

An Archaeological Inventory Survey of the 13-acre Kahua 'Olohū Property

TMK: (3) 9-5-012:005

Kaunāmano Ahupua'a

Ka'ū District

Island of Hawai'i

FINAL VERSION



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EXECUTIVE SUMMARY

At the request of Alex Kelepolo of the County of Hawai‘i Department of Finance–Property Management, ASM Affiliates (ASM) conducted an Archaeological Inventory Survey (AIS) of the 13-acre Kahua ‘Olohū property (TMK (3) 9-5-012:005) located in Kaunāmano Ahupua‘a, Ka‘ū District, Island of Hawai‘i. The Kahua ‘Olohū property is part of a larger area near the town of Nā‘ālehu reported to be the site of traditional gaming fields associated with the annual *Makahiki* festival (Ellis 2004; Handy and Handy 1991). The *Makahiki* grounds were previously documented by McIntosh et al. (2012) during an archaeological reconnaissance survey of a larger State-owned parcel (TMK: (3) 9-5-012:002) that surrounds the County purchase on three sides. As a result of that study Kahua ‘Olohū was assigned the State Inventory of Historic Places (SIHP) site designation 50-10-74-29231. At the urging of the community, the County of Hawai‘i acquired the 13-acre study parcel on June 30, 2016 using funds from the Public Access, Open Space and Natural Resources Commission (PONC). The intention for the property is to form a community initiative to re-institute Hawaiian cultural games during the season of *Makahiki*. The County is currently seeking to establish partnerships with non-profit organizations, community groups, and volunteer organizations to provide management of the Kahua ‘Olohū property through PONC fund stewardship grants administered by the Department of Parks and Recreation. This AIS was conducted in an effort to determine the presence of archaeological/cultural sites and features within the study parcel, to establish their significance, and to provide recommendations regarding mitigative actions for the protection, preservation, restoration, and appropriate cultural use of Kahua ‘Olohū. The information contained in this report is a critical prerequisite to the implementation of maintenance/development actions on the Kahua ‘Olohū property by the County and/or approved community-based groups and volunteers.

As a result of the current fieldwork, a portion of a previously-identified archaeological site (Site 50-10-74-29231) was documented within the current study area. Site 29231, which occupies the entire 13-acre study parcel, and includes an undetermined area beyond its boundaries, is the location of a traditional *Makahiki* game field visited by Rev. William Ellis (2004:185-186) in 1823, who observed the game of *pahe‘e* being played there at the time, and mentioned the game of *maika* as also associated with the site. The location of the game field was later described as Kahua ‘Olohū by Mary Kawena Pūku‘i (in Handy and Handy 1991), who notes that her elder relative Opupele also grew sweet potatoes in the area during the late 19th century. Pūku‘i relates that, “In old Hawaiian times this broad kahua or plaza was used not just for bowling, but for other sports such as boxing, javelin throwing, and hula dancing during the *Makahiki* festival” (Handy and Handy 1991:596). The study parcel was purchased by Wailuu as a portion of Grant No. 2113:2 in 1856, and later became part of the Nā‘ālehu Ranch and Dairy, Inc. (in 1908), operated by the Hutchinson Sugar Plantation Co. The lands were used as pasture, and for making silage, throughout the 20th century. The name Kahua ‘Olohū, descriptive of an open place for playing *‘ulu maika*, is depicted in the general vicinity of the current study area on the 1962 United States Geological Survey (USGS) 7.5 min. series quadrangle, Naalehu, HI (and on all subsequent USGS Naalehu quadrangles).

While the current AIS did reveal surface features that could have potential association with viewing the *Makahiki* games once played at Kahua ‘Olohū, most of the 13-acre portion of Site 29231 included within TMK: (3) 9-5-012:005 contains no physical evidence (on the surface) of the area’s past use. The area does however retain sufficient integrity of design, location, setting, feeling, and association (through its identification by Mary Kawena Pūku‘i) to be assessed as significant under Criterion a for its association with the annual *Makahiki* festival, Criterion d for the information it has yielded on past land use in the region, and Criterion e for its important traditional cultural value to the native Hawaiian people as a game field associated with traditional beliefs, events, and oral accounts. Site 29231 is recommended for preservation through rehabilitation with appropriate cultural use.

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1. INTRODUCTION

At the request of Alex Kelepolo of the County of Hawai'i Department of Finance–Property Management, ASM Affiliates (ASM) conducted an Archaeological Inventory Survey (AIS) of the 13-acre Kahua 'Olohū property (TMK (3) 9-5-012:005) located in Kaunāmano Ahupua'a, Ka'ū District, Island of Hawai'i (Figures 1 and 2). The Kahua 'Olohū property is part of a larger area near the town of Nā'ālehu reported to be the site of traditional gaming fields associated with the annual *Makahiki* festival (Ellis 2004; Handy and Handy 1991). The *Makahiki* grounds were previously documented by McIntosh et al. (2012) during an archaeological reconnaissance survey of a larger State-owned parcel (TMK: (3) 9-5-012:002) that surrounds the County purchase on three sides. As a result of that study Kahua 'Olohū was assigned the State Inventory of Historic Places (SIHP) site designation 50-10-74-29231. At the urging of the community, the County of Hawai'i acquired the 13-acre study parcel on June 30, 2016 using funds from the Public Access, Open Space and Natural Resources Commission (PONC). The intention for the property is to form a community initiative to re-institute Hawaiian cultural games during the season of *Makahiki*. The County is currently seeking to establish partnerships with non-profit organizations, community groups, and volunteer organizations to provide management of the Kahua 'Olohū property through PONC fund stewardship grants administered by the Department of Parks and Recreation. This AIS was conducted in an effort to determine the presence of archaeological/cultural sites and features within the study parcel, to establish their significance, and to provide recommendations regarding mitigative actions for the protection, preservation, restoration, and appropriate cultural use of Kahua 'Olohū. The information contained in this report is a critical prerequisite to the implementation of maintenance/development actions on the Kahua 'Olohū property by the County and/or approved community-based groups and volunteers.

The current study was undertaken in accordance with Hawai'i Administrative Rules 13§13–275, and was performed in compliance with the Rules Governing Minimal Standards for Archaeological Inventory Surveys and Reports as contained in Hawai'i Administrative Rules 13§13–276. Compliance with the above standards is sufficient for meeting the initial historic preservation review process requirements of both the Department of Land and Natural Resources and the County of Hawai'i Planning Department. This report contains background information outlining the study area's physical and cultural contexts, a presentation of previous archaeological work conducted in the general vicinity of the study parcel, and current survey expectations based upon that previous work. Also presented is an explanation of the archaeological field methods, a detailed description of the 13-acre portion of Kahua 'Olohū contained within the study area, interpretation and evaluation of this cultural site and its features, and treatment recommendations that consider the future cultural use of the *Makahiki* grounds by the community.

STUDY AREA DESCRIPTION

The current study area consists of 13 acres located on the southern flank of Mauna Loa Volcano at an elevation of approximately 400 feet (122 meters) above sea level in Kaunāmano Ahupua'a, Ka'ū District, Island of Hawai'i (see Figure 1). Situated on relatively flat terrain, approximately 1.25 miles (2 kilometers) inland of the coast and 0.5 miles (0.84 kilometers) east of the town of Nā'ālehu, the roughly triangular-shaped subject parcel (TMK: (3) 9-5-012:005) includes the southern portion of former Grant No. 2113:2 to Wailuu (see Figure 2). The parcel contains fallow pasture that is fenced on all sides (Figures 3 and 4). It is bounded to the west by the Māmalahoa Highway (HWY 11), and to the north, south, and east by a State-owned parcel (TMK: (3) 9-5-012:002) that is currently leased for grazing purposes. Easements for existing utility poles and a proposed future realignment of the Māmalahoa Highway extend across the property. Vegetation within the study area consists of a thick growth of Guinea grass (*Megathyrsus maximus*) mixed with various non-native vines and weeds. A few small thickets of Christmas-berry (*Schinus terebinthifolius*) are present in the southern corner of the parcel. This general area of Ka'ū receives between 30 and 60 inches of rain annually, has a mean annual temperature of 72.5° Fahrenheit, and experiences northeasterly trade winds throughout most of the year (Juvik and Juvik 1998).

Geologically, the study area includes some of the oldest exposures of Ka'ū basalt found on the slopes of Mauna Loa. According to the geologic map of Hawai'i Island prepared by Sherrod et al. (2007:sheet 8), most of the subject parcel is situated on *pāhoehoe* lava flows (unit Qk) that occurred roughly 11,000 to 30,000 years ago during the Pleistocene (Figure 5). A roughly 0.5-acre area in the southern corner of the study parcel, however, is situated on the elevated edge of a younger 'a'ā flow (unit Qk1y) of Ka'ū basalt that occurred 3,000 to 5,000 years ago. Sato et al. (1973:40-41) classify the soils overlying older *pāhoehoe* substrates as belonging to the Naalehu Series (Figure 6). These soils, which consist of well-drained silty clay loams formed in volcanic ash, are found at elevations ranging

1. Introduction

from 750-1,800 feet above sea level on the slopes of Mauna Loa. The deeper, less rocky soil in the more level, northeastern portion of the study area is classified as Naalehu silty clay loam on 0 to 10 percent slopes (NaC), and the shallower, more rocky soil in the southwestern portion of the study area, where the terrain begins to slope up to the west, is classified as Naalehu very rocky silty clay loam on 6 to 20 percent slopes (NhD). The soil on the younger 'a'ā substrate is described as Very Stony Land (rVS), a miscellaneous land type comprised of very shallow soil exhibiting a high percentage of exposed 'a'ā lava outcrops (Sato et al. 1973:52).

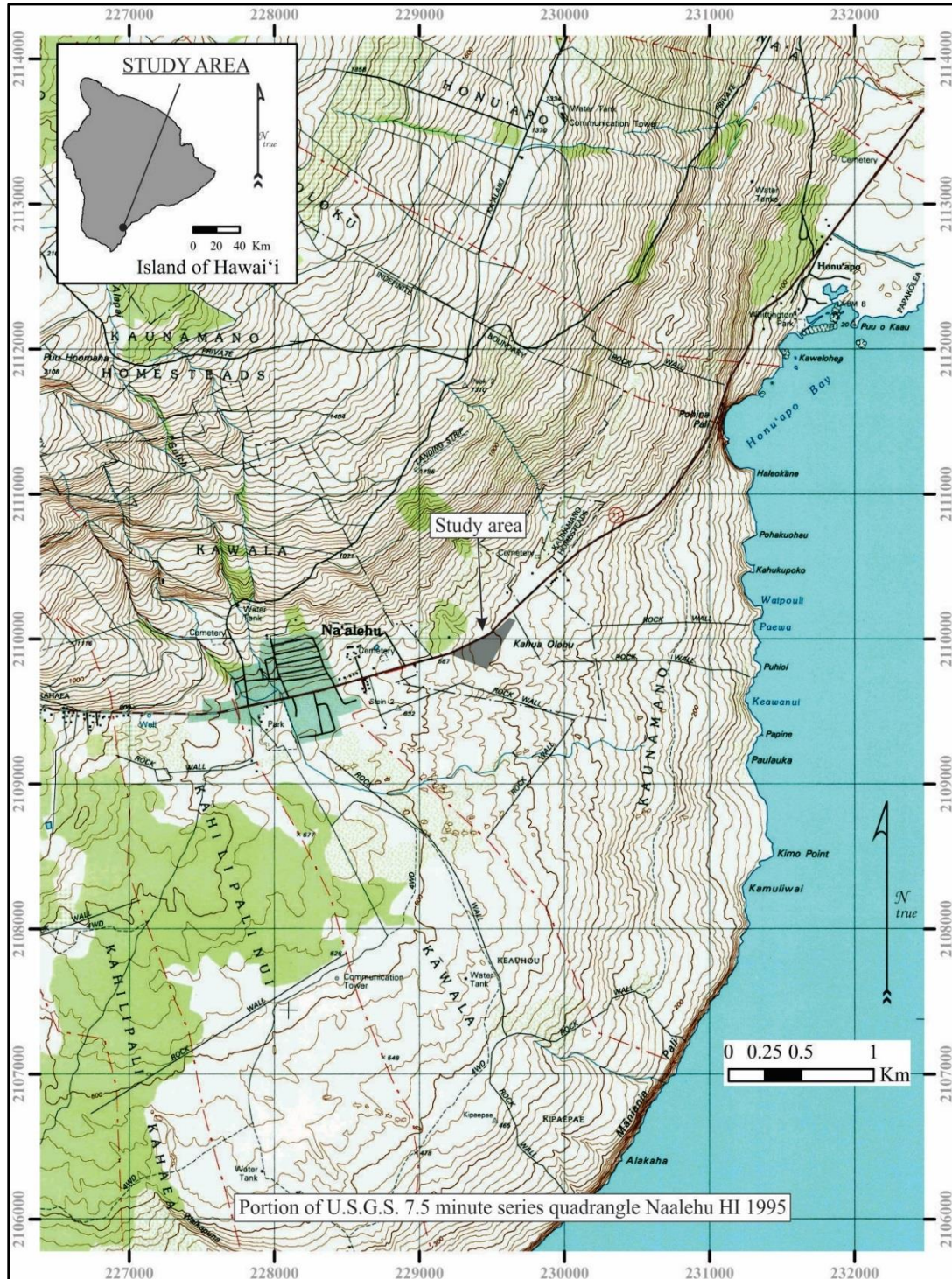


Figure 1. Study area location.

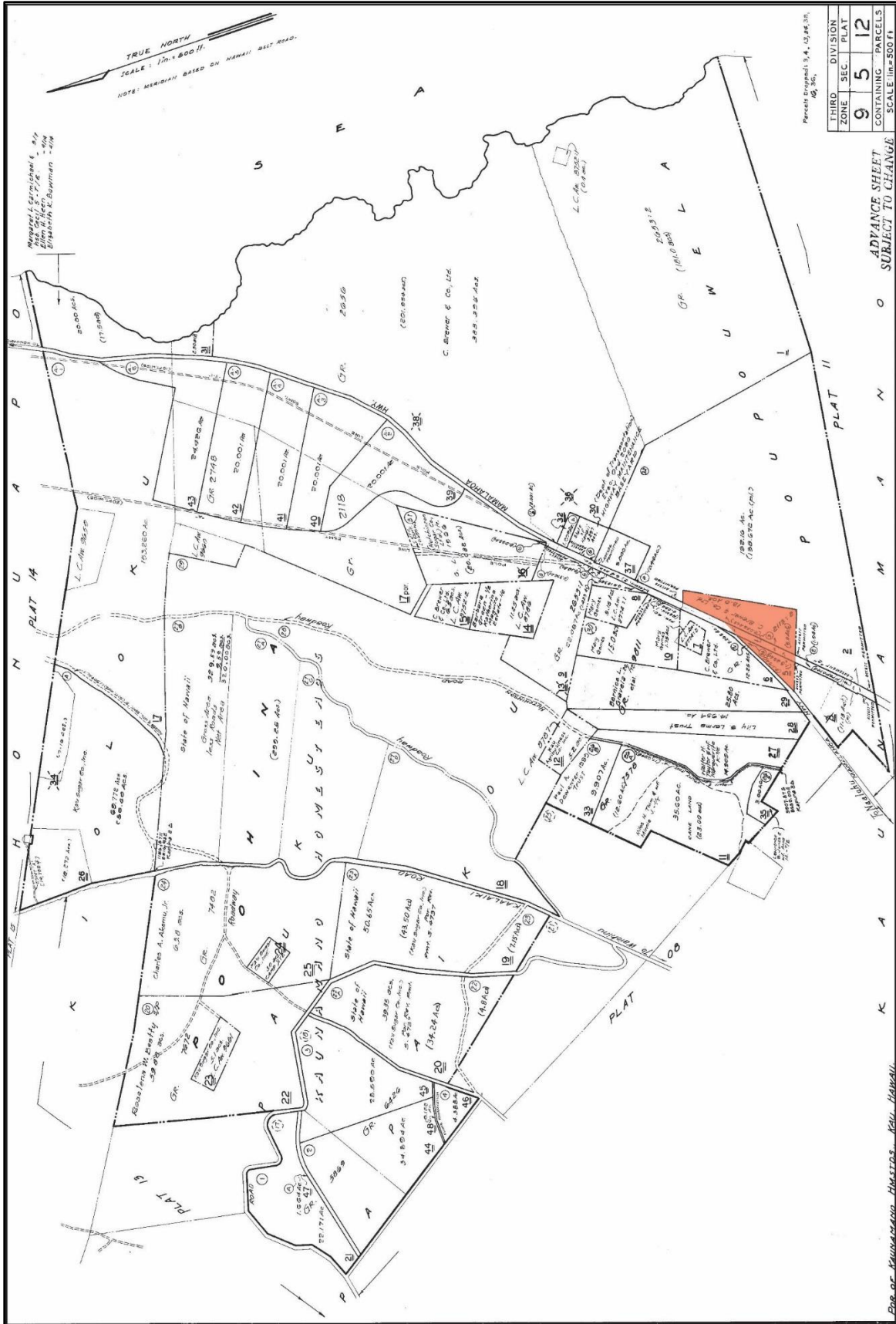


Figure 2. Tax Map Key (TMK) (3) 9-5-12 showing the current study area (Parcel 005) shaded red.



Figure 3. 2016 Google Earth™ satellite image showing the current study area outlined in red.



Figure 4. Study area terrain, view to the northeast from the southern corner with eastern boundary indicated.

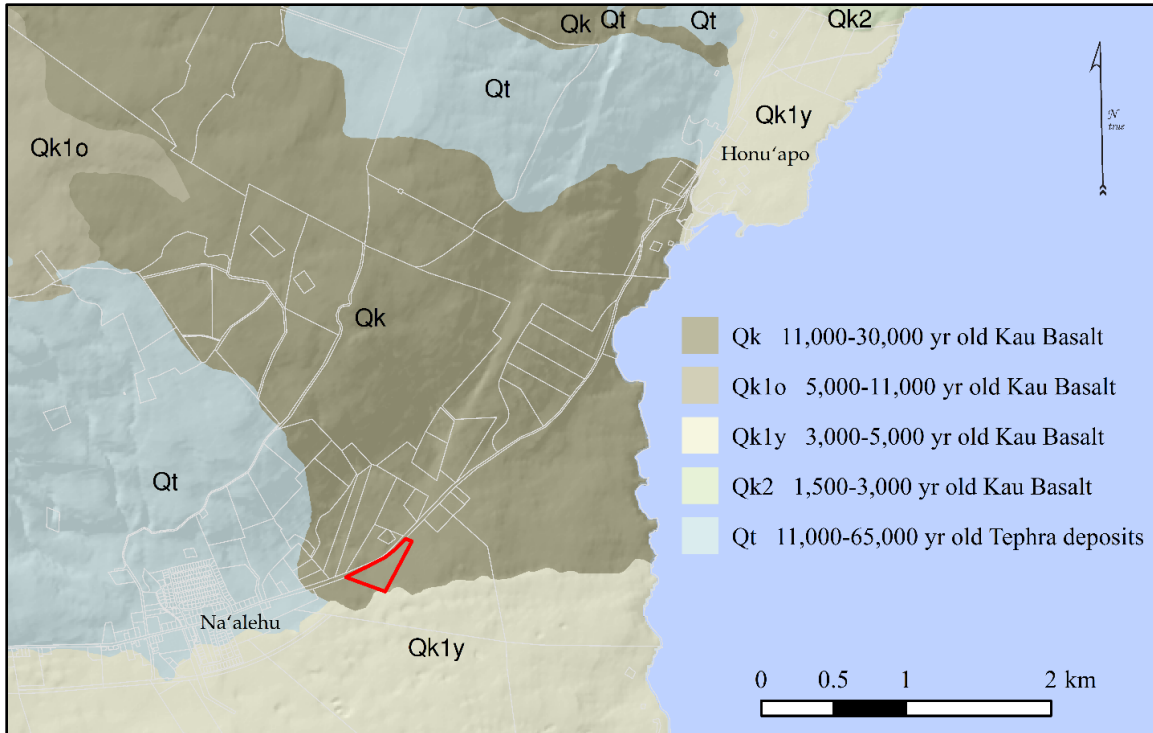


Figure 5. Age of the geologic substrates in the vicinity of the current study area (outlined in red). Based on Sherrod et al. (2007:sheet 8).

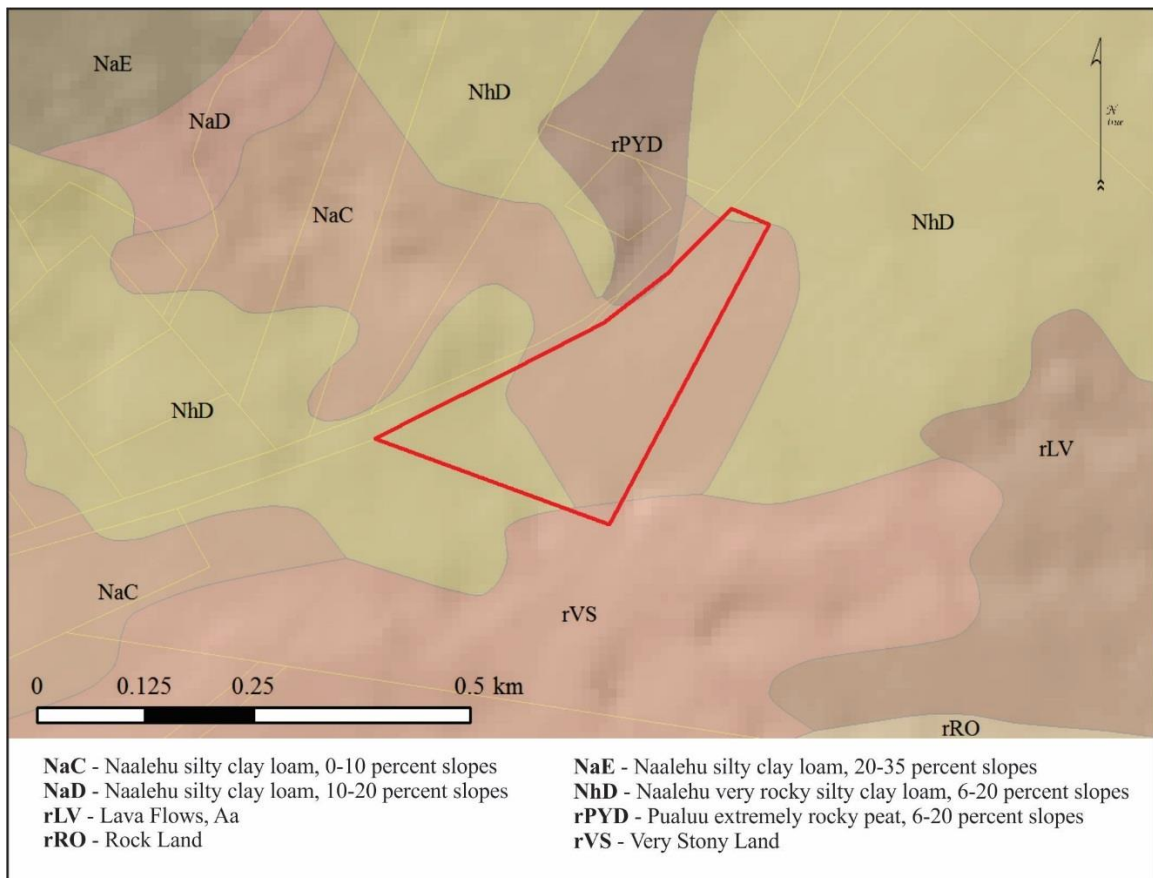


Figure 6. Soils in the vicinity of the current study area (outlined in red) after Sato et al. (1973).

2. BACKGROUND

To generate a set of expectations regarding the nature of cultural sites that might be encountered within the current study parcel, and to establish an environment within which to assess the significance of any such sites, a general culture-historical background for the region is presented, and the results of previous archaeological studies conducted in the vicinity of the study area are summarized.

CULTURE-HISTORICAL CONTEXT

The study area is located within the District of Ka‘ū, the largest and southernmost of the six traditional districts on the island of Hawai‘i. The subject parcel occupies 13 acres within the present day *ahupua‘a* of Kaunāmano (Figure 7), a once populous part of the Ka‘ū District, the name of which literally translates as “multitudes are placed [here]” (Pukui et al. 1974:95). *Māhele* records from the mid-19th century indicate that traditionally Kaunāmano was divided among the *ahupua‘a* of Kukui (1-2), Kaunāmano, Pāpa‘ikou (1-3), Pauku (Nui-Iki), Wiliwilinui, Puhalanui, Lolipali, Halekaa, Nalua, and Pōhina. The current study parcel, which occupies the southern half of former Grant No. 2113 to Wailuu, appears to be situated within the *ahupua‘a* of Pāpa‘ikou (Figure 3), the name of which literally means “hut [in a] *kou* [grove]” where Pukui et al. (1974:179) indicate that a chief once had a shelter. Archival sources (Ellis 2004) and previous research (McIntosh et al. 2012) suggest that the study area is a portion of a larger *Makahiki* ground, identified by Mary Kawena Pūku‘i as “Kahua-olohu [Kahua ‘Olohū]” (Handy and Handy 1991:596), where traditional games such as *pahe‘e* (dart-throwing) and *maika* (bowling) were once played. The information presented below provides a general culture-historical context for Kaunāmano Ahupua‘a and the current study area, and is based on original research conducted by ASM at various online repositories, the U.H. Hilo Mo‘okini Library, the State Historic Preservation Division office in Hilo, the Edmund Olson Trust Plantation Archives in Pāpa‘ikou (South Hilo District), and the Hawai‘i State Archives and Bureau of Conveyances in Honolulu, O‘ahu.

Generalized Model of Hawaiian Prehistory

The question of the timing of the first settlement of Hawai‘i by Polynesians remains unanswered. Several theories have been offered that are derived from various sources of information (i.e., genealogical, oral-historical, mythological, radiometric), but none of these theories is today universally accepted (c.f., Kirch 2011). For many years, researchers have proposed that early Polynesian settlement voyages between Kahiki (the ancestral homelands of the Hawaiian gods and people) and Hawai‘i were underway by A.D. 300, with long distance voyages occurring fairly regularly through at least the thirteenth century. More recent re-evaluation of the data, however, seems to indicate that there is no concrete archaeological evidence for pre-A.D. 1000 claims, rather Kirch (2011) and others (Athens et al. 2014; Duarte 2012; Wilmshurst et al. 2011) have argued that Polynesians may not have arrived to the Hawaiian Islands until at least A.D. 1000, but expanded rapidly thereafter.

The initial settlement of Hawai‘i is believed to have occurred from the southern Marquesas Islands. The Settlement Period was a time of great exploitation and environmental modification, when early Hawaiian farmers developed new subsistence strategies by adapting their familiar patterns and traditional tools to their new environment (Kirch 1985; Pogue 1978). Their ancient and ingrained philosophy of life tied them to their environment and kept order. Order was further assured by the conical clan principle of genealogical seniority (Kirch 1984, 2010). According to Fornander (1969), Hawaiians brought from their homeland certain universal Polynesian customs: the major gods Kāne, Kū, and Lono; the *kapu* system of law and order; cities of refuge; the *‘aumakua* concept; various epiphenomenal beliefs; and the concept of *mana*. Conventional wisdom suggests that the first inhabitants of Hawai‘i Island focused habitation and subsistence activity on the windward side of the island (Burtchard 1995; Hommon 1986; Kirch 1985). The story of an early group of voyagers to arrive on the shores of Ka‘ū is told in the *Ka‘ū mele inoa* (name chant of Ka‘ū). Handy and Pukui (1998:36–37) write:

Kua, the *mano ali‘i* (shark chief), described in a local Ka-‘u *mele inoa* (name chant) in praise of him as “the red shark, huge and thick-skinned,” came directly to Ka-‘u shores from “Kahiki” as leader of a great company of sharks, several of his male relatives being his lieutenants. As the Hawaiians of old were versed in symbolic speech, it is our belief that Kua and his company have historical significance, not actually as fish of the deep but as a raiding party of fierce warriors (“sharks”) on war canoes. As the dramatic chant of Kua describes his arrival, there were probably nine single canoes or four double canoes, each under the command of a valiant leader whose name remains celebrated in the chant of praise.

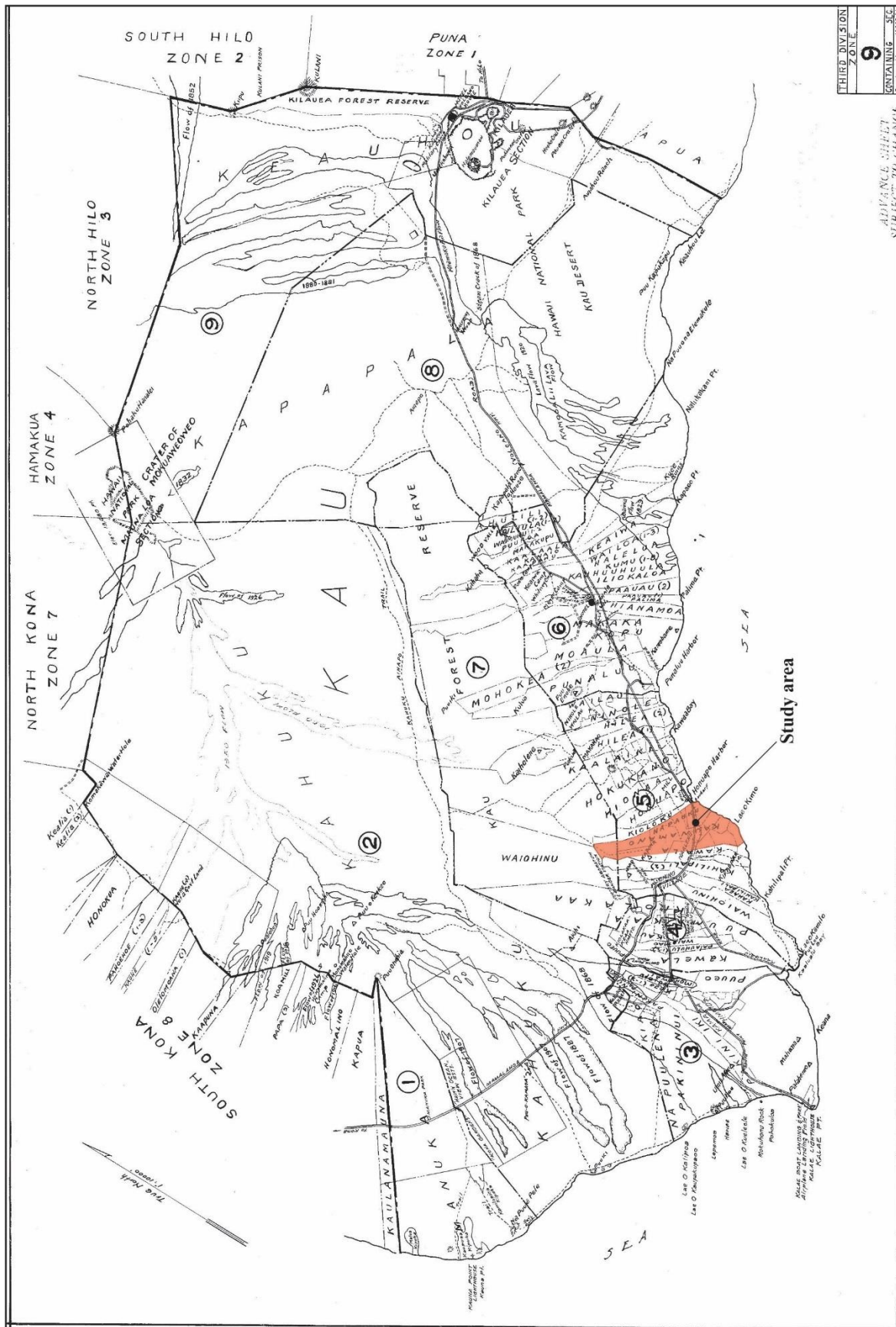


Figure 7. Map of the Ka'u District (TMK Zone 9) showing location of the current study area within the present day ahupua'a of Kaunāmano (shaded red).

As time passed a uniquely Hawaiian culture developed. The portable artifacts found in archaeological sites of the development period of the Hawaiian Islands reflect not only an evolution of the traditional tools, but some distinctly Hawaiian inventions. The adze (*ko'i*) evolved from the typical Polynesian variations of plano-convex, trapezoidal, and reverse-triangular cross-section to a very standard Hawaiian rectangular quadrangular tanged adze. Few areas in Hawai'i contain quality basalt for adze production. Mauna Kea on the island of Hawai'i was a well-known adze quarry. The two-piece fishhook and the octopus-lure breadloaf sinker are Hawaiian inventions of this period, as are 'ulu maika stones and lei niho palaoa. The later were status items worn by individuals of high rank, which indicates recognition of status differentiation (Kirch 1985). As population expanded in the Hawaiian Islands so did social stratification, which was accompanied by major socioeconomic changes and intensive land modification. Once most of the ecologically favorable zones of the windward and coastal regions of the major islands were settled, the more marginal leeward areas were developed. Migrations to Hawai'i from the Marquesas and Society Islands may have continued throughout the early settlement and development periods (Kirch 1985).

The Ahupua'a Land Management System

The first settlers of Ka'u initially established a few small communities near sheltered bays with access to fresh water. The communities shared extended familial relations, and there was an occupational focus on the collection of marine resources. The Hawaiian population expanded rapidly throughout the first few centuries of the new millennium (Kirch 2011), and by the fourteenth century inland elevations were being turned into dryland agricultural fields. By the fifteenth century, residency in the uplands was becoming permanent, and there was an increasing separation of the chiefly class from the common people. Sometime during the sixteenth century the population stabilized and the ahupua'a land management system was established as a socioeconomic unit (see Ellis 2004; Handy and Handy 1991; Kamakau 1992; Kelly 1983; Tomonari-Tuggle 1985; Kirch 2010).

Ahupua'a, generally speaking, are wedge-shaped subdivisions of land that radiate out from the center of the island, typically extending from the mountain into the sea. Their boundaries are often defined by the topography of the land and its geological features. In these land units the native tenants tended fields and cultivated crops necessary to sustain their families, and the chiefly communities with which they were associated. As long as sufficient tribute was offered and kapu (restrictions) were observed, the common people (*maka'ainana*), who lived in a given ahupua'a had access to most of the resources from mountain slopes to the ocean. These access rights were almost uniformly tied to residency on a particular land, and earned as a result of taking responsibility for stewardship of the natural environment, and supplying the needs of the ali'i (see Kamakau 1992; Malo 1951).

Entire ahupua'a, or smaller portions of the land called *'ili* were generally under the jurisdiction of appointed *konohiki* or lesser chief-landlords, who answered to an ali'i-*'ai-ahupua'a* (chief who controlled the ahupua'a resources). The ali'i-*'ai-ahupua'a* in turn answered to an ali'i *'ai moku* (chief who claimed the abundance of the entire district). Thus, ahupua'a resources supported not only the *maka'ainana* and *'ohana* who lived on the land, but also contributed to the support of the royal community of regional and/or island kingdoms. This form of district subdividing was integral to Hawaiian life and was the product of strictly adhered to resource management planning. In this system, the land provided fruits and vegetables and some meat for the diet, and the ocean provided a wealth of protein resources (Rechtman and Maly 2003).

