The Hawaiian Island of Maui provides an ideal setting for 21st Century research and development. In fact, for fifty years, Maui has been a research center emphasizing space surveillance, astronomy, supercomputing, and more. The accomplishments at the Maui Space Surveillance Site are enormous and the contributions made to science immeasurable.

Yet, Maui is also a diverse island, one that is rich with natural beauty and filled with traditional customs and cultures. This film and accompanying reference guide have been created expressly for the employees, contractors and visitors of the Air Force Research Laboratory and the University of Hawai‘i, Institute for Astronomy—members of a team of individuals who call the unique environment at the summit of Haleakalā their daily work locale. This educational experience will familiarize you with Maui’s Native Hawaiian culture, with particular attention to Haleakalā—its geography and terrain, and its indigenous species and cultural significance.

Hahai no ka ua i ka ululā‘au.
Rains always follow the forest.
– ancient Hawaiian proverb

Water, or wai, was recognized by ancient Hawaiians as the source of life, so much so, that the Hawaiian word for wealth is waiwai.
Acknowledgements

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We thankfully acknowledge the artful weaving together of the mo‘olelo (stories) by Jay April of Artifact Studios, whose film production expertise brought a level of excellence to the project that exceeded our expectations. We are also grateful for the invaluable cultural oversight of Kahu Charles Kauluwehi Maxwell, Sr. who guided the project with his knowledge of Haleakalā. It was his reach into Maui’s Native Hawaiian community that paved the way for the richness of stories and visual impressions we were able to capture and paint for the viewer.

We would be remiss if we did not mention our other contributors by name, Nainoa Thompson, master navigator, Polynesian Voyaging Society, Hōkūlani Holt-Padilla, kumu hula, and cultural programs director at the Maui Arts and Cultural Center, Art Medeiros, biologist, U.S. Geological Survey, Kaleikoa Ka‘eo, cultural education director, Kaho‘olawe Island Reserve Commission, and Charles Ka‘upu, kumu hula and master chanter.

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The Great Navigators

Before the invention of the compass, or more recently, the satellite global positioning system, Polynesians navigated the open ocean without instruments, through careful observation of natural signs. Modern day navigator Nainoa Thompson, was taught by Mau Piailug, a master navigator from Micronesia, to use a star compass to tell direction without instruments. The star compass is based on the Hawaiian names for the houses of more than 200 stars—the places where they come out of and go back into the ocean—and is also used to read the flight path of birds and the direction of waves. During a voyage, stars may be available for navigation only about 20 percent of the time; daylight and cloud-cover at night hide them from the navigator during the other 80 percent of the time. Thus, wind, currents, landmarks, signs of landfall, and flight patterns of land-based sea birds were also important tools of navigation. In speaking of Haleakalā as it related to navigation, Thompson says, “these big mountains were learning sanctuaries, used as a place for study.”

If you want to call it magma, lava, creating of a volcano—our culture just so happens to believe that it is created the same way a scientist believes, from the ocean floor up—that the goddess that moved here became the goddess of this place and as she moved on and settled on Hawai‘i, where the lava is still erupting, there she is celebrated. But this place is still revered for its magnificence whether it is viewed in a cultural aspect or in a scientific one, and either way there is grandeur in it so there should be reverence and respect for it.

— Charles Ka‘upu
Known in ancient times as Ala Hea Ka Lā (path to call the Sun), the Hawaiian name Haleakalā (House of the Sun), is now synonymous with the entire shield of East Maui volcano. Early Hawaiians, however, applied the name only to the summit area, the site where the demigod Maui snared the Sun and forced it to slow its journey across the sky. The oldest lava flow exposed on East Maui is believed to be about 1.1 million years in age. The time estimated to build a volcano from ocean floor to the end of its shield-building stage is thought by some scientists to be about .6 million years. East Maui volcano probably began its growth about 2 million years ago.

Maui kumu hula, Hōkūlani Holt-Padilla, tells us that “in the Hawaiian way of thinking, Haleakalā is our ancestor.” Her sentiment is supported by another cultural practitioner, Kaleikoa Ka'eo, who goes on to explain that, “in Hawaiian thinking, you never went up to the top unless you had some specific purpose. The remnants of Pele exist in her forms on the summit of Haleakalā, so you would never move or take anything away from the summit because that is an encroachment on the realm of Pele, as the physical creator of these islands.”

Volcanism. The dormant volcano’s moonlike crater floor with its towering cindercones is a geological wonder. From the 10,023 foot summit, the Island of Hawai’i can be seen. The Haleakalā National Park ranges through five distinctly different climate zones. The road to the Haleakalā summit holds the world record for climbing to the highest elevation in the shortest distance (38 miles). When asked about Hawaiian volcanoes, most people imagine the Island of Hawai’i, and its’ eruptions at Kilauea or Mauna Loa volcanoes. But East Maui volcano has witnessed at least ten eruptions in the past 1,000 years, and numerous eruptions have occurred there in the past 10,000 years. Thus East Maui’s long eruptive history and recent activity indicate that the volcano will erupt in the future.

