

Keaukaha Tract II - 'Āina Ho'opulapula

Papakū Makawalu Introduction

Lands from Keonepūpū to Paukūpahu



Kahawai

*Huli mai e nā 'aumākua i ka ho'opulapula'ana o ko 'oukou mau pulapula
Ancestral guardians give attention to the procreative forces of your offsprings*



Kahakai

Papakū Makawalu

The ideology for Papakū Makawalu is born from the mele oli Kumulipo specifically from ‘Oki ‘Umikumāmākolū. Papakū Makawalu is designed to convey knowledge of the Hawaiian Universe and everything within it, to the attention of Hawaiian practitioners, educators and eventually to the greater public of these islands whose interest lies in studying and maintaining Hawaiian dogma.

The Kumulipo exhibits the fact that our ancestors systematically arranged their intellectual information. Today we manifest their system of knowing and specialties to see through their eyes the universe in which they, as well as we, live. Papakū Makawalu is the means to elevate, titillate and expand our native intelligence. Papakū Makawalu is a natural process for Hawaiians whose intuition reacts to altruism.

The Introduction begins with Kumulipo Wā ‘Akahi as a perspective of Keaukaha Tract II’s natural environment.

Kumulipo Wā ‘Akahi

15. Hānau ka ukuko‘ako‘a, hānau kāna, he ‘āko‘ako‘a puka
Born are the coral polyp, born are the coral heads, the offsprings enters
16. Hānau ke ko‘e ‘enuhe ‘eli ho‘opu‘u honua, hānau kāna, he ko‘e puka
Born are earth diggers, born are the offsprings, caterpillars, worms, etc. enters
17. Hānau ka pe‘a, ka pe‘ape‘a kāna keiki puka
Born are starfish, the starfish offsprings enters
18. Hānau ka weli, he weliweli kāna keiki puka
Born are black sea worms, multiple worm offsprings enters
19. Hānau ka ‘ina, ka ‘ina, hānau kāna he hālula puka
Born are short spine urchin, born are long spine urchins, the offsprings enters
20. Hānau ka hāwa‘e, ‘o ka wanakū kāna keiki, puka
Born are juicy sea urchins, the meaty sea urchins, the offsprings enters
21. Hānau ka hā‘uke‘uke, ‘o ka uhalula kāna keiki puka
Born are the toothy sea urchin, the long spined urchins, the offsprings enters
22. Hānau ka pi‘oe, ‘o ka pipi kāna keiki puka
Born are barnacles, the pearl oysters, the offsprings enters
23. Hānau ka pāpaua, ‘o ka ‘ōlepe kāna keiki puka
Born are bivalves, the mussels, oysters, the offsprings enters
24. Hānau ka nahawele, ‘o ka unauna kāna keiki puka
Born are bivalves, hermit crabs, the offsprings enters
25. Hānau ka makaiauli, ‘o ka ‘opihi kāna keiki puka
Born are limpets, multiple limpets, the offsprings enters
26. Hānau ka leho, ‘o ka pūleholeho kāna keiki puka
Born are cowrys, multiple cowrys, the offsprings enters
27. Hānau ka naka, ‘o ke kupekala kāna keiki puka
Born are bivalves, multiple bivalves, the offsprings enters
28. Hānau ka makaloa, ‘o ka pūpū ‘awa kāna keiki puka
Born are shellfish with long-sharp edges, alike shells, the offsprings enters
29. Hānau ka ‘olē, ‘o ka ‘olē‘olē kāna keiki puka
Born are large conch shells, various sizes of conch, the offsprings enters
30. Hānau ka pipipi, ‘o ke kūpe‘e kāna keiki puka
Born are mollusks, nerita shells, the offsprings enter
31. Hānau ka wī, ‘o ke kīkī kāna keiki puka
Born are fresh and salt water snails, shellfish offsprings enter

32. Hānau kāne iā wai‘ololī, ‘o ka wahine iā wai‘ololā
Born are male water forms, as well as female water forms
33. Hānau ka ‘ēkaha noho i kai
Born are the limu ‘ēkaha in the ocean
34. Kia‘i ‘ia e ka ‘ēkahakaha noho i uka
Guarded by the ‘ēkahakaha fern on land
35. He pō uhe‘e i ka wawā
There is a continuous movement of water noisely slipping and sliding
36. He nuku, he wai ka ‘ai a ka lā‘au
Water is the food of plants
37. ‘O ke akua ke komo, ‘a‘oe komo kanaka
The akua enters, man does not enter.



Keaukaha Tract II is a living example of Kumulipo Wā ‘Akahi lines 15 through 31. The photos above are some of the dominant regenerative creatures found in Kumulipo Wā ‘Akahi. Each line reminds us of the genius of generational observation of ancestors who were aware of the metamorphosis of these creatures. Ancestral accountability is responsible for the information from original body forms to “kāna keiki” or eventual transformational offsprings.

Time has not eliminated the life exposed in the above mele oli, the fact is that these are considered food sources one gathers at the edge of the ocean which continue to exist and procreate. Some of the food sources are considered delicacies especially the wana, ‘ina, hā‘uke‘uke, kūpe‘e, pipipi, ‘opihi and pāpaua, to name a few sea shells consumed by kanaka today.

Lines 32 to 37 introduces wai and the reciprocal growth dependency on wai and kai. The life giving fluids of wai and kai are abundant in Keaukaha II. Line 32 and 37 hints to male and female fresh water sources.

32. Hānau kāne iā wai‘ololī, ‘o ka wahine iā wai‘ololā
 Born are the male waters, also the female waters
37. ‘O ke akua ke komo, ‘a‘oe komo kanaka
 The akua enters, man does not enter

Akua is water, likewise, water is akua. The water the plant drinks is male, the water the plant transpires is female. There are many examples of male and female water sources and the enumeration of water in Kumulipo Wā ‘Akahi specifies its necessity for life.

Akua, whether *wai* (freshwater) or *kai* (saltwater) are elements of nature that gives life to regenerative creatures.

Plants are enumerated in the Kumulipo and ‘ēkaha is the first mentioned. The photo below is an example of ‘ēkaha or ‘ēkahakaha that is found at Keaukaha Tract II. There is also a limu ‘ēkaha found in the ocean. That particular limu however is unfamiliar to the kanaka of today. Despite the unknown limu ‘ēkaha, limu are plentiful here.

Keaukaha Tract II is the facsimile of Kumulipo Wā ‘Akahi. Wai and kai and its natural landscape is obvious and outstanding. Throughout the islands there are life forms as described in Kumulipo Wā ‘Akahi however Keaukaha Tract II allows dominance of these life forms and the natural environment they live in without the fabricated and over indulgent lifestyle of modernity.



‘Ēkaha fern from Keaukaha Tract II



Wai at Keaukaha Tract II



Kai at Keaukaha Tract II

The advantage of Keaukaha Tract II is that it provides more practical knowledge concerning wai, kai, and the creatures mentioned in Kumulipo Wā 'Akahi than we can learn in any educational institutions.

Keaukaha Tract II, ‘Āina Ho‘opulapula

Keaukaha Tract II is located in the south eastern section of the ahupua‘a of Waiākea in the moku of Hilo on the mokupuni of Hawai‘i in the archipelago of Lononuiākea. In accordance with the island’s genealogy, the makeup of the island of Hawai‘i was engineered by Kānekumuhonua, Kānekamohoali‘i, Kānemiloa‘i, Kūha‘imoana, Kāneikōkala, Leho and Pelehonamea. Kohala and Ka‘ū are the north-south corners of Hawai‘i, while Puna and Kona are the east-west corners. Hilo is the broader east and Hāmākua is the northeastern end of the island. The advantage of both eastern fronts are that they are on the Ko‘olau, or rainy-windward side, of Hawai‘i.

In the intellectual caverns of our Hawaiian ancestors these nomenclatures were developed to provide knowledge of the island’s creative forces. “Kānekumuhonua (k)” is the nomenclature translated as “Heat, source of the earth.” Living on a volcanic island stipulates the obvious. Heat, a great deal of heat, is the causitive of molten rocks. Kānekamohoali‘i (k) is the foundation of new craters or the initial hot spots that eventually grows into a crater. Kānemiloa‘i (k) manifests the vertical movement for magma’s escape. Kūha‘imoana (k) manifests the horizontal movement of magma or lava tubes. Kāneikōkala (k) is the wall of very narrow, vertical, dense, veins of rock which rises to the surface of high islands. Kāneikōkala (k) is the treasured rock used for tools and weapons known as ko‘i (adze). Leho are the movements of the earth and volcano that causes pu‘u to rise but is not hot enough for magma to exit. Pelehonamea (w) is the pele, or lava, that exits to grow, form, and shape the islands’ surface.

Keaukaha Tract II is considered undeveloped. Since 1922 Keaukaha Tract II is one of many land tracts throughout the islands which has fallen under the jurisdiction of Hawaiian Homelands, a federal initiative ‘Āina Ho‘opulapula program for the rehabilitation of Native Hawaiians. It is equal to the federal reciprocity program with the Native American tribes. This is the idea of displacing and replacing the Natives.

Ho‘opulapula is a profound theory establishing the care for seedlings to ensure that there will be a next generation. Since Hawaiian ideology does not differentiate between the regenerative cycles of living organisms, ho‘opulapula is inclusive of humans as well as vegetation, fish, winged creatures, etc. Ho‘opulapula is the federal’s reciprocity.

Hawaiian Home’s ‘Āina Ho‘opulapula program was to establish housing and diverse communities for Hawaiians.

Keaukaha Tract II attracts fishermen who have knowledge of the possible production this area provides. The shoreline is respected by fishermen who utilize this area, which is considered dangerous for casual fishermen. It provides all of the sea creatures mentioned in Kumulipo Wā ‘Akahi as well as Kumulipo Wā ‘Alua.



Six decades and 2 years (1984) after the proclamation of the federal ‘Āina Ho‘opulapula program 10 Hawaiian ‘ohana (family) and 4 Hawaiian individuals felt the need to occupy Keaukaha Tract II because of the inert disability of Hawaiian Homelands to advocate lands according to the needs of the Hawaiian. One of the families who occupy the ‘āina since 1984 is the Keli‘i “Skippy” William Ioane Jr. family. This is their abbreviated narrative of life at Keaukaha Tract II.

Aloha, my name is ‘Āinaaloha Waika‘alulu Ioane. My twin sister Haawina Wise and I was born in May of 1984 at our home, on the ‘āina pulapula of King‘s Landing at Waika‘alulu. Our relationship with the ‘āina of King‘s Landing began while we were in our mother’s ‘ōpū, womb, and became tangible upon our birth. We are honored to be the narrators of these shared stories.

Growing up, I remember always having a bowl of poi, and a bowl of limu kohu on the table, while i‘a was frying in the pan. We ate fish almost every night of the week. It was a rare occasion to have chicken and even more rare to have beef. I have countless memories of dad, coming home from holoholo with his eke, fish bags, filled with all kinds of ocean goodies: limu kohu, ‘ōpihi, a‘ama and top shell.

The coastline is rich with nutrients, reef fish, seaweed, and tide pool creatures. On the ‘āina grows ulu, breadfruit for eating; hala, pandanus for crafting; hau, hibiscus for cordage harvesting; milo and naupaka for natural dyeing material. There is also an introduction of tropical fruits: banana, tangerine, avocado, and mountain apple.

Hawaiian Philosophy of Land

Hawaiians are born with an inbred passion and philosophy in relation to land, that is in reference to these islands. Most Hawaiians are unable to explain this relationship but are assured that the philosophy exists, is alive and well. The basic philosophy refers to ‘Āina Aloha and Aloha ‘Āina

‘Āina Aloha

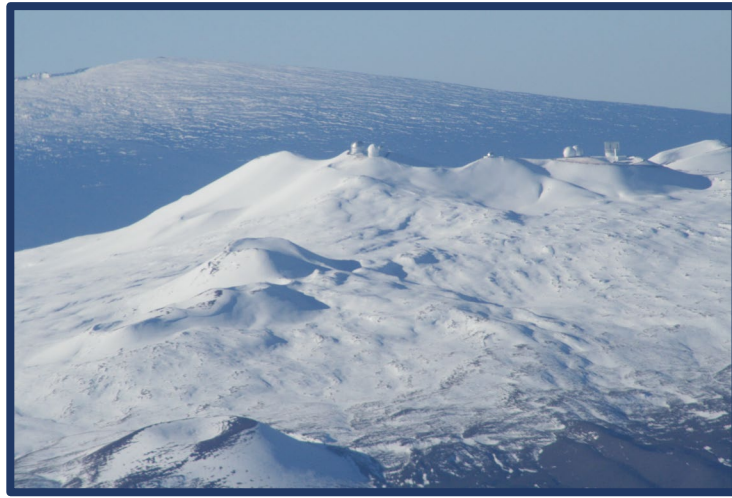
‘Āina Aloha is a reciprocal idiom to Aloha ‘Āina. ‘Āina Aloha is the kanaka ideology of loving the land one lives on. It is an archaic attitude that was bred into the DNA of the Native Hawaiians who were raised on these islands. Islands represents a minimal amount of land however the rainfall provides a means for growth and the volcanic outpour in many areas will eventually display the vegetative expansion of native flora.

“Love your island” and “take care of the land and the land takes care of you” are idioms used daily. These islands are what we have to live on, to grow our families, to plant our crops, to enjoy the dense forest and snow on the mountain and the food gathered from the ocean. A spectacular, very large ocean which surrounds these insignificant pieces of rocks called “home” or “islands” by the Native Hawaiians.

‘Āina Aloha, is a kinship relationship to land. Land is an older sibling, it comes out of the ocean and goes back to the ocean. We, kanaka Hawai‘i, comes out from the land and will go back to the land. Therefore this ‘āina is ‘ohana and is treasured.

Aloha ‘Āina

Aloha ‘Āina is the reciprocal value of the land’s provisions. Many of us were taught to recognize all levels of Aloha ‘Āina. Every bit of our original islands are volcanically constructed, therefore there are many mele oli composed for Pelehonuamea. Gratification to volcanoes. Volcanos builds high islands. The summits of our islands are between 1,281 ft. for Ni‘ihau and 13,796 ft. for Hawai‘i. The advantage of our high volcanic islands is that they are considered “‘ume wai” or cloud catchers. This provides lots of fresh water. The island winds also attract seeds and therefore we have a prolific forest. Fresh water is excellent for natural growth and establishing food sources for both the land and reefs.



He‘e Wākea, kālewa kona ‘ōhua
Wākea slips through atmospheric levels with his offsprings
Kū ‘āmū ‘ia e Kāne, Kū awa ‘ia e Kāne
Land shaved off by Kāne, shaped into valleys by Kāne

These two lines above reveal the amount of water which slips through the atmosphere and forms the east Hawai'i valleys. It also accounts for the ponds from Waiolama, Wailoa, Waiaka, Waiakua to Hā'ena, from Hilo to Puna. Kāne is one of the major akua wai and Wākea accounts for all entities that fall with the rain and are causatives of new growth or fertilization.

Water for lo'i and fish ponds are some examples for food production and the Native Hawaiian took advantage of this natural resource. There are a great amount of fresh water ponds in Keaukaha Tract II. This entire system according to 'Ike Kūpuna is part of the evaporation, transpiration, wind, cloud, rain cycles of water. Water helps growth at ground level. Water also becomes part of the underground water basins which eventually moves to the open ocean. Water digs and shapes valleys. The nomenclature Waiākea is indicative of this broad expanse of fresh water.

Whether human, or animals that are winged, crawlers, swimmers, or plants, these life forms are all dependent on water. Mahalo to Maunakea and Maunaloa, the ume wai that attracts and captures water.