Handy and Handy (1991) provide a cartographic sketch indicating the various zones of sea and land in Ka'u and their uses by the Precontact population of the District (Figure 8). This construct is based on the Hawaiian terms for the major vegetation zones that are used to define and segregate space within the region's ahupua'a. The zones are bands roughly parallel to the coast that mark changes in elevation and rainfall. The current study area lies within the *kula uka* on the upland slopes. Handy and Handy (1991:555) describe what the Precontact cultural landscape of Ka'u may have looked like in the general vicinity of the current study area:

...Near the bays and beaches are coconut trees, houses, and canoe sheds. Beyond the shore the immediate landscape is one of rough irregular exposed black lava interspersed with small bushes and sparse tufted grasses, green from December until May, dry for the rest of the year. In the old days many footpaths meandered seaward through this wide wasteland from the higher slopes, miles inland, where there was soil enough for gardens. The scattered homes and gardens of this lower zone of habitation were those of the seaward slopes (*ko kula kai*), where sweet potato and gourds were cultivated but little else. These households had relatively easy access to the sea and consequently depended on shellfish, seaweed, and had these for exchange with relatives living further up the slopes.

Moisture increases and evaporation decreases with altitude here, so beyond the *kula kai* (the lowest habitable zone) were the dwellings of the upland slopes (*ko kula uka*), less accessible to the sea, but increasingly favorable for gardening. In addition to sweet potato, dry-land taro of the variety called *Paua* was planted, and sugar cane flourished. (This is a zone of sugar plantations today.) Beyond this the open slopes (*kula*) become fern lands, then gradually merge with the lower forest (*wao*). In this zone where fern, bushes, and small trees prosper, other varieties of upland taro requiring more water were cultivated under mulch to keep in the moisture. This continued right back into the lower forest. Here were the wild bananas, wild yam, arrowroot, and tree fern (whose starchy core was eaten) extending down into this zone from the rain forest.

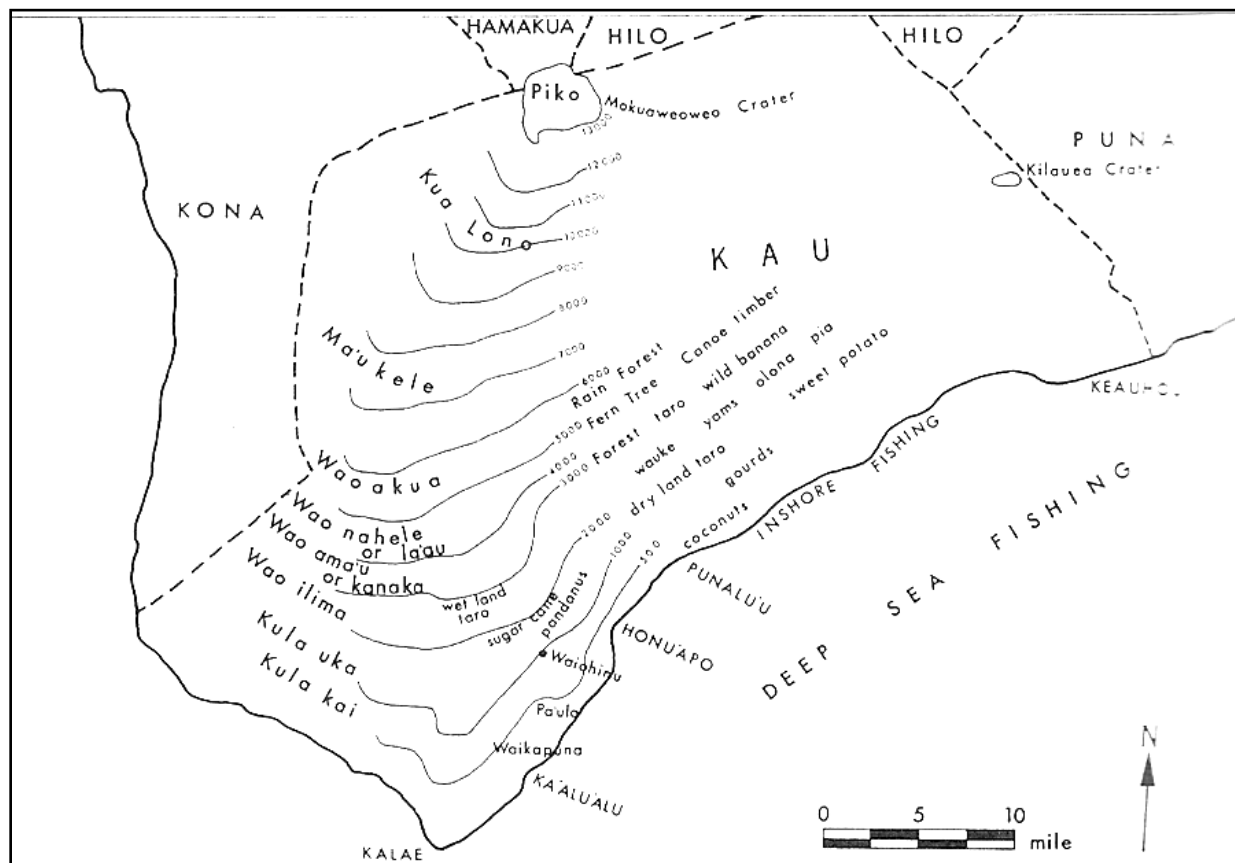


Figure 8. Cartographic sketch of the District of Ka'ū indicating the various zones of sea and land and their uses by Hawaiians (from Handy and Handy 1991:554).

In their comprehensive ethnographic study of Ka'ū, Handy and Pūku'i (1998:2) write "the fundamental unit in the social organization of the Hawaiians of Ka'ū was dispersed community of 'ohana, or relatives by blood, marriage and adoption, living some inland and some near the sea but concentrated geographically in and tied by ancestry, birth, and sentiment to a particular locality which was termed the 'aina." They relate that the concepts of 'aina (literally "that which feeds") and 'ohana (literally "off-shoots [specifically of a taro plant]") essentially belong to an agricultural people. The *Kanaka Maoli* (Native Hawaiians) of Ka'ū viewed the land as a source of sustenance and life (Handy and Pukui 1998:3). In this model, termed the 'ohana model, the *ahupua'a* and 'ili sub-divisions, which often extend from the sea to the mountain slopes, played key roles in the economic support of the 'ohana, providing all that they needed for survival, and creating surpluses for the coffers of the Ali'i. Handy and Pūku'i (1972:18), who concentrate on the central Ka'ū District (where Mary Kawena Pūku'i was from), attribute the unique physical environment of Ka'ū with playing a central role in determining the form and nature of the dispersed 'ohana community they describe. They write, "[t]he dispersal of the households comprising the extended family ('ohana), the types of structure constituting the domiciles, the means of livelihood and exchange of products of sea, land, and handcraft between individuals and households were all affected by topography, rainfall and vegetation, the nature of the shore and the sea offshore, by climate and weather and the cycle of seasons" (Handy and Pukui 1998:18). This exchange relationship detailed by

Handy and Pūku‘i (1998) offered increased access to geographically dispersed resources, while at the same time buffering against environmental and social perturbations (Allen and McAnany 1994:47). It also functioned as a unit in external economic and social affairs, such as placing the burden of taxes levied by the *ali‘i* during the annual collection of tribute (the *Makahiki*), not on the individual or single households, but on the entire ‘*ohana* (Handy and Pukui 1998:6).

Games of the Annual *Makahiki* Festival

The flat plain containing the current study area was identified by Mary Kawena Pūku‘i as a sporting field named Kahua ‘Olohū used for games typically associated with the annual *Makahiki* festival:

The famous bowling field name Kahua-olohu (*maika* stones were called olohu in Ka‘u) was just below the present town of Nā‘ālehu. It is a large level area to seaward of the road which must have been cleared and graded. In old Hawaiian times this broad kahua or plaza was used not just for bowling, but for other sports such as boxing, javelin throwing, and hula dancing during the *Makahiki* festival. But in a later era this was good sweet-potato land. Kawena Pukui’s elder relative, Opule, had ‘*uala* patches here when she was a child. (Handy and Handy 1991:596)

The *Makahiki*, the origins of which can be traced back to the ancient Polynesian ancestors of the first Hawaiian settlers (Kirch 2012:252), was a four-month period of the Hawaiian lunar calendar coinciding with the rainy season, or *ho‘oilo*, that was sacred to Lono (Valeri 1985). During this period, Lono symbolically returned from the land of Kahiki to bring rains and fertilize dryland fields (Kirch 2010). The *Makahiki* featured a complex set of rituals combining elements of a New Year’s festival (Valeri 1985), a harvest festival (Handy and Handy 1991), and the collection of tribute (*ho‘okupu*) by the *ali‘i* (Kirch 2010). As described by Samuel Kamakau (1964:19),

The *Makahiki* festival was a time to rest, and a time to make great feasts of commemoration (*‘aha‘aina ho‘omana‘o*) for life and health of the body, and for the help received from the god. All manual labor was prohibited and there was several whole days of resting and feasting. Chiefs and people made many joyful *Makahiki* feasts at the end of each year. The custom (*malama*) of feasting came from very ancient times; and from the time that chiefs became rulers of the kingdoms, yearly feasts (*‘aha‘aina makahiki*) were held in commemoration. This perhaps was the main reason for the observance of the feast.

[They gave thanks] to the god for his care, and for his help; from him came life, blessings, peace, and victory.

Events of the *Makahiki* (as it was conducted during Kamehameha I’s reign) are described by Samuel Kamakau (1964), John Papa ‘Ī‘Ī (1959), David Malo, (1951), and Kēlou Kamakau (Fornander 1919–1920:38–41), and a few of the early European visitors to the islands (Beaglehole 1967; Campbell 1819). Hommon (2013) and Kirch (2010) provide syntheses of these varied historical descriptions and scholarly analysis (Sahlins 1985; Valeri 1985), and the summary included below borrows from them.

The *Makahiki* involved a series of rituals, prayers, offering, and processions asking Lono to bestow plenty in the coming year (Hommon 2013). Ritual activities were centered on the *hale o Lono* temples, but also occurred throughout each island’s districts. On Hawai‘i Island, the *Makahiki* celebration began and ended at Hikiau Heiau, located at Kealakekua Bay. Following an initial set of rites at the *hale o Lono*, a procession departed Kealakekua to travel around the island and collect tribute in the form of the abundance that Lono had provided during the year (Beckwith 1976). The procession was led by the *akua loa* (the “long god”, a ten- to fifteen-foot tall staff that was a physical manifestation of Lono) that travelled clockwise around the coastal trails of each island, stopping to collect tribute from *ali‘i* during the circuit of island. Another procession, led by the *akua poko* (“short god”) travelled counter-clockwise along the upland trails, possibly only in the ‘*ili kūpono* lands belonging to the *mō‘ī* (‘Ī‘Ī 1959; Sahlins 1985) or only in its own district (Hommon 2013). The *akua loa* and its attendants would visit each *ahupua‘a* and collect tribute from the *konohiki*, with severe consequences for the *konohiki* who did not provide sufficient tribute. Once satisfied with the offering, the *akua loa* would proceed to the *konohiki*’s residence, where it would be ritually greeted by a *kahuna* and fed and dressed by the chiefs. Following this, the procession would continue around the island. When the *akua loa* procession returned to Kealakekua, another set of rituals took place to restore the land to the *ali‘i nui*. These rituals included the *kāli‘i*, a mock battle in which the *mō‘ī* (or his representative) dodged thrown spears, the sacrifice of a pig to Lono, and the launching of a canoe filled with food to symbolically carry Lono back to *Kahiki* (Kirch 2010).

Among the rituals conducted during the *Makahiki* was a multi-day festival of sport and games. As Kamakau (1964:20) explains:

When the *Makahiki kapu* was ended [after four days], the *akua pa'ani*, the god of play, came forth. His work was to promote the strengthening of the body. A place had been made ready before the *akua pa'ani* came, and the *maika* sites and level places (*pū'uhonua*) were full of people in readiness for competitive sports (*hakaka le'ale'a*). Those on the side of the god were trained in boxing (*mokomoko*) fist fighting (*ku'iku'i*), *lua* fighting (*ku'ialua*), wrestling (*hakoko*), chest-pushing (*kulakula'i*), and hand-gripping (*pu'ili*); for spear throwing (*'o'o ihe*), a pushing contest in a squatting position called "playing turtle" (*honuhonu*), wrist-turning (*umauma*), tugging with hooked fingers or arms (*loulou*), *maika* rolling, dart-throwing (*pahe'e*), sliding (*koi*), turning somersaults (*kuwalawala*), noosing (*pahelehele*), and other games that strengthened the body.

According to Malo (1951), the *akua pā'ani* (the god of play) travelled in the procession with the *akua loa*, and thus the games took place after an interval between the departure of the *akua loa* and the arrival of the *akua poko*:

45. That evening [when the *akua loa* departed] the people of the village and from the country far and near assembled in great numbers to engage in boxing matches, and other games as well, which were conducted in the following manner...

50. The next day, Koloa-kulua (twenty-fifth), was devoted to boxing, *holua* sledding, rolling the *maika* stone, running races (*kukini*), sliding javelins (*pahee*), the *noa* (or *puhenehene*) and many other games, including *hula* dancing.

51. These sports were continued the next day, which was Kaloa-pau, and on the morning of the following day (Kane) the *akua-poko*, reached the border of the district, travelling to the left; and turning back, arrived home that evening. The *akua-loa* kept on its way about the island with the god of sport (*akua paani*). (Malo 1951:148)

The games associated with the *Makahiki* were also played throughout the year, often accompanied by gambling. Wagers were made by players and spectators, and often were the impetus for competition (Arago 1823; Ellis 2004; Fornander 1916; Kamakau 1964; King 1784; Malo 1951). One of the well-known games reported to have been played at Kahua 'Olohū was the sport of *maika* (Ellis 2004:186), which involved rolling stone disks on a flat, prepared surface (*kahua*). According to Fornander (1916:112), "*Olohu*, as also '*ulu*, was the name of a stone disk used in a game of [the] same name, more particularly on Maui and Oahu. It was more generally known as *maika*, the game consisting of rolling this round, smooth stone the greatest distance, on which heavy stakes were wagered, even to one's bones, meaning life itself." J. S. Emmerson noted that in 1884 on Hawai'i Island "of the ancient names, *ulumaika* and *olohu*, the latter is more often used, while the former seems to be almost forgotten" (Summers 1999:87). William Brigham (1902:68) states that a third variation was played as well in which "the stones were rolled against each other and the toughest won the game for its owner." The game of *pahe'e*, usually translated as "sliding darts," was observed being played firsthand at Kahua 'Olohū by William Ellis (2004:185-186) in 1823. This game involved throwing short wooden javelin called a *pahe'e* down the *kahua* so it would slide or skip across the ground (Malo 1951). Ellis' descriptions of these games are presented in more detail below (see report section titled "The Journey of William Ellis Through Ka'ū in 1823").

The Ruling Chiefs of Ka'ū

By the seventeenth century large areas of Hawai'i Island (*moku 'āina* – districts) were controlled by a few powerful *ali'i 'ai moku*, and the annual *Makahiki* rituals were beginning to become codified in the Hawaiian political system (Kirch 2012:252-253). From the story of 'Umi (Kamakau 1992:1-21) we learn that Imaikalani was the ruler of Ka'ū at this time. Around A.D. 1600 'Umi a Līloa was able to conquer all of the districts of the island, thus unifying Hawai'i under his rule. Imaikalani, who was a powerful warrior, resisted 'Umi, and in his younger days 'Umi was never able to defeat him. The war between these two lasted for a long time. As Imaikalani got older he became blind, but was still noted for his strength and skill in battle. As Kamakau explains:

Many chiefs who had fought against him were destroyed. He was skilled in striking left or striking right, and when he thrust his spear (*pololu*) to the right or to the left it roared like thunder, and rumbled like an earthquake. When he struck behind him, a cloud of dust rose skyward as though in a whirlwind. 'Umi-a-Līloa feared I-mai-ka-lani. Although he was blind and unable to see, his

hearing was keen. He had pet ducks that told him in which direction a person approached, whether from in front, at the back, or on either side. All depended on the cries of the birds. (1992:18)

Only through the skill and cunning of Pi'imaiwa'a, 'Umi's lifelong friend, was Imaikalani defeated. Pi'imaiwa'a studied Imaikalani until he knew every angle of the Ka'ū chief's strength and marvelous skill, and then he killed the two men who led Imaikalani on either side, the forty men who carried his spears, and all of his pet ducks. When Imaikalani was alone and helpless, Pi'imaiwa'a killed him and Ka'ū became 'Umi a Līloa's (Kamakau 1992). Following Umi's unification of Hawai'i Island the *Makahiki* took on "a much more important political and economic function," and became "the principal ritualized form of ensuring that the surpluses produced by the common people could be systematically collected by the *ali'i*" (Kirch 2012:252-253).

In ancient times the people of Ka'ū labored willingly for their chiefs, but when the chiefs were abusive, the people rebelled. For this reason the district earned the name Ka'ū Mākaha, or Fierce Ka'ū (Kelly 1980). Malo (1951) names three chiefs of Ka'ū who were slain by their subjects: Koihala, Kohaikalani, and Halaea. Three different stories tell of the abuses that led to the deaths of these chiefs (see Kelly 1980:1-6). One chief was stoned to death because he abused the people who served him and provided him with food; another, who regularly demanded the entire catch of the fishermen in Ka'ū, drowned when his canoe was purposely overloaded with fish by the vengeful fishermen. The third, worked his people too long and unreasonably hard while building a *heiau* inland of Nīnole. He was tricked into standing beneath a large log that the people were pulling up a steep hill, which they then released, crushing the abusive chief.

One of the last great ruling chiefs from Ka'ū was Kalani'ōpu'u (Kamehameha I's uncle). During the first part of the eighteenth century Kalani'ōpu'u inherited the position of Ka'ū's high chief from his father, Kalaninui'iamamao. Kalani'ōpu'u was a clever and able chief, and a famous athlete in all games of strength, but according to Kamakau (1992) he possessed one great fault, he loved war and had no regard for others' land rights. In 1754, after many bloody battles, Kalani'ōpu'u defeated Keaweopala in South Kona and became ruler of Hawai'i Island (Kamakau 1992:78), a position he would hold for nearly thirty years. Kalani'ōpu'u was the reigning chief of the island during the first recorded visit to Hawai'i by European explorers in 1778.

History After Contact

The arrival of European Explorers to the Hawaiian Islands marks the end of the Precontact Period of Hawaiian history, and the beginning of the Proto Historic Period. British explorer Captain James Cook and his crew on board the ships the H.M.S. *Resolution* and *Discovery* first arrived in the Hawaiian Islands on January 18, 1778, staying for less than a month (visiting Kaua'i and Ni'ihau) before proceeding north toward the Bering Strait. Upon returning to the islands in January of 1779, Cook and his men visited the southern tip of Hawai'i Island for the first time. Cook recorded a large village on the point and he met with some of the inhabitants who brought supplies to his ships. Cook was not overly impressed with the size of the pigs, nor the amount of fruit and vegetables offered, and he noted that "the Country did not seem capable of producing many of either having been destroyed by a Volcano..." (Beaglehole 1967:486). Lt. James King, who accompanied Cook on the voyage, noted that the Ka'ū District, despite its desolate appearance, seemed more populous than neighboring district of Puna; Kelly (1969) estimated that the Ka'ū District had a population of between 10,000 and 13,500 at the time European contact. King wrote of this southernmost district:

It is not only by far the worst part of the Island but as barren waste looking a country as can be conceived to exist...we could discern black Streaks coming from the Mountain even down to the Seaside. But the [southern] neck seems to have undergone a total change from the Effect of Volcanoes, Earthquakes, etc...By the SE side were black honey combed rocks, ...horrid & dismal as this part of the Island appears, yet there are many Villages interspersed, & it struck as being more populous than the part of Opoona [Puna] which joins Koa [Ka'ū]. There are houses built even on the ruins [lava flows] we have described. (Beaglehole 1967:611)

After leaving the South Point area, Cook anchored at Kealakekua Bay in South Kona where he exchanged gifts with Kalani'ōpu'u (Kamakau 1992). Cook's visit happened to correspond with the annual *makahiki* rituals, and some researchers have suggested that Cook may have been mistaken for the god Lono himself (Sahlins 1985; Kirch 2012). In February 1779, Cook set sail for Maui; however, a severe storm off the coast of Kohala damaged a mast and they were forced to return to Kealakekua Bay. While back at the bay a skirmish broke out on the shores of Ka'awaloa over a stolen skiff, and Captain Cook was killed (King 1784; Kuykendall and Day 1976; Sahlins 1985; Samwell 1786).

Around 1780, after the *Resolution* and *Discovery* had come and gone, Kalani'ōpu'u proclaimed that his son Kiwala'ō would be his successor, and he gave the guardianship of the war god Kūka'ilimoku to Kamehameha, who had resided in Ka'ū with his uncle's family for some time as a child (Īī 1959). Kamehameha and a few other chiefs, however, were concerned about their land claims, which Kiwala'ō did not seem to honor (Fornander 1969; Kamakau 1992:199). In 1781 a rebel Puna chief named Īmakakoloa led an uprising against Kalani'ōpu'u, but was defeated in Puna by Kalani'ōpu'u's superior forces. Following the defeat, Īmakakoloa managed to avoid capture and hide from detection for the better part of a year. While the rebel chief was sought, Kalani'ōpu'u "went to Ka-'u and stayed first at Punalu'u, then at Waiohinu, then at Kama'oa in the southern part of Ka-'u, and erected a heiau called Pakini, or Halauwailua, near Kama'oa" (Kamakau 1992:108).

Īmakakoloa was eventually captured and brought to the *heiau*, where Kiwala'ō was to sacrifice him. "The routine of the sacrifice required that the presiding chief should first offer up the pigs prepared for the occasion, then bananas, fruit, and lastly the captive chief" (Fornander 1969:202). However, before Kiwala'ō could finish the first offerings, Kamehameha, "grasped the body of I-maka-koloa and offered it up to the god, and the freeing of the tabu for the *heiau* was completed" (Kamakau 1992:109). Upon observing this single act of insubordination, many of the chiefs believed that Kamehameha would eventually rule over all of Hawai'i.

After Kalani'ōpu'u died in April of 1782, several chiefs were unhappy with Kiwala'ō's division of the island's lands, and civil war broke out. Kiwala'ō, Kalani'ōpu'u's son and appointed heir, was killed at the battle of Moku'ōhai, South Kona in July of 1782. Supporters of Kiwala'ō, including his half-brother Keōua and his uncle Keawemauhili, escaped the battle with their lives, however, and laid claim to the Hilo, Puna, and Ka'ū Districts. According to John Papa Īī (1959) nearly ten years of almost continuous warfare followed the death of Kiwala'ō, as Kamehameha endeavored to unite the island of Hawai'i under one rule and conquer the islands of Maui and O'ahu. Keōua became Kamehameha's main rival on the island of Hawai'i, and he proved difficult to defeat (Kamakau 1992). Keawemauhili would eventually give his support to Kamehameha, but Keōua never stopped resisting. Around 1790, in an effort to secure his rule, Kamehameha began building the *heiau* of Pu'ukohola in Kawaihae, which was to be dedicated to the war god Kūka'ilimoku (Fornander 1969).

The near constant warring on the island of Hawai'i during this decade of turmoil and strife undoubtedly had an effect on the people in Keōua's home district of Ka'ū. Westervelt (1916) relates a story of Keōua, Keawemauhili, and Kamehameha that begins after the battle of Moku'ōhai, but tells of another battle in ca. 1790 when Kamehameha routed Keōua at Waimea and Hāmākua and then sent men to attack Ka'ū. As Keōua attempted to return to his home district a portion of his army was killed by an eruption of Kīlauea Volcano. Westervelt (1916:140–141) writes:

... Kiwalao's half-brother Keoua escaped to his district Ka-u, on the southwestern side of the island. His uncle Keawe-mau-hili escaped to his district Hilo on the southeastern side.

For some years the three factions practically let each other alone, although there was desultory fighting. Then the high chief of Hilo accepted Kamehameha as his king and sent his sons to aid Kamehameha in conquering the island Maui.

Keoua was angry with his uncle Keawe-mau-hili. He attacked Hilo, killed his uncle and ravaged Kamehameha's lands along the northeastern side of the island.

Kamehameha quickly returned from Maui and made an immediate attack on his enemy, who had taken possession of a fertile highland plain called Waimea. From this method of forcing unexpected battle came the Hawaiian saying, "The spear seeks Waimea like the wind."

Keoua was defeated and driven through forests along the eastern side of Mauna Kea (The white mountain) to Hilo. Then Kamehameha sent warriors around the western side of the island to attack Keoua's home district. Meanwhile, after a sea fight in which he defeated the chiefs of the islands Maui and Oahu, he set his people to building a great temple chiefly for his war-god Ka-ili. This was the last noted temple built on all the islands.

Keoua heard of the attack on his home, therefore he gave the fish-ponds and fertile lands of Hilo to some of his chiefs and hastened to cross the island with his army by way of a path near the volcano Kīlauea. He divided his warriors into three parties, taking charge of the first in person. They passed the crater at a time of great volcanic activity. A native writer, probably Kamakau, in the native newspaper *Kuokoa*, 1867, describes the destruction of the central part of this army by an awful explosion from Kīlauea.

The untimely eruption of Kīlauea, as Keōua's army attempted to return to Ka'ū to stop Kamehameha's warriors from ravaging their home district, cost him about 400 fighting men along with an untold number of women and children (Fornander 1969). Kamehameha's prophets said that this eruption was the favor of the gods who rejoiced at his building of Pu'ukohola Heiau. According to Westervelt (1916:146), "The people said it was proof that Pele had taken Kamehameha under her special protection and would always watch over his interests and make him the chief ruler." Despite the loss of men to the volcano, Keōua continued to resist Kamehameha. In 1791 Kamehameha's forces, under the leadership of Ka'iana attacked Keōua's forces in Ka'ū. Fornander (1996:326–327) tells of this battle:

The war with *Keoua* was vigorously continued by *Kamehameha* during the year 1791. One army corps under command of *Keeaumoku*, to which John Young and Isaac Davis were attached, operated against Hilo, while another corps under *Kaiana-a-Ahaua* was sent against Kau. Though sorely pressed on both sides, yet *Keoua* bravely kept his ground during the spring and summer of that year, and no decisive advantages were gained by *Kamehameha* in any of the battles fought. The prolonged contest, however, began to tell upon the resources of *Keoua*, yet with consummate tact and bravery he showed a bold and ready front to every attack, from whatsoever quarter aimed.

No reminiscences of the operations against Hilo have survived, but of the campaign in Kau some notices have been collected by the native historians. Supported by a fleet of war canoes hovering about the South Cape ("Lae a Kalaeloa") of Hawaii, *Kaiana* fought several engagements with *Keoua* at Paiahaa, at Kamaoa, and at Naohulelua, but they were what may be called drawn battles, *Kaiana* sometimes remaining master of the field, and sometimes being obliged to fall back on his flotilla for support. During one of the intermissions in this martial game *Keoua*, suddenly changed his ground from Kau to Puna. *Kaiana* looked upon this move as a confession of weakness, followed *Keoua*, into Puna, and with jubilant exultation anticipated an easy victory. At a place called Puuakoki the two forces met, and *Kaiana* was so severely handled by *Keoua*, and by his generals, *Kaieiea* and *Uhai*, that he made a precipitate retreat out of Puna and returned with his men to Kona, reporting his ill success to *Kamehameha*.

Unable to defeat Keōua in battle, Kamehameha resorted to trickery. Following the skirmishes with Ka'iana, Keōua stayed in Ka'ū, living "mauka in Kahuku with his chiefs and warriors of his guard" (Kamakau 1992:155). When Pu'ukohola Heiau was completed in the summer of 1791, Kamehameha sent his two counselors, Keaweahu and Kamanawa, to Keōua to offer peace. Keōua was enticed to the dedication of the Pu'ukohola Heiau by this ruse and when he arrived at Kawaihae he and his party were sacrificed to complete the dedication (Kamakau 1992). The assassination of Keōua gave Kamehameha undisputed control of Hawai'i Island by 1792 (Greene 1993).

Demographic trends during this period indicate that the Hawaiian population declined in some areas due to war and disease, yet increased in others, with relatively little change in material culture (Rechtman and Maly 2003). There was a continued trend toward craft and status specialization, intensification of agriculture, *ali'i* controlled aquaculture, upland residential sites, and the enhancement of traditional oral history. The Kū cult, *luakini heiau*, and the *kapu* system were at their peaks, although western influence was already altering the cultural fabric of the Islands, as an increasing numbers of foreign vessels began to arrive (Kent 1983; Kirch 1985). Foreigners introduced the concept of trade for profit, and by the end of the 1700s, Hawai'i saw the beginnings of a market system economy (Kent 1983). This marked the end of an era of uniquely Hawaiian culture.

Archibald Menzies, a botanist who arrived in the Hawaiian Islands with Capt. George Vancouver, visited the Ka'ū District in 1794 during an attempt to climb Mauna Loa Volcano. Menzies took a canoe from Kealakekua Bay, stopping first at Manukā and then at Pakini Village near South Point, where he left his canoe and set out overland. Menzies (1920) noted that when Hawaiians visited the eastern side of the island by this southern route, they typically traveled by canoe as far as Pākini, where they would leave their canoe and continue eastward by land, reclaiming the canoe on the return trip. This journey, however, required that the traveler first climb a steep precipice near the coast known as Pali o Kalani. Menzies (1920:181–183) reported that:

...On gaining its summit [of Pali o Kalani], which was not an easy task, an extensive tract of the most luxuriant pasture we had yet seen amongst these islands rushed at once upon our sight, extending itself from the south point to a considerable distance inland...

From the summit of this bank we pursued a path leading to the upper plantations in a direct line towards Mauna Loa, and as we advanced the natives pointed out to us on both sides of our path, places where battles and skirmishes were fought in the late civil wars between the adherents to the

present king [Kamehameha I] and the party of Keoua, who was king of the island in Captain Cook's time. Kamehameha's warriors were headed by Kaiana, who at that time made free use of firearms, which obliged Keoua's warriors to entrench themselves by digging small holes in the ground, into which they squatted flat down at the flash of the musquets. Many of these little entrenchments were still very conspicuous and they were pointed out to us by natives with seeming satisfaction, as it was to them a new method of eluding the destructive powers of firearms on plain ground. Here then we behold the first beginnings of fortifications amongst them. We also see that the same mode of fighting naturally begets the same mode of defense in every part of the world. It was in these wars that Kaiana by his knowledge of firearms gained so much ascendancy on the island and became so powerful a chief. We continued our ascent through a rich tract of land which appeared to have laid fallow or neglected ever since these wars, till we came to a grove of kukui trees, and under their shade we stopped to rest and refresh ourselves in the heat of the day.

From this point, Menzies and his companions continued on a narrow winding path five or six miles from the shore, which he described as "the public road leading to the east end of the island" (Menzies 1920:184). They stopped for the night at the village of Kī'olokū on a plantation belonging to the chief Keaweheulu. The next day they continued east, passing through Wai'ōhinu and several inland plantations *mauka* of the current study area, before arriving at Punalu'u where they spent the night. Menzies (1920:181–183) writes:

February 11th. We set out early in the morning of the 11th and ascended a steep verdant hill on the eastern side of the valley [Wai'ōhinu], from the summit of which we had a charming prospect of the country for a long way before us, presenting extensive and rich plantations industriously cultivated. As we passed on through them, the natives pointed out one which they said the king had given to Kualelo soon after we left him on the island. This was further confirmed to us by the vassals on it readily owning Kualelo as their chief. We found the people everywhere busily employed in their little fields, many of which were here cropped with plantains and bananas that had a ragged appearance from having little or no shelter, yet they bore fruit tolerably well. We seldom observed these vegetables cultivated so low down on the western side of the island, where they generally occupy the verge of the forest, a situation which for shelter seems more congenial to their tender feelings. We observed here that they suffer many of their fields here and there to lay fallow, and these in general were cropped with fine grass, which they cut down for the purpose of covering their new planted fields of taro or yams to preserve them from the powerful heat of the sun.

After examining these plantations we came to a barren woody tract, without even a hut or the least arable land for a considerable distance, and so arid that we could get no water to quench our thirst or refresh ourselves...

In the afternoon we continued our journey by the same path which still led along the upper plantations, preserving nearly the same distance from the seacoast, and was excessive rugged and woody, with here and there some intervening plantations arranged alternately with these rugged forests, which seemed to mark the latter courses of the lava down the side of the mountain. We stopped in the evening at a plantation belonging to Kamehameha called Punaluu.

The following day Menzies and his companions continued northeast to the village of Kapāpala, where they began their ascent to the summit of Mauna Loa. In the years following this trip Kamehameha continued to consolidate his reign over the Hawaiian Islands. By 1796, with the aid of foreign weapons and advisors, Kamehameha had conquered all of the island kingdoms except Kaua'i. In 1810, when Kaumuali'i of Kauai gave his allegiance to Kamehameha, the Hawaiian Islands were unified under a single leader (Kuykendall and Day 1976). Kamehameha would go on to rule the islands for another nine years. He and his high chiefs participated in foreign trade, but continued to enforce the rigid *kāpu* system.

The Death of Kamehameha I and the Abolition of the *Kapu* System

Kamehameha died in the year 1819 at his residence of Kamakahonu in Kailua-Kona, and with his passing his heir Liholiho was given the name of Kamehameha II. Ka'ahumanu, the favorite wife of Kamehameha, announced the last commands of Kamehameha I:

O heavenly one! I speak to you the commands of your grandfather. Here are the chiefs; here are the people of your ancestors; here are your guns; here are your lands. But we two shall share the rule

over the land. Liholiho consented and became ruling chief over the government. (Kamakau 1992:220)

Following the death of a prominent chief, it was customary to remove all of the regular *kapu* that maintained social order and the separation of men and women and elite and commoner. Thus, following Kamehameha's death a period of *'ai noa* (free eating) was observed along with the relaxation of other traditional *kapu*. It was for the new ruler and *kahuna* to re-establish *kapu* and restore social order, but at this point in history traditional customs were not followed:

The death of Kamehameha was the first step in the ending of the tabus; the second was the modifying of the mourning ceremonies; the third, the ending of the tabu of the chief; the fourth, the ending of carrying the tabu chiefs in the arms and feeding them; the fifth, the ruling chief's decision to introduce free eating (*'ainoa*) after the death of Kamehameha; the sixth, the cooperation of his aunts, Ka-ahu-manu and Ka-heihei-malie; the seventh, the joint action of the chiefs in eating together at the suggestion of the ruling chief, so that free eating became an established fact and the credit of establishing the custom went to the ruling chief. This custom was not so much of an innovation as might be supposed. In old days the period of mourning at the death of a ruling chief who had been greatly beloved was a time of license. The women were allowed to enter the *heiau*, to eat bananas, coconuts, and pork, and to climb over the sacred places. You will find record of this in the history of Ka-ula-hea-nui-o-ka-moku, in that of Ku-ali'i, and in most of the histories of ancient rulers. Free eating followed the death of the ruling chief; after the period of mourning was over the new ruler placed the land under a new tabu following old lines. (Kamakau 1992:222)

Immediately upon the death of Kamehameha I, Liholiho was sent away to Kawaihae to keep him safe from the impurities at Kamakahonu brought about by the death of Kamehameha. After purification ceremonies Liholiho returned to Kamakahonu:

Then Liholiho on this first night of his arrival ate some of the tabu dog meat free only to the chiefesses; he entered the *lauhala* house free only to them; whatever he desired he reached out for; everything was supplied, even those things generally to be found only in a tabu house. The people saw the men drinking rum with the women *kahu* and smoking tobacco, and thought it was to mark the ending of the tabu of a chief. The chiefs saw with satisfaction the ending of the chief's tabu and the freeing of the eating tabu. The *kahu* said to the chief, "Make eating free over the whole kingdom from Hawaii to Oahu and let it be extended to Kauai!" and Liholiho consented. Then pork to be eaten free was taken to the country districts and given to commoners, both men and women, and free eating was introduced all over the group. Messengers were sent to Maui, Molokai, Oahu and all the way to Kauai, Ka-umu-ali'i consented to the free eating and it was accepted on Kauai. (Kamakau 1992:225)

Liholiho's cousin, Kekuaokalani, caretaker of the war god Kūka'ilimoku, was distressed by the socioreligious turn of events and rebelled. A battle between the forces of Liholiho and Kekuaokalani was fought in December of 1819 at Kuamo'o in North Kona. Kekuaokalani's forces were defeated and the old religion fell with them. Kamehameha II sent edicts throughout the kingdom renouncing the ancient state religion, ordering the destruction of the *heiau* images, and commanding that the *heiau* structures be destroyed or abandoned and left to deteriorate. He did, however, allow personal family religion, the *'aumakua* worship, to continue (Kamakau 1992; Oliver 1961).

