

## Hawaiian Volcano Observatory 2012 Volcano Awareness Month and Centennial Events

### Evening Talks



#### **“After Dark in the Park” – 7:00 p.m.**

**Hawai‘i Volcanoes National Park – Kīlauea Visitor Center**

*Free talks, but Park entrance fees apply. More info: (808) 985-6011.*

- January 3**    **Kīlauea’s east rift eruption: 29 years and counting**  
Tim Orr, USGS Hawaiian Volcano Observatory
- January 10**   **What’s happening in Halema‘uma‘u Crater?**  
Matt Patrick, USGS Hawaiian Volcano Observatory
- January 17**   **Story of HVO’s first 100 years**  
Jim Kauahikaua, USGS Hawaiian Volcano Observatory
- January 24**   **Mauna Loa: How well do you know the volcano in your backyard?**  
Frank Trusdell, USGS Hawaiian Volcano Observatory
- January 31**   **Kīlauea’s volcanic gases and their environmental impact**  
Jeff Sutton and Tamar Elias, Hawaiian Volcano Observatory



#### **University of Hawai‘i at Hilo, UCB 100 – 7:00 p.m.**

*Free. More info: (808) 967-8844. UHH campus map at:*

[http://hilo.hawaii.edu/images/maps/main\\_campus\\_map.pdf](http://hilo.hawaii.edu/images/maps/main_campus_map.pdf).

- January 5**    **Explosive Kīlauea: First impressions can be deceiving**  
Don Swanson, USGS Hawaiian Volcano Observatory
- January 12**   **Fissures, fountains, and flows—Tracking Kīlauea’s ongoing eruptions**  
Matt Patrick, USGS Hawaiian Volcano Observatory
- January 19**   **Kalapana: Then and now (impacts of lava flows)**  
Ken Hon, UHH Department of Geology (formerly HVO)
- January 26**   **A seismic time machine: 100 years of earthquake monitoring in Hawai‘i**  
Paul Okubo and Wes Thelen, Hawaiian Volcano Observatory



#### **Lyman Museum, Hilo – 7:00 p.m.**

*Members—Free; Nonmembers—\$3. More info: (808) 935-5021.*

- January 16**   **Lava tubes: The view from the outside looking in**  
Ken Hon, UHH Department of Geology (formerly HVO)
- January 23**   **What’s up with Kīlauea and Mauna Loa?**  
Mike Poland, USGS Hawaiian Volcano Observatory
- February 13**   **Yellowstone: A closer look at a restless supervolcano**  
Cheryl Gansecki, UHH Department of Geology
- February 27**   **Explosive eruptions at Kīlauea: A wolf in sheep’s clothing**  
Don Swanson, USGS Hawaiian Volcano Observatory

### Exhibits

- Dec. 9–Mar. 31**   **“Hawaiian Volcanoes—1880s to Present”**  
Lyman Museum, Hilo / Admission fee / *Info: 935-5021*
- Jan. 6–Jan. 28**   **“HVO 100<sup>th</sup> Year Celebration”**  
East Hawai‘i Cultural Center, Hilo / Free / *Info: 961-5711*  
(HVO scientists will speak at the opening on January 6)
- Jan. 7–Feb. 19**   **Volcanic “Observation / Inspiration”**  
Volcano Art Center, Hawai‘i Volcanoes NP / *Info: 967-7565*

### West Hawai‘i Talks

#### **Kealakehe High School**

**Cafeteria – 7:00 p.m.**

*Free. More info: (808) 967-8844.*

**January 11**    **What’s up with Hawai‘i’s volcanoes...and how do we know? — Mike Poland, USGS HVO**

#### **Pu‘uhonua o Hōnaunau National**

**Historical Park Amphitheater –**

**6:00 p.m..** *More info: (808) 328-2326.*

**February 8**    **Mauna Loa: How well do you know the volcano in your backyard? — Frank Trusdell, USGS Hawaiian Volcano Observatory**

## HVO

## Centennial Open House

**Saturday - January 21**

9:00 a.m. to 4:00 p.m.

