volcano House offers food, entertainment and signature cocktails with panoramic views of Kīlauea and Mauna Loa Mountain.



HAWAII VOLCANOES HISTORY

The major inhabited Hawaiian Islands were formed during the past 5 million years by the intermittent outpouring of lava from the floor of the Pacific Ocean. According to the theory of plate tectonics, the island of Hawaii sits on, and is almost in the middle of, the Pacific Plate, a giant jigsaw piece of the Earth’s crust that is moving slowly (about four inches per year) in a northwesterly direction. As Janet Babb explains in *Hawaii Volcanoes—The Story Behind the Scenery*, “Heat from a relatively stationary hot spot deep within the Earth’s mantle creates magma (molten rock) that rises through the overlying Pacific plate and erupts on the ocean floor. After thousands of eruptions, an island builds a rocky mass above sea level.” Like a slow-paced assembly line, the plate, moving over the hot spot, has created a succession of islands in the Hawaiian Ridge that extends all the way to Midway and Kure, more than 1,500 miles (2,414 km) from where it began 30 to 35 million years ago.

The Hawaiian Islands are but mere tops of gigantic mountains rising from the floor of the ocean. The newest of these islands, Hawaii, is relatively young, geologically speaking. The oldest rocks above sea level are less than one million years old. The Island of Hawaii was formed by five volcanoes, but only three are considered active: Hualalai, Mauna Loa and Kīlauea. The latter are two of the world’s most active volcanoes.

A new sister volcano is **Lō’ihi Seamount**, an underwater active volcano about 20 miles (32 km) off the southeast coast of Hawaii. Lō’ihi may be the next

island in the Hawaiian chain. Currently, it is about 3,000 feet below sea level. If it continues to grow at the rate that the island of Hawaii developed, 100,000 years will pass before Lō’ihi breaks the water surface.

ARRIVAL OF POLYNESIANS

The first discoverers of Hawaii are believed to have come from the Marquesas Islands, at about A.D. 500. A second migration, from Tahiti, began sometime between A.D. 1200 and A.D. 1400. These invaders became the conquerors and rulers of Hawaii and brought with them the political system of **kapu**, which is made up of a strict form of rules.

Evidence of early Hawaiian settlement is found throughout the islands. The ancient Hawaiians lived off the sea and lowland agricultural areas. For this reason, we find most of their ruins near shorelines. Villages, isolated house sites, agricultural mounds, petroglyph fields, refuge caves, **heiau** (temples) and many other signs of their early presence can be found on the island. In the park, the legacy of the ancient Hawaiians lives on in the petroglyph fields, and caves, house sites and canoe landings.

THE SECOND DISCOVERY

The Hawaiian Islands remained isolated from the rest of the world until 1778, when Captain James Cook first sighted the islands of O’ahu, Kaua’i and Ni’ihau. In February 1779, the English navigator returned to discover other islands in the main group, including Hawaii. He was killed by Hawaiian warriors while anchored at Kealahou Bay on Hawaii Island’s west coast. A mon-

Oh, Ranger! FUN FACTS

Q. IS IT TRUE HAWAIIANS CAME FROM POLYNESIA?



Polynesians from the Marquesas Islands migrated to Hawai'i over 1,600 years ago, navigating by the sun and stars and reading the winds and the flight of seabirds. They sailed across 2,400 miles of open ocean in great double-hulled canoes, bringing items essential to their survival such as chickens, dogs and sugarcane.

For answers to all your questions, go to OhRanger.com

ument marks the spot.

No other Europeans visited Hawai'i until 1786. After that, traders and explorers came in increasing numbers. Scottish botanist Archibald Menzies of the Vancouver Expedition became, in 1794, the first non-Hawaiian to climb Mauna Loa.

MISSIONARIES AND SCIENTISTS

Following the death of King Kamehameha the Great in 1819 and the overthrow of the kapu system of rule, the first missionaries arrived from New England. In 1823, the Reverend William Ellis toured the island of Hawai'i by land and by sea. He also became the first non-Hawaiian to view Kīlauea Volcano in action. Seventeen years later, a party under Commander Charles Wilkes spent several weeks on the summit of Mauna Loa mak-

ing scientific observations. The party also camped briefly on Waldron Ledge overlooking Kīlauea Caldera.

Although Kīlauea was extremely difficult to reach, a growing number of people expended the necessary energy to do so. In 1824, Lord George Anson Byron came to Kīlauea while visiting the islands to return the bodies of the Hawaiian king and queen who had died of measles while visiting England.

VOLCANO HOUSE

By the 1840s, a growing need for accommodations at Kīlauea became evident. At an elevation of 4,000 feet, and with strong winds and frequent rain, little thatched huts were hardly adequate to meet this need. The first Volcano House was built on the rim of the caldera. It was made of thatch, too, and it was not until 31 years later that a permanent structure was erected to accommodate visitors to Kīlauea. Since then, the historic hotel and its replacements have been improved many times by various owners. For more information on Volcano House, please see the "Lodging & Dining" chapter.

NATIONAL PARK STATUS

Because the eruptions of Hawaiian volcanoes are gentler than those of most other volcanoes around the world, lava flows are frequently accessible, allowing people to come and pay their respects to Pele. The early Hawaiians revered her and made offerings to placate her wrath. In 1823, missionaries William Ellis and Asa Thurston visited Kīlauea's boiling lake of lava. They were the first Westerners to do so. Pele's lake was described in magazines of the day, and adventure-seeking travelers came to see it firsthand. Mark Twain, on seeing Kīlauea in 1866, enthusiastically wrote, "Here was room for the imagination to work!"

Work crew/Library of Congress; Dr. Jaggard/Bishop Museum; Carriage/NPS; other images are uncredited.



Clockwise from top: The construction of the Crater Rim Road made the area more accessible to the increasing number of visitors. Dr. Thomas A. Jaggard, seen here at the Laboratory of Seismology, was instrumental in the creation of the park. The fourth Volcano House was erected in 1891. The second Volcano House was built on the rim of Kīlauea in 1866. Since 1877, the Volcano House has been structurally updated nine times. The first carriage trip in the park was made in 1893 from Hilo to the volcanoes.

Lorrin Thurston, publisher of the *Honolulu Pacific Commercial Advertiser* at the turn of the century, loved to explore the volcano lands. Among his discoveries was a giant lava tube, formed when a river of hot lava cooled and crusted over while the still-molten interior continued to flow downhill. Eventually, the lava drained out, leaving a cave-like shell. The Thurston Lava Tube (Nahuku) is a major attraction on the Crater Rim Drive.

In 1906, Thurston began a campaign to establish this amazing area as a public park. His efforts were not effective until he was joined in 1912 by Dr. Thomas A. Jaggar, who came to the islands to establish and serve as director of the Hawaiian Volcano Observatory. Together, the two conservationists collared politicians, wrote editorials and promoted the idea of making

the volcanoes into a national park in what was then the Territory of Hawai'i.

On August 1, 1916, President Woodrow Wilson signed the country's 15th national park into existence. It took 10 years, but Thurston and Jaggar's perseverance paid off.

At first, the park consisted of only Kīlauea and Mauna Loa on Hawai'i and Haleakalā on Maui. Eventually, park boundaries were extended to include the Ka'ū and Kalapana regions on Kīlauea, and Kahuku and the Ola'a rain forest on Mauna Loa.

In 1961, Haleakalā was made a separate national park. Today, Hawai'i Volcanoes National Park protects 333,086 acres (almost the size of the island of Oahu) of the island's volcanic wonders and is a refuge for surviving native plants and animals.

In 1980, the United Nations Educational, Scientific and Cultural Organization (UNESCO) named Hawai'i Volcanoes National Park an International Biosphere Reserve because of its outstanding scenic and scientific values. The park was recognized for its important volcanic sites (including two of the world's most active volcanoes); its volcanic island ecosystem, which preserves one of the largest significant ecosystems on the Hawaiian Islands; and its cultural and historic sites. The Biosphere Reserve program goals are to conserve the diversity of a designated site's ecosystems and provide areas for research, education and training.

Hawai'i Volcanoes National Park was named a World Heritage Site by UNESCO in 1987. World Heritage Sites recognize and protect areas around the globe that have outstanding natural, historical and cultural values. It evolved from the idea that certain natural and cultural sites have "universal value" for all people.



HAWAI'I VOLCANOES LODGING & DINING

A variety of lodging and dining options are available at the park, including hotel rooms, cabins, and dining rooms with panoramic views.