With the end of the *kapu* system changes in the social and economic patterns of the Hawaiian Islands began to affect the lives of the common people. Liholiho moved his court to O'ahu, lessening the burden of resource procurement for the chiefly class on the residents of Hawai'i Island. Some of the work of the commoners shifted from subsistence agriculture to the production of foods and goods that they could trade with early Western visitors. Introduced foods often grown for trade with Westerners included yams, coffee, melons, Irish potatoes, Indian corn, beans, figs, oranges, guavas, and grapes (Wilkes 1845).

In October of 1819, seventeen Protestant missionaries had set sail from Boston to Hawai'i. They arrived in Kailua-Kona on March 30, 1820 to a society with a religious void to fill. Many of the *ali'i*, who were already exposed to Western material culture, welcomed the opportunity to become educated in a Western style and adopt their dress and religion. Soon they were rewarding their teachers with land and positions in the Hawaiian government.

The Journey of William Ellis Through Ka‘ū in 1823

The Reverend William Ellis, one of these early missionaries, visited the Ka‘ū District in July of 1823. Ellis and his party landed at Kā‘iliki‘i to the west of South Point and set out overland. Ellis, like Menzies (1920) did in 1794, reported that this was the usual custom when travelling to the east, as the trade winds were too strong to continue the journey by sea around the south tip of the island. After climbing Pali o Kalani, Ellis (2004:180) writes:

...A beautiful country now appeared before us, and we seemed all at once transported to some happier island...The rough and desolate tract of lava, with all its distorted forms, was exchanged for the verdant plain, diversified with gentle rising hills and sloping dales, ornamented with shrubs, and gay blooming flowers. We saw, however, no streams of water during the whole of the day; but from the luxuriance of the herbage in every direction, the rains must be frequent, or the dews heavy.

Ellis (2004:182) goes on to relate that the population in this part of the countryside:

...did not seem to be concentrated in towns and villages, as it was along the sea shore; but scattered over the whole face of the country, which appeared divided into farms of varied extent, and upon these the houses generally stood singly, or in small clusters seldom exceeding four or five in number.

Ellis (2004:181-182) reported that the local residents were engaged in growing taro. He writes:

...Our path led us through several fields of mountain taro, a root which appears to be extensively cultivated in many parts of Hawaii. It was growing in a dry, sandy soil, into which our feet sank two or three inches, every step we took. The roots were of an oblong shape, generally from ten inches to a foot in length, and four or six inches in diameter. Seldom more than two or three leaves were attached to a root, and those were of light green colour, frequently blotched and sickly in their appearance. The inside of the root is of a brown, or reddish colour, and much inferior to that of arum esculentum or low land taro. It is however, very palatable, and forms a prime article of food in those parts of the island, where there is a light soil, and but little water.

The path they followed took them north and then east to the village of Wai‘ōhinu, which Ellis (2004:184) described as a “most enchanting valley, clothed in verdure, and ornamented with clumps of kukui and kou trees,” with a fine stream of freshwater, “on both sides adorned with gardens, and interspersed with cottages, even to the summits of the hills.” They rested at a house belonging to the head man, Pai. After lunch on July 29, 1823 they departed from the village of Wai‘ōhinu and proceeded east towards the current study area. Ellis (2004:185) writes:

Between three and four o’clock we took leave of [Wai‘ōhinu], and pursued our journey towards the sea-shore. Our road, for a considerable distance, lay through the cultivated parts of this beautiful valley: the mountain taro, bordered by sugar-cane and bananas, was planted in fields six or eight acres in extent, on the sides of the hills, and seemed to thrive luxuriantly. On leaving the valley, we proceeded along by the foot of the mountains, in a line parallel with the sea, about a mile and a half from it.

Along the trail, Ellis and his companions crossed what he described as a “tahua pahe” (*kahua pahe‘e*) or *pahe‘e* floor (Ellis 2004:185). Although Ellis does not provide the name of the *kahua*, its location along the trail from Wai‘ōhinu strongly suggests that it was Kahua ‘Olohū. Ellis describes the *kahua* as about fifty or sixty yards long, but offers no other details. He does, however, provide a detailed description of the games of *pahe* (*pahe‘e* - throwing wooden darts) and *maika* (throwing stone disks), and the associated gambling, which he indicated was very popular among chiefs and common people alike. Ellis (2004:185–186) notes two different games played with *pahe‘e*:

...In our way we passed over a tahua pahe, or pahe floor, about fifty or sixty yards long, where a number of men were playing at pahe [*pahe‘e*], a favourite amusement with farmers and common people in general. The pahe is a blunt kind of dart, varying in length from two to five feet, and thickest about six inches from the point, after which it tapers gradually to the other end. These darts are made with much ingenuity, of a heavy wood. They are highly polished, and thrown with great force or exactness along a level ground, or floor of earth, previously prepared for the game.

Sometimes the excellence of the play consists in the dexterity with which the pahe is thrown. On these occasions two darts are laid down at a certain distance, three or four inches apart, and he who, in a given number of times, throws his dart most frequently between these two, without striking them, wins the game.

At other times it is a mere trial of strength; and those win who, in a certain number of times, throw their darts farthest. A mark is made in the ground, to designate the spot from which they are to throw it. The players, balancing the *pahe* [*pahe'e*] in their right hand, retreat a few yards from this spot, and then springing forward to the mark, dart it along the ground with great velocity. The darts remain wherever they stop till all are thrown, when the whole party run to the other end of the floor, to see whose have been the most successful throws.

This latter game is very laborious, yet we have known the men of whole districts engage in it all at once, and have seen them playing several hours together, under the scorching rays of a vertical sun...

Ellis only states that the game of *pahe'e* was being played at the time of his visit to Ka'ū, but he goes on to describe other games that would have also been played on the same *kahua* (see also Malo 1951). One of these is the game of *maika*. Ellis' (2004:186–187) description of *maika* closely resembles other early written descriptions of the game:

... On the same *tahua* or floor they also play at another game, resembling *pahe* which they call *maita* [*maika*] or *uru maita* [*ulu maika*].

Two sticks are stuck in the ground only a few inches apart, at a distance of thirty or forty yards, and between these, but without striking either, the parties at play strive to throw their stone; at other times, the only contention is, who can bowl it farthest along the *tahua* [*kahua*] or floor.

The *uru* [*ulu*], which they use instead of a dart, is a circular stone admirably adapted for rolling, being made of compact lava, or a white alluvial rock, (found principally on the island of Oahu,) about three or four inches in diameter, an inch in thickness around the edge, but thicker, and consequently heavier in the center.

... These stones are finely polished, highly valued, and carefully preserved, being always oiled and wrapped up in native cloth after having been used. The people are, if possible, more fond of this game than the *pahe*; and the inhabitants of a district, not unfrequently challenge the people of the whole island, or the natives of one island those of all the others, to bring a man who shall try his skill with some favourite player of their own district of island.

On such occasions we have seen seven or eight thousand chiefs and people, men and women, assembled to witness the sport, which, as well as the *pahe*, is often continued for hours together.

As a Protestant missionary, Ellis (2004:187–188) generally disapproved of these idle pastimes and the gambling he observed associated with them:

... There are some few who play merely for pleasure; but the greater part engage in it in hopes of gain.

Were their games followed only as sources of amusement, they would be comparatively harmless; but the demoralizing influence of the various kinds of gambling existing among them is very extensive.

Many of these amusements require great bodily exertion; and we have often been struck with the restless avidity and untiring effort with which they pursue even the most toilsome games.

Sometimes we have expressed our surprise that they should labour so arduously at their sport, and so leisurely at their plantations or houses, which, in our opinion, would be far more conducive of their advantage and comfort.

They have generally answered, that they built houses and cultivated their gardens from necessity, but followed their amusements because their hearts were fond of them.

Scarcely an individual resorts to these games but for the purpose of betting; and at these periods all the excitement, anxiety, exultation, and rage, which such pursuits invariably produce, are not only visible in every countenance, but fully acted out, and all the malignant passions which gambling engenders are indulged without restraint.

... We have seen females hazarding their beads, scissors, cloth-beating mallets, and every piece of cloth they possessed, except what they wore, on a throw of the *uru* or *pahe*.

In the same throng might be frequently seen the farmer with his o-o, and other implements of husbandry; the builder of canoes, with his hatchets and adzes; and some poor man, with a knife, and the mat on which he slept, all eager to stake every article they possessed on the success of their favourite player; and when they have lost all we have known them, frantic with rage, tear their hair from their heads on the spot.

This is not all; the sport seldom terminates without quarrels, sometimes of a serious nature, ensuing between the adherents of the different parties.

In discussing the games, Ellis (2004:188) credits the influence of the Protestant missionaries during the mid-nineteenth century as tempering the frequency with which these once popular activities were conducted:

Since schools have been opened in the islands, and the natives have been induced to direct their attention to Christian instruction and intellectual improvement, we have had the satisfaction to observe these games much less followed than formerly; and we hope the period is fast approaching, when they shall only be the healthful exercises of children, and when the time and strength devoted to purposes so useless, and often injurious, shall be employed in cultivating their fertile soil, augmenting their sources of individual and social happiness, and securing to themselves the enjoyment of the comforts and privileges of civilized and Christian life.

Passing the *kahua* and continuing his journey towards Honu‘apo, Ellis (2004:188) noted that, generally, this part of Ka‘ū appeared more thickly inhabited than the area between South Point and Wai‘ōhinu, and that “the villages, along the sea shore, were near together, and some of them extensive.” Ellis (2004:188–189) writes that, “

...After travelling about an hour [from Wai‘ōhinu], we came to Kapauku, a pleasant village belonging to Naihe. As we passed through it we found tall rows of sugar-cane lining the path on either side, and beneath their shade we sat down to rest.

A crowd of natives soon gathered around us; and after a little general conversation, we asked them who was their god? They said they had no god; formerly they had many, but now they had cast them all away.

We asked them if they had done well in abolishing them? They said, Yes, for the tabu occasioned much labour and inconvenience, and drained off the best of their property.

We asked them if it was a good thing to have no god, and to know of no being to whom they ought to render religious homage? They said perhaps it was, for they had nothing to provide for the great sacrifices, and were under no fear of punishment for breaking tabu; that now, one fire cooked their food, and men and women ate together the same kind of provisions.

We asked them if they would not like to hear about the true God, and the only Saviour? They said they had heard of Jesus Christ, by a boy belonging to Naihe, who came from Oahu about two months ago; but he had not told them much, and they should like to hear something more.

...Bidding them farewell, we directed our course towards the shore, and in about half an hour came to Honuapo, an extensive and populous village, standing on a level bed of lava which runs a considerable distance into the sea.

As Ellis and his party approached Honu‘apo from the west they were led to a steep precipice overhanging the sea and shown a rock below called “Kaverohea [Kawelohea].” As Ellis (2004:190-191) explains, their guides:

... seemed to regard both the place where we were, and the rock below, with strong feelings of superstition; at which we were not surprised, when they informed us, that formerly a jealous husband, who resided a short distance from the place, murdered his wife in a cruel manner with a stone, and afterwards dragged her down to the place where we stood, and threw her into the sea; that she fell on the rock which we saw, and, immediately afterwards, while he stood ruminating on what he had done, called out to him in the most affectionate and lamentable strains, attesting her innocence of the crime for which she had been murdered.

From the rock, which is still called by her name, they said her voice was often heard calling to her husband, and there her form was sometimes seen. They also informed us, that her lamentations were considered by them as [*sic*] ominous of some great disaster; as of war, or famine, or the death of a distinguished chief.

Arriving at Honu‘apo, Ellis reported that there were at least 200 people in attendance for his sermon, and he noted that many of the people in the village, unlike other places he had visited, had tattooed lips. It was clear to Ellis (2004:190-191), by the way that his party was greeted, that they were some of the first foreigners to visit the village:

...From the manner in which we were received at Honuapo, we should not think this village had been often visited by foreigners; for on our descending from the high land to the lava on which the town stands, the natives came running out to meet us from all quarters, and soon gathered so thickly around us, that we found it difficult to proceed...

While in Honu‘apo, Ellis stayed at the headman’s house on the northeastern point of the bay near the ruins of a *heiau*. Ellis (2004:191-192) describes the accommodations and *heiau* as follows:

...We passed through the town to the residence of the head man, situated on the farthest point towards the sea. He invited us to his house, procured us water to wash our feet with, and immediately sent to an adjacent pond for some fish for our supper. While that was preparing, the people assembled in crowds around the house, and a little before sun-set Mr. Thurston preached to them in the front yard. Upwards of 200 were present...

...After the service, some of our number visited the ruins of a *heiau*, on a point of lava near our lodging. During the evening we made some inquiries respecting it, found it had been dedicated to Tairi, and was thrown down in the general destruction of idols in 1819.

After a stay of one night, Ellis and his party left the village and traveled along the coast to the northeast passing through Hi‘ona‘ā and crossing “a wide tract of lava, in some places almost as rugged as any we had yet seen” (Ellis 2004: 195). They stopped first at Hōkūkano where Ellis praised the excellent quality of the spring water, and then continued on to Hīlea. Ellis noted small villages at both locations. The road they followed across the rugged lava “was formed of large smooth round stones, placed in a line two or three feet apart” (Ellis 2004:196).

Early Western Missionaries in Ka‘ū (1827-1848)

In the years following Ellis’ visit to Ka‘ū, the American Board of Commissioners for Foreign Missions (A.B.C.F.M.) began to establish Protestant churches and schools in the district. Ka‘ū did not have a permanent missionary presence until 1841, but was often visited by missionaries from the Districts of South Kona and Hilo during the 1820s and 30s. In a November 5, 1827 letter to the A.B.C.F.M., James Ely of the Ka‘awaloa Mission Station in South Kona, writes:

Our attention for the past year has been in part directed to the improvement of the schools. For this purpose, I have had a school for the teachers, where I have attended myself, and endeavored to give them such instruction as would make them most useful to the people.

A few weeks since, I made the tour of Kau. Naihe generously furnished me with a double canoe well manned; also men to carry my baggage, and supply me with provisions. My object in visiting Kau was to preach to the people, visit the schools, and establish schools where none were previously. Naihe, who has the government of that district, seconded my proposals, which facilitated the organization of schools. Arrangements were made with the head men for erecting school-houses, and for establishing schools, so that all the inhabitants of Kau may be brought under a course of instruction. When I returned, a number of interesting youths, accompanied me to be instructed at Kaavaroa [Ka‘awaloa], and to return as teachers to Kau. They are now attending to instruction under the tuition of Arapai, over whom I hold a superintendence. On my tour I preached frequently to the people; and on the Sabbath, which we spent at Honuapo, many of the people of Kau were assembled to hear me.

The rulers of this district have declared, that, in future, marriages shall not be accounted valid, unless solemnized by a minister of the Gospel. Offenders are punished by being made to work on a public road. (A.B.C.F.M. 1828:275)

Nearly a year later, on October 1, 1828, two of Ely’s fellow missionaries, Samuel Ruggles and Artemas Bishop, set out from Ka‘awaloa to inspect the schools of the District of Ka‘ū. On the way their canoe wrecked at a place called “Wili” (according to Pukui et al. 1974:100, Kāwili is the current coming from the west to Ka Lae). After nearly drowning, they were forced to proceed on foot without any provisions, noting that “along this desolate coast there was nothing to satisfy the cravings of hunger and thirst ... during our walk, we saw only a few scattered fishermen’s huts, with squalled miserable tenants, who replied to us, as we asked for food or drink, that they had none” (A.B.C.F.M.

1830:109). After a night with no food or water they obtained refreshments at “Kailiki [Kā‘iliki‘i?]” and went to Honu‘apo where they conducted an examination of the schools. Ruggles and Bishop reported that twenty-five schools containing 1,500 scholars were in attendance at the examination, and that a total of between 3,000 and 4,000 people assembled at Honu‘apo for the Sabbath. An 1835 missionary census counted a total of 4,766 Hawaiians living in the district of Ka‘ū (Schmitt 1973:30).

By the early 1840s the A.B.C.F.M saw the need to establish a permanent mission station in Ka‘ū. Previous appeals to do so by missionaries in Hawai‘i had been unsuccessful, despite repeated arguments that the difficulty of travel to and throughout the district necessitated a permanent station there. For example, Cochran Forbes (1834) wrote to the A.B.C.F.M.:

At Kau he [the missionary] will not, as at Lahaina & Honolulu, have ships twice a year and have friendly calls from the captains & officers; &c &c [sic] He will perhaps never see a ship within speaking distance at Kau. He will also have more difficulty in getting his supplies. He may sometimes be even destitute before his supplies can be got to him, as native vessels rarely go there unless sent expressly, and we cannot hope long to enjoy the favor of the chiefs in conveying our stores gratuitously, perhaps we are now near the end of their favors, & we hope God is going to purify his church. --Small vessels can anchor at Kau but not very convenient to where a station is proposed, I believe alualu [Ka‘alu‘alu] in longitude 155.41 is the only safe place and there is no good road from that to Waiohiue [Wai‘ōhinu]--

The decision to build the Protestant mission was influenced in part by the remoteness of the Ka‘ū District and the difficulties that the South Kona and Hilo missionaries had servicing it, but was also a response to the growing influence of Catholic missionaries, who had arrived in the islands in 1828, and were themselves looking to establish a permanent presence in Ka‘ū. In a May 1841 letter addressing the need for more A.B.C.F.M. missionaries in Hawai‘i, Mr. Coan of the Hilo station writes that Ka‘ū “contains a population of 4,000 souls ... the people are anxious for a missionary ... there are 200 church members in the district” (A.B.C.F.M. 1842:160). In a July 22, 1841 letter, Cochran Forbes of the Kealakekua Station urges the board to quickly supply more missionaries, as “the present number cannot possibly supply the wants of the people so that many openings will not be left for the Jesuits to enter and beguile unstable souls” (A.B.C.F.M. 1842:153). Mr. Forbes goes on to complain that the Catholic missionaries convince people to convert by telling them that the Protestants are taking their money by taxing them, having them pay for supplies, and requiring donations for support, and that these arguments, because they are accompanied by gifts of books, images, and cloth, have a powerful effect on the minds of the poor people. Mr. Forbes also writes of the poverty in Ka‘ū and South Kona, stating in a July 22, 1841 letter to the A.B.C.F.M.:

... You must keep in mind all the time that there are not forty families in the church, whose whole wardrobe and household furniture taken together would amount to more than twenty dollars. The whole property of a family in this region usually consists of a canoe [Mr. Forbes clarifies that he means not every family, but perhaps one in three has a canoe of some sort], worth from ten to thirty dollars, a hog or two, a grass house, worth from ten to forty dollars, (more houses are worth ten dollars, than can be found worth forty,) a few mats, in value perhaps worth three or four dollars; a few calabashes, say worth two dollars; a shirt apiece for each male and sometimes one pair of pantaloons; one look dress for each female, with a few tapas to sleep in. They rarely have seats in their houses, and still more rarely any dishes or pots, except one wooden dish for the whole family. Their mats form seats, tables, and often beds. Axes are very rare. A few of them have fish-nets, and but here and there one. Thus you have an inventory of property, of pretty universal, and, I believe, correct application to the mass of the people on this island. I do not recollect more than ten common people about us, in a population of 4,000, who own a horse apiece. Others may have horses in their care, which belong to some chief and therefore are not at the disposal of the natives. A few of them own goats. Perhaps there are twenty persons in the whole district of 4,000 souls, who own twenty goats apiece. This is a large estimate, for I do not believe 4,000 goats can be collected in the whole district.

There is not one native blacksmith among the whole 4,000, who can purchase bellows and tools. There is no such thing owned in all the district, except by foreigners. There is not a native carpenter who owns a set of tools, to my knowledge, on this island, the population of which is 30,000, or more. Here and there one owns a saw and an adze, rarely any, however, except canoe diggers, and

the tools they have usually belong to some chief, for whom they work. A few of them have doors to close the entrance to their houses. But a lock is almost as rare here as a comfortable dwelling. (A.B.C.F.M. 1842:155)

Rev. John Davis Paris was the first Protestant missionary permanently stationed in the Ka'ū District. Paris, originally from Virginia (born on September 22, 1809), had arrived in the islands in 1841 with the ninth company of A.B.C.F.M. missionaries. For many years he, his wife Mary Grant Paris, and their two children, Mary (born on O'ahu in 1841) and Anna (born at Wai'ōhinu in 1843), were the only foreigners living in the Ka'ū District, with the exception of a French priest (Paris 1926). Paris first arrived at Ka'alu'alu on September 10, 1841 (his wife and family followed him there in 1842), and after a night's stay he proceeded to the town of Wai'ōhinu where a new grass house belonging to a teacher named Kema (Shem) Namakelua was put at his disposal:

... The house was built on a huge pile of aa or lava stones, about fifteen feet square, with one door about four and one half feet high. There was no floor, - no windows, no ceiling, no partitions. The rough stone floor was covered with a coarse grass and the lauhala mats were spread over it. This was to be our parlour, bedroom, dining room, and study! (Paris 1926:17)

Our cook house was a little pen of lava stone, built up some four feet without a roof. Here was our stove in rain and shine, a few steps from the house. . . .

Our grass hut, where all our effects were stored, was far from comfortable. The trade winds, blowing a gale for several weeks often came up through the stones with such force to raise the heavy mats if they were not held down by chests, trunks and the like. But this was our home and through pilikia [trouble] and often suffering in health, we made the best of it for six or eight months. (Paris 1926:20)

The Protestant church at Wai'ōhinu was organized in November of 1841, and work soon began on the first house of worship in the town (Paris 1926). The church was a grass house built on a large stone enclosure 110 feet long by 40 feet wide and four feet high with posts set in the wall. It had four doors, but no windows, and the stone floor was covered with grass and mats. According to Paris (1926) the house was often packed full with as many people waiting outside as there were sitting inside.

About the beginning of February 1842 the Catholic mission in Hilo was established, "when Father Heurtel there baptized 136 persons, and engaged the new Catholics to erect three grass chapels there and at other points of the district" (Yzendoorn 1927:183). Soon after the island was divided into four missionary districts, and the Catholics began to compete with the Protestants for the souls of the natives. The missionary district of Ka'ū and Puna was assigned to Father Joachim Maréchal, "a very ardent young soldier of the Church militant" (Yzendoorn 1927:183). Maréchal established his mission base at Hīlea, and grass chapels were also erected at Kamā'oa, Naohulelua, Moa'ula, and, closest to the current study area, at Honu'apo (Elwell and Elwell 2005). The relationship between the Catholic and Protestant missionaries and their respective followers was not amiable as can be seen in the following passage from the *History of the Catholic Mission in Hawaii*:

...The district which was assigned him [Maréchal] was an unfallowed ground, as no Protestant missionary had taken up a residence there, before the end of January, 1842, when the Rev. Mr. Paris had been sent thither. He [Paris] writes of it in these terms: "Some of the people had gone to Hilo, and others to Kona, and heard the Gospel; and some have heard it not in vain, we hope; but the great mass of people are all in the darkness and degradation of heathenism. Most of them are exceedingly poor, often living for days without food, because they are too indolent to plant and cultivate their lands."

Among this wretched people Father Joachim endeavored to implant the Catholic Faith towards the end of February. A great number readily followed his instructions, and soon he judged a hundred of them sufficiently instructed to be granted the grace of baptism. Within three months those who had embraced the Catholic faith amounted to nine hundred.

When the parents turned Catholic, they withdrew their children from the Protestant schools, naturally to the great annoyance of the teachers. They moreover refused to work for the benefit of those schools, and in consequence the usual punishments were inflicted upon them. The poor people who already had so little to eat, were deprived of their lands, and forbidden to enjoy the fruits of their labor.

This grew even worse when about the beginning of November, the school authorities came to Kau in company with the Rev. Mr. Coan from Hilo, to inspect the schools. They sent word to Father Maréchal that his Catholic pupils must come on a certain day to the Protestant schools, there to be examined as to their knowledge. The priest, who might well have yielded in this instance, as no principles were involved, refused to comply, but wanted the inspectors to conduct the examination in his own schools. They, however, were in a no more accommodating mood than the priest, and at once issued orders to “okiwaena” the parents of the Catholic school children. Whilst the Catholics were greatly embittered by these drastic measures, the tax-collector, Pipi, ordered the arrest of a certain chief who lately had gone over to the Catholic faith with two hundred of his subordinates. The Catholics rushed in great numbers to the rescue of their coreligionary, surrounded the troop which had been dispatched to arrest him, and a scuffle took place, in which some persons on both sides were wounded. The Catholics being in the majority, routed their adversaries, and followed up their victory by entering into several houses of Protestant converts, who—says Brother Calixte—had profited by the recent “okiwaena,” plundered them by way of compensation.

The mission in Kau continued to flourish, for, less than two years after the fight we have mentioned, Father Maréchal boasted that two thirds of the population had become Catholic, whilst most of the Protestant schools were closed and great and flourishing Catholic schools had been established in their place. (Yzendoorn 1927:183–184)

The Rev. Paris, who supposed that “more good on the whole has been done, than there would have been if the Romanists had not been allowed to enter this field” (A.B.C.F.M. 1844:47), provides his own version of this incident in an April 28, 1843 letter:

The enemy has come in upon us like a flood, and threatened to overturn and destroy everything good in his course. The Romanists have probably been more bold and daring, and more untiring in their efforts to convert the whole population of this district to their faith, than in any other part of the Islands. Aware that the natives residing in Kau had less light, - and had been less under the influence of Protestant missionaries than others, and knowing also that I had a very imperfect knowledge of the language, the papists determined to leave no scheme untried to bring the whole population to embrace the Romish religion. At first they tried noise, parade, and a great display of every thing novel; they promised large rewards to all who would leave us and join them, and also to those who would become teachers and lead in their meetings. They boasted that the king and all the chiefs would soon join them; that France would take possession of the Islands, and all who did not turn to their religion would be brought to submit by the sword and probably suffer death. And when they found that all their schemes, prosecuted with apostolic zeal, failed to accomplish their object, they commenced open hostilities, setting at defiance all the laws of the country, binding and beating at pleasure the officers of government, even in the discharge of their official duties, robbing the houses and plundering the villages of many of our native converts. Several of the members of our church have been wounded and severely beaten, and all their effects carried off by large companies of the papists. (A.B.C.F.M. 1844:47–48)

Tensions between the two rival churches continued unabated as Rev. Paris and Father Maréchal labored in their respective missionary fields throughout the 1840s. Paris built a framed house of *koa* for himself and began work on a stone church in Wai‘ōhinu in 1843–44. He was joined by a second Protestant missionary, the Reverend Timothy Hunt, in 1845, who established a mission residence and church at Punalu‘u, but who did not reside in the district for more than year before being reassigned to a new field (A.B.C.F.M. 1846). Father Maréchal often toured his district, but maintained a residence at Hīlea. Both the Catholic and Protestant schools continued to operate, even as the population of the district decreased, and enrollment dropped.

The population of Ka‘ū in 1843 was estimated by missionaries to be nearly 5,000 people, less than half of the estimated population at the time of European contact (Kelly 1969, 1980). By 1847, when the first government census was taken, the population of the Ka‘ū District had declined to 3,010 persons (Kelly 1980). There was no single reason for the decrease in population, rather it occurred through an accumulation of changes that took place after European contact. One often cited reason is that Westerners brought foreign diseases with them, to which the Native Hawaiians had no resistance. A large portion of the Hawaiian population (perhaps as much as half) is said to have been lost to a plague that ravaged the Islands in ca. 1804 (Malo 1839; Schmitt 1968); in 1848–49 the inhabitants of the Islands were

2. Background

struck by a series of epidemics, including measles, whooping cough, influenza, and dysentery (Kelly 1969). In addition to population reduction caused by disease, many people moved to other islands; for example when Governor Kuakini moved from Hawai‘i Island to O‘ahu and many of his people followed him. Also, Hawaiian men who began working on whaling ships moved to foreign countries and rarely ever returned to Hawai‘i (Schmitt 1973:16).

Another major factor in the decline of Ka‘ū’s population was famine caused by drought and fires (Kelly 1980). After visiting Ka‘ū in 1846, Chester Lyman (1846:14) noted that a recent fire, which began at Honu‘apo and then spread quickly westward by the trade winds, had “consumed houses taro & potato patches & produced a famine.” Lyman (1846:14) was told that another fire occurred in 1830 or 1831 that “burnt nearly the whole district”, and he reported that, “the natives speak of four such burnings as having taken place within the memory of their aged men”. The Rev. J.D. Paris (1926:26–27), who witnessed the 1846 fire first hand, corroborated Lyman’s account:

...A woman at Honuapo started a little fire to burn the dry grass for her kalo patch. As the wind was blowing very hard and all the grass, weeds, and bushes in that part of the country were very dry, the fire ran like a race horse. Everything in its course was consumed, grass houses and whole native villages.

The Government’s taxation policies were another contributor to the depopulation of Ka‘ū. As the Rev. Paris wrote in his 1846 annual report,

Another cause of depopulation has been the course pursued by Government officers, in reference to taxes. They require that all taxes be paid in Silver & gold & nothing else. But there is no silver in Kau. It does not grow there. The soil is good but is not adapted for the cultivation of silver & gold. Consequently all our able bodied men have gone money hunting - Some with their whole families & not a few of them have taken up their abode in the Cities of dollars & cents. If the people are compelled to pay their taxes in money only, I am satisfied it will be the cause of draining Kau of its inhabitants. This will also be the case with all districts similarly situated, they will be depopulated, to enrich the Government & their inhabitants will become hewers of wood & drawers of water to a foreign people.

Taxation leveled on the people took the form of poll taxes, land taxes, and labor taxes (Kuykendall 1938). The labor tax required that an individual work six days out of the month—three days for the chief landlord, and three days for the King—or a pay a fee of nine dollars (Kelly 1969). Prior to 1840 the schools in the Ka‘ū District were supported by the Protestant mission, but in that year, under pressure from the missionaries, a law was enacted for a national system of Hawaiian schools supported by the government. At first the schools were subsidized from the King’s share of the labor tax, but in 1846 the burden of a school tax was also placed directly on the people (Kelly 1969). Paris writes of the difficulties of securing money for taxes in such a remote district:

The failure of the kalo and potato crop for two successive years, has produced a distressing scarcity of food, with the difficulty of raising money to pay taxes in a region so far from any market, has caused a large emigration to other parts of the kingdom. The population of Kau has been reduced from five thousand to three thousand, or thereabouts... The schools, though reduced in number of pupils by emigration, had decidedly improved in their character. (A.B.C.F.M. 1848:103)

In 1847, there were 764 pupils enrolled in school in the district of Ka‘ū (460 Protestant, 340 Catholic). The Protestant school in Nā‘ālehu had thirty-seven students, and the Catholic school had forty-nine students (Kelly 1969). A decade later, by 1857, both the Protestant and Catholic schools in Nā‘ālehu had closed their doors, and by that time a total of only 235 pupils were enrolled in school in the entire district (159 Protestant, 76 Catholic).

In 1848 the Rev. Paris once again writes of the declining population of Ka‘ū:

Since 1845, the work of depopulation has gone on in Kau with fearful rapidity. It will be remembered that the distressing famine which prevailed in that year, together with, the sufferings occasioned by the fire which overran the whole country, drove many of the people to other parts of the Islands. The effects of the sufferings then experienced have not ceased. The early and the latter rains have returned in their season; the hills and valleys are clothed with verdure and beauty; and food abounds throughout all the region. But the graves are multiplied. The work of death, the consequence of extreme suffering, has been silently going forward. The old and the grey-headed are seldom seen in our borders. They sleep beneath the clods of the valley.

Other influences, moreover, have tended to diminish the population; such as have been felt in all the remoter districts of the Islands. And it is somewhat, remarkable that a very large proportion of the emigrants from Kau have been under eighteen years of age. (A.B.C.F.M. 1849:74)

Paris goes on to describe additional changes he has noticed in the district since he first arrived, noting that most of the natives were now clothed on the Sabbath in European fabrics, and even European style; that the structure and comfort of the native houses had been considerably improved, and that many of the yards and gardens were now enclosed, greatly improving their appearance. He also writes that in 1848 many dwellings had tables, chairs, iron pots, bowls, plates, knives, forks, spoons, etc., and that “some have a clock; and they begin to understand the value of time” (A.B.C.F.M. 1849:75). In 1849 Rev. Paris’ time in Ka‘ū came to end. In that year Paris returned to the United States with his daughters for an extended sojourn. In 1851 Paris would return to Hawai‘i with his family and a new wife to continue his missionary work at the Ka‘awaloa/Kealakekua mission station in South Kona where he remained until his death in 1892 (Paris 1926). Father Maréchal continued to serve in Ka‘ū and Puna until 1848, when he transferred to Kona, where he died in 1859 at the age of forty-five. Paris and Maréchal were the first of many missionaries to reside in Ka‘ū during the sweeping social and economic changes of the nineteenth century.