*(Park entry fee waived for open house)*

### Hawai‘i Volcanoes National Park

*More info: (808) 985-6011*

*Free hikes, but Park entrance fees apply.*



#### **Ranger-Guided Hikes**

**Sundays** – 1:00 p.m.

**Kīlauea Iki Crater**

**Mondays** – 10:00 a.m.

**Amazing Mauna Ulu**

**Wednesdays** – 1:00 p.m.

**Above and Below**

**Thursdays** – 1:00 p.m.

**Pu‘uloa Petroglyphs**

**Fridays** – 1:00 p.m.

**Devastation Trail**

**Saturdays** – 1:00 p.m.

**Into the Volcano**

#### **DAILY Movies** – Kīlauea Visitor Center

- **Every Hour:**  
“Born of Fire, Born of the Sea”
- **Every Half Hour (except 11:30 a.m.):**  
“Kīlauea Eruption Update”
- **11:30 a.m.:** “1959 Kīlauea Iki Eruption”

#### **Friends of Hawai‘i Volcanoes NP**

January 29 – Guided hike

**“Footprints Trail to Mauna Iki”**

*Info: (808) 985-7373 / Registration Fee*

## January 2012

### “After Dark in the Park” programs presented by HVO scientists

Kīlauea Visitor Center Auditorium ▪ 7:00 p.m.

Hawai‘i Volcanoes National Park

*Park entrance fees apply. Park also requests a \$2 donation for the program.*

For more information, call (808) 985-6014 or 985-6011.

#### Tuesday, January 3

##### **Kīlauea Volcano's East Rift Eruption: 29 Years and Counting**

January 3, 2012, marks the 29<sup>th</sup> anniversary of Kīlauea’s ongoing east rift zone eruption. During its first three years, spectacular lava fountains spewed episodically from the Pu‘u ‘Ō‘ō vent.

Since then, nearly continuous lava effusion has built a vast plain of pāhoehoe that stretches from the rift zone to the sea. This past year has seen many changes, including fissure eruptions and the collapse and refilling of the lava lake within the Pu‘u ‘Ō‘ō crater. Geologist **Tim Orr**, USGS Hawaiian Volcano Observatory, will review highlights from the past 29 years and talk about recent developments on Kīlauea’s east rift zone.



#### Tuesday, January 10

##### **What’s happening in Halema‘uma‘u Crater?**

In March 2008, a new volcanic vent opened in Halema‘uma‘u Crater at the summit of Kīlauea.



Since then, the eruption has consisted of continuous degassing, occasional explosive events, ongoing ash emissions, and fluctuating lava pond activity in an open vent that has now grown to more than 430 feet wide. While the eruption enthalls visitors, it also provides an abundance of data and insights for scientists. USGS Hawaiian Volcano Observatory geologist **Matt Patrick** will present an overview of Kīlauea’s summit eruption, including a survey of the volcanic processes occurring within the vent.

*(continued on next page)*

**Tuesday, January 17**

### **Story of the Hawaiian Volcano Observatory's First 100 Years**



In 2012, the USGS Hawaiian Volcano Observatory (HVO) reaches its centennial milestone—100 years of continuous volcano monitoring in Hawai'i. Join HVO Scientist-in-Charge **Jim Kauahikaua** as he talks about Thomas Jaggar's vision for the observatory, how Frank Perret began the work of monitoring Kīlauea volcano, and HVO's accomplishments during the past century.

**Tuesday, January 24**

### **Mauna Loa: How Well Do You Know the Volcano in Your Backyard?**

Mauna Loa, the largest volcano on Earth, comprises more than half of the surface area of Hawai'i Island. Mapping and dating show that 95% of this active volcano is covered with lava flows less than 10,000 years old. Since 1843, it has erupted 33 times. When Mauna Loa erupts, fast-moving and voluminous lava flows can reach the sea in hours, severing roads and utilities, repaving the flanks and building new land. The growth of Mauna Loa is far from complete as this huge volcano will undoubtedly erupt again. Join USGS Hawaiian Volcano Observatory volcanologist **Frank Trusdell** as he talks about Mauna Loa's eruptive history and current status.



