

**HE MO'OLELO 'ĀINA:  
A CULTURAL STUDY OF THE  
MANUKĀ NATURAL AREA RESERVE  
LANDS OF MANUKĀ, DISTRICT OF KA'Ū,  
AND KAULANAMAUNA, DISTRICT OF  
KONA, ISLAND OF HAWAI'I**



*Manukā Forest Canopy and Understory  
(Photo Courtesy of DLNR-NARS)*



*Moa Ground Cover under 'Ōhi'a of the  
Kipāhoehoe-Manukā Region Forest Zone  
(Photo Courtesy of DLNR-NARS)*



*Koki'o (Kokia drynarioides) at Manukā  
(Photo Courtesy of DLNR-NARS)*

**Kumu Pono Associates LLC**



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*Historical & Archival Documentary Research · Oral History Interview Studies ·  
Researching and Preparing Studies from Hawaiian Language Documents ·  
Māhele 'Āina, Boundary Commission, & Land History Records ·  
Integrated Cultural Resources Management Planning ·  
Preservation & Interpretive Program Development*

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ISLAND OF HAWAI‘I**

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*JULY 20, 2004*

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## EXECUTIVE SUMMARY

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At the request of Ms. Lisa Hadway, Natural Area Specialist for the State of Hawai'i Department of Land and Natural Resources – Division of Forestry and Wildlife (DLNR-DOFAW), *Kumu Pono Associates LLC*, conducted a detailed study of historical and archival literature documenting the natural and cultural landscape and history of land use in the vicinity of Manukā and Kaulanamauna, in the Districts of Ka'ū and South Kona on the island of Hawai'i. The documentation also includes detailed oral testimonies—describing the lands, traditional and customary practices, and historical land use—from native residents of lands in the Manukā-Kaulanamauna vicinity collected in the 1870s to 1890s. The documentation cited herein is the product of years of research, and includes specific research conducted for the study between October 2003 to April 2004. The research was conducted in private and public collections, and that documentation, cited herein, includes written narratives that cover the period from antiquity to the 1980s.

The historical and archival resources were located in the collections of the Hawai'i State Archives, Land Management Division, Survey Division, Bureau of Conveyances and the Natural Areas Reserve System offices; the Hawaiian Historical Society; the University of Hawai'i-Hilo Mo'okini Library; private family collections; and in the collection of *Kumu Pono Associates LLC*. The documentation includes rich narratives translated from native Hawaiian accounts; descriptions of lands that make up the South Kona-Ka'ū region, as recorded in historic surveys; a history of land tenure from 1848 to the present; records documenting the establishment of the Ka'ū and South Kona Forest Reserves, and the subsequent designation of the Manukā Natural Area Reserve.

The Natural Area Reserve (NAR) takes its name from the native land division (*ahupua'a*) of Manukā, which may be literally, “Blundering,” so named from a traditional account of one of the ancient residents. The NAR also includes the land of Kaulanamauna, literally, “The-mountain-resting-place,” and extends from sea level to the 5,524 foot elevation. The native traditions and historical accounts associated with the lands of Manukā and Kaulanamauna span many centuries, from Hawaiian antiquity to the later period following western contact. The narratives describe customs and practices of the native people who resided on these lands, walked the trails, and who were sustained by the wealth of the mountain resources, the *kula* (plain and plateau lands), and the adjacent marine fisheries.

The most detailed descriptions of the Ka'ū-South Kona mountain lands, including documentation of traditional and customary rights, are those found in the Kingdom collections, documenting the history of land tenure, and defining the boundaries of *ahupua'a* in the Ka'ū-Kona Districts. Detailed oral testimonies from elder native tenants that were taken in court proceedings of the mid to late 1800s, document the occurrence of traditional and customary practices, and nature of the resources within the *ahupua'a*. In those records, we learn of the traditional knowledge and occurrence of native practices in the lands which today are a part of, and adjoin the Manukā Natural Area Reserve.

We find in native traditions and beliefs, that Hawaiians shared spiritual and familial relationships with the natural resources around them. Each aspect of nature from the stars in the heavens, to the winds, clouds, rains, growth of the forests and life therein, and everything on the land and in the ocean, was believed to be alive. Indeed, every form of nature was a body-form of some god or lesser deity. In the Hawaiian mind, care for each aspect of nature, the *kino lau* (myriad body-forms) of the elder life forms, was a way of life. This concept is still expressed by Hawaiian *kūpuna* (elders) through the present day, and passed on in many native families. Also, in this cultural context, anything which damages the native nature of the land, forests, ocean, and *kino lau* therein, damages the integrity of the whole. Thus caring for, and protecting the land and ocean resources, is important.

In the traditional context above referenced, we find that the land, the native plants and life-forms, and the intangible components therein, are a part of a sacred Hawaiian landscape. Thus, the landscape itself is a highly valued cultural property. Its protection, and the continued exercise of traditional and customary practices, in a traditional and customary manner, are mandated by native custom, and

State and Federal Laws (as those establishing the Ka'ū and South Kona Forest Reserves, the Manukā Natural Area Reserve; and the Endangered Species Act).

In this discussion, protection does not mean the exclusion, or extinguishing of traditional and customary practices, it simply means that such practices are done in a manner consistent with cultural subsistence, where each form of native life is treasured and protected. *Kūpuna* express this thought in the words, "*Ho'ohana aku, a ho'ōla aku!*" (Use it, and let it live!).

In the early 1900s, the Ka'ū and South Kona mountain and forest lands were determined to be significant resources in the Hawaiian islands, and worthy of protection. In 1911, the mountain lands were dedicated as the South Kona Forest Reserve. As a part of on-going ranching operations, and the mission of the newly formed forestry programs, hunting for pigs and goats, and in earlier times, for wild cattle, has been practiced on lands of the Manukā NAR. Such hunting interests remain of importance to community members and long-term management goals of the Natural Area Reserve System program.

In the late 1970s, certain lands within the South Kona Forest Reserve were again signaled out as being unique and fragile systems, and efforts led to the establishment of the Manukā Natural Area Reserve in 1983. Since that time, agencies and community members have been working together to try and ensure the health and integrity of the natural and cultural resources of the Manukā Natural Area Reserve.

Several points of cultural and historical importance are discussed in the texts cited in this study. These points include, but are not limited to the following facets of the cultural-historical landscape in the Manukā Natural Area Reserve:

- Haliukua and Pu'epu'e were ancient dryland agricultural fields of the South Kona-Ka'ū region, including feature within the forests of Manukā and Kaulanamauna.
- Traditional and historic period residency and agriculture practices are described in the *kīpuka* situated in various forest and *kula* zones of Manukā and Kaulanamauna.
- Goat ranching developed by the late 1840s, and was of particular economic interest in Manukā and Kaulanamauna from the 1860s to 1890s.
- By the 1880s, cattle ranching interests began to emerge as the primary economic uses of the land.
- Native residents maintained houses and agricultural fields in both Manukā and Kaulanamauna through the early 1900s. Areas of last native residency were situated on both the mauka and makai side of what became the Māmalahoa Highway.
- Access to the land was generally controlled by lessees and government forestry programs.

*māua nō me ka ha'aha'a — Kepā a me Onaona Maly*

***"A'ohe hana nui, ke alu 'ia!***  
(It is no great task when done together by all!)

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# INTRODUCTION

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## **Background**

As a part of a program designed to protect and restore significant Hawaiian natural resources found within the Manukā Natural Area Reserve, Ms. Lisa Hadway, Natural Area Specialist for the State of Hawai'i Department of Land and Natural Resources—Division of Forestry and Wildlife (DLNR-DOFAW), requested that *Kumu Pono Associates LLC*<sup>1</sup>, conduct historical and archival research to document the traditional-cultural and historical setting of *ahupua'a*<sup>2</sup> that make up the Manukā Natural Area Reserve in the Districts of Ka'ū and South Kona, on the Island of Hawai'i (*Figure 1*).

The Manukā Natural Area Reserve (NAR) is comprised of two *ahupua'a* that bound one another, and that also mark the boundary between the districts of Ka'ū and Kona (South Kona). The upper mountain region of the NAR was once a part of the South Forest Reserve, which was established by Governor's Proclamation in 1911, and included nearly 37,000 acres of unique dry forest. On January 12<sup>th</sup>, 1983, Governor's Executive Order No. 3164, established the Manukā NAR, consisting of some 25,550 acres. The NAR takes its name from the *ahupua'a* of Manukā, which may be literally translated as "Blundering," so named for one of the ancient residents of the land (see tradition cited in this study). The name, Kaulanamauna, is literally translated as meaning "Mountain-resting-place," and commemorates the practice of traditional residents traveling to the upland forests for canoe logs and other resources.

In the 1992 Manukā NAR Management Plan, DLNR staff describe the lands and resources of the Manukā-Kaulanamauna lands as:

...the Manuka Natural Area Reserve was established on the island of Hawaii in 1983 by Executive Order 3164. The reserve protects a diverse range of natural communities including dry and mesic forests, subalpine shrublands and forests, lowland and coastal shrublands and grasslands, anchialine pools, pioneer vegetation on lava flows, and lava tubes. These communities provide habitat to native plants and animals, several of which are considered rare such as the 'io (Hawaiian hawk) and the 'ope'ape'a (Hawaiian hoary bat).

...Manuka Natural Area Reserve occupies 25,550 acres on the southwest slope of Mauna Loa on the island of Hawaii. Elevations range from near sea level to 5,524 feet near Puu Ohohia at the reserve's apex. Rainfall averages from 30 inches annually in the lower elevation to 40 inches at the reserve's apex. Precipitation is probably higher along a band in the mid-elevations (ca. 1,800 - 3,200 feet) where daily cloud cover results in fog drip. March is the wettest month, averaging 3 - 4 inches, and June the driest with only 1 - 4 inches (Giambelluca, Nullet, and Schroeder 1986). [DLNR-NARS 1992]

The 1992 plan further observes that "The overall management goal is to protect, maintain, and enhance the reserve's native ecosystems" (DLNR-NARS 1992).

This study seeks to provide readers with access to primary documentation on native traditions, customs, and practices associated with the lands and resources of Manukā and Kaulanamauna; and to provide readers with a historical overview of the land and activities of people in the region from the early 1900s through the present-day. Such information will be helpful in planning phases and discussions of the South Kona-Ka'ū community and agencies, as efforts to protect the unique natural

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<sup>1</sup> *Kumu Pono Associates LLC*: Kepā Maly, Cultural Historian-Resource Specialist and Onaona Maly, Researcher.

<sup>2</sup> *Ahupua'a* is a traditional term used to describe an ancient Hawaiian land unit (extending from sea to mountain lands), and remains the primary land unit of the modern land classification system.



