

Pelehonuamea: Managing an Active Lava Landscape

Laura C. Schuster, Chief, Cultural Resources Division, Hawaii Volcanoes National Park, PO Box 52, Hawaii National Park, HI 96718-0052; laura_c_schuster@nps.gov

HAWAII VOLCANOES NATIONAL PARK IS THE HOME OF TWO ACTIVE VOLCANOES, Kīlauea and Mauna Loa. The summits of both volcanoes lie within park boundaries, and for some Hawaiians the summit areas of these two volcanoes are considered sacred. This park includes around 333,000 acres of land (Figure 1) which is considered to be the physical body of the deity Pelehonuamea. Mauna Loa is the most massive volcano, rising to 13,681 feet above sea level, and 9,600 cubic miles in volume. It makes up half of the island of Hawai‘i. Kīlauea rises to 4,000 feet above sea level, and is between 6,000 to 8,500 cubic miles in volume (not all of either volcano falls within the park boundary). The frequent volcanic activity and the access to lava flows from these two volcanoes is the very reason the park was established. Ongoing lava activity is creating new land within the park. Past activity is described by over 400 years of oral traditions that are celebrated and told through *mo‘olelo* (stories), *mele* (song, chant or poem) and *hula* (dance) that relate to Pelehonuamea, and the geologic history of the Hawaiian Island Archipelago.

When Hawaii National Park was established in 1916, there was little consideration of the cultural significance of Kīlauea and Mauna Loa (Moniz-Nakamura 2007). The prime goal of park development and planning was, and is, to get people to the active lava flows—the red active lava. Consequently, park planning efforts are designed to take advantage of the natural topography that allows visitors to drive through Kīlauea Caldera and up to the very edge of Halema‘uma‘u—the pit crater considered to be the residence of Pelehonuamea. Although light on the land, the roads cross through the very sacred land associated with Pelehonuamea. In addition, a 300-car parking area was developed at the edge, Halema‘uama‘u. The sacred summit of Uwēkahuna became the location for a museum and other park buildings. The summit is considered to be the most sacred of locations to the Hawaiians, and now houses the Hawaiian Volcano Observatory and Jaggar Museum. The site remains important to Hawaiians, visitors and scientists, who visit and work in the park. Similar plans to construct a road to the summit of Mauna Loa have resulted in paved access to the 6,000 foot elevation, and a truck trail to the summit that dates to 1915.

Since the park is currently moving forward with a General Management Plan (GMP), which is a document to guide the park for the next 20 years, it is imperative that we consider what we know today of the cultural significance of our parklands. Consultation, with Native Hawaiian

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Figure 1. Map of Hawaii Volcanoes National Park and the land of Pelehonuamea.

Organizations and individuals, is used to address the issue of the significance of Pele as it affects future planning within the park.

Hawai'i National Park (today called Hawai'i Volcanoes National Park) was the thirteenth national park established within the National Park system. It is a World Heritage Site, and is included in the Hawaiian Islands Man and the Biosphere Reserve. These designations were based on the natural resource values, and not specifically the cultural resource values of parklands. Hawaii is the most geographically isolated chain of islands in the world, and the rate of endemism in flowering plants is 90% within park lands. The Hawaiian cultural connections remain vibrant and thrive. The forest and all things natural for Hawaiians are not separate from humans; they are all part of the same culture.

The Kīlauea Crater is a listed property on the National Register of Historic Places, and it is significant for its "... frequent, almost continual, centering of volcanic activity ... in prehistoric and historic times [it] has affected human life, cultures, religions and undertakings and in historic times has attracted local and worldwide governmental, tourist and scientific interests. Kīlauea Crater has been, and is, both worshipped and studied" (Apple 1973). This volcanic feature is one of the major visitor attractions in the park. It is ringed by Crater Rim Drive, and is a National-Register-eligible property, based on initial National Park Service master planning effort in the 1930s. It has high integrity, and after many eruptive events, the bulk of the original historic infrastructure remains.

Hawai'i Volcanoes National Park is a dynamic landscape, with Kīlauea likely being the most active volcano in the world, with 61 eruptions since the late eighteenth century, and nearly continuously active through the nineteenth century. Our current situation is a flank, or rift zone, eruption that has been ongoing for 27 years. A summit eruption within Kīlauea Crater at Halema'uma'u started in March of 2008, and continues. With all of this activity, it is not uncommon that lava and Kīlauea play a big role in the Hawaiian culture.