**Tuesday, January 31**

### **Kīlauea's Volcanic Gases and Their Environmental Impact**

As magma rises from the Earth's mantle to the surface, volcanic gases expand, driving the spectacular fountains and flows of Hawaiian volcanoes. While Kīlauea's current eruption produces enough lava to fill a football stadium every week, it also releases huge amounts of volcanic gases. **Jeff Sutton and Tamar Elias**, USGS Hawaiian Volcano Observatory geochemists, offer an update about volcanic gases, especially those related to the 2008-2011 activity at Halema'uma'u Crater. Learn about volcanic pollution (vog)—how it forms and what we've learned about its effects on our island environment. BYON (Bring Your Own Nose) to the ever-popular "gas tasting" party where you can learn to identify volcanic gases by smell.



## 2012 Talks at the University of Hawai'i at Hilo University Classroom Building (UCB) Room 100 ▪ 7:00 p.m.

*For directions to UCB (Bldg. 301), see the UHH campus map at:  
[http://hilo.hawaii.edu/images/maps/main\\_campus\\_map.pdf](http://hilo.hawaii.edu/images/maps/main_campus_map.pdf)*

### Thursday, January 5

#### **Explosive Kīlauea: First Impressions Can Be Deceiving**

Recent decades of quiet lava effusion on Kīlauea can be deceiving compared to the past 2500 years, when the volcano produced episodic explosive activity more than half the time. Through collaborative studies by HVO, Smithsonian Institution, and University of Hawai'i geologists, we now know that the period from 1500 to 1800 was one of frequent violent eruptions, with at least four eruptions powering their way into the jet stream and many others inundating the summit with deposits of thick ash and volcanic bombs. HVO geologist **Don Swanson** will discuss Kīlauea's explosive past, speculate on future events, and show how the explosive activity has been both a blessing and a curse for Hawai'i Island people.

### Thursday, January 12

#### **Fissures, Fountains, and Flows—Tracking Kīlauea's Ongoing Eruptions**

Kīlauea has been erupting essentially nonstop for the past 29 years, with an ongoing east rift zone eruption since January 1983, and a summit eruption since March 2008. During those years, the volcanic activity has included erupting fissures, spectacular lava fountains, and numerous flows of 'a'ā and pāhoehoe lava. Join HVO geologist **Matt Patrick** as he presents an overview of recent events on Kīlauea and describes how USGS scientists track the volcano's eruptive activity.

### Thursday, January 19

#### **Kalapana: Then and Now**

In the past 35 years, eruptions on Kīlauea's east rift zone have sent lava flows into Kalapana four times, with vastly different impacts each time. Join **Ken Hon**, UHH Geology Professor and former HVO scientist, as he talks about these eruptions, including how they affected the community and helped volcano scientists better understand the dynamics of flowing lava.

### Thursday, January 26

#### **A Seismic Time Machine: 100 Years of Earthquake Monitoring in Hawai'i**

Seismic data collected during the Hawaiian Volcano Observatory's first 100 years tracks Hawai'i's history of damaging earthquakes and tremor related to island volcanic activity, as well as large, distant earthquakes from around the world. Earthquake monitoring began at Kīlauea in 1912, and since then, HVO has steadily expanded and upgraded its seismic monitoring and research capabilities. Hawai'i's long record of volcanic and earthquake activity plus HVO's exceptional seismic observations has made Kīlauea a world-renowned "seismic laboratory" where cutting-edge research continues today. Join HVO seismologists **Paul Okubo** and **Wes Thelen** as they talk about HVO's seismic monitoring history, including highlights of notable earthquakes during the past century, and look toward HVO's seismological future.

## 2012 Talks in West Hawai'i

*presented by*  
**Hawaiian Volcano Observatory scientists**

### **Wednesday, January 11**

**Kealakehe High School Cafeteria  
Kailua-Kona ▪ 7:00 p.m.**

For more information, call (808) 967-8844.

#### **What's up with Hawai'i's volcanoes...and how do we know?**

The Island of Hawai'i is home to five volcanoes—Kīlauea, Mauna Loa, Hualālai, Mauna Kea, and Kohala. Three of these volcanoes (Kīlauea, Mauna Loa and Hualālai) have erupted since the reign of Kamehameha the Great, and Kīlauea has been erupting almost continuously since 1983. But what's happening with Hawai'i's volcanoes today? Has Kīlauea's eruption recently changed? Will Mauna Loa and Hualālai erupt again? How does the Hawaiian Volcano Observatory, which reaches its centennial milestone in 2012, monitor volcanic activity? Join HVO volcanologist **Mike Poland** as he explores these topics and more.