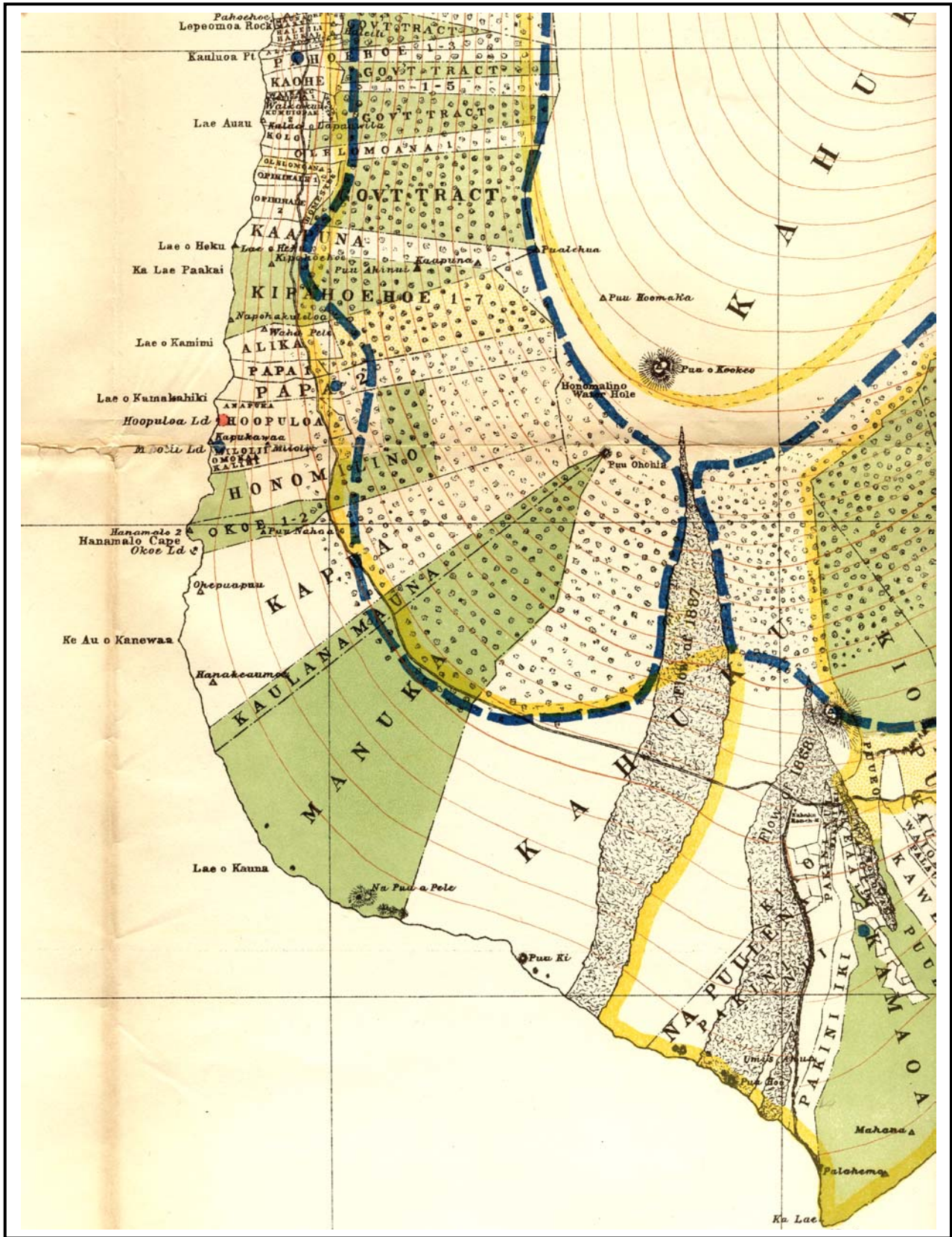


Figure 1. Detail of Lands of South Kona and Northern Ka'ū, Island of Hawai'i (1901). Depicting Forest Lands (outlined in Blue); Public Lands (shaded in green); and Approximate Area of Grazing Lands (outlined in yellow). Territorial Survey Division.

and cultural landscape of the NAR are undertaken. While a great deal of information has been compiled, and is presented in the following section of this study, we acknowledge that additional information will likely be found through further research. The goal here, is to bring a significant collection of documentation into one study that will help all interested parties plan actions to ensure the well-being of the land for present and future generations.

### ***Historical and Archival Research***

The historical and archival research conducted for this study was performed in a manner consistent with Federal and State laws and guidelines for such studies. Among the pertinent laws and guidelines are the National Historic Preservation Act (NHPA) of 1966, as amended in 1992 (36 CFR Part 800); the Advisory Council on Historic Preservation's "*Guidelines for Consideration of Traditional Cultural Values in Historic Preservation Review*" (ACHP 1985); National Register Bulletin 38, "*Guidelines for Evaluating and Documenting Traditional Cultural Properties*" (Parker and King 1990); the Hawai'i State Historic Preservation Statute (Chapter 6E), which affords protection to historic sites, including traditional cultural properties of on-going cultural significance; the criteria, standards, and guidelines of the Department of Land and Natural Resources-State Historic Preservation Division (DLNR-SHPD) for the evaluation and documentation of cultural sites and practices, Title 13 Sub-Title 13:275-284 (October 21, 2002); and the November 1997 guidelines for cultural impact assessment studies, adopted by the Office of Environmental Quality Control (which also facilitate the standardized approach to compliance with Act 50 amending HRS Chapter 343; April 26, 2000).

While conducting the research, primary references included, but were not limited to—land use records, including an extensive review of Hawaiian Land Commission Award (L.C.A.) records from the *Māhele 'Āina* (Land Division) of 1848; Boundary Commission Testimonies and Survey records of the Kingdom and Territory of Hawai'i; and historical texts authored or compiled by—D. Malo (1951); J.P. I'i (1959); S. M. Kamakau (1961, 1964, 1976, and 1991); Wm. Ellis (1963); Chas. Wilkes (1845); C. Lyman (1846); A. Fornander (1916-1919 and 1996); G. Bowser (1880); T. Thrum (1908); J.F.G. Stokes and T. Dye (1991); and Handy and Handy with Pukui (1972). The study also includes several native accounts from Hawaiian language newspapers (compiled and translated from Hawaiian to English, by the author), and historical records authored by nineteenth century visitors, and residents of the region.

The historical-archival resources were located in the collections of the Hawai'i State Archives, Land Management Division, Survey Division, Natural Area Reserves office, and Bureau of Conveyances; the Bishop Museum Archives; Hawaiian Historical Society; University of Hawai'i-Hilo Mo'okini Library; private family collections; and in the collection of *Kumu Pono Associates LLC*. This information is generally cited in categories by chronological order of the period depicted in the narratives.

The historical record—including oral testimonies of elder native residents of the lands of Manukā, Kaulanamauna, and adjoining lands—provide readers with detailed descriptions of traditional and customary practices, the nature of land use, and the types of features to be expected on the landscape. The descriptions of land use and subsistence practices range from antiquity to the middle 1900s, and represent the knowledge of *kama'āina* (natives) of the land.

## **THE LANDS OF THE MANUKĀ-KAULANAMAUNA REGION: A CULTURAL-HISTORICAL CONTEXT**

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### ***Hawaiian Settlement***

Archaeologists and historians describe the inhabiting of these islands in the context of settlement which resulted from voyages taken across the vast open ocean, with people coming from small island groups. For many years archaeologists have proposed that early Polynesian settlement voyages between Kahiki (the ancestral homelands of the Hawaiian gods and people) and Hawai'i were underway by AD 300, with long distance voyages occurring fairly regularly through at least the thirteenth century. It has been generally reported that the sources of the early Hawaiian population—the Hawaiian “Kahiki”—were the Marquesas and Society Islands (Emory in Tatar 1982:16-18).

For generations following initial settlement, communities were clustered along the watered, windward (*ko'olau*) shores of the Hawaiian Islands. Along the *ko'olau* shores, in areas such as Waiākea-Pi'ihonua, Waipi'o, Waimanu and Pololū, streams flowed, rainfall was reliable, and agricultural production became established. The *ko'olau* region also offered sheltered bays from which deep sea fisheries could be easily accessed. Also, near-shore fisheries, enriched by nutrients carried in the fresh water flowing from the mountain streams, could be maintained in fishponds and estuarine systems. It was around these bays that clusters of houses where families lived could be found. In these early times, the residents generally engaged in subsistence practices in the forms of agriculture and fishing (Handy, Handy and Pukui 1972:287).

Over the period of several centuries, areas with the richest natural resources became populated and perhaps crowded, and by ca. 900 to 1100 AD, the population began expanding to the *kona* (leeward side) and more remote regions of the island (Cordy 2000:130). In Kona, communities were initially established along sheltered bays with access to fresh water and rich marine fisheries. The primary “chiefly” centers of Kona were established at several locations—these being in the Kailua (Kaiakeakua) vicinity, Kahalu'u-Keauhou, Ka'awaloa-Kealakekua, and at Hōnaunau. Smaller outlying communities were established further south, in the region traditionally known as Kapalilua, at areas such as Kauhakō-Ho'okena, Ka'ohe, Pāpā, Miloli'i, Kalihi, Honomalino, and Kapu'a, with even smaller communities at areas in between the large *kulana kauhale* (village communities). Similarly in Ka'ū, native communities and important centers also flourished at Wai'ōhinu, Honu'apo, Hilea and Punalu'u.

By the 1400-1500s, upland elevations to around the 4,000 foot elevation were being developed into areas of residence and a system of dry land agricultural fields were being developed (Cordy, 2000). Each of the communities shared extended familial relations, and there was an occupational focus on collection of marine resources and upland agriculture. A sophisticated complex of dryland cultivating grounds were developed over a wide region of the Ka'ū and South Kona uplands, used by residents of various *ahupua'a* to supply their own needs and support the larger royal communities. By the fifteenth century, residency in the uplands was becoming permanent, and there was an increasing separation of chiefly class from commoners. In the sixteenth century the population stabilized and the *ahupua'a* land management system was established as a socio-economic unit (see Kamakau 1961; Ellis 1963; and Handy, Handy & Pukui 1972).

In Kona and Ka'ū, where no streams flowed regularly to the coast, access to potable water (*wai*), was of great importance and played a role in determining the areas of settlement. The waters of Kona and Ka'ū were found in springs and water caves (found from shore to the mountain lands), or procured from rain catchment and dew-fall. Traditional and historic narratives abound with descriptions and names of water sources, and also record that the forests were more extensive and extended much further seaward than they do today. These forests not only attracted rains from the clouds and provided shelter for cultivated crops, but also in dry times drew the *kēhau* and *kēwai* (mists and dew) from the upper mountain slopes to the low lands.

While native tenants lived upon the lands of Manukā and Kaulanamauna, native traditions and early historical accounts do not describe the lands as large political or community centers. This is perhaps reflective of the isolated nature of the lands, and the fact that other lands in the region were easier to live upon.

### ***Natural Resources and Land Management in the Hawaiian Cultural System***

In Hawaiian culture, natural and cultural resources are one and the same. Native traditions describe the formation (literally the birth) of the Hawaiian Islands and the presence of life on, and around them, in the context of genealogical accounts. All forms of the natural environment, from the skies and mountain peaks, to the watered valleys and lava plains, and to the shore line and ocean depths are believed to be embodiments of Hawaiian gods and deities. One Hawaiian genealogical account, records that Wākea (the expanse of the sky—father) and Papa-hānau-moku (Papa, who gave birth to the islands)—also called Haumea-nui-hānau-wāwā (Great Haumea, born time and time again)—and various gods and creative forces of nature, gave birth to the islands. Hawai'i, the largest of the islands, was the first-born of these island children. As the Hawaiian genealogical account continues, we find that these same god-beings, or creative forces of nature who gave birth to the islands, were also the parents of the first man (Hāloa), and from this ancestor all Hawaiian people are descended (David Malo, 1951; Beckwith, 1970; Pukui and Korn, 1973). It was in this context of kinship, that the ancient Hawaiians addressed their environment, and it is the basis of the Hawaiian system of land use.

In the generations that followed initial settlement, the Hawaiians developed a sophisticated system of land use and resource management. By the time 'Umi-a-Līloa rose to rule the island of Hawai'i in ca. 1525, the island (*moku-puni*) was divided into six districts or *moku-o-loko*. Ka'ū and Kona, being two of the major districts. The large *moku-o-loko* were further divided into political regions and manageable units of land. These smaller divisions or units of land were tended to by the *maka'āinana* (people of the land) (see Malo 1951:63-67). Of all the land divisions, perhaps the most significant management unit throughout the islands was the *ahupua'a*.

*Ahupua'a* are subdivisions of land that were usually marked by altars with images or representations of a pig placed upon them, thus the name *ahu-pua'a* or pig altar. In their configuration, the *ahupua'a* may be compared to wedge-shaped pieces of land that generally radiate out from the center of the island, extending to the ocean fisheries fronting the land units. Their boundaries are generally defined by topographic and geological features such as *pu'u* (hills), ridges, gullies, valleys, craters, or areas of a particular vegetation growth (see Boundary Commission testimonies in this study; and Lyons, 1875).

