

FINAL—Archaeological Inventory Survey of TMK: (3) 6-4-038:011 (por.), Waimea Ahupua‘a, South Kohala District, Island of Hawai‘i



Prepared For:

Group 70 International
925 Bethel Street, 5th Floor
Honolulu, Hawaii 96813



April 2015

Keala Pono 

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MANAGEMENT SUMMARY

An archaeological inventory survey was conducted for TMK: (3) 6-4-038:001 (por.) in Waimea Ahupua‘a, South Kohala District, on the Island of Hawai‘i. This was done in preparation for ground disturbance associated with construction of an agricultural park, cemetery, equestrian center, golf facility, and necessary site improvements for utilities, infrastructure, and road access. The archaeological work included a pedestrian survey that covered 100% of the parcel, as well as test excavations consisting of three test units and ten trenches. The entire property was utilized as ranch land and little remains on the surface. Stratigraphy consists entirely of natural deposits, with bedrock as shallow as 22 cm below surface.

One archaeological site was found. Site 50-10-06-30195 is a surface alignment of cobbles, in fair condition. Site 30195 is significant under Criterion d of HAR §13-284-6(b) for its potential to yield important information on history or prehistory. No further work is recommended for Site 30195. Archaeological monitoring should be conducted during future ground disturbance only in the vicinity of the site.

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INTRODUCTION

At the request of Group 70 International, Keala Pono Archaeological Consulting conducted an archaeological inventory survey of TMK: (3) 6-4-038:011 (por.) in Waimea Ahupua'a, South Kohala District, on the island of Hawai'i. Plans for the parcel include construction of an agricultural park, cemetery, equestrian center, golf facility, and necessary site improvements for utilities, infrastructure, and road access. The archaeological inventory survey was designed to identify any historic properties that may be located on the property in anticipation of the proposed construction.

This report is drafted to meet the requirements and standards of state historic preservation law, as set out in Chapter 6e of the Hawai'i Revised Statutes and SHPD's draft *Rules Governing Standards for Archaeological Inventory Surveys and Reports*, §13–276. The report begins with a description of the project area and a historical overview of land use and archaeology in the area. The next section delineates methods used in the fieldwork, followed by the results of the archaeological survey. Project results are summarized and recommendations are made in the final section. Hawaiian words, flora and fauna, and technical terms are defined in a glossary at the end of the document.

Project Location and Environment

The Waimea Nui project is located on Hawai'i Island in the district of Kohala Waho, or South Kohala; in the Kohala land division called Waimea; in the Waimea subdivision of Pu'ukapu. Around Pu'ukapu are the other Waimea subdivisions of 'Ala'ōhi'a, Noho'āina, Paulama, Pauweanui, Po'okanaka, Pukalani, and Pu'uka'ali'ali. TMK: (3) 6-4-038:011 is a 191.711-acre (77.58 ha) parcel owned by Hawaiian Home Lands. The parcel is bounded by Hi'iaka Street on the north, Hawaiian Home Lands parcels on the east and south, and undeveloped ranchland on the west. The archaeological inventory survey covers 161.65 acres (65.42 ha) of the property (Figures 1 and 2).

The project site is situated in the northern part of the Big Island of Hawai'i below the southern slopes of the Kohala Mountains, at an elevation of 2,000–3,000 feet (600–900 m), approximately 11 miles (18 km) from the coast. Temperatures here usually range from 60–70° Fahrenheit (15.5–21.1° C). There are several streams flowing down from the Kohala Mountains toward the project site, such as the Lanimaomao, the Waikoloa, and the Kohākōhau, but none of these streams enter the project area. The region has a mean annual rainfall of approximately 30–40 inches (75–100 cm) per year with most months seeing 2–4 inches (5–10 cm) of rain (Giambelluca et al. 1986:99).

The soils in the project area are of the Waimea-Kikoni-Naalehu association. These consist of "Very deep, nearly level to steep, well drained soils that have a medium-textured to moderately fine textured subsoil; on uplands" (Sato et al. 1973:oversize map). Particularly, Waimea very fine sandy loam, 6–12% slopes, (WMC) predominates (Figure 3). There are also small portions of Kikoni very fine sandy loam, 0–3% or 3–12% slopes, (KfA and KXC respectively) in the northern and eastern parts of the project area (Sato et al. 1973) (see Figure 3)

As unimproved pasture, the flora of the region consist mostly of 'a'ali'i, 'ilima, cactus, and various grasses, although only grasses remain within the specific project area. The land in the study area is relatively flat, with a few low, rocky knolls and has fared well as pasture lands in recent history.

The Undertaking

The Waimea Hawaiian Homesteaders' Association (WHHA) and its subsidiary organization, the Waimea Nui Community Development Corporation (WNCDC) have been actively conceptualizing for over 40 years a community development project to address the cultural, economic, and social needs of the Waimea area and of Waimea Homestead families in particular (Figure 4). The Waimea

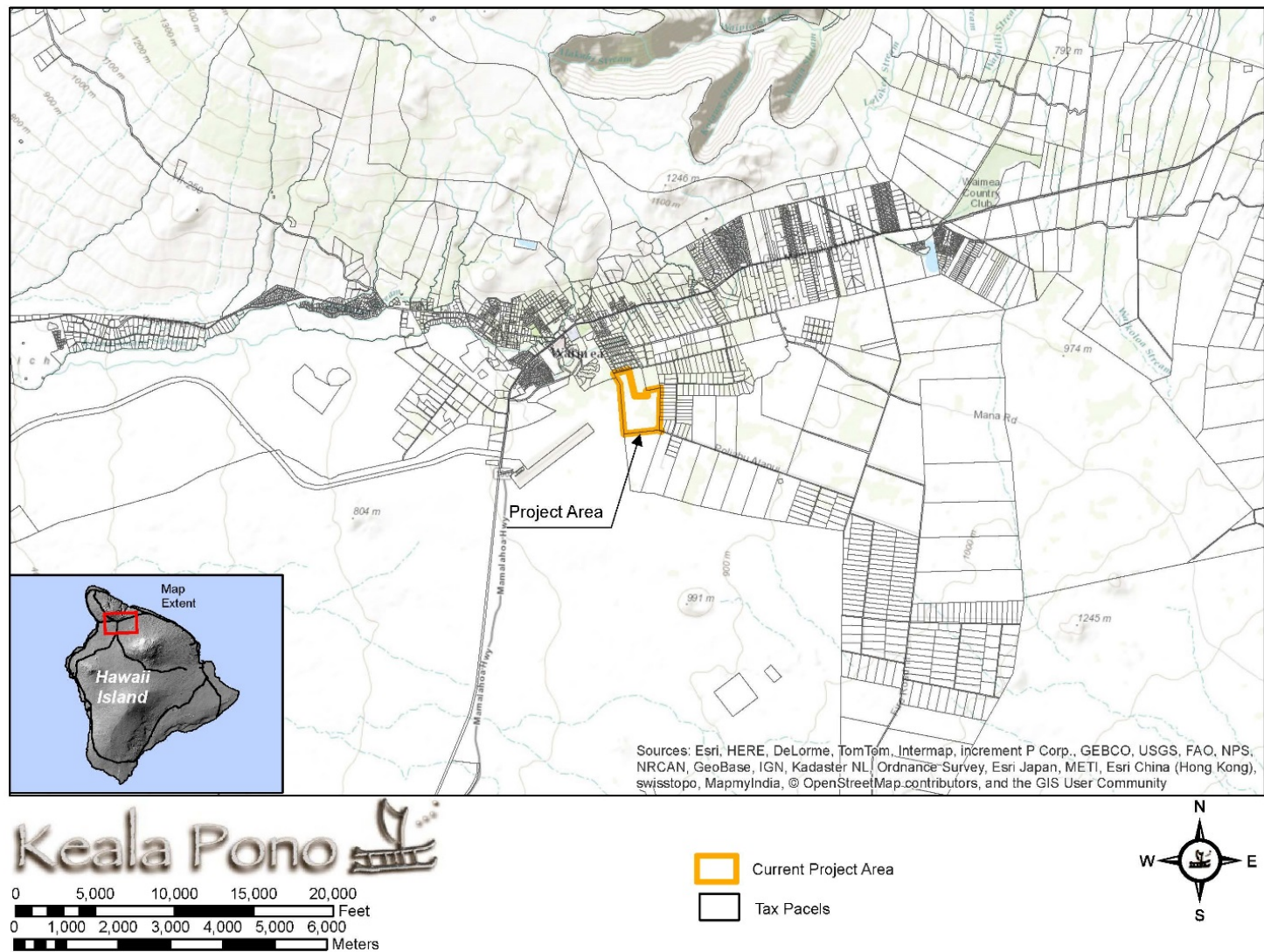


Figure 1. Project area on a 7.5 minute USGS Waimea quadrangle map with TMK overlay.

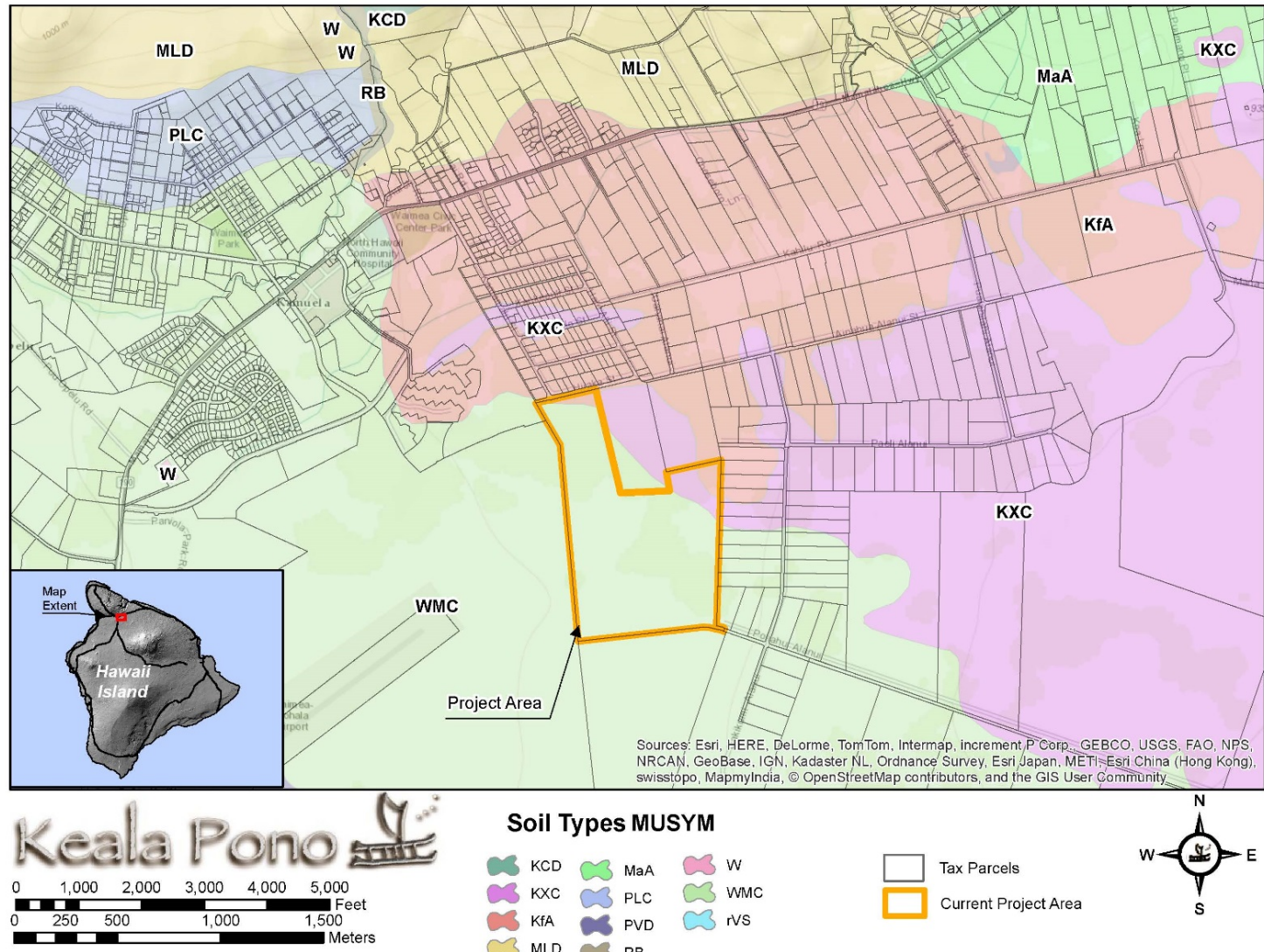


Figure 3. Soils in the vicinity of the project area.



**DHHL Waimea Nui
Development Plan**

Development Plan of the Waimea Nui Community Development Initiative
Pu'ukapu, Waimea, Kohala Waho, Hawai'i Island
TMK (3)-6-4-38:011 (POR.)



11 December 2014

Figure 4. Conceptual plan for Waimea Nui.

Nui Regional Community Development Initiative (WNR-CDI) was developed based upon the ideas and concepts articulated by the homestead community. It also incorporates the long-term visions of both WHHA and the Department of Hawaiian Home Lands (DHHL), as outlined in the DHHL Waimea Regional Plan from 2012. The WNR-CDI proposes the following:

Homestead Cemetery/Chapel - Currently, there is no dedicated cemetery in the region for homesteaders to lay family members to rest. The closest cemetery options are over an hour away in Hilo or Kona, which has essentially forced families to opt for cremation in order to keep deceased family close by. A cemetery/chapel with a columbarium will allow the homestead community to perform proper burials in Waimea that are more aligned with Hawaiian values and protocol.

Community Agriculture Park – By partnering with various Federal and State agencies, the WNCDC is developing farm training programs on site. Agricultural greenhouse lots and associated facilities in the community agriculture park will allow the community to build a base of farmers, increase food self-sufficiency, and revitalize the local agriculture industry. An anaerobic biodigester will provide a proven renewable energy source at a fraction of the cost of current electricity rates for the refrigeration, sanitation, and processing of agricultural products through the use of biomass waste from farmers on-site and the adjacent equestrian center.

Equestrian Center - Waimea has a longstanding ranching and paniolo history. The equestrian center will provide recreational opportunities for the community while revitalizing the rich tradition in horse riding. The facility will serve as a venue for a host of community events such as calf roping; team roping; leisure riding, barrel racing, and jumping. Animal waste will be sustainably disposed of and used in the anaerobic digester for additional energy production.

Golf Facility - The proposed golf facility, which includes a par-3 course, driving range, and club house, will provide a recreational and economic opportunity to generate jobs and additional financial resources to support WNCDC operations and future planning of the area.

The WNR-CDI will enable the homestead community to meet their goals of self-sufficiency through a dedicated program of economic opportunities centered on agricultural, equestrian, and recreational activities while also ensuring a reserved space for those that lie in eternal rest.

BACKGROUND

A brief historic review for the Waimea area is provided below, to offer a better holistic understanding of the use and occupation of the project area. In the attempt to record and preserve both the tangible (i.e., traditional and historic archaeological sites) and intangible (i.e., *mo'olelo*, *'ōlelo no'eau*) culture, this research assists in the discussion of anticipated finds. Research was conducted at the Hawai'i State Library, the University of Hawai'i at Mānoa libraries, the SHPD library, and online on the Huapala database, Papakilo database, Ulukau database, Waihona 'Aina database, and the State of Hawai'i Department of Accounting and General Services (DAGS) website. Historical maps, archaeological reports, and historical reference books were among the materials examined.

Waimea in traditional times

The history of Waimea begins with the history of Hawai'i Island:

Hawai'i was another child of Papa and Wākea, their first-born child. He was the brother of Ho'ohoku-kalani. Hawai'i became the ancestor of the people of Hawai'i; the ancient name of Hawai'i island was Lono-nui-ākea. (Kamakau 1991:129)

Much of the oral accounts that narrate the events from the first peopling of Hawai'i to the recent period of written documentation has been lost in time. However, there are other means by which Hawai'i's history has been preserved. One often overlooked source of history is the information embedded in the Hawaiian landscape. Hawaiian place names “usually have understandable meanings, and the stories illustrating many of the place names are well known and appreciated... The place names provide a living and largely intelligible history” (Pukui et al. 1974:xii).

Among the places in Waimea with names which have been explicitly defined and connected to stories are 'Ala'ōhi'a, Noho'āina, Paulama, and Pukalani. 'Ala'ōhi'a, or “fragrant 'ōhi'a,” is an 'ili of Waimea that was said to have been covered in 'ōhi'a with unusually large flowers. Noho'āina, or “live on the land,” is an 'ili that was once cultivated in sweet potatoes grown by *ali'i*. Paulama, or “extinct *lama*,” is an 'ili that supported a grove of sacred *lama* trees that were frequented by native birds. Pukalani, or “heavenly gate,” is a grassy plain that was used as a gathering place.

Pukui, Elbert, and Mookini's *Place Names of Hawaii* translates Pu'ukapu as “Sacred hill” and Waimea as “Reddish water (as from erosion of red soil)” (Pukui et al. 1974:199, 226). However, many elders familiar with the area attribute the red tint not to the red soil, but to the natural color added as the water seeps through the *hāpu'u* forest on the slopes of the Kohala Mountains. The fern plants there are a natural source of red dye, and so they say the reddish tint comes from that vegetation. Perhaps the red tint comes from both the soil and the *hāpu'u*.

Subsistence and Traditional Land Use

Waimea has an environment naturally conducive to intensive upland farming, and this supported a sizable village in ancient Hawai'i.

The population of Waimea became the most significant in density, scattered among fields adjacent to streams that provided year-round water for consumption... The availability of dependable irrigation systems gave Waimea a unique advantage whereby both dryland and irrigated *kalo* (taro) could be grown.

The early Waimea inhabitants resided typically within a *pā hale* (fenced house lot) with a sleeping house and adjacent protected cooking facility. The *pā pōhaku* (stone wall)

surrounded the *pā hale*, and likely included within was a *kīhāpai* (garden). The farming plot (*‘apana*) of the householder was located elsewhere within the agricultural zone of the respective *ahupua’a*. These prehistoric farmed areas have become known as the Waimea Field System.

Rudimentary farming of the ‘Ōuli flats between Lanikepu and Keanu‘i‘omanō Streams *makai* (towards the ocean) of the [Waimea-Kohala] airport began as early as A.D. 1100–1200. The southernmost swales reflect the presence of housing and agriculture about A.D. 1300–1400. Substantial evidence, however, points to the cultivation of walled, irrigated fields coupled with permanent habitation during the period from A.D. 1600 to 1800. (Bergin 2004:16–19)

Handy et al. note that Waimea was well suited for the planting of *‘uala* (1991:283). They elaborate on the cultivation of traditional crops: “Dry taro used to be planted along the lower slopes of the Kohala Mountains on the Waimea side, up the gulches and in the lower forest zones” (1991:532). Naturalist, Archibald Menzies, describes fertile plantations in the uplands of Waimea in 1793, which likely extended back into pre-contact times:

A little higher up, however, than I had time to penetrate, I saw in the verge of the woods several fine plantations, and my guides took great pains to inform me that the inland country was very fertile and numerously inhabited. Indeed, I could readily believe the truth of these assertions, from the number of people I met loaded with the produce of their plantations and bringing it down to the water side to market...(Menzies 1920 [1793]:56)

There was a dramatic increase in extensive cultivation in the centuries just before Western contact. This coincided with the reign of Chiefs Alapa‘inui and Kalani‘ōpu‘u of the Waimea-Kawaihae area followed by Kamehameha and his construction of Pu‘ukoholā Heiau. It is suggested that during this pre-contact period, the strain on food resources had been pushed to its limits (Bergin 2004).

Pu‘ukoholā is not the only *heiau* connected to the area. Whereas Pu‘ukoholā is nearer to the coast at Kawaihae, there was another older *heiau* which stood further inland at Waimea. It was a women’s *heiau* built under the direction of High Chiefess Hoapilihae. This *heiau* was described in the accounts of the missionary Lorenzo Lyons in the 1820s:

This [the wind of Waimea] is the piercing wind that so suddenly meets the traveler who makes his upward way from the heat of Kawaihae; and as he nears Waimea he comes upon a region once held sacred. Vivid were the rainbows of the Lanikepu hills, and red the rain, uakoko, that fell upon their slopes, for in the forest that was then their background was a *heiau* --- a women’s *heiau*, the only one; and by these lovely tinted tokens the gods honored it, and signified their approval.

Founded, dedicated and consecrated by the very high chiefess Hoapilihae, it was attended exclusively by young virgins. There, in the sanctity of the cool highland forest, they performed the sacred ceremonies, learning also the science of healing so that they might eventually minister to others. And the names of the five rains of the *heiau* were given to the five children of Hoapilihae.

On a nearby ridge stood another *heiau*, builded there by the great Akua Makuakua who had come from far off Kahiki. He it was who, flying to a hillside to watch the rainbows, found there the beautiful goddess Wao, clad only in her long, silky hair. Love came swiftly and was mutual, and after glorious wedding festivities the couple went to live a Hokuula, the hill of the red planet.