PlaceNames for Keaukaha Tract II

Place names are initiated during different time periods and for diverse reasons, therefore some of these place names are old and some given within this time period. These are the names available now.

**1. The bold letters are the literal translation of the place names.*

**2. A description of the place name follows, after which an explanation may provide further clarity.*

Place Name	Translation
Waiākea	Broad expanse of water Waiākea is a very wet ahupua'a that receives water from clouds and melting snow. It probably has the greatest amount of fresh water ponds on the island of Hawai'i.
Keaukaha	Dominant current just off land Hilo Bay has the shape of a half moon and Keaukaha is on the southern end of that half moon. Tides moving out from Hilo is caught in the current as it moves from north to south of this half moon. At Keaukaha the current is moving faster in the southerly direction. The name is a warning of the current's movement.
Keonepūpū	Scattered clumps of sand Keonepūpū is the beach area fronting the cement wall. Keonepūpū is the only area in Keaukaha Tract II with notable white and black clumps of sand.
Pu'umaile	A maile hill

A hill or incline with maile growth. The inland wooded area did have maile growing there. This is no doubt the reason for this name. In the 1940s a hospital was built there. A cement wall was constructed to protect the hospital from the ocean.

Lā'ieikawai

“Lau ka ‘ie‘ie i ka wai,” the leaf of the ‘ie‘ie associated with water
Name of a pond ma uka of Leleiwi Point. Lauka‘ie‘ieikawai is the more complete nomenclature. “Ka wai” is associated with fresh water ponds, and it may also allude to transpiration, because ‘ie‘ie is the known vine of the native forest to climbs up tall trees therefore being the most valuable in aggressive growth and transpiration cycle. The story of Lā'ieikawai begins on O‘ahu on the boundary of Lā'ie and Kahuku. Lā'ielohelohe and Lā'ieikawai were born to a chiefess, both sisters assigned their own caretaker. Lā'ieikawai was cared for by Waka, a mo‘o guardian comfortable in dark water ponds. Waka and Lā'ieikawai eventually move to Paliuli in Puna, Hawai‘i. ‘Aiwohikūpua woos her but is unfaithful and his maile sisters become the maidens for Lā'ieikawai. Another lover of Lā'ieikawai is also unfaithful to her and she becomes “ka wahine o ka li‘ulā” or woman of the sunset. Like many romantic tales the story ends sadly.

Lehia

Skilled or expert, especially in fishing

Lehia is a coastal area. This name is perhaps a warning! In this area of Keaukaha Tract II one has to be “lehia,” or skilled in fishing, to survive this coastal ocean.

Leleiwi

Flying bones or bone altar

Leleiwi Point is a major cape, or point, in Hilo. Leleiwi is a pivotal landmark from east to south towards the border of Puna and is a warning for dangerous ocean.

Kōkī

Extreme, excess, tip, edge

This name was given to identify an outstanding round boulder where limu grows and gathered profusely.

Waiokawa

A deep pond which one leaps into

Name of a pond. There are many fresh water ponds in Keaukaha Tract II, this one seems to be the best and well used by young swimmers.

Pūhala

Pandanus tree

Pūhala was the name of a heiau ho‘oulu i‘a or fishing altar near Leleiwi. The area of Keaukaha Tract II is littered with pūhala trees. Pūhala is described in the MAHA Report as a flat place with a high hill.

‘Akolemoku

1. Section which is destitute, poor. 2. A large endemic fern

A rock appears as an island. It is difficult to define a place name when it is uninhabited.

Papa‘aloa	Very secured area
Waiakeakua	1. Water of the god. 2. Expanse of water images. 3. Windward fresh water ponds The name of a pond indicates that this is a great water source.
Oneloa	1. Very sandy. 2. Sand continuous fill in.
Waika‘alulu	Water that moves calmly Name of a pond. All the fresh water areas of Keaukaha Tract II can be described as “Waika‘alulu.” The fresh water ponds are walled off from the rough ocean by high cliffs.
Moani	To blow softly Moani is a gentle breeze associated with fragrance. It is unclear whether this name is the weather or land.
Anapuka	Underground cave or entrance to one Name of a place with a cave entrance. The word constitutes an underground passage, or cave as in lava tube.
Ka‘uleko‘u	Male potency The ideology of Ka‘uleko‘u can lend itself to any creature that goes through a regenerative cycle. An indication of this area’s productivity. The name could also be “Kaulekou” which suggests that the kou trees are fruiting. Both interpretations have to do with birthing cycle.
Poka‘i	Moving along
Puhikani	Noisy spouting horn A spouting blow hole.
Paukūpahu	A land cut off The name is applicable because of the fact that it is on the boundary of Hilo and Puna. The Puna boundary line, Māwae, registers the division on maps.

Mea Lawai‘a, the Fisherman



‘Oia ka mana o ka mea lawai‘a, ‘a‘ale ha‘awi pio!

Philosophy of the fisherman, never give up!

He kai ē he kai
Popo‘i akula ke kai
Popo‘i akula i Waika‘alulu
Aihea lā ke kai maha
Ma hope paha kēlā nalu nui a‘e
A ‘o ia ho‘i

The sea, o the sea
The sea is breaking
Breaking at Waika‘alulu
Where is the calm sea
Perhaps it is after that next big wave
So it is

PAPAHULIHONUA

Papahulihonua is a study of earth sciences pertaining to the island environment of Hawai‘i. In modern terminology, Papahulihonua experts are knowledgeable in such fields as geology, hydrology, geography, oceanography, soil science, and volcanology. To be a kama‘āina is to truly be a kama of the ‘āina, child of the land. To do so, one must be intimately aware of one’s ‘āina and the natural resources within. This Papahulihonua study focuses on the land and ocean of **Keaukaha Tract II**.

“The Department of Hawaiian Home Lands (DHHL) holdings total approximately 1,670 acres in the Keaukaha area. Keaukaha Tract I is located along Hilo’s coastline adjacent to the Hilo Airport and contains 457 residential homesteads. The area commonly known as King’s Landing is in Keaukaha Tract II, along Hilo’s northeast shoreline. Portions of Tract II are occupied by seven native Hawaiian households under a right-of-entry permit” ([Department of Home Lands Hawai‘i Island Plan, May 2002](#)).

“The Hawaiian Homesteads begin on Kalaniana‘ole Ave., across of the Pacific Chemical Co. and ends across of the Onekahakaha beach road. Along the coastline from Auwili to Leleiwi Point and on down Kalaniana‘ole until past the old Puumaile hospital is private owned land. Then from Leleiwi (this is not the Leleiwi as we know it today) to the Hilo side of a stonewall at Paukupahu is again Hawaiian Home Lands (Kuu Home I Keaukaha, p5).

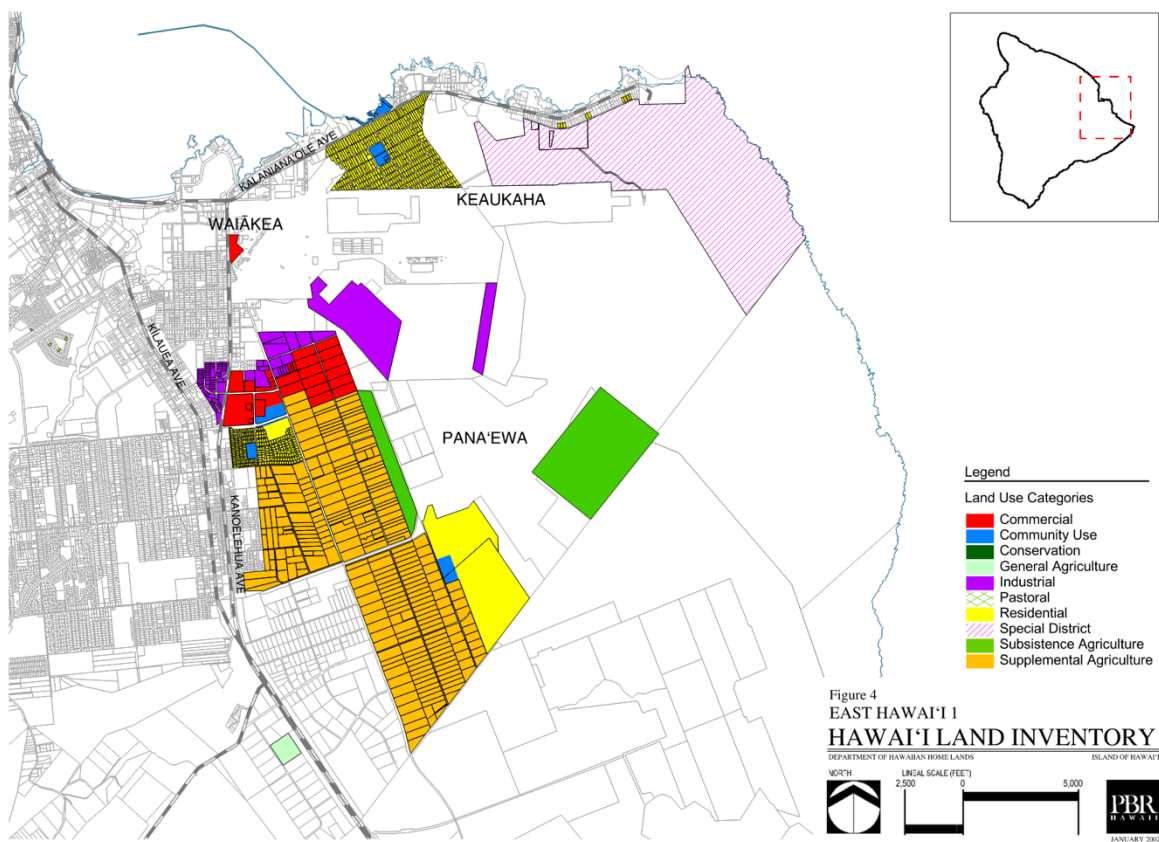


Figure 1: (Department of Home Lands Hawai‘i Island Plan, May 2002).

Figure 1 shows **Keaukaha Tract II** as part of the special district indicated with pink stripes. “**Keaukaha Tract II** lies in the southeast corner of the huge ahupuaa of Waiakea in the district of Hilo on the island of Hawai‘i. It is bounded on the south by the Hilo-Puna district border and the adjoining ahupua‘a of Kea‘au. The eastern edge runs along the shoreline of the ocean called ‘Aikanaka. To the north and west lie the areas of Keaukaha and Pana‘ewa” (MAHA Community Management Plan, 2).

William Ellis provides a description of Keaukaha Tract II from 1823 ([A narrative of a tour through Hawaii](#)):

Mr. Bishop hoping to reach Waiakea in a few hours, left Mr. Thurston and the natives with me, and proceeded thither. He was much deceived as to the distance; for it was three o'clock in the afternoon when he arrived at Kaau (Keaau), where the natives tried to persuade him to stay till morning, as they did not think he could reach Waiakea before night. However, he kept on with increased speed, in hopes of getting at least a sight of Waiakea before dark. But in this he was disappointed, for the sun sank behind Mounakea [sic], and darkness overshadowed the landscape before he had passed the wilderness of Pandanus, that stretched along the eastern shore, between Kaau and Hiro. He began to think of resting for the night beneath the shelter of the surrounding bushes; but the path becoming more beaten, indicated his approach to a village. Encouraged by this, he pursued his way, about nine in the evening reached Waiakea, and entered the house of [Malo], where he found Messrs. Goodrich and Harwood, by whom he was gladly welcomed.

Being somewhat recovered by noon, I was able to proceed with Mr. Thurston. The country was populous, but the houses stood singly, or in small clusters, generally on the plantations, which were scattered over the whole country. Grass and herbage were abundant, vegetation in many places luxuriant, and the soil, though shallow, was light and fertile.

... Leaving the village of Kaau, we resumed our journey, and after walking between two and three hours, stopped in the midst of a thicket to rest, and prepare some breakfast.

The natives produced fire by rubbing two dry stickes, of the hibiscus tiliaceus, together; and having suspended over it a small iron pot, in gipsy style, upon three sticks, soon prepared our food. At half-past ten we resumed our walk, and passing about two miles through a wood of pretty large timber, came to the open country in the vicinity of Waiakea. At one p. m. we reached the house of the chief, where we were welcomed by our companions, and [Malo], the chief, who though very ill, was glad to see us.