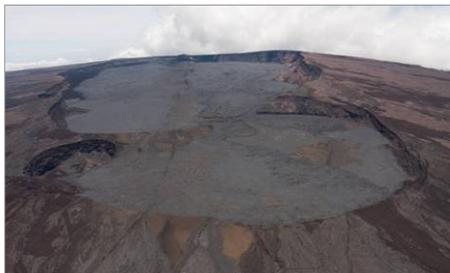
### **Wednesday, February 8**

**Pu'uhonua o Hōnaunau National Historical Park Amphitheater ▪ 6:00 p.m.**

For more information, call (808) 328-2326.

#### **Mauna Loa: How Well Do You Know the Volcano in Your Backyard?**

Mauna Loa, the largest volcano on Earth, comprises more than half of the surface area of Hawai'i Island. Mapping and dating show that 95% of this active volcano is covered with lava flows less than 10,000 years old. Since 1843, it has erupted 33 times. When Mauna Loa erupts, fast-moving and voluminous lava flows can reach the sea in hours, severing roads and utilities, repaving the flanks and building new land. The growth of Mauna Loa is far from complete as this huge volcano will undoubtedly erupt again. Join HVO geologist **Frank Trusdell** as he talks about Mauna Loa's eruptive history and current status.





**January 2012**  
**Hikes and Programs**  
*conducted by*

**Hawai'i Volcanoes National Park Interpreters**

Maps showing locations of meeting sites available at:

<http://www.nps.gov/havo/planyourvisit/maps.htm>

**Park entrance fees apply.**

**For more information about these programs, call (808) 985-6011.**

**Sundays • January 8, 15, 22, and 29**

**1:00 p.m. – Kīlauea Iki Crater Hike**

Hear the story of Kīlauea's dramatic 1959 eruption in this 4-mile hike across a still-steaming crater floor. Meet at the Kīlauea Iki Overlook parking lot on Crater Rim Drive. (3 hours)

**Mondays • January 9, 16, 23, and 30**

**10:00 a.m. – Amazing Mauna Ulu Hike**

See lava trees, fissures, and other volcanic features formed during a 1969-74 eruption in this 1-mile guided hike. Meet at the Mauna Ulu parking lot on the Chain of Craters Road. (1 hour)

**Wednesdays • January 4, 11, 18, and 25**

**1:00 p.m. – Above and Below Hike**

Discover the hidden world of lava tubes in this 1.5 mile hike to Nāhuku (Thurston Lava Tube). Flashlights recommended. Meet at the Kīlauea Iki Overlook on Crater Rim Drive. (1 hour)

**Thursdays • January 5, 12, 19, and 26**

**1:00 p.m. – Pu`uloa Hike**

Visit one of Hawai'i's most extensive petroglyph fields in this 2-mile hike along one of Kīlauea's coastal trails. Meet at the Pu`uloa parking lot on the Chain of Craters Road. (1.5 hours)

**Fridays • January 6, 13, 20, and 27**

**1:00 p.m. – Devastation Trail**

Learn about the spectacular 1959 Kīlauea Iki eruption and how the devastated forest has recovered in the years since. Meet at the Pu`u Paui parking lot on Crater Rim Drive. (1.5 hours)

**Saturdays • January 7, 14, 21, and 28**

**1:00 p.m. – Into the Volcano Hike**

Explore Kīlauea's unique rain forest and volcanic landscape in this 2.7-mile hike down to the floor of Kīlauea caldera and back up. Meet at the Kīlauea Visitor Center. (2-3 hours)

**DAILY Movies – Kīlauea Visitor Center in Hawai'i Volcanoes National Park (30 min)**

- **Every Hour:** "Born of Fire, Born of the Sea"
- **Every Half Hour (except 11:30 am):** "Kīlauea Eruption Update"
- **11:30 a.m.:** "1959 Kīlauea Iki Eruption"



## Friends of Hawai'i Volcanoes National Park

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<http://www.fhvnp.org/>

**Sunday • January 29, 2012**

### **FOOTPRINTS TRAIL TO MAUNA IKI**

**Cost: \$35 for members and \$50 for non-members, per person.** Students (K-12 and college with valid student ID) are half-price. Non-members are welcome to join the non-profit Friends group to get the member discount.