But to bear each of her children Wao returned to the Waimea hills, thereby made sacred. On these occasions a tabu was proclaimed, the forbidden ground extending down across the plains to whatever place a stone happened to stop rolling when started above by her servants. Stones they were themselves, these retainers, all through the night hours, for so Wao transformed them until daylight, when they became human again. (Doyle 1953:42, 43)

Mo'olelo

In Lorenzo Lyons' account, he does not connect the Waimea *heiau* with any particular deity. However, there are other stories of Waimea which connect the landscape to Uli, the goddess of sorcery, and to Lono, the god of agriculture and heavy rains.

A story published in the Hawaiian language newspaper, *Ka Hoku o Hawai'i*, in the early 1900s, narrated the legend of Ka-Miki and his brother Maka'iole. In this legend, the two brothers had been training to be warriors and were traveling around Hawai'i Island. Near the end of their training, their great-grandmother instructed the brothers to visit their ancestor Laninuiku'iamamaoloa who lived near Lanimaomao stream in Waimea. This ancestor of theirs, Laninuiku'iamamaoloa, was the guardian of sacred objects to be used in the brothers' end-of-training ceremony. Among the sacred objects were the 'awa mixing bowl called Hōkū'ula and the 'awa strainer called Kalauokahuli. Kalauokahuli, the 'awa strainer, was noted to be on the plains of Waikoloa, while Hōkū'ula, the 'awa mixing bowl, was at the hill closer to Waipi'o. Both were in the lands of north Hawai'i around Waimea. Furthermore, the 'awa bowl of Hōkū'ula was said to belong to Lono-Makahiki and associated with rituals connected to the agricultural god (Wilkinson et al. 2012:13, 14).

The ancestor woman named Laninuiku'iamamaoloa noted above is also mentioned in another story where she is identified as Uli, the goddess of sorcery. In this *mo'olelo*, which comes from the Kamohoalii Collection, Laninuiku'iamamaoloa also goes by the name of Lanimaomao. This is the name of an important stream in the area today. It is said that Lanimaomao lived in the Mahiki forested area of Waimea. She was prayed to for heavy rains, a weather phenomenon also associated with the god Lono.

Yet another story connected to Waimea is one associated with the goddess Hi'iakaikapoliopole, sister of the volcano goddess Pele. As Hi'iaka traveled from Puna in the south toward Kohala in the north, she was denied passage by Mahiki. This Mahiki is the same namesake of the forested area in Waimea today, but in this story, the Mahiki refers to a horde of ill-tempered creatures. The leader of this horde was the dragon-like creature named Mo'olau. Hi'iakaikapoliopole "resolved once and for all to make an end of this arrogant nuisance and to rid the island of the whole pestilential brood of imps" (Emerson 1997[1915]:50). The goddess was supported by a supernatural legion of male and female relatives which Pele called in to battle to support her sister. Mo'olau and the ill-tempered Mahiki were destroyed. Here is a chant which memorializes this battle and calls to mind the darkness of Mahiki with the cries of the malevolent horde in Waimea. Notice that the name of the sorcery goddess from the previous story is in this chant below:

| | |
|-------------------------------|------------------------------------|
| O Kini Akua o Wai-mea, | Wai-mea's myriads of godlings, |
| O ka Lehu Akua o Mana. | Thy four hundred thousand, Mana. |
| Kini wale Wai-mea | Wai-mea thrills with the snarl of |
| I ka pihe o ke 'kua o Uli, e. | witch-gods: |
| Po wale Mahiki; | Night's shadows brood over Mahiki; |
| A ia Mahiki ke uwa la no, e! | The uproar keeps on in Mahiki! |
| | (Emerson 1997[1915]:55) |

Oli

Waimea's rightful place in Hawaiian pre-contact history is bolstered by its appearance in traditional chants such as the one quoted above. These expressions of folklore have not lost their merit in today's society. They continue to be referred to in contemporary discussions of Hawaiian history, Hawaiian values, and Hawaiian identity.

Other chants that mention Waimea do not hearken back to the distant time of the gods. Some chants only go back to the more recent era of Kamehameha the Great. This is fitting since Kamehameha was from Kohala and his warriors trained in Waimea. One of the most famous of these Kamehameha chants is *Hole Waimea*. The words, translation and background of the chant can be found on the huapala.org website (Kanoa-Martin 2012).

Hole Waimea

| | |
|-----------------------------------|--|
| Hole Waimea i ka ihe a ka makani | Waimea strips the spears of the wind |
| Hao mai nā'ale a ke Kīpu'upu'u | Waves tossed in violence by the Kīpu'upu'u rains |
| He lā'au kala'ihi 'ia na ke anu | Trees brittle in the cold |
| I 'ō'ō i ka nahele o Mahiki | Are made into spears in Mahiki forest |
| Kū aku i ka pahu | Hit by the thrusts |
| Kū a ka 'awa'awa | Hit by the cold |
| Hanane'e ke kīkala o kō Hilo kini | The hips of Hilo's throngs sag |
| Ho'i lu'ulu'u i ke one o Hanakahi | Weary, they return to the sands of Hanakahi |
| Kū aku la 'oe i ka Malanai | Pelted and bruised by |
| A ke Kīpu'upu'u | The Kīpu'upu'u rains |
| Holu ka maka o ka 'ōhāwai a Uli | The petals of Uli sway |
| Niniau 'eha ka pua o ke koai'e | The flower of koai'e droops |
| Ua 'eha i ka nahele o Waikā | Stung by frost, the herbage of Waikā |

Source: This is a mele inoa (name chant) for Kamehameha I, that was inherited by his son, Liholiho. This is a tale of the Kīpu'upu'u, a band of runners whose name is taken from the cold wind of Mauna Kea that blows at Waimea on the big island of Hawai'i. They were trained in spear fighting and went to the woods of Mahiki, a woodland in Waimea haunted by demons and spooks, and Waikā to strip the bark of saplings to make spears. Hole means to handle roughly, strip or caress passionately. In the forest they sang of love, not of work or war. Hanakahi is the district on the Hamakua side of Hilo, named for a chief whose name means profound peace. Malanai is the name of gentle wind. Pua o Koai'e is the blossom of the Koai'e tree that grows in the wild, a euphemism for delicate parts. Parts of this old chant, full of double entendre or kaona, was set to music by John Spencer and entitled Waikā. (Kanoa-Martin 2012)

Another Kamehameha chant is *Hea 'Oe Kahaiolama*. In this chant the chiefess Kalama is in dialogue with Kamehameha, and he assures her that indeed, all of Hawai'i Island is his:

Hea 'Oe Kahaiolama

| | |
|--|---------------------------------------|
| KAMEHAMEHA: Hea 'oe Kahaiolama. | KAMEHAMEHA: Where are you, O Kalama? |
| KALAMA: He maka'u mai au lā iā Ka'ahumanu. | KALAMA: I am afraid of Ka'ahumanu. |
| KAMEHAMEHA: Mai maka'u mai 'oe. | KAMEHAMEHA: Do not be afraid. |
| No'u o luna, no'u o lalo, | All above is mine, all below is mine, |
| No'u o Kohala, | Kohala is mine, |
| No'u o Hāmākua, | Hāmākua is mine, |
| No'u o Hilo, | Hilo is mine, |

| | |
|-------------------------|--------------------|
| No‘u o Puna, | Puna is mine, |
| No‘u o Ka‘ū, | Ka‘ū is mine, |
| No‘u o Kona, | Kona is mine, |
| No‘u nā wahi āpau-o-loa | Everywhere is mine |

CONTRIBUTOR: Mrs. Kaimu Kihe, Pu‘uanahulu, North Kona, Hawai‘i. Mele kake.
(Bacon and Napoka 1995:194, 195)

And finally, the last two chants here are very similar, yet from different sources. Notice that both of these chants are accompanied by a type of string-figure game that was once familiar throughout the islands. And in both of these chants, as the string figures are being made, the words to these chants call out different features on the landscape around Hawai‘i Island. One of these string-figure chants is called *He Huaka‘i Ka‘apuni ma Hawai‘i*; here is a portion of that chant:

| | |
|--------------------------------|--------------------------------------|
| He Huaka‘i Ka‘apuni ma Hawai‘i | Ramble Round Hawai‘i |
| Kū e ho‘opi‘o ka lā | The rising sun travels in an arc |
| Ka lā i ke kula o Ahu‘ena | reaches the flatlands of Ahu‘ena |
| Komo i ka la‘i o Kai-lua e... | enters Kai-lua’s gentle landscape... |
| ‘O Kohala: | Kohala last: |
| ‘O Kohala-iki, ‘o Kohala-nui | lesser Kohala, greater Kohala |
| ‘O Kohala-loko, ‘o Kohala-waho | inner Kohala, outer Kohala |
| ‘O Pili, ‘o Ka-lā-hiki-ola | and then Pili and Ka-lā-hiki-ola |
| Nā pu‘u haele lua o Kohala | companion hills traveling as a twain |

Kohala last: The district included shoreland, an extinct volcano, a mountainous upland famous for its strong dry wind, ‘Apa‘apa‘a.

Ka-lā-hiki-ola: The hill named Ka-lā-hiki-ola, ‘the life-bringing sun’, gave its name to the surrounding area.” (Pukui and Korn 1973:187–191)

The other chant is called *Na Moku ‘Eono o Hawai‘i Nei*, a portion of which is presented here:

| | |
|--------------------------------------|--|
| Nā Moku ‘Eono o Hawai‘i Nei | |
| Ka lā, ka lā, i ke kula o Ahu‘ena... | The sun, the sun shines on the plain of Ahu‘ena... |
| Noho i Kohala, | Kohala is reached, |
| ‘O Kohala nui, ‘o Kohala iki, | Great Kohala, lesser Kohala, |
| ‘O Kohala ‘āina ua ha‘aheo, | Kohala, a land that is proud of its rain, |
| I ka ua ‘Āpa‘apa‘a. | The ‘Āpa‘apa‘a rain. |
| ‘O Pili me Kalāhikiola, | There lie Pili and Kalahikiola, |
| ‘O nā pu‘u haele lua, | There the two-sided hills, |
| ‘O nā pu‘u noho i uka... | The hills that remain inland... |

CONTRIBUTOR: Z.P. Kalokuokamaile, Nāpō‘opo‘o, South Kona, Hawai‘i. Mele hei.
[String-figure chant.] (Bacon and Napoka 1995:96–99)

‘Ōlelo No‘eau

Waimea’s place in pre-contact Hawaiian history has also been preserved in *‘ōlelo no‘eau*, or traditional proverbs and wise sayings. In 1983, Mary Kawena Pukui published a volume of close to 3,000 *‘ōlelo no‘eau* that she collected throughout the islands. The introductory chapter of that book reminds us that if we know these proverbs and wise sayings well, then we will know Hawai‘i well (Pukui 1983). Most of the *‘ōlelo no‘eau* concerning Waimea point out the cold weather conditions of the region. But aside from the details of each saying, the simple fact that Waimea is memorialized

in these proverbs is a testament to the significance of the entire place. Here are the traditional sayings from Pukui's book which mention Waimea either in its text or in its explanation:

(757) Hele pō'ala i ka anu o Waimea.

Going in a circle in the cold of Waimea.

Said of a person who goes in circles and gets nowhere. Waimea, Hawai'i, is a cold place and when foggy, it is easy for one unfamiliar with the place to lose his way.

(777) Hemahema Kahuwā me Waimea.

Kahuwā and Waimea are awkward.

These places are in the upland, where people are said to be awkward in handling canoes.

(1571) Ka ua Kīpu'upu'u o Waimea.

The Kīpu'upu'u rain of Waimea.

An expression often used in songs of Waimea, Hawai'i. When Kamehameha organized an army of spear fighters and runners from Waimea, they called themselves Kīpu'upu'u after the cold rain of their homeland.

(1593) Ka ua Paliloa o Waimea.

The Tall-cliffs rain of Waimea.

The rain of Waimea, Hawai'i, that sweeps down the cliffs.

(1748) Ke Kīpu'upu'u hō'anu 'ili o Waimea.

The Kīpu'upu'u rain of Waimea that chills the skin of the people.

(2913) Waimea, i ka ua Kīpu'upu'u.

Waimea, land of the Kīpu'upu'u rain.

Waimea, Hawai'i, is famed in old *mele* for its cold Kīpu'upu'u rain.

Other 'ōlelo no 'eau in Pukui's compilation refer to the larger district of Kohala of which Waimea is a part. Whereas the Waimea proverbs and wise sayings focus on rain, the Kohala proverbs and wise sayings focus on wind. In addition, the Kohala 'ōlelo no 'eau refer to other aspects of the land and the characteristics of the people there:

(211) 'A'ohe u'i hele wale o Kohala.

No youth of Kohala goes empty-handed

Said in praise of people who do not go anywhere without a gift or a helping hand. The saying originated at Honomaka'u in Kohala. The young people of that locality, when on a journey, often went as far as Kapua before resting. Here, they made *lei* to adorn themselves and carry along with them. Another version is that no Kohala person goes unprepared for any emergency.

(875) He pā'ā kō kea no Kohala, e kole ai ka waha ke 'ai.

A resistant white sugar cane of Kohala that injures the mouth when eaten.

A person that one does not tamper with. This was the retort of Pupukeya, a Hawai'i chief, when the Maui chief Makakuikalani made fun of his small stature. Later used in praise of the warriors of Kohala, who were known for valor.

(1171) I 'ike 'ia no o Kohala i ka pae kō, a o ka pae kō ia kole ai ka waha.

One can recognize Kohala by her rows of sugar cane which can make the mouth raw when chewed.

When one wanted to fight a Kohala warrior, he would have to be a very good warrior to succeed. Kohala men were vigorous, brave, and strong.

(1256) Ipu lei Kohala na ka Moa'ekū.

Kohala is like a wreath container for the Moa'e breeze.

Kohala is a windy place.

(1313) Kahilipulu Kohala na ka makani.

Kohala is swept, mulch and all, by the wind.

Kohala is a windy place.

(1455) Ka makani 'Āpa'apa'a o Kohala.

The 'Āpa'apa'a wind of Kohala.

Kohala was famed in song and story for the 'Āpa'apa'a wind of that district.

(1813) Kohala 'āina ha'aheo.

Kohala, land of the proud.

The youths, lei-bedecked, were proud of their handsome appearance and of their home district.

(1814) Kohala ihu hakahaka.

Kohala of the gaping nose.

Kohala is full of hills, and the people there are said to breathe hard from so much climbing.

(1815) Kohala i ka unupa'a.

Kohala of the solid stone.

The people of Kohala were known for their firm attitudes.

(1816) Kohala, mai Honoke'ā a Keahualono.

Kohala, from Honoke'ā to Keahualono.

The extent of Kohala.

(1973) Le'i o Kohala i ka nuku na kānaka.

Covered is Kohala with men to the very point of land.

A great population has Kohala. Kauhiakama once traveled to Kohala to spy for his father, the ruling chief of Maui. While there, he did not see many people for they were all tending their farms in the upland. He returned home to report that there were hardly any men in Kohala. But when the invaders from Maui came they found a great number of men, all ready to defend their homeland.

(1975) Lele au la, hokahoka wale iho.

I fly away, leaving disappointment behind.

Said of one who is disillusioned after giving many gifts. Waka‘ina was a ghost of North Kohala who deceived people. He often flew to where people gathered and chanted. When he had their attention he would say, “I could chant better if I had a tapa cloth.” In this way he would name one thing after another, and when all had been given him he would fly away chanting these words.

(1988) Lele o Kohala me he lupe la.

Kohala soars as a kite.

An expression of admiration for Kohala, a district that has often been a leader in doing good works.

(2220) Na ‘ilina wai‘ole o Kohala.

The waterless plains of Kohala, where water will not remain long.

After a downpour, the people look even in the hollows of rocks for the precious water.

(2276) Nani ka waiho a Kohala i ka la‘i.

Beautiful lies Kohala in the calm.

An expression of admiration for Kohala, Hawai‘i, or for a person with poise and charm --
- especially a native of that district.

(2365) ‘Ohi hāpuku ka wahie o Kapa‘au.

Anything was gathered up as fuel at Kapa‘au.

Said of one who takes anything and everything. At one time Kohala suffered a drought and food became scarce. The women did their best to raise food at ‘Āinakea while the men traveled far in search of some means of relieving the famine. In order to cook their meager, inferior crops, the women used whatever they found for fuel --- dried sugar-cane leaves, grasses, potatoes, and so forth.

(2533) ‘Ope‘ope Kohala i ka makani.

Kohala is buffeted by the wind.

(2811) ‘Uala ne‘ene‘e o Kohala.

Ne‘ene‘e potato of Kohala.

A person who hangs around constantly. *Ne‘ene‘e*, a variety of sweet potato, also means “to move up closer.”

Historic Waimea

The island of Hawai‘i witnessed multiple changes in its political rule in the years just prior to Western contact. In the early 18th century, Chief Alapa‘i ruled the entire island of Hawai‘i. But due to internal strife, it became divided with Alapa‘i ruling the northern part of the island and Kalani‘ōpu‘u ruling the southern districts of Ka‘ū and Puna. In 1754, Alapa‘i died, and his son Keawe‘ōpala inherited the governance of Alapa‘i’s lands. However, later that same year, Kalani‘ōpu‘u wrested control of Keawe‘ōpala’s lands, and because of that, Kalani‘ōpu‘u became the ruler of the entire island. When Kalani‘ōpu‘u died in 1782, the governance of Hawai‘i went to his son Kīwala‘ō. However, it wasn’t long before Kīwala‘ō’s rule was challenged by Kamehameha, the son of Kalani‘ōpu‘u’s brother. In a subsequent battle between Kīwala‘ō’s and Kamehameha’s forces, Kīwala‘ō was killed, and Kamehameha took his place. Following that decisive battle, the governance

of Hawai‘i Island was divided into three parts. Kamehameha ruled the north half of the island from Hāmākua to Kohala to Kona. Keawema‘uhili, the brother of the deceased Chief Kalani‘ōpu‘u, ruled out of Hilo, and Keōuakū‘ahu‘ula, a son of Kalani‘ōpu‘u, ruled the districts of Ka‘ū and Puna. Eventually, Keawema‘uhili was killed by Keōuakū‘ahu‘ula’s forces, and then Keōuakū‘ahu‘ula was defeated by Kamehameha’s army. After that, Kamehameha had complete rule over the entire island, and from there he went on to conquer the rest of the Hawaiian Islands (translations in italics by D. Duhaylonsod):

Ho‘i akula ‘o Alapa‘i i Hawai‘i i ke kaua, a ua lanakila ‘o Alapa‘i ma luna o nā ali‘i o Hawai‘i, a ua luku ‘ia nā ali‘i o Hawai‘i, a ua hui ‘ia i ho‘okahi aupuni ma lalo o Alapa‘i. (Kamakau 1996[1866]:1)

Alapa‘i returned to Hawai‘i Island to do battle, and Alapa‘i emerged victorious over the chiefs of Hawai‘i Island, the chiefs were slaughtered, and the entire kingdom was gathered as one under Alapa‘i.

I ke kaua ‘ana i Mahinaakāka ke kū ka‘awale ‘ana o Kalani‘ōpu‘u e noho mō‘ī no Ka‘ū me Puna, no ka mea, he ali‘i kama‘āina ‘o Kalani‘ōpu‘u no Ka‘ū, a ‘o kona one hānau ia o kona mau mākuā. Ho‘i maila ‘o Alapa‘i a noho ma Hilo, a hala ka makahiki, ho‘i maila ‘o ia a noho ma Waipi‘o. A pau kona noho ‘ana ma Waipi‘o. Ho‘i maila ‘o Alapa‘i me nā ali‘i a hiki ma Waimea, a ‘o kekahi po‘e, ma kai o ka ‘au wa‘a, a pae i Kawaihae. Ho‘i akula ‘o Alapa‘i mai Waimea aku a Lanimaomao, loa‘a ihola i ka ma‘i... Ma Kikiako‘i, make ihola ‘o Alapa‘i. I ka A.D. 1754, noho ali‘i ihola ‘o Keawe‘ōpala no ke aupuni o Hawai‘i (Kamakau 1996[1866]:13).

From the battle at Mahinaakāka, Kalani‘ōpu‘u emerged as the king of Ka‘ū and Puna, because Kalani‘ōpu‘u was a native chief of Ka‘ū, and it was the birthplace of his parents. Alapa‘i returned to Hilo, and after some time, he went to live at Waipi‘o. After living at Waipi‘o, Alapa‘i and his chiefs went to Waimea, and others, by way of canoes, landed at Kawaihae. Alapa‘i went from Waimea to Lanimaomao, he became ill... At Kikiako‘i, Alapa‘i died. In the year 1754, Keawe‘ōpala (the son of Alapa‘i) became the ruler of Hawai‘i.

‘Ōlelo aku ke kahuna ma hope o Kalai‘ōpu‘u [another name for Kalani‘ōpu‘u], ‘o Holo‘ae ka inoa, [“]Eia ka mea e make ai ‘o Keawe‘ōpala, aia a make ‘ē ke kahuna ma mua o Keawe‘ōpala, a laila, lilo ke aupuni iā ‘oe, no ka mea, ‘o ke kahuna ka mea e pa‘a ai ke aupuni iā Keawe‘ōpala.[“]... ua hopu ‘ia ke kahuna o Keawe‘ōpala, ua pepehi ‘ia a kālūa ‘ia e Kalani‘ōpu‘u me ka ho‘omāino‘ino ‘ia... I ka makahiki A.D. 1754, ua lilo holo‘oko‘a ke aupuni o Hawai‘i iā Kalani‘ōpu‘u (Kamakau 1996[1866]:13, 14).