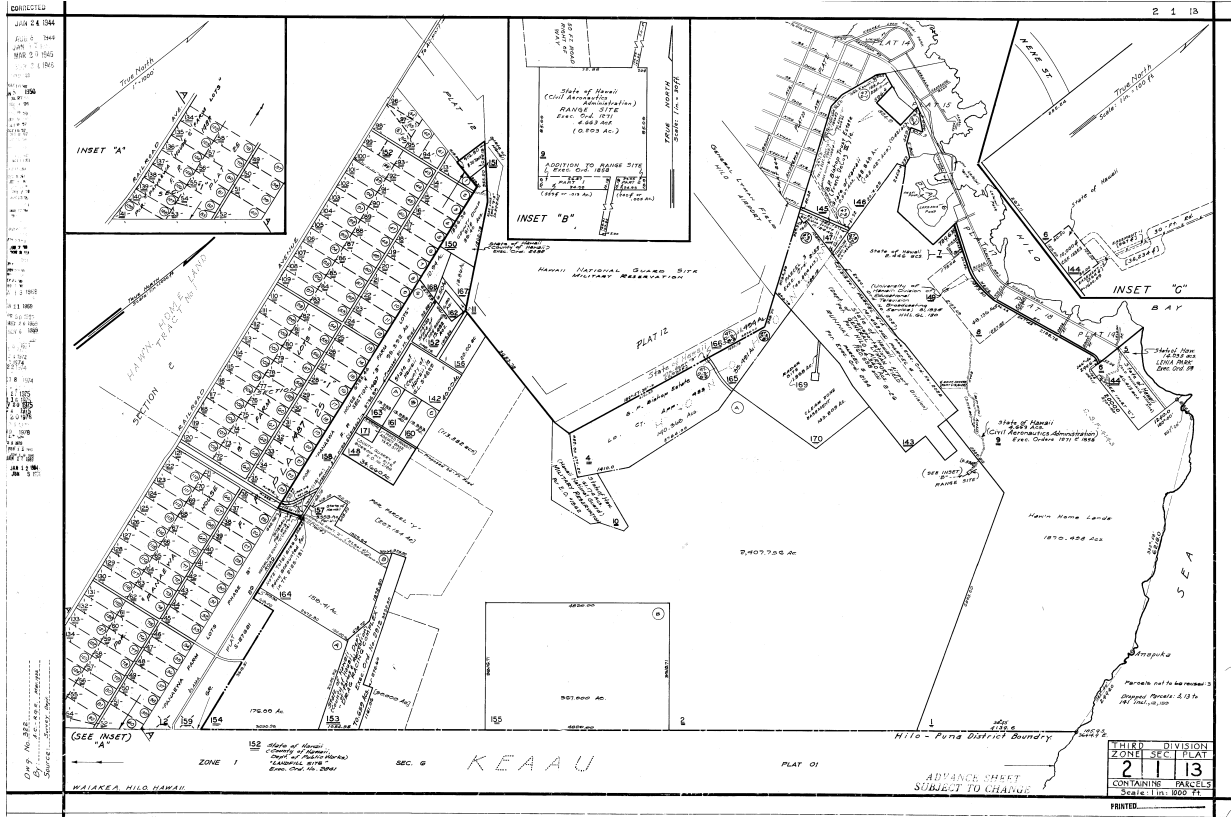


Figure 2: County of Hawai'i Planning Department

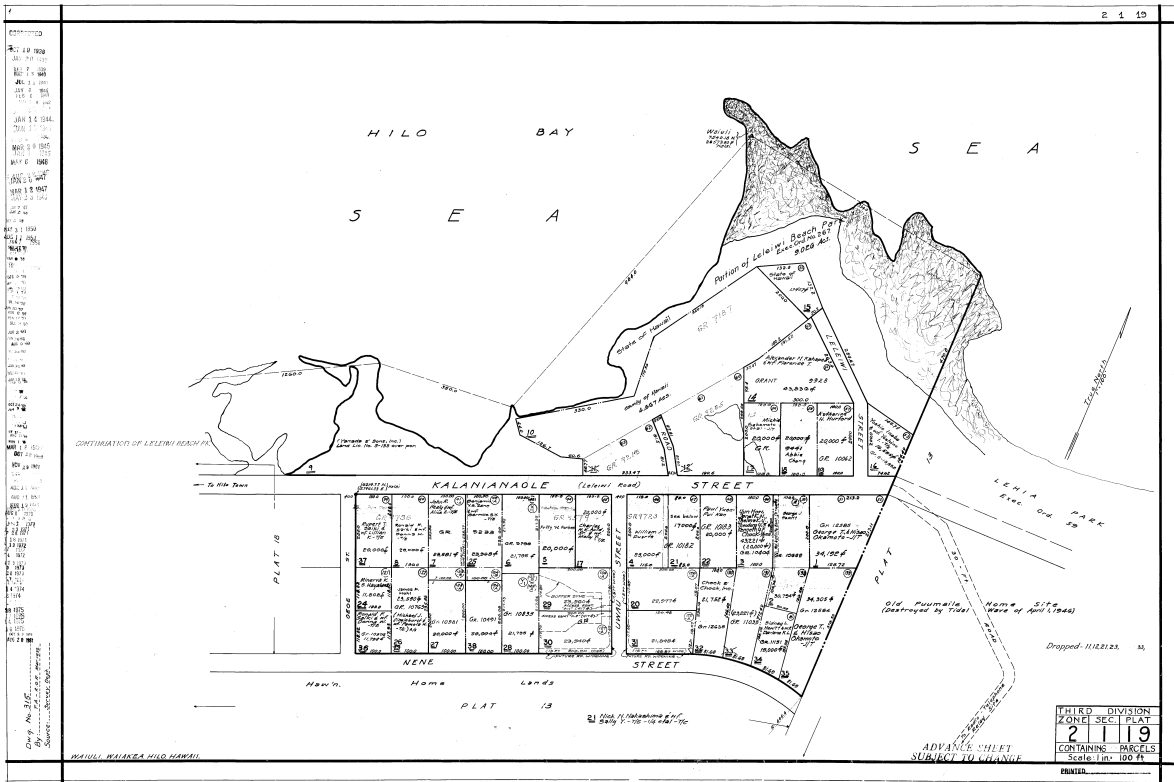


Figure 3: County of Hawai'i Planning Department

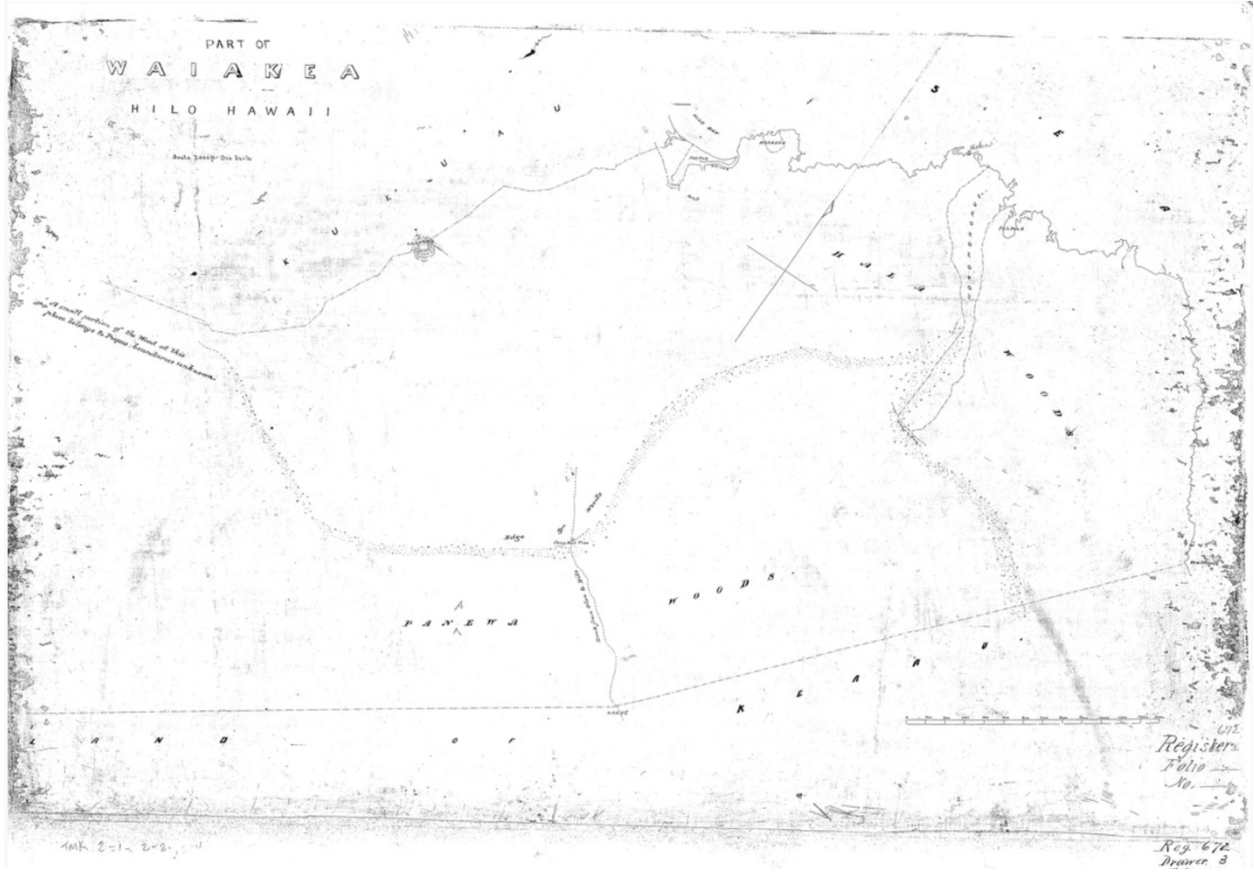


Figure 4: avakonohiki.org Maps of the Ahupua‘a of Waiākea, Hawai‘i

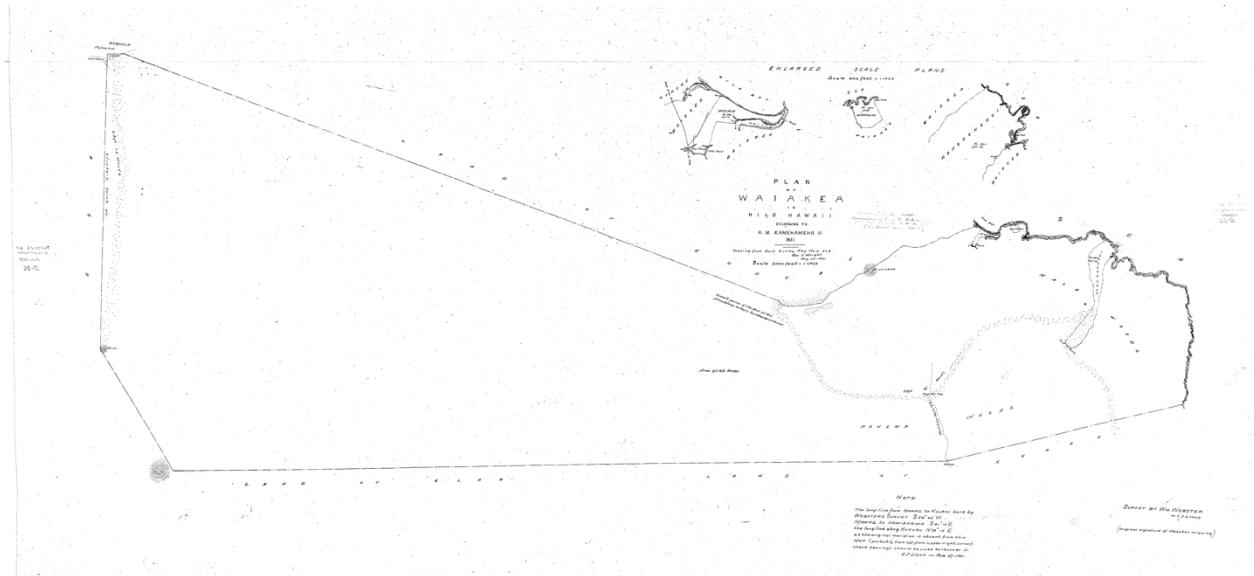


Figure 5: avakonohiki.org Maps of the Ahupua‘a of Waiākea, Hawai‘i

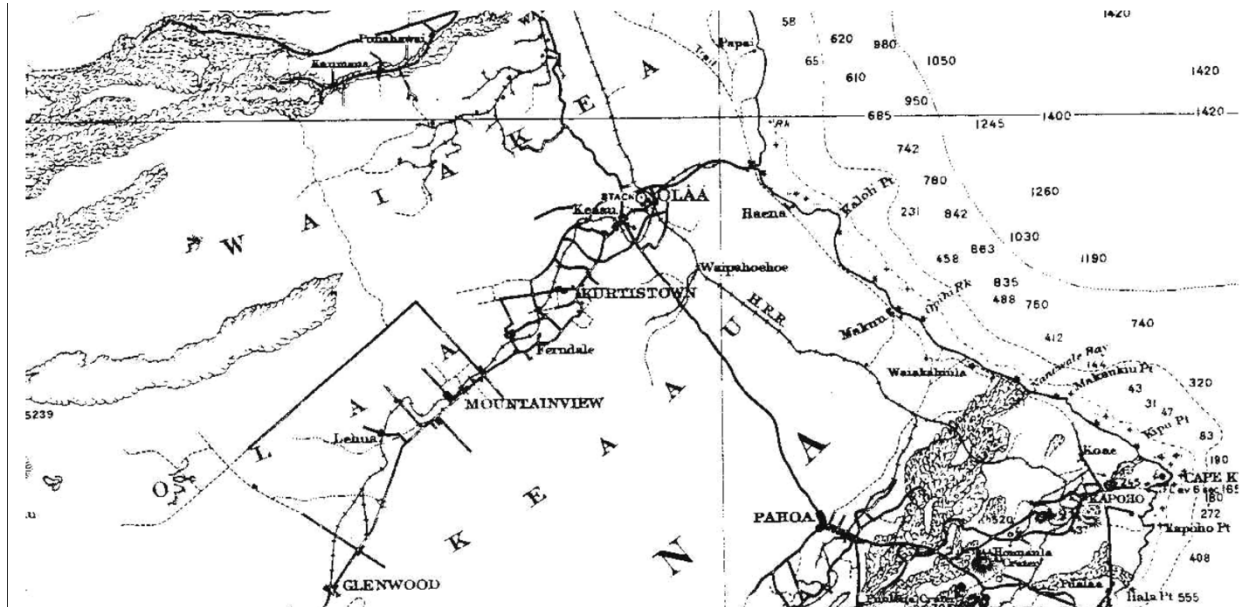


Figure 6: [Kumu Pono](#)

Figures 2-3 are the Tax Map Keys prepared by the County of Hawai‘i showing the northern portions of Keaukaha Tract II. These maps show the locations of Leleiwi point and Lehua.

Figures 4-5 are maps of the ahupua‘a of Waiākea provided by AVA Konohiki. These maps also show the location of Leleiwi point, as well as the location of Keaukaha Tract II in relation to the “Panaewa woods” as well as the boundary of Kea‘au. A note in Figure 5 reveals that “the long line from MAWAE to KULANI bore by WEBSTER’S SURVEY S 54°45W. MAWAE to KAWIAKAWA S 41° 15E the long line along KUKUAU N76° 15E as the original meridian is absent from this MAP (probably torn off from upper right corner), these bearings should be used to recover it.”

Figure 6 is a map of the Waiākea-Kea‘au boundary and the wahi pana in the vicinity.

This report will focus on the land and ocean of Keaukaha Tract II and its natural resources, starting by summarizing information related to the ahupua‘a (vertical land division) of Waiākea, before focusing on individual wahi pana, starting in the north and heading south towards the Kea‘au/Puna boundary:

Waiākea Ahupua‘a

“Waiākea is an ahupua‘a, located in the moku of Hilo, on the island of Hawai‘i. It is one of the largest ahupua‘a in Hilo, and was well known in times past for being a land of great abundance. In particular, Waiākea was famous for its "fat, sweet" mullet, which were raised in its many loko i‘a, or fish ponds. These fish were favored by Kamehameha I, and many Hawai‘i island chiefs of old” ([AVAKonohiki](#)).

In Places Names of Hawai‘i, Mary Kawena Pūku‘i notes that “a legendary man, ‘Ulu (breadfruit), lived [in Waiākea]. He died of starvation and was buried near a running spring. Next

morning a breadfruit tree laden with fruit was found there, ending the famine” ([Pukui](#)). This is an indicator of the abundance found in this ahupua‘a.

Keaukaha Tract II is also known for its many ponds. “People were living scattered here and there in the back of Lokoaka. When I say Lokoaka, it means ponds here and there scattered all the way down to Puna side. In these ponds were raised aholehole and mullets. Our old Hawaiians use to travel from Puna by trails and they had what they called half-way houses where they would rest if the trip was too hard. They would use the water or whatever food that was left at the house and when they left they would fish and dry them and leave poi and fish for the next family who was travelling” (Kuu Home I Keaukaha, p51).

Keaukaha Tract II Wahi Pana

The lands now known as Keaukaha Tract II was once referred to as Keonelau‘enaakāne. The term “onelau‘ena” refers to the legendary homeland of the akua Kāne, a land of plenty. In 1889, Hawaiian scholar Moses Manu published the myth “He Moolelo Kaa Hawaii No Ke Kaua Nui Weliweli Ma Waena o Pelekeahialoa a me Wakakeakaikawai.” This ka‘ao depicts the battle between Pele and the mo‘o Waka. The ka‘ao is a sacred discourse seeking to record the observations made by Hawaiian kupuna of elemental occurrences, in the case, it is a record of the movement of magma and lava that created the Hawai‘i archipelago. The following is a partial summary of the Pele-Waka ka‘ao. It is important to remember when reading Hawaiian ka‘ao, that the deities spoken of are actual energies/elements of the natural world (i.e. Pele is magma):

One day, Pele, along with several other family members, left Kahiki for Hawai‘i, first arriving at Nihoa and digging craters at Ka‘ula, Ni‘ihau, Lehua, Kaua‘i, O‘ahu, Maui, until finally arriving at Kīlauea on the island of Hawai‘i.

It was said that prior to Pele’s arrival, Puna was a beautiful land with sandy beaches stretching from Panau to Kea‘au.

One day Pele met a male, Puna‘aikoa‘e, who often took the form of a koa‘e bird flying over Halema‘uma‘u crater. The entire area of Kīlauea was noa to him, with the exception of Pu‘u‘oni‘oni, which was sacred to Hi‘iakaikapoliopole, and he was accustomed to coming and going as he pleased.

It was in this manner that Puna‘aikoa‘e became infatuated with Wakakeakaikawai, a beautiful mo‘o from Paliuli. Eventually Puna‘aikoa‘e left Pele for Wakakeakaikawai and the battle between Pele and Wakakeakaikawai began.

According to the myth, the battle began with Pele travelling underground from Kīlauea to Punalu‘u and she ordered her companions to flood Punalu‘u with ocean water (the area from Punalu‘u to a cave Kaualehu, where Wakakeakaikawai and Puna‘aikoa‘e resided, was inundated).