LODGING

VOLCANO HOUSE

In 1846, Benjamin Pitman built the first Volcano House on the northeast side of the Kīlauea Caldera. The thatched structure was specifically for visitor use. A second Volcano House followed in 1866, constructed by J. L. Richardson and Company. It was here that **Mark Twain** stayed that same year. In 1877, the building was enlarged with many of the finished materials coming from Honolulu. It was the first truly wooden hotel on the island that used lumber and commercial doors and windows.

In the late 1800s, the hotel on the rim of Kīlauea changed hands several times, until a larger, Victorian structure was erected. In 1904, George and Demosthenes Lycurgus took over management and became the principal stockholders. Their ownership lasted until 1921, when the hotel was purchased by the Interisland Steam Navigation Company. In 1932, George Lycurgus reacquired the hotel, and he and his son, Nicholas, managed it for more than 30 years.

In 1940, a devastating fire completely destroyed the Victorian hotel built in 1891. Fortunately, the section of the hotel built in 1877 had been moved so that this relic

of Kīlauea's by-gone days escaped unharmed. The 1877 structure is now the Volcano Art Center Gallery.

The current hotel was built in 1941 at the edge of Kīlauea Caldera, with addition of the Deluxe Wing built in 1962. In the late 1960s, the Lycurgus family sold Volcano House to C. Brewer and Company. Brewer operated the hotel for a short time and then hired Sheraton Hotels to manage it. Then, it was sold to Ken Direction Corporation, a local family-owned and operated company.

In 1989, extensive work began in an attempt to restore the casual elegance that made Volcano House world-famous in the Lycurgus years.

In 2013, with funding from the National Park Service and Hawai'i Volcanoes Lodge Company, the hotel underwent a multi-million-dollar renovation that improves safety and restores cultural and historic elements.

Many dignitaries, including Mark Twain (1866) and Franklin D. Roosevelt (1934), have visited Volcano House, as have many modern-day celebrities and royalty. Today, you can stay year-round at Volcano House, the oldest hotel in Hawai'i and the only hotel in Hawai'i Volcanoes National Park.

You have the opportunity to share the warmth of the historic lava-stone fireplace in the lobby. In 1935, Ripley's Believe It or Not stated that the hotel's fire had been burning continuously for 61 years. For over 134 years, the Volcano House fireplace, which symbolizes the hotel's warmth and its spirit of "Aloha," has continuously burned brightly.

Volcano House Hotel is located on Crater Rim Drive within Hawaii's Volcanoes National Park. The Volcano House is just a short walk across Crater Rim Drive from park headquarters and the Kīlauea Visitor Center. The hotel is located 30 miles southwest of Hilo on Highway 11 (45 minute drive); 96 miles southeast of Kailua-Kona on Highway 11, or 125 miles through Waimea and Hilo via highways 19 and 11 (two and a half to three-hour drive).

The Volcano House has a new kitchen, beamed ceilings and 34 rooms outfitted with rare koa wood furniture, iconic Hawaiian pieces and museum art. There are two **gift shops**, which carry a variety of items including souvenirs, books, clothing, jewelry, and native Hawaiian arts and crafts. Other facilities include a grab-and-go food retail location, The Rim Restaurant and Uncle George's Lounge. Pets are

not allowed. Wi-Fi is available at the hotel. Major credit cards are accepted. 🚫

Volcano House also operates year-round cabins at **Nāmakanipaio Campground**, three miles west of the park entrance on Route 11. Each newly-appropriated cabin can accommodate up to four people; linen, towel and blankets are included. Showers are located nearby. There is a picnic table and barbecue grill outside of each cabin. You must provide your own charcoal and cooking utensils. There are electric lights but no outlets.

It is best to make advance reservations for lodging at the Volcano House and the cabins at Nāmakanipaio, especially for July and August. Contact the Hawaii's Volcanoes Lodge Company at (808) 441-7750 or (866) 536-7972, or visit hawaiiivolcanoehouse.com.

OTHER ACCOMMODATIONS

If you are a member of the military (active, reserve or retired, or Department of Defense civilian, their dependent or guest), you and your family may find accommodations at the **Kīlauea Military Camp**, a Joint Services Recreation Center, which is located one mile west of Park Headquarters. For more information or reservations, call (808) 967-8333 or (808) 438-6707 or visit Kilaueamilitarycamp.com.

There are several vacation rentals and bed and breakfasts in the nearby community of **Volcano Village**, located right outside the park boundary. Hotels are available in **Hilo**, which is 30 miles (48 km) northeast of the park.

For more information about lodging, dining and other amenities outside of the park, please call the Hawaii's Island Visitors Bureau at (808) 961-5797 or visit gohawaii.com/big-island.

NPS



Clockwise from top left: Lucky visitors will witness the incredible sight of piping hot lava flowing into the ocean's cool water; See native Hawaiian flora and fauna, Nene and 'ōhia at Mauna Ulu; Learn about traditional Hawaiian dance and music; Flowing lava leaves behind molds of trees.



DINING

VOLCANO HOUSE

The only public dining facilities in the park are located at Volcano House. **The Rim Restaurant** and **Uncle George's Lounge** offer spectacular panoramic views of the Kīlauea Caldera. The restaurant serves breakfast, lunch and dinner and is open daily. The

lounge offers an all-day appetizer menu. Creative island cuisine highlights the best of Hawaii's Island's bounty through seasonal specials; at least 95 percent of the restaurant's meat, seafood, fruit and vegetables are sourced from local ranchers, farmers and suppliers. 🚫

OUTSIDE THE PARK

Restaurants in Hilo offer a variety of cuisines. There are also restaurants at Volcano Golf Course and Volcano Village, located just outside the park.

Oh, Ranger!

FUN FACTS

Q. IS THERE LODGING IN THE PARK?

Yes! Situated on the rim of the Kīlauea Caldera, the Volcano House is just a short walk across Crater Rim Drive from both the Kīlauea Visitor Center and park headquarters. With a history dating back to 1846, it is Hawaii's oldest hotel. Please call (808) 441-7750 or (866) 536-7972 to make your reservations.

For answers to all your questions, go to OhRanger.com



HAWAII VOLCANOES WALKING & HIKING

Walking and hiking in the park can be a fascinating experience. Trails range from easy walks, such as **Thurston Lava Tube**, to very strenuous hikes, such as **Mauna Loa**. Whenever you hike, let someone know where you are going and when you plan to return. Carry sufficient drinking water adequate to the hike's difficulty, length and the expected temperature. Sturdy walking shoes, rain gear and sun protection are a must. Most trails are well maintained and marked, but some backcountry trails are rough, marked only by "ahu," which are cairns (piles of rock). Pick up free trail guides and other information at

Kilauea Visitor Center. Topographic maps are for sale in the park as well as in Hilo and Kailua-Kona. Free backcountry permits are required for overnight trips, and are available at the **Backcountry Office at the Visitor Emergency Operations Center**, which is open daily from 8 a.m. to 4 p.m. For specific trail information, please see the chart below or visit nps.gov/havo. Note: Roads and trails situated on two active volcanoes are subject to closure at any time due to volcanic eruptions, fumes, and other events. Contact the park for current trail conditions.



YOUR GUIDE
TO
BIG ADVENTURE



WALKING & HIKING TRAILS

Trail	Description	Round-Trip Distance Time	Difficulty Elevation Gain
Crater Rim Trail¹			
Kīlauea Visitor Center	Loop around Kīlauea caldera through cool rain forest and warm desert. Partly paved crosses ash deposits and lava rock.	11 miles 6.5 hours	Strenuous 500 feet
Devastation Trail			
Devastation Trail or Pu'u Pua'i Overlook parking lots	Paved path winds through the remains of a forest devastated by high lava fountains in 1959.	1.0 miles 30 min.	Very Easy Level
Earthquake Trail (Waldron Ledge)			
Volcano House	Paved path on a section of Crater Rim Drive that was cracked and destroyed in 1983 by a magnitude 6.6 earthquake.	1.0 miles 45 min.	Easy 40 feet
Halapē²			
Keauhou Trailhead (Mau Loa o Mauna Ulu) or end of Hilina Palī Road	Trail descends a steep cliff to a small beach. Hikers are advised to carry plenty of water and to be prepared for high heat and humidity.	14 miles 2 days	Very Strenuous 2,200 feet
Halema'uma'u Trail³			
Volcano House	Descend to the floor of Kīlauea Caldera and hike to Halema'uma'u Crater. Return the same way or via Byron Ledge and Crater Rim trails.	6-7 miles depending on route 1 hour	Moderate 400 feet