The kahuna under Kalai‘ōpu‘u, whose name was Holo‘ae, spoke, “Here is the way Keawe‘ōpala will die, first his priest must die, and then, the kingdom will go to you, because it is the priest who keeps the kingdom securely under Keawe‘ōpala’s rule... the priest of Keawe‘ōpala was captured, and he was tortured, killed and burned in the pit by Kalani‘ōpu‘u... In the year 1754, the entire kingdom of Hawai‘i went under the rule of Kalani‘ōpu‘u.

I ka pau ‘ana o ka wā hī ‘ahi o Kalae, mana‘o ihola ‘o Kalani‘ōpu‘u e ho‘i i Kona, akā, ua loa‘a ‘ē ‘o ia i ka ma‘i, no laila, ho‘i maila ‘o ia a noho ma Ka‘ilīki‘i i Waio‘ahukini ma Pākinī; māhuahua loa ka ma‘i, a make nō ma laila. I ka iwakāluakumamāiwa makahiki [ia] o kona noho ali‘i ‘ana ma luna o ke aupuni o Hawai‘i. A ‘o nā makahiki a pau o kona ola ‘ana, he kanahikukumamāiwa, a make ihola ‘o ia i ka malama ‘o Ianuari, i ka A.D. 1782 (Kamakau 1996[1866]:62).

When he was finished trolling for 'ahi at Kalae, Kalani'ōpu'u decided to return to Kona, but he became sick, and therefore, he went to stay at Ka'iliki'i in Waio'ahukini at Pākini; the illness intensified, and he died there. His reign over the kingdom of Hawai'i lasted twenty-nine years. And he lived for seventy-nine years, and died in the month of January, 1782.

I ka noho 'ana o Kalani'ōpu'u ma Kohala, ua ho'oholo ihola nā ali'i a me nā kuhina, e kauoha 'ia ke keiki ho'oilina o ke aupuni (Kalanikaukeaoulīkīwala'ō)... Aia a make 'o Kalani'ōpu'u, a laila, e ili aku ke aupuni i ka ho'oilina (Kamakau 1996[1866]:59, 60).

When Kalani'ōpu'u was staying at Kohala, the chiefs and the cabinet members decided, and the command would be given that the child Kīwala'ō would be the next heir to the kingdom... Kalani'ōpu'u died, and then, the heir inherited the kingdom.

I ko Kamehameha mā hiki 'ana mai ma hope, ua ho'omaka mua aku 'o Ke'eaumoku i ke kaua i ko Kīwala'ō mau koa... A 'ike akula 'o Ke'eaumoku iā Kīwala'ō e huli ana i lalo, kokolo akula 'o ia me ka leiomano ma ka lima, a papa'i a'ela ma ko Kīwala'ō kani'ā'i, a make loa ihola ia... 'O ke 'auhe'e ihola nō ia o nā ali'i a me nā koa o Kīwala'ō. 'O Keōuakū'ahu'ula ho'i a me kekahi po'e ali'i... holo akula i Ka'ū, a lilo ihola 'O Keōuakū'ahu'ula i mō'i no Ka'ū a me Puna... 'O Keawema'uhili nō ho'i ke ali'i kapu i ke au o Alapa'inui... a hele akula a hiki i Hilo, a lilo ihola 'o ia i ali'i no kekahi hapa o Hilo, a me kekahi hapa ho'i o Puna, a pēlā nō ho'i 'o Hāmākua... Lilo ihola 'o Kona, Kohala a me kekahi hapa o Hāmākua iā Kamehameha. Lilo ihola ka mokupuni 'o Hawai'i i mau aupuni 'ekolu, a 'ekolu nō ho'i mau mō'i (Kamakau 1996[1866]:73, 74).

When Kamehameha arrived later, [his warrior-general] Ke'eaumoku had already started the battle with Kīwala'ō's warriors... Ke'eaumoku saw Kīwala'ō facing down, he crawled with a leiomano weapon in his hand, and struck at Kīwala'ō's throat, and Kīwala'ō died... The chiefs and the warriors of Kīwala'ō fled. Keōuakū'ahu'ula and some chiefs sailed to Ka'ū, and Keōuakū'ahu'ula became the king of Ka'ū and Puna... Keawema'uhili also, he was a sacred chief from the time of Chief Alapa'i... Keawema'uhili went to Hilo, and he became the chief of parts of Hilo, Puna, and Hāmākua... Kona, Kohala, and a portion of Hāmākua became lands of Kamehameha. The island of Hawai'i was divided into three kingdoms, and with three kings.

Ki'i maila 'o Keōuakū'ahu'ula e kaua iā Keawema'uhili. Kaua ihola lāua i kinohi, a he'e 'o Keawema'uhili; a kaua hou ihola ma 'Alae, ma Hilo Palikū, ua pepehi 'ia 'o Keawema'uhili, a make pū ihola kekahi ali'i, 'o Kāo'o kona inoa, he kaiko'eke nō ho'i nona (Kamakau 1996[1866]:105).

Keōuakū'ahu'ula came to do battle against Keawema'uhili. They fought in the beginning, and Keawema'uhili fled; and they fought again at 'Alae, at Hilo Palikū, Keawema'uhili was killed, together with another chief named Kāo'o, who was a brother-in-law of his.

Ki'i akula 'o Keaweaeulu a me Kamanawa, nā kuhina o Kamehameha, iā Keōuakū'ahu'ula, ka mō'i o ka 'ao'ao hikina o ka mokupuni 'o Hawai'i... nīnau ihola 'o Keōua, 'He aha kā 'olua huaka'i?' Pane a'ela 'o Keaweaeulu mā, 'I ki'i mai nei nō māua iā 'oe, 'o 'oe nō ke keiki a ko māua kaikua'ana haku; i ki'i mai nei iā 'oe, e holo kākou i Kona, a hui pū me kō kaikaina... E ho'opau i ke kaua 'ana ma waena o 'olua... Holo akula nō lākou nei a kokoke e pili i Mailekini ma Kawaihae... Kū maila nō ho'i 'o Keōuakū'ahu'ula a kāhea mai iā Kamehameha, 'Eia au lā.' Kāhea mai nō ho'i 'o Kamehameha, 'Kū mai, a hele mai e 'ike kāua.' Kū a'ela nō ho'i 'o Keōuakū'ahu'ula me ka mana'o e lele mai i uka; e hou mai ana 'o Ke'eaumoku i ka pololū... A 'o Keōua a me kekahi po'e 'ē a'e ma ko lākou wa'a, ua pau loa lākou i ka make... I ka make 'ana o

Keōuakū‘ahu‘ula, ke keiki a Kalani‘ōpu‘u, ka mō‘ī o Hawai‘i, a kau ‘ia ‘o ia ma Pu‘ukoholā ma Kawaihae, a laila, ua holo‘oko‘a ke aupuni o ka mokupuni ‘o Hawai‘i iā Kamehameha (Kamakau 1996[1866]:110–113).

Keaweāheulu and Kamanawa, the cabinet members of Kamehameha, went to get Keōuakū‘ahu‘ula, the king of the eastern side of Hawai‘i Island... Keōua asked, “Why have you two journeyed?” The two travelers answered, “We have come to get you, you are the child of our older brother, Chief [Kalani‘ōpu‘u]; we have come to get you that we may all sail to Kona and meet with your younger brother [cousin Kamehameha]... to put an end to the warfare between you two... They all sailed and approached close to Mailekini at Kawaihae... Keōuakū‘ahu‘ula stood and called out to Kamehameha, “Here I am.” Kamehameha called back in return, “Stand up and come, let us see.” Keōuakū‘ahu‘ula stood up with the thought of fleeing inland; (Kamehameha’s warrior uncle) Ke‘eaumoku threw his spear... Keōua and the other people on that canoe, they all died... At the death of Keōuakū‘ahu‘ula, who was the child of Kalani‘ōpu‘u, the former king of Hawai‘i, Keōuakū‘ahu‘ula was placed on the sacrificial heiau of Pu‘ukoholā at Kawaihae, and then, the entire kingdom of Hawai‘i Island became under the one rule of Kamehameha.

Prior to Kamehameha’s reign, in 1778 during the reign of Chief Kalani‘ōpu‘u, the British sailor James Cook arrived in the Hawaiian Islands. He is credited as being the first Westerner to do so (Kamakau 1996[1866]). An estimated 105,000 natives were living on Hawai‘i Island at the time with more than 23,000 living in Kohala, the district in which Waimea is situated (Bergin 2004:21).

Historic Land Use

After the arrival of foreigners to Hawai‘i’s shores, the islands were transformed culturally, politically, and economically. In the case of Waimea, numerous changes were spurred by the activities of ranchers, whalers, missionaries, sandalwood traders, and other agricultural businessmen. The transformation of Waimea was further shaped by the Māhele, a royal proclamation which replaced the traditional land tenure system with a Western capitalist one. And the final outside force which affected Waimea, though not as much as some other parts of the islands, was the establishment of the U.S. government and military presence.

Ranching

In 1792, another British sailor, Captain George Vancouver, arrived and anchored at Hawai‘i Island. Vancouver had previously visited the islands as a sailor on Captain Cook’s earlier voyages. When he came back as a captain, Vancouver brought gifts of cattle, goats, and sheep for the king, Kamehameha. Kamehameha instituted a *kapu* or strict taboo on these gifts of livestock. Anyone caught harming the livestock could be put to death. As a result, the cattle and goats and sheep multiplied copiously across Waimea and the rest of the lands of north Hawai‘i Island. Many walls and enclosures had to be built to protect the people’s cultivated crops from destruction from the animals. In 1803, the horse was also introduced to the island (Bergin 2004).

After the *kapu* over the cattle was lifted in 1815, the king appointed the American newcomer, John Palmer Parker, to be his authorized cattle hunter. Three years later, Parker married Keli‘i Kipikane Kaolohaka, a great-granddaughter of Kamehameha. The hunting of animals, and especially the salting and corning of beef and the procurement of hides and tallow, became a booming industry. This business was notably fueled by the demand from the visiting whaling ships. The immensity of this operation is shown when the numbers are tallied:

The salted beef, hide, and tallow export industry grew to become a major component of commerce. Forty to fifty-nine whaling ships called annually at Kawaihae in the mid-1850s, taking aboard 1,500 barrels of salt beef, 5,000 barrels of sweet potatoes, 1,200 bullock

hides, and 35,000 pounds of tallow on an average. Between Waimea and Kawaihae, South Kohala became the center of the cattle industry (Bergin 2004:32).

In 1832, the first of numerous Mexican cowboys arrived on Hawai'i Island to lend their experience and skills in handling cattle. These Mexican cowboys inherited their expertise from generations of ranching, first introduced to America from the Iberian Peninsula in Spain. However, the introduction of cattle and horses and later ranching operations entered America from Europe in the 1500s and 1600s. This industry then made its way to Hawai'i from America in the 1800s. It is important to realize that there was a span of perhaps 200 years for ranching in "New Spain" to evolve into something uniquely different from Old Spain. This evolution had a direct effect on the development the Hawaiian *paniolo*, or Hawaiian cowboy. Much of the current literature notes that the Hawaiian style of ranching has its roots in Spain and the American Southwest, although the differences between these two birthplaces of ranching are not explicitly stated. Many of Hawai'i's pioneer *vaqueros*, or Mexican cowboys, were not entirely Spanish, but instead they were *mestizos*, persons of mixed Spanish and Native American bloodlines. An interesting line of research would be to determine which characteristics from the Native American background became an integral part of the Mexican ranching culture, differentiating it from the European Spanish ranching culture. After this analysis, perhaps a clearer picture of Hawaiian ranching practices can be made, giving separate and proper credit to their New World and Old World origins.

While the *vaqueros* were busy teaching their cowboy skills to Hawaiians in the 1800s, Parker became a leader in the industry. In 1847, he established the Parker Ranch, an enterprise which would later become one of the greatest ranches under the American flag. As intrinsic as the contributions of the Mexican cowboys are to the story of the *paniolo* and Hawaiian ranching, so are the contributions of the Parker Ranch and the Parker family to *paniolo* history in Hawai'i. But besides the Parkers, there were other important families who have also added to the rich history of the Hawaiian cowboy. These other families include, among others, the Bell, the Fay, the Lindsey, the Purdy, and the Stevens 'ohana. The patriarchs and matriarchs of these aforementioned families with Anglo-American names married into the Native Hawaiian population, creating generations of descendants connected to the land on many levels.

Missionaries

Overlapping with the arrivals of foreign sailors, whalers, and cowboys to the islands was the equally significant arrival of Christian missionaries. Leading the cause to evangelize the Pacific were the American Board of Foreign Missions and the London Mission Society. The landing of the American Board of Foreign Missions on Hawai'i's shores in 1820 could not have come at a more opportune time. Just a year earlier, King Kamehameha had died, his son Liholiho became the new king, and soon after that, the ancient traditional religion was abolished by the new king (Ellis 1963).

One of the most famous early missionaries was Lorenzo Lyons, who arrived in the islands in 1832 and later erected his church in Waimea. His written descriptions of the natural environment of Waimea are priceless. They depict a landscape filled with wind, rain, and running water, a description that matches the oral accounts of the area since time immemorial. The following passages about Waimea were originally written in the manuscript journals of Lorenzo Lyons (Doyle 1953):

Waimea (Waikoloa) was a place of solitude, but a solitude by no means voiceless. The hours were few in the 365 days of the year when there was not 'a sound of going' in the mulberry trees. Normally the pliant boughs were strained and lashed by a northeast wind having the force of a full gale. The diapason of the weird music it made was the dominant fact of consciousness. Often for days at a time the wind was charged with fine drops of rain --- Scotch mist we called it --- and then its voice took on a fiercer, more uncompromising tone. This is the 'ua puupuu of Waimea'. The rain that raises the 'goose flesh.' The epithet,

like the local epithets of Homer, is inseparable in poetic speech from the place. Even within the house the fierce impact of those minute raindrops driven by the violent wind gusts against unsheltered window panes makes a wild music like that of a driving sleet storm in New England.

During the winter months come westerly breezes, swaying backward the mulberry boughs to which the more prevalent trades have given a permanent set toward the west, adding to the aeolian music a new and distant note. Beginning with a lisping whisper it swells to an inarticulate outcry of protest. Only rarely does this west wind approach the force of a gale [a Kona storm], when the clashing and boughs give to the music a martial motif. Great branches may finally be torn from trees which have withstood for decades the westward urge of the more violent trade winds.

Whenever the voice of the wind is hushed, there is heard a sustaining deep note --- the sound of a series of cascades in the glen which brings down from the Kohala mountain the Waikoloa stream. Within a half mile, the fall must aggregate all of six or seven hundred feet, the water leaping 5, 10, even 20 feet at a time, to plunge into the deep excavation worn in the solid rock at the foot of the cascade. It is the monotone of this music rising and falling in volume of sound with capricious changes in the breezes that in the night lulls one to slumber. On quiet nights at Waikoloa when the stream is in freshet from a rain storm mauka, the sound gains in depth and volume, becoming impressive and even awe inspiring. At such times the stream which passes close to the mission premises --- under normal conditions merely a purling brook --- is a foaming, roaring torrent, sweeping along in its course not only branches of trees, but even great rocks torn from its bed. (Doyle 1953:41, 42)

Another early missionary to Hawai'i Island who left us with invaluable written accounts of Waimea was William Ellis. Ellis arrived in the islands in 1822. In both Ellis' descriptions and in those of Lorenzo Lyons, the flora of Waimea do not appear to have been damaged yet by the introduction of foreign livestock. Ellis notes the lushness of Waimea's lands (Ellis 1963):

Here [at Waimea] a number of villages appeared on each side of the path, surrounded with plantations, in which plantains, sugar-cane, and taro, were seen growing unusually large. (Ellis 1963[1827]:253)

Mr. Thurston was informed that the inhabitants of the plantations, about seven miles in the interior, were far more numerous than on the shore... Mr. Thurston set out on a visit to the inland district of Waimea, having been furnished with a guide... Mr. Thurston walked on to Kalaloe, the residence of the chief of Waimea, Kumuokapiki (Stump of Cabbage). Leaving Kalaloe he walked on to Waiakea, from thence to Waikaloe, Pukalani, and Puukapu, which is sixteen or eighteen miles from the sea-shore, and is the last village in the district of Waimea... The soil over which he had travelled was fertile, well watered, and capable of sustaining many thousand inhabitants. In his walks he had numbered 220 houses, and the present population is probably between eleven and twelve hundred... In this district, and throughout the divisions of Hamakua and Kohala, together with the greater part of Hiro, the plough might be introduced with advantage, and the productions of intertropical climates raised in great abundance and excellent quality, as the sugar-cane and other indigenous plants, grown at Waimea, are unusually large. (Ellis 1963[1827]:288, 289)

Sandalwood

One very important entry not to be overlooked in the writings of William Ellis is his mention of the sandalwood trade taking place on Hawai'i Island. Ellis documents that a multitude of people from

Waimea had been ordered to harvest sandalwood trees from the Kohala Mountains. It was arduous labor that required the men to carry these huge harvested trees to the coastline for shipping (Ellis 1963):

[At Kawaihae] we were roused by vast multitudes of people passing through the district from Waimea with sandal wood, which had been cut in the adjacent mountains for Karaimoku, by the people of Waimea, and which the people of Kohala, as far as the north point, had been ordered to bring down to his storehouse on the beach, for the purpose of its being shipped to Oahu.

There were between two and three thousand men, carrying each from one to six pieces of sandal wood, according to their size and weight. It was generally tied on their backs by bands made of ti leaves, passed over the shoulders and under the arms, and fastened across their breast. When they had deposited the wood at the storehouse, they departed to their respective homes. (Ellis 1963[1827]:286, 287)

Undoubtedly, the deforestation caused by the unbridled logging of sandalwood altered the landscape of Waimea. Other notable ventures which transformed the environment of Waimea include the cultivation and procurement of sugarcane, cotton, and *pulu*. In addition, rampant livestock grazing depleted the natural vegetation of Waimea, and this was countered by introducing various invasive plant species that suited the needs of the ranchers. The introduced invasive plant species would eventually supplant countless endemic and indigenous ones. All of these business interests which developed throughout the 1800s left Waimea's post-contact landscape exhaustively different from what it looked like in the pre-contact era (Wilkinson et al. 2012; Bergin 2004).

Māhele Land Tenure

By 1848, the third monarch of the Kamehameha dynasty, born Kauikeaouli, was the ruler of the islands. That year he enacted one of Hawai'i's most transformative proclamations ever, the Māhele. This proclamation by the king divided the lands throughout Hawai'i and set aside land ownership for three groups of people: the king, the chiefs, and the commoners. This was a sweeping departure from the traditional land tenure system which originally fostered common stewardship rather than private ownership:

THE MAHELE is rightfully considered one of the most significant chapters in the modern history of Hawai'i. Several legislative acts during the period 1845–1855 codified a sweeping transformation from the centuries-old Hawaiian traditions of royal land tenure to the western practice of private land ownership. (Moffat and Fitzpatrick 1995)

The king enacted the Māhele intending for it to provide the Native Hawaiian population with an irrevocable land base they would own. The process that the commoners needed to follow to secure their land titles consisted of filing a claim with the Land Commission; having their land claim surveyed; testifying in person on behalf of their claim; and submitting their final Land Commission Award (LCA) to get a binding royal patent. However, in actuality, the vast majority of the native population never received any land commission awards recognizing their land holdings due to several reasons, such as their unfamiliarity with the process, their distrust of the process, and/or their desire to cling to their traditional way of land tenure regardless of how they felt about the new process. In 1850, the king passed another law, this one allowing foreigners to buy land. This further hindered the process of natives securing lands for their families.

Regarding the lands of Waimea, there were no LCAs within the project area, although according to the Waihona 'Aina database, 20 awards may have been made for the 'ili of Pu'ukapu (Table 1). Nevertheless, there has been documentation of a land dispute from 1865 which sheds some light on

Table 1. Māhele Awards in the ‘Ili of Pu‘ukapu, Ahupua‘a of Waimea

| LCA | Claimant | Island | District | Ahupua‘a | ‘Ili | Awarded |
|------------|-----------------|---------------|---------------------------|--------------------|------------------------|----------------|
| 3672 | Mana | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 3675 | Mahuka | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu, Waipio | 1 |
| 3685 | Mahoe | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 3686 | Moluhi | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 3733 | Imoehalau | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 3842 | Paukumoku | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 3923 | Naihe | Hawai‘i | Kohala, South | Waimea | Maialaa, Pu‘ukapu | 1 |
| 4130 | Kanakaole | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 4132 | Kaina | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 4183 | Kaluahinenui | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 04183B | Kanaue | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 4210 | Kalua | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 04210B | Wawaeluhi | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 4212 | Kualehelehe | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 4214 | Hanehane | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 4218 | Kaohimaunu | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 4227 | Kaulunui | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 4230 | Kukahekahe | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |
| 4233 | Kahuhu, E | Hawai‘i | Kohala, South, Hāmākua | Waimea, Kaloaha | Pu‘ukapu, Pu‘ulama, | 1 |
| 04348B | Purday, Harry | Hawai‘i | Kohala, South | Waimea | Pu‘ukapu | 1 |

the original ownership of the project site. One of the witnesses, a person named Cross, claimed that Pu‘ukapu once belonged to Chief Kalaimoku, but by 1865, this person wasn’t sure who the present owners were. Another witness in the same land dispute, a person named Mi 1st, claimed that the Pu‘ukapu land was firmly kept by Kamehameha I. It is possible that the Pu‘ukapu-Waimea lands were passed down from Kamehameha I to his son, Kamehameha III. It was mentioned in the journal entry of Lorenzo Lyons in 1849:

The King [Kamehameha III] owns Waimea, and has ordered all who have cattle, hogs, sheep, goats, horses, pasturing on his land to pay a certain rate per head. At this new regulation the people groan. (Doyle 1953:153)

Kamehameha III, in turn, entrusted administration of his Waimea lands to William Beckley, a part-Hawaiian of royal blood who had grown up with the king. Under William Beckley’s authority, the Hawaiian kingdom government started to take over much of the cattle industry. Beckley’s guidance of the crown’s involvement in the cattle industry perhaps led to John Palmer Parker’s lease of the Waimea lands to build his ranch.