The National Park Service preserves the volcanic landscape of the upper slopes of Haleakalā, protects the unique and fragile ecosystems of Kipahulu Valley scenic pools along ‘O’heo Gulch, and the many rare and endangered species. Haleakalā National Park was designated an International Biosphere Reserve in 1980. Of its 28,655 acres, 19,270 are wilderness.
Haleakalā’s Rich Natural Resources

Relationships between Hawaiians and their physical environment were evident in all aspects of daily life in ancient Hawai‘i. These relationships imbued a spirituality that governed most activities and places. The forests of Haleakalā saw to the cultural and material needs of ancient Hawaiians through the multitude of endemic species found there, such as hardwood trees used for canoes and weapons, and birds caught and released for their prized feathers. The forests, known as wao akua, or realm of the gods, fed spiritual and artistic needs as well, through herbs and healing plants and others gathered for the art of hula. Hawaiians also recognized the importance of the food source and regenerative energy of the forest. Therefore it was necessary to leave these areas untouched, hence the name, wao akua. As Kahu Charles Kauluwehi Maxwell, Sr. points out, “the ancient spiritual use of the mountain was for meditation and receiving of spiritual information by kahuna po’o (high priest). It is a place where the tones of ancient prayer are balanced within the vortex of energy for spiritual manifestations. In ancient times, only kahuna and their haumāna (students) lived at Haleakalā for initiation rites and practices. It is most important that whenever one enters this sacred realm today, one must remember the sacredness to this mountain that is ingrained in the Kanaka Maoli (native people) of today who still consider this place to be wahi pana (a legendary place) and should be respected as such.”

This sense of stewardship is just as vital today. To protect the natural resources of Hawai‘i, and in particular, Haleakalā, it is important to prevent the introduction and spread of alien species. We are also reminded not to disturb any of the natural surrounding environments due to the many endangered cultural sites and delicate ecosystem.
Hawai‘i is the endangered species capital of the world. With hundreds of plants and animals listed as endangered or threatened, there are more endangered species per square mile on these islands than anywhere else on the planet.

The Āhinahina (Hawaiian Silversword) is a threatened species of plant that only grows above 6,000 feet. A relative of the sunflower, the silversword is unique to the Hawaiian Islands and can live up to 50 years before finally blooming at the end of its lifecycle. Protected both by law and conscience, the silversword has proliferated in the last ten to fifteen years.

Many life-sustaining plants were carried to Hawai‘i by early Polynesian voyagers in their canoes. Within the canoes were stashed precious cargo—the roots, cuttings, shoots and seeds of plants for food, cordage, medicine, containers and fiber—life’s needs, both physical and spiritual. An active relationship and partnership existed between humans and plants. Cultivation occurred through selection and preservation.

Rain forest occupies the windward slopes of Haleakalā where annual rainfall ranges from 120 to 400 inches or more. The forest canopy is dominated by ‘ōhi‘a trees in the upper elevations, with a mixed ‘ōhi‘a and koa canopy at lower levels. Diverse vegetation—smaller trees, ferns, shrubs, and herbs—grow in the understory. One of the most intact rain forest ecosystems in Hawai‘i, the Kipahulu Valley in East Maui, is home to numerous rare birds, insects and spiders.

Hawai‘i is also noted for its birdlife; many species are found nowhere else. The golden plover commonly seen from September to May is famous for its migratory flights to and from Alaska. Also prevalent are the ‘apapane, ‘i‘iwi, ‘amakihi, and nēnē which are among those birds native only to the Hawaiian Islands. The ‘i‘iwi is one of the most beautiful of all Hawaiian birds, with a bright scarlet body, black wings and tail, and inch-long curved bill. The ‘apapane is also scarlet, but has a white belly and black legs and bill. The bright green and yellow ‘amakihi is known for the speed at which it searches for nectar and insects. However, most of the birds you see along Haleakalā’s roads—pheasants, skylarks, mockingbirds—are introduced. These have taken their toll on native bird life—as carriers of bird diseases and competitors for territory and food.
Cultural Richness

Many people who come to Maui, see its physical beauty—the land, the sea, and the sky—and miss making a deeper connection through observation and understanding of Native Hawaiian Culture. The sense of extended family which permeates throughout Hawaiian culture is derived from deep-seated Hawaiian values of kuleana (responsibility and privilege), mālama (to care for), ʻohana (family), hoʻokipa (hospitality), kōkua (to help or aid), and lōkahi (harmony). To strike a balance with these intangible qualities, Maui’s unique cultural resources must also be understood and protected.