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WALKING & HIKING TRAILS (CONTINUED)

Trail	Description	Round-Trip Distance Time	Difficulty Elevation Gain
Kīlauea Iki Trail			
<i>Kīlauea Iki parking lot on Crater Rim Drive</i>	Loop trail passes through a tropical rainforest and crosses a stark volcanic landscape on the crater floor.	4 miles 2-3 hours	Moderate to strenuous 400 feet
Kīpukapuauulu			
<i>Kīpukapuauulu parking area on Mauna Loa Road</i>	Loop trail follows an unpaved path through an "island" of forest and meadow rich with rare plants.	1 mile 1 hour	Easy 100 feet
Mauna Iki³			
<i>Ka'u Desert Trailhead on Highway 11</i>	This lava dome formed during the 1920 south-west rift zone eruption. When you arrive at the arid, wind-swept Ka'u Desert, take care not to disturb its fragile features.	3.6 miles 2 hours	Easy to moderate 150 feet
Mauna Loa²			
<i>Top of Mauna Loa Road</i>	It takes two days to climb to the south rim of Moku'āweoweo Caldera; most hikers spend the first night in a cabin at Red Hill and hike to the summit shelter on the second day. Plan an additional half-day to hike around the caldera to the true summit at 13,677 feet. (Experienced backpackers only: snow, wind and altitude sickness can be hazards.)	38 miles 4 days	very strenuous 6,662 feet
Napau Crater¹			
<i>Mauna Ulu parking area on Chain of Craters Road</i>	Pass by Pu'u Huluhulu, a prehistoric cinder cone, and Mauna Ulu, the vent for the 1969–1974 eruption. The top of Pu'u Huluhulu offers excellent views of Kīlauea's east rift zone, including Pu'u'O'o, an active vent.	14 miles 7+ hours	strenuous 200 - 500 feet
Pu'u Loa Petroglyphs			
<i>Pu'u Loa trailhead, 20 miles down Chain of Craters Road</i>	Rocky, coastal trail leads to ki'i pohaku (petroglyphs) carved into 500-year-old lava rock. Petroglyphs (rock carvings) are fragile, so take care not to step on them.	2 mile 1.5 hour	easy to moderate 40 feet
Thurston Lava Tube (Nahaku)			
<i>Thurston Lava Tube parking area</i>	Surface loop trail passes through a rich fern forest and a lava tube. Stair climb is necessary to enter and exit the tube.	2 miles 20 mins	easy 100 feet

1 Due to high levels of sulphur dioxide gas, the south section of Crater Rim Trail is closed from Jaggar Museum to Keanakakoi Overlook.
 2 Backcountry permit required.
 3 The Crater Rim portion of the trail was closed at press time due to high levels of sulphur dioxide gas. Contact the park for status.



HAWAII VOLCANOES CAMPING

There are two drive-in campgrounds in the park. **Nāmakanipaio** is three miles (5 km) from the park entrance on Highway 11. It is a large grassy area with tall eucalyptus and 'ohi'a trees. Nāmakanipaio has eating shelters, wheelchair-accessible restrooms and firepits. Firewood is not available at the campsite and it is illegal to collect firewood in the park, so you must bring your own. Cabins with the use of showers are also available at Nāmakanipaio and are operated by Hawai'i Volcanoes Lodge Company. For more information, call (808) 441-7750 or (866) 536-7972, or visit hawaiiivolcano-house.com. ⚠

Kulanaokuaiki, four miles from Chain of Craters Road off of Hilina Pali Road, has wheelchair-accessible restrooms and

campsites. Drinking water is not available, so be sure to bring your own. There is no charge and no reservation or permission required for your stay. ♿

Stays are limited to seven days a month and 30 days per year. All campsites are available on a first-come, first-served basis (except Namakanipaio cabins). Other than at designated backcountry campsites, these are the only legal places to camp. Backcountry camping requires a free permit, available from the Backcountry Office at the Visitor Emergency Operations Center.

For more information, please call (808) 985-6000, visit nps.gov/havo, or write the Superintendent, P.O. Box 52, Hawai'i Volcanoes National Park, HI 96718.

NPS



Nāmakanipaio Campground has restrooms, water, picnic tables and barbecue pits.



HALEAKALĀ PLAN YOUR VISIT

PARK ENTRANCE

Spreading across 33,000 acres, Haleakalā National Park extends from the Kīpahulu coastline, on the southeastern side of the volcano, up to its 10,023 foot (3,055 m) summit. The two areas of the park are not connected via roadway, but both can be approached from Kahului. The summit is a three-hour drive round-trip from Kahului and can be reached via Highway 37 to 377 to 378. The Kīpahulu area can be reached from Kahului via Highway 36 to 360 to 31 and will take about three to four hours each way. Highway 31 continues around the dry side of the island toward **Kaupō**, however, be aware that the road is rough and most rental agencies will not provide assistance if you break your contract and venture there.

GENERAL INFORMATION

The park is open 24 hours a day, year-round including holidays. For general park information, call (808) 572-4400 or stop at Park Headquarters Visitor Center, the Hāleakala Visitor Center or the Kīpahulu Visitor Center. Park information is also available online at nps.gov/hale. *Note: Neither food nor gas is available in the park.*

ENTRANCE FEES

Your entrance permit is good for three consecutive days. The entrance fee is \$20 per car, \$15 per motorcycle and \$10 per pedestrian or bicyclist. A **Hawai'i Tri-Park Annual Pass** is available for \$25 and allows entrance into Haleakalā, Hawai'i Volcanoes and Pu'uhonua o Honaunau for 12 months from date of purchase.

See "Hawai'i Volcanoes: Planning Your Visit" for information about National Park Passes.

VISITOR CENTERS

Park Headquarters Visitor Center is located one mile from the park entrance at 7,000 feet (2,134 m), and is open year-round from 8 a.m. to 3:00 p.m. Restrooms, a public telephone, a picnic area and a Hawai'i Pacific Parks Association park store are located here. Permits for backcountry camping and cabins can be obtained until 3 p.m.

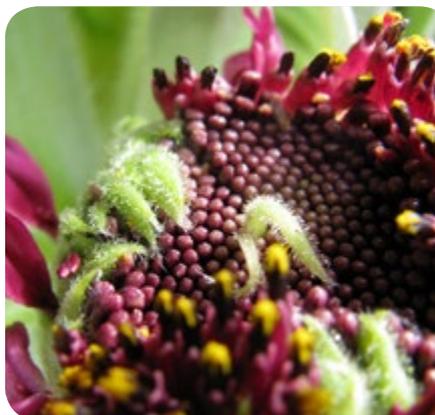
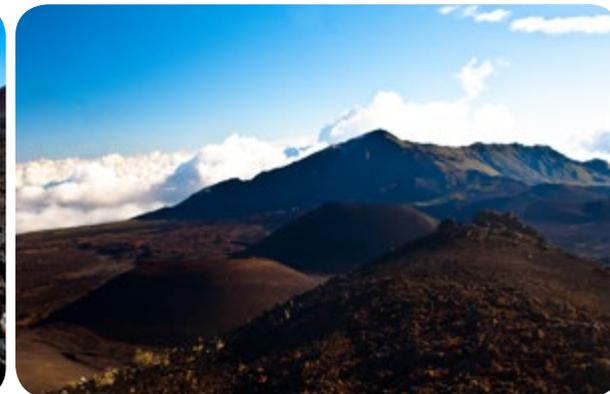
Haleakalā Visitor Center is located near the summit of Haleakalā at 9,700 feet (2,957 m), 10 miles from the park entrance. It is open year-round, from sunrise to 3 p.m. There are interpretive exhibits on the nature, geology and culture of Haleakalā.

Kīpahulu Visitor Center, located off of Highway 31 on the Kīpahulu coast near the Pools at 'Ohe'ō Gulch, is open from 9:30 a.m. to 5 p.m. during the summer. The visitor center has exhibits about the Kīpahulu area. Rangers are on duty during business hours to answer questions. Ask for a schedule of cultural

IMPORTANT NUMBERS

Park Headquarters and Information	(808) 985-6000 nps.gov/havo
Kīpahulu Visitor Center	(808) 248-7375
Emergencies	911
Camping Information	(808) 572-4400
Volunteer Information	(808) 572-4487
Weather Forecast	(808) 944-5025

Clockwise from top left: Esther Lee; Dave Dugdale; Forest and Kim Starr



Clockwise from top left: Trails wind through an otherworldly landscape; The dramatic landscape of Hāleakala; Get information about the park at the visitor's center; Hāleakala's climate supports biodiversity.

drive-in campground available.