Notice that in the above quote taken from a previous study, the exact end-date of Parker's lease of lands belonging to the crown is uncertain. What is certain is that Parker Ranch still utilized these lands well into the 20th century. This continuity of the ranch survived the American-backed overthrow of the Hawaiian monarchy in 1893 and the subsequent annexation of Hawai'i as an American territory in 1898.

Historic Maps

Historic maps help to paint a picture of Waimea in times past and illustrate the changes that have taken place in the region over the years. Note that place names are spelled as they are shown on each map.

The earliest map found for this area likely dates to the mid-late 1800s (Figure 5). Pu'ukapu is depicted in script lettering, with the points "Kaala," "East Base," and "West Base" surrounding it. Waimea Village is shown near West Base, but the settlement does not appear very developed.

The next map dates to 1913 (Figure 6). It shows the Pu'ukapu Homestead area with streets and land parcels laid out in modern fashion. Pu'u Kakanihia is labeled on the west side of the subdivision, and an abandoned pipeline runs through the west side. An abandoned ditch snakes through the homesteads, extending from the Upper Hamakua Ditch to the Pu'ukapu Reservoir. A new ditch is also shown, including a weir at its bend. The 10.6-acre Paiakuli Pond is illustrated on the southwest side of the homesteads.

A 1914 map shows land usage to the west of the project area (Figure 7). Place names depicted in Pu'ukapu are Nohoaina, Alaohia, Pukalani, and Paulima. A cattle pen and two corn fields are illustrated to the west in Waikōloa.

A 1928 map of government lands in Waimea shows more development of the area (Figure 8). Several small LCAs are shown to the northwest of the project area, including LCA 987, 988, 2271, 4026, 4037, and 4198. The "road to Kona" is now illustrated, with a racetrack shown on the *mauka* side of the road. Several ranch pipelines are also depicted.

The Pu'ukapu Homesteads are next shown in 1945 (Figure 9). The Lyons Ditch and a branch of this ditch flow from a dam in Waikoloa Stream. The U.S. military camp Tarawa is depicted between the Waimea and Pu'ukapu Homesteads. Among the features illustrated are the division headquarters, a hospital, a school, an ice plant, a recreation field, a gasoline storage area, and several pipelines. Also shown on this map are the Waimea Public Park, a bakery, a Roman Catholic Church, and a Church of the Latter Day Saints.

A land classification map for the Waimea Plain shows the area in 1947 (Figure 10). The LCAs depicted in the 1928 map are still shown, with two more added: LCA 3682 and 4233. The roads to Kona and Kohala are now labeled as the "Gov't Main Road." Paiakuli Pond and the new Upper Hamakua Ditch with its weir are still shown. A tree nursery and forest ranger station are illustrated in the *mauka* section of the Pu'ukapu Homesteads.

Mele

Like the traditional chants from ancient times that give us a window into pre-contact Hawai'i, the modern songs of today also provide a glimpse of the specific recent time and place that they were written in. It is interesting that the poetic references to Waimea from the days of old have found their way into the modern song compositions. Such is the case with the songs *I Ka Luna O Waimea*, *Hanohano E*, and *Na Kuahiwi Kaulana*. The rain of Waimea is still personified with the proper

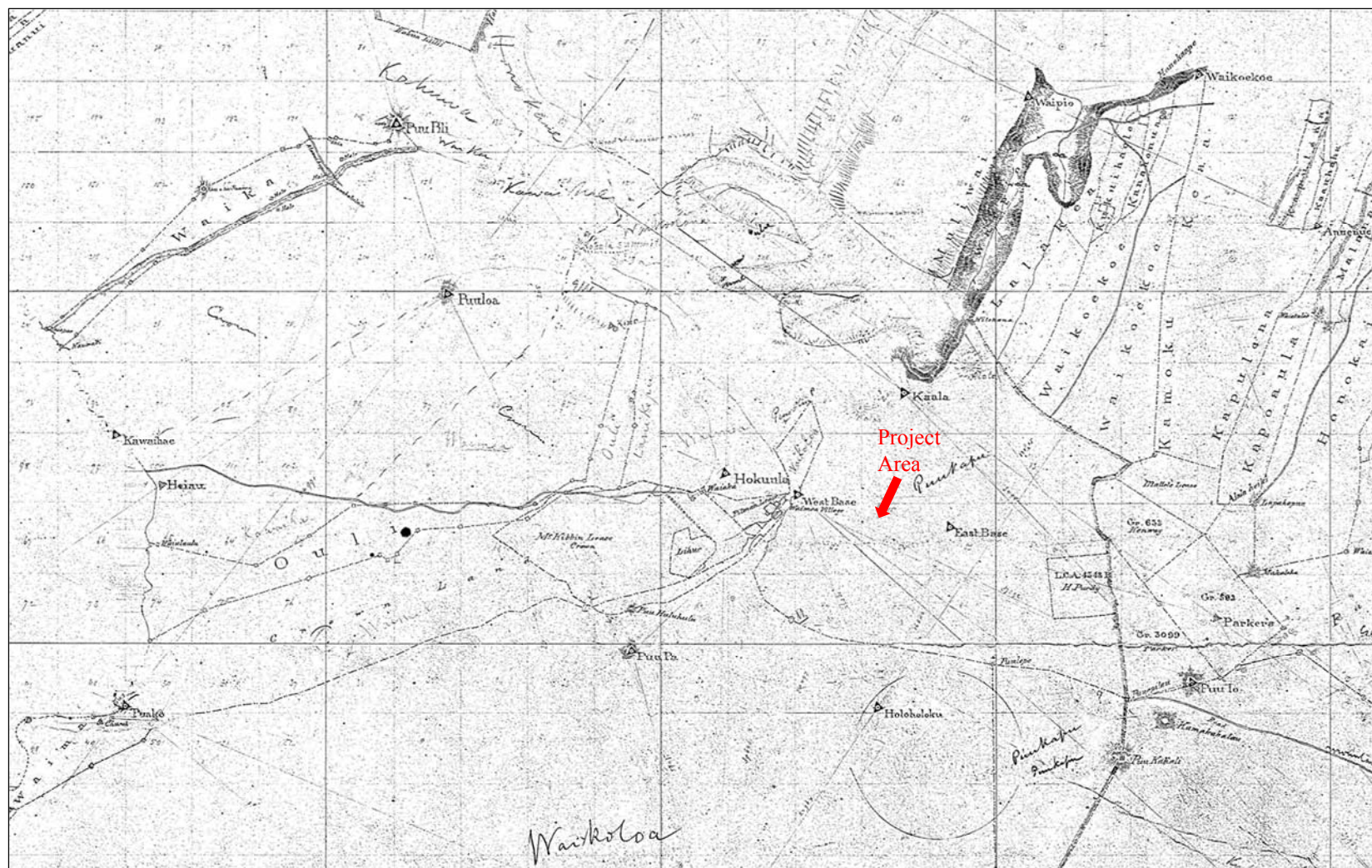


Figure 5. Portion of a North Hawai'i Island map dating to the mid-late 1800s (Lyons n.d.).





Figure 7. Portion of a Hawaii Territory Survey map of Waimea (Wall 1914). The project area is off the map to the east (bottom right of the map).

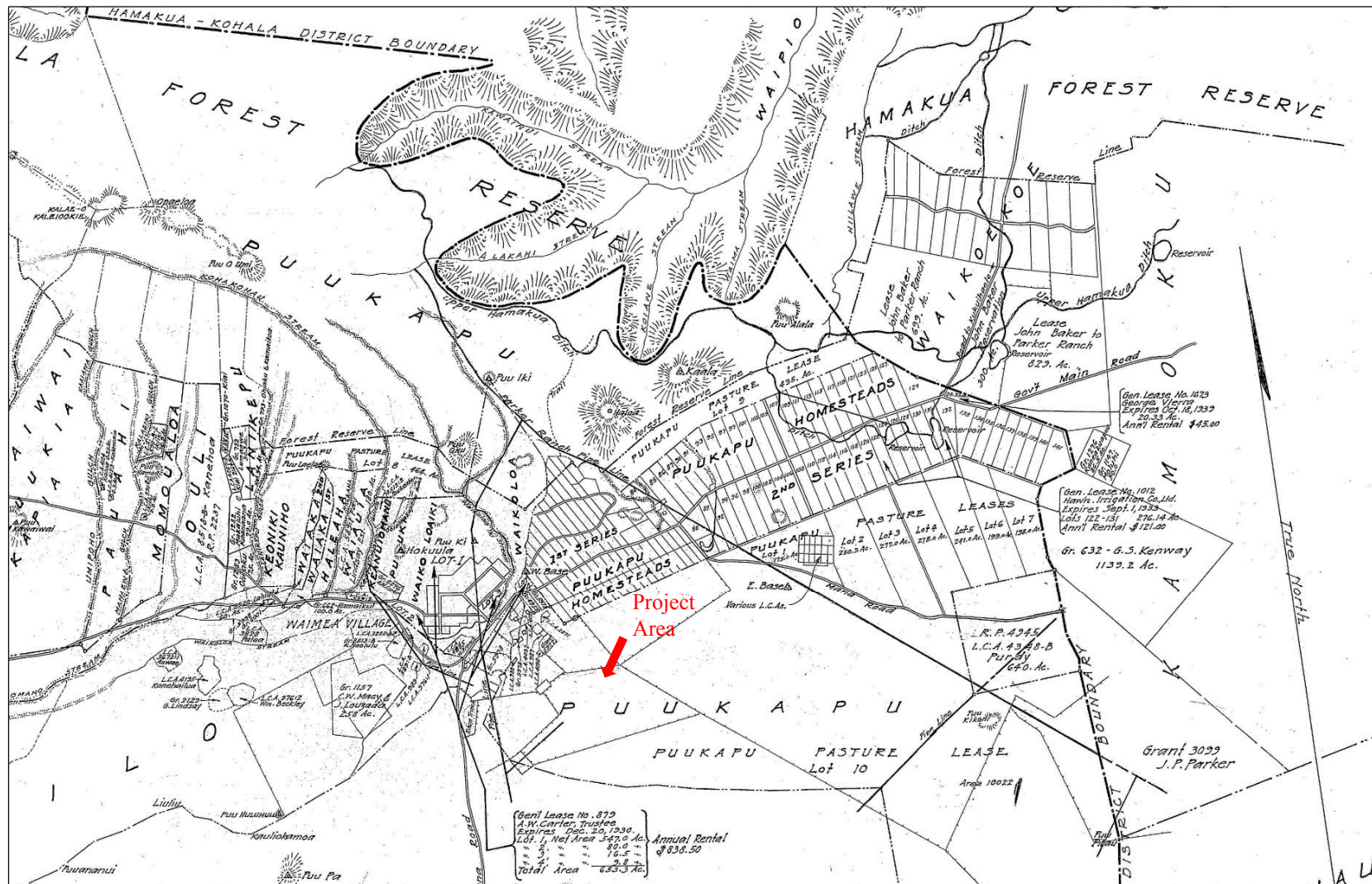
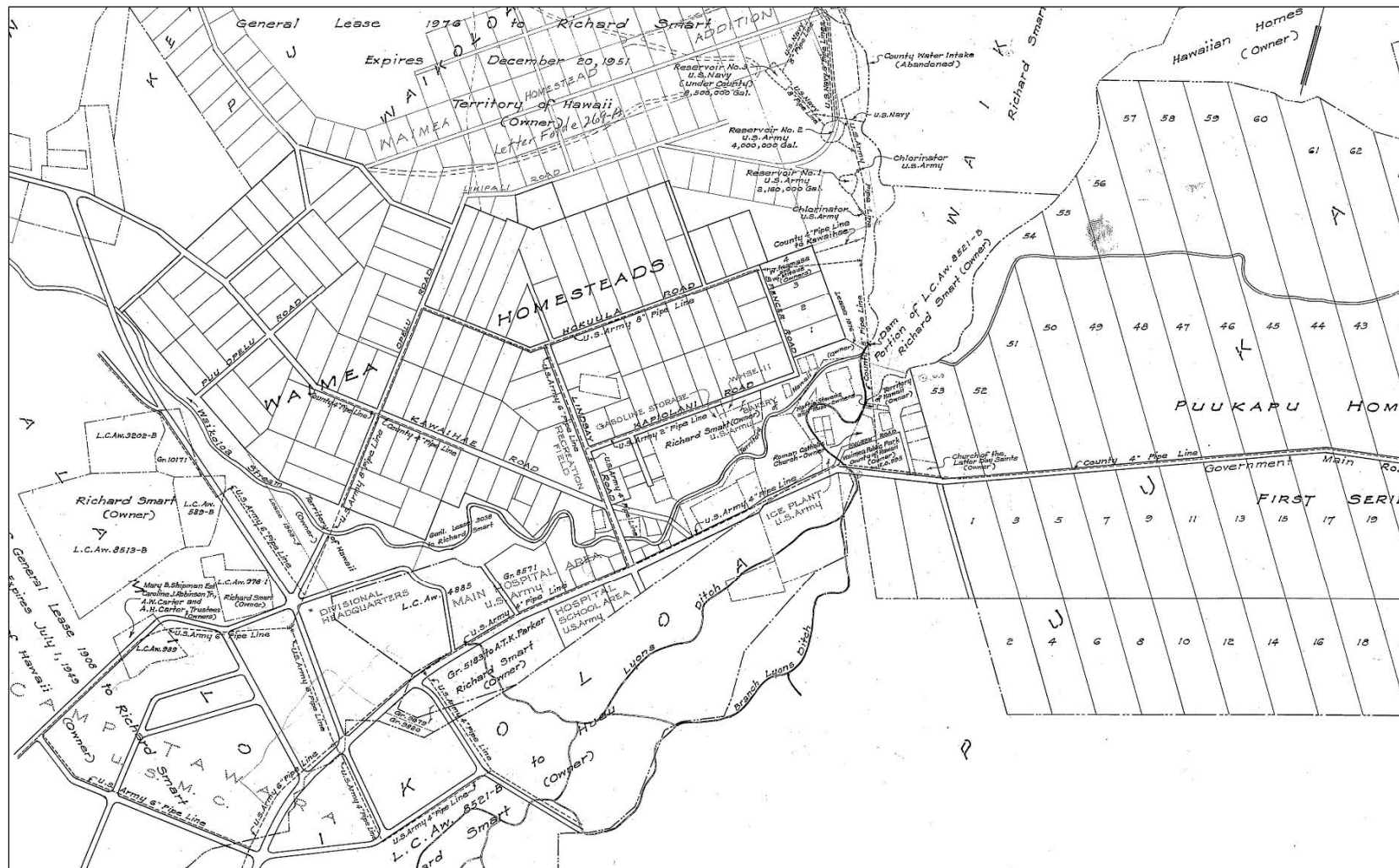


Figure 8. Portion of a Waimea Government Lands map (Wall 1928).



name, Kīpu‘upu‘u, and the wind of Kohala is similarly still called ‘Āpa‘apa‘a. Portions of the three songs are included here:

I Ka Luna O Waimea by Keali‘ikaleo‘olaeaenuikaumanamana VIII Blaisdell

| | |
|-------------------------|---------------------------------|
| Aia i ka luna o Waimea | There, in the heights of Waimea |
| Pumehana ho‘i kāua | You and I share warmth |
| I ka ua e kipu‘upu‘u | From the cold rain |
| Me ka noe e a ka uhiwai | And the mist and fog |

Source: Keali‘i Blaisdell’s CD “Malumaluakua” -This was written (07/08/2008) about a naughty little dream of Keali‘i and his wife up in Waimea, Hawai‘i. Having a lot of kaona, shall we say PG-13 rating? Translated by Keali‘i Blaisdell, Copyright 2008, Keali‘i Blaisdell (Lyrics and translation to this song and all other songs in this section along with their accompanied descriptions are from the www.huapala.org database compiled by Kanoa-Martin).

Hanohano E (traditional song)

| | |
|---------------------------|------------------------|
| Hanohano e o Kohala e | Majestic Kohala |
| I ka makani e apa‘apa‘a e | In the gales |
| Hanohano e o Waimea e | Majestic is Waimea |
| I ka ua e kipu‘upu‘u e | In the hard, cold rain |

Source: McKee Collection “Sonny Cunha Music Book” Translated by Mary Pukui

Nā Kuahiwi Kaulana by Bill Lincoln

| | |
|----------------------------------|---|
| Ho‘o komo i kau apo a‘o Mahukona | Let us go to Mahukona and |
| I ka nuku kaulana o ka ‘āina | Enter this famous land |
| Ahuwale nā Kuahiwi o Kohala | Mountains of Kohala are in plain view |
| Ke holo a‘ela mai uka a ke kai | That run from the uplands to the sea |
| Hu‘i hu‘i kai hona ao Waimea | Water of Waimea is cold |
| Me ka wai ili ula | The water burns the skin |
| Ka ua Kipu‘upu‘u | The chilly rain Kipu‘upu‘u |
| I ka ku‘i kā ‘olu o Kawaihae | The smooth pounding sea of Kawaihae |
| Ke one pua kea i ke kai | The white sand and whispering sea |
| hāwanawana | |
| Alawa a‘e ua | Let us glance up |
| I ka nani a‘o Maunakea | At the beauty of Mauna Kea |
| Pumehana i ka poli kaupu a‘o | Think of the heat in the heart of Mauna |
| Maunaloa | Loa |
| E ae ou Hualalai e ku‘u mai la | There is the top of Hualalai |
| Nā kuahiwi kaulana i ke kapa‘au | The famous mountains where the gods dwell |

Source: G.Cooke collection Translation by Kanani Mana

A beautiful addition to the the musical compositions written about Waimea is the inclusion of songs that reference the *paniolo*, or Hawaiian cowboy. This is undoubtedly unique to the few locales throughout the islands where ranching dominated the community. Songs written about, for, and by Hawaiian cowboys are probably even more prominent in the Waimea-Kohala area where Hawai'i's cattle industry thrived. The following three songs are associated with the *paniolo*. The first, *Ka Waimea Swing*, mentions the partying of a cowboy in Waimea. The second, *Lepe 'Ula'ula*, is a Waimea love song about a cowboy. And the third, *Waiomina*, celebrates the victories that the handful of Hawaiian cowboys stunned the world with when they traveled to Wyoming to compete in the annual cowboy competitions at Cheyenne. Here are the three songs:

Ka Waimea Swing by Thelma Sproat Bugbee, Music by Irmgard 'Aluli

Eia lā ka pō o ka wela lā
Nui ana o ka le'ale'a lā
E'oni ana nā po'e sure kēla!
Hele hula nā wāwae
Me ka Waimea swing
Me ka Waimea swing

This is the gala night
Fun and gaiety running high
Everyone in action for sure!
All the dancing feet moving
In the Waimea swing
In the Waimea swing

U'i nā pua lei like 'ole lā
Pūlehulehu nā pua aia lā
Kani nā kīkala ma kāma'a lā
Aia cowboy me ka Waimea swing
Me ka Waimea swing

Flower lei(s) of beauty unmatched
Bounty of floral beauty gathered here
Harmony of jingling spurs and boots
That's a cowboy dancing the Waimea swing,
The Waimea swing

Kani wāhie mai ne nā pila lā
Hū maila kani waiolina lā
Hui nā 'ukulele kīkā hō'alu lā
Kani maila e ka Waimea swing
E ka Waimea swing

Music breaks into the beauty and gaiety
Pouring forth harmony in violins
Mingling with 'ukulele and slack-key guitar
Raising the echo of the Waimea swing,
The Waimea swing

Ma 'ane'i mai a ma 'ō aku lā
Huli 'ākau a huli hema lā
Hene mai nā 'aka 'ana lā
Holo 'ana (Hī! Hū!)
O ka Waimea swing
O ka Waimea swing

Swing this way then that way
To the right and to the left
Rippling laughter mingles
With shouts, "Hee, Hoo!"
Of the Waimea swing
Of the Waimea swing

Ha'ina mai ka puana lā
Eia lā ka pō o ka wela lā
E 'oni ana nā po'e sure kēla!
Hele hula nā wāwae
Me ka Waimea swing
Me ka Waimea swing