The *ahupua'a* were also divided into smaller manageable parcels of land—such as the *'ili*, *kō'ele*, *mahina 'ai*, *māla*, and *kīhāpai*—that generally run in a *mauka-makai* orientation, and are often marked by stone wall (boundary) alignments. In these smaller land parcels the *maka'āinana* cultivated crops necessary to sustain their families, and supplied the needs of the chiefly communities they were associated with. As long as sufficient tribute was offered and *kapu* (restrictions) were observed, the common people 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 ones' *ali'i* (see Malo 1951:63-67 and Kamakau 1961:372-377).

Entire *ahupua'a*, or portions of the land were generally under the jurisdiction of appointed *konoiki* or subordinate 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'āinana* and *'ohana* (families) 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, vegetables and some meat in the diet, and the ocean provided a wealth of protein resources.

It is appropriate to observe here, that while isolated, a traditional saying shares with us something of the cultural significance of the lands of Manukā and Kaulanamauna, in the system of Hawaiian land management. In the same breath, the saying also tells us one of the important components of the natural environment in the Natural Area Reserve. As described in the saying, the lands of Manukā and Kaulanamauna mark the boundary between the districts of Ka'ū and Kona:

...*Mai Ke-ahu-a-Lono i ke 'ā o Kanikū, a hō'ea i ka 'ūlei kolo o Manukā i Kaulanamauna e pili aku i Ka'ū!* (from Keahualono [the Kona-Kohala boundary] on the rocky flats of Kanikū, to Kaulanamauna next to the crawling (tangled growth of) 'ūlei<sup>3</sup> bushes at Manukā, where Kona clings to Ka'ū! [Kihe, in *Ka Hoku o Hawaii*, September 13, 1917; Maly translator])

Noted Hawaiian Historian, David Malo, writing in the middle 1800s, described the traditional division of land under the ancient kings; mentioning Manukā and Kaulanamauna, indicating that such boundary lands were among those kept by the kings:

56. The king might well take as his own the *ahupuaa* on the borders of the districts, such, for instance, as Kaulanamauna, on the border of Kona, and Manuka, which lies on the border of Kau. (These were very rocky and rather sterile tracts of country.) When the king had found a suitable man, the king might put the lands in his charge.
57. It would also be a wise thing for the king to keep as his own the *ahupuaa* or districts in which the *kaui*, the *aala*, or the *auau*<sup>9</sup> is plentiful, together with any rocky and inhospitable tracts of land. He might entrust these lands into the hands of good men to farm them for him. [Malo 1951:193]

### **Overview of the Cultural Landscape of Manukā and Vicinity**

Ethnographers, Handy, Handy and Pukui (1972) provided readers with a description of the lands on the boundary of Ka'ū and Kona, describing their past nature, aspects of their lore, and historic setting up to the 1950s:

#### **MANUKA**

This is the first *ahupua'a* in Ka'u as one moves into that land from South Kona. It lies just beyond the well-watered rainy region of inland south-western Ka'u, yet the Manuka State Park, just above the belt road, has verdant grass, owing to cloud that covers the site in the rainy season and to daily showers. The elevation of the park is a little more than 2,000 feet. The massive jungle of 'ohi'a trees now covering widespread evidences of former taro and sweet-potato plantations is testimony enough of the climatically favorable nature of the locality. In prediscovery times there was even more abundant

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<sup>3</sup> 'Ūlei or 'ū'ūlei (*Osteomeles anthyllidifolia*), a native shrub which produces long branch runners that were still collected by elder Hawaiian fishermen for net making through the 1930s.

<sup>9</sup> Sect. 57. The *kaui* was a famous wood for spears, its color like that of mahogany. *Aala* is said to be fragrant. Perhaps the *ala-a* is the tree in question. *Auau* was a tree specially useful for the *aho*, or small poles that it furnished, the straight light poles of the *hau*. These were very useful in training men in spear practice. The head of the spear was blunted and wrapped with *tapa* to make its impact harmless. When young soldiers had acquired skill and proficiency with these harmless weapons, they were allowed to try their hand at the heavy, sharp-pointed, *kaui* spears used in battle.

rain; and before Hawaiian settlement and clearing of the forest, yet more. In fact this area was like the wet rain forest that now lies *mauka* of the park. Below the park at the present time the *'Ohi'a* dwindle, get smaller and sparser rapidly, and the seaward slopes of Manuka are dry and barren. Along the coast line and over what is now a lava desert blow the trade winds. This area is drenched with rain during the winter *kona* storms, and in October and November and February and March the uplands echo with Lono's thunder and Kane-hekili (Kane-of-the-lightning) is often seen and felt. From the upland and looking down toward Kauna Point (the ancient canoe landing for sea voyages from Kona northeastward) the striking difference between the wild white waters of the Ka'u coast and the *kai malie* (gentle sea) of Kona is distinctly visible as the two meet.

### **KAHUKU**

Kahuku, a very large *ahupua'a* which for many years has been a ranch, is just beyond the southwest shoulder of Mauna Loa. Over these heights the moisture-laden trade winds, having traversed the wet uplands and forested interior of eastern Ka'u, Hilo, and Hamakua Districts, spread a great roll of cool clouds. These masses of cool water vapor expand and precipitate as rain when they meet the air that rises morning to evening from the ocean, warmed in its passage over the dry lower plains of Kahuku, Manuka, and neighboring Kona. Warmed trade winds also blow in over the southeast coast and Ka Lae, crossing the high rolling plains of Kama'oa and Pakini, there precipitating much moisture as dew where it meets the cooled air blanketing the uplands. Actually, during the months of March through November, the blanket of cool moist air moving over the upland flank of Mauna Loa, and the warm damp flood of wind diverted inland and overland by the high plains of Kama'oa and Pakini, are nothing more nor less than vast eddies of the great southeastward flow of arctic air, which is warmed as it passes over the ocean in these latitudes. These we term the "trades"—the winds so named because the "traders" (sailing vessels) utilized their regular flow from March through November in their voyages.

In the season of southerly (*kona*) cyclonic storms, the wind and rain [page 560] came in upon western Ka'u from oceanward in more violent gusts, sometimes sweeping in with great force. These *kona* storms originate in the equatorial regions, hence their warm winds are heavily laden with moisture. Coming upon the cool uplands their heavy black clouds produce electric storms, with thunder and lightning, and downpours starting with light gentle rain (*hilina*), which gradually increase into deluges, at times veritable cloudbursts. These winter storms drench the whole land, which, whether dry lava, grassland, or forest, soaks it up greedily, and in the uplands stores it beneath the forests. [Handy et al., 1972:561]

In their discussion of history in the Manukā vicinity, Handy, Handy and Pukui (1972), cited the Journal of Wm. Ellis (1825), documenting a trip taken by the missionaries in 1823, across the lands from Kona into Ka'u. The authors also described the changing nature of the land, in part the product of lava flows in the 1800s and early 1900s, and provided us with important descriptions of significant cultural remains in Manukā. Knowledge of such resources, helps those concerned about the care of the cultural landscape plan for management of the land and resources:

As the missionaries journeyed on foot from South Kona along the coastal trail, the first *ahupua'a* they entered in Ka'u was Manuka. Along the coast this is, a desolate area, with almost no soil, no beaches, no springs. Kapua, Okoe, and, behind them in South Kona, Honomalino and Miloli'i, represented the last areas of settlement...

...Manuka has been spared the devastation of later lava flows which have covered much of what was good forest and open pasture prior to the outburst of 1868, that seems to have initiated the recent era of volcanism from Mauna Loa's southwest rift.

After 1868, came massive flows into Kahuku in 1887 and 1907, each slightly westward of the previous flow...

It was interesting to discover that one of the wild sweet-potato varieties that has persisted in the jungle is one peculiar to this area. It has a delicate [page 569] indented leaf form and a peculiar dusky or smoky tinge underlying the green and purple of the foliage and veining. Comparison of specimens collected in 1959 with descriptions of the *Uahi-a-Pele* (Smoke-of-Pele) collected in Kona in 1931 established this identification (see Fig. 16, *f*, in Handy, 1940). The presence of the smoky or dusky pigmentation found only in areas of active volcanism explains the names. But what causes the "smoky" look? The presence of the volcano goddess and her sister, Hawaiians say.

The trail that connects the seacoast with the upland, passing through the park, has along it five water holes. Near the shore, along the seacoast trail which is paved with huge *pahoehoe* (smooth) lava blocks; are a number of stones on which petroglyphs were carved by travelers.

The tumbling surf on the Ka'u shore is described in these lines of a sacred *hula* chant:

*The sun rises over the sea at Unulau,  
The billows of Kauna rush pell-mell.*

Unulau is a place on the Manuka shore east of Kauna Point. From there the sunrise may be seen out over the ocean. *Unulau* is also the name of the wind that blows in from the sea there. [Handy, Handy and Pukui, 1972:569-570]

Describing the relationship shared between families of the lands from Kamā'oa, Ka'ū, to Kapu'a, South Kona, Pukui recalled a tradition of a chiefess, a gourd, and her daughters, who were the progenitors of the people living in this region:

There was a local myth which accounted for the origin of the people of the western districts of Ka'u (Pukui, 1933). It tells of a beloved chiefess of Ka'u living in Kama'oa who fell ill and died just before she was to bear a child. Her body was put in a cave and a great stone was placed across its entrance. On the day when the child was due to have been born, a sprout emerged from the navel of the chiefess and grew out through a small opening in the entrance to the cave. It crept along over the country westward until it came to the house of a chief. There a gourd began to grow and to mature. The chief thumped and pinched it every day to see whether it was ready to pick. The spirit of the chiefess appeared to the *kahuna* of her ancestral house, who searched out the distant abode of the *malihini* chief by following the gourd vine. He then led the chief back to the cave in which the body lay, with the vine growing out of the navel. Thus he persuaded the chief to respect the gourd which had ripened on his land. The gourd was carried back to Kama'oa and kept carefully in a fine *tapa* cloth. In time it cracked open and out fell two seeds which developed into identical twin girls. These robust and prolific young women became the ancestress of the Kama'oa plain. The people of Kama'oa and of the districts westward to the border of Kona, over which the vine had spread, regarded themselves as descended from the gourd. Throughout this area gourd vines were never burned when they were dried or blighted, but were buried in a deep hole. Seven *ahupua'a* were crossed by the vine in its westward growth: Kama'oa, Pakini-iki, Pakini-nui, Kahuku, Kiao (a small *ahupua'a* practically enclosed between Pakini and Kahuku), Manuka, and Kapu'a (which is in Kona where the gourd fruited)... [Handy, Handy and Pukui, 1972:582-583]

Since the 1960s, residents of the South Kona-Ka'ū region have frequented the lands of Manukā and Kaulanamauna, for fishing and hunting. Traveling modified trails in jeeps, and on foot across the country. The activities are described by the Natural Area Reserve System program as:

Within Manuka, a jeep trail extends from the highway to the coast where it branches and parallels the shoreline. The jeep trail provides access to the remote coast for recreational fishing, which usually involves overnight camping along the shore. To allow tenting to continue, the *makai* boundary of the natural area reserve would exclude those shore areas where the jeep trail generally parallels and hugs the shoreline. The jeep trail system throughout the...reserve is also excluded... The reserve will continue to be a public hunting area as determined by hunting rules and policies of the Division of Forestry and Wildlife. Goats are normally in the drier region and pigs in the wetter forested parts. Present population estimates are less than 100 goats and from 100 to 200 pigs... [Manuka NAR File, Natural Area Reserve Office]

Prior to the middle 1950s, access in Manukā and Kaulanamauna was much more difficult, and the lands more carefully controlled. Those who had access to Manukā, Kaulanamauna, and neighboring lands such as Kahuku and Kapu'a, were employees of the ranches, or descendants of traditional families of the land—often they were both. With the improved means of access—the advent of jeeps and development of public hunting programs under Territorial-State regimes—people from beyond the immediate lands of the reserve began hunting and fishing in lands that now make up the Manukā NAR.