SPECIAL SERVICES

Major park buildings and their facilities that are wheelchair-accessible are indicated by the ♿ symbol. *Note: Park trails are currently unpaved and are not suitable for wheelchair use.*

WEATHER AND CLIMATE

Weather at the summit of Haleakalā is unpredictable. Temperatures are at least 20 degrees colder than at sea level and the windchill can drop temperatures below

thick clouds, to heavy rains and high winds reaching 25 to 50 miles per hour.

Kīpahulu weather is tropical with occasional light rain showers. Expect the tropical weather to be humid, warm to hot, and prone to sudden heavy rains and winds. Please heed safety signs. Swimming is not recommended as flash floods and rock falls can occur at any time. Remember that you are responsible for your own safety. Do not underestimate the risk, and always obey all caution signs and warnings from rangers. For the weather forecast, please call (808) 944-5025.



HALEAKALĀ SIGHTS TO SEE

Nothing dominates the visual splendor of Māui like the spectacular Haleakalā, or “House of the Sun.” The park’s diverse terrain encompasses numerous ecosystems. The best place to start any trip is at one of the three visitor centers.

WATERFALLS

More than 8,000 acres of rainforest drain through the park’s streams. Two streams, Palikeya and Pīpīwai are entirely within park boundaries, and several of their waterfalls are accessible to visitors. Waimoku (400 feet) and Makahiku Falls (185 feet) on the volcano’s eastern slope are easily reachable by foot. Start at the Kīpahulu Visitor Center and follow the marked trails. The hike parallels ‘Ohe’o Stream and Pīpīwai Stream up the lush valley, passing ancient taro farm sites and crossing two bridges. Remember to check with park staff for current trail conditions. Swimming is not recommended due to flash floods and rock falls.

SUNRISE AND SUNSET

Sunrise and sunset at Haleakalā can be magnificent events. Visitors in personal or rental vehicles wishing to view sunrise at Haleakalā National Park will need to make sunrise viewing reservations ahead of time at recreation.gov. The online reservation system has been implemented to ensure visitor and employee safety, protect natural and cultural resources, and provide a quality visitor experience at the summit during sunrise hours (3 a.m. to 7 a.m.). The cost is \$1.50 per car. The one-day, non-transferable sunrise reservation will not be sold at the park. It is only available online, up to 60 days ahead of a planned sunrise visit. To enter the Summit District between 3 a.m.

and 7 a.m., the reservation receipt (for that day) and a photo ID. The park entrance is separate and payable by credit card or park pass on the day of visit. The entrance fee is good for three days, with receipt.

Sunsets are equally impressive. The best locations to watch are the Haleakalā Visitor Center and the summit.

SKY-WATCHING

Magnificent views of the crater can be seen at the Haleakalā Visitor Center. It is located near the summit of Haleakalā. Overlooks with orientation panels and exhibits are located at Leleiwi, Kalahaku and Pu’u ‘Ula’ula along the park road ending at the summit. Stop at one of the several overlooks on the park road or take a short walk on one of the park trails away from the traffic noise to watch the clouds. The visual horizon in many places in the park is up to 115 miles out to sea. Even cloudy skies can offer amazing sights including rainbows, moonbows and halos seen around your shadow. Haleakalā is an ideal location to watch planets, stars and moons after dark.

Star/Sky programs are offered in the summer depending on staff availability. Rangers tell stories about major constellations and reveal the secrets of Polynesian navigation. Wear warm clothes and bring a flashlight and something to lay or sit on. For these programs and others, visitors should contact the park approximately one month in advance to confirm dates times and locations. For more information, please call (808) 572-4400 or visit nps.gov/hale.

Clockwise from top: Rocky Grimes/iStock; Lorraine Boogich/iStock; YinYang/iStock



Clockwise from top: Enjoy the pools at Ohe’o Gulch; The dark skies over Hāleakala make for incredible star gazing; See the sunrise over Hāleakala crater.

VIEW NATIVE PLANTS AND ANIMALS

The summit of Haleakalā volcano is one of the only easily accessible areas of Hawai’i where its rare and endemic species survive and thrive. No place you have ever been can prepare you for the experiences and

feelings you will have on the mountain. The landscape—deeply sculpted, richly colored and intensely evocative—is unlike any other landscape in the United States. Visitors can hike through diverse habitats and discover plants and animals found nowhere else on earth.



HALEAKALĀ THINGS TO DO

Throughout the year, Haleakalā offers a variety of activities and programs for visitors.

Plan on spending at least two hours in the park to drive up to the summit and back to the entrance. Budget more time if you plan to hike or attend natural or cultural history programs.

Don't miss the pools and scenic beauty of Kīpahulu, and make time to stop by a visitor center, take a short hike or plan a picnic.

In addition to all the activities previously described, the park and surrounding areas offer activities like horseback riding and

biking, as well as more adventurous activities like paragliding and ziplining

PARK PROGRAMS

All park programs are free of charge, included in the cost of park entry. In the **summit area**, short programs are offered daily that include walks, talks, and Junior Ranger programs.

When staffing and weather permit, ranger-led hikes leave daily from the Haleakalā Visitor Center. Stop by a visitor center, call (808) 572-4400 or visit nps.gov/hale to find out about the day's offerings.



YinYang/Stock

Take in the landscape from the top of the volcano, more than 10,000 feet above sea level.



HALEAKALĀ HISTORY

GEOLOGY

Nearly 1 million years ago, East Maui emerged from the Pacific Ocean. West Maui emerged over 2 million years ago and was one to two kilometers above the sea before Haleakalā rose up. The larger volcano, Haleakalā, may have risen as high as 15,000 feet (4,572 m) above sea level over a period of 500,000 years.

Wind, water and ice carved channels and valleys down the slopes to the island shore. The **Ke'anae** and **Kaupō** valleys were formed. Later lava flows partially filled in the basin to form the large "crater." The summit of Haleakalā rises to 10,023 feet (3,055 m) in elevation. Young cinder cones, eruption sites that are marked by piles of rich, rocky material deposits, dot the basin landscape.

The most recent volcanic activity occurred about 400 to 600 years ago, when two minor eruptions on the rift zone near the coast of **Makena** altered the southwest coastline of Maui. With the gradual northward shifting of the Pacific Plate, the island of Māui moved away from the "hot spot," a weak area in the earth's crust where magma wells up to the surface and causes eruptions.

Haleakalā is still considered active, though it remains unknown when it will erupt again. It has been more active in the last 1,000 years than previous 10,000 years.

PARK HISTORY

Haleakalā, "House of the Sun," holds a sacred place in Hawaiian history. Tradition tells of the early **Kanaka Maoli** (Hawaiian people) who sought the isolation of Haleakalā for ceremonial purposes, instruction and family reasons.

Global_Pics/Stock



Early Hawaiians used the lands of Hāleakala for ceremonial traditions.

The first recorded journey to the summit of Haleakalā by non-Hawaiians was in 1828, and it was not until the early 1900s when Lorrin Thurston, a publisher, and Dr. Thomas A. Jaggar, a scientist at the Hawaiian Volcano Observatory, proposed the area be preserved as a national park. After years of persistence, Haleakalā was first established as part of Hawai'i National Park in 1916.

The **Kīpahulu Valley** was acquired as additional park territory in 1951, and 10 years later, on July 1, 1961, Haleakalā was declared a separate national park.

In 1969, the Kīpahulu coastal area of 'Ohe'o was included, further extending the boundaries of Haleakalā. Today, 24,719 of the park's over 35,000 acres are designated wilderness. The lush green valleys of Kīpahulu are laced with white waterfalls, and the crater's barren landscape contrasts the dynamic coastline. The unique and fragile ecosystems of Haleakalā continue to be protected.



HALEAKALĀ WALKING & HIKING

Haleakalā National Park offers diverse hiking trails that wind through shrub-land, rainforest, wilderness, coastal areas and the summit. The **summit** area of the park offers more than 30 miles of trails through native shrubland and the aeolian cinder desert. The **Kīpahulu** area in the south-eastern side of the park has about five miles of trails through the lush, green tropical coastal environment.

SAFETY TIPS

It is important to always be prepared whether you are taking a short walk or half- or full-day hikes. Here are a few tips to make your hike safe and enjoyable:

- Always carry at least three quarts of water per person per day, a first-aid kit, flashlight, trail map, food, trash bag and toilet paper. Remember to pack out whatever you pack in.