Hawai'i was colonized by people from Polynesia, several times, between AD 800 and AD 1400. Voyaging double-hulled canoes carried people, food, and plants; all the baggage needed for life on new lands. Volcanic activity on the island of Hawai'i would have been visible for great distances at sea. One of the three active volcanoes—Hualālai, Manua Loa or Kīlauea—may have been the beacon that brought the first wave of visitors to this island.

The story of Pele and Hi'iaka, as told by Nathaniel Emerson (1993), was published in 1915. Based on oral tradition, it tells the story of two sisters, Pelehonuamea and Hi'iaka (Figure 2). The story is an account of the geologic history of the islands, and how Kīlauea (which means spewing rock) was formed, when it was formed, and how it was formed. The Pele Family, or Pele Mā, arrived in the Islands sometime around the fifteenth century. Pele traveled through Hawai'i, starting on the Island of Kaua'i in the northwest, and then journeyed to the Island of Hawaii in the southeast, where she made her home at Kīlauea. Her journey across the archipelago is in keeping with the geologic sequence of formation of the Hawaiian chain, which begins with Kaua'i and progresses to the youngest addition, Lō'ihi, just off Hawai'i Island, still a mile below the ocean's surface.

Pele lives at Halema'uma'u in Kīlauea Caldera. Kalua o Pele (Pele's pit, as it is often referred to locally) is where her jilted lover Kamapua'a built a *hale'ama'u* or house of ferns, to keep her from escaping. Kīlauea, Pele's home, is considered by some to be *Ka Piko O Ka Honua* (the navel of the earth), the center of the world for Hawaiians.

Today, traditional accounts, or *'ōlelo no'eau* (proverbs), share with us truths of the past. Prior to Pele's arrival, the area of Puna, a land division that is half of the park, is said to have been a rich and fertile land. Today much of Puna within the park and adjacent to the park is a barren lava landscape. To people living in Puna this landscape is home—they understand that it is Pele's land and they are living on it only temporarily until she claims it again.

From 1987 through 2003, the Kalapana area within the District of Puna has been the focus of intensive archeological surveys and salvage excavations. The eruptive event of Pu'u 'Ō'ō (when lava started flowing into the park in 1987) continues to transform the landscape from once forested areas to expanses of new lava. This landscape was home for many Native Hawaiians, and provided nourishment from taro, sweet potatoes, and fish, with trails across and within land divisions that linked the house sites, religious structures, and agricultural and animal husbandry activities. The diversity of site features is typical of a landscape that was in constant use, both seasonally, and for the long term. It is a seemingly marginal landscape, as there are no visible water resources, and no extensive soil deposits, and little seems to grow on the expansive lava fields. However to the people of Puna, this area was full of traditions and opportunities that reflected a very rich cultural heritage and agricultural region. In a recent description of the park landscapes, Myra Tomonari-Tuggle (2011) describes the context of the archeological record as it relates to Pele, "all of the sites of the Hawaiian past have to be seen as places where homage and offering were made to Pele and her family ... the story is more than the archeological remains it is the story of the world view of those of old who lived and worked on the land that was Pele."

Much of the southeastern corner of the park has been covered with lava from the Pu'u 'Ō'ō eruption. The losses include a visitor center, campground, and thousands of archeological features. A new site for the interpretation of traditions of this area is currently being developed in consultation with the adjacent Hawaiian community members of Kalapana. The story is theirs to tell.



Figure 2. Pelehonuamea at Halemaumau with the summit of Mauna Loa in the background (artwork by Herb Kane).

Pelehonuamea, or Pele, is so much a part of why Hawai'i Volcanoes National Park was established. A recent effort to focus on the park as a traditional cultural property, specifically related to the Pele traditions, has brought us to consider the boundaries of such a designation. On one hand the boundaries could include the entire 2,000 plus miles of the Hawai'i Island Archipelago, or a smaller focus could be just on the specific lands that we manage. Current research has given us a deeper understanding of the Hawaiian world view. The acceptance of the idea that Pele has been in residence at Kīlauea since the fifteenth century is based on the traditional “unwritten” literature or existing oral tradition, combined with hard science. Together these two areas have provided an enlightened view of the geologic history of Kīlauea.

In the following quote Don Swanson (2008), former Director of the Hawaiian Volcano Observatory, describes an “aha moment” regarding his profession: “... volcanologists were led astray by not paying close attention to the Hawaiian oral traditions. Had we looked for geologic evidence to test the traditions, rather than ignoring them, we probably would have realized much sooner that the formation of Kīlauea caldera happened much earlier than 1790 ... but it is difficult to interpret anecdotal comments, particularly those cloaked in thick poetic metaphor. We are used to thinking scientifically, not metaphorically, when we tackle volcanic problems... Oral traditions dealing with volcanoes in Hawai‘i implicitly ask and overtly answer the why questions in terms of Pele. If we volcanologists take the traditions seriously, we stand a good chance of learning about the what, when and where questions and answering those first three questions is often very helpful in addressing the more important how.”