The *Māhele* ‘*Āina* of 1848

By the mid-nineteenth century, the ever-growing population of Westerners in the Hawaiian Islands forced socioeconomic and demographic changes that promoted the establishment of a Euro-American style of land ownership. By 1840 the first Hawaiian constitution had been drafted and the Hawaiian Kingdom shifted from an absolute monarchy into a constitutional government. Convinced that the feudal system of land tenure previously practiced was not compatible with a constitutional government, the King (Kamehameha III) and his high-ranking chiefs decided to separate and define the ownership of all lands in the Kingdom (King n.d.). This change was further promoted by missionaries and Western businessmen in the islands who were generally hesitant to enter business deals on leasehold lands that could be taken from them at any time. After much consideration, it was decided that three classes of people each had one-third vested rights to the lands of Hawai‘i: the King, the chiefs and *konohiki*, and their tenants (the *maka ‘āinana* or common people). In 1845 the legislature created the “Board of Commissioners to Quiet Land Titles” (more commonly known as the Land Commission), first to adopt guiding principles and procedures for dividing the lands and granting land titles, and then to act as a court of record to investigate and ultimately award or reject all claims brought before them. All land claims, whether by chiefs for entire *ahupua‘a* or by tenants for their house lots and gardens, had to be filed with the Land Commission within two years of the effective date of the Act (February 14, 1846) to be considered (this deadline was extended several times for chiefs and *konohiki*, but not for commoners; Soehren 2005)

The King and some 245 chiefs (Kuykendall 1938) spent nearly two years trying unsuccessfully to divide all the lands of Hawai‘i amongst themselves before the whole matter was referred to the Privy Council on December 18, 1847 (King n.d.). Once the King and his chiefs accepted the principles of the Privy Council, the *Māhele* ‘*Āina* (Land Division) was completed in just forty days (on March 7, 1848), and the names of all of the *ahupua‘a* and ‘*ili kūpono* (nearly independent ‘*ili* land division within an *ahupua‘a*, that paid tribute to the ruling chief and not to the chief of the *ahupua‘a*) of the Hawaiian Islands and the chiefs who claimed them, were recorded in the *Māhele* Book (Soehren 2005). As this process unfolded King Kamehameha III, who received roughly one-third of the lands of Hawai‘i, realized the importance of setting aside public lands that could be sold to raise money for the government and also purchased by his subjects to live on. Accordingly, the day after the division with the last chief was recorded in the *Buke Māhele* (*Māhele* Book), King Kamehameha III commuted about two-thirds of the lands awarded to him to the government (King n.d.). Unlike the King, the chiefs and *konohiki* were required to present their claims to the Land Commission to receive their awards (LCAw.). The chiefs who participated in the *Māhele* were also required to provide to the government commutations of a portion of their lands in order to receive a Royal Patent giving them title to their remaining lands. The lands surrendered to the government by the King and chiefs became known as “Government Land,” while the lands retained by Kamehameha III became known as “Crown Land,” and the lands received by the chiefs became known as “*Konohiki* Land” (Chinen 1958:vii, 1961:13). All lands awarded during the *Māhele* were identified by name only, with the understanding that the ancient boundaries would prevail until the land could be surveyed. This process expedited the work of the Land Commission.

Soehren (2005) lists the distribution of each of the lands in Ka‘ū during the *Māhele* ‘*Āina* of 1848. Of the 85 *ahupua‘a* identified in the district, two went to Kamehameha III as Crown Land, 20 were awarded to various chiefs as *Konohiki* Lands, 61 became Government Lands, and two others were divided in half, with half of each awarded as

Konohiki Land, and the other half retained as Government Land. The Government Lands included 40 that were commuted by 27 different chiefs in order to receive title to their remaining lands, and another 21 that were either surrendered by Kamehameha III to the Government, or were not claimed at all during the *Māhele*, and therefore reverted directly to the Government. The *ahupuaʻa* awarded as *Konohiki* Lands went to ten chiefs, including eight to Ane Keohokālole, three to William C. Lunalilo, two each to Victoria Kamālumu, Lot Kapuāiwa (Lot Kamehameha), and William Pitt Leileiohoku, one each to N. Namauu, Kealohaai, and Kekauonohi, and one half each to Loisa Kalolou and Kuhio. Following the *Māhele*, Ane Keohokālole surrendered six of her awarded *ahupuaʻa* to the Government in lieu of paying fees on her other lands. William C. Lunalilo and N. Namauu also each surrendered one *ahupuaʻa*. Loisa Kalolou, Kealohaai, Kuhio, and Kekauonohi never received Land Commission Awards for their lands, and they too reverted to the Government.

Twelve of the 85 *ahupuaʻa* listed in the Kaʻū District by Soehren (2005), form the present day *ahupuaʻa* of Kaunāmano (Table 1). These land divisions include—from southwest to northeast beginning at Poupouwela Ahupuaʻa which may be split between the present day *ahupuaʻa* Kāwala and Kaunāmano (Clark et al. 2013)—Kukui, Kaunāmano, Pāpaʻikou 3, Pāpaʻikou 2, Pāpaʻikou 1, Pauku, Wiliwilinui, Puhalanui, Lolipali, Halekaa, Nalua, and Pōhina. An 1851 list of the lands of Kaʻū on file at the Hawaiʻi State Archives (HAS, Department of Interior-Land Letter 9/25/1851a; 9) actually further breaks Kukui Ahupuaʻa into Kukui 1 and Kukui 2, Pauku Ahupuaʻa into Paukunui and Paukuiki, and groups Paukunui, Paukuiki, Wiliwilinui, Puhalanui, Lolipali, Halekaa, Nalua, and Pōhina together under the heading “Na Pauku.” *Nā Paukū*, literally means “the sections,” and describes land divisions that are smaller in size than a *moʻo ʻāina* (Lucas 1995:91). The name “Na Pauku” is used on a 1901 map of Hawaiʻi Island prepared by John M. Donn (Figure 10) and the current County of Hawaiʻi TMK for Zone 9 (see Figure 7) next to Kaunāmano Ahupuaʻa.

All twelve of the former *ahupuaʻa* situated within Kaunāmano eventually became Government Lands. The lands of Kukui (1-2), Pauku (Nui-Iki), Lolipali, Halekaa, and Nalua are not listed in the *Buke Māhele*, indicating that they went unclaimed during the initial division of lands, and therefore reverted directly to the Government (Soehren 2005). Kaunāmano, Pāpaʻikou 1, and Pāpaʻikou 2 were claimed as *Konohiki* Lands by Kamakahonu, Ane Keohokālole, and Lunalilo respectively, but were relinquished to the Government at the time of the initial division of lands. Pāpaʻikou 3, also *Konohiki* Land, was the only land claimed by Kuhio during the *Māhele*. Half of that *ahupuaʻa* was relinquished to the Government during the initial land division, and the other half was retained by Kuhio, but subsequently (for unknown reasons) became Government Land. Wiliwilinui, Puhalanui, and Pōhina were awarded to Ane Keohokālole as *Konohiki* Land, but were eventually surrendered to the Government in lieu of paying commutation fees on other lands that she had received (Kelly 1969).

Table 1. Distribution of lands within the present day *ahupuaʻa* of Kaunāmano during the *Māhele ʻĀina* of 1848.

<i>Land Division</i>	<i>Returned by:</i>	<i>Retained by:</i>
Kukui (1-2) [†]	?	Government
Kaunāmano	Kamakahonu	Government
Pāpaʻikou 1	A. Keohokālole	Government
Pāpaʻikou 2	Lunalilo	Government
Pāpaʻikou 3*	- Kuhio	½ Kuhio ½ Government
Pauku (Nui-Iki) [†]	?	Government
Wiliwilinui*	-	A. Keohokālole
Puhalanui*	-	A. Keohokālole
Lolipali [†]	?	Government
Halekaa [†]	?	Government
Nalua [†]	?	Government
Pōhina*	-	A. Keohokālole

* Lands surrendered to Government in lieu of commutation fee subsequent to the *Māhele* of 1848.† Lands not listed in the *Māhele* Book.

List of lands in Kau.

Mamaha.	Kahilipali. 1.	Makaka. 2.	Kaailula. 2.
Kahuku.	Kahilipali. 2.	Kionamoa. 1.	Kaailula
Kiao.	Kowala.	Kionamoa. 2.	Waimuku. 1.
Manione.	Hemala.	Palina. 1.	Waimuku. 2.
Tohohu.	Pouponuola.	Palina. 2.	Pohakuloa.
Kikukai.	Kukui. 1.	Paauau. 1.	Ahulili. 1.
Kanahaunawali.	Kukui. 2.	Paauau. 2.	Ahulili. 2.
Ponahale.	Kaunamano.	Phokoloa.	Kapapapa.
Pahini. 1.	Papaikou. 1.	Kauhuhuula. 1.	
Pahini. 2.	Papaikou. 2.	Kauhuhuula. 2.	
Kera. 1.	Papaikou. 3.	Kumu. 1.	
Kira. 2.	Paukunu.	Kumu. 2.	
Kamara.	Paukuki.	Kumu. 3.	
Waiwua.	Halimelini.	Kumu. 4.	
Mohoua.	Puhalanu.	Kumu. 5.	
Puno.	Polipali.	Kumu. 6.	
Kanela.	Kalekaa.	Kumu. 7.	
Palauhulu. 1.	Kalua.	Kumu. 8.	
Palauhulu. 2.	Pohina.	Kalehua.	
Wanomas.	Kialoku.	Wailoa. 1.	
Kau.	Konapo.	Wailoa. 2.	
Miananai.	Kionaa.	Wailoa. 3.	
Pumaka.	Kokukano.	Keanwa.	
Kubakua.	Kaalaihi.	Kaapahu.	
Papohaku. 1.	Kylea. 1.	Konao.	
Papohaku. 2.	Wilea. 2.	Kaalaaala.	
Papohaku. 3.	Inde.	Makakupa. 1.	
Mahaula.	Wailau.	Makakupa. 2.	
Manono.	Punahuu.	Makakupa. 3.	
Punohu. 1.	Mohokea. 1.	Makakupa. 4.	
Punohu. 2.	Mohokea. 2.	Punhoa.	
Kivalaa.	Moaula.	Kamamakaka.	
Waichuu.	Kopu.	Kuhiloa.	
Kahaa.	Makaka. 1.	Kaailula. 1.	

Figure 9. 1851 “List of lands in Kau” (Hawai‘i State Archives, Department of Interior-Land Letter 9/25/1851a) indicating the land divisions that make up the present day ahupua‘a of Kaunāmano (outlined in red).

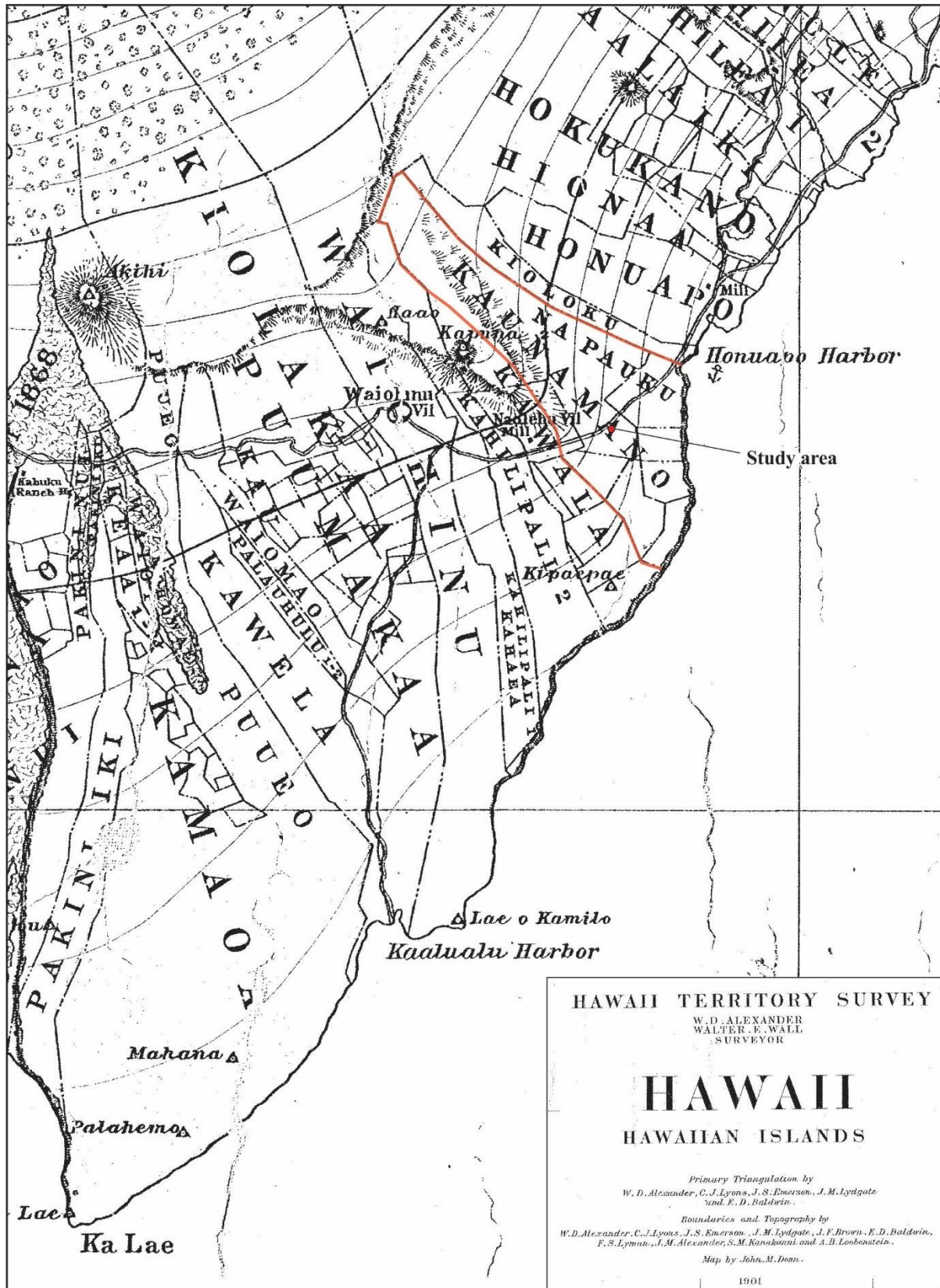


Figure 10. A portion of a 1901 map of Hawai'i Island (Donn 1901) showing the current study area and the present day ahupua'a of Kaunāmano (including Na Pauku) outlined in red.

During the *Māhele*, native tenants of the lands that were divided up among the Crown, *Konohiki*, and Government could claim, and acquire title to, *kuleana* parcels that they actively lived on or farmed. The Board of Commissioners oversaw the program and administered the *kuleana* as Land Commission Awards (LCAw.). Claims for *kuleana* had to be submitted during a two year period that expired on February 14, 1848 to be considered. All of the land claimants were required to provide proof of land use and occupation, which took the form of volumes of native registry and testimony. The claims and awards were numbered, and the LCAw. numbers, in conjunction with the volumes of documentation, remain in use today to identify the original owners and their use of the *kuleana* lands. The work of hearing, adjudicating, and surveying the claims required more than the two-year term, and the deadline was extended several times for the Land Commission to finish its work (Maly 2002). In the meantime, as the new owners of the lands on which the *kuleana* were located began selling parcels to foreigners, questions arose concerning the rights of the native tenants and their ability to access and collect the resources necessary for sustaining life. The “Enabling” or “*Kuleana Act*,” passed by the King and Privy Council on December 21, 1849, clarified the native tenants’ rights to the land and resources, and the process by which they could apply for fee-simple interest in their *kuleana*.

The work of the Land Commission was completed on March 31, 1855. A total of 13,514 *kuleana* were claimed by native tenants throughout the islands, of which 9,337 were awarded (Maly 2002). The history of the *kuleana* claim and award process is summarized in an 1856 report by the Minister of Interior:

...During the ten months that elapsed between the constitution of the Board and the end of the year 1846, only 371 claims were received at the office; during the year 1847 only 2,460, while 8,478 came in after the first day of January 1848. To these are to be added 2,100 claims, bearing supplementary numbers, chiefly consisting of claims which had been forwarded to the Board, but lost or destroyed on the way. In the year 1851, 105 new claims were admitted, for *Kuleanas* in the Fort Lands of Honolulu, by order of the Legislature. The total number of claims therefore, amounts to 13,514, of which 209 belonged to foreigners and their descendants. The original papers, as they were received at the office, were numbered and copied into the Registers of the Commission, which highly necessary part of the work entailed no small amount of labor...

...The whole number of Awards perfected by the Board up to its dissolution is 9,337, leaving an apparent balance of claims not awarded of say 4,200. Of these, at least 1,500 may be ranked as duplicates, and of the remaining 2,700 perhaps 1,500 have been rejected as bad, while of the balance some have not been prosecuted by the parties interested; many have been relinquished and given up to the *Konohikis*, even after surveys were procured by the Board, and hundreds of claimants have died, leaving no legal representatives. It is probable also that on account of the dilatoriness of some claimants in prosecuting their rights before the Commission, there are even now, after the great length of time which has been afforded, some perfectly good claims on the Registers of the Board, the owners of which have never taken the trouble to prove them. If there are any such, they deserve no commiseration, for every pains has been taken by the Commissioners and their agents, by means of oft repeated public notices and renewed visits to the different districts of the Islands, to afford all and every of the claimants an opportunity of securing their rights... (quoted in Maly 2002:7)

Although more than 500 claims for *kuleana* lands were initiated in the Ka‘ū District during the *Māhele* ‘*Āina* of 1848, only 260 individuals actually received Land Commission Awards (LCAws.) for their claims. Of these 260, only about 215 individuals ultimately acquired titles (Royal Patents) to their *kuleana* parcels. The awarded *kuleana* in Ka‘ū ranged in size from low of 0.25 acres to high of 30.9 acres, with an average size of 6.95 acres; only 66 people received parcels that were larger than 10 acres, however (Kelly 1969). In the present day *ahupua‘a* of Kaunāmano, 19 *kuleana* parcels totaling 91.55 acres (ranging in size from 0.18 to 11.3 acres) were awarded to 13 claimants who had received their lands between 1819 and 1847 (Table 2 and 11). The LCAws. include 2 parcels (14.18 acres) in Kukui Ahupua‘a, 11 parcels (49.37 acres) in Kaunāmano Ahupua‘a, 4 parcels (13.23 acres) in Pāpa‘ikou 1-3 Ahupua‘a, and 1 parcel each in Pauku (11.75 acres), Wiliwiliinui (5.1 acres), Halekaa (6.5 acres), and Pōhina (5.6 acres) *ahupua‘a*. Land use mentioned in the claims includes 17 taro fields (*kīhāpai kalo*), 6 unspecified fields (*kīhāpai*), a *wauke* field (*kīhāpai wauke*), and 3 house lots (*pā hale*). All of the fields are situated in the vicinity of the present day Māmalahoa Highway or above, and the house lots are situated near the coast.

2. Background

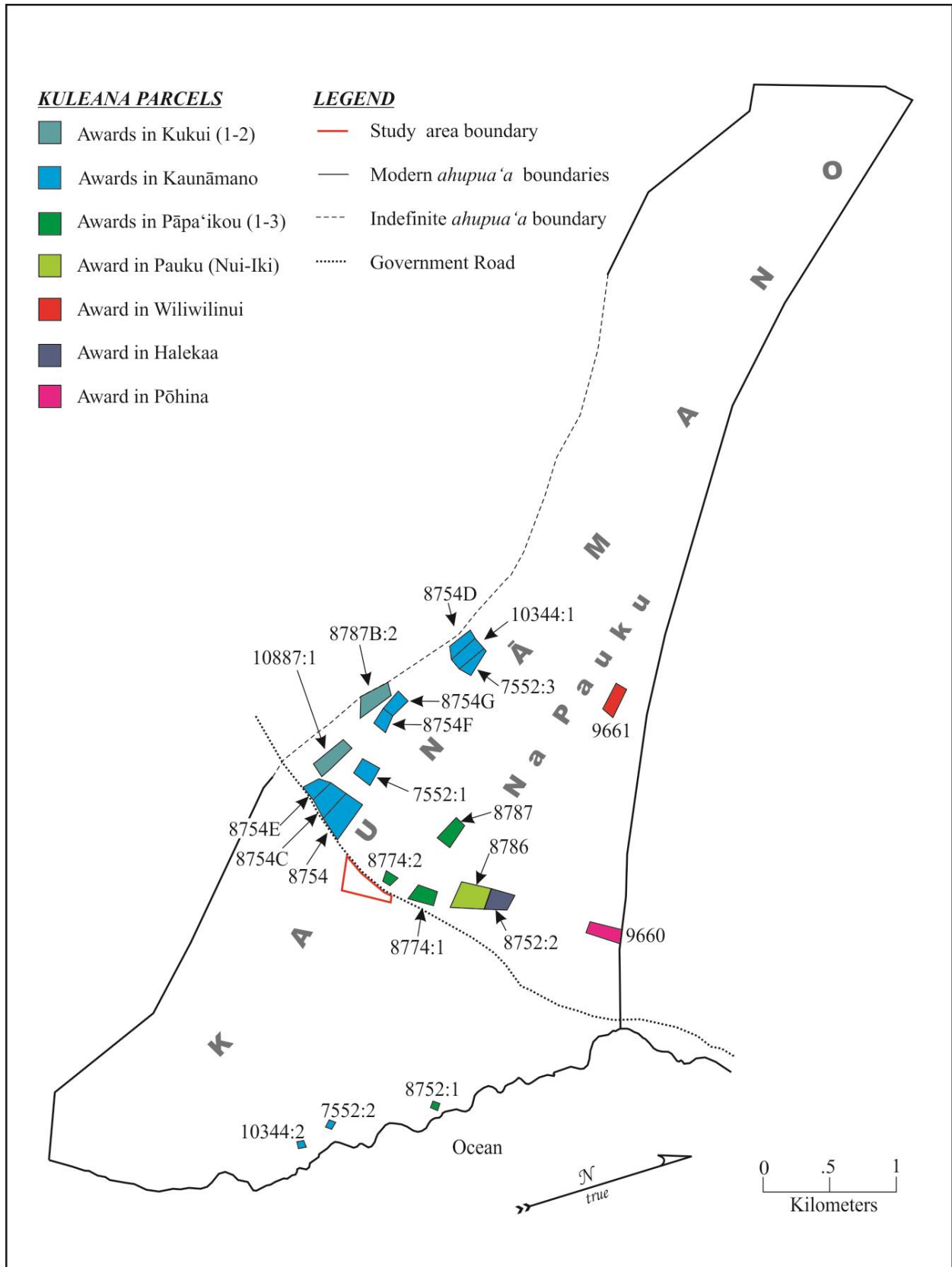


Figure 11. Distribution of *kuleana* parcels within the present day *ahupua'a* of Kaunāmano.

Table 2. *Kuleana* parcels awarded within the present day *ahupua‘a* of Kaunāmano.

<i>LCAw. #</i>	<i>Claimant</i>	<i>‘Ili</i>	<i>Land use</i>	<i>Size (ac.)</i>	<i>Recv’d From</i>	<i>Date</i>
Kukui (1-2)						
8787B:2	Kupele	-	2 taro fields	7.4	Kauka	1840
10887:1	Palea	Kaaloa	2 taro fields	6.78	Kalimapaahana	1847
Kaunāmano						
7552:1	Kukui	Kukuipuha	5 taro fields	4.2	Kaawa	1840
7552:2	Kukui	Kaumuhonu	-	3.56	Nawaakana	1840
7552:3	Kukui	-	House lot	0.64	Kaawa	1840
8754	Kalawahine	Kapia	Taro field	11.3	Naonoaina	1819
8754C	Keaweaukai	Poomuku	-	8.0	Kukuihina	1840
8754D	Naonoaina	Kapia	-	3.7	Kawaa	1819
8754E	Lia	Kapia 2	-	4.27	Kaawa	1819
8754F	Pahupu	Kekuahale	-	3.47	Parents	1819
8754G	Opukoa	Haleolono	-	4.2	Parents	1819
10344:1	Napumaia	Kapia	3 fields	5.85	Naonoaina	1819
10344:2	Napumaia	-	House lot	0.18	-	-
Pāpa‘ikou 1-3						
8752:1	Kauwale	(Papaikou)	House lot	0.4	Kauhiahiwa	1830
8774:1	Kapunanui	(Papaikou)	-	5.18	Naihe	1819
8774:2	Kapunanui	(Papaikou 3)	Taro field	1.75	Kanakaole	1840
8787	Kaawa	(Papaikou 3)	Taro field	5.9	Kanakaole	1840
Pauku (nui-iki)						
8786	Kuaana	(Paukunui)	6 fields	11.75	Parents	1819
Wiliwilinui						
9661	Kauinui	-	<i>Wauke</i> field	5.1	Kekahuna	1839
Halekaa						
8752:2	Kauwale	-	-	6.5	Kekuni	1830
Pōhina						
9660	Kaahui (<i>make</i>) Kauinui (<i>heir</i>)	-	2 taro fields	5.6	-	-
Totals:						
<i>19 parcels</i>	<i>13 claimants</i>	-	<i>24 fields;</i> <i>3 house lots</i>	<i>91.55 ac.</i>	-	-

The distribution of the awarded *kuleana* parcels suggests that the current study area is situated within the *ahupua‘a* of Pāpa‘ikou 3, bounded to the southwest by Kaunāmano, and to the northeast by Pāpa‘ikou 2. Pāpa‘ikou (1-3) *Ahupua‘a* may have been named for a grove of *kou* trees formerly located in that area. As Handy and Handy (1991:597) write:

Toward Honu‘apo [from Nā‘ālehu] on the lower slopes of the mountainside was a grove of *kou* trees in which the *ali‘i* had a small pavilion whither he used to go to enjoy the peace and serenity of the place, and the beauty of the *kou* with their yellow blossoms. The old Hawaiian *kou* had yellow blossoms; the introduced *kou* has orange-colored blossoms. The name of this retreat was Papa‘ikou which means “kou tree-shelter (or hut).” It is said that the “little house” (*papa‘i*), which might be called either an arbor or a pavilion, was built with *kou* wood. (Handy and Handy 1991:597)

While all of the lands contained within the present day *ahupua‘a* of Kaunāmano eventually became Government Lands, Pāpa‘ikou 3 was claimed at the time of the *Māhele* by a chief name Kuhio (the only land he claimed). This may be Chief Kūhiō Kalaniana‘ole of Hilo, who served as a steward for Naihe and Kapi‘olani, and was an early convert to Christianity (Bingham 1847). He ultimately retained half of the *ahupua‘a*, but never received an award for it (the land may have actually passed from Kuhio to Haumea before reverting to Government Land; Hawai‘i State Archives, Department of Interior-Land Letter Book, Volume 3 page 178, 9/25/1851b). In 1823, the nearby village of Kapauku (likely in Pauku *Ahupua‘a*) was reported by Ellis (2004:188) to belong to Naihe. Ane Keohokālole, who

received several nearby *ahupua'a* during the *Māhele*, including Pāpa'ikou 1 which she returned to the Government, had inherited much of her claimed lands from Naihe, her great uncle. Pāpa'ikou 2 was originally claimed by William Charles Lunalilo, who received the second largest allotment of lands during the *Māhele*, and who would eventually become the ruler of the Kingdom. Kaunāmano was claimed by a chief named Kamakahonu, who ultimately retained four lands, two in the Kohala District of Hawai'i Island, and two on the island of O'ahu. Both Kaunāmano and Pāpa'ikou 2 were returned to the Government at the time of the *Māhele*.

Land Grants, Land Use, and Changes in Land Tenure in the Vicinity of the Study Area (1850-1868)

In conjunction with the *Māhele*, the King also authorized the issuance of Royal Patent Grants to applicants for tracts of land, larger than those generally available through the Land Commission. The process for applications was clarified by the "Enabling Act," which was ratified on August 6, 1850. The Act resolved that portions of the Government Lands established during the *Māhele* of 1848 should be set aside and sold as grants. The stated goal of this program was to enable native tenants, many of whom were not awarded *kuleana* parcels during the *Māhele*, to purchase lands of their own. "Section 4. Resolved that a certain portion of the Government lands in each Island shall be set apart, and placed in the hands of special agents to be disposed of in lots of from one to fifty acres in fee simple to such natives as may not be otherwise furnished with sufficient lands at a minimum price of fifty cents per acre" (HSA—"Enabling Act" Series DLNR: 2-4). According to Kelly (1969), by 1853 the population of Ka'ū had dropped to 2,210 persons, with only 1,327 persons living in the district over the age of twenty. Therefore, approximately 1,100 (or about 80%) of the eligible citizens did not receive *kuleana* awards during the *Māhele*, and were without land of their own.

The Kingdoms' policy of providing land grants to native tenants in Ka'ū is briefly laid out in an September 25, 1851 letter from Interior Department Clerk, A. G. Thurston, prepared on behalf of Keoni Ana (John Young), Minister of the Interior, to F. S. Lyman, asking him to become the Government Land Agent for Hilo, Puna, and Ka'ū. The letter reads:

In consideration of the numerous applications for land in your vicinity and the consequent necessity for having an agent of this office in that quarter. His Highness the Minister of the Interior has & does hereby appoint you to be agent for the sale of the Government lands in the districts of Hilo, Puna & Kau.

In all cases of application for land, you will require a part of the purchase money to be paid you as the initiatory step, so as not to be put to trouble & expense to no purpose.

The land applied for is then to be surveyed, care being taken not to encroach upon any vested rights, and the survey with your report therein you will transmit to His Highness for approval.

Upon being informed of the approval of your proposed sales, proceed to collect the remainder of the purchase money, and four dollars additional, the fee for the Royal Patent, upon the receipt of which at this office the Patent will be forwarded to you.

Not more than fifty acres are to be sold to any one native, and each purchaser is to pay the surveyor for the survey of his land.

I enclose a list of all lands not belonging to the Government in your three districts also a list of lands which have been granted to various individuals, which have yet been surveyed.

You will please make known your views in regard to compensation at your earliest convenience. (Hawai'i State Archives, Department of Interior-Land Letter Book, Volume 3 page 178, 9/25/1851a)

With F. S. Lyman acting as the Government Land Agent, 148 Royal Patent Grants were purchased in the district of Ka'ū between 1852 and 1879 by 135 individuals (Kelly 1969). Forty of those who purchased land grants in the district had also received *kuleana* during the *Māhele*. In the vicinity of the current study area, in the present day *ahupua'a* of Kaunāmano, more than 1,700 acres, extending from the coast to inland of the Government Road, were sold as 12 Royal Patent Grants between 1854 and 1861 (Table 3 and 12). The grant parcels ranged in size from 27 acres to more than 300 acres. Of the 12 grant purchases, one included three parcels of land, three included two parcels of land, and the rest included a single parcel of land each. The current study area is a 13-acre portion of Grant No. 2113 purchased by Wailuu (b. 1822—d. 1872) in 1856. This grant, totaling 193.75 acres in Kāwala, Poupouwela, and Pāpa'ikou *ahupua'a*, includes three 'apana (sections). The study parcel is the southern half of the 27-acre 'Apana 2 situated in Pāpa'ikou Ahupua'a.

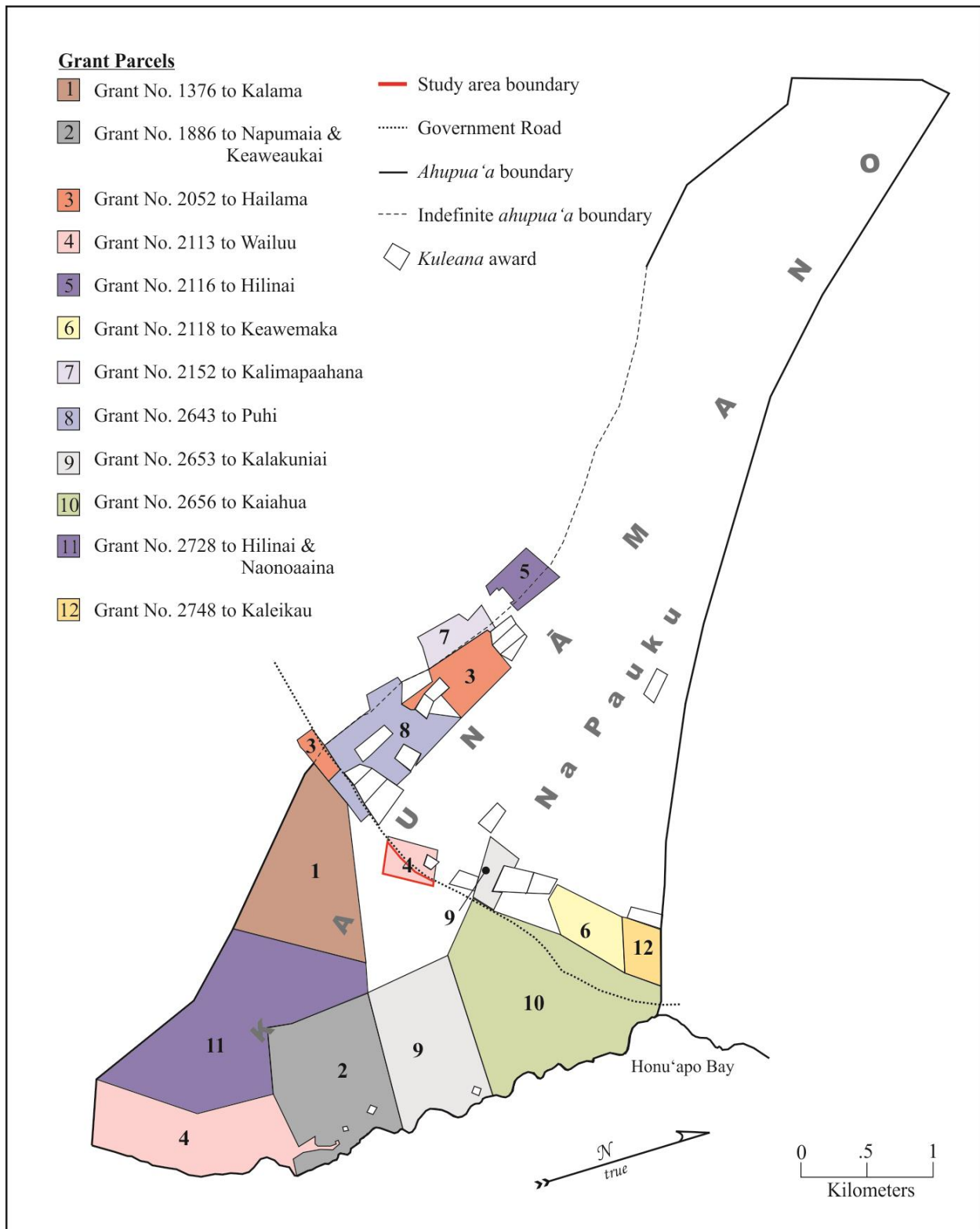


Figure 12. Royal Patent Grants sold within the present day ahupua'a of Kaunāmano between 1854 and 1861.

Table 3. Land grants purchased within the present day *ahupua'a* of Kaunāmano (1854-1861).

<i>Grant No.</i>	<i># of Parcels</i>	<i>Name of Grantee</i>	<i>Ahupua'a Listed</i>	<i>Year Purchased</i>	<i>Size (Acres)</i>
1376	1	Kalama	Kukui, Kaunāmano	1854	202.33
1886	1	Napumaia & Keaweaukai	Kaunāmano	1855	200
2052	2	Hailama	Poupouwela	1856	64.21
2113	3	Wailuu	Kāwala, 'Aemalo, Pāpa'ikou	1856	193.75
2116	1	Hilina'i	Poupouwela, Kaunāmano	1856	31.7
2118	1	Keawemaka	Pauku	1856	52.2
2152	2	Kalimapahana	Kāwala, Poupouwela	1856	242.08
2643	1	Puhi	Poupouwela, Kaunāmano	1859	126.8
2653	2	Kalakuniai	Pauku	1859	264
2656	1	Kaiahua	Pōhina	1859	29
2728	1	Hilina'i & Naonoaaina	'Aemalo, Poupouwela	1860	336
2748	1	Kaleikau	Pōhina	1861	29.8

In the deed for Grant No. 2113 to Wailuu (Figure 13) the boundaries of 'Apana 2 are described as follows:

Ap. 2 E hoomaka ma ke kihi Hi ma ka puka o kahi ana makai o ke Alanui Aupuni, a e holo ana ma ko ke aupuni Ak. 75 Kom 13°70' kaula i kahi ahu pohaku, alaila Hem. 25 ½ Kom. 2000 kaul. I kahi ahu pohaku pili ana me ke alanui alaila Hem 76½ Hik. 1480 kaul. i kahi pohaku i hoailona ia T maluna o ke aa, alaila Ak. 21½ Hik. 1947 kaul. A hiki i kahi mua 27 ek.