This is the story told
The gala night of whoopee
Everybody in action for sure!
All the dancing feet moving
In the Waimea swing
In the Waimea swing

Source: Hailama Farden from Kani ka pila! The musical legacy of Irmgard Keali'iwahinealohanohokahaopuamana Farden 'Aluli. Translation by Thelma Bugbee

Lepe ‘Ula‘ula by Kaimanahila

Lepe ‘ula‘ula lepe o ka moa
Ke hua kūlīna ‘ai a ka pehuhu

The red comb of the rooster
The corn eating turkey

Keiki mai au no Kawaihae
No ke kipuka ‘ili lawe a lilo

I am a lad from Kawaihae
With a winning lasso

‘Elua wale iho ho‘i māua
Ka hau hāli‘i a‘o Waimea

Just the two of us
Covered by the dew of Waimea

I laila māua kukuni e ka hao
Koko‘pe e ka ‘i‘o kupu kuku‘i e ka
papa niho

There, we two used the branding iron
Scraped the flesh from the gums

Mai nō ‘oe a ho‘opoina
I ka lawe ha‘aheo ake kipuka ‘ili

Never forget
The lasso and the proud catch

Ha‘ina ‘ia mai ana ka puana
Lepe ‘ula‘ula lepe o ka moa

Tell the refrain
The red comb of the rooster

Source: This Waimea love story tells of a Big island cowboy who uses his lariat to capture the object of his affection. Translator unknown

Waiomina by Helen Parker

Kaulana Ikua me Ka‘aue, lā
Na‘eu kīpuka ‘ili
Na āiwaia ‘o Eulopa, lā
Waimea e ka ‘eu
Ka ua Kīpu‘upu‘u
Kahua Waiomina

Famous are Ikua and Ka‘aue
Both mischievous with the lariat
Both experts in Europe
Waimea full of gusto
The hard rain named Kīpu‘upu‘u
To the stadium of Wyoming

‘Olua nā moho puna ke ao, lā
Na‘eu kīpuka ‘ili
‘A‘ohe kupu‘eu nanā e a‘e, lā
Waimea e ka ‘eu
Ka ua Kīpu‘upu‘u
Me ke anu a‘o Kaleponi

Both are delegates to the world championship
Both mischievous with the lariat
No expert to excel you
Waimea full of gusto
The hard rain named Kīpu‘upu‘u
To the cold of California

Na ke kelekalapa i ha‘i mai, lā
Na ‘eu kīpuka ‘ili
Ikua e ka moho puni ke ao, lā
Waimea e ka ‘eu
Ka ua Kīpu‘upu‘u

A telegraph brought us the word
Of your mischievous lariats
Ikua is the champion of the world
Waimea full of gusto
The hard rain named Kīpu‘upu‘u

Nā kuahiwi ‘ekolu
Piha hau‘oli ou mau kini, lā
Na ‘eu kīpuka ‘ili
Kaulana ka ua Kīpu‘upu‘u, lā
Waimea e ka ‘eu
Nā kuahiwi ‘ekolu
Kahua Waiomina

And the three mountains
Your people are full of happiness
Of your mischievous lariats
Famous is the Kīpu‘upu‘u rain
Waimea full of gusto
The three mountains
The stadium of Wyoming

| | |
|-------------------------------------|-----------------------------|
| Ha'ina hou mai ka puana, lā | Tell the refrain |
| Na 'eu kīpuka 'ili | Of your mischievous lariats |
| Ke kaula 'ili a'o kani ka uwepa, lā | The sound of the lariats |
| Waimea e ka 'eu | Waimea full of gusto |
| Nā kuahiwi 'ekolu | The three mountains |
| Waimea e ka 'eu | Waimea full of life |

Source: Penny Keli'i - When the Waimea paniolo went to Cheyenne in 1907, they scouted the world's largest rodeo and decided they could compete and probably do well. They signed up to compete and returned the next year, 1908, with approximately 5 or 6 paniolo. They were well received and the Hersig Ranch loaned some of their best horses to our paniolo to use in the competition. Rancher Hersig was a good friend of Eben Low. Eben Low competed with only one hand, his right hand had been yanked off years before while roping cattle in Hawai'i. Jack Low, Eben's brother, had an asthma attack but competed anyway placing 6th in the competition. Ikua Purdy's average roping time was 56 seconds, and won him 1st place, stunning the rest of the competing cowboys. Archie Kaaua came in 3rd.

Finally there is the song *Nani Waimea*. This song is simply a proud tribute to the area. The composer is moved to express his love for his home there. Here is a portion of this musical tribute:

Nani Waimea by Sam Koki

| | |
|-------------------|--------------------------|
| Nani Waimea | Beautiful Waimea |
| Ku'u home Kamuela | My home in Kamuela |
| Lei o ka heke | Best wreath |
| Lei o Hawai'i | Wreath of Hawai'i |
| Ku'u pua milimili | My flower to caress |
| Anuanu Humu'ula ē | Coolness of Humu'ula |
| Ku'u 'āina aloha | Land that I love |
| 'Āhē nani Waimea | Yes, Waimea is beautiful |

Source: Humu'ula is a place name on the slopes of Mauna Kea.

Contemporary History

The first half of the 1900s saw Parker Ranch dominating the Waimea countryside. By then, Waimea had a few stores and a boarding house, but the economy was centered on its shipment of cattle to the outside markets. Under the management of A.W. Carter, more lands were purchased; more irrigation ditches were constructed; and a concentrated effort was made to breed better cattle and horses. Carter even ventured to train horses for polo and to provide cavalry horses for the U.S. military. He was succeeded as manager of the ranch by his son A.H. Carter in 1937 (Wilkinson et al. 2013).

In 1943, the Army leased from Parker Ranch approximately 91,000 acres of land for military training. Both the Army and the Marines utilized this land for battle maneuvers. The military 'camp' was initially named Camp Waimea, but then it was called Camp Tarawa. Its center of operations was located south of today's Waimea Town, near the current project site at Pu'ukapu. The camp was abandoned in 1946 after the end of World War II. The camp infrastructure went into ruins, and the lands reverted back to Parker Ranch. When Parker Ranch's lease expired, these former Crown Lands reverted to the Department of Hawaiian Home Lands (Wilkinson et al. 2013).

The project area lies within Sector 15 of the Waikoloa Maneuver Area Formerly Used Defense Site (FUDS). This is a 123,000 acre area of Waimea and Waikoloa acquired by the Navy in 1943 (U.S. Army Corps of Engineers 2013). Approximately 50,000 troops were sent there from 1943–1945 to participate in live fire training exercises and troop maneuvers. Although surface clearing of unexploded ordnance (UXO) was conducted in 1946 and again in 1954, munitions and explosives are still being discovered in the Former Waikoloa Maneuver Area FUDS. To date, more than 22,600 acres of the Waikoloa Maneuver Area have been surface cleared of UXO, with a wide variety of munitions, explosives, and military debris removed. Clean up and investigative studies are ongoing.

Today, the lands of Waimea around this project site are still under the Department of Hawaiian Home Lands and designated for community and agricultural use. The current lessees use the land for cattle grazing.

The Hamakua Ditch

An offshoot of the Upper Hamakua Ditch runs through the Pu‘ukapu Homesteads, to the east of the project area. The main ditch was completed in January 1907 to divert water from tributaries of Wailoa Stream in Waipi‘o Valley for use as irrigation in sugarcane fields and for fluming at the sugar mills of the Hāmākua Coast (Wilcox 1996). At first, the ditch was not properly lined, and by 1915 average flow decreased by more than half, with the flumes and associated mountain trails badly deteriorating. The ditch was repaired at high cost and “boasted some of the best dressed-stone work in Hawaii” (Wilcox 1996:149). By 1921 much of the ditch had been rerouted and other parts were enlarged so by that time, none of the original ditch was in use. Even with the repairs, the ditch was unsuccessful, in part because of the inconsistent water source.

The Upper Hamakua Ditch was appropriated by the territorial government in 1948, but further repairs were not undertaken until the late 1980s. At this time the Alakahi and Ko‘iawe sections were reconstructed and the Pu‘u ‘Alalā section was abandoned. Water was diverted to homes and farms in Waimea, including the Pu‘ukapu Homesteads and the Lālāmilo Farm Lots. Nothing is left of the original 1907 ditch, although a few miles of the 1915 ditch can still be seen today (Wilcox 1996:150).

Previous Archaeology

The undertaking of archaeological work in the areas around Waimea has only started relatively recently, although a large amount of work has taken place. The following chronological review of archaeological studies summarizes reports found in the SHPD Kapolei library (Figure 11 and Table 2).

In 1981, an archaeological survey was conducted at the proposed Lālāmilo Agricultural Park (Clark 1981). A total of 321 historic properties were identified, and all were associated with the Waimea agricultural system. All of the irrigation ditches, to include the well-known “Akona’s ‘Auwai”, were designated as Site 9179.

In 1983, 4,561 archaeological features were identified during an investigation of the Mudlane-Waimea-Kawaihae road corridor (Clark and Kirch 1983). Numerous habitation and agricultural sites were recorded along with one dendritic irrigation system, possibly connected to “Akona’s ‘Auwai”, and designated as Site 2684. A portion of Section 4 of the extensive project area overlaps with the current study. Although no archaeological sites were found within the current area of study, 20 sites were located along Section 4 (Sites 8800–8819). These include C-shaped and U-shaped shelters, alignments, enclosures, terraces, walls, platforms, mounds, and agricultural fields.

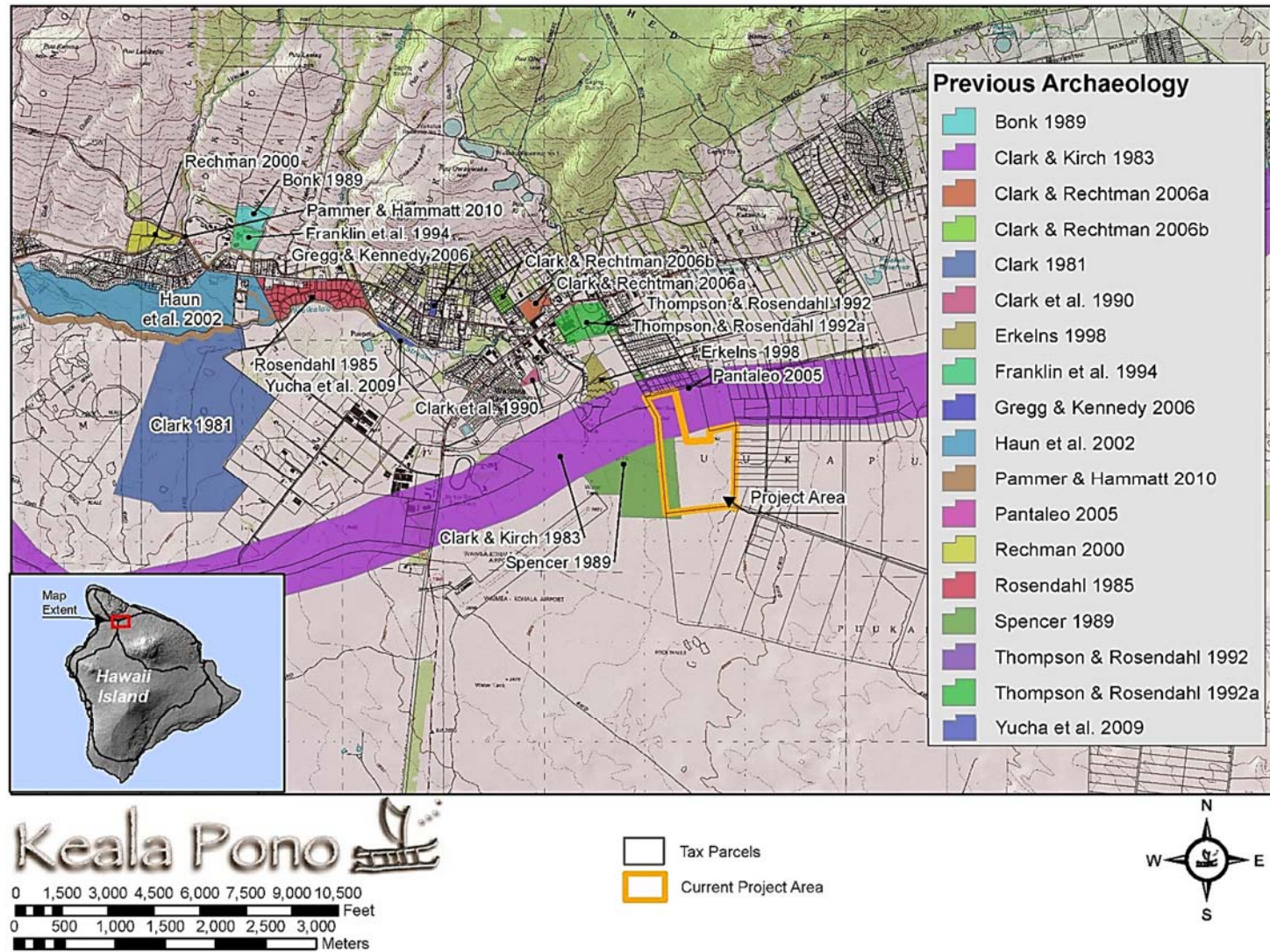


Figure 11. Previous archaeological studies in the vicinity of the project area.

Table 2. Previous Archaeological Studies in the Vicinity of the Project Area

| Author | Year | Location | Work Completed | Findings |
|------------------------|-------------|--|--|---|
| Clark | 1981 | Near Lālāmilo Agricultural Park | Archaeological Survey | Identified 321 historic properties associated with the Waimea agricultural system. All irrigation ditches including “Akona’s ‘Auwai” designated as Site 9179. |
| Clark and Kirch | 1983 | Mudlane-Waimea-Kawaihae road corridor | Archaeological Investigation | Identified 4,561 archaeological features. Dendritic irrigation system designated as Site 2684. |
| Rosendahl | 1985 | Kawaihae Reservoir No. 1 | Archaeological Reconnaissance | No findings. |
| Hammatt and Borthwick | 1986 | Lālāmilo Houselots | Archaeological Reconnaissance | Identified eight historic properties typical of the Waimea agricultural system. |
| Hammatt et al. | 1988 | Lālāmilo Houselots | Archaeological Inventory Survey and Subsurface Testing | Recorded artifacts and midden dating to the late prehistoric period. |
| Bonk | 1989 | Near Hawai‘i Preparatory Academy | Archaeological Reconnaissance | Identified various agricultural terraces. |
| Hammatt and Shideler | 1989 | Lālāmilo Houselots and Ka La Loa Subdivision | Data recovery | Documented possible sweet potato farming with agricultural intensification over several centuries. |
| Spencer | 1989 | Lālāmilo | Archaeological Investigation | No findings. |
| Clark et al. | 1990 | Waimea School | Archaeological Testing and Data Recovery | Recovered charcoal samples dating to AD 1449–1674. |
| Thompson and Rosendahl | 1992a | North Hawai‘i Community Hospital | Archaeological Inventory Survey | Identified an agricultural field complex (Site 18054) and an irrigation system (Site 16095). |
| Thompson and Rosendahl | 1992b | Waimea Elderly Housing | Archaeological Inventory Survey | Further documented Site 16095, previously recorded irrigation system. |
| Barrera | 1993 | Sandalwood Estates | Archaeological Inventory Survey | Identified an agricultural field complex (Site 14948). |
| Barrera | 1994 | Lanikepu and ‘Ōuli | Archaeological Inventory Survey | Identified 43 properties from the pre-contact and historic periods including trails, walls, burials, ‘animal barriers’, agricultural, and habitation sites. |
| Franklin et al. | 1994 | Hawai‘i Preparatory Academy | Archaeological Inventory Survey | Identified a historic habitation terrace (Site 19648), a cemetery (Site 19649), and five mixed habitation-agricultural sites (Sites 19643–19647). |

Table 2. (continued)

| Author | Year | Location | Work Completed | Findings |
|--------------------|-------------|---|--|---|
| Erkelens | 1998 | Pukalani | Archaeological Investigation | Identified a breaking corral (Site 19419), a veterinary office (Site 19418), the Pukalani stables and blacksmith shop (Site 19417), the Duncan-Lanakila Cemetery (Site 19416), and the <i>kuleana</i> lots (Site 8812). |
| Nees and Williams | 1998 | Camp Tarawa | Archaeological Monitoring | Identified a C-shaped feature (Site 21325), an enclosure remnant (Site 21326), and 96 WWII artifacts and artillery fragments. |
| Wolforth | 1999 | North Hawai'i Community Hospital | Data Recovery | Recorded subsurface features and collected sediment samples. |
| Rechtman | 2000 | TMK: 3-6-2-001:091 | Archaeological Inventory Survey | Identified a historic trash dump (Site 18579) and several agricultural features (Site 18581). |
| Haun et al. | 2002 | DHHL at Lālāmilo | Archaeological Inventory Survey | Documented 819 features (walls, mounds, enclosures, platforms, irrigation ditches, and field boundaries) within 76 historic properties. |
| Kikiloi et al. | 2002 | Waimea Trails and Greenway | Literature Review and Field Inspection | Assessed five areas according to potential for cultural resources, terrain type, and degree of urbanization. |
| Pantaleo | 2005 | Kanu O Ka 'Aina Learning Center at Pu'ukapu | Archaeological Assessment | No findings. |
| Clark and Rechtman | 2006a | TMK: 3-6-5-004:025 and 063 | Archaeological Inventory Survey | Identified an ' <i>auwai</i> ' (Site 26682), a wooden structure (Site 26683), and two historic walls (Sites 26680 and 26681). |
| Clark and Rechtman | 2006b | TMK: 3-6-5-4:029, 030, and 050 | Archaeological Monitoring | Documented a stone-concrete decorative feature (Feature H of previously recorded Site 24168). |
| Gregg and Kennedy | 2006 | TMK: 3-6-5-002:043 | Archaeological Assessment | No findings. |
| Yucha et al. | 2009 | Waimea Trails and Greenway | Archaeological Inventory Survey | Identified a concrete ford and connecting roadway (Site 26873), an earthen ditch determined to be part of "Akona's 'Auwai" (Site 26872), and WWII infrastructure from Camp Tarawa (Site 26871). |
| Pammer and Hammatt | 2010 | Waimea Trails and Greenway | Literature Review and Field Inspection | Identified seven historic properties consisting of alignments, enclosures, walls, and terraces. |
| McElroy et al. | 2014 | Current Project Area | Cultural Impact Assessment | Conducted ethnohistorical interviews and archival research. |

In 1985, an archaeological reconnaissance survey was done at Kawaihae Reservoir No.1 (Rosendahl 1985). No historic properties were found, and no further work was recommended.

In 1986, a reconnaissance survey was conducted at the proposed site of the Lālāmilo house lots (Hammatt and Borthwick 1986). Eight historic properties were identified, and they were determined to be similar to the Waimea Agricultural System. As a follow up to the reconnaissance survey, 12 acres were designated for further work and inventoried in 1988. Subsurface testing indicated that the area was a habitation-agricultural complex, and the artifacts and midden that were uncovered dated the site to the late prehistoric period (Hammatt et al. 1988). In 1989, data recovery and radiocarbon dating of these properties suggested possible sweet potato farming with a gradual intensification of agriculture in the area over several centuries (Hammatt and Shideler 1989).

Also in 1989, an archaeological reconnaissance survey was completed near the Hawai'i Preparatory Academy in Waimea (Bonk 1989). Various agricultural terraces were recorded but no irrigation ditches were found. Also, no habitation sites were identified in the survey. Additional mapping of the terraces and data recovery were recommended.

Also in 1989, an archaeological investigation was conducted at Lālāmilo for an irrigation pipeline and for a livestock distribution and management area (Spencer 1989). A portion of this investigation overlaps with the west side of the current area of study. No historic properties were observed, and no further work was recommended.

In 1990, archaeological testing and data recovery was conducted at Waimea School (Clark et al. 1990). Focusing on the previously recorded Site 8808, three irrigation ditches were studied, and it was concluded that there was a possible mix of historic and pre-historic construction. Charcoal samples from a lower subsurface lens yielded dates in the range of AD 1449–1674.

In 1992, an inventory survey was conducted for potential sites of the North Hawai'i Community Hospital (Thompson and Rosendahl 1992a). Among the sites identified were an agricultural field complex, Site 18054, and an irrigation system, Site 16095. The irrigation system was further documented after additional adjacent lands for the Waimea Elderly Housing were surveyed (Thompson and Rosendahl 1992b). Archaeological monitoring was recommended.

In 1993, an archaeological inventory survey was conducted on approximately 50 acres of the Sandalwood Estates (Barrera 1993). A complex of agricultural field borders were recorded through subsurface testing. The complex was designated as Site 14948, and no further work was recommended.

In 1994, an inventory survey was conducted for the campus expansion of Hawai'i Preparatory Academy Waimea (Franklin et al. 1994). Seven archaeological sites were identified, two of which were determined to be significant, Site 19649, a cemetery, and Site 19648, a historic habitation terrace. The other five sites had a mix of habitation and agricultural functions. These were given the site numbers 19643–19647.