Consider the site known as Steam Vents, where 2.5 million visitors annually climb out of buses and cars to have a firsthand look into a steam vent, and feel the thermal heated vapors. This is also a place known as Wahine Kapu, used traditionally by Hawaiian women for physical and spiritual cleansing. Traditional users have found a way to avoid the visitors in the park, however. The issues of appropriate use, access, and development need to be revisited in the GMP process as it relates to the larger Pelehonuamea traditional cultural property. Any planning for the future must incorporate consideration of this cultural icon. Pele’s story is retold at every eruption, it is told through the landscape of expansive lava. It is shared through the sulfur steam of earth cracks or steam vents; Pele is manifested in the place names found within Hawai‘i Volcanoes National Park.

Pele is an implicit part of our universe at Hawai‘i Volcanoes National Park. The challenge remains to incorporate current understanding of the significance of the elements of Pelehonuamea into current, and likely future, decision making. If there is an eruption and a visitor center burns and is covered by lava, do we rebuild in the same location? Would we build a hotel at the edge of an active volcano? Do we rebuild a hotel on the sacred lands of Pele where traditionally no one lived? Do we remove the roads that allow visitors and Hawaiians alike easy access to and across the *Ka Piko O Ka Honua* (the navel of the earth), the center of the world for Hawaiians?

What would be the boundaries for a traditional cultural property (TCP) that tells the story of Pelehonuamea? If the entire park qualifies as a TCP, how precedent setting would that be for the National Park Service?

When our roads and infrastructure are impacted by eruptive events, they are re-opened and we continue to provide visitor access to active lava flows. This is in keeping with the parks legislation “as a public park or pleasure ground for the benefit and enjoyment of the people of the United States.” Waha‘ūla, the first sacrificial temple constructed in Hawai‘i, is currently buried beneath 75 to 100 feet of lava. It may not be visible any longer but the location remains important to Hawaiians. Should we re-establish access to the site?

We continue to learn from the 400-year oral history that relates to Pele, and from the work done daily in the management of the park lands. Through consultation and careful listening we can incorporate the oral traditions, stories, songs, and dance for those that follow. The elders from the adjacent community understand Pele very well—she is Hawai‘i, and although we are all here for the short term, the land belongs to her; if she wants it she will take it.

Although lava flows may seem barren, they are Pele’s realm and it is Pele who provides a clean canvas for new life, and for the pioneering plants that in turn bring the water that nourishes the land that is Hawai‘i (Figure 3). Hawai‘i Volcanoes National Park provides an opportunity to combine indigenous and scientific knowledge.

Hawaiians consider the human world and the natural world to be one, with the origin of all living things beginning with Pele. The life cycle revolves around Pele and she is the connection between all things. This is a key idea to managing a traditional cultural property located on an



Figure 3. New land in the Puna District of Hawaii Volcanoes National Park (photo by USGS-HVO)

active volcano. The practice of consultation with traditionally associated groups or individuals will provide direction to an issue such as building a road to access the center of the Hawaiian's world. Consistent responses and constant consideration of our actions, with continued consultation, will help to educate and protect Pele's domain.

References

- Apple, R. 1973. Kīlauea Crater, National Register of Historic Places nomination form. Manuscript on file at Cultural Resource Management Office, Hawai'i Volcanoes National Park, Hawaii National Park, HI.
- Emerson, N.B. 1915. *Pele and H'iika: a Myth from Hawaii*. Honolulu, HI: Honolulu-Star Bulletin. www.archive.org/details/pelehiiakamythfr00emeriala.
- Moniz-Nakamura, J. 2007. Fire on the rim: The creation of Hawai'i National Park. Hawaii Volcanoes National Park. *Hawai'i Volcanoes National Park Occasional Papers* 1, 1. www.nps.gov/havo/historyculture/special-centennial-publications.htm.
- Swanson, D.A. 2008. Hawaiian oral tradition describes 400 years of volcanic activity at Kīlauea. *Journal of Volcanology and Geothermal Research* 176, 427–431.
- Tomonari-Tuggle, M. 2011. In the realm of Pele-houna-mea: Landscapes of archeology and tradition in Hawai'i Volcanoes National Park. Prepared for Hawai'i Volcanoes National Park. On file in the Cultural Resource Management Office, Hawai'i Volcanoes National Park, Hawaii National Park, HI.