[Parcel 2- Starting at the East corner near the cave opening makai of the Government Road and running along the Government [land] North 75 West 13°70' chains to the stone ahu. Then South 25 ½ West 20.00 chains to the stone ahu adjacent to the road, then South 76½ East 14.80 chains to the stone marked with a T located on the 'a'a, then North 21½ East 19.47 chains until the point of commencement. 27 acres.]

While the specific use of the former land grants is not known, it is likely that most in the inland parcels were cultivated in a manner similar to the *kuleana* parcels in their vicinity (with taro and other crops). Mary Kawena Pūku'i recalled that her elder relative Opupele grew 'uala (sweet potatoes) in the general vicinity of the study area (at Kahua 'Olohū) during the late 1800s when she was a child. On the more *makai* grant parcels within the study *ahupua'a*, where extensive agriculture was not possible, the grantees may have raised livestock. An 1851 mission station report written by Rev. Kinney, who replaced Rev. Paris at the Wai'ōhinu Station, indicates that following the ravages of a measles epidemic in 1850 and "a scarcity of the common food of the natives...for a few months the people have been unusually active in planting taro, potatoes and onions" in hopes that ships might come for their produce, and that "cattle, horses, and goats are becoming numerous; the latter of them afford the principle article of export—hundreds of goats salted and dried might be exported monthly, if a vessel would come for them at a set time...now all the produce must be carried to Hilo on the backs of men or animals" (Kinney 1851:2). As stated in the deed for Grant No. 2113, the Government Road (to Hilo) passed through 'Apana 2 of Wailuu's property, and it currently (as the Highway 11 right-of-way) forms the *mauka* boundary of the study area.

Forced to pay taxes or lose their land and houses, families with no local source of income sent the young and able-bodied to trade centers such as Hilo and Honolulu to earn money. Some families lived in fear of being jailed or pressed into hard labor because they had no money to pay the taxes demanded of them (Kelly 1969). With few options available, many men and women went to the forests to collect *pulu* for foreign traders. *Pulu* is a soft, glossy, yellow wool found at the base of the *hāpu'u* tree fern shoots that was used during the mid to late nineteenth century for stuffing pillows and mattresses. The widespread trade in *pulu* began in Hawai'i around 1851. By 1859, 300,000 pounds of *pulu* were being exported from the islands annually, and at its peak in 1862, *pulu* exports reached 649,000 pounds (Kelly 1969). The *pulu* trade had a detrimental effect of the on the people of Ka'ū, however. In some cases families were able to procure money from the trade to pay their taxes, but just as often they ended up in debt to the traders, and lost their property as payment. Many gardens also suffered as the people spent more time in the forests gathering *pulu* than they did cultivating their fields (Kelly 1980). This led to crop failures, and eventually resulted in famine.

HELU 2113 ✓

PALAPALA SILA NUI.

Ma keia Palapala Sila Nui ke hoike aku nei o Kamehameha IV., ke Alii nui a ke Akua i kona lokomaikai i hoonoho ai maluna o ko Hawaii Pae Aina, i na kaunika a pau, i keia la, nona iho, a no kona mau hope Alii, ua haawi lilo loa aku oia ma ke ano alodio ia *Wailuu* i kona kanaka i manao pono ia ia, i kela spana aina a pau e waiho la ma *Aimaleo, Papeikou, ame Kowala Kahu* ma ka Mokopuni o *Hawaii*; a penei hoi ka waiho ana o na 'Mokuna:

E hormata ma ke kahi Kom. ma kahi ahu pohaku ma kahakai. A e holo ma ka Aina o Kaula. Ak 77 1/2 Kom 2500 kaul i kahi ahu pohaku ma ke kahi o ka Aina o Kaula a me Keana. Alaila ma ke ke Aupuni Ak 29 1/2 Ki 3550 kaul Ak 1 1/2 Kom 2500 kaul i kahi ahu pohaku ma ka Aina o Kapunamaia ma, A ma ia aina Ak 75 1/2 Kik 260 kaul i M kahakai ma ka pahuhoe ma ke Alamu Alaila ma ia Alamu Ak 17 1/2 Kom 215 kaul i D. Ak 27 Kom 430 kaul i Z. Aina 68 1/2 Kik 245 kaul i E. Ak 57 1/2 Kik 150 kaul i H. Ak 8 1/2 Ki 450 kaul i I. Ak 7 1/2 Kom 230 kaul i T Kom 73 Kom 148 kaul i L. Ak 2 1/2 Ki 78 kaul i K. Ak 73 1/2 Ki 137 kaul i N Kom 21 Ki 302 kaul i Kom 7 1/2 Kom 533 kaul i A Kom 13 Kom 243 kaul i P Kom 4 Ki 328 kaul i L. Kom 35 Ki 415 kaul i C. Ki 80 1/2 Ki 450 kaul i F. ma kahakai Alaila ma kahakai a hiki i kahi mua 160 & E
Ap 2. E hormata ma ke kahi Ki ma ka puaka o kahi ana makai o ke Alamu Aupuni. A e holo ana ma ke ke Aupuni Ak 75 Kom 1371 kaul i kahi ahu pohaku. Alaila Kom 25 1/2 Kom 2000 kaul i kahi ahu pohaku. pili ana me ke Alamu Alaila Kom 7 1/2 Kik 1480 kaul i kahi pohaku i hoalona ia T ma alawa o ke aa. Alaila Ak 21 1/2 Kik 1947 kaul a hiki i kahi mua - 27 &
Ap 3. E hormata ma ke kumu kumu ma ke kahi o ka Aina Ap 2. o Kaula. A e holo ana ma ke ke Aupuni. Ak 63 1/2 Kom 912 kaul i kahi ahu pohaku Kom 48 1/2 Kik 1090 kaul Ak 79 1/2 Ki 575 kauli ke kuleana o Kaula ma ia Kuleana Ak 32 1/2 Kom 912 kaul a ma ka Aina o Kaula Ak 197 kaul a hiki i kahi i hormata ai 64 &

ke ke kuleana oia Kanaka

Figure 13. Page 1 of the original deed for Royal Patent Grant No. 2113 to Wailuu, dated November 12, 1856.

Rev. Shipman, who became the Protestant missionary in Ka'ū (in 1855) following the untimely death Rev. Kinney, reported in 1857 that an agricultural society had been formed in the district, and he optimistically opined that:

...Farming has actually commenced in Kau during the past year. Within this time the first plow has been brought in and the first ground ploughed. Corn, beans, wheat, etc. has been planted and the trial is being made. Two years ago there was not, nor even had been a cart in Kau, now there are three ox carts and all in use. Ox yokes, bows, chains, and other farming utensils have been brought in and are used. (Shipman 1857:5; see also Kelly and Crozier 1972:7)

The February 18, 1858 edition of the *Pacific Commercial Advertiser* (Volume 2 No. 34, Honolulu, Hawai'i) confirms Shipman's assertions, reporting that in the "remote and little known district of Kau" the incoming wheat crop was estimated from 2,000 to 3,000 bales, and that the bean crop was estimated at 20,000 pounds. That same article relates that more than half of the bales of *pulu* brought to Honolulu on the last shipment were from Ka'ū, where "Mr. Swain, one of the partner's in the firm of A. Harris & Co., has with his well known energy, established himself as a trader." The article goes on to report "that the great drawback on the agricultural enterprise of Kau, is the lack of purchasers of their produce", stating that the district is in need of a suitable harbor, or a good road to Kona, as the one to Hilo "is a long and wet route."

In his 1860 mission station report, Rev. Shipman notes that while wheat had been a successful crop in Ka'ū, the Hawaiian Flour Company paid too little to make it worthwhile (Kelly and Crozier 1972). In that same report he laments the effect of the *pulu* trade on the Hawaiian population, indicating that agricultural pursuits had stopped for all practical purposes, and that even the cultivation of taro was severely neglected, as the Hawaiian farmer could make more money gathering *pulu* (Kelly 1980). Rev. Shipman goes on to describe the detriment this trade brought to the Hawaiian family in Ka'ū:

...The effect – on them – is not good; not that the *pulu* is not a source from which they might secure comfort to themselves and families, but the actual result is the reverse. They are offered goods to almost any amount, to be paid for in *pulu*; this to a native is a strong temptation to go into debt. Consequently many of them are deeply in debt and almost all to some extent. The policy of the traders is to get them in debt and to keep them there so long as possible. By this means they are induced to purchase much which could be dispensed with. When once in this condition they are compelled to live in the *pulu* regions, at the peril of losing their houses and lots, and whatever other property they may possess. Thus their homes are almost in reality deserted, ground uncultivated.

When my last report was written [in 1859] I could report but one foreigner in the district. Now there are more than twenty. Their influence is such as is unusual from that class of people in other places. There are but three of the whole number who attend church, although the most of them are familiar with the native language.

Ten months since, there was not one store in the District, now there are seven and a good amount of trade; one store on an average sells over \$1000 worth of goods per month. (Shipman 1860:5)

Although the *Māhele 'Āina* of 1848, and the selling of government lands in the form of grants during the middle to late 1800s, was directed at encouraging native tenants onto fee-simple parcels of land from which they could earn a living, it actually resulted in the land becoming a commodity to be bought and sold (Kelly 1969). Those with money could buy (or lease) land, and those without, could not. As one Hawaiian writer put it, "if anyone of us becomes assistants of the chiefs, his pay for the most part is in goods; the most of the dollars are for the foreign chiefs... foreigners come on shore with cash, ready to purchase land; but we have not the means to purchase lands; the native is disabled like one who has long been afflicted with a disease upon his back... we are not prepared to compete with foreigners" (Kenui et al. 1845:119). Basically, the majority of the Hawaiian population at this time was still participating in a subsistence economy, while foreigners had access to extensive monetary resources. As a result, many Hawaiian families, who were new to land ownership and the market economy, were dispossessed of their homes and fields, and foreigners were able to buy up large tracts of land. The Kuleana Act of August 6, 1850, even prohibited the landless *maka 'āinana* from conducting economic activities on unassigned Government Lands, from which they had previously secured a living. These lands were increasingly falling into the hands of foreigners through Government leases.

The unfortunate situation described above is echoed in the following passage written by a Western visitor passing through Kaʻū in 1861, who wrote:

...A Mr. Richardson [Charles Richardson (1817-1879)] an American who has a lease from the King of land to the amount of (at the lowest estimate) 70,000 acres [Kapāpala Ranch], at a rental of only about \$300. ...His limits are not well defined, and he considers that he has much more than that number of acres for his rent. He is keeping stock and goats, which last are very valuable...He has a source of almost unlimited wealth at the paltry price of £80 a year!

...Mr. Lyman [F.S. Lyman (1837-1918)] is another instance of successful arrangement, not to say bargaining: he has some thousand or two of acres, which he bought of the government at half a dollar (2s 2d.) an acres! There is, however, some scandal attached to this transaction, as Mr. Lyman was formerly a government surveyor and surveyed this land. Moreover, serious mistakes with regard to private property were made by him (how he has ever learned surveying is a mystery—or, rather, it is believed that he never did, or could have learned it). And though in one instance restitution on a large scale has been made, he retains land which could not rightfully be sold... (in Korn 1958:58)

In regard to the people mentioned in this passage, Charles Richardson and William H. Reed leased the entire *ahupuaʻa* of Kapāpala from King Kamehameha IV on March 1 1860, where they started Kapāpala Ranch. Fredrick S. Lyman, the son of D.B. Lyman, the land agent for Hilo, Puna, and Kaʻū, purchased three large grant parcels in western Kaʻū (totaling roughly 7,737) between 1859 and 1864, where he raised stock until 1868 (Kelly 1969, 1980). In addition to serving as a judge for East Hawaiʻi (1869-1893) and holding various other government offices, Lyman also served as a government land surveyor in Hilo, Puna, and Kaʻū from 1854 to 1901. The largest grant sold in Kaʻū during this period was purchased by C.C. Harris, who received the entire *ahupuaʻa* of Kahuku (184,298 acres) in 1861 as Grant No. 2791. The selling of land grants and the increased number of foreigners in Kaʻū may explain the slight rise in the population (2,227 persons) reported during the census of 1860 (Kelly 1969).

In 1863, William Thomas Martin, the son of a Scottish-West Indian immigrant to the Islands and a Hawaiian mother, who was born in Kaʻū in 1828 and married a Hawaiian woman of some rank (Korn 1958:60), applied for the right to lease all of the unsold Government Lands “between Kahilipali on the West, and Kioloku on the East, and mauka of the Aupuni [Government] road, and makai of the woods; reserving, however, the right of picking pulu, to the Government” (Hawaiʻi State Archives, Department of Interior-Land Collection Box 75, Letter 2/25/1863). A group formed by W.T. Martin had previously leased all of the unsold Crown Lands in Waiʻōhinu *Ahupuaʻa* in ca. 1862 where they established the Waiʻōhinu Agricultural and Grazing Company (Kelly 1980). In the application request for this roughly 2,000 acre lease, an area that included the unsold portions of Kaunāmano *Ahupuaʻa*, D.B. Lyman writes (on February 25, 1863), that Martin “wishes the land for pasturage; and I should think that a good share is not good for any thing else.” At that time Martin was offering \$20 per year for a ten year period. He later increased this offer to \$40 per year for the same period, but the lease had not been secured by August 31, 1865, when Martin addressed a letter to F.W. Hutchinson, Minister of the Interior, asking what terms he would accept (Hawaiʻi State Archives, Department of Interior-Land Collection Box 76, Letter 8/31/1865). In that letter Martin offers to deed 2.1 acres at Waiʻōhinu (the *kuleana* of Kamali) to the King, apparently in exchange for the lease.

The effects of disease and outmigration combined with the changes in land tenure and the economy that occurred in Kaʻū during the middle of the nineteenth century, ultimately contributed to famine and further population decline (Kelly 1969). In 1863 Rev. Gulick, who ran a boarding school for girls in the district for a few years during the early 1860s, wrote:

For two years famine has raged in Kau—that is to say, taro & poi have been scarce. This has been owing, firstly to the drought, secondly to the free range of cattle and horses over lands once devoted to cultivation, and lastly to the pulu trade. The effect of the famine has been to send many of our people to Hilo, Puna, Kona, and Oahu to sojourn. . . (Gulick 1863:3)

By 1864 many of the upper Government Lands had been leased to foreign traders for the purpose of gathering *pulu* for resale (Kelly 1980). One of these traders, Nicholas George, established the first sugar mill in the district in Waiʻōhinu in 1866, where he ground cane produced by several small growers in the district (Elwell and Elwell 2005). By that year the population of Kaʻū had once again declined to 2,020 persons (Kelly 1969). In 1867, the Rev. John Kauhane (1828-1907), son of a high ranking chief and the high chiefess Julia Alapaʻī, became the pastor of the Protestant church in Waiʻōhinu; he was then made the District Judge of Kaʻū, where he served for a number of years as the district was transformed first by a natural disaster and then the introduction of the sugar industry.

The 1868 Eruption of Mauna Loa

In 1868 a volcanic eruption emanating from Mauna Loa volcano shook the southern part of Hawai‘i Island, changing the landscape forever. Beginning on March 25th, a series of initial earthquakes were felt in the District of Ka‘ū, and on March 27th smoke was seen rising from Moku‘āweoweo Crater, the summit caldera of Mauna Loa. That evening even stronger earthquakes occurred, culminating in an estimated magnitude 7.1 earthquake on March 28th. The epicenter of this earthquake was near Wai‘ōhinu, where as a result of the movement of the earth the government road was offset by a distance of more than its width (Hawaiian Volcano Observatory 2014). Several first-hand accounts of the events were published in the *American Journal of Science* that autumn (Dana and Coan 1868). This quake “destroyed a large stone church at Kahuku, and also all the stone dwelling houses in that place, including the houses....at the foot of the mountain” (Dana and Coan 1868:106). Frederick Lyman, who lived in Ka‘ū at that time, wrote that on Friday morning, March 27th, 1868:

Between 9 and 10 o’clock, a slight tremble, soon another, and another, at short intervals. Bella tried to keep a record of them, but soon gave it up, when they went into the hundreds during the day - some of them harder, and continued thro [sic] the night . . . with more earthquakes, increasing in violence. On Saturday, just after lunch, there was a hard one, peculiar, it seemed as if we moved backwards and forwards, 2 or 3 feet each time, for several seconds - it made the small children seasick - and it threw down some of our stone walls . . . but the earthquakes kept on too - every few minutes, often we could hear it coming from the south, then give us a good smart shake and pass on towards Kilauea, North East from us - at night it made the house rock and creak like a ship in a heavy sea, and we could not sleep... (Dana and Coan 1868:108)

The earthquakes continued for several days afterwards at a rate of between 50 and 300 per day, until Thursday, April 2nd, when at about four in the afternoon, an estimated 7.9 magnitude earthquake shook Ka‘ū. This earthquake is believed to have been centered roughly five miles north-northeast of Pāhala, and to have occurred at a depth of about six miles below the surface (Hawaiian Volcano Observatory 2014). The earthquake generated a landslide that covered Kapaliuka Village in Wood Valley, killing thirty-one people, and a *tsunami* that destroyed all the coastal villages of Ka‘ū and swept forty-six people out to sea. According to Reverend Celestine N. Ruault, a Catholic missionary stationed in Ka‘ū at the time of the 1868 eruption, as a result of this quake, “every stone wall in Kau was down; frame and thatched houses were demolished; crockery and glassware were all in atoms,” and, “men and animals lay smitten on the ground” (Ruault 1909:98).

Fredrick S. Lyman wrote of the April 2nd earthquake:

Soon after four o’clock p.m. on Thursday we experienced a most fearful earthquake. First the earth swayed to and fro from north to south, then from east to west, then round and round, up and down, and finally in every imaginable direction, for several minutes, everything crashing around, and the trees thrashing as if torn by a hurricane, and there was a sound as of a mighty rushing wind. It was impossible to stand: we had to sit on the ground, bracing with hands and feet to keep from being rolled over... (Dana and Coan 1868:109)

Within minutes of the initial quake, the ocean rose up and a *tsunami* pounded the coast, washing inland in some locations as far as 150 yards (Sinoto and Kelly 1970). Fredrick Lyman goes on to describe the *tsunami*, writing:

. . . All along the shore from directly below our place [Keaīwa] to Punalu‘u, a distance of three or four miles, the sea was boiling and foaming furiously. The waves covered the shore, and the water was red for at least an eighth of a mile from the land . . .

The villages along the shore were swept away by the great wave that rushed upon the land immediately after the earthquake. The eruption of the earth destroyed thirty-one lives, but the waves swallowed a greater number. (Dana and Coan 1868:110)

It was later reported that the wave destroyed 108 houses in Ka‘ū and drowned forty-six people (Coan 1882). Ruault (1909:102), the Catholic missionary in Ka‘ū, who had been at Kamā‘oa when the largest earthquake occurred, was soon informed that the tidal wave had “wiped Honuapo from the face of the earth, killing many.” Thinking he could help, Ruault immediately set out for that village. When he reached the bay, he saw “...nothing but indescribable ruin. The ocean [had] indeed entered and flooded all Honuapo, wrenching everything from it, even the layer of soil on the lava. Only a few solitary heaps of stones remained where once stood a flourishing settlement of natives” (Ruault 1909:103). While at Honu‘apo, Ruault (1909:104–105) identified pieces of his chapel and he buried one of his

congregation. He recalled that:

...I got there without mishap and found the place quite deserted. Just one person I had found who had come there for the same purpose. All the others had gone to a place of shelter among their friends. On the chapel-site there was not the slightest mark of its former presence, but we recognized some of the stones. Having mortar still attached to them, we knew they belonged to our chapel. We found two relics—only two. One was in the shape of a Hawaiian prayer-book, and the other was the bell, which had been carried to and fro by the waves and finally landed on the sandy shore. That bell did good service before and is doing good service at present after its watery experience in the tidal waves almost forty years ago.

We also found the corpse of one of my former friends, whom I had baptized shortly before. It was not an easy job to bury him, there being but two of us. We were without tools, and worse still, there was no soil with which to dig a grave, the wave having taken every bit of soil from the solid lava. Fortunately we found a ready-made grave for him—a deep fissure in the lava, caused by the action of the earthquakes. Into this hole we put him tenderly, and as we had no soil we put the next best over his mortal remains—stones, which were plentiful, and after having prayed the *De Profundis* for him and all the faithful departed of my recent flock, I left this sad place and went home to Hilea again.

Aftershocks plagued Ka‘ū following the April 2nd earthquake, and then on Tuesday, April 7th a fissure opened along the southwest rift zone of Mauna Loa that sent voluminous amounts of lava rushing towards the sea (Hawaiian Volcano Observatory 2014). The lava flows, which occurred near the southern tip of the island originating in Kahuku Ahupua‘a, reached the sea (a distance of 13 km), in only three and a half hours. One witness to the eruption, Henry M. Whitney, described “four grand fountains playing with terrific fury, throwing blood-red lava and huge stones, some as large as a house, to a height varying from 500 to 1,000 feet” (Dana and Coan 1868:113). The lava flow continued for four days, but was inactive by April 11th. The aftershocks continued for several months following the eruption. An article in the Hawaiian language newspaper *Ka Nupepa Kuokoa* (translated at <http://www.hawaiian-roots.com/the-hawaii-volcano-eruption-of-1868.htm>) contains the following summary of the destruction caused in Ka‘ū by the 1868 eruption, including the names of the seventy-seven people who perished and where they were from:

...Through the kindness of our loving friend, the Honorable W. T. Martin of Kau, the one who came from where the Fiery lava is wreaking havoc, we have obtained the information below, and we put before our readers the things he witnessed with his eyes, and heard with his ears:

According to the native son of Naihe of Kau, a river of lava is flowing from Maunaloa until the sea at Kahioipakini [Ka Hioipakini], and so the people of Kona cannot set foot in Kau and so too for Kau’s people to Kona.

Five craters of lava opened up at Puuolokuana, right in the middle of the land between the sea and the Mountain.

The height that the fire is shooting up from those craters of lava is five hundred feet or more. From the plumes headed upland and down; and from the rivers of lava from Puuolokuana to the shore and entering the sea; flashes were seen like lightning in the dark, reddish-gray, green, and white clouds. Also heard booming louder than cannon.

When the lava exited to the sea, a large heap of sand appeared in the water, creeping along, being pushed forward to the side going to Kona. The lava is creating new hills, and perhaps there will be many hereafter.

A frightening rumbling was heard beneath Waiohinu and the neighboring areas when the lava was flowing. This rumbling was still going on at the time the Kona Packet recently left Kau.

Before the lava appeared in Puuolokuana on the evening of the 7th of April, volcanic ash had already covered the houses from Kahuku all the way to Ninole, on the night of the 6th. The kamaaina and the haole were alarmed then, thinking that this was the end, because of the explanation of a knowledgeable haole.

The great stone church standing in Waiohinu was driven to the ground, and there was not one stone left upon another; so too of all the stone buildings around that area. The wooden structures were all smashed and were pushed to the Kona side from where they first stood. From Puao until the sea of

Waikapuna, the land was cracked open on the 2nd of April, by a powerful earthquake that was seen by all of us around the area, and the quake did not subside to the moment when the ship left. A few days prior to the eruption, the fissure closed up, but where it came together did not match up as before; it is uneven.

The settlements at Kaalualu, Paiahaa, Honuapo, Hokukano, Kaalaiki, the two Hilea, Ninole, Wailau, Punaluu, all the way to the sea of Keauhou: all of those houses were lost to the sea, “by the onslaught of the great seas of the woman of the pit.”

The kind of sea that struck the settlements above, it was ocean water joined with water coming up from the ground. The height that the ocean reached was like the height of the coconut trees near the homes. These waters were not like the ocean seen on our other islands; it was terribly unusual. If it was a tsunami [kai hooee], then there would be no human toll, but what came ashore was a swirling sea.

There is volcanic ash in the wind, which was seen at Keaiwa during the time spoken of above (Apr. 2). The area covered by ash is nearly three-fourth mile in length. And under the area covered over by ash is a river of water. As the wind stretches out, the sea cliffs of Kamehame and Mahuka were swept. Soon after, is when the water appeared, devastating those spoken of in the settlements above. It is estimated that the number of cows covered over by the eruption at Kapaliuka was no less than five hundred, and the goats were no less than two thousand.

The number of animals killed by the lava in Kahuku and the two Pakini, all the way to Kamaoa, is thought to be no less than one thousand cows and horses. As for the goats and sheep, their number is unknown.

The lands which turned into pahoehoe, partially engulfed by lava, was the lands of Robert Brown, W. T. Martin, Kamamalu, W. C. Lunalilo, government land, and lands of other kamaaina people, lying outstretched from Kahuku to Puueo. These were all fertile lands.

It is guessed that the damages of all lands destroyed by lava included with property, is no less than seventy-thousand dollars (\$70,000) should it be properly tallied. The earthquake began in Kau from the last days of March until the 10th of April; it is believed that there were three thousand quakes that shook. Some were powerful while others were weak, but there was one that was the biggest, that being the quake of the 2nd of April, from which the many below perished.

We put forward the list of those who died as spoken of above.

Perished in the Eruption at Kapaliuka [Wood Valley], Kau, Hawaii. Kanakaole (m.), Kailo (m.), Puoina (m.), Kalamahiai (m.), Kahuhu (m.), Kuaehu (m.), Kaawa (m.), Kuaki (m.), Pupule (m.), Kaili (m.), Kaaihue (m.), Kuikahi (m.), Kahuhu (m.), Kamaliwahine (f.), Kalakala (f.), Mireta (f.), Mere (f.), Kekahuna (f.), Kauinui (f.), Haolelo (f.), Kumaiea (f.), Aulani (f.), Kaaiwaiwai (f.), Kahikina (f.), Kikalaole (f.), Keliinohola (f.), Honuakaha (f.), Keahiwela (f.), Waimaka (f.), Luukia (f.), Kamaka (f.).

Died at sea at Makaka & Moaula.

Kliinui [Keliinui] (m.), Awihī (m.), Ahia (m.), Kamalii (m.), Kahamo (m.), Nakamaa (m.), Kalua (m.), Keliimakawela (m.), Halelaau (f.), Kahaipo (f.), Kapuni (f.), Kapela (f.).

From Punaluu was Kalawaiililiii (f.)

From Ninole was Kapuuhonua (m.), Hanoa (m.), Kamoka (f.).

From Kawa was Nailieha (m.), Keahialoa (m.).

From Honuapo was Keaweheulu (m.), Haole (f.), Moeawa (m.), Moehuliolo (f.), Kaumuahana (f.), Piimoku (f.), Kukona (m.), Kaina (m.), Kaumu (f.), Kiniakua (f.), Kalaiku (m.), Palapala (f.), Kailipeleuli (f.), Kauha (f.), Puhiea (m.), Moku (m.), Mahoe (m.), Keliikipi (f.), Naholoaa (f.), Kamaliikane (m.), Pupuka (f.), Apua (m.).

Died at sea at Kaalualu & Paiahaa. Kapela (f.), Kahinakea (f.).

Surrounded by the Eruption of Kahuku. Pau (m.), Mauae (m.), Hueu (m.), Pauwahine (m.).

People who barely survived the tsunami from Punaluu to Paiahaa in Kau, Hawaii, numbered twenty three (23), other than those who died met with disaster in Keauhou, who are not counted here. Here are those that are living atop the hills:—Puu o Haa, Kahilipaliuka, about 400 or so; in the lands of Hilea & Kaala, 80 or more; and the majority fled to Hilo & Kona. The people of Waiohinu and the devastated areas, are gathered on the hill of Haa; it is there that they sleep, but perhaps a fraction has returned back to their own place. They will probably be facing difficulty from lack of food. The farms from Pakini until the sea of Kamaoa are covered over.

Regarding the state of Ka‘ū and its resident population following the earthquake, *tsunami*, and eruption of 1868, Dr. William Hillebrand wrote in the May 6th edition of the *Hawaiian Gazette* (in Kelly 1980:41):

. . . From the upper road from Kapapala to Waiohinu (the lower road has been rendered impassable by the encroachments of the sea), several minor land slides were observed on the hills; most houses were injured more or less; no stonewall remained anywhere. All the people from near the beach had taken refuge on higher lands near the upper road. My professional services were called for by many people who had been injured by the great oceanic earthquake waves. The great wave rose to a height of 25 feet, and according to reliable information, portions of the coastline have subsided considerably. In some places cocoanut trees formerly out of the water are now a foot deep in the sea. Every village along the coast of Kau and part of Puna has been swept away. The whole population of Waiohinu I found encamped on a high hill to the east among the ferns. From two to three hundred people had lived there for two weeks under the scanty shelter of huts made of mats, fern and ki leaves, and could not find it in their hearts to return to their houses and field. Their crops, which before had already suffered from long continued drought, were being invaded by the cattle, no fences remaining to protect them. It is much to be feared that the calamity of a famine will visit the smitten district in addition to the disaster suffered already.

As a result of the 1868 eruption the district of Ka‘ū was devastated. While the aftershocks eventually subsided and life returned to a semblance of normal, the coastal villages were destroyed by the *tsunami*, and most coastal residents moved to inland towns such as Nā‘ālehu, or moved out of the district altogether (Handy and Handy 1991). By 1872 the population of Ka‘ū had further declined to 1,865 persons (Kelly 1969). The destruction caused by the earthquake and *tsunami*, and the resulting exodus of people from their lands, paved the way for a new economic chapter in the history of Ka‘ū, the commercial sugar industry.

The Nā‘ālehu Sugar Company (1868-1884)

Following the eruption of 1868, Alexander Hutchinson (1829-1879), a native of Pennsylvania and a former engineer at the Honolulu Iron Works, moved to Nā‘ālehu to enter into the sugar business. By 1870 he and his partner, John Costa, established the Nā‘ālehu Sugar Company on fee-simple and leased lands in close proximity to the current study area (Costa sold his interest in the company to Charles R. Bishop in 1872; Dorrance and Morgan 2000). Hutchinson erected a small mill in Kāwala Ahupua‘a, *mauka* of the government road, on a 225 acre grant parcel that he purchased from D.F. Sanford, and a small company town grew up around it. In 1870 Hutchinson also partnered with Charles Spencer and William Irvin to form the neighboring Hilea Sugar Company. Under Hutchinson’s guidance the Nā‘ālehu Plantation’s steadily increased its land holdings throughout the 1870s. In 1877 Hutchinson purchased the Waiohinu Sugar Company (founded by John Nott in 1875), and in 1878 he helped erect another sugar mill in Ka‘ū at Hilea (Kelly 1980). The growth of sugar industry in Hawai‘i, and the growth of the political power of those involved in it, was spurred on by the signing of the Treaty of Reciprocity in 1875, which allowed the United States to import Hawaiian sugar duty free.

The Nā‘ālehu Plantation had the distinction of being the southernmost in the Hawaiian Islands, and it was also the most isolated, which made it difficult to recruit and retain permanent workers (Campbell and Ogburn 2004). Consequently, contract laborers were brought in from China (during the 1870s), Portugal (in 1878), and Japan (during the 1880s) to work in the fields (Haun et al. 2004). The fields were located primarily on the fertile hillside above Nā‘ālehu, in the where native claimants during the *Māhele* of 1848 had been awarded their agricultural plots. The land was rolling and somewhat hilly, with the lower lands lacking soil and the higher lands being more fertile. The valleys were shallow, sterile, and rocky, while the ridges were composed of rich soils that extended to a considerable depth. These conditions were opposite of those found at most of the sugar plantations in the islands, and required different agricultural methods (Campbell and Ogburn 2004).

Harvests were brought to the Nā'ālehu mill by a system of flumes that reached as far as six miles up the slopes of Mauna Loa (Dorrance and Morgan 2000). The mill at Nā'ālehu initially shipped its product from the harbor at Ka'alu'alu Bay, but during the 1870s Honu'apo Bay was deepened, and it eventually replaced Ka'alu'alu as the main harbor in the district (Kelly 1980). Goods and people that disembarked at Honu'apo had to land on the rocky coastline, as no harbor facilities were built at first. The dangers of loading and unloading cargo at Honu'apo during this period are illustrated in the events that lead to Hutchinson's death on May 10th, 1879. On that day, Hutchinson personally took part in a hunt for two men that had broken their labor contracts and left the plantation. He took a small skiff out to the steamer *Likelike*, which was standing off shore at Honu'apo, to look for the men. On the return trip, heavy seas caused the boat to hit the rocks and capsize. Several people were injured and one person drowned. Hutchinson was rescued, but he died five days later from head injuries (Kelly 1980).

Bowser's *Hawaiian Kingdom Statistical and Commercial Directory* for the year 1880-1881 (in Kelly 1980:105-106) lists the executors of the estate for Alexander Hutchinson as the owners of the Nā'ālehu Sugar Mill and Plantation, and C. N. Spencer as the manager. At that time the plantation owned 4,000 acres of land and leased another 15,000, with 700 acres under cultivation, and another 8,000 acres available for cultivation. In 1880 the plantation employed 187 men, owned 150 yoke oxen, and twenty mules. There were also several persons planting cane on shares for the sugar company. Two other sugar planters are also listed in Nā'ālehu in 1880; the aforementioned Wm. Thomas Martin, who was renting 225 acres and cultivating 100 acres, and Wm. Thompson, who was cultivating 200 acres of 373³/₄ acres that he owned and 160 acres that he rented with the help of twelve men that he employed.

In 1880 the Nā'ālehu Plantation was purchased by Claus Spreckels and William Irwin, and four years later, in 1884, they incorporated as the Hutchinson Sugar Company. By that time three sugar mills were operating in Ka'ū, one each at Nā'ālehu, Hīlea, and Pāhala, and a mill at Honu'apo was under construction (Haun et al. 2004). Construction of the Honu'apo Mill was completed in 1881, and by 1883 a wharf was built at Honu'apo Bay that helped facilitate the import of mill machinery, equipment, and labor, and the export of raw sugar, goat hides, and cattle in the Ka'ū District (Kelly 1980). Spreckels and Irwin kept the plantation headquarters in Nā'ālehu. The current study area appears to have remained in private hands throughout this period.

The Lease of the Government Remnants in the Vicinity of the Study Area (1873-1888)

In 1873, Obadiah B. Spencer (b. 1818— d. 1902), the brother of Nā'ālehu Plantation manager Charles N. Spencer, leased the remnants of the Government Lands situated between Kāhilipali and Honu'apo (including the lands immediately *mauka* of the current study area) for a term of fifteen years (Hawai'i General No. L-170). Captain O. B. Spencer was the brother of Thomas Spencer and Charles N. Spencer, who were well known *pulu* traders in Hilo and Ka'ū respectively, and became involved in the sugar industry of Hawai'i fairly early on (Kelly 1980). C. N. Spencer had moved to Wai'ōhinu in the early 1860s where he opened a store; he had several early leases of Government Lands for the collection of *pulu*. O.B. Spencer captained a ship for his brothers that picked up *pulu* from outlying harbors and transported it to Hilo (Kelly 1980); he had previously leased lands in Kea'au, Puna. An exchange of letters between E. O. Hall, Minister of the Interior, and Rev. J. Kauhane in September and October of 1873, clarify the details of this lease. Excerpts of these letters are reproduced below:

E.O. Hall, letter to J. Kauhane, dated Sept. 1, 1873:

...O.B. Spencer has applied for the lease of the Government remnant, between Kahilipali and Honuapo. There are a number of awards belonging to the natives within these boundaries; so said foreigner stated. Is it proper to let him have the lease of it?

He offers \$100.00 a year.

If this land is held by the residents, and are paying a hundred dollars a year, it is best to leave it alone. If not, send information, stating the character of the land and number of acres.