Wakakeakaikawai then called upon her ancestor Kamo‘oinanea for assistance, and soon all the mo‘o of Hawai‘i archipelago came to her assistance, the area between Kaualehu to Honu‘apo filling with mo‘o.

Pele once again caused a tsunami to inundate Punalu‘u, but Wakakeakaikawai was able to deflect the tsunami, sending it back to the sea. Therefore, lava burst forth from the earth to surround and crash down upon Wakakeakaikawai.

Wakakeakaikawai and Puna'aikoa'e flee to the mountains to hide in the forests. But Pele was not to be outrun and so they escaped back down to Punalu'u, the 'a'ā covering the canoe landing. Wakakeakaikawai and Puna'aikoa'e run from Punalu'u, along Honu'apo, towards Kūkalā'ula, with Pele following as 'a'ā and pāhoehoe. At Honu'apo, Pele sends another tsunami to inundate the coast (perhaps the tsunami of 1868-1869). From there the pair run to Kaimu, 'Opihikao, Keahialaka, Pohoiki, and Ha'eha'e. Pele continues to chase them through Paliuli and Māwae on the Hilo border. At this point, Wakakeakaikawai realizes that their death is inevitable. Pele finally catches the pair at a pond in Keaukaha, killing them, turning them to stone. From that day on, the pond was known as Lokowaka (Waka's pond), a pond known for its abundance of 'owā'owaka (pī'oe'oe).

It is said, this battle between Pele and Wakakeakaikawai from Punalu'u, Ka'ū through Puna and on to Waiākea in Hilo is the flow that covered the beaches from Waiākea in Hilo to Panau in Puna, turning the once sandy coastline to pāhoehoe, leaving behind only pockets of sand ([Pelekeahialoa me Wakakeakaikawai, 16 Dek 1899](#)).¹

The movement of Pele originates from Maunaloa, which has erupted 33 times since written descriptions became available in 1832. Some eruptions were preceded by only brief seismic unrest, while others followed several months to a year of increased seismicity. Since 1832, seven eruptions occurred in 1852, 1855–56, 1880–81, 1899, 1935–36, 1942 and 1984.

¹ Ma keia make ana o Keakaikawai, me Puna'aikoa'e ia Pelekeahialoa, ua olelo ia ma keia moolelo e ka poe kahiko, o keia hakaka ana a ua mau kupua eueu nei mai Punaluu, Kau mai a hiki ma Puna a me Waiakea ma Hilo oia no ka mea nana i uhi i na pohaku Pele ma kekahi one loihi loa mai Waiakea, Hilo a hiki Panau ma Puna nona ka inoa o Keonelauena Kane, a mamuli o ko Waka ma holo ana mai, ua lilo ka hapa nui o ka aina o Puna i aa pohaku a pahoehoe pele a hiki i keia wa, a oia ke kumu nui i nalowale ai keia one kaulana, a e ike ia no nae na kipukapuka one ma na wahi i koe mai Waiakea mai a hiki i Puna.

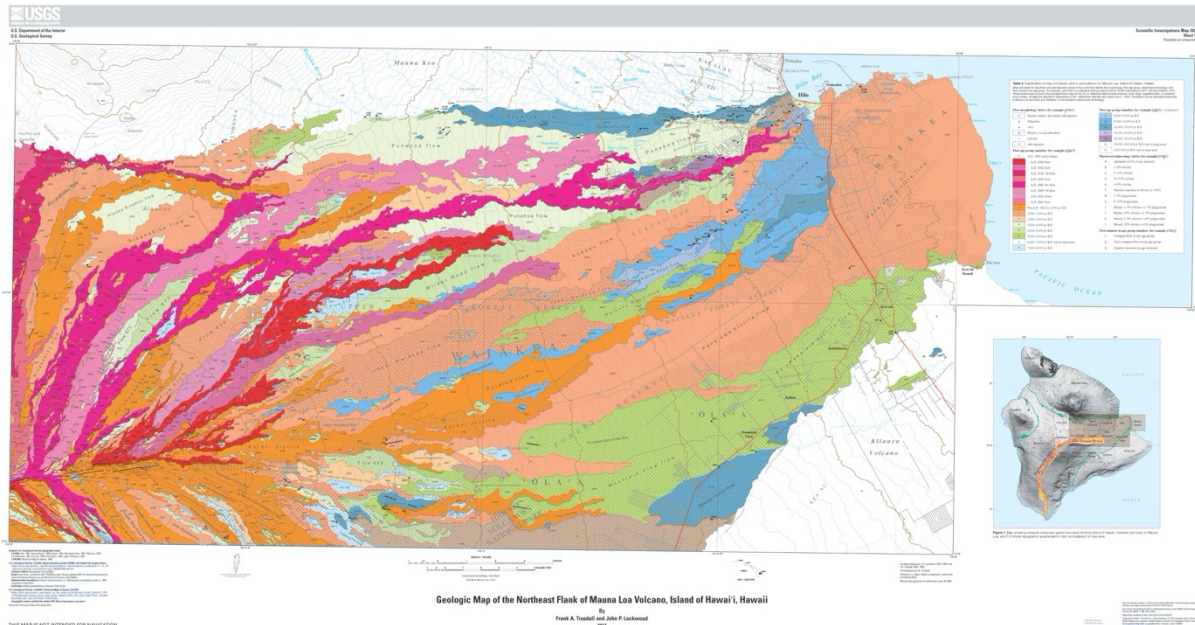


Figure 7: Geologic Map of the NE Flank of Maunaloa

In the “Geologic map of the northeast flank of Mauna Loa volcano, Island of Hawai‘i” (figure 7), the U.S. Geological Survey illustrates the distribution of lava flows in Hilo. Ages of the flows are indicated by color: reds and oranges are younger, blues and purples are older. The largest salmon-colored lava flow (which cover Keauakaha Tract II) is the Pana‘ewa flow ([Big Island Now](#)). Initial research shows that this flow is known as the Pana‘ewa picrite flow with lava erupting from a cinder cone at 6,020 ft elevation and forms the coastline from Hā‘ena to Hilo Bay ([USGS](#)).

The following are excerpts from “Ka Moololo Kaa o Hiiakaikapoliopole” describing this area known as Pana‘ewa:

Pana‘ewa is a famous lehua forest in Hilo, given the same name as its resident kupua, the guardian of the area. Pana‘ewa was a male entity full of power and strength. Passage through this forest [from Puna] to Hilo Waiākea was granted by this kupua Pana‘ewa, and with his authority travelers were able to pass through safely. If passage was not granted, the travelers would be surrounded by storms while inside the forest. Dark mist, cold rains, and strong winds would cause one to lose his way.

It is said that those travelling from Puna, as well as those travelling from Hilo, should give an offering prior to entering Pana‘ewa, acceptable offering are ‘awa, lū‘au, red fish, kapa, malo, etc. Once the offering was given, the road would be clear.

The alawī and ‘alaiaha birds frequented this forest, these were seen as guardians. These tiny birds could fly swift as lightning. Native who frequented the

forest, and were caught in a storm, could find their way out by following these birds' chirps (Ka Moolelo Kaa O Hiiakaikapoliopole, 25 Kep 1908).²

In the ka'ao above, the mo'o Pana'ewa was killed by Hi'iaka's brothers, namely Kūhuluhulu and Kū'ālanawao. Pana'ewa was captured in Kanaloa vegetative forms (koali pehu, koali maoli, koali ka'e'e'e) and his lifeless body swept out to the ocean by a large flood. Looking at Figures 4-7, one can assume that this occurred in the Keaukaha Tract II vicinity.

Along with the narrative above by Joseph Moku'ōhai Poepoe, our ancestors composed mele to record their observations of natural phenomena. One such mele that describes an eruption in the Keaukaha Tract II area is:

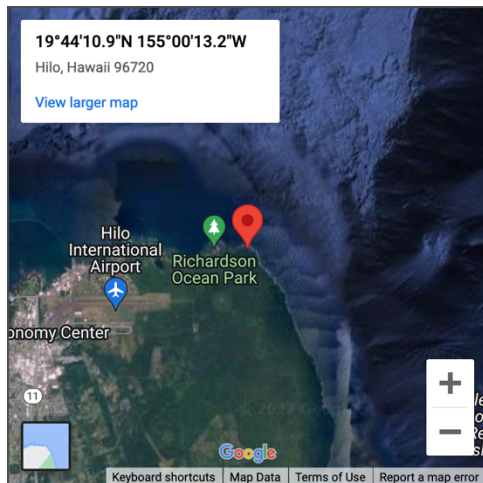
Kualoaloa Kea'au i ka nāhelehele	Kea'au is a long ridge of wilderness
Hala kū ahulu Pana'ewa i ka lā'au	Pana'ewa's hala trees are burnt
'Ino ka maha o ka 'ōhi'a	The groves of 'ōhia are laid to waste
Kū kepakepa ka maha o ka lehua	The clumps of lehua stand in torn fragments
Po'ohina i ka wela a ke akua	Burnt gray from the heat of the lava
Uahi Puni i ka 'oloka'a pōhaku	Puna smokes amidst rolling rocks
Huna pe'a 'ia e ka wahine ē	Reduced to ashes by the lava
Nanahu 'ai ka papa 'Oluea ē	'Oluea is a bed of burning coals
Momoku ahi Puna hala i 'Āpua	Puna is charred as far as 'Āpua
A ihu ē, a ihu lā	Probed here and there
A hulihia lā i kai	Overtaken clear to the sea
A ihu ē, a ihu lā	Probed here and there
A hulihia lā i uka	Overtaken clear to the mountains
A ua wawaha	Desolate
A ua noho ha'aha'a	Debased
A ua helei, helele'i, helele'i	Shattered, scattered
A ihi ē, a ihi ā	Stripped
He inoa no Hi'iakaikapoliopole	Invoking Hi'iakaikapoliopole

Kualoaloa speaks of lava burning into Kea'au and Pana'ewa, two wahi pana that surround Keaukaha Tract II (see Figures 4-5) and speaks of the burnt hala trees, which we can assume is Keaukaha Tract II, as illustrated in Figures 4-5 as "hala woods." The chant provides clear imagery of the lava flow through this Kea'au and Pana'ewa, "clear to the sea."

² He ulu lehua kaulana kēia no Hilo, a ua loa'a mai kona inoa ma muli o kekahi kupua nona ka inoa 'o Pana'ewa, a 'o ia ke kia'i o ua wahi nei. He kāne nēia 'o Pana'ewa, a he piha i ka mana a me ka ikaika. 'O ke alanui e hele ai ma loko aku o ia wahi a puka ma kēlā 'ao'ao ma ka huli ma Hilo Waiākea, aia nō a 'ae ua kupua nei 'o Pana'ewa, a laila, hiki ka huaka'i malihini ke hele. A inā e 'ae 'ole ua kupua nei, a laila e punia 'ia ana ka huaka'i hele e ka 'ino ma loko o ua ulu lehua nei. Uhi maila ka 'ohu pouli, ne'e ka ua 'awa, pā ka makani ikaika, a pa'a a nalowale ke ala.

Ua 'ōlelo 'ia ma kēia mo'olelo, 'o ka huaka'i hele ma ka huli mai ma Puna, a pēlā ho'i ma ka huli mai ma Hilo, he pono ke hele mai a ma mua o ke komo 'ana mai i loko o Pana'ewa e 'ālana a'e i wahi mōhai, e la'a kahi 'awa, kahi lū'au, ka i'a 'ula, ke kapa, ka malo, a pēlā aku. A inā pēlā e hana ai, a laila, e māla'ela'e ana ke alanui, 'a'ole e ulia 'ia e ka 'ino.

'O nā wahi kia'i o Pana'ewa, 'o lāua nō nā kaikaina manu o ua kupua nei, 'o ia 'o Alawī a me 'Alaiaha. He mau wahi manu makali'i loa kēia, a 'o ka māmā o ko lāua lele 'ana, he like me ka 'ōlapa 'ana a ka mālamalama o ka uila. 'A'ole nō ho'i e nalo i nā po'e kama'āina e hele ana i loko o ia ulu lehua ka punia 'ia 'ana e ka 'ino ma muli o ke kani a nei mau wahi manu.



Leleiwi

Leleiwi Point is a very visible landmark at the beginning of Keaukaha Tract II. In a mele attributed to Kūāpaka‘a, the Pu‘ulena is the wind of Waiākea and the ‘Awa is the wind of Leleiwi ([He Wahi Moolelo, 8 Mei 1861](#)).

In the ka‘ao of Lauka‘ie‘ie, Leleiwi is reported to be the son of Waiolama (m) and Punahoa (w). His sister is Makahanaloa. Leleiwi was killed by Pele, his body turned to red stone, where one can find amazing red leho and ‘ahi ([Ka Moolelo Kaa Hawaii O Laukaieie, 19 Oka 1894](#)).³

In many ka‘ao, Leleiwi is personified as a male and coupled with different females. In one ka‘ao, Leleiwi is coupled with a female named Puaoka‘ōhelo from Makahanaloa, Hilo ([He Kaa No Puaokaohelo, 21 Ape 1870](#)).⁴ In her mele “Nā Pana Kaulana O Keaukaha”, Edith Kanaka‘ole writes that Lehia, Keonepūpū, and Lā‘ieikawai are the wives of Leleiwi.

Leleiwi is mentioned in the mo‘olelo of Kamapua‘a. It is said that when Pele got together with Kamapua‘a, she was seriously injured at the consumation of their marriage. Pele’s brother Ka‘ahuikūkanaloa distracted Kamapua‘a with his mai‘a kinolau, leading Kamapua‘a away from Puna to Leleiwi, to Makahanaloa, to Hilo Palikū, and on to Hāmākua ([He Moolelo No Kamapuaa, 31 Iul 1861](#)).⁵

Leleiwi was once the site of a heiau of the same name. Leleiwi Heiau stood 3 feet tall, one foot in width, and 80 feet in length, constructed with only pāhoehoe rocks. This heiau stood near the shoreline and signs/specters would appear within and voices could be heard which foretold a big

³ O ka lae o Leleiwi ma Waiakea kai o Hilo, ua kapaia kona inoa ma o Waiolama (k) me Punahoa kana wahine, a na laua mai o Leleiwi kane, me kona kaikuahine o Makahanaloa. E loa no ma ka moolelo o Keomelemele.

A o ua Leleiwi nei keia i haina mai ai e Pele a make moloko o ke kai, aia kona kino pohaku me he lei Palaoa la ke ano e waiho la maloko o ke kai malalo o ka lae mai ka aina aku nei, he pohaku ula keia, a o ka Leho maikaiula a me he ahi la ke nana aku iloko o ke kai, he lele ke ike mai i ke kanaka, e loa no i ke kanaka lulu lehu o Hilo ma keia pohaku o Leleiwi.

⁴ Ua hanau ia o Puaokaohelo ma Hilo, Hawaii, mai loko mai o Makahanaloa, he wahine na Leleiwi, kana kane. He mau Lae kaulana keia no Hilo.