Also in 1994, an inventory survey was conducted over 250 acres in Lanikepu and 'Ōuli (Barrera 1994). A mix of 43 pre-contact and historic properties were identified, comprised of trails, walls, burials, 'animal barriers', and agricultural and habitation sites.

In 1998, land around the *kuleana* lots in Pukalani were investigated (Erkelens 1998). Five historic properties were identified: the *kuleana* lots, Site 8812; the Duncan-Lanakila Cemetery, Site 19416;

the Pukalani stables and blacksmith shop, Site 19417; a veterinary office, Site 19418; and a breaking corral, Site 19419.

Also in 1998, while monitoring the investigation of unexploded ordnance at Camp Tarawa, two historic properties and approximately 96 WWII-era artillery fragments and other artifacts were identified (Nees and Williams 1998). The two sites recorded were an enclosure remnant, Site 21326, and a C-shaped feature, Site 21325.

In 1999, subsurface features were identified during a data recovery project at the North Hawai'i Community Hospital (Wolforth 1999). In addition, sediment samples were collected for palynological analysis and radiocarbon dating while investigating an irrigation ditch of the Lālāmilo Field System.

In 2000, there was a survey of TMK: 3-6-2-001:091, in the vicinity of the project area (Rechtman 2000). Several previously recorded sites were assessed, and two new sites were identified: a historic trash dump, Site 18579; and several agricultural features, Site 18581.

In 2003, an area was surveyed in Lālāmilo for the Department of Hawaiian Home Lands (Haun et al. 2002). Numerous mounds, walls, enclosures, platforms, irrigation ditches, and field boundaries were identified, for a total of 819 features within 76 historic properties.

Also in 2002, a field inspection and literature review was conducted for the proposed Waimea Trails and Greenway Project (Kikiloi et al. 2002). The project area was broken down and categorized into five different zones based on the potential for cultural resources, terrain type, and degree of urbanization.

In 2005, an archaeological assessment was conducted of 15 acres in Pu'ukapu for the proposed Kanu O Ka 'Aina Learning Center (Pantaleo 2005). No cultural resources were identified in the surface survey or during subsurface testing. No further archaeological work was recommended.

In 2006, an archaeological inventory survey was conducted on TMK: 3-6-5-004:025 and 3-6-5-004:063 (Clark and Rechtman 2006a). Four historic properties were identified: a historic wooden structure probably erected in WWII; an 'auwai which ran parallel to the Waikōloa Stream; and two historic walls.

Also in 2006, archaeological monitoring was carried out during the construction of the Waimea Parkside Residential Subdivision (Clark and Rechtman 2006b). No new sites were identified during the monitoring, but a decorative pond-like feature was recorded and added as Feature H to the previously recorded Site 24168. In addition, midden, historic trash, and two adze fragments were documented in the area.

In another project in 2006, no historic properties were observed during an archaeological assessment of TMK: 3-6-5-002:043 (Gregg and Kennedy 2006).

In 2009, there was a survey of several portions of TMK: 3-6-5-003:004 in the Waimea Trails and Greenway Project area (Yucha et al. 2009). Three historic properties at the Waikōloa Stream were recorded: a concrete ford and connecting roadway, Site 26873; an earthen ditch, Site 26782; and a WWII-era site associated with Camp Tarawa, Site 26871. This latter site was made up of two features, a damaged concrete bridge and a paved road remnant. Site 26783 was determined to be a remnant of a 20th century roadway, and Site 26782 was found to be part of the previously recorded "Akona's 'Auwai". Furthermore, Site 26782 was recommended for preservation due to meeting the Hawai'i Register's Criteria a and d of site significance.

In 2010, 14 historic properties were documented in other work for the Waimea Trails and Greenway Project while conducting a literature review and field inspection for some trail developments (Pammer and Hammatt 2010). Of the 14 sites documented, seven were previously recorded, and seven were newly identified sites. It was stated that more data is needed to assess the significance of the newly identified sites. Two of the previously recorded sites, Site 18588 and Site 18590, were recommended for preservation.

A cultural impact assessment was also conducted for the current project area (McElroy et al. 2015). Results show that the project area was once the location of Christmas Paddock, a ranching compound where horses were kept, although the interviewees say that there are no material remains of the paddock today. (see Community Consultation section).

Summary and Settlement Patterns

Waimea, on the island of Hawai‘i, has its origin at the dawn of time when the earth mother Papa and the sky father Wākea dwelled together, and Hawai‘i was born. This same Hawai‘i was to become the ancestor of the Hawaiian people (Kamakau 1991).

Evidence such as radiocarbon dating, avifaunal extinctions, and vegetation change suggest that the major colonization of the Hawaiian Islands occurred around AD 700–800 (e.g., Athens et al. 2002:57). The initial settlers came from other Pacific Islands looking for a new home that was accessible to the sea and able to sustain their new population with drinking water and food resources. Although the Waimea area was rich with water and food resources, it was relatively far from the canoe landing sites on the shores and far from the abundance that the ocean provided. Rudimentary farming in this upland area of Hawai‘i Island didn’t start until AD 1100–1200, many centuries after initial colonization of the islands (Bergin 2004). Initial habitation on the *makai* edges of Waimea commenced around AD 1300–1400, and its permanent upland habitation along with the more intense and complex agricultural systems developed there during the 1600s–1800s (Bergin 2004).

The expansion of settlement to the interior of Waimea and its accompanying intensification of agriculture marked a pre-contact era that was full of political and economic change. Waimea saw a relatively quick succession of rulers in the 1700s from Chief Alapa‘inui (Alapa‘i) to Chief Keawe‘ōpala to Chief Kalani‘ōpu‘u to Chief Kalanikauikeaolikīwala‘ō (Kīwala‘ō) and finally to King Kamehameha who eventually united all the Hawaiian Islands under his throne (Kamakau 1996[1866]). By the time of Kamehameha’s rule, Western explorers had just found their way to Hawai‘i. The arrival of Westerners spurred Waimea’s growth of sandalwood harvesting and various agricultural ventures; the introduction of Waimea’s Christian missions; and the development of Waimea’s ranching industry which also helped support the whaling industry at Hawai‘i Island’s ports.

As Western capitalism transformed Waimea into the following century, it was complemented with the proclamation of the Māhele and other new laws in the mid-1800s concerning land ownership (Moffatt and Fitzpatrick 1995). Most, if not all, of Waimea remained in the hands of the *ali‘i* as Crown Lands, and the *ali‘i*, interested in supporting the flourishing ranching industry, leased a major portion of the Waimea Crown Lands to ranchers. Among those ranchers was John Palmer Parker who started Waimea’s successful Parker Ranch, an enterprise which dominated the Waimea landscape throughout most of the 20th century.

Prior to the start of the 20th century, the Hawaiian monarchy was overthrown and there was a subsequent annexation of Hawai‘i as an American territory. As a result, the Crown Lands were confiscated by the self-appointed Provisional Government and later given to the U.S.-appointed Territorial Government (Kame‘eleihiwa 1992). However, as stated above, the ranching operations

in Waimea continued throughout the 20th century. For a short time period around the Second World War, Parker Ranch leased a portion of its Waimea lands to the U.S. military for training purposes. A military camp was built, first called Camp Waimea and later renamed Camp Tarawa. After the war, the military training there ceased and the land went back to Parker Ranch operations. When Parker Ranch's lease expired in the 1980s, these former Crown Lands of Waimea became administered by the State Department of Hawaiian Home Lands where it remains today designated for community and agricultural use.

Anticipated Finds and Research Questions

Previous research has identified a wide range of activities that were carried out traditionally and historically in Waimea, including both dry and wetland cultivation, habitation, cattle ranching, and military use. It follows that a variety of archaeological remains may be found during the current survey. These might include traditional agricultural features such as stone terraces, subsurface pondfield deposits, and/or ditches. Habitation features such as temporary or permanent shelters or house foundations may also be encountered. Trails are another site type that may also be found.

Historic-era archaeological resources might also be identified, including vestiges of cattle ranching or military use of the area. These may include the remains of ranch houses, military structures, animal pens, cattle walls, faunal remains, and/or ceramic, glass, and metal artifacts. Of particular interest are any materials associated with Christmas Paddock, a ranching compound known to have been located on the project area.

Research questions will broadly address the identification of the above archaeological resources and may become more narrowly focused based on the kinds of resources that are found. Initial research questions are as follows:

1. Have any pre-contact archaeological remains survived historic and modern use of the parcel?
2. If so, what are the nature of these remains and where are they located?
3. Are there any vestiges of historic-era use of the project area, including Christmas Paddock or other ranching uses?

Once these basic questions are answered, additional research questions may be developed in consultation with SHPD, tailored to the specific kinds of archaeological resources that occur on the parcel.

METHODS

Archaeological inventory survey was conducted on September 19–22, 2014, and again on April 12, 2015, for a total of five days. Archaeologists participating in the September survey included Windy McElroy, PhD; Lokelani Brandt, BA; Leischene Calingangan, BA; Jeffrey Lapinad; and U‘ilani Macabio, BA. Lizabeth Hauani‘o, BA, completed the work in April, which consisted of excavating an additional test unit at Site 30195, per SHPD request. Either four or five archaeologists were present per day for the September survey. McElroy served as Principal Investigator, overseeing all aspects of the project.

For the pedestrian survey, the ground surface was visually inspected for surface archaeological remains, with transects walked for the entire project area. Of the 161.65-acre (65.42 ha) survey area, 100% was covered on foot. Wire fences marked the boundaries of the property and also divided it into several paddocks where livestock is currently grazing.

Vegetation was sparse throughout the property, consisting entirely of low grass, which did not limit the survey effort at all (Figure 12). Because of the high visibility, the spacing between archaeologists was relatively wide, approximately 5–8 m apart. Archaeological sites and their boundaries were identified visually, with any feature possibly made or used by humans and more than 50 years old considered a site.

The one archaeological site that was identified was mapped with tape and compass, measured, described, photographed, and excavated. Controlled test units (TU) were excavated by hand at the site and in one other area. Vertical provenience was measured from the surface and all sediment was screened through 1/8 inch mesh.

Mechanical test trenches (TR) were excavated in ten arbitrary locations throughout the survey area to determine the presence or absence of cultural deposits and document stratigraphy over a wide area. A mini excavator was used for digging of the trenches (Figure 13). Vertical provenience was measured from the surface, and trenches were excavated to bedrock where possible. For both the units and trenches, profiles were drawn and photographed, and sediments were described using Munsell soil color charts and a sediment texture flowchart (Thien 1979). Excavations and site locations were recorded with a 3 m-accurate Garmin GPSmap 62st, and all units and trenches were backfilled after excavation.

The scale in all field photographs is marked in 10 cm increments. The north arrow on all maps points to magnetic north. Throughout this report rock sizes follow the conventions outlined in *Field Book for Describing and Sampling Soils*: Gravel <7 cm; Cobble 7–25 cm; Stone 25–60 cm; Boulder >60 cm (Schoeneberger 2002:2–35). The only material collected consists of animal bone from TU 1. This was analyzed by Sara Collins of Pacific Consulting Services, Inc. and is temporarily being curated at the Keala Pono office.



Figure 12. Pedestrian survey, showing spacing of archaeologists and vegetation in the project area. Orientation is to the northeast.



Figure 13. Excavation of TR 5 with mini excavator. Orientation is to the southeast.

RESULTS

Pedestrian survey and subsurface testing were conducted in the 161.65-acre (65.42 ha) project area (Figure 14, Table 3). One historic property was found, Site 50-10-06-30195, an alignment. The entire project area is currently used for livestock grazing, thus very little of the archaeological record remains on the surface. Excavation of ten test trenches did not yield any evidence of subsurface cultural deposits or features. The project area is potentially a contributing element to a larger historic district that includes historic ranching infrastructure such as fences, pastures, paddocks, waterlines, corrals, and other ranching infrastructure from Parker Ranch elsewhere in Waimea.

Community Consultation

Community consultation for this project took the form of speaking with community members and conducting a cultural impact assessment (McElroy et al. 2014). A total of four ethnographic interviews with *kūpuna* were completed. The interviewees were Sonny Keakealani, Alan “Uku” Lindsey, Mark Yamaguchi, and an anonymous *kupuna*. Interviews were conducted in person by Keala Pono Ethnographer and Waimea resident, U‘ilani Macabio, BA.

The *kūpuna* did not offer much information on the specific project area. They did note that the project area was once a compound for horses known as Christmas Paddock. They stated that there are no material remains of the paddock today and they did not know of any archaeological sites in the area. Archival research did not yield much information on Christmas Paddock. Only the following passage was found that describes how ranch manager A.W. Carter named the paddock:

Mr. Carter and his men worked all one day, surveying, staking and fencing a large paddock near the headquarters of the Ranch. Late that evening, while still in his office, Mr. Carter was approached by his fence foreman who said, ‘Kalikimaka all pau’. Mr. Carter then realized that the day was Christmas (Kalikimaka), a fact he had lost sight of in his desire to complete the job, but he appreciated the humor of the subtle rebuke and retained the name for the paddock. (Brundage 1971:75)

The consultants shared a wealth of information on various topics. Several misconceptions about place names were explained. These include the history of the naming of Mahukona, Holoholokū, Honokāne, and Kanehūa. The consultants did not say that the project area was or is a place for plant gathering, but they did expand upon traditional uses for plants, particularly the *koali*, or morning glory. They also shared several *mo‘olelo* and *mele* and reminisced of their younger days and of working on the ranch. They noted that Waimea has changed over time, with regard to the weather, flora and fauna, as well as the lifestyle that was practiced.

The *kūpuna* were generally supportive of the Waimea Nui Community Development Initiative but shared several concerns and recommendations. These included the need to construct another road into the area; concerns about cultural practices hindered by laws and regulations; concerns about further development; concerns about where the water will come from for the development; recommendations to utilize traditional place names; recommendations to hold a blessing before construction begins; and recommendations to work together in the planning process.

In addition to the cultural impact assessment, consultation was conducted with Michael Hodson of the Waimea Hawaiian Homestead Association via email throughout the course of the project. Hodson lived near the subject property since 1989 and was also a police officer that patrolled the area. He witnessed bulldozing on the southeast side of the project area. The grading and removal of large boulders created the level yards outside the subject parcel and the material was dumped in the southeast corner of the project area, creating the uneven topography seen today.

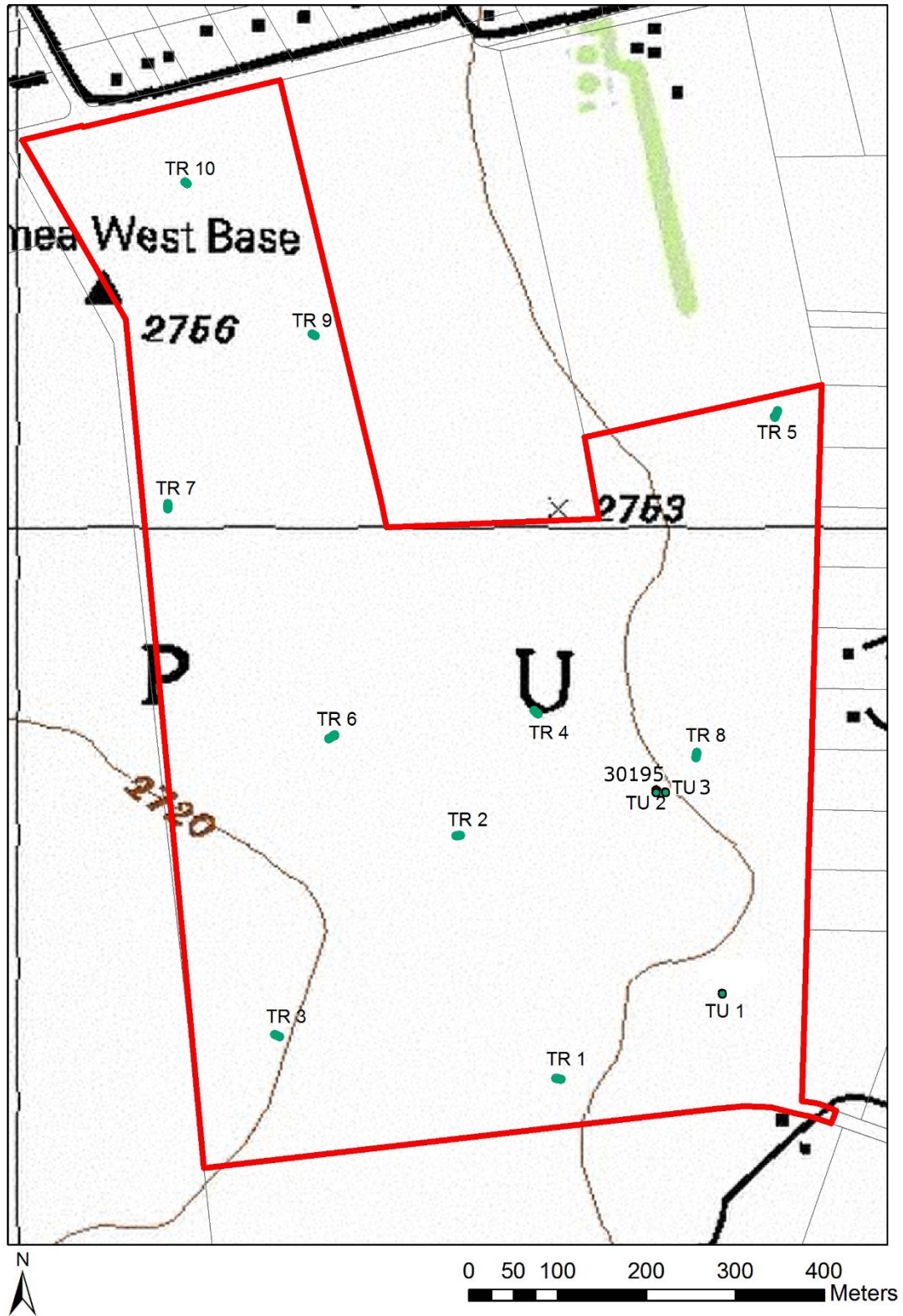


Figure 14. Location of Site 30195, Test Units 1–3, and Trenches 1–10 on a USGS Waimea quadrangle.

Table 3. Sediment Descriptions

| Location | Layer | Depth (cmbs) | Color | Description | Interpretation |
|----------|-------|--------------|------------|--|----------------|
| TU 1 | I | 0–22 | 2.5Y 4/4 | Silt loam; 15% roots; 20% basalt cobbles and gravel; faunal material, metal fragment; base of excavation. | Natural |
| TU 2 | I | 0–10 | 10YR 3/3 | Sandy loam; 50% roots; 10% basalt cobbles and gravel; smooth, abrupt boundary. | Natural |
| | II | 10–30 | 2.5Y 4/4 | Silt loam; 15% roots; 20% basalt cobbles and gravel; base of excavation. | Natural |
| TU 3 | I | 0–8 | 10YR 4/4 | Sandy loam; 50% roots; 20% basalt cobbles and gravel; smooth, abrupt boundary. | Natural |
| | II | 8–36 | 7.5 YR 4/6 | Silt loam; 10–20% roots, decreasing with depth; 30–50% basalt gravel and cobbles, increasing with depth; base of excavation. | Natural |
| TR 1 | I | 0–16 | 10YR 3/3 | Sandy loam; 50% roots; 10% basalt cobbles and gravel; smooth, abrupt boundary. | Natural |
| | II | 16–100 | 7.5YR 4/6 | Silt loam; 15% roots; 10% basalt cobbles and gravel; base of excavation. | Natural |
| TR 2 | I | 0–12 | 10YR 3/3 | Sandy loam; 50% roots; 10% basalt cobbles and gravel; smooth, abrupt boundary. | Natural |
| | II | 12–110 | 7.5YR 4/6 | Silt loam; 15% roots; 8% basalt cobbles and gravel; base of excavation. | Natural |
| TR 3 | I | 0–170 | 10YR 3/4 | Loam; 10% roots; 1% basalt cobbles and gravel; base of excavation. | Natural |
| TR 4 | I | 0–15 | 10YR 3/3 | Sandy loam; 50% roots; 10% basalt cobbles and gravel; smooth, abrupt boundary. | Natural |
| | II | 15–120 | 7.5YR 4/6 | Silt loam; 10% roots; 20% basalt cobbles and gravel; base of excavation. | Natural |
| TR 5 | I | 0–86 | 7.5YR 4/6 | Silt loam; 10% roots; 10% basalt cobbles and gravel; base of excavation. | Natural |
| TR 6 | I | 0–93 | 7.5YR 4/4 | Silt loam; 15% roots; 8% basalt cobbles and gravel; base of excavation. | Natural |
| TR 7 | I | 0–136 | 7.5YR 4/4 | Silt loam; 15% roots; 5% basalt cobbles and gravel; base of excavation. | Natural |
| TR 8 | I | 0–112 | 2.5Y 4/4 | Silt loam; 10% roots; 8% basalt cobbles and gravel; base of excavation. | Natural |
| TR 9 | I | 0–130 | 10YR 4/6 | Silt loam; 15% roots; 2% basalt cobbles and gravel; base of excavation. | Natural |
| TR 10 | I | 0–110 | 10YR 4/4 | Silt loam; 10% roots; 8% basalt cobbles and gravel; base of excavation. | Natural |

TU 1

TU 1, a 50 x 50 cm test unit, was placed within an area that was initially thought to be a possible modified outcrop (Figure 15). The purpose of the unit was to collect data that might inform on the age and function of the site and to determine if the site was utilized by humans or is merely a natural feature.