It is the opinion of said foreigner, that the Government at present time, is receiving \$50 or \$60.- for said land... (Hawai'i State Archives, Department of Interior-Land Collection Letter Book Volume 12 page 341, Letter 9/1/1873a)

J. Kauhane, letter to E.O. Hall, dated Oct. 6, 1873:

...Opekaia, the foreigner who has applied to lease the remnants of Government lands between Kahilipali and Honuapo, has come again. Therefore, these are the names of said lands hereinbelow set forth:

1. Kawala,
2. Aemalo,
3. Poupouwela,
4. Kaunamano,
5. Papaikou 1,
6. Papaikou 2,
7. Papaikou 3.

I was not acquainted very much with this foreigner here in Kau. He lived in Keaau, Puna, which was his first lease. But, I have heard that he lived peacefully with the old residents there. If this is true, then, there will be no trouble... (Hawai'i State Archives, Department of Interior-Land Collection Box 81, Letter 10/6/1873b)

E.O. Hall, letter to J. Kauhane, dated Oct. 16, 1873:

...I hereby beg to inform you that the lands which you sent a report to me upon, that is Kawala, Aemalo, Poupouwela, Kaunamano, Papaikou 1, 2, & 3, have been leased to O. B. Spencer, for a term of Fifteen (15) years at \$150.-- a year; and payment of \$150.-- has been made to this office, for the first year.

Therefore, whatever privileges the natives may wish on these lands, must be arranged with him, and that they make payments to him, the same as they have been in the habit of paying to you for the Government.

I believe, this is a very kind man to the natives, and they will not be troubled by him.

The Government remnants are the only places given, and not the holdings of the natives... (Hawai'i State Archives, Department of Interior-Land Collection, Letter Book Volume 12 page 371, 10/16/1873c)

The lease of the Government lands to a foreigner concerned many of the longtime residents of Ka'ū, who were largely dependent upon those same lands for their livelihood and sustenance. Soon after the lease to O.B. Spencer was signed, W. Thos. Martin, on behalf of himself and ten others, wrote to E. O. Hall, Minister of the Interior, asking to lease the Government remnants between Kawela and Wai'ōhinu *ahupua'a*, effective January, 1874. The letter indicates that these Ka'ū residents were fearful of losing their rights to the land, and its tone suggests that O. B. Spencer may not have been well liked in the district:

...We, the people and old residents, because of having raised animals and worked on the remnants of Government lands situate in this district, being the remnants of land between Kawela and Waiōhinu. And because we were surprised these days of hearing the mournful voices of the old residents of Government lands between Kioloku & Kahilipali, of O. Spencer, the stranger foreigner from Hilo, having acquired same, and because of such distress of those people who have been deprived of a place where they can support themselves. Therefore, we have decided to ask you, the parent, to consent to lease to us these remnants of Government lands above set forth, for the sum of \$100. Per annum, and the length of time to be 15 years, - reserving the wood for the Government. And that we be granted some privileges of timber for houses and wood for imu. Do not disappoint us in our application to you, it is far better to hearken to prayers of poor people, who are of the land, than to listen to the stranger who has plenty of money, without taking notice of the rights of the poor people, do not delay this or we will be without anything like the old residents of the Government lands which have been acquired by O. Spencer...(W. Thos. Martin, and 10 others, letter to E.O. Hall, dated Oct. 28, 1873; Hawai'i State Archives Department of Interior-Land Collection Box 81, Letter 10/28/1873d)

It is not clear what O. B. Spencer intended to do with the nearly 3,000 acres of land he leased in 1873. Given his family connections, Spencer may have intended to collect *pulu*, grow sugarcane, or raise livestock on the leased lands. Alternatively, he may have been speculating on the land, as all of his holdings eventually ended up in the hands of the Hutchinson Sugar Company. A September 11, 1888 letter from Chief Clerk, J.A. Hassinger, on behalf of the Minister of the Interior, to W.G. Irwin, Agents for the Estate of A. Hutchinson, indicates that the lease was taken over by the Hutchinson Sugar Plantation at some point prior to 1888 when it was set to expire (Hawai'i State Archives, Department of Interior-Land Collection, Letter Book Volume 36 page 191, 9/11/1888).

The Hawaiian Government Survey in Ka‘ū (1870-1887)

The Land Commission required that all claims for *kuleana* awards be accompanied by a metes and bounds description and a map. The same was true for Government Lands and Crown Lands that were sold. As a result of this requirement, between 1846 and 1870 perhaps as many as 40,000 parcels of land, large and small, were surveyed in the Hawaiian Islands. No base maps were ever made, however, and by the 1870s it was nearly impossible to determine the area and extent of the Crown and Government Lands (King n.d.). Also, because of the lack of trained surveyors and an insufficient supply of inferior equipment, these early surveys were largely deficient and often times they did not agree with one another, even when the parcels shared a common boundary (Alexander 1920).

By 1872, the lack of general maps in Hawai‘i showing the locations of *kuleana*, grants, and *ahupua‘a*, and the relative positions of the parcels with respect to each other and the surrounding topography, lead to the establishment of the Hawaiian Government Survey (Alexander 1920). By this date the Hawaiian Government itself, because of the lack of general maps, was not certain which lands it had left and which lands were already in the hands of private owners (Mitchell 1930). To this end, in 1879 an attempt was made by F. S. Lyman, to compile all the land grant surveys of central Ka‘ū into a single map (Hawai‘i Registered Map No. 575) showing the locations of the grant parcels and *ahupua‘a* boundaries, including Grant No. 2113:2 to Wailuu (Figure 14). This map, while useful for visualizing which of the Government Lands had been sold in this part of Ka‘ū, still suffered from some of the same inaccuracies that plagued the early surveys in Hawai‘i.

The Hawaiian Government Survey, in an attempt to standardize the government maps, introduced a system of surveying by the true meridian instead of the magnetic, and established carefully located and marked points across the islands from which the direction of the true meridian could be easily obtained. This improved the methods and standards employed by the local surveyors prior to 1872 (Alexander 1920). According to King, after the establishment of the Hawaiian Government Survey, “the first steps taken were to determine the latitudes and longitudes of initial stations, to measure base lines and to extend a chain and network of geodetic stations, over the whole group of islands, as a foundation to which all existing surveys could be coordinated and to which all subsequent surveys could be connected” (Alexander 1920:11–12).

By 1882 the construction of geodetic stations commenced on the Island of Hawai‘i, beginning along the western coast and continuing southward around the island until all stations were completed. The earliest stations were built of whatever local material was at hand, but later the stations were standardized (Mitchell 1930). The first general maps of the Ka‘ū District produced using the new system of geodetic stations were completed by the mid-1880s. Hawai‘i Registered Map No. 1409, which shows *ahupua‘a* boundaries and the Royal Patent Grants, including Grant No. 2113:2 (Figure 15), was compiled by J. F. Brown in September of 1885, principally from surveys completed by F. S. Lyman for land grant parcels that had already been sold. An 1887 map of a section of Ka‘ū prepared by M.D. Monsarrat (Hawai‘i Registered Map No. 1455) shows much more detail than the 1885 map. This map shows not only the land grants, but also the *kuleana* awards, some physical features of the landscape, rock walls and other stone constructions such as pens, piles, and house sites, some vegetation, and some of the features of the Hutchinson Sugar Plantation that were extant at that time. The map also lists the land divisions that make up the present day *ahupua‘a* of Kaunāmano in their correct order, shows the general locations of several named places within the district, and gives names to most of the points along the coast. On Hawai‘i Registered Map No. 1455, *hala* trees are shown growing near the southern corner of the current study parcel (Figure 16).

The Hutchinson Sugar Company (1884-1972)

In 1880, after the death of Alexander Hutchinson, the Nā‘ālehu Plantation was purchased by Claus Spreckels (1828-1908) and William G. Irwin (1843-1914). Four years later, on September 11, 1884, they incorporated as the Hutchinson Sugar Plantation Company. That year, the plantation had only about 7½ square miles (4,800 acres) planted in sugarcane (Campbell and Ogburn 2004). The company maintained its headquarters in Nā‘ālehu, and operated two mills, one at Nā‘ālehu (Figure 17) and one at Honu‘apo. Sugarcane on the plantation was grown from sea level up to the 2,000 foot elevation, but the bulk of the fields were located above the 1,600 foot level (Campbell and Ogburn 2004). The fields were entirely dependent on rainfall for water. Harvested cane was transported from the fields to the mills by flume and animal drawn carts throughout the 1880s. Labor camps, generally separated by ethnicity, were spread across the plantation in close proximity to the fields and mills. A small dairy and a large cattle ranch, commonly known as the Ka‘alu‘alu Ranch, were operated in conjunction with the plantation on fee simple and lease hold lands situated mostly *makai* of the cane fields.

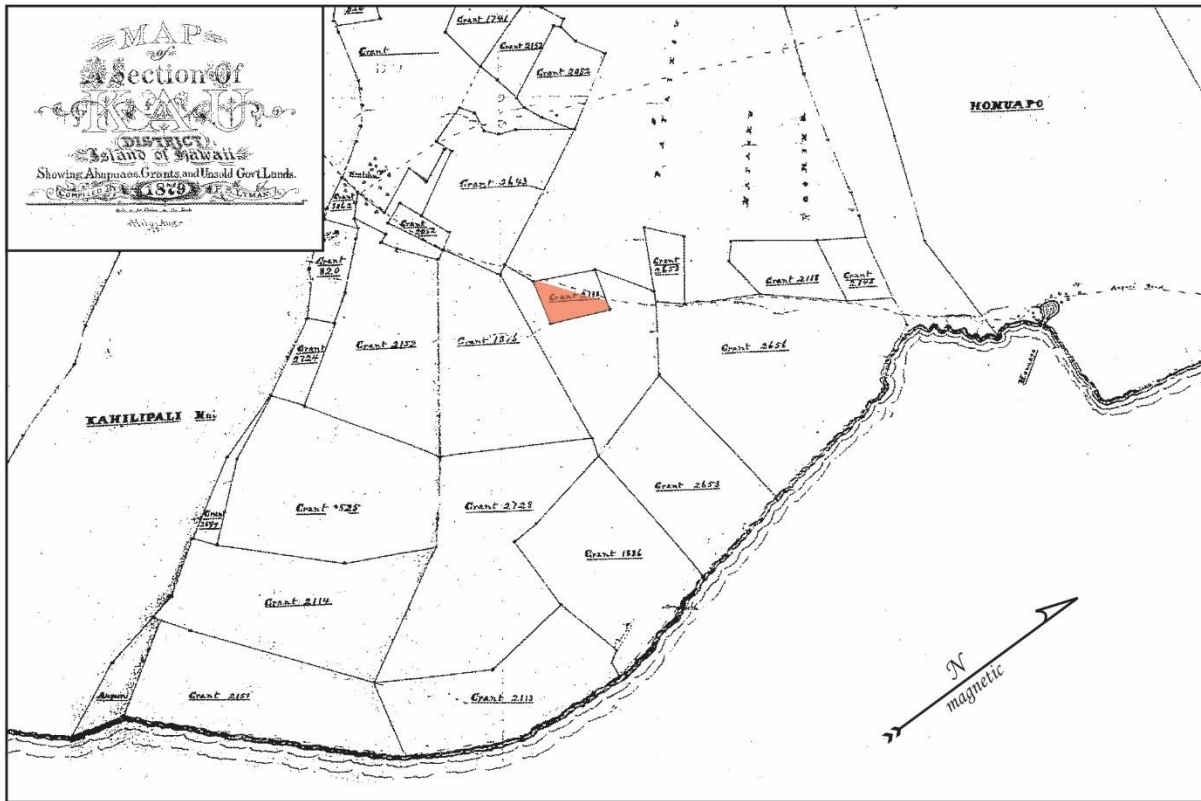


Figure 14. Portion of Hawai'i Registered Map No. 575 (Lyman 1879) with the current study area shaded red.

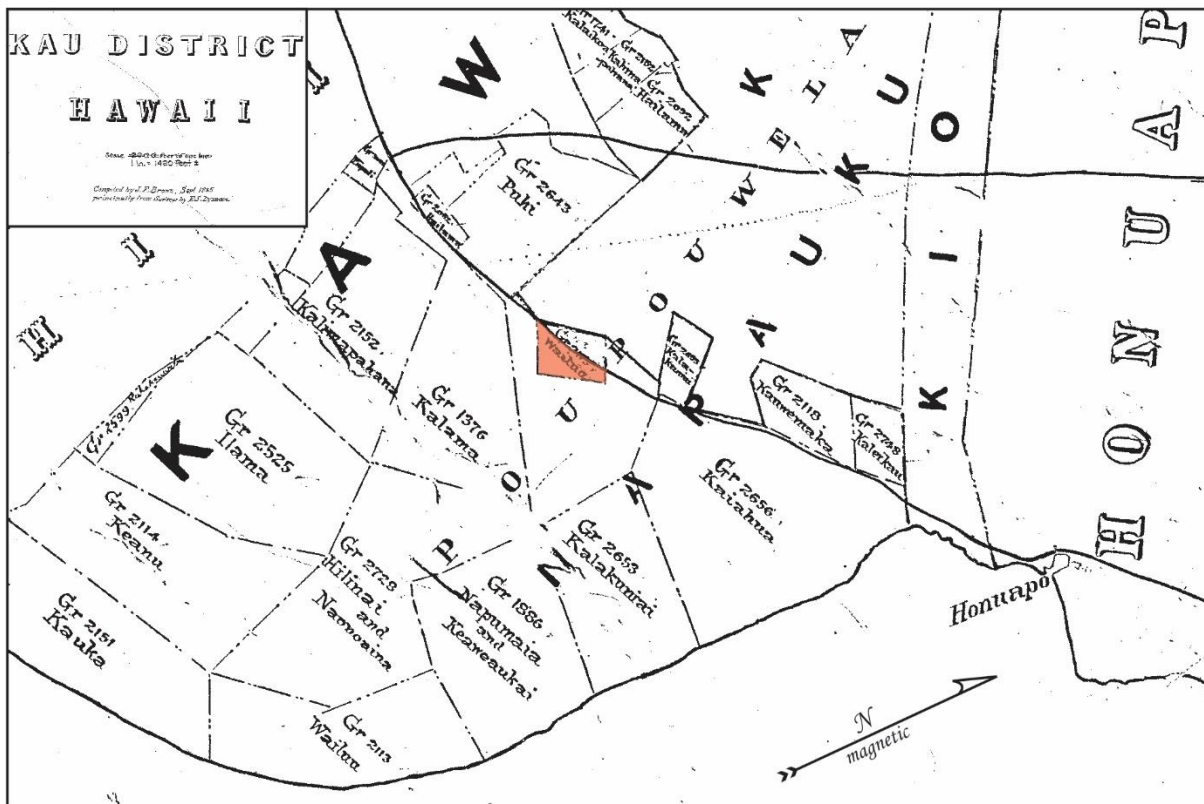


Figure 15. Portion of Hawai'i Registered Map No. 1409 (Brown 1855) with the current study area shaded red.

2. Background

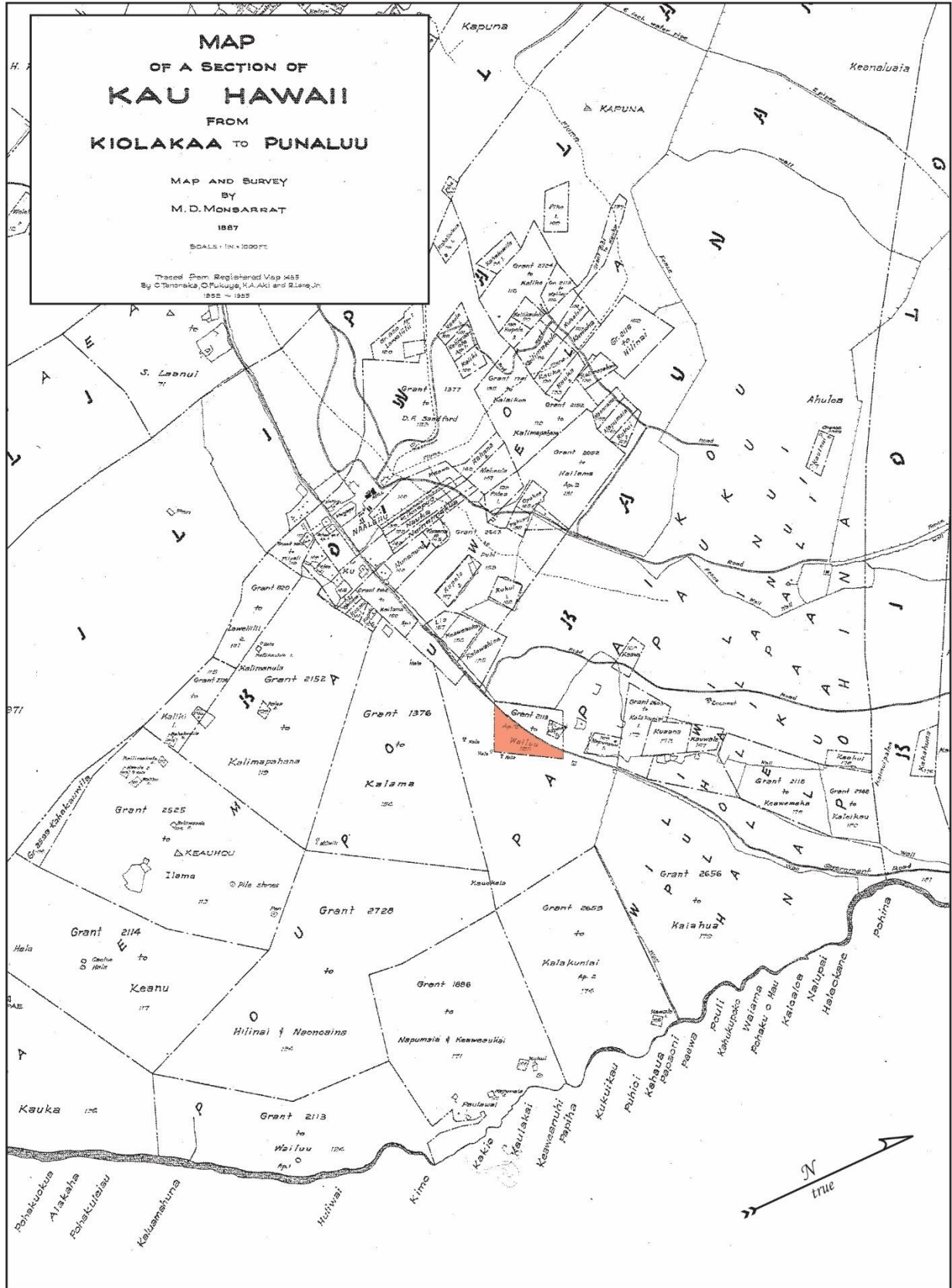


Figure 16. Portion of Hawai'i Registered Map No. 1455 (Monsarrat 1887) with the current study area shaded red.



Figure 17. Undated photograph of Nā‘ālehu Sugar Mill workers spreading bagasse near the current study area, with the Town of Nā‘ālehu in the background (from Elwell and Elwell 2005).

The Hutchinson Sugar Plantation Company continued to acquire lands in the vicinity of Nā‘ālehu Town throughout the latter part of the nineteenth century, vastly expanding its ranching and sugar growing operations. The plantation purchased the neighboring Hīlea Sugar Company in 1889, adding more land and another mill to its holdings (Dorrance and Morgan 2000). On April 5, 1899 a twenty-five year lease for the *ahupua‘a* of Wai‘ōhinu (totaling 15,210 acres) was secured. On October 22, 1890 a new fifteen year lease from the Government for the unsold portions of Kāwala, ‘Aemalo, Poupouwela, Kaunāmano, and Pāpa‘ikou 1-3 *ahupua‘a* (totaling 2,880 acres; the area formerly leased to O. B. Spencer) was signed. In 1891 additional fifteen-year leases (totaling 7,832 acres) were acquired from the Government for the unsold remnants of Hi‘ona‘ā, Nīnole, and Wailau *ahupua‘a* (Mitchell et al. 1903). Many of the privately owned *kuleana* and grant parcels in the central Ka‘ū District were also either leased or purchased by the plantation. Ownership of Grant 2113:2, which remained in privately owned throughout this period, appears to have passed from Wailuu to David Waiau and his wife, Kahoopai Waiau.

By the 1890s, sugar planters in Hawai‘i had come to control about eighty percent of all arable land in the islands, yet they remained unsatisfied. Under the threat of force they, and other businessmen in the islands, pushed through a so-called Bayonet Constitution that turned the monarch into little more than a figurehead (Kuykendall 1967). Then on January 17, 1893, Queen Lili‘uokalani, who had succeeded her brother Kalākaua to the throne in 1891, was overthrown in a nearly bloodless coup by a group of foreign businessmen supported by U.S. troops. These businessmen established a Provisional Government of the Republic of Hawai‘i headed by Sanford B. Dole (1894-1898). Most Hawaiians opposed the overthrow of Lili‘uokalani, as did incoming President Grover Cleveland (Kuykendall 1967). Once Cleveland left office in 1898, however, Hawai‘i was annexed to the United States. Two years later, in 1900, Hawai‘i formally became a territory of the United States.

A four-and-a-half mile-long railroad used for hauling cane from the Nā‘ālehu Mill to the Honu‘apo landing, passing *makai* of the current study area, was added to the plantation in ca. 1890 (Condé and Best 1973; Planters’ Labor and Supply Company 1891). Another line was also built between the Hīlea Mill and the harbor. The locomotive *Kilauea* was purchased in 1890 to pull 30 wooden cane cars, but did not arrive at the plantation until 1891. During the intervening time period, between the completion of the tracks and the arrival of the locomotive, mules were used to pull wooden carts long the railroad (Condé and Best 1973; 18). The following description of the Honu‘apo railroad appeared in *The Planters’ Monthly* in January of 1891:

The Hutchinson Sugar Plantation at Kau has just completed a railroad, 36 inches gauge, from Honuapo to a point about two and a half miles below Naalehu Mill, and a Baldwin locomotive, lately sent up, is in successful operation. This railroad was constructed to take off some four hundred acres of cane, which could not have been conveyed to the mill in any other way, but it will be employed also to carry the sugar from the Naalehu Mill to the Honuapo landing. The railroad is about four and a half miles in length, the grade at the start being 3½ feet, which was necessary to ascend the steep hills above Honuapo. (Planters’ Labor and Supply Company 1891:2)

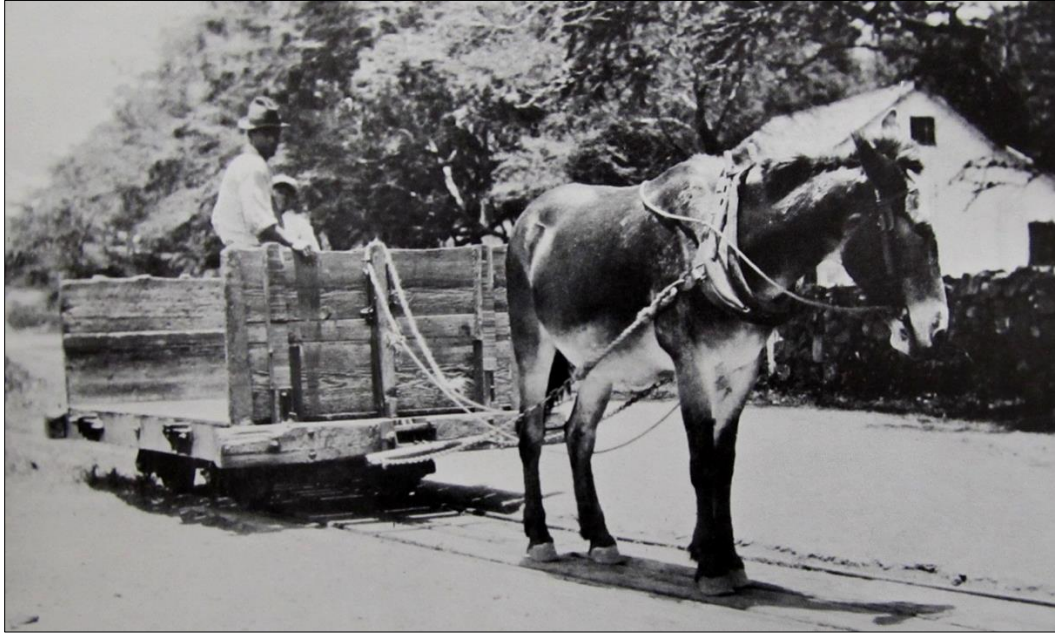


Figure 18. A mule pulling a wooden cart along the Nā‘ālehu-Honu‘apo railroad in ca. 1890 (from Condé and Best 1973).

A map of the “Hutchinson Sugar Plantation Company Showing Cane Lands, Water Sources, etc.” reduced and drawn by R. C. Cridge with new surveys by J. K. Kapuilani in August of 1902 (accessed at the Edmund Olson Trust Archive) shows the extent of sugarcane cultivation in and around Nā‘ālehu soon after Hawai‘i became a U.S. territory. As shown on that map, the current study area, which remained privately owned in 1902, is situated directly *makai* of Field No. 26, on the opposite side of the Government Road. In addition to field boundaries, the locations of camps, roads, railroad tracks, flumes, springs, and reservoirs are also depicted on the map.

In October of 1905 the lease to the Hutchinson Sugar Plantation Company for a 1,941.82 acre tract of Government land in Kāwala-Kaunāmano expired. This tract included all unsold portions of the Government lands above and to the east of the Nā‘ālehu Mill, stretching almost to Honu‘apo Bay. At the time that the lease expired 964.72 acres were planted in sugarcane and 977.10 acres were used as pasture land (Wall 1907). The government declined to renew the lease and instead divided the land into 32 lots known as the Kaunāmano Homesteads that were either sold as grant parcels or leased. The lots ranged in size from roughly 25-50 acres in areas planted in cane, to 50-125 acres in areas used for pasture. A survey map of the homesteads prepared by George F. Wright in October-November 1906 (Hawai‘i Registered Map No. 2340; 20) shows not only the newly created lots, but also the boundaries of the older LCAw. and Grant parcels in the area (including Grant No. 2113:2 to Wailuu), the areas of cane and pasture, the plantation roads and camps, some of the plantation infrastructure, and the topography of the lands; this map was reduced and cleaned up by Robt. O’Neal in May, 1912, and used as the base for Territory of Hawai‘i Plat 107 (Figure 21). Wall (1907:13) notes that “[t]he government main road and two branch roads run through the tract besides the plantation road.” In addition six miles of homestead roads were surveyed, creating access to all the lots. Only twenty-three of the lots were sold or leased (Table 4).

The current study area (at the time still a part of Grant 2113:2) was not part of the Kaunāmano Homesteads, but was bordered *mauka* by Lot 30 (across the Government Road) sold to Herbert Kin In (as Grant No. 9811) and *makai* by Lot 32, which was not sold. George Wright’s 1906 map (see Figure 20) indicates that a portion of Lot 32 to the northeast of the current study area became the County Stable Lot, while the remainder of Lot 32, through which the railroad to Honu‘apo passed, was used for pasture. That map indicates that the southern corner of the current study area was marked with “pipe in a bed of aa on small rise.” It also shows *hala* trees near the southern corner of the grant parcel, and a “rock ‘k’ at mouth of cave” near the eastern corner (outside the current study area). Robert O’Neal’s 1912 map (see Figure 21) indicates that while 31 acres of Lot 32 became the County Stable Lot, the other 123.7 acres was leased to the Hutchinson Sugar Plantation Company (General Lease No. 853) until Nov. 1, 1929 at a rate of \$122.70 per year. ‘*Apana* 1 and 2 of Grant No. 2113, including the current study area, were sold by David Waiiau and wife to the Ka‘ū Agricultural Co. on January 28, 1908 (*The Hawaiian Star*, February 19, 1908, second edition:5).



Figure 19. Portion of a map showing “Hutchinson Sugar Plantation Company Showing Cane Lands, Water Sources, etc.” (Cridge and Kapuilani 1902).

2. Background

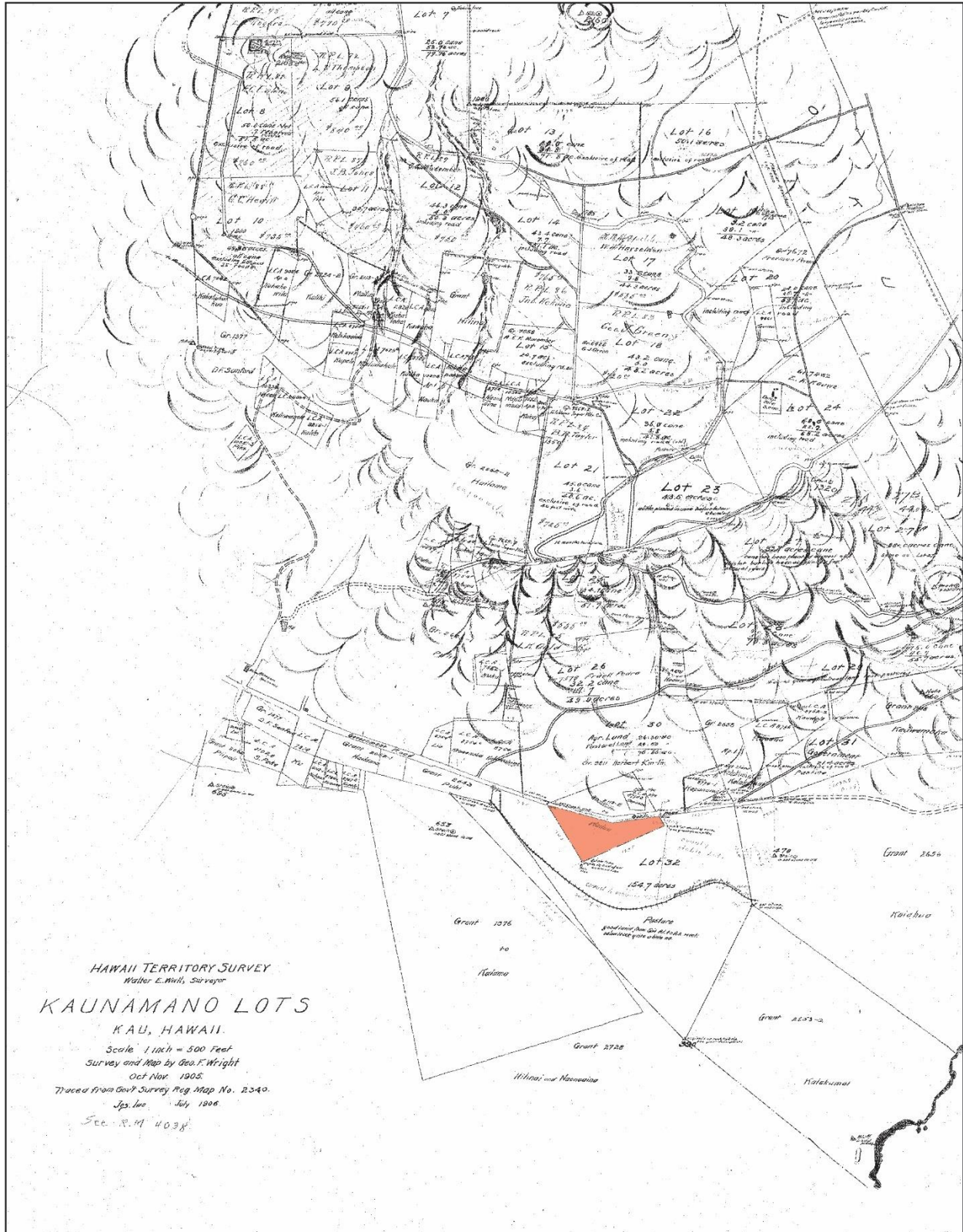


Figure 20. A portion of Hawai'i Registered Map No. 2340 (Wright 1905) with the current study area shaded red.

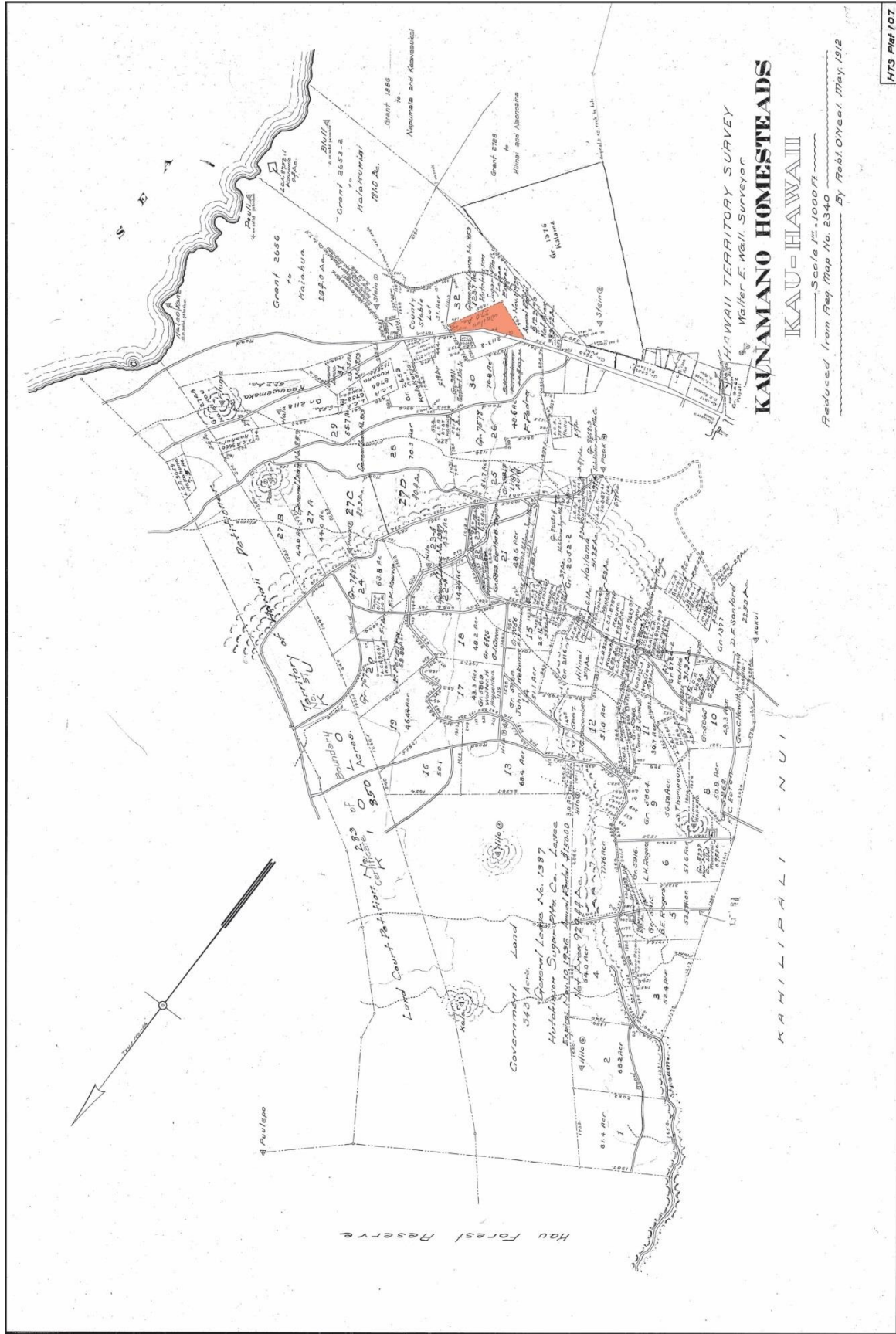


Figure 21. Territory of Hawaii i Plat 107, (O'Neal 1912) with the current study area shaded red.