## **MO‘OLELO ‘ĀINA: NATIVE TRADITIONS AND HISTORIC ACCOUNTS OF THE MANUKĀ-KAULANAMAUNA VICINITY**

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This section of the study provides readers with access to a small collection of native traditions from the Ka‘ū-Kona region within which we find Manukā, Kaulanamauna, and neighboring lands. The primary traditions cited herein, have been translated from the original Hawaiian language narratives by Maly. The narratives span many centuries, from Hawaiian antiquity to the later period following western contact. Some of the narratives make specific references to places on the lands that make up the Manukā NAR, while other accounts are part of larger traditions that are associated with regional and island-wide events. Such accounts—though not necessarily site-specific—are cited here, as they help us to understand the kinds of traditional and customary practices which have been recorded for such lands, and may answer questions about features which might be encountered on the landscape of the Manukā NAR.

Unfortunately, it appears that only a few traditions have survived the passing of time in this region of Hawai‘i Island. This is perhaps in part a reflection of the remoteness of this part of the island. Importantly, the traditions describe customs and practices of the native people who resided on these lands, walked the trails, and who were sustained by the wealth of the mountain lands, the *kula* (plains and plateau lands), and the adjacent marine fisheries. It is also appropriate to note here, that the occurrence of these traditions—many in association with place names of land divisions, cultural sites, features of the landscape, and events in the history of the lands which make up the Manukā NAR—are an indicator of the rich native history of those lands.

### **“Kaa Hooniua Puuwai no Ka-Miki” (The Heart Stirring Story of Ma-Miki)**

Perhaps one of the most detailed native traditions which includes rich accounts of place names and traditional practices associated with the South Kona-Northern Ka‘ū region, is the historical account titled “Kaa Hooniua Puuwai no Ka-Miki” (The Heart Stirring Tale of Ka-Miki). The story of Ka-Miki was published in the Hawaiian language newspaper *Ka Hoku o Hawaii* (1914-1917). It is a long and complex account that was recorded for the paper by Hawaiian historians John Wise and J.W.H.I. Kihe (translators of the work of A. Fornander), with contributions from others of their peers. While “Ka-Miki” is not an ancient account, the authors used a mixture of traditions, local stories, tales, and family traditions in association with place names to tie together fragments of site specific history that had been handed down over the generations.

The complete narrative include historical accounts of more than 800 place names (many personified, commemorating particular individuals) around the island of Hawai‘i. While the personification of individuals and their associated place names may not be entirely “ancient,” such place name-person accounts are common throughout Hawaiian and Polynesian traditions. The selected narratives below, are excerpted from various sections of the tradition, and provide readers with descriptions of the land, resources, areas of residence, and practices of the native residents, as handed down by *kama‘āina* (those familiar with the land). Of particular interest, specific documentation is given pertaining to the practice of bird catchers, the nature of weather patterns, and the naming of many places on the mountain landscape.

The English translations below (Kepā Maly, translator), are a synopsis of the Hawaiian texts, with emphasis on the main events of the original narratives. Also, when the meaning was clear, diacritical marks have been added to help with pronunciation of the Hawaiian place names and words.

This *mo‘olelo* is set in the 1300s (by association with the chief Pili-a-Ka‘aiea), and is an account of two supernatural brothers, Ka-Miki (The quick, or adept, one) and Maka‘iole (Rat [squinting] eyes). The narratives describe the birth of the brothers, their upbringing, and their journey around the island of Hawai‘i along the ancient *ala loa* and *ala hele*

(trails and paths) that encircled the island. During their journey, the brothers competed alongside the trails they traveled, and in famed *kahua* (contest fields) and royal courts, against *‘ōlohe* (experts skilled in fighting or in other competitions, such as running, fishing, debating, or solving riddles, that were practiced by the ancient Hawaiians). They also challenged priests whose dishonorable conduct offended the gods of ancient Hawai‘i.

Ka-Miki and Maka-‘iole were empowered by their ancestress *Ka-uluhe-nui-hihi-kolo-i-uka* (The great entangled growth of *uluhe* fern which spreads across the uplands), who was one of the myriad of body forms of the goddess *Haumea*, one of the creative forces of nature—also called *Papa* or *Hina*— who was also a goddess of priests and competitors.

The brothers traveled from North Kona, through the southern lands of the district of Kona, and on into the district of Ka‘ū. In between December 10, 1914 to April 1, 1915, Wise and Kihe et al., provide us with the following descriptions of *wahi pana* (storied places), traditional practices, and events in the history of the lands of southern Kona and northern Ka‘ū . Perhaps of greatest importance in a study of traditional land use practices, the following narratives describe the extensive upland agricultural field by the name of Pu‘epu‘e, which extended from Kaulanamauna and Kapu‘a to Kukuiope‘e. The narratives also describe numerous upland residences near the *mauka* trail, and the inland fields which sustained the population.

### ***Traditions of Kapu‘a, Kaulanamauna, Manukā, Kahuku and Neighboring Lands***

...Bidding *aloha* to the people and lands of Pāhoehoe, Ka-Miki and Maka-‘iole departed, and passed through the lands of Kukuiope‘e, Kolo, ‘Ōlelomoana, ‘Ōpihihali, Ka‘apuna, and ‘Alikā, all of which were named for *ali‘i* who controlled the *ahupua‘a* of those names...

The brothers descended to the shore, and arrived at the *hālau ali‘i* (royal compound) of the chief Pāpaua, which was situated near the canoe landing, in the land now called Pāpā. The chief Pāpaua was famed for his *pā-hī-aku* (mother of pearl, bonito fishing lure), and the place name, Pāpā commemorates Pāpaua. Pāpaua was descended from the family of Pā-ku-huhu-a-Kalino, as told in the story of Kalino<sup>4</sup>, and was the brother-in-law of Hīkāpōloa, a great chief of Kohala...

The land of Pāpā was well populated and there were many fishermen and fishing canoes in Pāpā and neighboring lands. Ka-Miki met with Pūpuhi, the head fisherman of Pāpaua, at the canoe landing, and it was agreed that Ka-Miki would accompany the chief on his fishing expedition in place of Pūpuhi. Once in the canoe, Ka-Miki gave one thrust of the paddle, and the canoe was directed to the *aku* fishing grounds. So great was the strength of Ka-Miki’s thrust, that Pāpaua almost fell out of the canoe. Once at the fishing ground, a great catch of *aku* was made, and it was understood that Ka-Miki was no ordinary person.

Upon returning to the shore, Pūpuhi invited Ka-Miki *mā* to stay at Pāpā, but he declined, explaining the nature of the journey with his brother. Pūpuhi then warned them about the fierce *‘ōlohe*, ***Omoka‘a*** and ***Okoe mā***, who dwelt along the path and waylaid travelers. It was in this way, that Ka-Miki and Maka-‘iole learned that those *‘ōlohe* had a special compound along the trail with houses on both sides of it, and in between the two was an *imu* which was always kept glowing hot. It was the practice of *Omoka‘a* and *Okoe mā* to compete in riddling and fighting techniques with everyone who passed by, and they had killed many people. Their victims were baked in an *imu*

<sup>4</sup> See the account of *Ka-uma-‘ili-‘ula* (in S.M. Kamakau 1991:102-103).

and their bones were used for fishhooks. Pūpuhi also told them about **Manukā** of **Nāpu'uapele**, who was a master in fighting with sling stones, and in all manner of fighting.

Pūpuhi further explained to Ka-Miki that the people who lived in this region, were so afraid of the *'ōlohe* that they traveled bunched up, together in groups, rather than to travel alone. Ka-Miki told Pūpuhi that the purpose of their journey was to meet with *'ōlohe* practitioners of that nature, and make right the ways of such practitioners. The brothers then departed and passed through the lands of **Ho'opūloa** (To cluster together), which were named for a chief who had taken that name.

Likewise, the neighboring lands of **Omoka'a** and **Okoe** were named residents of those places. Omoka'a (k), Okoe (w), and their five children lived along the main trail which passed through the region. The children lived on the *makai* side of the trail, and the parents lived on the *mauka* side of the trail. It was the practice of this family to waylay travelers and bake them in their *imu*, which was kept in the middle of the trail. People of the surrounding communities feared these *'ōlohe* and never traveled individually, they stuck together (*ho'opū*) in groups, and went great distances to avoid using the land trails as long as Omoka'a *mā* continued their evil ways. Most people of this region traveled by canoe whenever they could.

While people feared Omoka'a, Okoe and their children, the land of the Ho'opūloa area was celebrated in the saying —

*Ka 'āina i ka wai pū'olo i ka maka o ka 'ōpua hiwahiwa i ke ao lewa i ka lani papanu'u a Haunu'u* (The land of water laden horizon clouds, cherished by the banks of clouds which line the sky foundation of *Haunu'u*).

Though all the warnings had been given, Ka-Miki and Maka'iole passed through the Ho'opūloa vicinity uneventfully, and continued their journey until they arrived in the uplands of **Kapu'a**. The area was well populated and there were many houses. There, they met with Nā-niu-a-ō'ū (The-coconut grove of 'Ō'ū), a farmer and *kāula Pele* (priest of the *Pele* class). A section of land at Kapu'a, known as **Niu-ō'ū** was named for this priest.

Nā-niu-a-ō'ū tended an agricultural field in the uplands, but his efforts were often thwarted because of the dry nature of the land. Before the arrival of Ka-Miki and Maka'iole, Nā-niu-a-ō'ū had a premonition of their nature, and saw that they would be followed by a great cleansing of the land. Nā-niu-a-ō'ū went about telling all of the people from the uplands to the shore that they should remain within their houses for a great storm was coming. But because of the *kapu* associated with his priest nature, Nā-niu-a-ō'ū was considered to be *ano 'ōpulepule* (somewhat crazy) by the people of Kapu'a, and they often ridiculed him.

When Ka-Miki and Maka'iole arrived at Nā-niu-a-ō'ū's residence, he happily welcomed them and prepared a feast for them. As Nā-niu-a-ō'ū strained the *'awa* in the *kānoa* (*'awa* bowl), Ka-Miki called upon *Kāhuli-'eli-papa-honua-mea*, and his female and male ancestor deities in a *mele pule* (prayer chant)—

*lā 'Ōhi'a-nui-moe-awakea  
lā Kumakua-moe-awakea  
lā Nā -wahine-moe-awakea*

*lā Ka-'ohu-kolo-mai-luna-o-ka-lā'au  
lā Ka-uluhe-nui-hihi-kolo-i-uka...*

To 'Ōhi'a-nui  
To Kumakua  
The women (goddesses) who rest  
at midday  
To Ka-'ohu-kolo  
To Ka-uluhe...

<i>E ala e Haumea nui a ke āwaiwa</i>	Arise great Haumea of mysterious forms
<i>E ho'ohānini a māninini ka wai a Kāne</i>	Let pour and flow forth the waters of Kāne
<i>E ola iā māua i nā pulapula</i>	That we two, your offspring might live
<i>Nā pua kela i ke ao manamana</i>	The foremost flowers of the many faceted light
<i>lā Ka-Miki a me Maka-'iole</i> <i>'Eli'eli kapu, 'eli'eli noa</i>	It is Ka-Miki and Maka-'iole Profound sacredness, profound freedom
<i>'Āmama, ua noa</i>	The prayer is finished, it is freed

Thus Ka-Miki called upon the deity which spanned the expanse of the land, the deity of clouds, rain, thunder, winds, earthquakes, lightning, great mysterious *Haumea*, and *Kāne* of the waters of life, to partake of the 'awa and food. All of the nature deity forms manifested themselves, and the people of the land were filled with terror, at seeing the calm broken. Clouds appeared to flow over the cliffs of Kahuku like flowing water —

*'Oiai e mau ana kēia mau 'ōuli me ka ho'omaha 'ole, ke hālī'i mau ala ka 'ohu i nā kaka'i pali o Kahuku a me Manukā, a ke 'ike 'ia ala ka hiolo o ka wai o nā pali...Ke kokolo a'e o ka 'ohu i kumu pali a hekau iluna o nā lā'au...a he hō'ike kēia no ka māwehe a'e o ka 'ino.*

So it is that these signs remain without fail; if the mist is spread out, along the edges of the cliffs at **Kahuku** and **Manukā**, flowing like water over the cliffs ... and the mist then creeps along the base of the cliffs, while above in the trees all is calm...it is a portend that a storm is about to occur.