The test unit was excavated to 22 cmbs, where bedrock was encountered (Figure 16). Soil consisted of 2.5Y 4/4 (olive brown) silt loam with 15% roots and 20% basalt cobbles and gravel. The only items found were faunal remains at 0–20 cmbs in the northeast corner of the unit, with an unidentified piece of metal below them.

The faunal remains were collected and submitted to Pacific Consulting Services, Inc. for identification. Analyses indicate that the remains are from a juvenile dog, likely all part of the same individual. The metal fragment was not fully excavated or collected due to concerns of unexploded ordnance. Community consultation later determined that the outcrop was in fact a bulldozer push pile that was constructed in the 1990s.

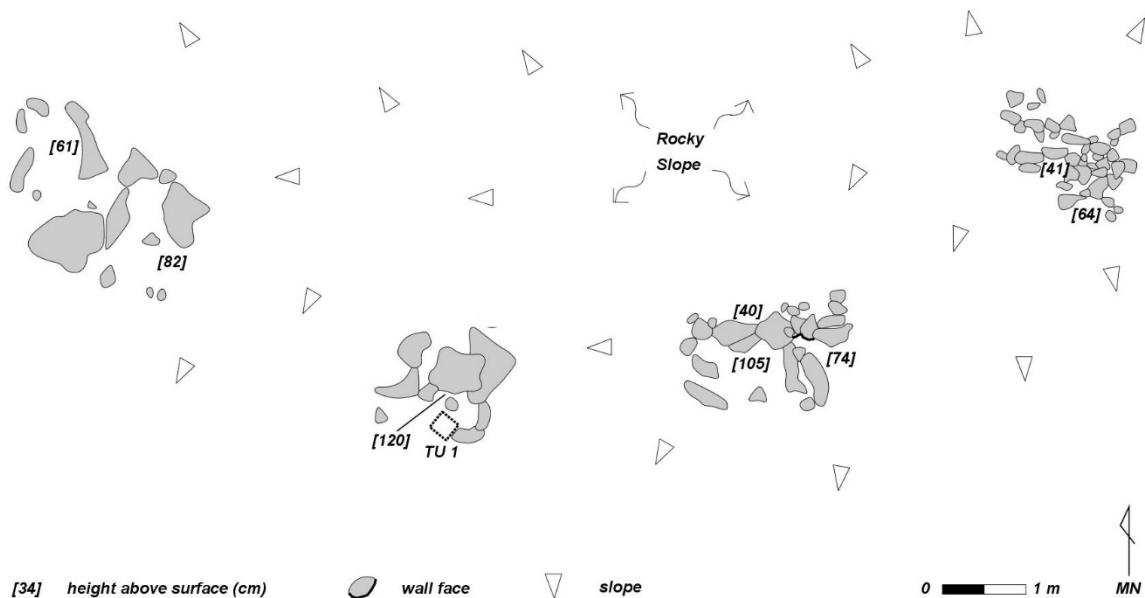


Figure 15. Plan view drawing of TU 1 location.

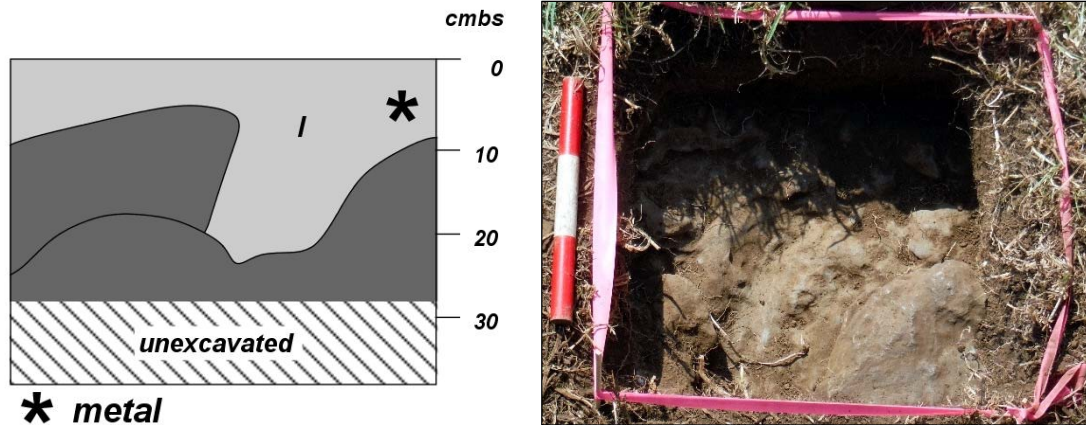


Figure 16. TU 1 north face profile drawing (left) and plan view photo (right). The dark shapes in the profile drawing are bedrock.

Site 50-10-06-30195

Temporary Site No. KP 2

Formal Type: Alignment

Size: 3.1 m long, 1.5 m wide, .21 m tall

Shape: L-shaped

Construction: Aligned

Surface Remains: None

Subsurface Deposits: None

Condition: Fair

Function: Undetermined

Age: Undetermined

Significance Criteria: d, May Yield Additional Information

Mitigation: Avoidance, No Further Work

Site 30195 is an L-shaped alignment that sits atop a low rise in the topography in the east-central portion of the project area (see Figure 14). It is composed of a single alignment of embedded cobbles, measuring 3.1 m long, 1.5 m wide, and .21 m high (Figures 17 and 18). No cultural material was found on the surface. The site is in fair condition, overgrown with grass but relatively intact. Its age and function, however are uncertain.

Two test units were excavated at the site. TU 2, a 50 x 50 cm test unit, was placed within the L-shaped portion of the alignment (see Figure 17). The purpose of the unit was to collect data that might inform on the age and function of Site 30195. The unit was excavated to 34 cmbs, where naturally-deposited, tightly packed rock hindered further excavation. Stratigraphy consisted of two natural layers (see Table 3), and no cultural material or deposits were encountered (Figure 19). Layer I consisted of 10YR 3/3 (dark brown) sandy loam with 50% roots and 10% basalt cobbles and gravel. It exhibited a smooth, abrupt boundary into Layer II. Layer II was a 2.5Y 4/4 (olive brown) silt loam with 15% roots and 20% basalt cobbles and gravel.

TU 3, another 50 x 50 cm test unit, was placed on the opposite side of the alignment from TU 2 (see Figure 17). The purpose of the unit was to collect data that might inform on the age and function of Site 30195. The unit was excavated to 36 cmbs, where naturally-deposited, tightly packed rock

hindered further excavation. Stratigraphy consisted of two natural layers (Figure 20; see Table 3), and no cultural material or deposits were encountered. Layer I consisted of 10YR 4/4 (dark yellowish brown) sandy loam with 50% roots and 20% basalt cobbles and gravel. It exhibited a smooth, abrupt boundary into Layer II, which was a 7.5YR 4/6 (strong brown) silt loam. It included 10–20% roots, decreasing with depth, and 30–50% basalt gravel and cobbles, increasing with depth. The rocks of the alignment extended to approximately 12 cmbs.

The age and function of Site 30195 remain undetermined. The site is significant under Criterion d of HAR §13-284-6(b) for its potential to yield important information on history or prehistory. Avoidance with no further work is recommended.

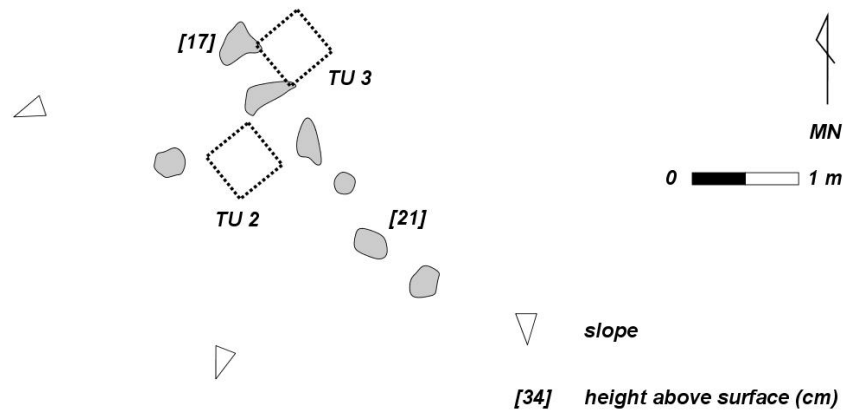


Figure 17. Plan view drawing of Site 30195.



Figure 18. Photograph of Site 30195 before excavation.

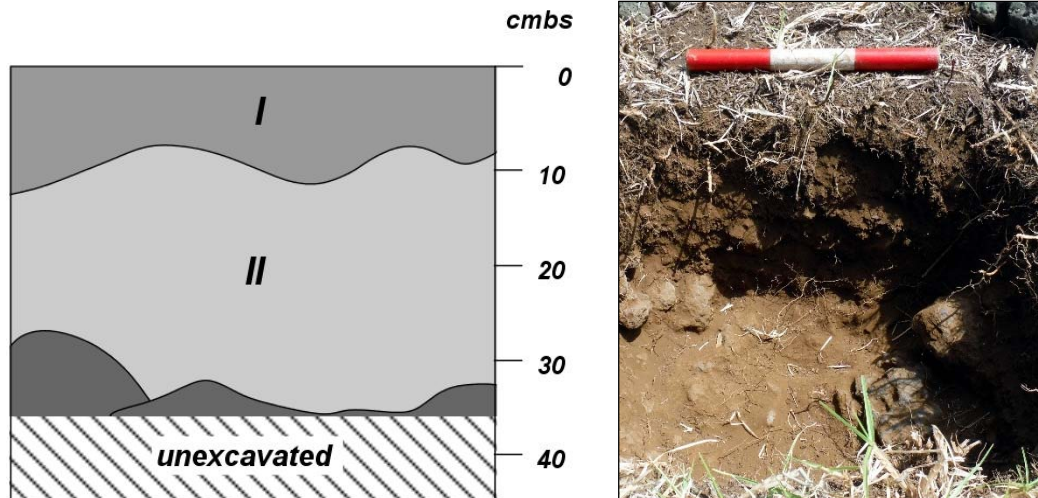


Figure 19. TU 2 northeast face profile drawing (left) and photo (right).

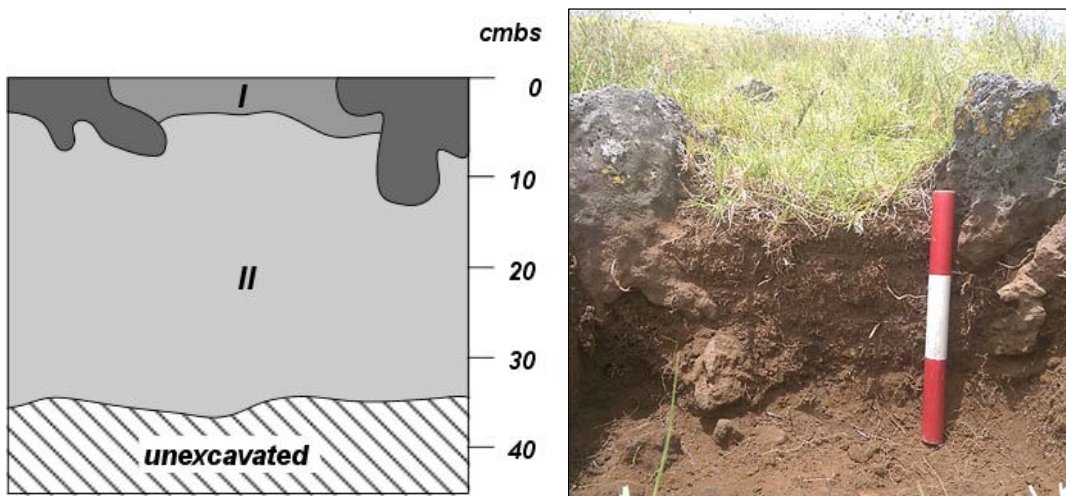


Figure 20. TU 3 southwest face profile drawing (left) and photo (right). The dark shapes at the top of the profile drawing are the bases of the alignment rocks that extend below the surface.

Stratigraphic Trenches

A total of ten trenches were excavated throughout the project area to determine the presence or absence of subsurface cultural deposits or material and to document the stratigraphy over a large area (see Table 3 and Figure 14).

TR 1 was excavated on the south end of the project area (see Figure 14). The trench measured 5.6 m long and .55 m wide. It was excavated to 100 cm below surface (cmbs) to bedrock. Stratigraphy consisted of two natural layers, and no cultural deposits or material were identified (Figure 21). Layer I consisted of 10YR 3/3 (dark brown) sandy loam with 50% roots and 10% basalt cobbles and gravel. It exhibited a smooth, abrupt boundary into Layer II, which was a 7.5YR 4/6 (strong brown) silt loam. It included no roots and 10% basalt gravel and cobbles.

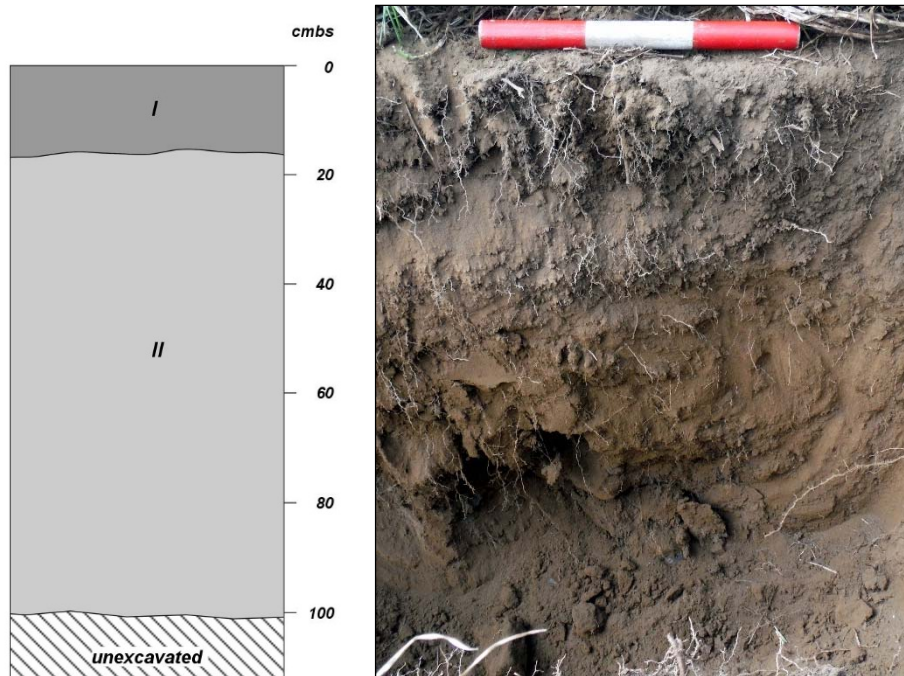


Figure 21. TR 1 south face profile drawing (left) and photo (right).

TR 2 was placed near the center of the property (see Figure 14). The trench measured 4.9 m long and .55 m wide. It was excavated to 60 cmbs on the west end and 110 cmbs on the east end, where bedrock was encountered throughout. Stratigraphy consisted of two natural layers, and no cultural deposits or material were found (Figure 22). Layer I consisted of 10YR 3/3 (dark brown) sandy loam with 50% roots and 10% basalt cobbles and gravel. It exhibited a smooth, abrupt boundary into Layer II, which was a 7.5YR 4/6 (strong brown) silt loam. It included 15% roots and 8% basalt gravel and cobbles.

TR 3 was located toward the southwest corner of the parcel (see Figure 14). It measured 4.9 m long and .55 m wide. The trench was excavated to 170 cmbs but bedrock was not encountered here. Stratigraphy consisted of a single natural layer with no cultural deposits or material (Figure 23). Layer I consisted of 10YR 3/4 (dark yellowish brown) loam with 10% roots and 1% basalt cobbles and gravel.

TR 4 was placed in the central portion of the project area (see Figure 14). The trench measured 5.8 m long, .55 m wide, and 120 cm deep. It was excavated to bedrock. Stratigraphy consisted of two natural layers, and no cultural deposits or material were identified (Figure 24). Layer I consisted of 10YR 3/3 (dark brown) sandy loam with 50% roots and 10% basalt cobbles and gravel. It exhibited a smooth, abrupt boundary into Layer II, which was a 7.5YR 4/6 (strong brown) silt loam. It included 10% roots and 20% basalt gravel and cobbles.

TR 5 was placed near the northeast corner of the property (see Figure 14). The trench measured 5.3 m long and .55 m wide. It was excavated to 86 cmbs where bedrock was encountered. Stratigraphy consisted of a single natural layer with no cultural deposits or material (Figure 25). Layer I consisted of 7.5YR 4/6 (strong brown) silt loam. It included 10% roots and 10% basalt gravel and cobbles.

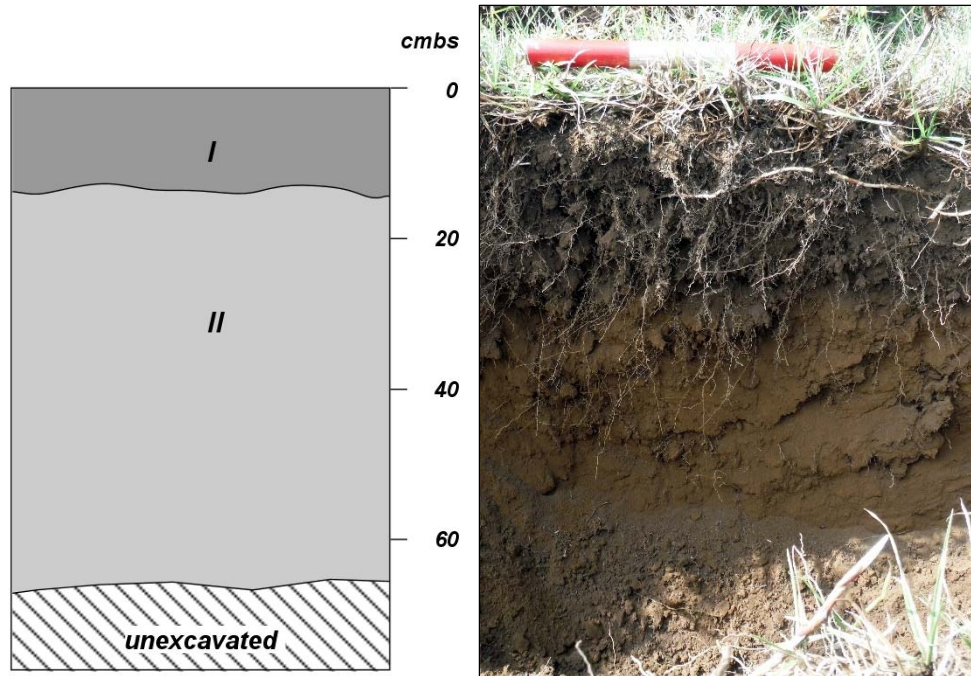


Figure 22. TR 2 west end, north face profile drawing (left) and photo (right).

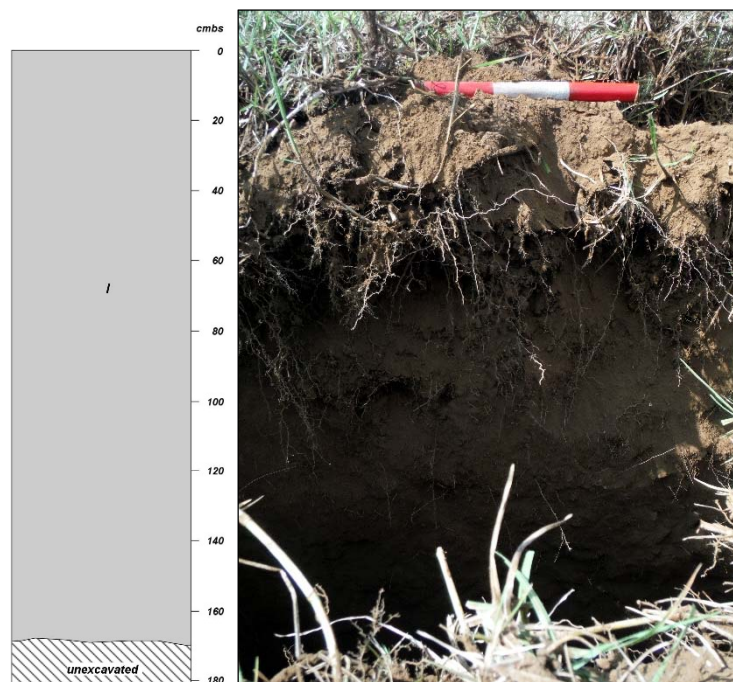


Figure 23. TR 3 south face profile drawing (left) and photo (right).