Table 4. Distribution of the Kaunāmano Homestead lots created in 1905.

<i>Lot #</i>	<i>Area (acres)</i>	<i>Lessee</i>	<i>Lot #</i>	<i>Area (acres)</i>	<i>Lessee</i>
1	81.4	J. G. Andrews	17	43.3	W. H. Hayselden
2	69.1	Awana Akana	18	48.2	Geo. J. Green
3	52.9	Martin Martinson	19	48.3	Not Taken
4	64.5	G. K. Kawaha	20	59.7	Not Taken
5	55.0	Samuel E. Rogers	21	48.6	Bertha B. Taylor
6	51.6	L. H. Rogers	22	41.8	Bertha B. Taylor
7	79.0	M. P. Apiki	23	50.2	(General Lease)
8	50.8	Floyd B. Eaton	24	68.2	E.K. Kauwe
9	56.1	L. S. Thompson	25	51.7	Lillie K. Auld
10	49.3	George C. Hewitt	26	68.6	Frank Pedro
11	30.7	Jane B. Jones	27	83.7	Chas. Auld
12	50.3	Chas. G. Macomber	28	70.3	Not taken
13	71.8	Not taken	29	55.7	Not taken
14	51.1	John Kekuna	30	69.5	Herbert Kin In
15	24.7	Not taken	31	21.4	Not taken
16	50.5	Not taken	32	154.7	Not taken

The current study area, once it became part of the fee-simple land holdings of the Hutchinson Sugar Plantation Company in 1908, was used primarily as pasture. The plantation's cattle ranch, founded in ca. 1868 as Ka'alu'alu Ranch and later operated as the Nā'ālehu Ranch and Dairy, Inc. and the Sea Mountain Hawai'i Ranch, supplied meat and dairy to the plantation's employees, and also sold its products on the open market (Henke 1929). The Hutchinson Sugar Plantation Company Annual Reports for the years 1903 to 1969 (available at the University of Hawai'i at Hilo Mo'okini Library) give yearly accounts by the manager of the plantation's ranch. The reports include observations about rainfall and grazing conditions, improvements (i.e. land clearing, grass planting, fence lines/walls added or repaired, etc.), the condition of livestock (i.e. cows, horses, mules, oxen, etc.), the breeding program, the number of cattle purchased, sold, and slaughtered, general conditions on the ranch, expenses, purchases, and the dairy operations. The reports commonly contain generic statements about the number of acres cleared, miles of fence lines installed, and the average weight, number, and price of cows sold. In general, the reports indicate that in years when labor was scarce at the Hutchinson Plantation, less clearing of ranch land was undertaken, in order to keep up with the planting, harvesting, and milling of sugarcane. When labor was plentiful clearing, fencing, and seeding of grasses was conducted first on the leased properties, as the government lease agreements required a certain amount of improvement every year on the leasehold lands.

In years with little rain the condition of the pastures and the availability of water for the cattle was also a topic of concern. During droughts cattle were typically kept in higher pastures away from the coast where slightly more forage was to be found. In the early years of the plantation the cattle were also fed molasses to keep them alive when there was not enough food in the pastures. Adding waterlines to the *makai* pastures was a priority of the plantation during the early 1900s. In 1908-1909 severe drought conditions prevailed in Ka'ū and nearly 2,000 head of cattle on the Ka'alu'alu Ranch perished. In response, 20,000 feet of 1-inch waterline and a gasoline engine were added to the ranch to carry water further down the lands, and fence building was begun to protect the ranch from outside encroachment (H.S.P.C. 1909). The plantation report for 1912 lists a total of 4,946 head stock on the ranch (H.S.P.C. 1912).

In 1925 new dairy buildings were erected on the plantation *mauka* (west) of the current study area. A March 1931 a map of the Nā'ālehu Ranch and Dairy Inc., between Kahuku and Punalu'u (on file at the Edmund Olson Trust Archive), compiled by G. Podmore from USGS maps and surveys conducted by T. Koike, an engineer at the Hutchinson Sugar Plantation Company shows the current study area as part of the 60-acre Dairy Paddock # 9 (Figure 22). On the map rock walls and fence lines are depicted surrounding the 60-acre paddock, and a "cane flume" is shown passing just *makai* of the study area.



Figure 22. Portion of a March 1931 (Podmore 1931) map showing the properties of the Nā'ālehu Ranch and Dairy Inc. between Kahuku and Punalu'u.

The Ka‘alu‘alu Ranch holdings are briefly described in the 1954 publication, *The Gilmore Hawaii Sugar Manual*:
...Kaalualu Ranch, a subsidiary of the plantation runs a herd of 5,200 head of Grade Hereford cattle plus small herds of Aberdeen Angus and pure bred Short Horns which are used for crossing with the Herefords to produce more vigorous range animals for local conditions. The half crop in 1953 amounted to 1,250 head. Hutchinson has been operating a slaughter house but this is being closed down and the beef will marketed through Hilo Meat Co.

A dairy of 250 head of Holstein stock is also operated by the Ranch. Milk is sold to plantation personnel as well as the Hilo market. Approximately 500 acres of land are utilized for dairy pasture and 900 quarts of Grade A pasteurized milk are sold daily. (Gilmore 1954:46)

By the end of the 1950s Ka‘alu‘alu Ranch had become part of the Hawaiian Ranch Company, a subsidiary of C. Brewer & Co. According to *The Investment Dealers’ Digest*, “1958 saw the formation of the Hawaiian Agricultural Co. — wholly owned by the four Brewer subsidiary companies — which was created to manage the ranches and dairies owned by these subsidiaries,” and, “in 1961 the ranch and dairy properties of two of its subsidiary sugar companies — Hawaiian Agricultural Co. and Hutchinson Sugar Co., Ltd., were spun off into two new subsidiaries: Kapapala Ranch, Inc., and Naalehu Ranch & Dairy, Inc” (Investment Dealer’s Digest 1962:76).

Carl “Soot” Bredhoff, a 2002 inductee into the Paniolo Hall of Fame, was hired as a foreman at Ka‘alu‘alu Ranch in 1960. In an oral interview with Anna Ilima Loomis conducted on April 28, 2003 in Wailea, Maui (Bredhoff 2003), Mr. Bredhoff describes Ka‘alu‘alu Ranch and its relationship with the other ranches of the Hawaiian Ranch Company:

... the company that I went to work for was Hawaiian Ranch Company. It was a C. Brewer company, and at that time they had Kaalualu, Kapapala and Keauhou, up in the volcano. It was more or less each place had its own gang. Keauhou had one man living there and Kapapala, that gang took care of that because it was small, I think we just ran 750 cows or something. And so Kaalualu was on fee land and lease land. Hawaiian Homes land, state land and Brewer land. And it more or less went from South Point over to Punaluu, the black sand beach at Punaluu. And then Kapapala was from Punaluu all the way up to the volcano. And then there was a strip in between that was National Park. You can see it today, it’s all trees -- you can see the definite division between the pasture and the trees. And then up in the back there was Keauhou Ranch.

In 1972, C. Brewer & Co. decided to consolidate their two sugar operations in Ka‘ū, the Hutchinson Sugar Plantation Company and the Hawaiian Agricultural Company, to form the Ka‘ū Sugar Company (Campbell and Ogburn 2004). The name of the plantation was changed to Ka‘ū Agribusiness Company in 1986. As can be seen on an undated map of land ownership in Ka‘ū between Wai‘ōhinu and Honu‘apo prepared by the plantation using the 1962 U.S.G.S Nā‘ālehu 7.5 min. series quadrangle as a base (on file at the Edmund Olson Trust Archive), the study area, and the leased land surrounding it, remained part of the dairy operation throughout the second half of the 20th century (Figure 23). The 1962 U.S.G.S. quadrangle labels the area in the vicinity of the study area “Kahua Olohu.” This map lists the study area and the surrounding pasture as part of the “Sea Mountain Hawai‘i Ranch.”

Former Nā‘ālehu Dairy employee, John Replogle (personal comm.), remembers the study area as a grazing paddock, the location of a hay field, and a place where the ranch would bury cut grass to make silage used as cattle feed. Former plantation land manager, John Cross (personal comm.), recalled that that the area was once referred to as “Puakela’s hay field.” An aerial photograph taken by the NASA AMES Research Center in November, 1985, recorded what appears to be hay cutting in progress on a piece of land straddling the study area boundary (Figure 24). Also visible in the photograph is an area in the southwestern portion of the study parcel that at the time appears to have been fenced and grazed. In 1990 the Ka‘ū Sugar Company had 12,800 acres under cultivation and they produced 50,149 tons of sugar (Dorrance and Morgan 2000). By 1994 the Ka‘ū Agribusiness Company was the last operating sugar plantation on Hawai‘i Island, but it too would soon succumb to changing economy of the Islands. In 1996 the company closed its doors for good, and began selling off all its assets, including its fee-simple land holdings in Ka‘ū. The Nā‘ālehu Dairy continued to operate until the early 2000s (Rechtman 2016), and the study parcel remained in use as pasture until even more recently.

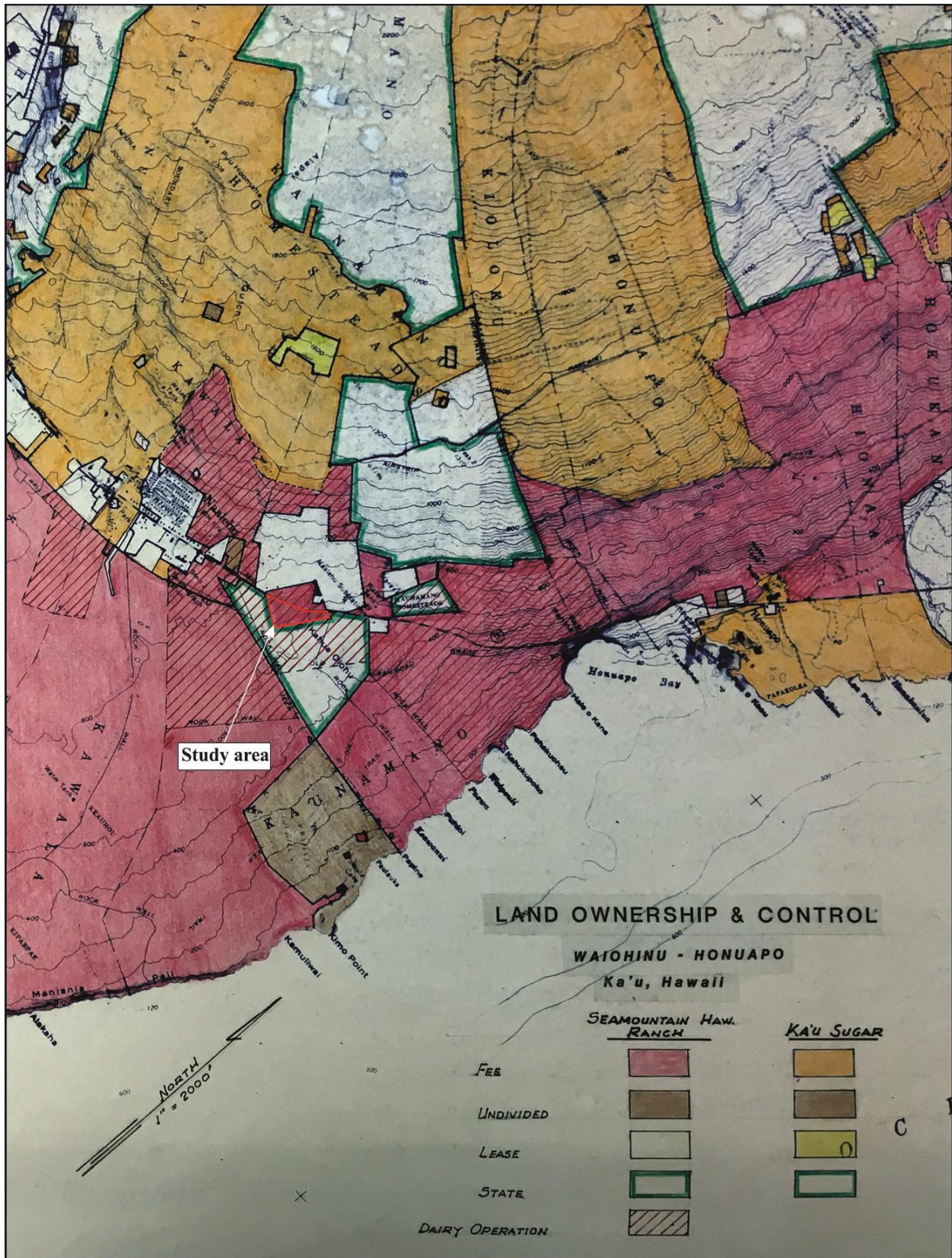


Figure 23. Portion of a map of land ownership & control in Ka'u between Wai'ohinu and Honu'apo (C. Brewer & Co. n.d.) superimposed on the 1962 USGS Nā'ālehu 7.5 min. series.



Figure 24. Aerial photograph taken in November, 1985, showing possible hay cutting within the current study area (USGS 1985). **PREVIOUS ARCHAEOLOGICAL RESEARCH**

Archaeological surveys conducted in the vicinity of the current study area (Figure 25) have documented Precontact settlement patterns and changes to the landscape resulting from commercial sugar cultivation and ranching. The earliest archaeological studies (Baker 1921; Stokes and Dye 1991; Westervelt 1905) concentrated on coastal areas containing petroglyphs, known *heiau*, and village sites. More recently, archaeological survey and testing projects have occurred near the current study area, primarily on lands *makai* of Māmalahoa Highway. One archaeological inventory survey (AIS) conducted by Guerriero et al. (2006) reported a variety of Precontact sites *mauka* of the highway that had survived in spite of extensive Historic-period sugar cultivation. In Nāʻālehu Town west of the study area, two AIS studies (Escott 2009; Rechtman 2011) recorded late nineteenth and early twentieth century domestic sites, a field inspection (Rechtman 2016) identified twentieth century features associated with Nāʻālehu Ranch and Dairy, Inc., and a field inspection (Hammatt and Shideler 2006) of the Nāʻālehu Elementary School identified no historic properties. *Makai* of the study area, two large inventory surveys (Clark et al. 2013; Haun et al. 2006) were conducted in Kāwala and Kaunāmano *ahupuaʻa*, respectively. Finally, two prior studies (Kennedy 1987; McIntosh et al. 2012) reported findings on the parcels immediately *makai* of the current study area. Table 5 presents a chronological list of relevant prior archaeological studies conducted in the vicinity of the study area. The findings of these studies are described in further detail below. Unless otherwise indicated, all State Inventory of Historic Places (SIHP) site numbers discussed below are prefixed with the state, island, and quadrangle code “50-10-74.”

The Rev. W. D. Westervelt (1905), an amateur archaeologist, photographed and described a panel of petroglyphs in a ravine near the town of Nāʻālehu in Kaunāmano Ahupuaʻa (see Figure 25). The petroglyphs described by Westervelt were visited by Stokes (1910), who described them in a survey article on Hawaiian petroglyphs. Stokes’ article includes photographs of the two panels of images, and notes the existence of other petroglyphs in a cave in upland Waiʻōhinu, which he was unable to visit. In 1920, Albert S. Baker also visited the petroglyphs. Baker’s (1921) article entitled “Petroglyphs of Kau” in Thrum’s Hawaiian Annual and Almanac for 1922 describes how to get to the petroglyphs in Kaunāmano Ahupuaʻa, and briefly mentions additional petroglyphs that were found a quarter of a mile away.

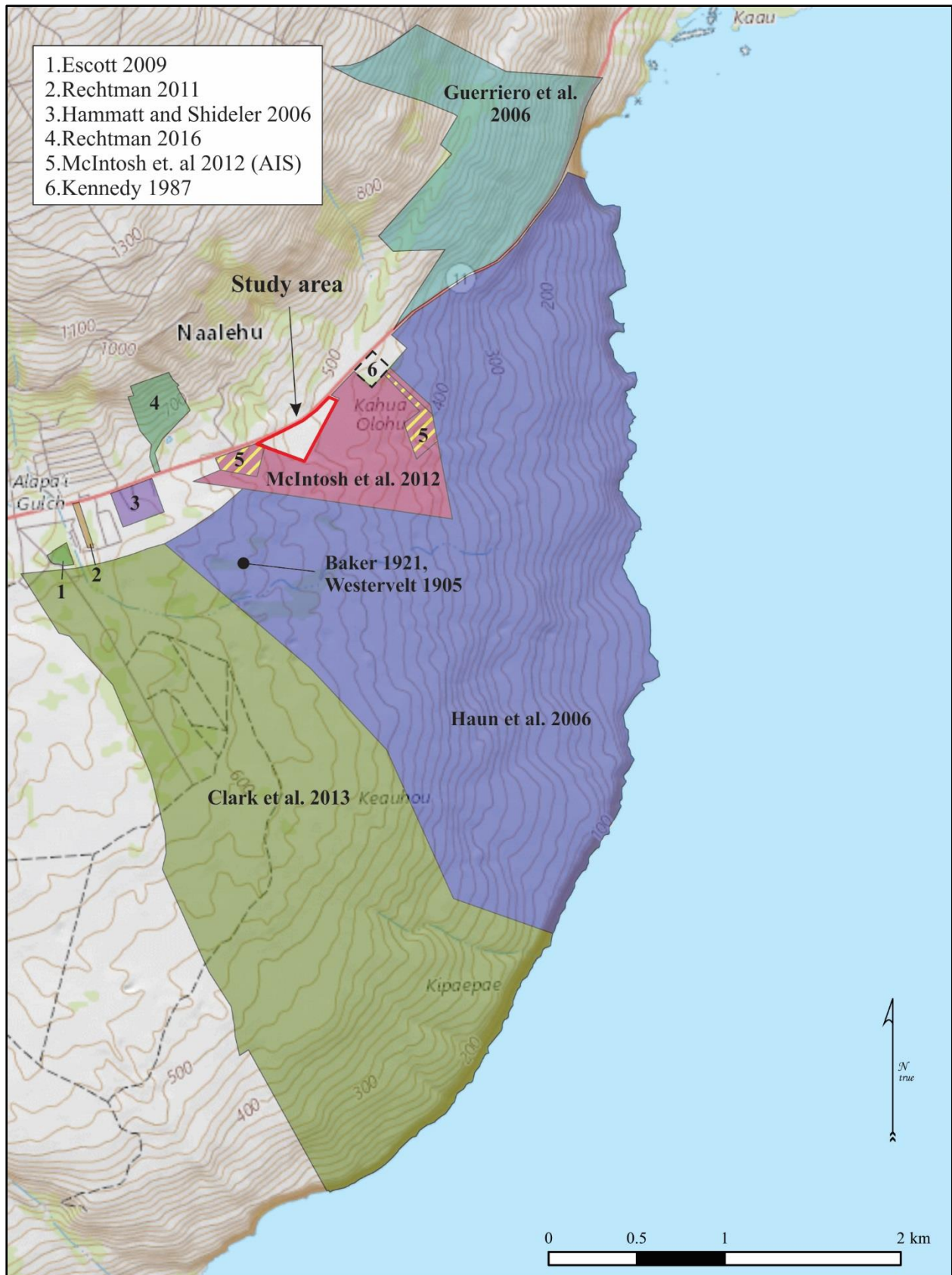


Figure 25. Prior archaeological studies in the vicinity of the current study area.

Table 5. Archaeological studies conducted in the vicinity of the current study area.

<i>Author</i>	<i>Year</i>	<i>Type</i>
Westervelt	1905	Petroglyph
Baker	1921	Petroglyph
Kennedy	1987	Archaeological Assessment
Guerriero et al.	2006	Archaeological Inventory Survey
Hammatt and Shideler	2006	Literature review and field check
Haun et al.	2006	Archaeological Inventory Survey
Escott	2009	Archaeological Inventory Survey
Rechtman	2011	Archaeological Inventory Survey
McIntosh et al.	2012	Archaeological Inventory Survey
Clark et al.	2013	Archaeological Inventory Survey
Rechtman	2016	Field Inspection

In 1987, Joseph Kennedy (Kennedy 1987) conducted an Archaeological Assessment of a portion of TMK: (3) 9-5-012:002 located to the northeast of the current study area within Kaunāmano Ahupua‘a. The survey was conducted for the then proposed Ka‘ū Police station. It included a visual inspection of the surface of the study area and shovel testing. Kennedy (1987) did not record any sites, although he did note the presence of a Historic ranch wall. No further work was recommended as a result of the assessment.

In 2004, Archaeological Consultants of the Pacific, Inc (ACHP) conducted an Archaeological Inventory Survey (AIS) (Guerriero et al. 2006) of a 257.9 acre property located just inland of Honu‘apo Bay in Kī‘olokū and Kaunamano *ahupua‘a* to the northeast of the current study area (see Figure 25). A large portion of that property had been used for sugarcane cultivation, however, four site complexes were recorded at elevations between 600 and 700 feet elevation. Site 24381 is a Precontact/ early Historic habitation complex comprising thirty-five features that include rock walls, animal enclosures, platforms, paving, and a mortared privy. Site 24382 is a Precontact/early Historic complex comprising eighteen features that include enclosures, raised platforms, walls, modified outcrops, and paving; this site was interpreted to be a habitation and possible religious site. Site 24383 is a Precontact/early Historic habitation site comprising twelve features that included rock walls, an animal enclosure, platforms, a stone bridge, and an altar/shrine. Site 24384 is a Historic boundary wall likely associated with ranching and sugarcane cultivation activities during the middle part of the 20th century.

In 2006, Cultural Surveys Hawai‘i prepared a report (Hammatt and Shideler 2006) summarizing an archaeological literature review and field check of the Nā‘ālehu Elementary and Intermediate School property (TMK: (3) 9-5-009:006) located adjacent to Māmalahoa Highway in Kaunāmano Ahupua‘a, southwest of the current study area (see Figure 1). The purpose of the study was to provide archaeological recommendations regarding the appropriate scope of work for proposed wastewater system improvements at the school. Although no archaeological sites were recorded by Hammatt and Shideler (2006) on the property as a result of the field check, given the proximity of the school to several *kuleana* parcels and the fact the Nā‘ālehu School itself is on the Hawaiian Register of Historic Places, it was recommended that an archaeological monitor be on-site for any subsurface excavation associated with the proposed wastewater system improvements.

In 2009, Scientific Consulting Services (Escott 2009) conducted an AIS of a 3.098 acre parcel (TMK: (3) 9-5-021:035) located in Kāwala Ahupua‘a southwest of the current study parcel in the Town of Nā‘ālehu (see Figure 25). As a result of the survey, Escott (2009) recorded three archaeological sites including a Historic to early modern-era community cemetery (Site 26668), a Historic to early modern house site (Site 26669), and the remains of three early modern bath houses (Site 26670). The cemetery, a 0.42-acre rectangular area along the northern border of the study area, contained sixteen features including rough stone pavements, terraces, small rock mounds, cement graves, and three headstones, fifteen of which Escott (2009) considered likely to contain burials. Dates present on two of the headstones indicate that the deceased individuals were interred in 1908 and 1921, respectively. The construction of the house site, likely during the late nineteenth century, appeared to predate the use of the cemetery. The house complex contained twenty-five features that included rock walls, enclosures, a platform, clearing and trash mounds, a hog wire fence, a house foundation, terraces, and several other cement foundations associated with water supply and

bathing. The remains of the three bath houses were found separate from the house site and were associated with single-men cottages constructed by the Hutchinson Plantation north of the Escott (2009) study area. By the time of the Escott study, the cottages had been demolished, but the cement foundations of the bath houses were still present in close proximity to the cemetery.

In 2011, Rechtman Consulting, LLC conducted an AIS (Rechtman 2011) of a 2.24 acre parcel (TMK: (3) 9-5-09:003) in Nā'ālehu Town adjacent to Māmalahoa Highway, west of the current study area (see Figure 25). The study parcel, located within Kāwala Ahupua'a, is currently the location of a Bay Clinic, Inc. health care facility, which occupies a portion of the former LCAw. 7314 to Ku. As a result of the survey, six archaeological sites were identified. The sites included a twentieth century residential complex (Site 28925) with eight recorded features (a house, a wall, a garage foundation, a cement slab, a concrete pad, a rock and cement stove, a concrete slab, and a low rock alignment), three stacked stone wall segments (Site 28926, Site 28927, and Site 28990) that may have had origins dating to the middle of the nineteenth century, a core-filled wall enclosure (Site 28928) that appeared to post-date the Site 28927 and 28990 walls, and a grouping of four rock piles (Site 28929), associated with either nineteenth or twentieth century land clearing activities, possibly linked to cultivation practices. Archival and oral-historical information indicates that the residence on the property (in which the health care facility is currently housed) belonged to Mr. James Takemoto and his wife Tome Murakawa, who built the house in 1938 and lived in it until their deaths (hers in 1975 and his in 1989). The Takemotos were both significant figures in the local community, Ms. Takemoto served as a school teacher at Nā'ālehu School and Mr. Takemoto was the Postmaster. Following Mr. Takemoto's death in 1989, the property was sold by his son and the ancillary structures (garage, *furo*, etc.) were demolished. Rechtman (2011) associated the other sites recorded on the property with the Historic and Modern use of the parcel for habitation and agricultural related purposes.

In 2012, Pacific Legacy, Inc. conducted an AIS (McIntosh et al. 2012) of 17.1 acres comprising two proposed locations for a waste water treatment plans (see Figure 25). One of these areas was located adjacent to the western corner of the current study area. In addition to the inventory-level survey conducted within the proposed treatment plant locations, a reconnaissance level survey was conducted of the entire surrounding State-owned parcel (TMK: (3) 9-5-012:002). As a result of the combined AIS and reconnaissance survey, twenty-five sites were identified (Figure 26). Those eight sites were recorded in detail and included a lava tube containing a burial (Site 25266), a stone mound—possibly a burial—and stone platform (Site 29385), two cattle walls (Sites 29386 and 29391), a section of railroad bed (Site 29390), a stone wall backed with bulldozed soil to form a terrace (Site 29387), wall segments (Site 29388), and a petroglyph (Site 29389). The remaining seventeen sites were identified in the reconnaissance-level survey area included four petroglyphs, modified outcrops, a terrace, an L-shaped wall, ranch walls, stone wall segments, a complex with possible burial platforms, a possible Historic complex, an enclosure, and, most relevant to the current study, Site 23291, which was interpreted to be Kahua 'Olohū *Makahiki* field.

McIntosh et al. (2012:90) described Kahua 'Olohū as follows:

SIHP Number: [Site number 29231 is added by hand to the final draft report]

Site Type: Makahiki Field

Field Number: T-014

No. Features: 1

Artifacts: None Observed

Midden: None Observed

Coral: None Observed

Skeletal Remains: None Observed

Possible Age: Pre-Contact

Possible Function: Gaming Ground

Condition: Good

Description: This site is a large flat open grassy area situated on the makai side of the belt highway. It is partially located on the DLNR property [McIntosh et al.'s study area] and partially on land [the current study area] owned by a private landowner (which the state is reportedly attempting to acquire through exchange). This site, which ethnohistoric accounts suggest is a traditional makahiki field, is currently used for pasture and is split between the two landowners. The gaming ground is a large, flat area physical [sic] characterized by a lack of rock and basalt outcropping. Rock appears to have

been intentionally cleared from the field. A low ridgeline extends along its southern and eastern edges. There are no apparent “man-made” physical features defining the makahiki other than the lack of rock in the field. A survey of the boundaries of the entire site was not completed since a large portion of the field is situated on private land. East of the field, the land slopes slightly upward with scattered rocks and basalt outcroppings. It is in this area that the Site T-011, 015, and 016 petroglyphs are located. The western edge of the cleared gaming field appears to be visible in aerial photographs, but since this edge is located on property to which the archaeological survey did not have access it was not possible to delineate the exact western boundary. This adjoining property is presently covered in high grass. The ground also appears to slope upward from the western edge of the field, and this area may have served as natural “bleechers” [sic] associated with the makahiki field.

In Kaunāmano Ahupua‘a, located *makai* of the current study area (see Figure 25), Haun and Associates conducted an AIS (Haun et al. 2006) of 1,360 acres (TMKs: (3) 9-5-011:001, 004, 005, 006, and (3) 9-5-012:001). The Haun et al. (2006) inventory survey report has not yet been submitted to DLNR-SHPD for review, but the findings presented in the draft report are summarized here. Despite widespread mechanical disturbance within the project area, 444 archaeological sites (Sites 25072-25515) containing a total of 3,935 individual features were identified as a result of Haun et al. (2006) survey. The vast majority of which (n=380 sites; 86%) are thought to have been utilized solely during Precontact times. Seventeen sites (4%) exhibited evidence of both Precontact and Historic utilization, twenty-three (5%) of use during Precontact and Modern times, and the use of four sites (1%) spanned all three of the time periods. Nineteen of the sites (4%) are Historic in age and utilization, and one of the Historic sites was also utilized during Modern times. Roughly twenty percent of the features (n=762) recorded were interpreted as having been used for temporary and permanent habitation-related purposes. One hundred and sixty-one permanent habitation sites comprised of 456 features (281 enclosures, forty-nine platforms, twenty-two terraces, nineteen lava tubes, nineteen lava blisters, nineteen walls, eighteen modified sinkholes, sixteen pavements, four alignments, four walled terraces, three walled platforms, one mound, and one midden scatter) were identified. In addition, 219 temporary habitation sites comprised of 306 features (108 C-shapes, 105 lava tube chambers, twenty-four lava blisters, twenty enclosures, nineteen U-shapes, thirteen L-shapes, eight terraces, five modified sinkholes, three platforms, and a wall) were recorded.

Lava tubes and lava blisters are numerous within the coastal *pāhoehoe* flows of this portion of Ka‘ū. Haun et al. (2006) identified 276 of these natural features within their project area, 173 of which (63%) exhibited signs of human occupation or use. The remaining 103 lava tubes and blisters, the majority of which were small blisters or tubes with marked ceiling collapse, were carefully examined for cultural remains or internal modifications, but no evidence of utilization was identified. Forty-four lava blisters were recorded by Haun et al. (2006), of which 89% (n=39) were used solely for shelter purposes; twenty-four were used for temporary habitation purposes (one of these also contained a burial), nineteen were associated with permanent habitation sites (two of which were used for storage purposes, and one contained a burial), and one was used only for burial purposes.

Haun et al. (2006) also recorded several special function features including two canoe sheds and seventeen features at eight sites that were interpreted as having been used for ceremonial purposes as well as eight *papamū*, fifty-one salt pans, fourteen trails, and fifteen cairns. In addition, forty-eight petroglyphs were identified at nine locations within the Haun et al. (2006) project area. The petroglyphs included thirty-eight anthropomorphic and unidentifiable figures, four names, two sets of initials, one letter, one geometric design, and one image that appeared to represent a bird. Three of the petroglyphs were lone images, one of which was associated with a permanent habitation/ceremonial complex, the others were found in groups of two to sixteen images. The majority of the images were pecked into bare *pāhoehoe* surfaces, but three sets of images are associated with lava tubes, including two panels at Site 25079 that were first described by Westervelt in 1904 (see above).

More than seventy-five percent (n=2,982) of the features were interpreted as having been used for Precontact agricultural purposes, and were described as a single site complex (Site 25515), which covered nearly their entire study area. Features subsumed by this agricultural site designation include 1,821 mounds, 1,085 modified outcrops, forty-four walls, fourteen enclosures, five terraces, thirteen depressions, a platform, and a filled crack. Haun et al. (2006) reported the highest agricultural feature density in the central and north-central portions of the project area, at elevations ranging from 150 to 600 feet above sea level. According to Haun et al. (2006) the increase in agricultural feature density also corresponds to the start of the 40-inch rainfall gradient.

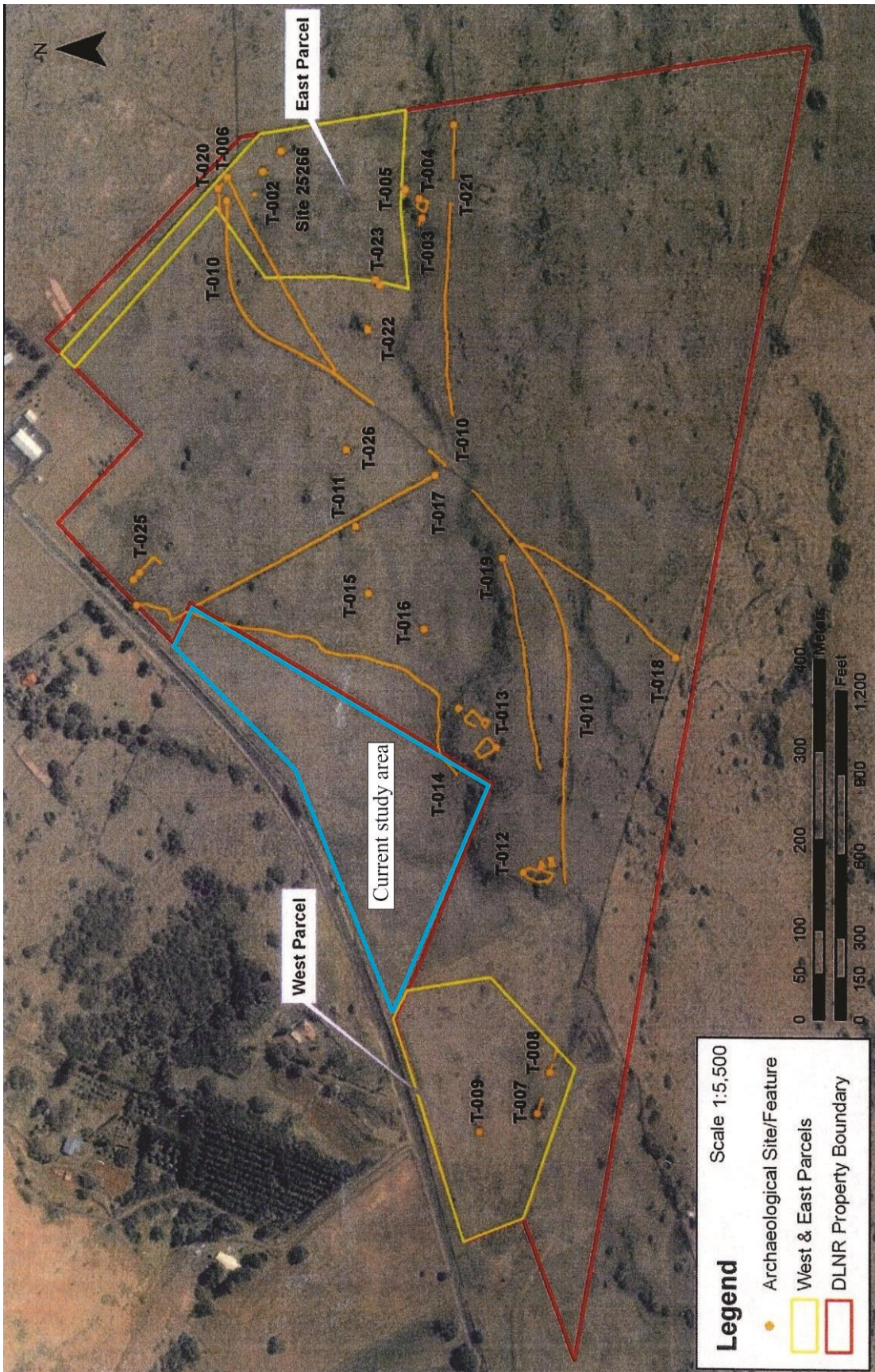


Figure 26. McIntosh et al. (2012:23) site location map showing the current study area.