The elder female ancestors of *Nu'umealani* descended with the mist form of *Ka-'ohu-kolo-māi-iluna-o-ka-lā'au* covering the land down to the shore with mists. The voices of *Kānehekili* and *Kāne-wāhilani* rumbled and lightning flashed. *Nā-niu-a-ō'ū* then saw a multitude of mysterious formed deity all about his compound and throughout his plantation. Ka-Miki then called with a *mele pule* to *Ka-uluhe (Haumea)* —

<i>Eia ka 'ai e ke akua</i>	Here is your food o gods
<i>E Kāhuli, e Kahele</i>	O Kāhuli, o Kahele
<i>E Kauwila-nui-'eli-papa honuamea...</i>	O Kauwila-nui who digs the red (sacred) stratum of the earth...
<i>Kulukulu ka wai ke pākakahi nei</i>	Let the water flow here and there
<i>A hānini la, a hānini ua</i>	Flowing and pouring forth
<i>Ka ua i ka 'ōnohi o Laniwahine</i>	The cherished rains of Laniwahine,
<i>O Nu'umea-lani-a-lani-nu'u-i-ka-ua</i>	who is of Nu'umealani
<i>I 'eli kapu, i 'eli noa – noa</i>	The sacredness is profound, the freedom is profound the prayer is freed

Thus Ka-Miki called upon the multiple forms of *Ka-uluhe*, *Lani-pipili*, *Lani-nui-ku'i-a-mamao-loa*, the forms of *Haumea*, *Kāmeha'ikana*, *Hina*, *Pele*, and the host of gods and *Kāne* forms. When Ka-Miki ended his prayer, *Lani-papanu'u-i-ka-ua*, *Lani-ka'ahele-i-ka-ua*, *Kāne-nui-ākea*, and *Kāne-i-ka-wai-ola mā* caused the rains to fall. Water flowed from the mountain to the sea, and those who had ridiculed *Nā-niu-a-ō'ū* met with much tribulation, and they repented.

During the time of the storm, Nā-niu-a-‘ō‘ū and Ka-Miki *mā* remained within Nā-niu-a-‘ō‘ū’s house, where they ate and drank ‘*awa*, for there was a period of *kapu* till the night passed. Only the thunder and the winds stirred outside. *Kānehekili-wāhilani-nui-a-nu‘u*, the thunderer, brother of *Hilina[na]* and *Hilinehu-i-ka-maka-o-ka-ua-koko*; and *Ka-‘ōnohi-‘ula-ku-hai-i-ka-moana*, who were the elder spirit-wind body formed brothers of *Haumea-nui-niho-wawaka-a-ke-aīwaiwa*, moved about.

When the calm returned, after this great storm passed, the people of **Kapu‘a** looked to Nā-niu-a-‘ō‘ū with new respect, and followed his suggestions willingly. The lands were cleansed and peace spread across the land. All forms of verdant growth sprouted from mountain to shore, and in this way, the extensive taro plantation of **Pu‘epu‘e** came to be planted, and it remained viable until recent days.

Now this great plantation's full name was *Pu‘epu‘e-ku‘u-kalo-i-amo-‘ia-kiola-‘āina-‘ia-a-koekoena-kiola-‘ia-i-ka-mauna-a-me-ka-moana* (My taro, planted in mounds was carried and spread [thrown] across the land, and what remains was spread [planted] from mountain to sea). The plantation extended across the region, from Kaulanamauna to Kukuiopa‘e.

As Ka-Miki and Maka-‘iole prepared to depart, Nā-niu-a-‘ō‘ū warned them about the feared ‘*ōlohe*; **Omoka‘a**, **Okoe**, their children, and **Manukā**. These ‘*ōlohe* waylaid and killed many travelers. Whenever possible, the natives of the surrounding districts avoided traveling the *ala loa*, choosing instead to journey by canoe. Nā-niu-a-‘ō‘ū suggested that Ka-Miki and Maka-‘iole might be better off taking a canoe, and returning to land once past Kalae, near Kaumaea. But the brothers told Nā-niu-a-‘ō‘ū that they had come in search of those people who dishonored their gods and practices. They described the depth of their own ‘*ōlohe* training and sling fighting practices, including the techniques of *Kaueleau*, and *Ki‘ilenalena*. They then departed and sought out **Okoe** and **Omoka‘a**.

**Okoe** was the ‘*ōlohe* wife of **Omoka‘a**, and mother of ‘*Ōpu‘u-ka-honua*, ‘*Ōmu‘o-ka-honua*, ‘*Ōlau-ka-honua*, ‘*Ōlika-ka-honua*, and ‘*Ōmole-ka-honua*, all of whom were notorious ‘*ōlohe*.

Ka-Miki and Maka-‘iole arrived at the compound of Omoka‘a and Okoe *mā*, and indeed the famed *imu* in which they baked their victims glowed red hot with its fire. Omoka‘a sat on the *mauka* side and Okoe on the *makai* side of the *imu*, and upon seeing Ka-Miki *mā* they both reached for their tripping clubs. The four competitors exchanged taunts and riddles. And Ka-Miki warned the couple that they would be the ones baked in their own *imu*. Seeing that Ka-Miki *mā* were versed in riddling, Omoka‘a and Okoe started their efforts at defeating Ka-Miki *mā*, in hopes of baking them in the *imu*. Okoe started the riddle contest using a form of riddle chants (*mele nanenane*):

<i>O hānau ka honua</i>	The earth was born
<i>A mole ka honua</i>	The earth's foundation set
<i>O kokolo ke ‘a‘ā</i>	The ‘a‘ā lava creeps along
<i>ka weli o ka honua...</i>	Causing the earth to be afraid...

The riddle contained the names of Okoe’s children, and as the chant ended, Okoe called out, “‘*O wai? ‘O wai lā? ‘O wai ho‘i lā?*” (Who? Who is this? Who indeed is this?) Ka-Miki chanted in response answering correctly, stating that the riddle described the creation of the earth in the account of *Wākea* and *Papa*; The layering of sky and earth strata; and the genealogy of Okoe, Omoka‘a and their family. He chanted —

O hānau ka moku, a kupu, a lau,  
 A loa, a mu'o, a 'ike,  
 Ka moku iluna o Hawai'i,  
 He pūlewa ka 'āina, naka Hawai'i  
 E lewa wale ana no i ka lani lewa,  
 Hono-ā mai, e Wākea pāhono 'ia,  
 Mali o ke a'a o ka moku me  
 ka honua,  
 Pa'a 'ia lewa e lani, i ka lima akau  
 o Hawai'i,  
 A pa'a Hawai'i la, a la'a Hawai'i la,  
 'ikea he moku  
 O ka moku la ho'i auane'i.  
 ko lalo nei..

The island was born, sprouting,  
 spreading,  
 Lengthening, budding, and seen,  
 Hawai'i is the island which is above  
 The land sways, Hawai'i shakes  
 Floating above in the heavens,  
 Bound together, bound by Wākea  
 The root of the island was tied to  
 the earth  
 And held fast in the heavens by  
 the right hand of Hawai'i  
 Hawai'i was set firm and consecrated,  
 the island is seen  
 Indeed it is the island which  
 is below...

Surprised that Ka-Miki answered their riddle, Okoe and Omoka'a told the brothers that they were indeed clever. Omoka'a and Okoe then called upon their riddling god *Kāne-iki-pa'ina* (*Kāne* who assumes the form of a click bug) to assist them.

As the competition continued, comparisons were made to the casting of a net to ensnare one's catch. Ka-Miki warned Okoe *mā* that if they were not careful, they would end up like *Luanu'u-a-nu'u-pō'ele-ka-pō* of the nine fold cliffs of Waipi'o – caught in the supernatural net *Ku'uku'u* which belongs to *Ka-uluhe*. Ka-Miki then chanted a *mele pule kānaenae ho'oūlu mana 'e'ehia* (Prayer chant supplication to increase his supernatural power):

*lā Ku'uku'u ka 'upena  
 Hei mai ka i'a*  
  
*O ka pulelehua  
 O ka pokipoki  
 O ka nananana  
 O kini o ke akua  
 O ka mano o ke akua  
 O ka lehu o ke akua  
 O ka puku'i o ke akua...*

*Ku'uku'u* is the net,  
 A snare which catches the fish,  
 Binding it like —  
 The butterfly,  
 The sow bug,  
 The spider,  
 The 40,000 gods  
 The 4,000 gods  
 The 400,000 gods,  
 The assembly of gods...

Understanding the power of the prayer which Ka-Miki chanted, Okoe *mā* began another form of riddling and asked —

*“Aia la! Aia ho'i! Ku'u imu a'ohē ahi , ku'u imu uwahi 'ole, ku'u imu ho'okāhi no pōhaku, ku'u imu 'elua no pe'a kauwawe, ku'u imu e ...!”* (Behold, behold indeed! My *imu* has no fire, no smoke, my *imu* has one stone, and two ti leaf bundle covers, yet it is my *imu*...!)

Ka-Miki responded:

*“He imu manini ko kai, a'ohē ahi pau no na'e ka manini i ka 'ai 'ia. He imu mā'a ko uka ua mo'a pala kāpule iloko o ka lua, a'ohē ahi pau no na'e i ka 'ai 'ia...”* (The rock mound an *imu* [also called *umu*] for the *manini* in the sea, has no fire, yet it is consumed. The smokeless *imu* is in the uplands, is an over ripened banana, and it too is consumed...)

Once again, Okoe and Omoka'a agreed that Ka-Miki won the contest. Okoe then presented a riddle about the name of the plantation of Pu'epu'e. The full name of this plantation is *Pu'epu'e-ku'u-kalo-i-amo-'ia-kiola-'āina-'ia-a-koekoena-kiola-ia-i-ka-mauna*

-a-me-ka-moana (My taro planted in mounds was carried and spread [thrown] across the land, and what remained was spread [planted] from mountain to sea). She called out —

[Note: numbers in the following narrative have been inserted at key points by the translator, to indicate where points in the riddle correspond with the answer.]

<sup>[1]</sup> *He kalo ku i ka mauna, i pu'epu'e 'ia;* <sup>[2]</sup> *i amo 'ia a* <sup>[3]</sup> *koe,* <sup>[4]</sup> *lino 'ia a pa'a,* <sup>[5]</sup> *ho'ō'ia apau,* <sup>[6]</sup> *kiola 'ia i ka* <sup>[7]</sup> *mauna,* <sup>[8]</sup> *hali 'ia i ka* <sup>[9]</sup> *moana,* <sup>[10]</sup> *ku ka puna i uka,* <sup>[11]</sup> *ua kolo a* <sup>[12]</sup> *pae he kukui ka 'āina.* (The taro placed upon the mountain, planted in mounds, carried to where it remains, securely bound (*lino*), all set in place, thrown to the mountain (by Haumea); carried and spread to the ocean, [reaching] to where the spring is in the uplands, and where the *kukui* cling upon the land.)

Okoe then told Ka-Miki, “Answer the riddle or your eyes shall become the food of our riddling god *Kāne-iki-pa'ina*.” Ka-Miki answered in a riddle of his own, describing many of the lands of the Kapalilua region —

*Aia la, aia la, aia la! O ke kalo a ku'u mau kūpunawahine i kanu ai i ka hei, i ka manomano wai, i ka lā'au kala'ihī o'o i kanahēle o Mahiki, i ka mauna anuanu ko'ūa, he ahi ke kapa e mehana ai, e lala ai mākou i uka o 'Ōma'olālā e - 'oia – <sup>[1]</sup> He Helemauna ke kalo i pu'epu'e 'ia; O <sup>[2]</sup> Kapu'a ia - I amo 'ia a koe; O <sup>[3]</sup> Omoka'a ia me <sup>[4]</sup> Okoe - He mau 'okana i pili ana me Kapu'a, 'oia no ho'i ko 'olua mau inoa; Lino 'ia a pa'a; o <sup>[5]</sup> Honomalino ia; Ho'ō'ia apau; o <sup>[6]</sup> Ho'opūloa ia; Kiola 'ia i ka mauna; o <sup>[7]</sup> Kiolaka'a a me <sup>[8]</sup> Kaulana mauna; Hali 'ia i ka moana; o nā <sup>[9]</sup> 'Ōpihiali a me nā <sup>[10]</sup> 'Ōlelomoana; Ku ka puna i uka; o <sup>[11]</sup> Ka'apuna ia. O kolo a pae he kukui ka 'āina; o <sup>[12]</sup> Kolo ia a me <sup>[13]</sup> Kukuiopa'e; he mau ali'i 'ai ahupua'a lākou apau...*

Behold! It is the taro which my ancestresses planted with exceptional skill (*hei*), with the multitudinous waters (deep knowledge), at the forest of Mahiki with the rigid trees on the cold damp mountain – where the fire is the only blanket which warms one, indeed we were warmed at 'Ōma'olālā.