**More information: Contact Hawai'i Volcanoes Institute at (808) 985-7373  
or [institute@fhvnp.org](mailto:institute@fhvnp.org).**

#### **Description:**

Join Darcy Bevens, University of Hawai'i at Hilo Educational Specialist, for a guided geological hike to explore features along the Footprints Trail to Mauna Iki in the Ka'ū Desert. The 4-mile round trip hike begins at the Footprints trailhead, where you will examine textural details of an 'a'ā lava flow. Then descend to the sandy desert, where you will view footprints preserved in ash erupted in 1790 and discuss accretionary lapilli in the ash layers. Approaching Mauna Iki, you will see a pāhoehoe lava field with unusual secondary mineralization that results in beautiful surface patterns. From there, you will ascend Mauna Iki ("little mountain") to explore a variety of volcanological features. You may also encounter strands of Pele's hair that have been wafted downwind in the plume emitted from the Halema'uma'u Crater vent.

## Community Events and Exhibits Celebrating HVO's Centennial



**December 9, 2011 to March 31, 2012**

### **"Hawaiian Volcanoes—1880s to Present" Exhibit**

A special in-house exhibit, "Hawai'i Volcanoes, 1880s to Present" will showcase the Museum's spectacular collection of seldom seen historic volcano paintings by artists such as Hitchcock, Furneaux, Bailey, and Nāwahī. Photographs and aerial images of the volcano park from the 1880s to current volcanic eruptions will also be featured. Newly digitized 8mm and 16 mm film footage from 1924 to 1960 of Kīlauea Iki, Halema'uma'u, and Kapoho eruptions will make their debut in the exhibit. Also on display will be excerpts from Sarah Lyman's Earthquake Journal dating back to 1848, as well as volcanic specimens and artifacts, including Thomas Jaggar's sextant. Call (808) 935-5021 or visit <http://www.lymanmuseum.org/> for more information.

### **East Hawaii Cultural Center**

**January 6 to January 25, 2012**

### **"Hawaiian Volcano Observatory 100th Year Celebration Exhibition"**

EHCC will help HVO celebrate its centennial through a special exhibit featuring EHCC Member Art in the main gallery and HVO historical photos and videos in the side galleries. Opening night will feature HVO speakers. Call (808) 961-5711, email [arts@ehcc.org](mailto:arts@ehcc.org), or visit <http://www.ehcc.org/index.html> for more information.



**January 7 to February 19, 2012**

### **"Observation/Inspiration" Exhibit**

A group exhibit celebrating the Hawaiian Volcano Observatory's Centennial. This multimedia exhibit features paintings by Catherine Robbins and Alan Fine, ceramics by Tim Freeman, and a live performance by poet Kimberly Dark, all inspired by the dynamic volcanic environment. Hawai'i's culture, history, and traditional and contemporary arts are brought vividly together at Volcano Art Center on the edge of Kīlauea, one of the world's most active volcanoes. Opening reception on Saturday, January 7, 2012, 5:00–7:00 p.m., at Volcano Art Center Gallery in Hawai'i Volcanoes National Park. Free. Park entrance fees apply. Call (808) 967-7565 or visit [www.volcanoartcenter.org](http://www.volcanoartcenter.org) for more information.



In celebration of Volcano Awareness Month,  
the USGS Hawaiian Volcano Observatory (HVO) invites you  
to visit our interactive display about Hawaiian volcanoes at the

## **2012 Onizuka Science Day**

**Saturday, January 28**

8:00 a.m. to 12:45 p.m.

**University of Hawai'i at Hilo**

Library Lanai and Plaza

**HVO volcanologists will be available at the display  
to answer your volcano questions.**

For more information about HVO and Volcano Awareness Month,  
visit our Web site at: <http://hvo.wr.usgs.gov>

For more information about Onizuka Science Day, go to:  
<http://www.spacegrant.hawaii.edu/OnizukaDay/>