

“100 years ago this month”
Complete Homepage Series
(July through December)

July 2011

In January 1911, Thomas A. Jaggar arranged for the world-famous volcanologist [Frank Perret](#) to accompany him to Kīlauea Volcano the following summer. But by April, Jaggar pulled out of the arrangement over concerns about his wife's health (she was pregnant). However, he continued to arrange for the equipment needed to perform several experiments on Kīlauea.

Perret and Dr. E.S. Shepherd were tasked to perform these experiments and to start regular observations of Halema‘uma‘u Crater. They arrived in Honolulu with their equipment at the end of June 1911 and, after a brief stop on Maui, arrived in Hilo and traveled directly to Kīlauea Crater.

On July 2, 1911, Perret and Shepherd began their work toward finishing two tasks—erecting a cable across Halema‘uma‘u Crater for the purpose of obtaining a temperature of molten lava, and constructing an observation and instrument station at the crater's edge. By July 20, the cables spanned a distance of 380 m (1,250 ft)—the crater today is about 1,000 m (3,280 ft) in diameter—between A-frames on opposite sides of the crater rim and the team had twice attempted, but failed, to get a temperature from the molten lava lake. They succeeded, however, in obtaining a large lava sample (shown in photo, with Perret at right) using the cable.



August 2011



By early August 1911, construction of a scientific station on the rim of Halema‘uma‘u Crater (left) was complete and [Frank A. Perret](#), HVO Director pro tem (filling in for Thomas Jaggar), began living at the crater's edge. After two failed attempts in July, Perret finally succeeded at lowering an electric pyrometer into the circulating lava lake within the crater, obtaining the first actual measurement of molten lava

temperature—1,010 degrees Celsius (1,850 degrees Fahrenheit)—in the world. At the insistence of Lorrin Thurston, editor of the Pacific Commercial Advertiser, Perret began publishing weekly summaries of Kīlauea's volcanic activity in the Honolulu newspaper from mid-August through late September—six reports in all. With the completion of temperature experiments and the start of regular, consistent observations, Jaggar's vision for a volcano observatory at Kīlauea was well underway.

September 2011

After [Frank Perrett](#) successfully measured the temperature of lava within Halema‘uma‘u Crater in late July 1911, the lake level dropped, and he could no longer conduct experiments there. Instead, he documented the lava lake activity and, in mid-August, he noted “an extraordinary object” afloat on the lake:



“A huge, sausage-shaped, gas inflated balloon of black lava glass—triangular or box-shaped at one end and cylindrical at the other—was making its way across the lake. A lava fountain, boiling continuously under the eastern end, gave the appearance of a screw propeller, and this most amazing contrivance seemed to be navigating the lake under its own power like a great whaleback steamer, or a black Zeppelin airship. Its length was not less than 170 feet and the cylindrical portion about 30 feet in diameter.”

Perret completed his weekly reports on Kīlauea’s volcanic activity by mid-September

1911, detailing the continued drop in the lava lake level and the movement of the floating “lava islands.” By the third week in September, he had abandoned the Technology Station on the rim of Halema‘uma‘u Crater and relocated to Volcano House, where he continued to document Kīlauea’s behavior.

October 2011

Although [Frank Perret](#) had moved from the technical station at the edge of Halema‘uma‘u Crater to the Volcano House Hotel on the rim of Kīlauea Caldera, he continued observing the volcanic activity. His work had gone so well that, in the first week of October 1911, key Honolulu merchants formed the Hawaii Volcano Research Association and began raising the funds needed to establish a permanent volcano observatory at Kīlauea. This Association supported HVO for several decades.

For the first three months of Perret’s stay on Kīlauea, the Halema‘uma‘u lava lake level fell. It had finally begun to rise, but Perret was anxious to return to his beloved Italy and, on October 27, he left Hilo for Honolulu, where he presented a lecture before sailing away. The day before he left Hilo, Perret’s service was publicly acknowledged in a *Hawaii Herald* (Hilo newspaper) editorial. It stated that 90 percent of tourists traveling to Hawai‘i came to see Kīlauea, but that most were dissuaded from the trip by Honolulu residents eager to retain the tourists and their money. Thus, the Hilo editor expressed gratitude for the publicity that Perret’s work on Kīlauea had generated for Hawai‘i Island.



Frank Perret photo of Kīlauea Iki with Halema‘uma‘u in background.

November 2011

After observing and documenting Kīlauea's volcanic activity from July 11 to October 27, 1911, [Frank Perret](#) began his journey back to Italy. From Hilo, he traveled to Honolulu, where he delivered a lecture at the YMCA Hall on November 10. Impressed by Perret's work, the Honolulu merchants who had formed the Hawaiian Volcano Research Association tried to convince him to stay in Hawai'i. But Perret was adamant about returning to Mount Vesuvius, and sailed away on November 13. Before he left, however, he assured the merchants that he would try to stay involved in the effort to establish a volcano observatory at Kīlauea and that he might return to Hawai'i in a few years.



Frank Perret photo of Pu'u Lē'ahi (Diamond Head) on O'ahu in 1911.

On November 18-19, Lorrin A. Thurston, who was determined to fill the gap left by Perret's departure, traveled to Kīlauea, where he found the lava level in Halema'uma'u Crater significantly higher with frequent overflows covering the crater floor. Near the end of November, word reached Hawai'i that Thomas Jaggar would arrive at Kīlauea in early January 1912 to continue the volcano observations begun by Perret.

December 2011

As Frank Perret made his way to Italy, Thomas Jaggar made plans to relocate to Hawai'i in early January 1912. Meanwhile, the 1911 holiday season was made livelier by spectacular volcanic activity at Kīlauea. Lava within Halema'uma'u, which had begun to cover the crater floor in November, continued to rise and was within 35 feet of the crater rim by the end of December (*right*). Rumors that the Technology Station, built on the crater rim by Perret, had burned down due to the rising lava lake were rampant, but Hilo newspapers assured the public that the hut was only scorched. However, intense heat of the Halema'uma'u lava lake separated the heavily corroded steel cable that Perret had strung across the crater in July, causing it to fall into the lake. The floating "lava islands," which had been a constant feature during Perret's time at Kīlauea, disappeared in the rising lava lake.