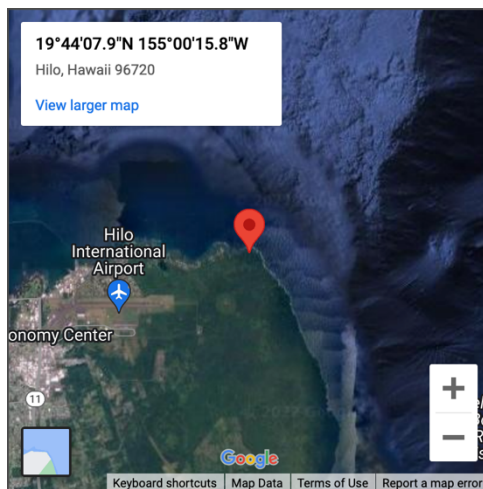
⁵ Lilo ae la keia ia Pele, huhu iho la na kaikaina i ka lilo o ke kane nana, a nele lakou, (ko lakou hele iho la no ia a hiki i Puuokapolei) Hoao ae laua nei ma ke a inoino kahi wanawana o ka pohaku, kahi kupono ole i ka maikai, a aneane pilikia o Pele. Ua ike e mai la o Kaahuikukanaloa, ke kaikunane maia o Pele, a o kekahi puni no hoi ia a Kamapuaa o ka maia, hele iho la a ma ke poo o laua nei, ku iho la ua maia nei hele a pala, i ka nana ana ae oia nei, ike keia i ka pala o ka maia, ka! e hele ae au e ai i kuu puni o ka maia, e haalele ae keia, pela i pakele ai o Pele. I ka lalau ana ae oia nei i ua maia la, e pancee hele aku ana ua maia nei, e uhai aku ana keia, a Leleiwi ka maia, alaila keia, a Makahanaloa ka maia, alaila keia, mailaila mai a Hilo-pali-ku.

rain that would spread over the land, a reminder for farmers to plant their crops, or announce the coming of a chief ([Ka Inoa Leleiwi Heiau, 29 Oka 1931](#)).⁶

The old Malo and Kahaawi families who were born near and around Leleiwi spoke of Keaukaha as a time of ‘writing.’ Ke Au meaning the ‘time’ or ‘era’ and kaha meaning ‘to write’”(Kuu Home I Keaukaha, p5).

“Leleiwi is the point. This is where Kamapuaa once came and also King Kamehameha and many other chiefs who traveled this way. They came through a trail on from Puna and on to Waiakea because Waiakea was an old village. These are the places that were populated before Hawaiian Homes came into being” (Kuu Home I Keaukaha, p10).

It is also said that the ocean from Leleiwi to Mokuola is ruled by the shark Kaneialehia. This stretch of Keaukaha coastline is kapu, sharks are forbidden from biting humans, this practice extending from ancient times until today ([He Moolelo Kaa Hawaii no Keliikau o Kau, 6 Ianuali 1902](#)).⁷



Lehia

The shark Kaneialehia may be the reason this adjacent wahi pana is named Lehia.

Lehia is mentioned briefly in the above Leleiwi Heiau article as a park where the community can be at leisure with one another ([Ka Inoa Leleiwi Heiau, 29 Oka 1931](#)).⁸ Lehia Park is also recorded in Place Names of Hawai‘i as a “coastal park at Leleiwi Point at the east end of Kalaniana‘ole Avenue. The shore is rocky, consisting of low lava sea cliffs. Two sections of the park are known as Keonepūpū and Lā‘ieikawai. Also known as Pu‘u Maile. *Lit., skilled.*”

⁶ ... e hookomo iho i keia mau wahi hunahuna mea hou e piliana i ka Heiau Leleiwi, i ike mai ai na hoa o ka aina kulaiwi, a penei iho. Ma ka nana ana i ke kulana o Leleiwi Heiau e waiho nei ma Keaukaha, Hilo, Hawaii. He ekolu kapuai kona kiekie wale no, he kapuai kona laula, a he 80 kapuahi kona loihi, a he pohaku pahohoe wale no, a he pili kokoke loa i kahakai a o na mea kuapaianaha e hoes mai ana mailoko o keia Heiau o na kahoaka kamahao o na po lai. I kekahi manawa e lohe ia ana na leo anoano eehia o ka pa ke hana mai i kekahi wa, he mau hoailona no keia e hoike mai ana he ua nui a hoes mai a pahola ae maluna o ka aina, e hoomanao ae ke ola o na mahiai i kanu i ka lakou mau mea kanu a nui, a i kekahi manawa loli ae he alii e hele mai ana e makaikai ina ka wa kuahau i e alii, oia hoi ke konohiki o ka aina i mau mea ai me na hoohiwahiwa no ka hookipa ana mai i ke alii me kona mau aialo; ia wa nae ia o kela au kahiko i hala aku, ka wa hoi a na makaainana o keia aina e paa ana i ka aina, a i keia wa ua hema aku ka aina mai na lima o kakou ka lahui Hawaii, a kaa i aea mai a hookuonokuono aku ma ka lima o na malihini luna o kou lepo aloha e Hawaii.

⁷ ... o ka mano alii nona ka lae o Leleiwi a hiki i ke kai o Makaoku e pili la me kahi mokupuni hoopapa o Mokola ka inoa, a oia no ka mano alii o Kaneialehia, a ua oleloia he kapu loa kona mau makalae ma kona kai makai o Keaukaha ma Waiakeakai, ma Hilo Bay, Hawaii, aole loa hookahi kino kanaka maoli i nahuia e ka mano ma keia wahi, mai ka wa kahiko loa mai ahiki wale no i keia au hou.

⁸ Eia o Lehia Paka no ka lehulehu e luana ai no ka manawa o ke ao maloko o kela Paka.

“Lehia, facing the point of Leleiwi, or the end of the road use to be a very nice park. It was a good place for fishing, picnics and camping. We see the remains of the stone wall which was built as a means of protection to keep the waves off. One year there was a big tidal wave and the Puumaile hospital which was there was wiped out” (Kuu Home I Keaukaha, p8).

“Lehia stands by ... Keonepūpū. Between these two area there is much black sand ... There was no foliage as we have today so you could see from one side to the other” (Kuu Home I Keaukaha, p10).

“They built the Puumaile hospital down by Leleiwi and it was destroyed by high seas. Before they built the hospital, we told them to build it about a quarter mile further in. They asked, “Why”? We told them, “You don’t know over here, there are high seas, sometimes tidal waves.” But they still built the hospital. When the tidal wave came it didn’t do too much damage, but when the next high seas came, it knocked the wall again and the hospital was gone. Some of the remains are still there now” (Kuu Home I Keaukaha, p18).

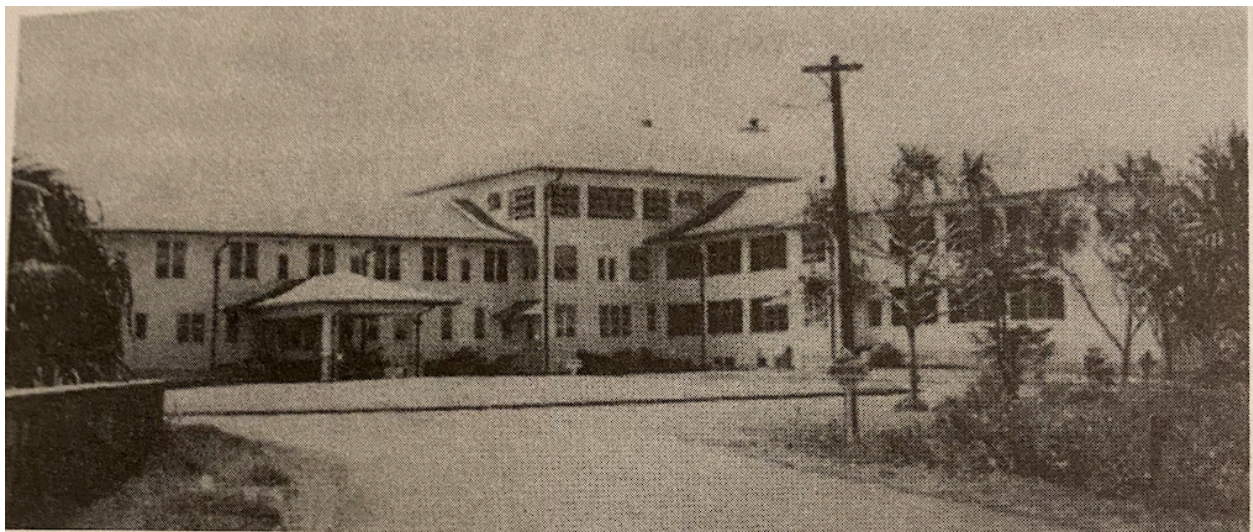


Figure 8: Puumaile Hospital ... Built in 1939, many patients were little children. Little damage from the tidal wave in 1946 (Kuu Home I Keaukaha, p18).

“I remember how John and their boys used to hunt for sea cucumbers down at Leleiwi to sell. They also planted sweet potatoes near Puumaile home” (Kuu Home I Keaukaha, p34).

“Knowing Keaukaha in my early childhood, we use to go to the front of the beach by way of trails. There were many trails coming from what is known as Ocean View Cash and Carry, clear down to King’s Landing. There were all nothing by trails and people who lived in that area King’s Landing and Leleiwi would have to travel by boat in order to get to Waiakea town” (Kuu Home I Keaukaha, p49).

The correct name for Pu‘umaile is Keonepūpū (MAHA Community Management Plan, 2).

Keonepūpū

Place Names of Hawai‘i records that Keonepūpū is a “Large, open grassy field on the shore of Lehia Park. *Lit.*, the sand [beach with] shells. Keonepūpū was a legendary person, one of the wives of Leleiwi.”

“Keonepūpū was very famous ... because much kupe‘e or hte largest sized shellfish (larger than the pipipi but grayish in color) were found here. They came only at a certain time of the year ... and were plentiful because here they could survive” (Kuu Home I Keaukaha, p10).

Lā‘ieikawai

Place Names of Hawai‘i records that Lā‘ieikawai is a “cluster of sand-bottomed, brackish-water pools that are used as swimming pools in Lehia Park. Lā‘ieikawai was a legendary person, a wife of Leleiwi.”

“Laiekawai was a good place where people came down to farm and they planted sweet potatoes and tomatoes because these could survive. These places were named after the wives of Leleiwi who was a high chief. He had these three wives, Lehia, Keonepupu, and Laiekawai. In the area of Laiekawai, there were three ponds. Each pond was relative to the wives of Leleiwi because this is where they went to take their baths” (Kuu Home I Keaukaha, p10).

Kōkī

Beyond [Leleiwi] is the round boulder at Kōkī where limu is picked (MAHA Community Management Plan, 2). The Malo family, said to be descended from the chief of Waiākea, had three homes in the area during historic times: one at Waiuli (Richardson Ocean Center), one at Koki and one at Waiokawa (MAHA Community Management Plan, 3-4).

Pūhala

Further south [of Kōkī] is Pūhala, a big flat place with a high hill (MAHA Community Management Plan, 2); a fish heiau once stood near ([Inoa ‘Āina Hawai‘i](#)). Interestingly, figure 4 shows “hala woods” in the area of Keaukaha Tract II and may be the source of this name.

‘Akolemoku

[After Kōkī] comes ‘Akolemoku where the three ‘akole sisters sat on a flat moku (island) (MAHA Community Management Plan, 2). The ‘akole is a large endemic fern (*Dryopteris unidentata*), 1 m or more high, with triangular-oblong fronds much subdivided. This fern can be found from Waiākea to ‘Ōla‘a, Puna ([Pu‘u Maka‘ala Natural Area Reserve Management Plan](#)).

Pāpa‘aloa

[no info]

Waiakeakua

Pāpa‘aloa is followed by the beautiful pond Waiakeakua (MAHA Community Management Plan, 2).

Oneloa

The sandy place where water comes out (MAHA Community Management Plan, 2).

Waika‘alulu

A pond where the water swirls up and makes noise (MAHA Community Management Plan, 2).

Waiokawa

The Malo family, said to be descended from the chief of Waiakea, had three homes in the area during historic times: one at Waiuli (Richardson Ocean Center), one at Koki and one at Waiokawa (MAHA Community Management Plan, 3-4).

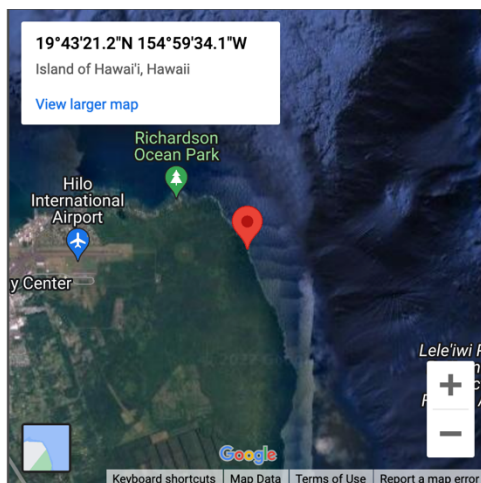
Moana

[no info]

Pōka‘ī

[Anapuka is] an area in the ‘ili of Pōka‘ī (in Waiākea) ([The Historic Puna Trail](#)).

An ‘ili of Waiākea and the name of a heiau on shore ([Kumu Pono](#)).



Anapuka

Anapuka, shown in Figure 2, is a “cave entry or underground passage ([Inoa ‘Āina Hawai‘i](#)).

An area in the ‘ili of Pōka‘ī (in Waiākea), also a heiau and associated features ([Kumu Pono](#)).

Ka‘uleko‘u

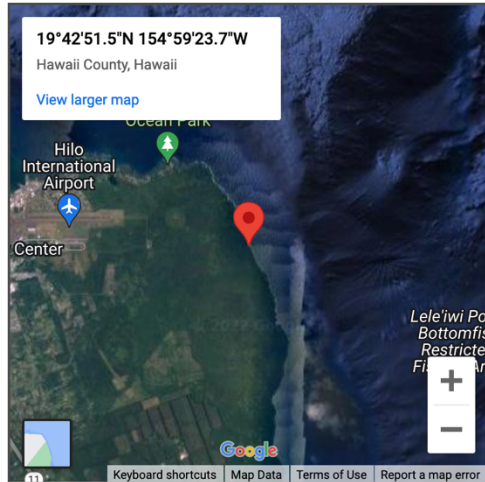
Named for the man with an insatiable sexual appetite (MAHA Community Management Plan, 2); On shore between Anapuka and Pakaiea ([The Historic Puna Trail](#)).

Pakaiea

Shoreline fronting heiau of Pōka‘ī ([The Historic Puna Trail](#)).

Puhikani

Spouting horn (MAHA Community Management Plan, 2).



Paukūpahu

Point ([Boundary Commission Testimony, 4 June 1873](#)); listed as a land division in Place Names of Hawai‘i; listed also as an ‘ili of Kea‘au ([Kumu Pono](#)).