<sup>[1]</sup> *Helemauna* is the taro which was planted in mounds at <sup>[2]</sup> Kapu'a, so the plantation became called Pu'epu'e; *amo* (carried) is <sup>[3]</sup> Omoka'a; to where it *koe* (remains) is <sup>[4]</sup> Okoe, these are 'okana (land districts) which are near Kapu'a; *lino 'ia* (securely bound) is <sup>[5]</sup> Honomalino (cf. *lino*); *ho'ō'ia* (set in place) is <sup>[6]</sup> Ho'opūloa; *kiola* (tossed or thrown) is <sup>[7]</sup> Kiolaka'a; to the *mauna* (mountain) is <sup>[8]</sup> Kaulanamauna; *hali 'ia* (carried) is <sup>[9]</sup> 'Ōpihiali; to the *moana* (sea) is <sup>[10]</sup> 'Ōlelomoana; [reaching] to where (*ku ka puna i uka*) the spring in the uplands) is <sup>[11]</sup> Ka'apuna; the *kukui* is <sup>[12]</sup> Kukuiopa'e; and *kolo* (cling upon the land) is <sup>[13]</sup> Kolo; and all of these lands are named for the chiefs who control the district resources.

Thus Ka-Miki answered the riddle of Okoe and told her that if she denied the accuracy of his answers; her eyes would be pierced by coconut mid-ribs, and the juices would be used to fill sacred cups *Laukapalili* and *Hikiaupe'a* of *Ka-uluhe*, and be served as the *pūpū 'awa* ('awa drink condiment) for Ka-Miki, *Kahuelo-ku*, and their riddling gods.

Omoka'a told Ka-Miki that he was indeed correct. Ka-Miki then asked Okoe and Omoka'a if they were finished, and stated that if they were, “only their children remained to be bound in the mesh of *Kanikawī* and *Kanikawā*; the mysterious net of our ancestress *Lani-nui-ku'i-a-mamao-loa*, from which there was no escape.” Ka-Miki then chanted about the nature of their riddling god and knowledge – *mele*:

*I Tahiti ka pō e Niho'eleki  
I hana ka pō e Niho'eleki  
Mākaukau ka pō e Niho'eleki  
Lawalawa ka pō a Niho'eleki*

*lā 'akāhi ka pō e Niho'eleki*

*lā 'alua ka pō e Niho'eleki*

*lā 'akolu ka pō e Niho'eleki  
lā 'ahā ka pō e Niho'eleki*

*lā 'alima ka pō e Niho'eleki  
lā 'aōno ka pō e Niho'eleki  
Pa'i wale ka pō e Niho'eleki  
Pono, a'o wale e Niho'eleki  
Aia! Aia ho'ī! Aia la!*

Niho'eleki – is in the antiquity of *Tahiti*  
– was formed in antiquity  
– is prepared in all antiquity  
Niho'eleki's understanding is more  
than enough  
*Niho'eleki* – understands the first level  
of meanings,  
– understands the second level  
of meanings,  
– understands the third level of meanings,  
– understands the fourth level  
of meanings,  
– understands the fifth level of meanings,  
– understands the sixth level of meanings,  
– understands all levels of meanings,  
It is correct, taught only by *Niho'eleki*  
Behold! It is so! It is so!

Okoe, Omoka'a and Ka-Miki *mā* then exchanged taunts about the depth and nature of their knowledge. Seeing that they could not win, Okoe and Omoka'a agreed to stop the riddling contest, lest they ended up in their own *imu*. Now this couple kept many weapons in waiting, and they expected their children to return shortly, from fishing at Honomalino. With their help, they planned to kill Ka-Miki and Maka'iole with other forms of competition, for Omoka'a and Okoe *mā* were knowledgeable in all manner of fighting and were compared to the lofty peaks of Hā'upu, Kaua'i, and the distant leeward islands of Ni'ihau, Ka'ula, and on to *Kahiki*.

Omoka'a met with Ka-Miki in hand to hand combat but his leg was broken, and he was nearly thrown into his own *imu*, but Ka-Miki laid him to the *imu* side, waiting until the contest was finished. Okoe covered her body with *kukui* and coconut oil, and wore a *pā'ū* of the 'eokahaloa variety, worn in a tightly twisted form. This *pā'ū* was tied so as to entangle her opponents. Maka'iole called to Okoe that she should take heed lest her *pā'ū* be shredded by the fierce *uhu* (parrot fish; himself) the cherished *uhu* of *Ka-uluhe*. Maka'iole then offered a name chant for *Ka-uluhe* – *mele*:

*O Kaulua ka lā*

*Kaulua ka ua  
Kaulua ka makani  
Kaulua ke kai  
Kaulua ka 'ino  
Kaulua ka hōkū e kau nei  
E Ka-uluhe-nui-hihi-kolo-i-uka-e  
Eō mai ana i ko inoa*

The assembly of gods...  
[the season of *Kaulua* when the star Sirius  
is above]  
O *Kaulua* of the rains  
O *Kaulua* of the winds  
O *Kaulua* of the [rough] seas  
O *Kaulua* of the storms  
O *Kaulua* [when] the star is set above  
O *Ka-uluhe-nui*...  
Answering to your names

*Ka-uluhe* responded from Kalama'ula with a greeting chant – *Mele*:

*A'u kama iluna o ka 'Ōhi'a-moe-  
awakea  
Lehua 'ula i ka wī a ka manu  
  
Manu hulu weoweo i ka uka o  
Kalama'ula*

My child who is there upon the deity,  
'Ōhi'a which reclines in the midday sun  
The red *lehua* blossoms around which  
the birds sing  
The birds with the red glowing feathers  
in the uplands of Kalama'ula



*He 'ula leo kēia e hōlio nei  
'Ano'ai no a, 'Ano'ai wale ho'i!*

This is a voice offering to you, the  
one who is always in my thoughts  
Greetings, greetings indeed!

Upon completing the chant, the wind roared breaking the forest, and Okoe leapt to attack Maka-'iole, though she was exceedingly skilled, she was beaten. Omoka'a leapt to assist Okoe, but both 'ōlohe were bound in the net *Halekumuka'aha* (also called *Ku'uku'u*). Seeing their complete defeat, both Omoka'a and Okoe surrendered to Ka-Miki and Maka-'iole. 'Ka-Miki and Maka-'iole agreed not to bake them in their own *imu* after the couple promised that they would no longer attack people traveling along the *ala hele*. Omoka'a went to fetch 'awa and food items with which to serve Ka-Miki *mā*.

Okoe saw her children returning from Honomalino where they had been fishing. The children were carrying nets filled with *pā'ou'ou*, *hilu*, *weke*, *moano*, *anahulu*, and *maomao uli* (*Thalassoma*) and other fish. Okoe explained the days events and told the children that there was no victory for them, that they must take Ka-Miki *mā* as companions to save their own lives. 'Ōlau, 'Ōliko, and 'Ōmole, the three younger children agreed with their mother that they should not attempt to fight.

'Ōpu'u and 'Ōmu'o refused to listen, and they recounted their 'ōlohe nature and the background of their family (their grandparents lived in *Kahiki* with the chief Ke'e (written Kowea Jan. 28, 1915), ward of Olokea and Olomea, the mysterious *kūpua* of *Kahiki-kū*.

Omoka'a, Okoe and their children returned to the compound where Ka-Miki *mā* awaited. Upon seeing Ka-Miki *mā*, 'Ōpu'u and 'Ōmu'o put their heads down, realizing that they would be no competition for Ka-Miki. Omoka'a prepared the food and 'awa, and all participated in a feast. As the new day arrived, Ka-Miki and Maka-'iole prepared to continue their journey, and Okoe told them about Manukā, and his skills...

...**Manukā** (Careless) was named for the 'ōlohe chief who was a foremost expert in *nou pōhaku* (sling stone fighting). There was no dodging his shots, and he could launch three stones at one time. Manukā's house was also built along the *ala nui* (main pathway), and he mercilessly killed travelers.

Ka-Miki and Maka-'iole drew near to Manukā's compound. Ka-Miki had Maka-'iole walk directly behind him so it looked as if only one person was traveling. Manukā observed the approach of this lone traveler, and attacked with his sling stones, which Ka-Miki and Maka-'iole dodged, caught up, and directed back to Manukā, with one stone striking Manukā's left foot. Having lost his sling stones, Manukā understood that Ka-Miki *mā* were exceptionally skilled at this method of fighting, for this was the first time anyone had ever dodged his attacks.

Manukā then rose and took up his club and leapt to attack Ka-Miki *mā*. Ka-Miki called to Manukā, "I have heard much about you, and you are greatly feared, but you do not appear to be much more than a plaything." Manukā and Ka-Miki exchanged riddle taunts, and Manukā warned Ka-Miki that he would become captive of the 'ūlei which crawls over the land. Ka-Miki shrugged off the comments, telling Manukā that he was an old man with shallow knowledge. Manukā then told Ka-Miki that his *hauna lā'au* (war clubs) *Hilihili-a-Pahoa* and *Ku'i-ka-'ole* would become Ka-Miki's teachers.

Ka-Miki dodged Manukā's attacks, and struck Manukā. Ka-Miki then leapt and took Manukā's club from him, and called out, "Manukā you will die at the hands of the mysterious children of *Kapa'ihilani*." He called out in a *mele pule*:

*O Iku-ā ka leo o ka hekili  
Iku-ā ka leo o ka uwila  
Iku-ā ka leo o ka makani  
Iku-ā ka leo o ka 'ino  
Iku-ā ka leo o ke kai  
Iku-ā ka leo o ka manu  
O Iku-ā ka pohā kō'ele'ele*

*I nā mo'opuna piha aīwaiwa nui wale*

*A Kāhuli-'eli-papa-honua-mea  
A 'Ōhi'a-nui-moe-awakea  
A Ka-'ohu-kolo-mai-iluna-o-ka-lā'au  
A Ka-uluhe-nui-hihi-kolo-i-uka*

The thunder roars  
The voices of the lightning crashes  
The winds roar  
The storm roars  
The ocean roars  
The birds roar  
Ikuwā is the month when dark storms  
arise explosively  
The time of the greatly mysterious  
grandchildren of  
Kāhuli-'eli (Pele),  
Of 'Ōhi'a-nui,  
Of Ka-'ohu-kolo, and  
Of Ka-uluhe...

Maka-'iole told Manukā, "We two have come here with the *mana* (power) of our many mysterious ancestresses and contest gods. So Manukā, you did err in attacking us with your sling stones." Manukā did not answer Maka-'iole, and was filled with anger because Ka-Miki had taken his war club. Manukā reached out to grab Ka-Miki, thinking to beat him with the fighting technique of *ha'iha'i* (bone breaking combat). But Ka-Miki grabbed Manukā and threw him out of the compound onto the pathway as if Manukā was but a mere pebble. Ka-Miki then told Manukā, "Your deceitful attacks have been thwarted three times, and your knowledge taken from you." Manukā leapt up again to attack Ka-Miki, thinking that he might be able to bind him. Instead, Ka-Miki bound up Manukā and threw him out of his house like a bundle, where he writhed like a bound eel.