ʻOhana. The seafaring ʻohana of old was able to travel thousands of miles on double-hulled canoes because it was in touch with nature and the gods. The Hawaiian was never separated from his makers and ancestors because the gods and demigods showed themselves in their kinolau, or physical representations, everywhere: in the sky, in the earth, and in the sea. Every cloud, rainstorm, lightning flash, ti plant, and maile vine were recognized as a body form of the gods Kāne and Kanaloa. Likewise, rainclouds, rain, ferns, fish and certain types of seaweed revealed the god Lono. Every rock, waterfall and natural feature had a name and explanation as to its origin, just like the Hawaiian race.

Similarly, the Hawaiians had their own mystical and ancestral roots. According to tradition, the Hawaiian Islands and its people were born of the spirit world. The honored genealogies of the Hawaiians stem from Papa and Wakea. The ancients believed them to be the progenitors of the Hawaiians. The first son of this union was stillborn and buried beside Wakea’s home. A kalo (taro) plant grew in this spot. A second son, Hāloa, was born, whose kuleana it was to mālama the kalo. The word ha-loa means long breath, which represents life and the long stem of the taro plant. The word ʻohana comes from the ʻoha, or corm of the taro plant. Thus, the taro plant links the Hawaiians to the origin of their people and continues to provide a visual reference of the importance of the extended family system. Since there were more than eighty types of taro, some varieties were offered to Hawaiian gods, others were kapu (sacred) to the aliʻi (royalty), but there were enough varieties to make poi the mainstay of the Hawaiian diet.
Ahupua'a. In ancient Hawai‘i, the organizational structure whereby individual households were merged into a public economy was the ahupua‘a system. These territories, as depicted in this painting by Marilyn Kahalewai, contained a full complement of food and other resources and dissected the topography of an island. Ahupua‘a were chiefly estates often redistributed by the ruling chief to loyal supporters following the successful conclusion of a war or conquest. Ahupua‘a were managed for the chiefs by a specialist group of konohiki (managers).

The typical Ahupua’a is a long narrow strip extending from the sea to the mountain, so that its chief may have his share of all the various products of the uka, or mountain region, the cultivated land, and the kai, or sea. The word ahupua‘a is derived from the customary placement of rocks as an ahu (altar), marked with the head of a pua’a (pig). On East Maui the principal lands all radiate from a large rock on the northeast brink of the crater of Haleakalā, called Palaha. Eight ahupua‘a, one in each moku, or district, of East Maui, meet at this rock. Often these divisions were made following distinct land characteristics such as gulches or ridges. Sometimes a stone or rock or the habitat of a certain kind of bird, made a division. Certain persons were specially taught and made the keepers of this knowledge, carefully delivered over generations, from father to son.
In a very real way, it was the canoe that helped shape the Hawaiian culture. It was the voyage that helped shape who you became. Today, we can ask similar questions of ourselves: Who are your companions? What sustains you through your journey across the open ocean of life? How do you relate to the elements that surround you? Who are you? Where are you? What star guides you in the darkest of nights? What is your Sense of Place?

Charles Ka'upu poignantly captures this sense of stewardship and magnificence, “Haleakalā is a beautiful crater, beautiful mountain; it makes you realize how insignificant you are, and how lucky you are to live here.”

Looking at the stars for me invokes many things: my teachers, (and) a connection to my heritage in a special way… they are always things that I can trust, especially when I am out on the ocean trying to bring islands out of the ocean.

– Nainoa Thompson
Further Reading

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• How to Plant a Native Hawaiian Garden, Kenneth M. Nagata, State of Hawai‘i, Office of Environmental Quality Control, 1992.
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Internet Resources

• Air Force Research Laboratory-Detachment 15—http://www.maui.afmc.af.mil/
• CKM Cultural Resources—http://www.moolelo.com/
• Haleakalā National Park—http://www.nps.gov/hale/
• Hawaiian Electronic Library—http://ulukau.org/
• Polynesian Voyaging Society—http://www.pvs-hawaii.com
• University of Hawai‘i, Institute for Astronomy—http://www.ifa.hawaii.edu/haleakala/

For inquiries regarding Haleakalā: House of the Sun—A Sense of Place, Cultural Overview DVD and briefing booklet contact:

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I don’t think anybody’s asking anybody to believe that rocks are spiritual here if you don’t believe that, but please respect that Hawaiians truly believe this. These are the bones of Pele, these are clear physical symbols to them.

—Art Medeiros
“Haleakala is a beautiful crater, beautiful mountain; it makes you realize how insignificant you are, and how lucky you are to live here.”

- Charles Ka’upu