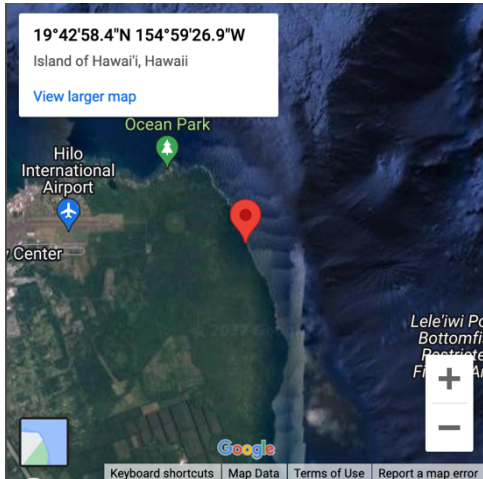
The area of Leleiwi to Pāpa‘i and Paukūpahu was historically known for whirlwinds ([He Moololo Kaa Hawaii no Laukaieie, 3 Mei 1894](#)).⁹

It is said that the shark Mikololou is from Pauai and Paukūpahu. Mikololou was taken under the tutelage of Kaneialehia, who gave him his seas and coastlines from Leleiwi to Keauhou, adjacent to Hopoe, as well as the lands from Pāpa‘i and Paukūpahu, Pāpua‘a, Hā‘ena, Pākī,

‘A‘alamanu, and Keauhou ([He Moololo Kaa Hawaii no Keliikau o Kau, 6 Ianuali 1902](#)).¹⁰

⁹ ... aia na makani puahiohio la ke hele ala mawaho ae o ka lae o Leleiwi, a ke huli aku la laua nei ma o aku o Papai me Paukupahu

¹⁰ Na hoakaka no ka Mano Mikololou, ua oleloia ma keia moololo na Pauai ame Paukupahu i Puna, Hawaii, keia Mano o Mikololou, Aia no ia wa, ua lawe ae la ka mano alii Kaneialehia ia Mikololou i wahi mano lawelawe malalo ona me he keiki hookama la paha ke ano, a ua noho o Mikololou malalo o ia ano a hiki i kona nui ana, a e hoolohe ana hoi i na olelo apau a ke alii ... Ua olelo ia no hoi ma keia moololo, ua haawi aku o Kaneialehia i kona kai me na makalae mai Leleiwi aku a hiki i Keauhou e pili pu la me Hopoe ma Puna, a o na aina maloko o keia kihi ame kela kihi oia hoi o Papai a me Paukupahu, Papuaa, Haena, Paki, Aalamanu a hiki i Keauhou. Aia keia mau aina, ua nui wale na kahu o ua mano Mikololou nei e hoi iho ai a noho iluna o na kane a me na wahine, a ua maluhia hoi ka hele ana o na mea apu ma kahakai, ame na lawaia maluna o na waa he he nahu ole ia la e ka mano, aia nae, mamuli o ka nui loa o na kahu ana e noho ai, ua ulu ae la na manao pono ole a me ka ohumu i kekahi poe kahu ina loa a me na waiwai o kahi poe e aku, a ua kena aku la lakou ia Mikololou e aki (nahu) i ke kanaka me ka hoolohe ole i na olelo no a Kaneialehia me ka manao paha e malo ana kana mau hana i kela mana nui e nana mai la.



Kawīakāwā, Kawiokāwā

A sort of *awaawa* (gulch or depression) at shore ... some distance on the Puna side of the cocoanut trees on Paukupahu ([Boundary Commission Testimony, 4 June 1873](#)); The ahupua‘a of Kea‘au, in Puna to the south, was given to Lunalilo in the Great Mahele and was bought by William Herbert Shipman in 1882. According to Lunalilo’s deed the Hilo-Puna border was marked by an old heiau named Kawiakawa (MAHA Community Management Plan, 4).

Heiau site on shoreward boundary of Waiākea and Kea‘au; Walking along the coast line through Keaukaha past Leleiwi, Hudson entered Puna in the land of Kea‘au. Hudsons’ Site 74., a “Walled, paved and terraced platform; about an eighth of a mile on the Hilo side of Papai” (ibid.:295), is identified as a possible heiau. It is possible that this site is the heiau called “Kawiakawa,” referenced in the Boundary Commission testimonies and survey records cited in this study ([Kumu Pono](#)).

Kamokuna

Actual oceanside boundary between Waiākea and Kea‘au ([Kumu Pono](#)).

Pōhākau

Point and flat lands in vicinity of Kāwīakāwā ([The Historic Puna Trail](#)).

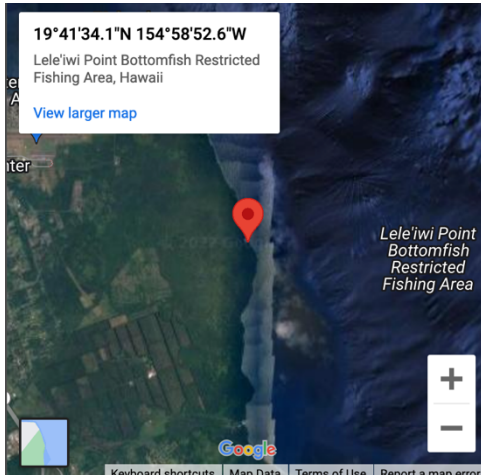
Kalipala, Kalīpalu

[Kalipala is] a point at Pāpa‘i ([Boundary Commission Testimony, 4 June 1873](#)).

[Kalīpalu is] a point at Pāpa‘i ([Inoa ‘Āina Hawai‘i](#)).

Uhunui

Point between Pāpa‘i and Kāwīakāwā ([The Historic Puna Trail](#)).



Pāpa‘i

Old village site on shore of Kea‘au, near Paukūpahu ([The Historic Puna Trail](#)). Hawai‘i Places Names records that Pāpa‘i is a “narrow, crescent black and green sand beach fronting a coconut grove and the ruins of the former fishing village of Pāpa‘i. It was here in 1793 that King Kamehameha I lead a small raiding party in an attack on the village. Leading his warriors, Kamehameha leaped out of his canoe and gave chase to several fishermen, but as he ran, he stepped in a crevice in the lava, catching his foot. One of the fishermen picked up a canoe paddle and broke it over Kamehameha's head. By this time other men from the village were arming themselves and were

coming to assist, so Kamehameha's warriors freed him, and they retreated. Years later, after Kamehameha had successfully united all the Hawaiian Islands, he visited the town of Hilo. Members of his retinue, still incensed that a commoner had struck the king and had not been punished, rounded up the fishermen at Pāpa‘i who had attacked Kamehameha, brought them before the king, and demanded their execution. Kamehameha answered these demands with a pardon in the form of the now legendary decree known as the Law of the Splintered Paddle.

Today Keaukaha Tract II is referred to as “King’s Landing” by contemporary residents. King’s Landing, however, is actually the name given to Pāpa‘i, a village in Puna approximately 3 miles south of the Hilo district border ... because the road to Pāpa‘i, or King’s Landing, passes through Keaukaha Tract II, the name has been applied to thoe whole area in recent years (MAHA Community Management Plan, 2).

Lanipō

When Makanikeoe left ‘Ōla‘a, he headed for Lanipō, where his sister lived. This area can be found seaward of the government road from Hilo Town to Puna, through the Pana‘ewa forest that passes Māwae, the boundary of Hilo and Puna, Lanipō is there, near Pāpa‘i, where Kamehameha I’s foot got stuck and his forehead hit by a paddle ([Ka Moololo Kaa Hawaii O Laukaieie, 12 Oka 1894](#)).

Māwae

Māwae is the boundary of Hilo and Puna ([He Moololo Kaa Hawaii no Laukaieie, 3 Mei 1894](#)).¹¹

Māwae is a large crack running across the Government road (*makai* road) to Puna, and thence to Kawīakāwā, a sort of *awaawa* (gulch or depression) at shore, point of Kalipala at Pāpa‘i, and point of Paukupahu. The māwae runs between these two, Kawīakāwā is some distance on the Puna side of the cocoanut trees on Paukpahu ([Boundary Commission Testimony, 4 June 1873](#)).

¹¹ O keia ka moku ana o Hilo me Puna; i oleloia o Mawae

Hinamakaulunui

Hinamakaulunui was a female who loved to surf. Her body was red ... her home was in the sea near Hōpoe. She lived in a deep hole where good fish live, such as mā‘i‘i, kole maka onaona, maomao, and other delicacies. Hilo’s natives are familiar with the boulders named Hinamakaulunui sitting in the ocean between Leleiwi and Pāpa‘i ([Ka Moolelo Kaaō Hawaii O Laukaieie, 19 Oka 1894](#)).¹²

Oceans

Paikaka

When referencing Hilo, the Hawaiian language newspapers mention the sea of Paikaka. An article about Hilo Town publishing in 1878 reveals that the town of Hilo is located in the south portion of the district and that it sits directly in front of the Sea of Paikaka and Leleiwi Point; to the east and south lies the ‘ōhi‘a of Pana‘ewa ([No Ke Taona O Hilo, 16 Now 1878](#)).¹³

‘Aikanaka

“The eastern edge [of Keaukaha Tract II] runs along the shoreline of the ocean called ‘Aikanaka” (MAHA Community Management Plan, 2).

‘I, ‘Īko‘a

‘Ī is the name of a famous ‘ahi fishing ground of Hilo, several ka‘au (40) deep, this fishing ground sits next to a very deep hole – fishermen are not able to hold their breath and reach the bottom, for fishermen knew that they aren’t able to hold their breath for 5 lau (400). A Hilo native reported that this fishing ground is named ‘Ī, a shoal located way out in the ocean, far out. To triangulate, aim the bow of the canoe to Kūki‘i, Puna, and anchor the middle section of the canoe to the Coconuts of Hā‘ena in Kea‘au, and below this will be ‘Ī, which Hilo natives brag

¹² He wahine puni heenalu keia o kakou a he puni lealea no hoi ma na ano a pau, a he ano ula la kona kino holookoa ke nana aku ... O ka lua o ka hale o keia wahine o Hinamakaulunui, aia no ia maloko o ke kai ma kahi kokoke ma kahi o ke kino pohaku o Hopoe lehua kiekie iluna
Makau i ke kanaka
Lilo ilalo e hele ai e ilalo
Keaau iliili nehe
Olelo ke kai o Puna i ka uluhala
Kaikoo Puna

He wahi lua hohonu aia mawaho pono aku o ua wahine kino pohaku kupanaha la o Hopoe e waiho la a hiki i keia wa he hale noho keia nona ia maikai apau. E like me ka Maiii a me ke Kole maka onaona, a Maomao, a me na ia maikai e ae a pau o na ia a pau i makemake ia i na manawa a pau ke kii aku ma keia lua, he manawa pokole loa ke alu aku.

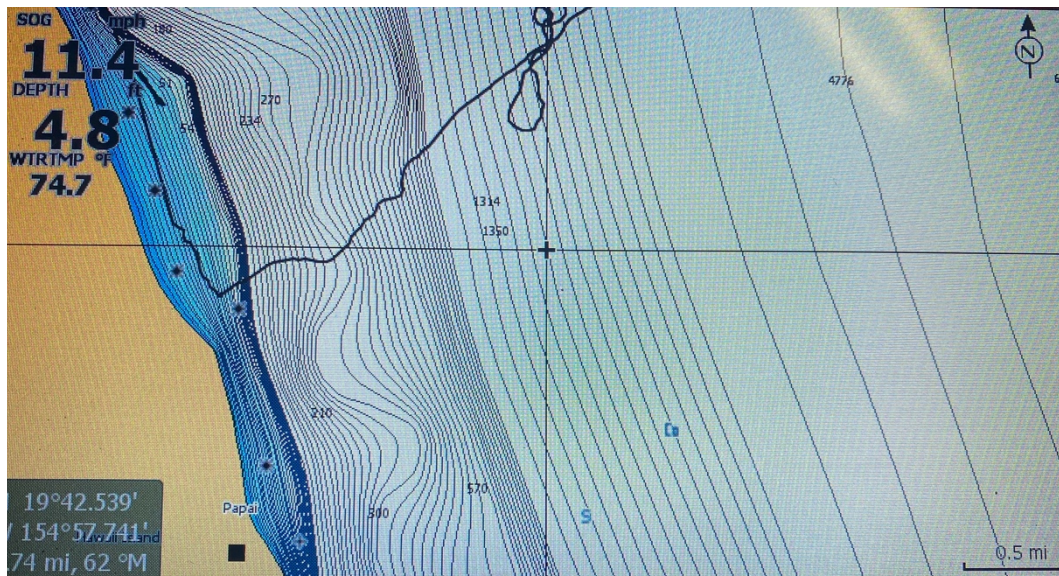
A nolaila, ua haalele aku ka huakai i ke Ahupuaa o Keaau, ka aina kaulana i ke kipaia e ko Kauai keiki puukani i ike ia ma na moolelo kaaō lehulehu wale o Hawaii nei, nolaila, na ko Hilo poe e ike a hoomaopopo i kela mau pohaku i kapaia ka inoa o Hinamakaulunui e okuu ala i ke kai mawaena o Leleiwi a me Papai, oia ka nalu loihi hookahi ma keia Pae moku, he mau mile ka loihi mai kela wahi mai a pae i Aalamanu, a o ka nalu o Keahua ka nalu ma ke kai kuono ma Hilo one

¹³ Aia keia taona, ke waiho nei ma ka Hema o Hilo, a mamua pono o kona alo ke Kai o Paikaka, a ma ka lae o Leleiwi; ke huli pono aku oe i ka Hikina, e ike oe i ka Ohia o Panaewa, a hala loa ae ma ka Hema.

about in song, “I am I fisherman of ‘Ī, always returning with ‘ahi.” This famous ‘ahi fishing ground is known to many ‘til today ([Ka Moolelo Kaa Hawaii O Laukaieie, 19 Oka 1894](#)).¹⁴

‘Īko‘a [is] the fishing grounds of ‘Ī where he fished for ‘ahi. The location of this ko‘a was obtained by bringing into line the coconuts of Pāpa‘i and the Cape of Anapuka (ka lae o Anapuka) on the Puna side, and on the Hilo side, the coconuts of Kaumai (near Keaukaha), and the cape of Kiha ([A History Of Fishing Pratices](#)).

The following image shows the depth of the ocean along the southern portion of Keaukaha Tract II, near Pāpa‘i, where modern fishermen are seen fishing for ‘ahi:



A note on modern fishing grounds ([History of the Hawaii State FADs program](#)):

Fishermen in Hawai‘i and other parts of the world have long known that tunas and other pelagic fishes are attracted to floating objects. Fishermen have

¹⁴ E like me ko lakou hele ana mai mai Waipio mai, mahope iho o na kuka olelo ana, ua hui aku la ka Punohuula o ka moana ia Laukaieie me kana kane no ka ilikai ma kahi o ke koa-ahi kaulana o Hilo, oia o I kona inoa, he mau kaa kona hohonu, aia nae ma kekahi aoao o keia koa ia ahi e kokoke mai ana, he lua hohonu loa – aohe aho a ka poe lawaia e ku ai ilalo o keia lua, no ka ike o ka poe lawaia kahiko aole e ku ia ke aho me ka makau i na lau elima.

Nolaila, ua i mai kekahi kanaka o Hilo o I kona inoa, a loa kahi papau mawaho loa o ka moana mai na kapakai mai o Hilo, he mamao loa keia wahi a I e ana nei he mau kaa wale no ua ku ke aho ilalo, a ma kai aku o ua wahi nei ana i manao ai i koa-ia, he hohonu loa, a ua maopopo ia I na maka ouka o ka aina.

Oia hoi e hoopololei i ka ihu o ka waa i ka puu o Kukii ma Puna, a e hoopaa i ka honua o ka waa i na Niu o Haena ma Keaau, a malalo o keia koa-ia o I, a oia ka mea a ko Hilo poe keiki lawaia i olelo kaena iho ai ma ke mele.

Lawaia nui au no I

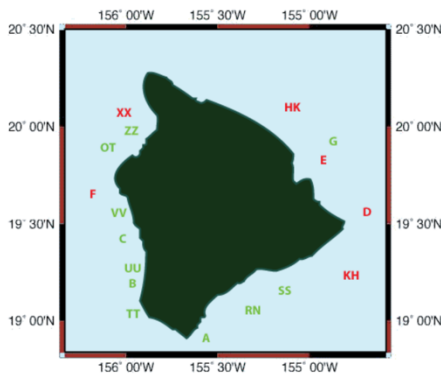
He ahi ka ia e hoi ai

O keia koa ahi kaulana ma Hilo, he kamaaina na keiki o na aina la ia koa a hiki i keia wa, a mahope iho o ka makaikai ana o ka mea nona keia moolelo ma ia wahi.

benefited from this behavior by fishing around floating logs, nets, debris and other flotsam.