Haun et al. (2006) excavated fifty-four test units at a total of forty-nine sites. The tested features included fourteen burial platforms, five permanent habitation/burial platforms, one burial terrace, one temporary habitation/burial platform, one burial lave blister, eighteen permanent habitation platforms, one permanent habitation terrace within a lava tube, one permanent habitation terrace in a sinkhole, three temporary habitation platforms, three temporary habitation terraces, two temporary habitation terraces in a lava tube, one agricultural filled crack, one agricultural platform, and one agricultural terrace. Food remains recovered from the excavations included marine shell and fish, pig, dog, and bird bone. Volcanic glass flakes were the most common traditional Hawaiian artifacts observed or recovered from the test excavations. Other indigenous artifacts included basalt flakes and cores, hammerstones, abraders, adzes, net sinkers, groundstone, an *ula maika*, a poi pounder fragment, fishhooks, *Cypraea* sp., octopus lures, shell scrapers, a wooden digging stick, a fire starter, and worked bone, coral, and marine shell.

Human burials were identified at thirty-five features within thirty-two of the sites recorded by Haun et al. (2006). The burials included five platforms and a lava blister that were associated with six different permanent habitation sites, and seven lava tubes and a lava blister that were also used for temporary habitation purposes. The burial features, which contained a minimum of fifty-seven individual sets of human skeletal remains, included twenty-one platforms, ten lava tubes, three lava blisters, and a terrace. Haun et al. (2006) note that the burial platforms and terraces within the Kaunāmano project area have vertically-faced sides with level, well-paved, upper surfaces, and that they are typically smaller than the platforms used for habitation.

In Kāwala Ahupua‘a immediately south of the current study area (see Figure 1), Rechtman Consulting, LLC conducted an AIS (Clark et al. 2013) of TMK: (3) 9-5-010:001. Their entire study area had been the subject of a prior reconnaissance survey (Rechtman 2007) and a subsequent AIS for a proposed 3.2-kilometer (10,498-foot) long, 100-foot (30-meter) wide road corridor that mostly followed existing ranch roads across a portion of the subject parcel (Clark and Rechtman 2009). As a result of these two earlier studies, seven sites (Sites 26881-26887) containing various Historic features, Precontact features, and lava tubes were documented. The seven sites included a core-filled wall (Site 26881), a crude enclosure (Site 26882), and a low-lying, two-tiered platform (Site 26883) located in the northwestern portion of the parcel; and a Historic/modern cattle corral complex (Site 26884), a core-filled wall (Site 26885), a modified outcrop (Site 26886), and a large enclosure with core-filled walls (Site 26887) in the central portion of the parcel. A draft of the Clark and Rechtman (2009) AIS was submitted to DLNR-SHPD, and comments were received in January of 2010, which resulted in the withdrawal of the draft in favor of completing an AIS (Clark et al. 2013) for the entire property in consultation with Keanu family descendants.

As a result of the inventory fieldwork, five sites (Sites 25072, 25214, 25233, 25237, and 25238) previously recorded by Haun et al (2006) and the seven sites (Sites 26881-26887) recorded by Clark and Rechtman (2009) were relocated. In addition, 192 newly identified sites (Sites 29505-29696), comprised of 468 distinct features, were recorded within their project area. Functional site types include the following: habitation (N=71); windbreaks and shelters (N=27); burials (N=21); ceremonial (N=6); petroglyphs (N=7); *papamū* (N=16); agricultural-related (N=5); roads (N= 3); animal pens (N=5); ranching-related (N=24); and indeterminate (N=51); in addition to remnants of several trail and pathways.

Fifty-seven sites were assigned a habitation function associated with the Precontact Period, representing 205 features (roughly 43% of the total number of features recorded), and including the following formal types: nine lava tubes, twenty complexes, five enclosures, four enclosure remnants, two enclosures/platforms, one enclosure/terrace, one lava blister/enclosure, five modified outcrops, one modified sink, two modified sinks/lava tubes, one pavement, three platforms or platform remnants, one rock pile, one wall remnant/pavement and one wall/platform remnant. Clark et al. (2013) assigned twelve sites (representing ninety-three distinct features) a habitation function associated with utilization during both the Precontact and Historic Periods. These sites included the following formal types: four lava tubes, five complexes, a modified overhang, one enclosure remnant and one enclosure/enclosure remnant. Two complexes (Sites 29597 and 29678), containing a total of fourteen features, were determined to have a habitation function associated with only the Historic Period. Clark et al. (2013) assigned twenty sites (modified outcrops, walls or wall remnants, and enclosures) a windbreak function. Eighteen of the twenty sites were interpreted as affiliated with the Precontact Period, with one site (Site 29591) of indeterminate age, and one site (Site 29561) dating to the Precontact/Historic Period.

Twenty-one sites identified by Clark et al. (2013) contained burials; ten of which were located within lava tubes or concealed blisters, and the remaining eleven burials located within constructed surface features. Clark et al. (2013) determined that six sites had a ceremonial function based on the substantial construction of the individual feature or

complex, the presence of associated cultural material (or significant lack thereof), the formal attributes of the features (such as an enclosure with attached platform), and the general location of the feature. Clark et al. (2013) also recorded three sites (Sites 29549, 29661 and 29665) containing at a minimum of seven petroglyphs (with some twenty plus possible at Site 29661). Petroglyphs were also observed at four Precontact and Precontact/Historic habitation sites (Sites 29570, 29574, 29626, and 29641). With the exception of Site 29626, all petroglyphs were found on surface features, or on exposed areas or slabs of *pāhoehoe* bedrock. The petroglyph present at Site 29626 was an anthropomorphic figure located on a small, flat boulder at the entrance of the tube. *Papamū* were observed (sixteen complete or fragmented *kōnane* boards) at four habitation sites and seven non-habitation sites. Ten of the *papamū* were found on areas of exposed bedrock, while six *papamū* were found on loose portions of flat, *pāhoehoe* slabs.

Only five of the 204 sites recorded by Clark et al. (2013) were identified as having an agricultural function. The majority of these sites were modified natural features such as sinks and depressions (n=4), with the exception of a single enclosure (Site 29605). These sites were determined to represent the opportunistic use of soil areas in a relatively soilless environment rather than large scale agricultural systems, such as may have occurred on the slopes above the town of Nā‘ālehu where *Māhele* records indicate widespread agriculture was practiced during the early Historic Period. Clark et al. (2013) also recorded two roads and a portion of Site 25238, which was previously documented by Haun et.al (2006). The roads were interpreted as dating to the Historic Period. In addition to formal roadways, numerous bulldozer cuts and ranch access roads in varying states of use and disrepair were noted throughout their project area. Five sites(all enclosures and enclosure remnants) were interpreted by Clark et al. (2013) as having an animal pen function, temporally affiliated with the Historic or Precontact/Historic Periods. Twenty-four sites (containing twenty-seven features) were categorized by Clark et al. (2013) as ranching-related. These sites were uniformly distributed throughout their project area, which was consistent with the ongoing and Historic use of the entire property for ranching purposes since ca.1868. Site types within this classification included Historic (core-filled) walls and fence lines that functioned to inhibit or otherwise direct the movement of goats or cattle; enclosures that functioned as pens for goats, cattle or pigs; troughs, tanks, and waterlines that provided a source of water for the grazing cattle; and concrete foundations, ramps, and other special function features as well as buildings constructed and used by the ranch for various purposes. Clark et al. (2013) also recorded forty-one sites (containing forty-nine features) that were assigned an indeterminate function. Most of the sites were poorly preserved remnants that had been impacted by land disturbing activities, for which functional interpretation is unclear. The poor condition of the features made assigning a temporal designation difficult, as a result the age of most of the sites remained indeterminate.

Clark et al. (2013) excavated thirty-two test units, twenty-six of which revealed information that aided in the determination of function of the feature: the presence of burials (N=7); ceremonial (N=1); architectural and cultural material related to habitation activities (N=16); and agricultural function (N=2). Artifacts recovered include abraders made from basalt, scoria, coral, and Echinoidea spine, adze fragments and flakes, volcanic glass, fish hook fragments and blanks, water-worn cobbles, avian and fish bone awls, and worked mammal (*Sus* sp. and *Canis* sp.) bone. Marine shell, charcoal and *kukui* were the most commonly recovered cultural material. No historically introduced wood species were identified in the recovered cultural material, indicating that the wood was burnt prior to the Historic Period and that the tested features were utilized prior to that Period. In addition, the types of artifacts recovered and the lack of Historic artifacts other than a single glass bead suggested abandonment of these features prior to or during the early Historic Period.

In 2016, Rechtman (2016) conducted a field inspection of TMK: (3) 9-5-008:050 in Nā‘ālehu Town in support of an after-the-fact grading permit application. The parcel is known to have been included in a dairy paddock used by Nā‘ālehu Ranch and Dairy, Inc. between the 1920s and the first decade of the twenty-first century. As a result of the field inspection, a concrete ditch and effluent pond and fence line associated with the dairy were observed.

3. STUDY AREA EXPECTATIONS

Based on the results of prior archaeological fieldwork and the review of historical documentary material summarized above, a comprehensive set of study area expectations is now presented. Archival sources (Ellis 2004) suggest that the study area is a portion of a larger *Makahiki* ground, identified by Mary Kawena Pūku‘i (Handy and Handy 1991:596) as Kahua ‘Olohū, where traditional games such as *pahe‘e* (dart-throwing) and *maika* (bowling) were once played during the Precontact and early Historic Periods. This site (Site 50-10-74-29231) was previously documented and described by McIntosh et al. (2012:90) as extending into the subject parcel (see Figure 26). The entire 13-acre study area seemingly constitutes a portion of the former *Makahiki* ground. Although no “man-made” physical features were noted by McIntosh et al. (2012) defining Kahua ‘Olohū (other than the lack of rock in the field), it is possible that artifacts related to the games (such as *‘ulu maika*) may be still be present. It is also possible that the raised *‘a‘ā* flow in the southern corner of the parcel, which McIntosh et al. (2012:90) indicate likely served as a viewing area for the games, may contain features related to that past activity. McIntosh et al. (2012) previously recorded several enclosures on the *‘a‘ā* flow in the general vicinity of the study parcel.

The study parcel is also a portion of Grant No. 2113:2, purchased by Wailuu in 1856. The deed for Grant No. 2113 indicates that a cave was present near the eastern corner of the parcel, and that a “stone marked with a T” was placed on the *‘a‘ā* at the southern corner of the grant. It is possible that these features may be present within the current study area. The flat, grassy area where the *Makahiki* games viewed by Ellis (2004) in 1823 were being played was used by Mary Kawena Pūku‘i’s elder relative, Opupele, during the late 19th century for the cultivation of sweet potatoes (Handy and Handy 1991:596). It is unlikely that any evidence of this use will remain within the study area, as the parcel was purchased by the Hutchinson Sugar Plantation Company in 1908, and subsequently became part of the Nā‘ālehu Ranch and Dairy Co.’s grazing lands. The parcel was used throughout the 20th century not only for grazing, but used also as a hay field and a location for burying grass to make silage for cattle feed. These uses, which continued until relatively recent times, likely had a detrimental effect on any earlier features that may have once been present on the property. It is possible though that Historic ranching features, such as rock walls or cattle troughs, may be identified.

4. FIELDWORK

Fieldwork for the current study was conducted on July 13, 2017 by Matthew R. Clark, M.A., Ashton Dircks Ah Sam, B.A., Josh Gastilo, M.A., Genevieve Glennon, B.A., Ivana Hall, B.A., and C. Ke‘ala Martins-Keli‘iho‘omalū, B.A., under the supervision of Robert B. Rechtman, Ph.D.

FIELD METHODS

Fieldwork included a visual inspection of the surface of the entire study area and detailed site recordation. Fieldworkers walked pedestrian transects (oriented roughly northeast/southwest) spaced at roughly 7-meter (20-foot) intervals across the entire study parcel, the boundaries of which were clearly identified in the field by existing fence lines, and the corners of which had been recently marked by surveyors with lathe and flagging tape. With the exception of the raised edge of the ‘a‘ā flow in the southern corner of the parcel, tall grass limited ground visibility across most of the study area. As previously discussed, however, the flatter portions of the study parcel were intensively used for grazing, as a hay field, and for making silage throughout the 20th century, and are consequently rock-free, with very little potential for the presence of extant surface features. A scaled map of the study area was prepared using a Garmin Vista HCx handheld GPS technology, and GPS data for all the observed surface features was collected using a Trimble Geo 7x Geo Explorer 7000 series handheld GPS receiver (set to the NAD 83 datum). Cultural features identified within the study area were assigned temporary site numbers in sequential order as they were recorded (T-1, T-2, T-3, etc.) and, after being cleared of vegetation, were mapped in detail (using a measuring tape and compass), photographed (with and without a meter stick for scale), and described using standardized site record forms. The identified features were all assigned to the existing State Inventory of Historic Places (SIHP) site designation for Kahua ‘Olohū (Site 50-10-74-29231). No subsurface testing was conducted during the current Archeological Inventory Survey. The recorded features are described in further detail below within the context of the larger Kahua ‘Olohū site complex.

FINDINGS

As a result of the current fieldwork, a portion of a previously-identified archaeological site (Site 50-10-74-29231) was documented within the current study area (Table 6). Site 29231, which occupies the entire 13-acre study parcel, and includes an undetermined area beyond its boundaries, is the location of a traditional *Makahiki* game field visited by Rev. William Ellis (2004:185-186) in 1823, who observed the game of *pahe‘e* being played there at the time, and mentioned the game of *maika* as also associated with the site. The location of the game field was later described as Kahua ‘Olohū by Mary Kawena Pūku‘i (in Handy and Handy 1991), who notes that her elder relative Opupele also grew sweet potatoes in the area during the late 19th century. Pūku‘i relates that, “In old Hawaiian times this broad kahua or plaza was used not just for bowling, but for other sports such as boxing, javelin throwing, and hula dancing during the *Makahiki* festival” (Handy and Handy 1991:596). The study parcel was purchased by Wailū as a portion of Grant No. 2113:2 in 1856, and later became part of the Nā‘ālehu Ranch and Dairy, Inc. (in 1908), operated by the Hutchinson Sugar Plantation Co. The lands were used as pasture, and for making silage, throughout the 20th century. The name Kahua ‘Olohū, descriptive of an open place for playing ‘*ulu maika*, is depicted in the general vicinity of the current study area on the 1962 U.S.G.S. 7.5 min. series quadrangle, Naalehu, HI (and on all subsequent U.S.G.S. Naalehu quadrangles; see 1).

Table 6. Archaeological sites recorded in the current study area.

<i>SIHP Site No.</i>	<i>Formal Type</i>	<i>Function</i>	<i>Temporal association</i>
50-10-74-29231	Kahua ‘Olohū	<i>Makahiki</i> field	Precontact/early historic

Site 50-10-74-29231

Site 29231 is the State Inventory of Historic Places (SIHP) designation for Kahua ‘Olohū, a traditional *Makahiki* field located 0.5 miles (0.84 kilometers) east of the town of Nā‘ālehu, Ka‘ū, along the *makai* edge of Māmalahoa Highway (see Figure 1). This site was first documented archaeologically by McIntosh et al. (2012) on the adjacent State-owned parcel (TMK: (3) 9-5-012:002) that surrounds the current study area on three sides (see description above). The earlier study describes the site as a large, flat open grassy area on the *makai* side of Māmalahoa Highway, characterized by a general lack of rock and basalt outcroppings. McIntosh et al. (2012:90) indicate a *makai* boundary for the site on their field map (see Figure 26), and suggest that the western edge of the field, where the ground begins to slope upward on

4. Fieldwork

to a raised 'a'ā flow, may have served as a natural “bleachers” used for viewing games once played at Kahua 'Olohū. The *makai* boundary of the site begins at the highway near the northern corner of the study area, and follows a low ridgeline that curves to the south and west, skirting an 'a'ā flow in the southern corner of the study parcel, before curving back up to the highway. During the current fieldwork, an additional portion of the site, including approximately 10.7 acres of cleared, level ground (Feature A—the *kahua* proper), approximately 1.9 acres of slightly upward-sloping pasture described by McIntosh et al. (2012) (Feature B—possibly a viewing area), and approximately 0.4 acres of the 'a'ā slope in the was identified within the current study area (Figure 27). No archaeologically justifiable site boundaries could be determined with the current study area, and it appears that the gaming field and observation areas comprising Kahua 'Olohū extended beyond the current study area.

The *mauka* boundary of the level field (Feature A) that makes up the site, is coterminous with Māmalahoa Highway, and the western boundary of the study parcel. Although the historical configuration of the *kahua* may have extended onto parcels located *mauka* of Māmalahoa Highway, the scope of the current study did not include those parcels. The *kahua* (Figure 28) can be distinguished from the surrounding land by its leveled ground surface that has been cleared of rocks. The portion included within the current study area has maximum dimensions of 404 meters (northeast-southwest) by 141 meters (southeast-northwest). Together with leveled area depicted by McIntosh et al. (2012), the *kahua* documented to date comprises approximately 13.8 acres. Consistent with McIntosh et al.'s (2012) description of the site, there are no other apparent constructed features on the level game field, which had been most recently used as pasture. The slightly sloping pasture (Feature B) is also cleared of rocks, but seems too steep to have been part of the *kahua* proper. Sloping downward toward the east at about 10-12 percent (Figure 29), this area corresponds with the transition from Naalehu Silty Clay Loam 0-10 percent slopes (NaC) to Naalehu very rocky silty clay loam 6-20 percent slopes (NhD) depicted in 6. This sloping area provides a good view of the more level area interpreted to be the *kahua* proper, and, as proposed by McIntosh et al. (2012) may have served as a viewing area for spectators.

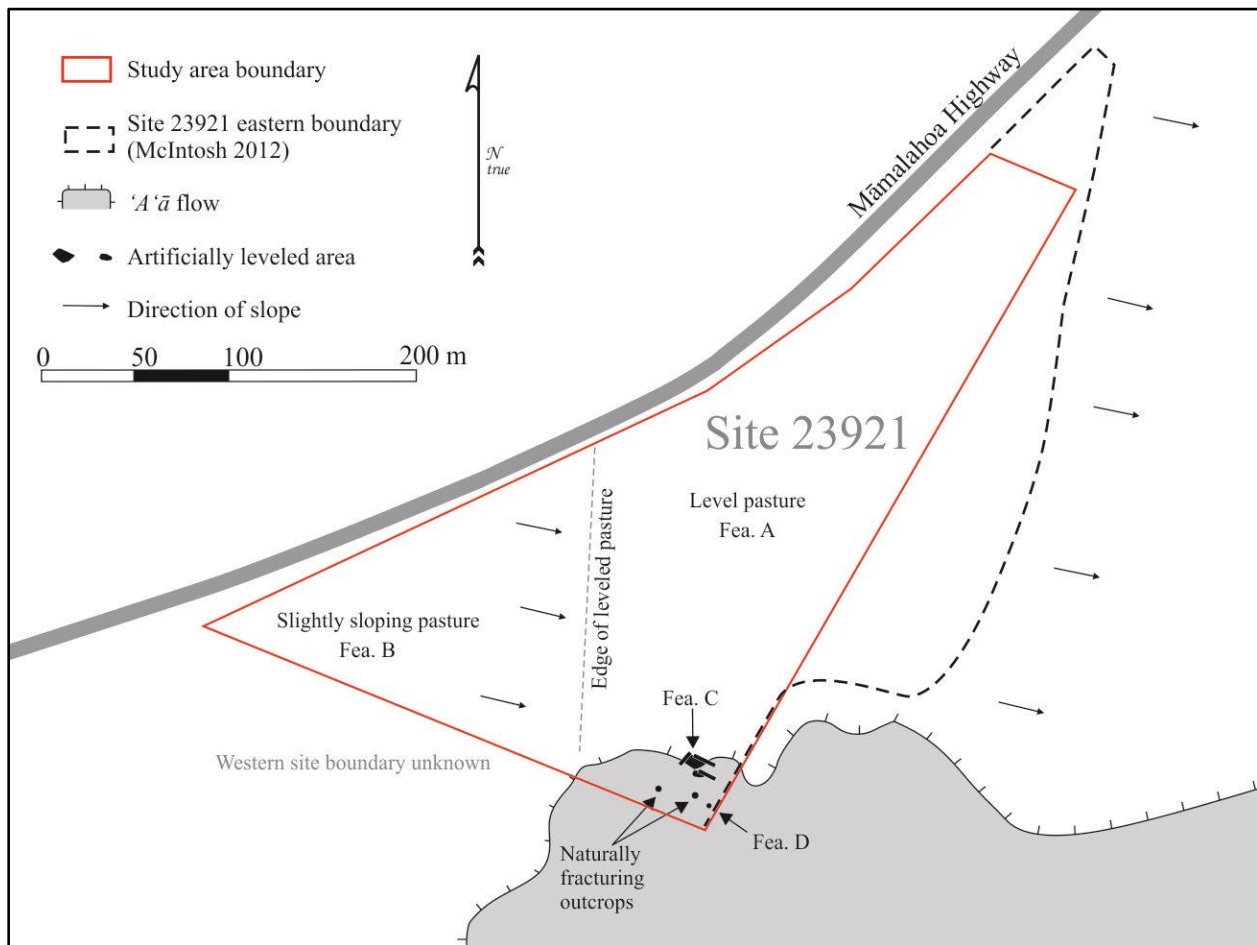


Figure 27. Plan view of Site 23921.

During the current fieldwork, a two-tiered artificially leveled area (Feature C) was identified along the edge of the ‘a‘ā flow in the southern corner of the current study area (see Figure 27). These two adjacent level surfaces occupy an area that measures 18 meters by 14 meters overall on the north-facing slope of the ‘a‘ā flow, overlooking Feature A (Figure 30). The lower of the two leveled surfaces (Figure 31) occurs at the base of the raised ‘a‘ā flow. The edge of the flow has been modified by the addition of two rough walls constructed ‘a‘ā cobbles. These rough walls partially enclose an area measuring 4 meters long by 6 meters wide. The ground surface of the interior of this partially enclosed space consists of soil and scattered cobbles covered with a growth of grass and a Christmas-berry over story. The western wall (Figure 32) is loosely stacked, measuring 8 meters long by 2.4 meters wide. It has an interior wall height of up to 68 centimeters, and exterior wall heights ranging from 42 to 92 centimeters. The eastern wall (Figure 33) segment measures 11.2 meters long by 2 to 3 meters wide. It has interior wall heights ranging from 32 to 38 centimeters, while the exterior edge stands 58 to 82 centimeters tall. A 3 meter wide gap separates the northern ends of the two walls. This gap could represent an entrance to the feature, or an area where both walls were disturbed by bulldozing activities associated with the use of the adjacent land for ranching.

A 4.4 meter wide slope (Figure 34) of loose ‘a‘ā cobbles covered in Christmas-berry separates the lower level area from the upper level area. The floor of the upper area (4.0 meters long by 1.5 meters wide) sits roughly 2 meters above the floor of the lower area, and appears to have been created by the removal of cobbles to its periphery. The northern edge of the upper level area is defined by a rough ‘a‘ā wall that runs across the ‘a‘ā slope following a vertical bedrock edge. The wall measures roughly 8 meters long by 0.8 to 1.1 meters wide, with upslope heights ranging from 37 to 45 centimeters and down-slope heights from 70 to 80 centimeters tall. A short (1.6 meter long by 1 meter wide by 60 centimeter tall) wall of loosely piled cobbles extends southeast from the central portion of the aforementioned wall to a vertical bedrock face at the southern edge of the upper level area, enclosing its eastern end. The west end of this level area is defined by jumbled cobbles and small boulders on the natural slope, while the southern edge is defined by a vertical bedrock face. The leveled space has a floor of ‘a‘ā cobbles and thin soil.



Figure 28. Site 29231 Feature A, view to the north from the raised ‘a‘ā flow in the southern corner of the parcel.



Figure 29. Site 29231, Kahua ‘Olohū, view to the northwest showing the transition from level (Feature A) to sloped (Feature B) terrain within the western portion of the study parcel.

Cultural material associated with the level areas on the ‘*a*’ā slope was limited to a single Ka‘ū Soda Works bottle (Figure 35) found on the surface of the eastern wall of the lower level area (see Figure 30). The Ka‘ū Soda Works was founded in Wai‘ōhinu, Ka‘ū in 1901 (*Honolulu Republican*, July 13, 1901, page 9). This 20-centimeter tall, cylindrical, colorless glass, beverage bottle has a crown finish, and seems that indicate that it was manufactured in an automatic bottle machine. Embossing on the shoulder reads “KAU SODA WORKS” and along the heel, “NET CONTENTS 6 ½ FLUID OUNCES.” The base is embossed with a large “M” in the center, along with a mold code of “4232-G-1” and an Owens-Illinois manufacturer’s mark reading “21 [O-I in Diamond] 6.” The embossing on the base indicates that the bottle was manufactured in 1936 at the Owens-Illinois factory in San Francisco (Lockhart and Hoenig 2015). The presence of the bottle at the lowered level area suggests that these features, potentially associated with the viewing of traditional *Makahiki* games, may have also received later use, perhaps associated with Nā‘ālehu Ranch and Dairy, Inc.’s use of the land as part of Dairy Paddock #9 during the middle part of the 20th century (see Figure 22).

In the southern corner of the parcel, east of the natural rock piles, a rock ring (Feature D) constructed of stacked ‘*a*’ā cobbles was noted on the surface of the ‘*a*’ā flow (Figure 36). This ring measures 1.4 meters in diameter by 0.5 meters tall and surrounds a 0.5-meter diameter interior space that is 0.6 meters deep. The ring likely held a wooden post used to mark the corner of the study parcel. The antiquity of this particular rock ring is uncertain; however, it almost certainly post-dates the use of Kahua ‘Olohū. The boundaries recorded for Grant No. 2113:2 (see Figure 13) in 1856 indicate that the southern corner of parcel was indicated by a “stone marked with a T located on the ‘*a*’ā.” Hawai‘i Registered Map No. 2340 (see Figure 20) shows that the corner was marked in 1905 with a “pipe in bed of aa on a small rise” (see Figure 20). Neither a stone marked with a “T” nor a pipe set in ‘*a*’ā were observed during the current fieldwork.

In addition to these archaeological features, two unmodified, naturally fracturing bedrock outcrops (Figures 37 and 38) were observed to the south of Feature C. These outcrops superficially resemble loosely piled rock constructions, but the natural fracturing of the bedrock can be discerned upon close examination.

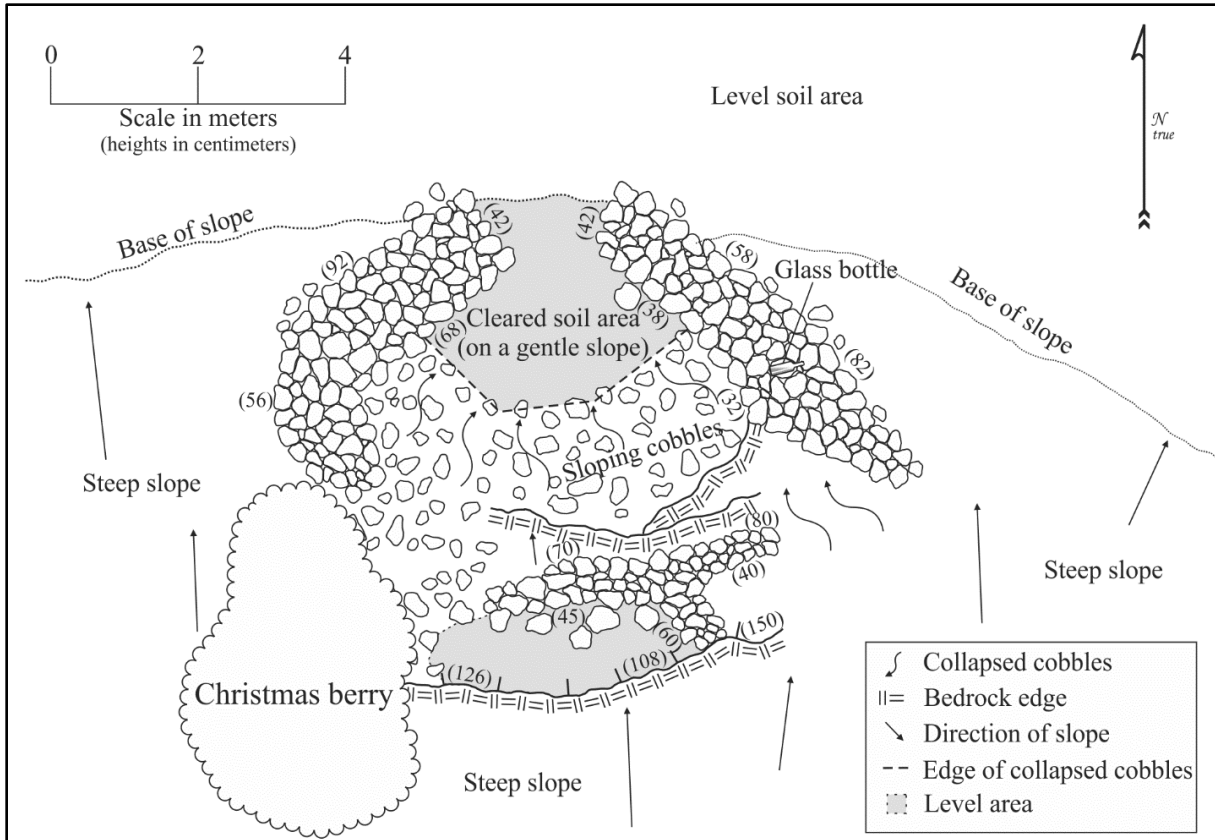


Figure 30. Site 29231 Feature C plan view.



Figure 31. Site 29231 Feature C, lower of the two level areas on the 'a' slope, view to the west.



Figure 32. Site 29231 Feature C, western wall of the lower level area, view to the southwest.



Figure 33. Site 29231 Feature C, eastern wall of the lower level area, view to the southeast.



Figure 34. Site 29231 Feature C, Christmas-berry covered 'a 'ā slope between the lower and upper level areas, view to the south.



Figure 35. Site 29231 Feature C, Ka'ū Soda Works bottle found on the surface of the eastern wall of the lower level area, over view with a close up of the bottle base inset.



Figure 36. Site 29321 Feature D near the southern corner of the study parcel, view to the north.



Figure 37. Western naturally fracturing outcrop on the 'a 'ā flow, view to the north.



Figure 38. Eastern naturally fracturing outcrop on the ‘a‘ā flow, view to the east.

5. SIGNIFICANCE EVALUATION AND TREATMENT RECOMMENDATION

The recorded archaeological site is assessed for its significance based on criteria established and promoted by the DLNR-SHPD and contained in the Hawai‘i Administrative Rules 13§13-275-6. For a resource to be considered significant it must possess integrity of location, design, setting, materials, workmanship, feeling, and association and meet one or more of the following criteria:

- a Be associated with events that have made an important contribution to the broad patterns of our history;
- b Be associated with the lives of persons important in our past;
- c Embody the distinctive characteristics of a type, period, or method of construction; represent the work of a master; or possess high artistic value;
- d Have yielded, or is likely to yield, information important for research on prehistory or history;
- e Have an important traditional cultural value to the native Hawaiian people or to another ethnic group of the state due to associations with traditional 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 group’s history and cultural identity.

The significance and recommended treatment for the single recorded site is presented in Table 7 and discussed below.

Table 7. Site significance and treatment recommendation.

<i>SIHP Site No.</i>	<i>Site Type</i>	<i>Temporal Affiliation</i>	<i>Significance</i>	<i>Recommended Treatment</i>
50-10-74-29231	Kahua ‘Olohū	Precontact/Early Historic	a, d, e	Preservation

Site 29231 was previously identified by McIntosh et al. (2012) as Kahua ‘Olohū, the *Makahiki* field described by Mary Kawena Pūku‘i as a place that “was used not just for bowling, but for other sports such as boxing, javelin throwing, and *hula* dancing during the *Makahiki* festival” (Handy and Handy 1991:597), and also described in Rev. William Ellis’ (2004) first-hand account of a *pahe‘e* competition he encountered while travelling through Ka‘ū in 1823. Because of its association with the *Makahiki* rituals and traditional Hawaiian sporting games, Site 29231 possesses traditional cultural significance for the Hawaiian people, in the sense that:

“Traditional” in this context refers to those beliefs, customs, and practices of a living community of people that have been passed down through the generations, usually orally or through practice. The traditional cultural significance of a historic property, then, is significance derived from the role the property plays in a community’s historically rooted beliefs, customs, and practices. (Parker and King 1998)

McIntosh et al. (2012), who offer preliminary significance evaluations for Kahua ‘Olohū in their reconnaissance survey of the adjoining State-owned parcel, suggest that the gaming field, because of its connection with the annual *Makahiki* festival, is directly related to an important religious event in the Hawaiian calendar, and therefore could be considered for significance as a Traditional Cultural Property (TCP). They write that:

A Traditional Cultural Property can be considered a historic property even if it does not possess any recognizable archaeological remains. While Kahua Olohu is documented as an important gathering area for *makahiki* festivities and ceremonies, the events that took place there in traditional times may not necessarily have left any archaeological traces. The *kahua* would have roughly resembled a Western fairground, a level open stretch of land set aside for annual *makahiki* games with no substantial surface structures. An Archaeological Inventory Survey of the site might not reveal any physical evidence of the area’s past use. This would, however, in no way reduce its importance as a Traditional Cultural Property. (McIntosh et al. 2012:57)

While the current AIS did reveal surface features that could have potential association with viewing the *Makahiki* games once played at Kahua ‘Olohū, most of the 13-acre portion of Site 29231 included within TMK: (3) 9-5-012:005 contains no physical evidence (on the surface) of the area’s past use. The area does however retain enough integrity of design, location, setting, feeling, and association (through its identification by Mary Kawena Pūku‘i) to be assessed as significant under Criterion a for its association with the annual *Makahiki* festival, Criterion d for the information it has yielded on past land use in the region, and Criterion e for its important traditional cultural value to the native Hawaiian people as a game field associated with traditional beliefs, events, and oral accounts. Site 29231 is recommended for preservation.

The 13-acre study parcel was acquired on June 30, 2016 by the County of Hawai‘i, at the urging of the Ka‘ū community, using funds from the Public Access, Open Space and Natural Resources Commission (PONC). The property was acquired for the stated purpose of preserving Kahua ‘Olohū, and the County’s intention is to form a community initiative to re-institute Hawaiian cultural games during the season of *Makahiki*. As part of this effort, the County has consulted with a variety of Native Hawaiian Organizations, including the Office of Hawaiian Affairs, with respect to the significance and treatment of the site. The County is currently seeking to establish partnerships with non-profit organizations, community groups, and volunteer organizations to provide management of the Kahua ‘Olohū property through PONC maintenance fund stewardship grants administered by the Department of Parks and Recreation. Monies from the maintenance fund may be used solely for public safety maintenance and preservation of lands and easements (Hawai‘i County Charter, Article 10, Section 10-16); properties purchased using the PONC funds have strict covenants against development. As there is no planned development for the parcel at this time, it is recommended that the rules set forth in the PONC charter be used to guide the preservation of Site 29231 until such time as stewardship grants have been dispersed and a plan for the future use of the property has been formalized. At that time, the County of Hawai‘i should consult with SHPD regarding preparation of a Preservation Plan for Kahua ‘Olohū that meets the standards set forth in HAR 13§13-277.

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