Manukā loosened himself with great effort, and compared himself to the fierce *Lau-milo* eel with the jagged teeth, the eel which can not be grasped with the hands. Ka-Miki told Manukā, "At last I see that you are a true expert, but the extent of knowledge as taught by my ancestresses is not finished. Your end will be like that of the fierce eel god *Laumeki*; the eel killed by my ancestress." Manukā fought on, but was unable to defeat or tire Ka-Miki, and when Manukā could go no further, he was bound by Ka-Miki, who called out to him –

*Pau ka hana la a ka mo'opuna aīwaiwa a Lani-nui-ku'i-a-mamao-loa a me Ka-uluhe-nui-hihi-kolo-i-uka. Pa'a la, pa'a 'ia pōka'a lau hala i ka 'ope'ope a pelupelu, i ka pu'upu'u a lima iki, 'ōpe'a a ha'awe kiloi. Pa'a i ka 'ai a ka lua, i ka huhui a Makali'i, i ka pūnāwelewele a ka Nananana nui ho'omakua, i ka 'alihi o Kanikawī a me Kanikawā, ke kōkō aīwaiwa a ku'u kūpuna wahine e noho mai la i ka lā'au kala'ihī o'o i ka nahele o Mahiki... Pa'a loa ka pūhi Lau-milo... i ka 'upena ku'u a ku'u mau kūpuna wahine aīwaiwa ia Ku'uku'u.*

Completed is the task of the mysterious grandchild of *Lani-nui-ku'i* and *Ka-uluhe*. [You are] Bound and secured like a roll of bundled pandanus leaves, bundled and taken up by the hand to be thrown away like refuse. Bound by a superior combat knowledge, [bound] like the cluster of *Makali'i* (Pleiades), [bound] in the web of the great mature spider, [bound] up in the strings of *Kanikawī* and *Kanikawā*, the wonderful net of my ancestress who dwells there in the rigid forest of Mahiki... Securely bound is the *Lau-milo* eel... in the powerful net *Ku'uku'u* which belongs to my ancestresses. Thus, Manukā was defeated by Ka-Miki.

Ka-Miki gave Manukā the choice of life or death and told Manukā that his sisters Kealakahua and Pu'u o Kamā'oa, and Pu'u o Kamā'oa's husband, Kaulanamauna, would also be killed if Manukā chose to die rather than surrender. Ka-Miki also told

Manukā that surrendering required that the family stop attacking travelers along the trail ways. Manukā acknowledged Ka-Miki's superior skills and agreed to Ka-Miki's terms. Ka-Miki prepared a poultice of *kalehuna* (root of the morning glory), *kāko'olani* (medicine to support a chief) and *pa'akai* (salt), mixed with *kamahānau* (urine). Ka-Miki told Manukā that this medicine would heal his broken foot in five days.

Manukā then prepared 'awa from his upland gardens for them to drink. On the next day as Ka-Miki *mā* prepared to continue their journey, Manukā gave Ka-Miki a prized heirloom *kapa* (bark cloth garment) which would serve as a sign to Kealakahua *mā* that Ka-Miki and Maka'iole could travel the trails freely, and that the family was to end its practice of waylaying travelers. The promise was kept and this section of the trail was safely traveled by all.

**Ka-huku** (The-protuberance) was named for the chief Kahuku-nui-a-Hala'ea (Great Kahuku [son] of Hala'ea), his wife was (Wai-o) 'Ahukini, and their daughter was Mōlī (lele).

Kahuku was a master riddler, and it was his practice to kill anyone whom he defeated; in this way, many people had been killed by Kahuku while traveling via the upland trails through the region's rich agricultural zone. Having departed from Manukā, Ka-Miki and Maka'iole drew near to Kahuku's upland compound and agricultural fields, and Kahuku challenged their right to travel upon the trail. Calling upon his *akua ho'opāpā* (riddling gods) Kāne-pō-nui and Kāne-pō-iki Kahuku commenced the riddling contest.

Kahuku challenged Ka-Miki with a place name riddle which described the districts of Maui Island. Before answering the riddle, Ka-Miki told Kahuku, "Your nature and meaning is not hidden from us, for our guide and riddling god is Niho'elekī, who dwells in Kahiki-kū." Ka-Miki then responded by interpreting the riddle and describing the lands of Maui...

...Ka-Miki then called to Kahuku, "If you deny that my answer is correct, your eyes will be consumed as the *pūpū 'awa* ('awa drink condiment) of our god." Kahuku responded, acknowledging that Ka-Miki was indeed knowledgeable, and had correctly answered the riddle. Ka-Miki then challenged Kahuku with a riddle of his own.

The face looks to the star (*Ka-malama*) above, a groove is dug out and appears gray, leaping and splashing, fulfilled (rounded out), and it is covered by the ocean...

...Kahuku then answered the riddle, stating it described, "The hull of a canoe which opens to the sky, the paddle dips into the water causing it to well up with white water forming along the surface. The mast is raised and lashed to the bow and the sail unfurled. The bow leaps upon the waves which splash over the canoe."

Ka-Miki told Kahuku that his answer was incorrect, and Kahuku was unable to guess at the riddles' meaning. Ka-Miki then called to Kahuku, answer the riddle lest you be bound, and your eyes dug out. Kahuku then asked Ka-Miki to allow him to call his sister **Kamā'oa-nui-kua-makani** who was also a master riddler and *ha'iha'i* (bone breaker) expert.

Ka-Miki agreed, and Kahuku called his sister Kamā'oa by throwing a taro of the *paua* variety into the winds which carried it to Kamā'oa. The *pā* was a sign to Kamā'oa that a contest was occurring and that Kahuku needed her assistance. The *paua* taro landed on the plain at the place now called **Kiolaka'a** (tossed and rolling), and it is so named because the taro was thrown there.

**Kamā'oa** arrived before Kahuku and Ka-Miki *mā*, she agreed to the contest arrangements and prepared to answer Ka-Miki's riddle.

Upon hearing the riddle, Kamā'oa stated – "It is an open bowl container in which *poi* is mixed. From this bowl, the *poi* is taken up with one's finger, and placed in the mouth and joyfully swallowed down one's throat..."

Thus Kamā'oa answered Ka-Miki's riddle, and Ka-Miki declared, "Great indeed is your knowledge of riddles Kamā'oa." Ka-Miki and Kamā'oa continued to exchange riddles until they were satisfied with the depth of each other's knowledge. Kamā'oa and Kahuku then challenged Ka-Miki *mā* in hand to hand combat tests. Preceding the fight, Kamā'oa offered a *paha* (spoken chant) describing sites and features of Ka'ū, comparing their knowledge to the forces of nature which would strike at Ka-Miki and Maka'iole. Kahuku leapt to attack and was quickly defeated, Ka-Miki then warned them to be careful lest they end up as castaways on the shores of **Ka-milo-pae-kānaka**...

...During the competition between Ka-Miki, Kahuku and Kamā'oa, cloud omens rose above the hills of **Kamakoa** (The fearless one). These omens informed Kahuku's wife **'Ahukini**, that he was in competition. 'Ahukini sent her daughter **Mōlī(lele)**, to investigate the circumstances of the conflict. **Mōlīlele** arrived at the upland taro plantations, and saw the situation of her father and aunt. Kahuku called out in chant to Mōlīlele relating the circumstances of the contest between himself, Kamā'oa and the strangers:

*He lā makani kēia  
Ke lele 'ino nei ke ao  
A ke ao 'ōpua e kau nei  
Iluna o Kamakoa  
Kiu ka 'elele na ka Mālua*

*'Elua ka ho'i mea aloha  
O ke A'eloa me ka Moa'e-ku  
Ua kala aku ka hālelo  
Ku ka unuunu i ka moana  
I ke kūpāpā 'ia e ke kai  
Ike aku i ke kini o lalo  
Ua 'ino o uka  
I kai ke ola e, i kai ho'i*

*I ō 'Ahukini ho'i*

It is indeed a windy day  
With clouds speeding by  
Billowy clouds touch the peaks  
atop Kamakoa  
The cold wind *Kiu* is a messenger  
of the *Mālua* wind  
Though there are two winds which I love  
The *A'eloa* and *Moae-ku*  
[But now] the jagged cloud ridges speak  
The ocean is stirred up  
[And as] the ocean [waves] fight one another  
The multitudes of the lowlands, understand  
That the storm rages above  
There is life along the shore indeed by  
the sea  
Respond o 'Ahukini

Mōlīlele returned to the lowlands and reported on the events to her mother. 'Ahukini and Mōlīlele then returned to the uplands where 'Ahukini confronted Ka-Miki and told him that her older brother was **Ka'alu'alu**, who was the war advisor to the supreme chief Keli'i-kau(a)-o-Ka'ū (The shark formed war chief of Ka'ū). 'Ahukini told Ka-Miki *mā* that Ka'alu'alu would devour them even if no one else could.

'Ahukini was skilled at sling stone fighting and attempted rescuing Kahuku, but was wounded and defeated herself. Mōlīlele carried 'Ahukini to the spring by their shoreward compound. And as Ka-Miki leapt to catch Mōlīlele, she threw 'Ahukini into the spring where 'Ahukini could take her *mo'o* (lizard, or water form). Thus 'Ahukini was transformed into [a stone in] the spring which bears her name to this day; **Wai-o-'Ahukini** (Water of 'Ahukini).

As **Mōlīlele** leapt, trying to escape from Ka-Miki, but he grabbed her and she was transformed into a stone on the cliff which overlooks Wai-o-'Ahukini. To this day, the cliff bears the name of **Mōlīlele**; Ka-Pali-o-Mōlīlele (The cliff of [the] *Mōlī* [Albatross] leap).

Subsequent to the death of both 'Ahukini and Mōlīlele, Kamā'oa and Kahuku surrendered, agreeing to give up their waylaying of travelers. Kamā'oa befriended Ka-Miki *mā*, but following the contest, **Kahuku** was turned into the hill now called **Pu'u-o-Kahuku** (Hill of Kahuku)<sup>5</sup>. Kahuku's boasting and dishonorable use of his 'aumakua so enraged his gods, that they turned him into the hill which now bear his name. [Wise and Kihe et al., In *Ka Hoku o Hawaii*, December 10, 1914-April 1, 1915; Maly, translator]

### ***The Tradition of Koihala, and the Naming of Kapu'a***

In 1925, noted Hawaiian historian, Z.P. Kuluwaimaka, who wrote under the pen-name of "Kawaikaumaiikamakaoakaopua", a resident of Nāpo'opo'o, South Kona, submitted traditional accounts to the Hawaiian language newspaper, *Ku Okoa*. Among the articles was a series of traditions under the title, "*Hoonanea na ka Manawa. Moolelo No Kekahi Alii Kaulana o Ka Moku o Kau, Hawaii*" (A Pleasant Passing of Time. Traditions of Certain Famous Chiefs of the District of Kau, Hawaii). In one of these traditions, we learn of the naming of Kapu'a, South Kona, and the famous upland planting ground, Haliukua, situated in the forest lands of Manukā (see Register Map No. 2469). We are also told that the place name "Kapu-'ā" commemorates a restriction that was placed upon the stones gathered from that land, and which were used to stone the chief, Koihala. The account is part of a series in which readers learn that the people of Ka'ū were intolerant of cruel and foolish chiefs, who wasted resources and made unwise demands of their people.

#### **NO KOIHALA.**

O Koihala ke alii e noho ana ma Kamaoa, Kau, Hawaii. Ua loihi no na la o ka noho ana ma ka aina o Kamaoa, a ulu ae la ka manao e hele i ka pohu la'i a Ehu, a olelo aku la i kona mau aialo o hele hoomaha ma Kona; a ua ku mai la lakou a hele, a haalele aku la i ka aina o Kamaoa; ahiki lakou i Kona, a ua noho lakou ma ka aina o Kapua, Kona Hema, Hawaii. O ka hana no hoi a na kanaka me na kamaaina o Kapua o ka hele i ka lawai'a. la lakou e nanea ana i ka ai i ka i'a o Kona, ka i'a pumehana ame ka ai pumehana o ka Haliukua, ka aina iwaenakonu o ka ululaau, hookahi mea ikeia o ka la, o na hoku ame ka mahina; a ua aloha loa na kupa i keia aina uka waokele (Manuka); a o kahi no hoi keia a keia alii e kii ai i kana ai.