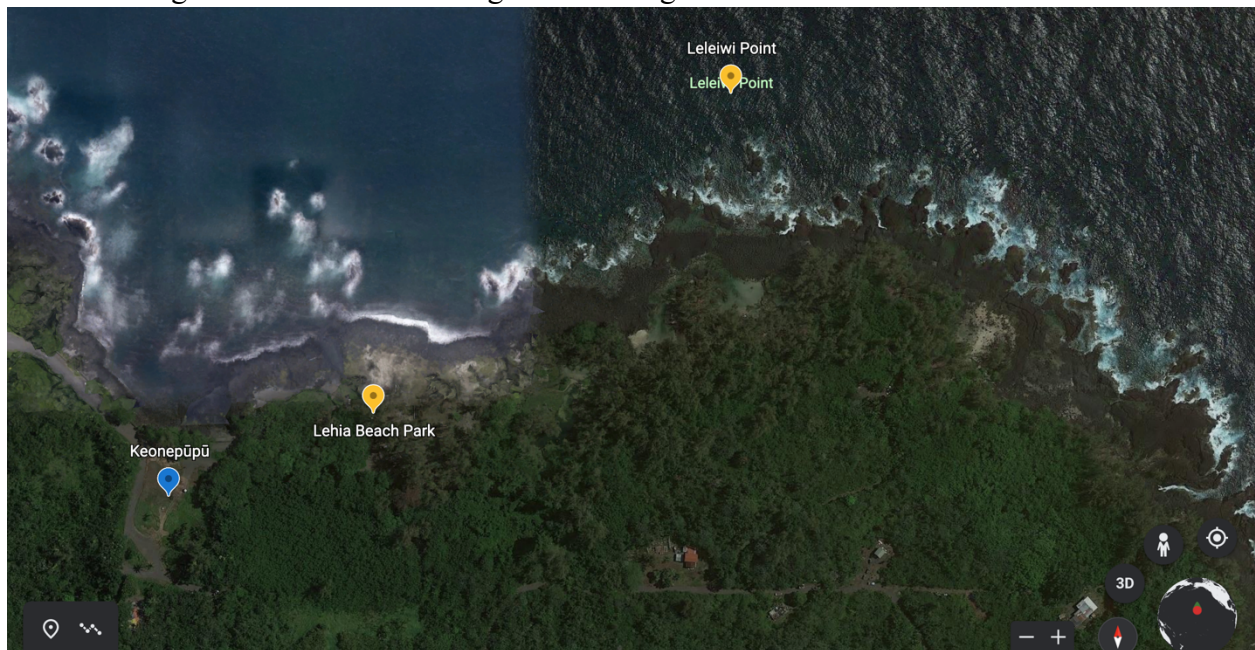
The State of Hawai'i has capitalized on this phenomenon by placing Fish Aggregating Devices (FADs) in the waters surrounding the Hawaiian Islands. In these waters, schools of tunas and other important pelagic fishes such as dolphin fish (Mahimahi), wahoo ('Ono), and billfishes can be induced to congregate and remain for periods of time in an area so that fishers can easily locate them. Thus, the FADs are used to "attract" and "hold" pelagic fishes in areas to enhance fishing.

In 1980, the Division of Aquatic Resources designed, constructed and deployed twenty-six (26) FADs in waters around the main Hawaiian Islands. The FADs were located 2.4 to 25 miles offshore and in depths of 80 to 1,510 fathoms as recommended by Hawaii's fishermen through statewide public meetings.



According to native Hawaiian fishermen, these FADs have attracted fish away from traditional fishing grounds, such as 'Īko'a, and have changed the behavior of these pelagic fish. Old-time fishermen mention that the 'ahi found at these FADs are smaller than what used to be found at traditional fishing grounds, possibly the result of a smaller population of large fish, or that larger fish aren't attracted to these man-made devices.

The following are screenshots of Google Earth images of the Keaukaha Tract II coastline:







Paukūpahu







Lehia – Paukūpahu
PAPAHĀNAUMOKU

Huihui Kanahale-Mossman, PhD
Luka Kanaka‘ole, Kia‘i Loko

PAPAHĀNAUMOKU

Papahānaumoku is the study of all things that are born. In the Kumulipo, or the data filled composition describing living things that are native to Hawai‘i island, the science of Papahānaumoku is stated in line 1794 or “O Papanuihānaumoku” followed by the sequence of events that induce the possibility of life in Hawai‘i.

Papa – the study or class of

Hānau – to be born, to give birth, to be separated from the origin

Moku – to be severed, a district, island, section, divide in two

Or the study of that which is born and separated from the origin

Papahānaumoku is the product of Papahulihonua and Papahulilani. Papahānaumoku begins at the embryonic state of all life forces till death. It describes all of the life cycles of our island’s flora and fauna inclusive of man. It is the process of investigating, analyzing and reflecting upon all things that give birth, regenerate and procreate.

The following items are all examples of Papahānaumoku.....



‘ōlepe



hala



‘a‘ama



La‘ī



Manō



Kanaka

KUMULIPO

‘O kane ia Waiololī, ka wahine ia Waiololā,
Hānau ka limu kala noho i kai
Kia‘i ia e ka ‘akala noho i uka
he pō ‘uhe‘e i ka wawa, he nuku he wai ka
‘ai a ka lā‘au



limu kala

The coast line and land plant life in this area from Leleiwi to Paukūpahu are categorized in this lines of the Kumulipo. This phrasing is repeated for several paragraphs in wa ‘akahi, the section on plants, and then again in wa ‘alua, with a slight change in the last portion of the statement. When the makawalu process is utilized the statement is easier to understand. This is the makawalu of this statement.....

‘O kane ia Waiololī – Waiololī is a male characteristic

Wai – water

Olo – rapid back and forth motion like a saw

Lī – chill or shake

‘O ka wahine ia Waiololā – Waiololā is a female characteristic

Wai – Water

Olo – rapid back and forth motion like a saw

Lā – depending upon the sun

Hānau ka limu kala – the limu kala is produced
Noho i kai – at the ocean
Kia‘i ‘ia e ka ‘akala – guarded by the ‘akala
Noho i uka- on the land

Plants like all other organisms have male-like functions and female-like functions. For plants, this has to do with the water intake and release, or the life functions of a plant. The whole picture is complete with the remainder of the statement.

He pō uhe‘e i ka wawa

Pō – night, dark, unseen, not in the visible range
Uhe‘e – slide, surf, slip, flee, melt, flow, drip, soften, hang down
Wawa –space, interval, staff, channel
An unseen outflow into channels, to other spaces

This portion of the statement describes how seeds, grains, embryos, spores, kernels etc travel from one space to another.

The last portion of the sentence is a description how plants obtain nutrients or ‘ai.

Nuku – beak, or root tip
He wai ka ‘ai – A water molecule is the nutrient

Plants absorb nutrients as dissolved minerals in water through the root tip.
The plants in the area of Keaukaha Tract II are perfect examples of this process.



Hala roots reaching for water

From Waikeakua to Paukūpahu there are several anchialine to fresh water ponds on both sides of the access road. These ponds are a distance from the coastline. These ponds are a result of extremely permeable pahoehoe allowing water to flow through. Lava tubes or Kuha‘imoana (horizontal) and Kanemiloha‘i (vertical) tubes are found throughout the area and expose basal water. This aspect of Keaukaha Tract II highlights the statement “he pō uhe‘e i ka wawa” where these tubes are the wawa in which seeds, embryos, gymnosperms etc will pō ‘uhe‘e with alacrity in comparison to other geology on this island.



O kane ia Wai'ololi, o ka wahine ia Wai'ololā
Hānau ka Pahaha noho i kai
Kia‘i ia e ka Puhala noho i uka
He po uhe'e i ka wawa
He nuku, he kai ka 'ai a ka i‘a

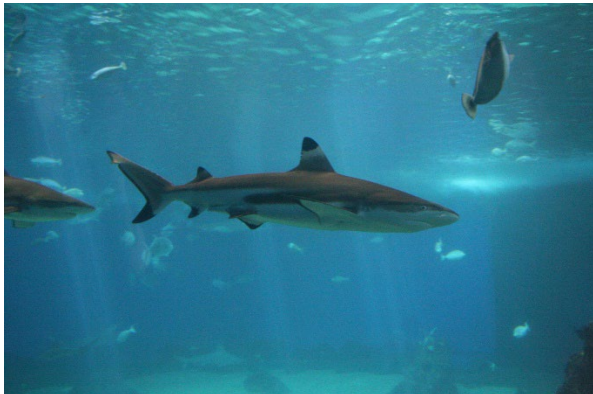


Kia 'i 'ia e ka puhala noho i uka

Each of the Papa in the methodology of Papakū makawalu can be detailed in certain ancestral texts. The Kumulipo is the reference for Papahānaumoku. Coral, reef organisms, and fish or ocean organisms that swim are described in the first two epocs or *wa* of the Kumulipo. This is where we will find the most significant residents of Keaukaha Tract II moku. The following is the text listed in the wa 2.....

138. Hānau ka i'a, hānau ka Nai'a i ke kai la holo

139. Hānau ka Mano, hānau ka Moano, i ke kai la holo,



Hānau ka Manō



hānau ka Moano, i ke kai la holo,

140. Hānau ka Mau, hānau ka Maumau i ke kai la holo

141. Hānau ka Nana, hānau ka Mana i ke kai la holo

142. Hānau ka Nake, hānau ka Make i ke kai la holo

143. Hānau ka Napa, hānau ka Nala i ke kai la holo

144. Hānau ka Pala, hānau ke Kala i ke kai la holo

145. Hānau ka Paka, hānau ka Papa i ke kai la holo

146. Hānau ke Kalakala, hānau ka Huluhulu i ke kai la holo

147. Hānau ka Halahala, hānau ka Palapala i ke kai la holo

148. Hānau ka Pe'a, hānau ka Lupe i ke kai la holo



Hānau ka pe'a, Hānau ka lupe i ke kai la holo

149. Hānau ke Ao, hānau ke Awa i ke kai la holo
150. Hānau ke Aku, hānau ke 'Ahi i ke kai la holo,
151. Hānau ka Opelu, hānau ke Akule i ke kai la holo
152. Hānau ka 'Ama'ama, hānau ka 'Anae i ke kai la holo
153. Hānau ka Ehu, hānau ka Nehu i ke kai la holo
154. Hānau ka 'Iao, hānau ka 'Ao'ao i ke kai la holo
155. Hānau ka 'Ono, hānau ke Omo i ke kai la holo
156. Hānau ka Pahau, hānau ka Lauhau i ke kai la holo
157. Hānau ka Moi, hānau ka Lo'ilo'i i ke kai la holo
158. Hānau ka Mao, hānau ka Maomao, i ke kai la holo
159. Hānau ke Kaku, hānau ke A'ua'u i ke kai la holo
160. Hānau ke Kupou, hānau ke Kupoupou i ke kai la holo
161. Hānau ka Weke, hānau ka Lele i ke kai la holo
162. Hānau ka Palani, hānau ka Nukumomi i ke kai la holo
163. Hānau ka Ulua, hānau ka Hahalua i ke kai la holo

164. Hānau ka 'Ao'aonui, hānau ka Paku'iku'i i ke kai la holo

165. Hānau ka Ma'i'i'i, hānau ka Ala'ihī i ke kai la holo



Hānau ka ala'ihī i ke kai la holo

166. Hānau ka 'O'o, hānau ka 'Akilolo i ke kai la holo

Where Hānau ka Ehu is “*born is the Ehu*” and Hānau ka Nehu i ke kai la holo is “*born is the Nehu swimming in the ocean.*”



Wa ‘elua lists many of the food that are consumed and used by the human residents are found such as the Manō, the moano, kala, pala, moi, the palani, and the Ulua just to name a few.

As this wa progresses a more annotated version of a list is composed. The annotation reveals the process in which the fish obtain food.

O kane ia Wai'ololi, o ka wahine ia Wai'olola

He po uhe'e i ka wawa

He nuku, he kai ka 'ai a ka i'a

The lines are almost identical to those lines in the first epoc, or wa ‘akahi. The only line that looks slightly different is the line that significantly concerns the fish and anenome abundance on that coastline.

He nuku, he kai, ka ‘ai a ka i’a.

Nuku in this case refers to the beak of the fish, he‘e (octopus), or wana (urchin).

He kai ka ‘ai a ka i’a refers to the fact that sea water, specifically the sea water along the coastline from ‘Ākolemoku to Paukupahu contains dissolved minerals not only from evaporated

carbons, methanes in the air, but enriched sea water of heavier solutes from the excess of groundwater, the same groundwater that provides seeds, grains, gymnosperms that becomes plants.



‘O Pana‘ewa nui moku lehua

‘ōhi‘a kupu hāo‘eo‘e

“*Large Pana‘ewa, a lehua forest, with uneven growth ‘ōhi‘a.*” As a part of or adjacent to the Pana‘ewa forest Lehia mā is home to ‘ōhi‘a tree growth that extend from far in land to the coast line. The trees grow as tall as 12-15 feet. Only red colored ‘ōhi‘a flowered trees were observed, but there could be trees that bloom other colors. As the mele reads.....

He aka ka wī a ka wai i Pana‘ewa
O Pana‘ewa nui moku lehua
‘Ōhi‘a kupu hāo‘eo‘e
I ka ua Lehuaula, i ka wī ia e ka manu
A ua pō e
Pō Hilo I ka uahi o ku‘u ‘āina
Ola ia kini ke a maila ke ahi e

*The lack of water is reflective of Pana‘ewa
Pana‘ewa a large lehua district
‘ōhi‘a growth is scraggly
in the Lehua‘ula rain, is the squeal of the birds
until the darkness
Hilo is darkened by the smoke of my land
numerous life when the fire is lit*



Per the line “He aka ka wī a ka wai i Pana‘ewa” the lone water supply in Pana‘ewa is from the Lehuaula rain. The Lehuaula rain also falls in the Lehia to Paukupahu land area however unlike Pana‘ewa the water supply is healthy due to the storage of water in the pahoehoe substrate. The mele continues to describe Hilo and the poor visibility due to the uahi o ku‘u ‘āina, or the smoke that covers Hilo and the amount of water in the atmosphere that capture the ashy particles that build heavy rain clouds. This is good growing conditions for the ‘ōhi‘a trees found in this coastline area.

The Kumulipo is descriptive of the Papahānaumoku of Lehia to Pāpa‘i especially in the first two wā or epocs. In wā ‘akahi or the first epoc, the list of living things are the limu, sea urchins, and plants. Many of these are found in this land area. The wā then goes on to a annotated listing of plants and seaweed. The narrative in the annotated listing describes how plants grow, eat, transpire and obtain water. The next wā, or wā ‘alua, lists fish. Many of these fish call this coastline home, a natural resource utilized by the immediate community of kanaka. The annotated listing of fish in this section describes the transport of minerals, seeds, gymnosperms and other growth origins through the many lava tubes that provide water to the ponds in the area. Lastly, this narrative showcases the data provided in the Hi‘iaka and Pele collection concerning Pana‘ewa. Since this land area of Lehia to Papa‘i is adjacent to and part of the Pana‘ewa moku lehua or the lehua forest of Pana‘ewa, ‘ōhi‘a trees are abundant here from inland all the way down to the coastline.



A Papahulilani Study of Lehia



Wainaku, Capella, Dedicated to 'Ahua'ī and Hilo

By: Kalei Nu'uhiwa, PhD
For EKF

July 2022

Introduction

This report was created to assist with incorporating Hawaiian atmospheric epistemology into the larger report. The intention of this papahulilani report is to consider all of its natural atmospheric processes that are pertinent entities that continue to contribute ‘ike (knowledge), mana (agency), and mauiola (wellbeing) to the collective Lehia community. This report deliberately acknowledges the natural processes and Hawaiians’ kincentric philosophies to pay attention to what Lehia conveys to those who reside, work, or learn on its lands.