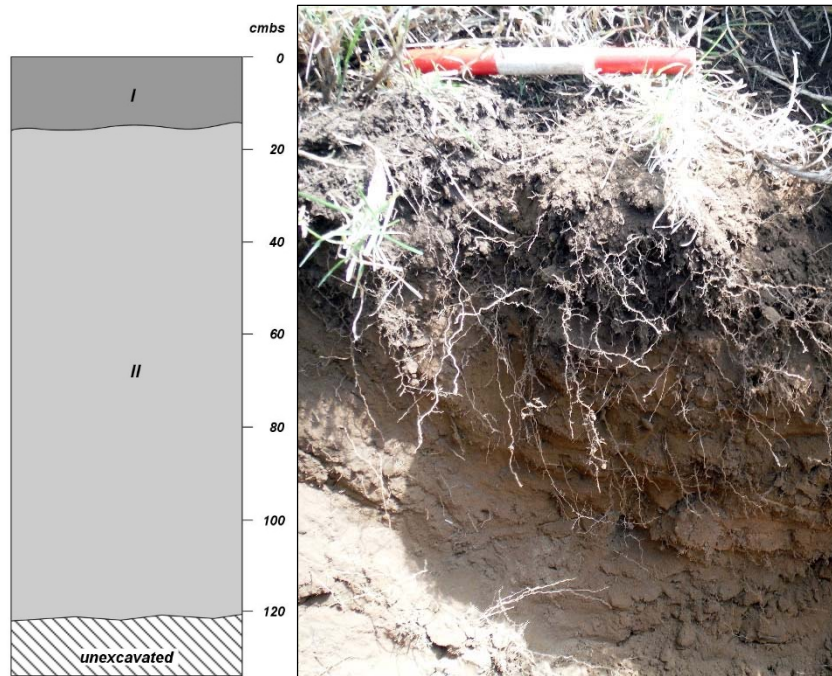


Figure 24. TR 4 north face profile drawing (left) and photo (right).

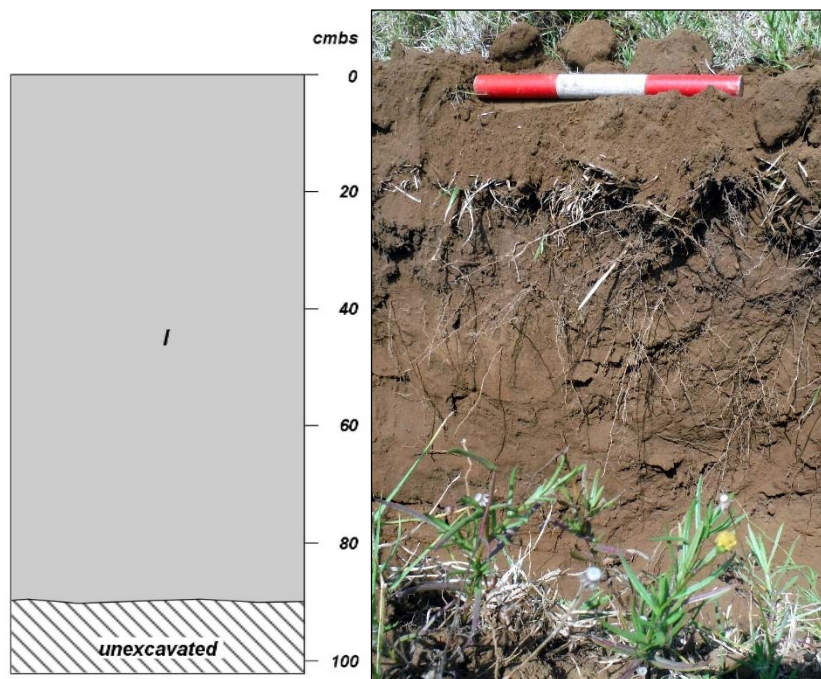


Figure 25. TR 5 east face profile drawing (left) and photo (right).

TR 6 was excavated in the central portion of the project area (see Figure 14). The trench measured 5.2 m long and .55 m wide. It was excavated to 93 cm below surface (cmbs) to bedrock. Stratigraphy consisted of a single natural layer, and no cultural deposits or material were identified (Figure 26). Layer I consisted of 7.5YR 4/4 (brown) silt loam with 15% roots and 8% basalt cobbles and gravel.

TR 7 was placed on the west side of the property (see Figure 14). The trench measured 5.1 m long and .55 m wide. It was excavated to 136 cmbs, where bedrock was encountered. Stratigraphy consisted of a natural layer with no cultural deposits or material (Figure 27). Layer I consisted of 7.5YR 4/4 (brown) silt loam with 15% roots and 5% basalt cobbles and gravel.

TR 8 was located on the east side of the parcel (see Figure 14). It measured 4.4 m long and .55 m wide. The trench was excavated to 112 cmbs to bedrock. Stratigraphy consisted of a single natural layer with no cultural deposits or material (Figure 28). Layer I consisted of 2.5Y 4/4 (olive brown) silt loam with 10% roots and 8% basalt cobbles and gravel.

TR 9 was placed in the north- central portion of the project area (see Figure 14). The trench measured 4.4 m long, .55 m wide, and 130 cm deep. It was excavated to bedrock. Stratigraphy consisted of one natural layer, and no cultural deposits or material were identified (Figure 29). Layer I consisted of 10YR 4/6 (dark yellowish brown) silt loam with 15% roots and 2% basalt cobbles and gravel.

TR 10 was placed at the far north end of the property (see Figure 14). The trench measured 4.0 m long and .55 m wide. It was excavated to 110 cmbs, where bedrock was encountered. Stratigraphy consisted of a single natural layer with no cultural deposits or material (Figure 30). Layer I consisted of 10YR 4/4 (dark yellowish brown) silt loam with 10% roots and 8% basalt cobbles and gravel.

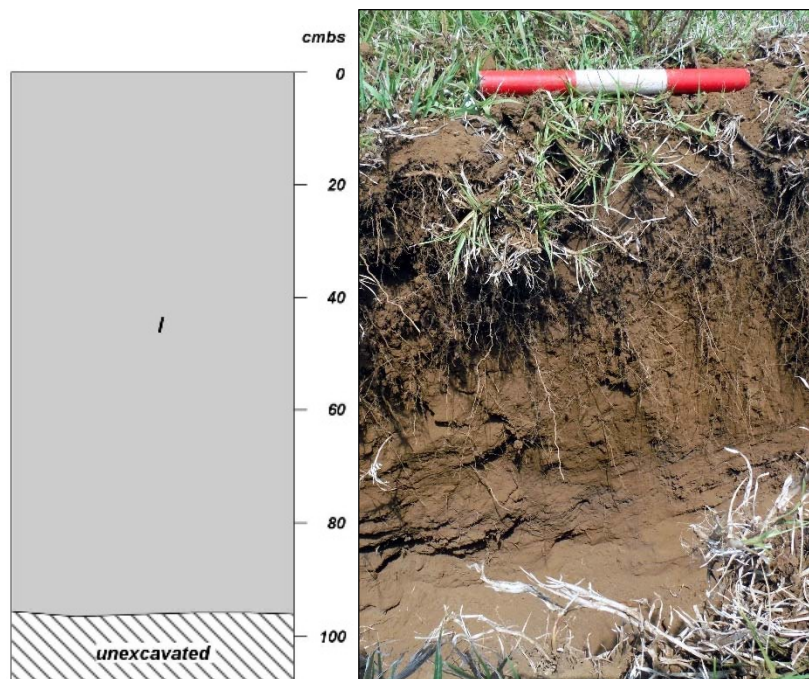


Figure 26. TR 6 northwest face profile drawing (left) and photo (right).

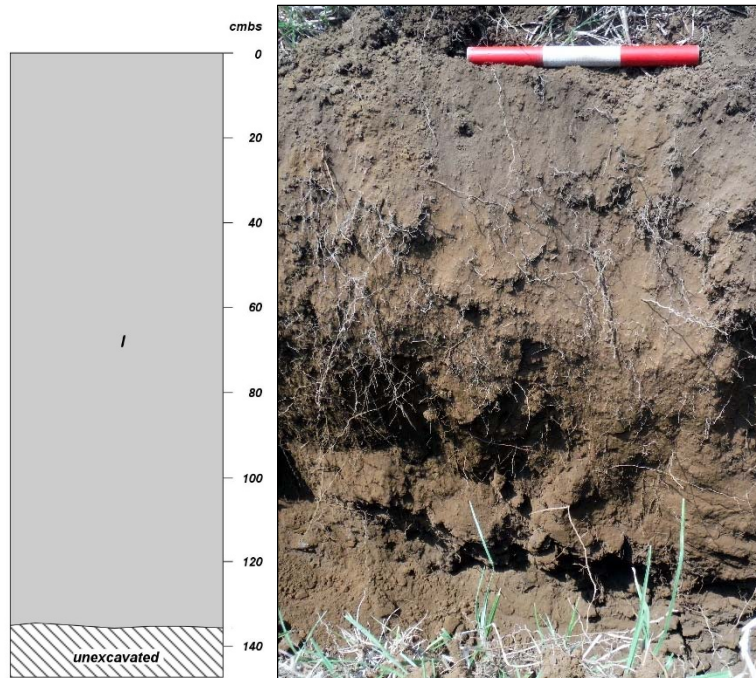


Figure 27. TR 7 west face profile drawing (left) and photo (right).

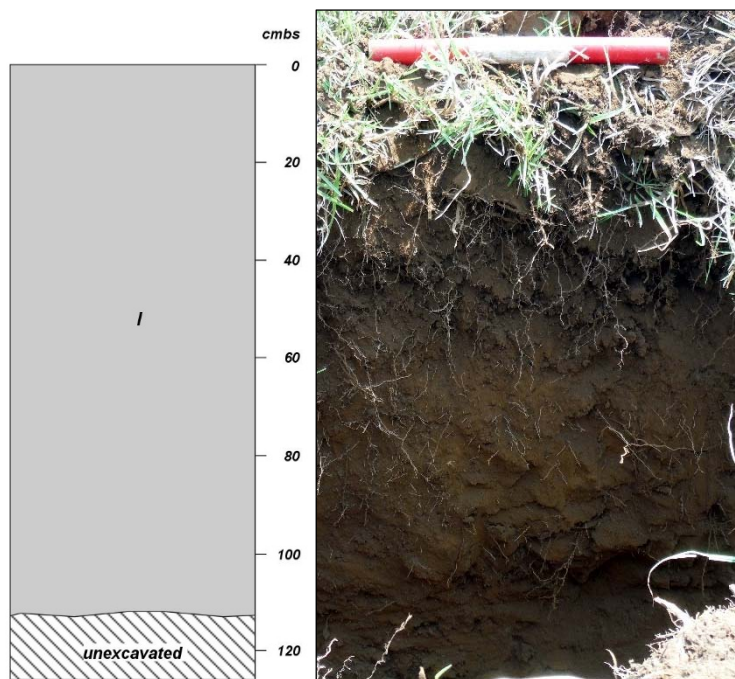


Figure 28. TR 8 southeast face profile drawing (left) and photo (right).

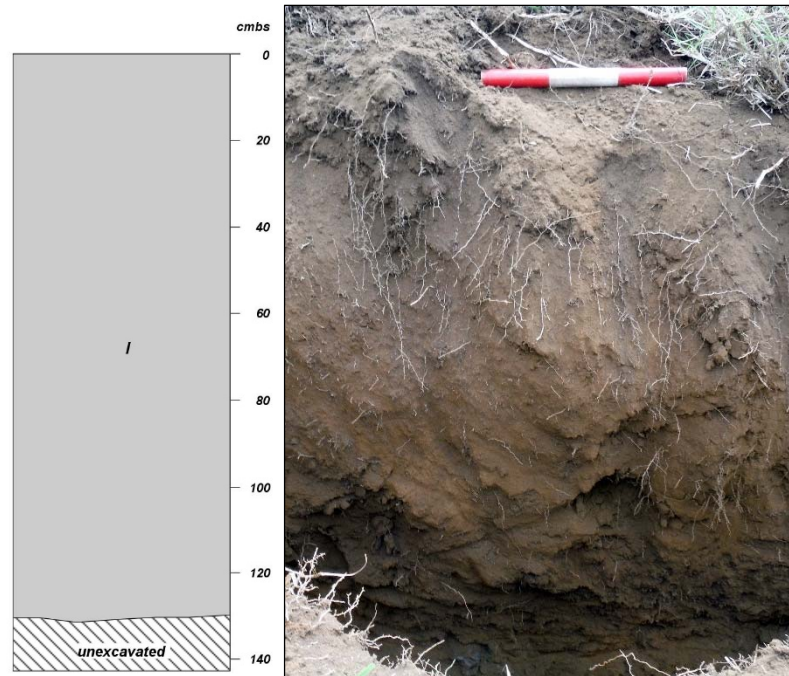


Figure 29. TR 9 south face profile drawing (left) and photo (right).

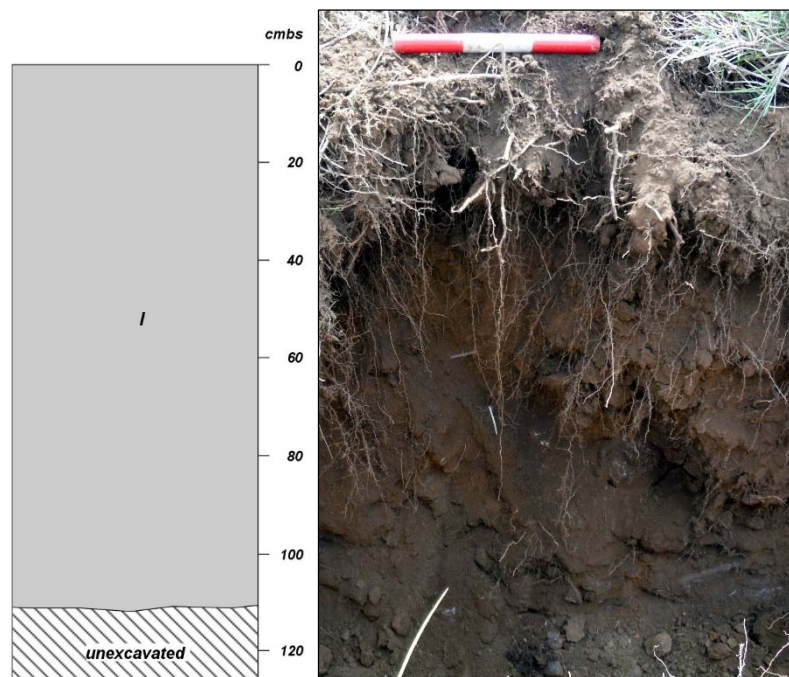


Figure 30. TR 10 southwest face profile drawing (left) and photo (right).

Summary of Findings

Pedestrian survey of TMK: (3) 6-4-038:011 (por.) in Waimea Ahupua'a, identified one historic property: Site 50-10-06-30195, an alignment. Test units excavated at the site yielded no cultural material. Test trenches were excavated in ten locations throughout the parcel to determine the presence or absence of subsurface cultural material or deposits, and none were found. Stratigraphy consists entirely of natural deposits with bedrock below.

These findings provide meager evidence to answer the research questions outlined earlier:

1. Have any pre-contact archaeological remains survived historic and modern use of the parcel?
One surface archaeological site was identified.
2. If so, what are the nature of these remains and where are they located?
The age and function of Site 30195 is undetermined.
The site is located in the eastern portion of the project area.
3. Are there any vestiges of historic-era use of the project area, including Christmas Paddock or other ranching uses?
It is unclear whether the archaeological site is associated with Christmas Paddock or had ranching uses.

SUMMARY AND RECOMMENDATIONS

An archaeological inventory survey was conducted for TMK: (3) 6-4-038:001 (por.) in Waimea Ahupua‘a, South Kohala District, on the Island of Hawai‘i. This was done in preparation for ground disturbance associated with construction of an agricultural park, cemetery, sports complexes, housing, and other facilities. The archaeological work included a pedestrian survey that covered 100% of the parcel, as well as test excavations consisting of three test units and ten trenches. The entire property was utilized as ranch land and little remains on the surface. Stratigraphy consists entirely of natural deposits, with bedrock as shallow as 22 cm below surface.

One archaeological site was found. Site 50-10-06-30195 is a surface alignment of cobbles, in fair condition. Excavation did not yield any cultural material. The age and function of the site are uncertain.

Significance Determinations

To determine if a historic property is significant under Hawaii Administrative Rules (HAR) for historic preservation, or is eligible for NRHP listing, it must be assessed for significance according to HAR §13-284-6(b) and National Register Bulletin 15, respectively. According to Bulletin 15:

The quality of significance in American history, architecture, archaeology, and culture is present in districts, sites, buildings, structures, and objects that possess integrity of location, design, setting, materials, workmanship, feeling, and association, and:

- A. That are associated with events that have made a significant contribution to the broad patterns of our history; or
- B. That are associated with the lives of persons significant in our past; or
- C. That embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
- D. That has yielded, or may be likely to yield, information important in prehistory or history.

(National Park Service 1990:2)

To this set of criteria, HAR §13-284-6(b) adds Criterion e, which states that a property may be significant if it has:

an important value to the native Hawaiian people or to another ethnic group of the state due to associations with cultural practices once carried out, or still carried out, at the property or due to associations with traditional beliefs, events, or oral accounts – these associations being important to the groups history and cultural identity.

Site 50-10-06-30195 is significant under Criterion d, as further study may yield more information (Table 4). No further work is recommended, and Site 30195 should be avoided during construction. Archaeological monitoring is recommended for any ground disturbance near the site.

In sum, one archaeological site was found within the project area. Avoidance is recommended for Site 30195, and archaeological monitoring should be conducted in the vicinity. Given the absence

of surface and subsurface cultural deposits or features in other parts of the project area, archaeological monitoring in the rest of the project area is not recommended. An archaeological monitoring plan should be produced, to further detail these stipulations.

Although highly unlikely given historical use of the site, there is always a potential for an encounter with isolated human burial remains during construction activity in Hawai‘i. Although there was no evidence of the presence of human burials on-site, should human burial remains be discovered during construction activities, work in the vicinity of the remains should cease and the SHPD should be contacted and the applicable rules of HAR §13-300-40 shall be administered.

Table 4. Significance Determination

| Site | Description | Function | Criterion | Justification | Recommendation |
|-------|-------------|--------------|-----------|--|--------------------------------------|
| 30195 | Alignment | Undetermined | d | May yield information on history and prehistory. | Avoidance, Archaeological Monitoring |

GLOSSARY

| | |
|----------------------|--|
| ‘a‘ali‘i | <i>Dodonaea viscosa</i> , the fruit of which were used for red dye, the leaves and fruits fashioned into <i>lei</i> , and the hard, heavy wood made into bait sticks and house posts. |
| ahupua‘a | Traditional Hawaiian land division usually extending from the uplands to the sea. |
| ‘āpana | Piece, slice, section, part, land segment, lot, district. |
| ‘awa | The shrub <i>Piper methysticum</i> , or <i>kava</i> , the root of which was used as a ceremonial drink throughout the Pacific. |
| boulder | Rock 60 cm and greater. |
| cobble | Rock fragment ranging from 7 cm to less than 25 cm. |
| gravel | Rock fragment less than 7 cm. |
| hale | House. |
| hāpu‘u | <i>Cibotium splendens</i> , a fern endemic to Hawai‘i; a forest fern to 5 m high. |
| heiau | Place of worship and ritual in traditional Hawai‘i. |
| ‘ili | Traditional land division, usually a subdivision of an <i>ahupua‘a</i> . |
| ‘ilima | <i>Sida fallax</i> , the native shrub whose flowers were made into <i>lei</i> , and sap was used for medicinal purposes in traditional Hawai‘i. |
| kalo | The Polynesian-introduced <i>Colocasia esculenta</i> , or taro, the staple of the traditional Hawaiian diet. |
| kapu | Taboo, prohibited, forbidden. |
| kīhāpai | Small land division; cultivated garden, patch, orchard, or field; parish of a church. |
| koali, kowali | Vines of the morning glory <i>Ipomoea</i> spp., used traditionally to make swings and nets. |
| kupuna | Grandparent, ancestor; <i>kūpuna</i> is the plural form. |
| lama | The native tree, <i>Diospyros sandwicensis</i> , that had many uses in traditional Hawai‘i. Fruit was eaten, wood was fashioned into fish traps and sacred structures within <i>heiau</i> . <i>Lama</i> wood was also crushed and used for medicinal purposes. |
| Māhele | The 1848 division of land. |
| makai | Toward the sea. |
| mauka | Inland, upland, toward the mountain. |
| mele | Song, chant, or poem. |
| mo‘olelo | A story, myth, history, tradition, legend, or record. |

| | |
|----------------------|--|
| ‘ōhi‘a | Two kinds of forest trees. See also <i>o ‘ōhi‘a ‘ai</i> and <i>‘ōhi‘a lehua</i> . |
| ‘ōlelo no‘eau | Proverb, wise saying, traditional saying. |
| oli | Chant. |
| paniolo | Cowboy. |
| pōhaku | Rock, stone. |
| pulu | Fern fibers obtained from the <i>hāpu‘u pulu</i> (<i>Cibotium glaucum</i>), tree fern. |
| sandalwood | <i>Iliahi</i> (<i>Santalum</i>), several varieties endemic to Hawai‘i. Known for their aromatic wood and medicinal qualities. Heavily exported in the 1800s. |
| stone | Rock fragment ranging from 25 cm to less than 60 cm. |
| ‘uala | The sweet potato, or <i>Ipomoea batatas</i> , a Polynesian introduction. |

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