- Before setting out on any hike, check with the visitor center for current trail conditions.
- Weather can change rapidly on Haleakalā, so dress in layers, bring a warm jacket, carry rain gear, a hat, sun-screen and sunglasses. Be sure to wear sturdy, comfortable walking shoes that can endure the rough rocky terrain.
- High-altitude sickness can be common due to lack of oxygen. Symptoms include nausea, headache, dizziness and shortness of breath. Descend immediately if these symptoms become acute and seek medical attention if symptoms persist. Pregnant women and people with heart or respiratory problems should consult their doctor before visiting the summit of the park.

Lux Tonnerre



The park's volcanic craters offer little shade. Bring plenty of water along on hikes.

WALKING & HIKING TRAILS

Trail	Description	Round-Trip Distance Time	Difficulty Elevation Gain
Summit Areas Trails			
Halemau'u Halemau'u Trailhead	This trail takes you through the native shrubland and offers views of both the north shore and the crater.	2.2 miles	Easy 400 feet
Hosmer Grove Hosmer Grove campground parking area	Located in a misty cloud forest, this loop trail is great for families and kids. It's a great place to see rare and endangered birds as well native and non-native plants..	0.5 miles	Easy Level
Keonehe'ehe'e Haleakalā Visitor Center parking lot	Keonehe'ehe'e, or sliding sands, descends steeply into the crater. For a half-day hike, take the trail to Split Rock, where you'll find colorful layers of cinder, cinder cones and unique rock formations.	4 miles	Strenuous 1,500 feet
Kīpahulu Area Trails			
Kahakai Kūloa Point	This trail leads from Kuloa Point along the shoreline to the Kīpahulu Campground. The ocean views are beautiful, but watch your step along cliffs!	0.5 miles	Easy Level
Kūloa Point Loop Kīpahulu Visitor Center	This magnificent trail winds through the rain forest and crosses streams before ending at the base of 400-foot Waimoku Falls. Be prepared for rain, mud and slippery moss.	0.5 miles	Easy Level
Piłpwai Kīpahulu Visitor Center	This magnificent trail winds through the rain forest and crosses streams before ending at the base of 400-foot Waimoku Falls. Be prepared for rain, mud and slippery moss.	4 miles	Moderately Strenuous 650 feet

HAWAII VOLCANOES NATIONAL PARK HALEAKALĀ NATIONAL PARK PU'UHONUA O HŌNAUNAU NATIONAL HISTORICAL PARK KALOKO-HONOKŌHAU NATIONAL HISTORICAL PARK PU'UKOHOLĀ HEIAU NATIONAL HISTORIC SITE NATIONAL PARK OF AMERICAN SAMOA

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 Main Phone: 808.985.6051

For trip planning, shopping and membership:
www.hawaiipacificparks.org



HALEAKALĀ CAMPING

Campers at Haleakalā can choose between **drive-up campgrounds or wilderness campgrounds**, which are accessible only by foot. All campers are reminded that no food, gasoline, supplies, showers or electricity are available in the park. Limited non-potable water is available and must be filtered before drinking.

For those who need an overnight escape without a backpack trip, there are two car-accessible campgrounds. **Drive-up campgrounds** are located at Hosmer Grove and Kīpahulu. There is a three-night camping limit at each of the drive-up campgrounds.

There are **primitive wilderness campgrounds** at Palikū and Hōlua in the park. They are accessible only by trail.

Three **wilderness cabins** are available by advance reservation. All cabins are equipped with a wood-burning stove with

limited firewood, a two-burner propane stove, cooking utensils, dishes and 12 padded bunks. During droughts, cookware is removed and you must pack in all of your water. An adult age 18 or older must accompany each group using a cabin.

Accessing the wilderness campgrounds and cabins requires negotiating strenuous trails at high elevation. A free permit is required for all overnight stays in the wilderness. Camping and cabin permits are available up to one day in advance at Park Headquarters Visitor Center from 8 a.m. to 3 p.m. or at the Kīpahulu Visitor Center from 9:30 a.m. to 4:30 p.m. All campers must also attend a 10-minute orientation. Campers are limited to a maximum of three nights per 30-day period in the wilderness campgrounds and cabins, with no more than two nights at any one location.



NPS

Hosmer Grove Campground lies in the cloud belt of Haleakalā, just below the 7,000-foot level, in the summit area of the park.

For reservations and availability visit recreation.gov or call (877) 444-6777. Reservations can be made with a credit card up to 180 days in advance. Reservations cost \$75 per night per cabin. Details are also available at nps.gov/hale.

Special accommodations are made

for educational and civic groups, which may reserve campground space up to six months in advance. Groups are limited to 12 campers. To request group space, send a letter, written on your group's letterhead, to: Attn. Cabin Rangers, Haleakalā National Park, P.O. Box 369 Makawao, HI 96768.

CAMPGROUNDS						
Campground Location Description	Elevation	Camper Limit	Max. Group Size	Water	Toilets	BBQ Grills
Hosmer Grove ^{1 2}						
<i>on the way to the summit</i> High on the windy slopes of Haleakalā	7,000	50	12	Yes	Pi	Yes
Kīpahulu ^{1 2}						
<i>reached via Hana Highway</i> On the wet, east side of the island	0–1,500	100	12	None	Pit	Yes
Hōlua Campsites ^{2 3 4} and Cabin ^{3 5}						
<i>3.7 miles down Halemau'u Trail or 7.4 miles down Keonehe'ehe'e Trail</i> In shrubland near Koolau Gap. Watch and listen for endangered 'ua'u (Hawaiian dark-rumped petrel) in spring and summer.	6,940	25 campers 12 in cabin	12	Must filter	Pit	No
Palikū Campsites ^{2 3 4} and Cabin ^{3 5}						
<i>9.3 miles on Keonehe'ehe'e Trail, 10.1 miles on Halemau'u Trail, or 8.6 miles on Kaupō Trail</i> On east end of the wilderness valley at base of a rain forest cliff. Area is cool and lush due to frequent clouds, fog and rain.	6,380	25 campers 12 in cabin	12	Must filter	Pit	No
Kapalaoa Cabin ^{3 5}						
<i>5.5 miles down Keonehe'ehe'e Trail or 7.3 miles from Halemau'u Trailhead</i> At base of cliffs on south side of valley. Nearby trails lead to the wilderness, where native shrubland grows on lava flows.	7,250	12	12	Must filter	Pit	No

¹Drive-up campground; ²Sites available on a first-come, first-served basis; ³Hike-in only. Wilderness permit required; ⁴Group reservations available; ⁵Reservations required.



PRESERVATION

In today's world, places as special as Hawai'i Volcanoes and Haleakala National Parks are increasingly important. The parks contain some of America's few native rainforests, numerous endemic plant and animal species, as well as invaluable archeological sites. Every effort must be made to save the parks and their threatened resources. Much of this responsibility rests with you. We encourage you to learn about and support efforts to protect them.

ENDANGERED SPECIES

Hawai'i's tropical climate and isolation have spawned a diversity of native species. Some animals and plants are endemic (found only in Hawai'i). Sadly, many native species have become extinct due to destruction caused by humans and nonnative plants and animals. The loss of one species through extinction has an immeasurable effect on all species, including humans. The NPS is involved in extensive preservation efforts to ensure the future of other endangered species. Four species that receive a great deal of time are: **nēnē** and **'ua'u birds**, **green and hawksbill turtles**, and **'ahinahina**, or **Haleakalā silversword**, a rare flora species. To learn more, see the "Nature & Wildlife" chapter.