The information that was collected for this report comes from over 150 articles, compositions, and stories that were researched, deconstructed, analyzed, and reconstructed. ‘Ike was gleaned from the collected information then studied through a process called Papakū Makawalu. This report will provide suggestions to develop pilina, relationship, with the ‘āina, kai, lani, and mea ola.

This report uses Hawaiian language newspapers, historical literature, and various Hawaiian compositions to extrapolate data. This report does not include land tenure, site visits or obtrusive data collected from interviews. All Hawaiian terms used in this report are translated upon their first use. Unless stated, all Hawaiian language paraphrasings used in this report come from either the Pukui and Elbert Hawaiian Language or the Andrews Dictionary.

LEHIA

In terms of atmospheric activities, the project area has some of the most pristine sky viewings of the pae‘āina o Hawai‘i especially at sunrise as noted in the story Lā‘ieikawai. The relationships and interactions between Lā‘ieikawai, twilight time, and Venus, Jupiter, and the Sun marks the conjunction activities between time and natural solar, lunar, and planetary movement along the ecliptic. The views of the north, east and south are open and unaffected by light or construction. The views to the west at night are affected by the airport light. However, the sunsets can be marked by the pu‘u and natural features of Maunaloa to the southwest and Maunakea to the northwest. Star and planet risings would also be spectacular and are also mentioned as characters, Waka and Poliahu, in the story of Lā‘ieikawai. The viewing in the west would be severely disrupted by the airport lighting. The risings of Makali‘i, Pleiades, Mānaiakalani, Scorpius, and Kai‘anui, Milkyway, would be phenomenal. All daytime atmospheric viewing of the clouds, rainbows, and wind would be impressive.

A list of the winds, rains, and clouds will be included to help become familiar with the atmospheric seasons of Lehia.

Nā Ala Polohiwa A Piko o Wākea

The northern boundary for the sun’s trek is called Ke Ala Polohiwa A Kāne that marks the summer solstice. The southern boundary for the sun’s trek is called Ke Ala Polohiwa a Kanaloa that marks the winter solstice. The exact middle of these boundaries is where the equinoxes, Piko o Wākea, occur. These boundary markers are natural points that preserve annual time and also mark the important stars that also keep time in the kaulana mahina. The kaulana mahina is pertinent to understanding the seasons and growth processes of the living biota in the environment. A list of the stars will be added in a chart to suggest which ones are the most important for keeping time.

To become better acquainted with the atmospheric and celestial activities, it is suggested that a site be chosen to kilo sunrises and sunsets throughtout the year and create northeastern and southeastern markers. The same is suggested for the northwestern and southwestern boundaries. These markers will remind individuals where the sun’s boundaries are located in relationship to the ‘āina and natural features that surrounds Lehia.

Winds, Rains, & Boundaries

In the next section a list of the winds, rains and boundaries are included in a spreadsheet. Most of the wind names mentioned in the mo‘olelo Lā‘ieikawai, Keaomelemele, and Ka‘ehuikimanōpu‘uloa are pule and mele that note a cross section of atmospheric activities from both Hilo and Puna. The first list includes the wind names.

Winds of Hilo		
Hilo	‘A‘ala Honua or ‘A‘alahonua	Wind accompanied by rain
Hilo	Alahonua	A light breeze
Hilo	Kēhau	This pleasant prevailing wind blows down from the mountain, downslope until the sun rises.
Hilo	Kēpia	Sulphuric smelling wind
Hilo	Kēwai	Moisture laden wind
Hilo	Malanai	This pleasant prevailing southeasterly wind blows up from the ocean once the sun starts to descend after noon. Reportedly originates from southeastern coastline of Hilo.
Hilo	Mālua	This wind carries moisture or rain with it and starts out in the ocean.
Hilo	Mālua Kī‘i Wai/ Māluakī‘iwai/Mālua lua Kī‘i Wai	Sea breeze accompanied by showers
Hilo	Pu‘ulena	This wind originates in Puna and carries the scent of hala and maile on it.
Hilo	‘Uluaunui	This wind is from Maui and is very strong
Hilo Paliku	‘Uluau	Originates from Maui.

The second list includes the rain names and the land boundaries that can be seen clearly from Lehia.

Rains		
Hilo	He'enehu	A misty rain off the coast when nehu fish are running. Another article states the rain looks like nehu fish falling from the sky.
Hilo	Kaniko'o	So heavy sounds like the tapping of canes on your roof.
Hilo	Kanilehua	A mistlike rain
Hilo	Po'olipilipi/Pōlipilipi	So called because this heavy rain forced the people to spend so much time sleeping that their heads were sharpened as by an adze
Pī'ihonua	Hehi Ulu	A purge of rain.
Waianuenue	Lei Mā'ohu	Mist
Boundaries		
'O'okala	Northern Boundary	
Leleiwi	Eastern Boundary	
Moku'āweoweo	Mauka Boundary	

The article “Na Kamahale I Ka Uka O Puna” (1877) from the Hawaiian language newspaper Ka Lama Hawai'i describes some of these rains more fully (a partial translation of the article follows):

We left the boundaries of Puna and entered Hilo though the Pana'ewa forest, where woody fragrance permeated the air and the light drizzle of the Kanilehua rain saturated us. Hilo Hanakahi is known for its torrential downpours, and this is but six of the rains of this area: 1) Kanilehua, 2) Alanilehua, 3) Hālaulani, 4) Mololani, 5) Lanipili, and 6) Lanipolua. There is no other wahi pana in the whole archipelago that is as proud of its copious rain and its charming names. Most of the rain names are related to the lehua, the chirping of birds, living conditions, and the atmosphere where the rains originate.

KANILEHUA. When the forest is still, the birds happily sip the lehua nectar to their heart's content (a time also when the birdcatchers are reconnoitering). When

rain falls torrentially and trees are swaying in the Pu‘ulena and Malanai winds, the birds are agitated, screeching in distress. This is when you hear the clamor of the tiny birds throughout the forest, crying over the loss of the lehua nectar, which is why this rain is called “Kanilehua” (lehua cry).

This rain customarily begins between the hours of 8-11am and 1-3pm. It begins imperceptibly, becomes a torrential downpour, before turning into a light drizzle. This rain starts at the north end of the Pana‘ewa forest moves west along the forest’s edge along the hala grove, and sometimes rains onto Mokuola before moving further west towards the eastern part of Hilo town before raining down upon Mokaulele. From there, the rain dissolves into the mist of Haili, a forest 2-3 miles south of Hilo. This rain falls for less than an hour, but thoroughly drenches the lehua forest in that time. The name of this rain is famous in songs of this land and commemorates the town of Hilo.

ALANILEHUA. This rain is also known as Wailehua; this rain is named after the nectar of the lehua. This rain starts at the shore of Hā‘ena, and from those skies comes west to shower on the hīnano blossoms of Puna and pour onto lehua of Pana‘ewa. This rain doesn’t reach the town but moves to the west of Pana‘ewa and turns south before heading to Pā‘ie‘ie and dissipating into mist. This rain is weak and occurs rarely, usually between 10-12pm.

HĀLAULANI. Because of the way this rain sits upon the canopy, natives say it is the Hālaulani rain, as if it is a roof for the Pana‘ewa forest. The lehua blossoms favor this rain for that is where this rain is found. It rarely leaves the forest. This rain begins in the northeast corner of Pana‘ewa forest and circles within the forest.

MOLOLANI. This rain was so named because of its sparse raindrops and the graceful way it streams as it falls on the lehua. This is the “Mololani rain, the rain the scatters the lehua flowers of Pana‘ewa”. This rain begins from clouds and streams like white thread released, drizzling atop the lehua blossoms of Pana‘ewa and continuing on to the lehua of Haili’s western tip and dissolving into its mist.

LANIPILI. On overcast days when large drops fall everywhere incessantly, thunder rumbles sporadically, cold creeps in, hail falls to the ground – that’s when the phrase “Ku‘u hoa mai ka ua Lanipili of Hilo” is heard. This rain shreds the lehua. In some cases this rain lasts more than a week.

LANIPOLUA. On overcast days when the clouds are dark gray, enveloping the tops of the trees like mist, this light rain occurs, more like an interminable fog that turns the forest gray. Sunlight is blocked, only shade. This fog sits atop Pana‘ewa and extends to the forest of Paliuli and on to the lehua of Haili. This is a calm rain that doesn’t end quickly, and at its end, dissipating as mist with good weather following.

EMERGING THEMES : Environmental Phenomena

The following illustrates the emerging themes found from the mo‘olelo and mele examined for this study.



Equinox sunrise, 2027

ATMOSPHERIC PHENOMENA

Lā, sun

Ke ao polohiwa a Kane – summer solstice

Ke ao polohiwa a Kanaloa – Winter solstice

Due to Papa‘is proximity to Kumukahi, the coastal frontage is perfect for sunrise observations during key times. Sunset observation is also possible over Mauna Kea.

Ala Polohiwa a Kāne (Summer Solstice) occurs in June from the 20th to the 23. Of course the sun will move a degree as the days go by, but measurements can still come close to accurate as the alignment of the kūahu is being adjusted.

Hawaiians noted and named different parts of the sun’s rising, zenith, and setting from the sun’s vertical passage, rising in the east and setting in the west; Hawaiians also noted and named the different junctures of the sun’s movement on its horizontal passage on the horizon, from its extreme north position to its extreme south position. These boundaries set by the sun’s vertical and horizontal passage are the Hālauaola, the structure, or house, that all life comes from and/or moves through. The Hālauaola is also the space that all the stars, planets, moon, sun, and any other atmospheric activity occurs. Nā Ao Polohiwa & Ka Piko O Ka Honua Ke Alanui Polohiwa a Kāne and Ke Alanui Polohiwa a Kanaloa are collectively termed “Nā Ao Polohiwa”. Nā Ao Polohiwa are the boundaries of the sun’s travels. “Ao” can be interpreted as “realm”, “world”, or “space”. “Polohiwa” is “dark

Kāne's ao polohiwa resides in the north, beginning at the equator and includes the latitudinal space 23.5° above the equator. Kanaloa's ao polohiwa resides in the south, beginning at the equator and includes the latitudinal space 23.5° below the equator. These ao polohiwa mark the edges of the Hawaiian universe, as anything beyond Ke Ao Polohiwa a Kāne is considered as lewa (space) and anything beyond Ke Ao Polohiwa a Kanaloa is considered as lipo (darkness). These intervals are known as the solstices, which mark the furthest trek of the sun's travels. The equator on the Earth is called Ka Piko o ka Honua because it sits on the piko (center) of the Earth. Ka Piko o ka Honua, as well as Nā Ao Polohiwa, run east to west.

Autumnal equinox occurs when the sun rises due east and sets due west on Ka Piko o ka Honua, around September 20-22. The hours in the day and night are equal during the equinoxes. From Ka Piko o ka Honua the Earth begins tilting away from the sun, which makes the sun appear to move south along the horizon. The days shorten and the nights lengthen on the surface of the Earth as the southern hemisphere is exposed to more sunlight. It takes the sun three months to move from Ka Piko o ka Honua to Ke Ao Polohiwa a Kanaloa. Ke Ao Polohiwa a Kanaloa is the furthest south that the sun will travel on its southern trek below the equator. The sun arrives at Ke Ao Polohiwa a Kanaloa on the winter solstice, around December 20-22. Vernal equinox occurs on the equator, meaning that the sun rises due east and sets due west around March 20-22. From Ka Piko o ka Honua, the Earth tilts towards the sun, which makes the sun appear to move north along the horizon. The days lengthen and the nights shorten on the surface of the Earth as the northern hemisphere is exposed to more sunlight. It takes the sun three months to move from Ka Piko o ka Honua to Ke Ao Polohiwa a Kāne. Ke Ao Polohiwa a Kāne is the furthest north that the sun will travel on its northern trek above the equator. The sun arrives at Ke Ao Polohiwa a Kāne on the summer solstice, around June 20-22. From Ke Ao Polohiwa a Kane, the Earth tilts back towards the equator, which makes the sun appear to move back south on the horizon towards Ka Piko o ka Honua. This annual movement of the sun through the tilting of the earth measures the seasonal journey of the sun. The sun is one of the elements used to organize Hawaiian time.

Mahina, moon



Moon Phase	Description
Hilo	Threadlike, Hilo appears shortly after sunset
Hoaka	Crescent. A phase similar to Hilo, <i>arch, to cast a shadow</i>
Kūkahi	Appear. Kū phases rise in the morning and kū the entire day
Moon Phase	Description
Kūlua	Appear twice. See Kūkahi
Kūkolu	Appear thrice. See Kūkahi
Kūpau	End Appearance. See Kūpau
'Olekūkahi	Without. The 'ole phases are known for confusion of tides, winds and ocean currents. Traditionally, the practices for these phases were to mend/clean gear, mulch, or prune plants
'Olekūlua	See 'olekūkahi
'Olekūkolu	See 'olekūkahi
'Olepau	End of 'Ole. 'Olepau marks the end of shifting ocean and air currents. Unlike other 'Ole, 'Olepau is a prosperous phase.
Huna	Hidden. The sharp tips of Huna hide on this phase.
Mōhalu	To Bloom. Mōhalu is seen in the sky during the afternoon hours
Hua	Seed, fruit, egg. Hua is egg shaped. Prayer and offerings to the akua are done on Hua.
Akua	god, In Hawaiian lunar calculations, Akua is the first of four full moon phases
Hōku	Hoku is the true full moon phase as it rises at the same time the sun sets; and sets at the same time that the sun rises the next morning. Hoku is in the sky the full night.
Māhealani	In Western calculations, Māhealani is the full moon. Māhealani is also known as Malani or Hoku 'ili when it is seen above the horizon in the west when the sun is rising in the east

Kulu	“To drip.” Kulu is the final full moon phase. There is a high chance of precipitation on Kulu because during the full moon phases, the moon draws moisture from the Earth.
Lā‘aukūkahi	“Plant.” All of the Lā‘au phases rise a few hours before midnight. The roundness of the moon begins to diminish.
Lā‘aukūlua	See Lā‘aukūkahi.
Lā‘aupau	See Lā‘aukūkahi. The ‘Ole winds begin to make their appearance in the late evening.
‘Olekūkahi	Without.” Ocean and wind currents begin shifting, creating confusion. The ‘Ole phases are not favorable for a lot of activities
‘Olekūlua	See ‘Olekūkahi. Air, water, and ocean currents are erratic.
‘Olepau	“End [of] ‘Ole.” ‘Olepau marks the lessening of shifting ocean and air currents. It is a prosperous phase.
Kāloakūkahi	“Length.” Kāloa phases are favorable for kapa or rope making. Shifting ‘Ole ocean and air currents end on Kāloakūkahi.
Kāloakūlua	<i>See Kāloakūahi.</i> Kāloakūkahi begins to look crescent-like. This night is extremely dark as the moon rises in the early morning hours, long after midnight.
Kāloapau	Kāloapau is crescent shaped. This night is extremely dark as the moon rises in the early morning hours, long after midnight.
Kane	Many rituals and ceremonies are done on Kāne. This phase is also infamous for huaka‘i pō (night marchers); a dark night as the moon is not seen until a few hours before sunrise.
Lono	Lono appears rising over the horizon an hour or two before dawn. After the sun rises, the visibility of Lono lessens and disappears due to the bright sunlight.
Mauli	Mauli is seen as a sliver above the horizon before the dawn light becomes bright.
Muku	“Cut off.” Muku rises approximately at the same time that the sun rises and sets, therefore is not seen. About three times out of the year, Muku follows a little after the sun and is slower than the sun. During this occurrence, the moon does not set at the same time as the sun, therefore, the moon rises as Muku, but sets as Hilo, which can be seen

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*SEVERAL NEWSPAPER ARTICLES WHICH ARE LISTED IN THE APPENDIX.

