

January 2010  
Volcano Awareness Month  
Evening Talks

**Hawai'i Volcanoes National Park "After Dark in the Park"**

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

(\$1 donation requested. Park entrance fees apply.)

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

**January 5 Kīlauea East Rift Eruption: 27 Years and Counting**

Kīlauea's prodigious East Rift Zone eruption marks its 27th anniversary on January 3, 2010. During the eruption's early years, spectacular lava fountains spewed episodically from the Pu'u 'Ō'ō vent, followed by more than two decades of continuous lava flows that built a vast plain of pāhoehoe stretching from the rift zone to the sea. The opening of a new vent in 2007 marked yet another chapter in the eruption, providing new twists on a familiar theme. Geologist **Tim Orr**, USGS Hawaiian Volcano Observatory, reviews highlights from this eruption and reveals the latest developments.

**January 12 Tracking Kīlauea's Summit Eruption in Halema'uma'u**

Kīlauea's current eruption at Halema'uma'u Crater marks the first summit eruption since 1982 and the first explosions here since 1924. Beginning in March 2008, the eruption has consisted of continuous degassing, occasional small explosions and fluctuating lava pond activity in an open vent. While the eruption provides an abundance of data and insights for scientists and enthralling views for visitors, its persistent choking gases severely affect the quality of life for downwind residents. USGS Hawaiian Volcano Observatory Geologist **Matt Patrick** offers an overview of Kīlauea's summit eruption with an in-depth survey of volcanic processes occurring within the vent.

**January 19 1960 Kapoho Eruption: The Rest of the Story**

Fifty years ago, lava from a 36-day eruption near the eastern-most tip of Hawai'i Island covered farmland and the town of Kapoho. Volcanic gases destroyed crops as far away as Honoka'a and Kona. During the eruption, bulldozers were deployed to build barriers to slow the advance of lava flows into the community. Should the barriers have been built? Were they successful? Before the lava fountains faded in Kapoho, collapses at Kīlauea's summit put nearby residents briefly on alert. These and other issues that arose during Kīlauea's 1960 eruption still have relevance today. Join Hawaiian Volcano Observatory Scientist-in-Charge **Jim Kauahikaua** as he reviews the eruption that destroyed Kapoho and its effects at the summit, discusses what was learned from it, and relates the "rest of the story."

**January 26 A Volcanologist's Toolkit: How Volcanoes are Monitored**

Volcano studies are carried out among four disciplines: geology, seismology, geophysics and geochemistry. Scientists from each of these disciplines use a variety of techniques and instruments to monitor active volcanoes. For example, geologists map lava flows and assess hazards, seismologists study earthquakes, geophysicists use GPS to track ground movements, and geochemists study gases to characterize magma depth and volume. Together, these techniques comprise a toolkit to better understand a volcano's hazards and activity. **Mike Poland**, a USGS Hawaiian Volcano Observatory volcanologist, explores the many tools used to monitor active volcanoes, and how applying multiple tools can lead to entirely new insights into how Hawaiian volcanoes work.

**University of Hawai'i at Hilo**  
**University Classroom Building (UCB) 100 ▪ 7:30 p.m.**

**January 8 Hawaiian Oral Tradition Describes 400 Years of Kīlauea Volcanic Activity**

The Pele-Hi'iaka chants, as translated by Nathaniel Emerson in the late 19<sup>th</sup> century, describe the two largest volcanic events at Kīlauea since Polynesians first arrived in about 800 CE. One is a huge 15<sup>th</sup> century lava flow that covers much of Kīlauea north of the east rift zone, reaching from Thurston Lava Tube to Kaloli Point, and accounts for the burning of Hi'iaka's forest by Pele. The second major event was the downdropping of Kīlauea's summit in about 1500 CE to form the modern caldera. This is described in the chants by Hi'iaka's digging to recover the body of Lohi'au, whom Pele had killed. The chants were overlooked by volcanologists until recently, and erroneous interpretations of the age of the caldera could have been avoided if the chants, as well as oral history told to William Ellis in 1823, had been taken into account. USGS Hawaiian Volcano Observatory geologist Don Swanson talks about geologic evidence found in the past 15 years that supports these oral traditions. There are certainly many untranslated oral traditions that describe other important natural events; they await study by Hawaiian speakers trained in science. For more information, call (808) 967-8844.

**January 22 Secret Lives of Lava Flows: A Video Exposé**

Volcanologist and videographer Cheryl Gansecki will show excerpts from her award-winning video "Lava Flows and Lava Tubes" as she talks about some of the amazing discoveries about lava flows scientists have made during the current eruption of Kīlauea Volcano. More info: (808) 974-7631.

**January 29 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 Hawai'i's celebrated volcanoes. While Kīlauea's current eruption produces enough lava to fill a football stadium every week, it also releases huge amounts of volcanic gases, which affect our island environment. **Jeff Sutton and Tamar Elias**, USGS Hawaiian Volcano Observatory geochemists, offer an update about volcanic gases, especially those related to the 2008-2009 activity at Halema'uma'u Crater. Learn about volcanic pollution (vog)—how it forms and ways to deal with this unpleasant aspect of Kīlauea's current eruptions. BYON (Bring Your Own Nose) to the ever-popular "gas tasting" party where you can learn to identify volcanic gases by smell. More info: (808) 967-8844.

**Kīlauea Military Camp**  
**Kīlauea Theater ▪ 7:00 p.m.**  
(\$5 Admission Fee)

**January 9 "The Earth as a Living Organism"**

Living History interpreter Peter Charlot delivers Dr. Thomas A. Jaggar's "The Earth as a Living Organism" lecture originally presented to the 20th Century Club in 1905. An intriguing look into the man and his philosophy. For more information, call (808) 982-7344 or email [kden73@aol.com](mailto:kden73@aol.com).

### Lyman Museum

**Classroom ▪ 7:00 p.m.**

(Museum Members, Free; Nonmembers, \$3)

For more information, call (808) 935-5021.

#### **January 4 Hawaiian Volcanoes: How They Formed and What They're Up To**

Volcanologist **Jim Kauahikaua**, Ph.D., talks about the formation of Hawaiian volcanoes, how and why they erupt, and provides an update of Kilauea's two ongoing eruptions.

#### **January 11 How Volcanoes Work**

**Ken Hon**, Ph.D., a volcanologist and associate professor of geology at UH-Hilo, demonstrates why volcanoes are one of Earth's most fascinating phenomena. Learn why volcanoes occur and how the distribution of volcanoes is related to processes taking place deep within our planet.

### Kealakehe High School

**Cafeteria ▪ 7:00 p.m.**

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

#### **January 14 Hualālai: Hawai'i's Third Active Volcano**

Hualālai, the volcano beneath the feet of most Kona residents and visitors, is an active volcano. Its last full-fledged eruption was in 1801, and it came close to erupting in 1929. What was the 1801 eruption like? What more do we know about Hualālai? Will it erupt again? The answers to these questions and more will be discussed by Hawaiian Volcano Observatory Scientist-in-Charge **Jim Kauahikaua**.

### Pu'uhonua o Hōnaunau National Historical Park

**Amphitheater ▪ 6:00 p.m.**

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

#### **January 20 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 98% 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.