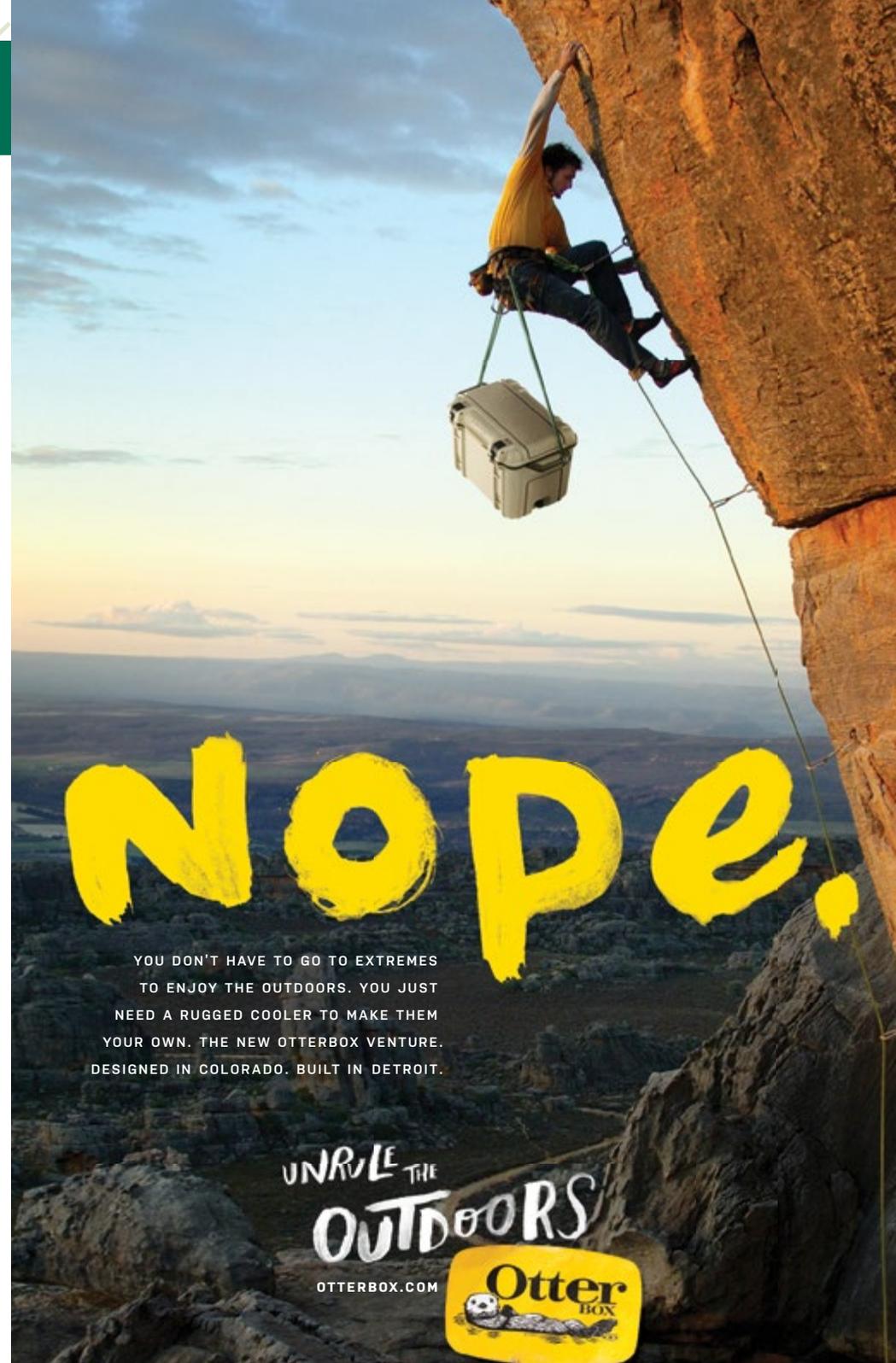
CONSERVATION PROGRAMS

The NPS protects the parks with many preservation programs, including endangered species programs, alien animal and plant control, and biological control research. Park resource managers are working to control **nonnative animals**, such as feral pig, feral cat, rat and mongoose, which threaten endangered endemic spe-

cies. Feral animals are those that have returned to an untamed state from domestication. Park researchers have found that feral pigs can destroy a rainforest by uprooting and killing its important tree fern layer, disturbing soil and introducing alien plants. Rats, feral cats and mongooses damage native bird populations by killing birds and eating eggs. Nesting sites of the **hawksbill turtle**, an endangered species, are located on park beaches and are threatened by mongooses and feral cats. The NPS is reducing predator populations near nesting sites, moving campsites and educating the public about garbage proper disposal.

Efforts are also being made to control disruptive, **nonnative plants**, including *Morella faya* and *Kahili ginger*, that threaten with extinction more than 30 native plant species. These alien plants have come to dominate the Hawaiian system because natural checks on their growth (other plants, predators and diseases) are left behind in their native countries. The NPS controls disruptive plants by weeding. The US Forest Service conducts biological control research at an insect quarantine lab to learn how to use a plant's natural predators such as insects to reduce nonnative plants. The lab is the only one of its kind directed toward the control of weeds in natural areas.

All of these programs are designed to preserve and protect biological diversity, the most precious natural resource of the park and the Hawaiian Islands. If you have any comments or suggestions about preservation, please talk to an NPS ranger or representative.



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The tropical climate of the Hawaiian Islands is quite hospitable, making the area particularly rich in flora. The isolation of the islands, sitting in the middle of the Pacific Ocean, 2,400 miles from the nearest continent, has also had an effect. Many species of plants are endemic, or found nowhere else in the world. Some are even limited to such small areas of the island of Hawai'i as Kīpukapuauulu. Of the more than 1,700 plant species once found in Hawai'i, at least 90 percent are endemic. Many of these plant species are now extinct, forced out by "alien," or introduced, plants, of which there are now more than 4,600 species. Many of the remaining endemic species are now listed as endangered.

PLANTS

The 'ōhi'a, or 'ōhi'a lehua (*Metrosideros polymorpha*), is the most common Hawaiian tree you will see. It is found at heights ranging from sea-level to high on the mountain slopes. Depending on habitat, it can be scraggly and short or tall and straight. Its bright-red (sometimes yellow) blossoms make it one of the most attractive native trees.

Known locally as "Hawaiian mahogany," koa (*Acacia koa*) has always been a prized wood in Hawai'i. More importantly, however, koa forests provide important habitats for native plants and animals, including many endangered species.

It is uncertain just when the coconut palm (*Cocos nucifera*) arrived in Hawai'i. Some think it was brought by the first Polynesians; others think it floated here before their arrival. In either case, it was one of the most useful plants to the first settlers, providing food, drink and cordage.

Screw pine, or pandanus (*Pandanus*

odoratissimus), is another tree formerly found along the seacoast in the park. Recent lava flows have destroyed most, if not all, of the screw pines in Hawai'i Volcanoes National Park. However, the Kīpahulu area of Haleakalā National Park is home to many of these trees. Known as the **hala** to Hawaiians, its distinct aerial roots extend to the ground and help support it. It bears an even stranger fruit, which is sometimes mistaken for pineapple. Lauhala, the art of weaving the leaves of the pandanus is still practiced on the island of Hawai'i.

'A'ali'i (*Dodonaea viscosa*) and Pūkiawe (*Styphelia tameiameia*) are two of the most common shrubs in the park. Both are found in a variety of habitats. The 'a'ali'i was sa-



Haleakalā silverswords sprout spectacularly, flower once, and die soon afterward, leaving their drying seeds to scatter in the wind.



WATCHABLE WILDLIFE



The bright red Hawaiian Honeycreepers known as 'apapane (*Himatione Sanguinea*) (1) are identifiable by the white coloring on their bellies and the undersides of their tails. During mating season, males compete by singing, and females often choose the loudest crooners. They use their curved, black bills to eat flower nectar. • **Weight** 0.5 Oz. • **Size** 4-6 in long • **Active** year-round. Photo: NPS/David Boyle.

Introduced from India in 1865, the common mynah (*Acridotheres Tristic*) (2) is one of the most common birds in Hawai'i. They have regular roosting trees, and their clamor can be heard for great distances. According to a local song, nothing is certain but "taxes and death and the mynah bird." • **Weight** 8 Oz. • **Size** 11-15 in long • **Active** year-round. Photo: Jes

Hawaiian 'Amakihi finches (*Hemignathus Virens*) (3) are one of the many species of endemic honeycreepers in Hawai'i. They are yellowish-green and have slightly curved beaks, which they use to feed on insects and suck nectar from fruits and flowers. • **Size** 4 in long • **Active** year-round. Photo: Noah Kahn/USFWS

Hawksbull turtles (*Eretmochelys Imbricata*) make nests and lay eggs on park beaches. After hatching, babies dig out of the nest, emerging as a group and scrambling to the water under cover of darkness. Loss of nesting habitat, predation and poaching (for their shells) have reduced populations to critically low levels. • **Size** 2.5-3 ft long • **Active** Spring through Fall, Photo: Tchami.

The endangered nēnē (5), also known as the Hawaiian goose (*Branta Sandvicensis*), is one of the park's most popular birds. Approximately 1,500 of these birds live on the islands of Hawai'i, Māui and Kaua'i. • **Weight** 3-7 lbs • **Size** 21-26 in long • **Active** Spring through Fall. Photo: NPS.

The endangered 'ua'u (*Pterodroma Andwichensis*) (5), also known as the Hawaiian Petrel, lives in open oceans, coming to land each year to lay a single egg deep within burrows or under rocks. Adults usually leave the nest before the chicks, leaving them vulnerable to feral cats, rats and mongooses. • **Weight** 1 lb • **Size** 13 in long; wingspan 36 in • **Active** year round. Photo: NPS/David Boyle.

Oh, Ranger! FUN FACTS

Q. WHAT MAMMALS ARE NATIVE TO THE HAWAIIAN ISLAND?



A. Hawai'i has only two endemic species, the Hawaiian monk seal and the Hawaiian hoary bat. Hoary bats are frequently sighted in the alpine shrubland of the park, and monk seals can occasionally be sighted sleeping on the beaches of Kaloko-Honokohau National Historical Park.

For answers to all your questions, go to OhRanger.com

cred to Laka, goddess of the hula. Because of the hardness and durability of the wood, it was sometimes used in the construction of houses, as well as to make spears and other weapons. Its brilliant-red fruit capsules were crushed and boiled to make a dye for tapa cloth, and they are still woven into leis. Pukiawe grows at elevations of 2,000 feet and up and is one of the last plants found at high altitudes.

The 'ahinahina or **Haleakalā silversword** is a rare flora species that exists in few locations at elevations of 7,000 to 10,000 feet (2,134 to 3,048 m). Human steps damage the fragile roots, which is one reason that wandering off-trail is strictly prohibited. The 'ahinahina is currently a threatened species and the NPS has intervened with protection and restoration efforts. Many plants are fenced in to protect them from feeding animals

such as mouflon sheep, cattle, goats and pigs. Other threats that contributed to the diminished population of the 'ahinahina include insects, drought, human disturbance, alien plants and disease. Efforts are being made to secure the habitats and stabilize populations.

Most of the flowers that people have come to associate with Hawai'i were introduced from elsewhere. For example, only three species of orchids are native, and these are very small; the others come from foreign lands. The NPS strives to reduce the number of plants introduced into the park environment and also attempts to control those already there. As you become acquainted with the park's flora, you will recognize many of these foreign species.

BIRDS

With few avian predators, Hawai'i provided an ideal environment for the development of a diverse bird population. Not until the arrival of humans, who hunted, destroyed lowland forests and introduced animals and diseases, did Hawaiian birds experience much difficulty.

Native **Hawaiian honeycreepers**, like the 'apapane (*Himatione sanguinea*) and the 'amakihi (*Hemignathus virens*), can be seen feeding on flower nectar or gleaning insects in 'ōhi'a lehua trees. You may spot them on Crater Rim Trail, where you can look down on the treetops from above. Mauna Loa Road is also a good place to look and listen for native birds.

The Hawaiian **owl** or **pueo** (*Asio flammeus sandwichensis*) is often observed flying over forests and fields in search of small birds, rats, mice and insects. The Hawaiian **hawk** or 'io (*Buteo solitarius*) can be seen at Hawai'i Volcanoes National Park.



PEARL HARBOR

The World War II Valor in the Pacific Memorial was erected to preserve and honor the stories of the Pacific War. The U.S.S. Arizona Memorial, the most well-known piece of the Hawai'i section, honors those men and women who lost their lives during the attack on Pearl Harbor on December 7, 1941. The U.S.S. Oklahoma Memorial and U.S.S. Utah Memorial are located on Ford Island and also honor the men and women who lost their lives on the dark day in American history.

U.S.S. ARIZONA

The final resting place for many of the 1,177 crew members who lost their lives on the ship is at the U.S.S. Arizona. The memorial is 184 feet long and covers the mid-portion of the sunken battleship. It is split into three sections: an entry room, assembly room and shrine room. The assembly room is the main area for ceremonies and general observation. In the shrine room, the names of all those killed on the ship are engraved into a marble wall.

Sprouting from the sunken battleship, attached to the severed mainmast, a flagpole rises above the water. In 1950, Admiral Arthur Radford, Commander in Chief, Pacific, ordered that the flagpole be placed at the site of the sunken ship. Later that year, on the ninth anniversary of the attack, a commemorative plaque was positioned at the flagpole's base.

Eight years later, President Eisenhower approved the creation of the memorial. Construction was completed three years later using both public funds appropriated by Congress and private donations. On Memorial Day, 1962, the memorial was

Chadica



A memorial to the U.S.S. Arizona, sunk during the Japanese attack, stands in the harbor.

dedicated. The Memorial has come to represent and honor all of the military personnel lost on that tragic day.

The Memorial and visitor center have been operated by the National Park Service since 1980, and the memorial was designated a national historic landmark in 1989.

Alfred Preis, the memorial's architect, spoke about his design: "Wherein the structure sags in the center but stands strong and vigorous at the ends, expresses initial defeat and ultimate victory... The overall effect is one of serenity. Overtones of sadness have been omitted to permit the individual to contemplate his own personal responses... his innermost feelings."

Funding to maintain the memorial is in part provided by Pacific Historic Parks, a nonprofit group working with survivors and others interested in preservation. For more information visit pacifichistoricparks.org or call (808) 954-8759.

PEARL HARBOR HISTORY

Pearl Harbor's name is adapted from ancient Hawaiians originally calling the area "Wai Momi," which meant "waters of pearl."

The area received the name for its abundance of pearl-producing oysters that once laid in the bay. The harbor was once inaccessible for ships due to a large coral reef.

The United States gained exclusive rights to Pearl Harbor in 1887, though a military base was not erected until 1908. Work to remove the reef began in 1902. The U.S.S. California was the first large ship to enter the harbor in 1911.

On December 7, 1941, the Japanese attack began at approximately 7:55 a.m. when the first wave of planes flying from carriers 230 miles north of Oahu arrived at Pearl Harbor. Roughly 15 minutes later, the U.S.S. Arizona was sinking following an explosion resulting from a 1,760-pound armor-piercing bomb coming through the deck and igniting the ship's forward ammunition magazine. The U.S.S. Oklahoma was hit by torpedoes and rolled over, trapping more than 400 men inside. The U.S.S. Utah was also capsized, with 50 men from the crew.

While 21 total ships were sunk or took serious damage, shipyards, fuel storage areas, submarine bases and aircraft carriers all took little to no damage. The total American death toll from the attack was 2,390.

PLANNING YOUR VISIT

The Pearl Harbor Visitor Center should be the first stop for visitors to the area. Upon entry, visitors can receive any information they may need about planning their day at the historic site. Tickets to the memorial and information can be obtained in the courtyard of the Visitor Center.

There are two world-class museums in the Visitor Center. The first educates the visitor of the events leading to WWII and the second focuses on the attack in December 7, 1941. The Remembrance Circle

exhibit honors all of the men, women and children, both military and civilian, who lost their lives due to the attack. Over 100 books relating to the attack, response and War in the Pacific can be found in the USS Arizona Memorial retail store.

Access to the U.S.S. Arizona Memorial is available through a 75-minute tour. Tickets can be obtained from the visitor center on the day of the visit, though reservations are recommended and can be made online at recreation.gov up to two months in advance for a \$1.50 convenience fee. The first step we recommend is to purchase the National Park Service's USS Arizona Memorial Narrated tour and to take the accompanying headsets through the two museums. Then the visitor should proceed to the Pearl Harbor Memorial Theatre, and watch a 23-minute documentary about the attack. Visitors then board a Navy shuttle to the Memorial and listen to the incredible Pearl Harbor Survivor segments of the tour while experiencing the site. Upon returning to the Visitor Center, the Narrated Tour continues along the Pearl Harbor shoreline for the "Path of Attack" tour.

The U.S.S. Oklahoma Memorial is accessible to the public by taking a shuttle to Ford Island. The U.S.S. Utah Memorial is not currently accessible to the public and is only available to those with military base access.

Strollers are permitted in the visitor center, though are prohibited from the theaters and memorial. Due to security measures, bags and other items that offer concealment are not permitted, including: purses, handbags, backpacks, fanny packs, camera bags, diaper bags and luggage. Visitors can bring their wallets, cameras, phones and water. Storage is available for bags at \$3 each.

Visitors to the Memorials are asked to remember that they are visiting a site of tremendous loss of life in service to our coun-

Clockwise from top: Vacclav/Stock; sphranev/Stock; Eric Broder Van Dyke/Stock



Clockwise from top. The U.S.S. Bowfin submarine is on display at the Pearl Harbor museum; Pearl Harbor veterans attend a commemoration ceremony every year; The historic Ford Island Aviation Tower still stands at Pearl Harbor.

try. The Memorials are places of honor, inspiration, reflection, and quiet contemplation. Visitors are asked to assist in maintaining an atmosphere of decorum. It is also important to consider attire: sandals are permissible, but bathing suits and profane T-shirts are prohibited.

The visitor center is open daily from 7 a.m. until 5 p.m. It is closed on Thanksgiving, December 25 and New Year's Day. The informational U.S.S. Arizona programs be-

gin daily at 8 a.m. and run through 1 p.m. Other historical learning opportunities in the area include the Battleship Missouri Memorial on Ford Island, the U.S.S. Bowfin Submarine Museum & Park and the Pacific Aviation Museum.

The U.S.S. Arizona Memorial at the World War II Valor in the Pacific National Monument is located at 1 Arizona Memorial Place in Honolulu. For information, call (808) 422-3399 or visit nps.gov/valr.



PHOTOGRAPHY

The ecosystems of America's national and state parks and public lands are among the most diverse on the planet—from the wetlands of the Everglades to the temperate rain forests of Olympic National Park and the deserts of Death Valley to the mountains of Yellowstone and Grand Tetons. For both aspiring and experienced photographers, the goal of any trip to a national park is to capture its endemic wildlife.

Taking photographs of animals presents a unique set of challenges. Landscapes cooperate; wildlife does not. Not only are animals likely to react to a photographer's presence, but they are also driven by their own instincts and behavior, which can make capturing them difficult. The tips below will help you compose better wildlife images of all creatures great and small—from the bison to the tiniest hummingbird and everything in between.

- **Use a tripod.** If you are using a large telephoto lens, consider investing in a gimbal head, which will make it easier to track your subject.
- **Know your subject.** Before you take out your camera, understand your subject's



JPechal/iStock

Don't miss your shot! Be aware of your surroundings.

behavior so that you can be prepared for what it will do next.

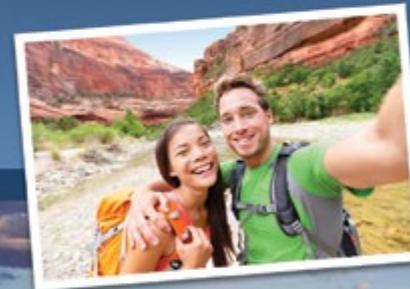
- **The eyes have it.** Capturing your subject's eyes will lead the viewer into the picture and make your image more impactful. Always keep the eyes in focus and try to place them in the power points (the intersection of rule of third guidelines).
 - **Keep a safe distance.** You'll want to keep a minimum of 25 yards between you and your subject and more than 75 yards for larger predators. That means that you'll need a big telephoto lens if you want to get up close and personal.
 - **Shoot in burst mode.** Instead of taking a single frame, increase the probability that you'll capture the behavior, head position or angle by capturing multiple frames.
 - **Be prepared.** Wildlife, and particularly birds, move quickly and without provocation. Practice your panning skills to better catch birds when they alight.
 - **Timing is everything.** The best time to photograph wildlife is during the golden hours—at dusk and dawn—when the light is soft and less likely to cast harsh shadows across your subject's face.
 - **Keep it simple.** The easiest way to draw attention to your subject is to use a simple background. Use a shallow depth of field to blur any distracting backgrounds.
 - **Aim for the action.** Make your image more compelling by capturing your subject exhibiting its natural behavior—flying, hunting, eating or caring for young.
- The best way to take better photographs is to practice, and you don't need to go far. Buy a bird feeder and build a studio in your backyard, where you'll be able to create your own version of *A Star(ling) is Born*.



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HAWAI'I VOLCANOES

- **Visit Thurston Lava Tube.** Also known as **Nāhuku**, this tube formed centuries ago when a channelized lava flow crusted over. The surrounding rainforest is rich with bird life and giant tree ferns line the short trail to the lava tube.
- **Take a hike.** Stroll through the upland forest trail in **Kīpukapuauulu**. This easy trail is located right off Mauna Loa Road. Look and listen for the 'apapane, a red honeycreeper.
- **Visit Volcano House.** Enjoy a wonderful view of Kīlauea Caldera and Halema'uma'u Crater from the telescope right outside the Volcano House gift shop. Enjoy unsurpassed birdwatching during the day and stargazing at night overlooking the breathtaking Kilauea Caldera.
- **Become a Junior Ranger.** The Junior Ranger program is for children of all ages. Earn a badge by completing an activity booklet. Ask a park ranger or check at the Kīlauea Visitor Center or Jaggar Museum for more information.
- **Look into an erupting crater.** Halema'uma'u, an active, erupting steaming crater within Kīlauea's summit caldera, can be seen from the Jaggar Museum overlook, the Kīlauea Overlook and other locations in the park.
- **Learn about volcanoes.** Call (808) 985-6000 or visit volcano.wr.usgs.gov to find out the latest information about volcanic eruptions.

HALEAKALĀ

- **Go sky-watching.** Stop at one of the overlooks on the park road or take a short walk away from the traffic noise to watch the clouds. In some places you can see as far as 115 miles (185 km) out to sea. Even cloudy skies can offer amazing sights including rainbows, moonbows and halos seen around your shadow. Remember to bring your binoculars.
- **Look for Whales.** During the winter months, humpback whales migrate through Hawaiian waters. You may be able to spot them breaching from the porch of the Kīpahulu Visitor Center.
- **Become a Junior Ranger.** Kids 7 to 12 years old can ask at any visitor center about Haleakalā's self-guided program.
- **Ride and Roll.** Take a vehicle-based tour of the park that ends with a 23-mile downhill ride that starts outside of the park at 6,500 feet. Little, if any, pedaling is required.

yemwen/istock



At Hawai'i Volcanoes, kids will feel like they've entered a world of adventure.



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IF YOU ONLY HAVE A DAY

If you've only got a day to visit the parks, review these suggestions from park insiders to help make the most of your time.

HAWAI'I VOLCANOES

The main feature of Hawai'i Volcanoes National Park is **Crater Rim Drive**. If you only have a few hours in the park, this is the trip for you. On the drive, you will see sulphur and steam vents, a caldera and pit craters, areas recovering from the cinder fallout of the 1959 eruption and a walk-through lava tube. *Note: The southern portion of this drive (from past the Jaggar Museum to the intersection on Chain of Craters Road) is closed due to volcanic hazards.*

A "must" stop is the **Thomas A. Jaggar Museum**, located next to the Hawaiian Volcano Observatory. The museum, established as a visitor center in 1987, is open daily from 8:30 a.m. to 5 p.m. Although the observatory is closed to the public, the results of its scientific studies are reflected in the volcano exhibits you will see at the museum and elsewhere.

From the overlook at Jaggar Museum is an incredible view of **Halema'uma'u**, the legendary home of Pele, the Hawaiian sacred earth person. Halema'uma'u is 3,000 feet (914 m) across and is now more than 280 feet (85 m) deep. The crater depth has varied over the years. In 1924, it was 1,200 feet (366 m) deep, but eruptions since then, most recently in 1974, 1982, and 2008 (ongoing since then) have covered the floor with lava decreasing its depth.

HALEAKALĀ

There are a variety of park programs offered every day at Haleakalā. When you arrive, stop by **Park Headquarters Visitor Center** to get the program schedule.

Take a short hike to observe the varied landscapes of the park. See the "Walking & Hiking" chapter for some great day hike ideas. You can also do some bird watching at **Hosmer Grove**, on the 30-minute nature loop trail, where you can observe native birds such as the i'iwi, 'apapane, 'amakihi, and if you're very lucky, an 'akohekohe.

One of Haleakalā's best-kept secrets is its **sunset**, which can be just as spectacular, if not even better, than sunrise. The park entrance and the bathrooms are open 24 hours a day and there's the added bonus of not having to wake up early in the morning.

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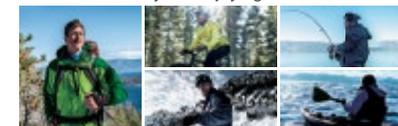


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Oh, Ranger! FUN FACTS

Q. WHAT'S A GOOD WAY TO SEE KĪLAUEA VOLCANO IF I ONLY HAVE A FEW HOURS?



A. You can explore the summit of Kīlauea Volcano using the Crater Rim Drive, which takes about an hour. It is a road that offers panoramic views of Kīlauea Caldera, passes through lush tropical rainforest, and provides access to well-marked scenic stops and walks.

For answers to all your questions, go to OhRanger.com

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