Ua loihi no na la o ka noho ana i Kona, ua hoouna aku la oia i kekahi mau elele i Kau, e lawe mai i puua, i ai, i i'a; a ua hiki aku la i ka manao o ke'lii; a i ka lohe ana o na kanaka i keia kauoha, ua hana iho la lakou i na mea apau i

#### **ABOUT KOIHALA.**

Koihala was a chief who lived at Kamaoa, Kau, Hawaii. Many were the days that he had lived at Kamaoa, and there arose in his thoughts, the desire to travel to the peace and calm of Ehu (Kona), so he told his retainers, that he would go to rest in Kona; So they all stood to go, departing from Kamaoa; they arrived in Kona, and they stayed at the land of **Kapua**, in South Kona, Hawaii. Now it was the custom of those living at Kapua to go fishing. So they enjoyed the food fishes of Kona, the cherished fish, and the cherished crops of **Haliukua**, the land situated there in the midst of the forest, where one can only see the sun, stars, and the moon; and this land was greatly loved by the natives there in the forested uplands (of **Manuka**); and it was from this place that the chief fetched his cultivated foods.

Many days were spent living in Kona, and then a messenger was sent to Kau, that pigs and more fish should be brought; so the thoughts of the chief were formed. Hearing this command, the people began to prepare all the things

<sup>5</sup> Pu'u-o-Kahuku - Marks the *mauka* boundary of Pākini-nui *ahupua'a*.

kauohaia aku ia lakou; i ka makaukau ana o ka ai, ka i'a, ame ka puua, ua hele mai la lakou mai Kau mai, ame na kanaka apau o noho ana ma Kamaoa. Ua hele mai la lakou he huakaihele nui maoli; a ike kekahi mau elele ua makaukau ka huakaihele no ka ka hele i Kona ua hoi mua aku la kekahi mau elele no ka hele ana mai, a ua makaukau na mea apau i kauohaia aku ai. Ahiki aku la na elele imua o ke'lii, a ninau aku la ke alii, "Pehea aku nei ka oukou huakai?"

Olelo aku la na elele: "Ua makaukau na mea apau; elike me kau kauoha; ina aku ahiki mai." "A ka poahia e hiki mai ai?" "Apopo hiki mai ka poe o Kau, aia i ka auwina la." A lohe o Koihala i keia olelo a na elele, olelo aku la o Koihala i kona poe aialo apau, e hoomakaukau no ka hoi ana i Kau; a kena aku la i na kanaka hoewaa e hoomakaukau i na waa, no ka hoi ana i Kau; a ua hookoia aku la ia olelo a ke alii Koihala. A makaukau na waa i ka hoi i Kau, oi ai no nae, o ka la no ia e puka mai ai ka poe o Kau; a kau aku la na mea apau maluna o na waa, a hoi aku la i Kau. I ka poe o Kau e hoi la maluna o na waa, puka ae la ka makamua o ka huakai i Kapua, i kahi i noho ai ke alii.

A ninau ka poe o Kau mai: "Auhea ke'lii?" A ha'iia mai la o ka poe kamaaina, ua hoi aku la i Kau iluna o na waa, aia ke hoi la. I nana io aku la ka hana, e hoi ana na auwaa apau; akoakoa mai la ka poe hele *mauka*, mai Kau mai, kukakuka iho la lakou, a hooholo iho la e ai lakou i ka ai apau, ame ka i'a, ame ka puua i ka lua ia, a e kaluaia na puua ola apau. Aole mea ai hookahi e hookoeia. Ala no ko lakou hoi i Kau, a pau na meaai i ka aiia e lakou; a kauohaia aku la na kanaka i hele mai ai mai Kau mai, e malama kela kanaka, ame keia kanaka, i kana puolo la'i; ma- mua o ka ai ana, ua kauohaia kela kanaka, ame keia kanaka, e malama i kana puolo la-i, me ke kiola ole. I ka lohe ana o na kanaka apau i ka leo kauoha a ko lakou mau luna, ua hooko lakou ia leo kauoha; a kauoha aku la na luna i na kanaka e hoopihai na puolo la-i me na pohaku. E hana a paa loa, aole e hooleiia hookahi pohaku, ahiki i kahi i makemakeia e kiola ka pohaku.

Ua noho iho la ka poe i hele mai ai mai Kau mai, e ai i ka waiwai a lakou i lawe mai ai mai Kau mai na ke'lii. A pau no hoi i ka ai ka waiwai a lakou i

ordered of them; preparing the vegetable foods, the fish, and the pigs; they then traveled from Kau, along with all those who lived at Kamaoa. All of them traveled in a great procession. Then one of the messengers who had been sent to order that all things be prepared saw that the party was prepared for the journey to Kona, so he ran back to tell the chief, who asked, "How was your journey?"

The messenger responded, "Everything has been made ready, just as you commanded; and they shall arrive shortly." "What day will they arrive?" "The people of Kau shall arrive tomorrow, in the afternoon." Koihala heard these words of the messenger, and he then told all of attendants to prepare for the return to Kau; he commanded the canoe paddlers to prepare the canoes for their return to Kau. The command of the chief, Koihala was fulfilled. The canoes were readied for the return to Kau, and it was now the day appointed for the people from Kau to arrive with all their supplies. Everyone was in the canoes, and just as the people of Kau began their canoe trip, the first of those people in the procession from Kau arrived at *Kapua*, where the chief had resided.

They asked, "Where is the chief?" And the natives of that place answered, "He is there, returning to Kau upon the canoes." Looking out, they saw the entire fleet of canoes sailing. The people on the land, who had come from Kau, gathered together and spoke among themselves, and they decided that they would eat all of the vegetable foods, the fish, and the baked pigs, and even cook the pigs that had been left alive. Not one morsel of food was to be left over. They would then arise and return to Kau, with all of the foods having been eaten by them. The people who had traveled from Kau, were instructed to take care of one another, and that each person should not throw away the ti-leaves from the bundles they had borne. The people heard the words of their leaders, and were prepared to fulfill them. They were then told to fill the ti-leaf bundles with stones, and to make them tight, so that not one stone would fall out.

The people who had traveled from Kau then sat down and ate the wealth of the foods that they had brought from Kau for their chief. When all of

lawe ai, alaila, makaukau lakou no ka hoi i Kau. A i ka hoi ana o ka huakai, ua hoi aku la no ka huakai ma kahakai me na puolo pohaku e auamo ana; a ua hoounaia kekahi poe e kii i na waa e kau ana ma Kailikii, Waioahukini; me ka nana ole aku i ke alii i nana ia malaila kahi i noho ai. I ka hiki ana o na kanaka i Kailikii, Waioahukini, ua hoi loa no o Koihala no uka o Kamaoa, aole hookahi oia poe i hoi ai i noho malaila, koe wale no na kamaaina noho paa i ka lawai'a. Ahiki aku la ka poe i hoounaia, a ninau aku la i na kamaaina. "I ka wa hea i hiki mai ai ke'lili ianei nei?" "I ke ahiahi nei. Pae mai no na waa, a hoi loa no ke alii no uka o Kamaoa." Alaila, o na waa apau loa e kau ana ma Kailikii, Waioahukini, ua pau loa i ka laweia mai e ka poe i hoounaia; a ua loa mai la ka huakai nui e hele aku nei *mauka*; a kau maluna o na waa me na puolo pohaku a lakou. Ahiki ka huakai i Kailikii, Waioahukini, apau ka poe iuka, a kau no hoi na waa, alaila, hoikeia mai la ka lohe i na kanaka apau; mai kekahi mai o na alii i holo mahope o na makaainana; "Ua maopopo no ia oukou ka hana a keia mau puolo pohaku?" Hoole aku la na kanaka. "Aole!" "E hoolohe mai oukou i ka olelo. O keia mau puolo pohaku a kakou apau e hoolei iluna o Koihala. O ia ka mea i papaia ai oukou 'kapu ke-a' (pohaku). Aole e kiolaia a kiola iluna o Koihala, na puolo pohaku a kakou." A lohe ae la na mea apau; pela ka i hanaia ai keia mau puolo pohaku, he mea pepehi no Koihala. A hoomaka aku la ka huakai no ka pii ana iuka a Kamaoa. Oleloia aku la na kanaka e pii like, a e lalani like ka pii ana ahiki i kahi o noho ana ke alii; a o ke kanaka mamua loa hele no oia a hoolei i kana puolo pohaku a ku ia a hele loa, a pela aku no ka lua, a pau na kanaka puolo pohaku. Ua hana aku la na kanaka pela ahiki i ke ku ana o ke ahua pohaku nui e hiki ole ai e hu'e hou ia ae ai ka pohaku, o kona mau hoaloha a make iho la o Koihala; a pela i kapaia ai ka inoa o kela aina "*Kapua*," no ka hookapuia ana o ke-a aole e kiola... [Z.P. Kuluwaimaka "Kawaikaumaiika-makaokaopua"; *Ku Okoa* September 10, 1925]

the food was consumed, they then prepared to return to Kau. The procession returned to Kau along the shoreward trail, bearing the bundles filled with stones. One person was sent to go to the canoes that had landed at Kailikii, Waioahukini, and to do so without being seen by the chief. When the person arrived at Kailikii, Waioahukini, it was found that Koihala had returned to the uplands of Kamaoa. Not one of the chiefs' party remained there, only the natives who always resided there for fishing. The people who had been sent for, then asked the residents, "When did the chief arrive here?" "In the evening, the canoes landed, and the chief returned to the uplands of Kamaoa." All of the canoes were left on the shore at Kailikii, Waioahukini, and were taken by the people who had been sent for. Then, the great procession which had traveled on land boarded the canoes, also taking the stone bundles with them, and reached Kailikii, Waioahukini, where they then all went back onto the land and all the people went on land. Then one of the chiefs who had traveled behind the common people, called out and asked the people, "Do you know what these stone bundles are for?" The people answered, "No!" "Listen to these words. These stone bundles of ours are to be thrown upon Koihala. That is the reason that we instructed you '*kapu ke-a*' (the stones are restricted). Do not throw them away, until they are thrown upon Koihala, that is the purpose of these stone bundles of ours." The people heard all these things, that is what was to be done with the stone bundles, they were to be used to kill Koihala. The people then began their procession to the uplands of Kamaoa. The people were told to march together, in a unified line, ascending to the place where the chief was staying; the very first man threw his stone bundle and then moved, then the second, and so were the stone bundles of all the people. This was done by all of the people until there was a great stone mound standing, from under which the stones could not be pushed out from. Thus Koihala and his companions all died; *and that is why the name of that land is Kapua,* because of the restriction being proclaimed that the stones should not be thrown away... [Ku Okoa, September 10, 1925; Maly translator]

## ***Pai'ea – Kamehameha at Manukā and Kaulanamauna***

Another brief reference to the lands of Manukā and Kaulanamauna is found in the tradition of Kekūhaupi'o and the youth, Pai'ea, who grew up to be Kamehameha I. Reverend Steven L. Desha, editor of *Ka Hoku o Hawaii*, along with several of his peers (such as J.W.H.I. Kihe, John Wise and Julia Keonaona), prepared the rich native text, embellished by many localized accounts, not available elsewhere. The narratives, originally published between 1920 to 1924), were translated by Frances Frazier, and published by Kamehameha Schools and Bernice Pauahi Bishop Museum in 2000. Through the narratives we learn that as a youth, Kamehameha I was given to Kekūhaupi'o and other "uncles" to be cared for. When traveling from Ka'ū to Kohala, The party with the young Kamehameha, stopped at Manukā, and then traveled up the mountain trail, to elude any pursuers. Desha et al. told us:

...The young chief placed in the hands of Kekūhaupi'o's uncles asked whither they were going as their journey began, and was told they were returning to the land of North Kohala. They proceeded straight from the land of Waio'ahukini to Manukā, a place adjacent to Kaulanamauna, the boundary of Kona and Ka'ū. It was [page 92] said in the story of the famous kingdom conqueror that he was carried on their backs, showing how Kekūhaupi'o and his aforementioned uncles cherished their *alii*. On their arrival at Manukā, they stopped for a breath and set Kamehameha down for a little rest. At this time Kekūhaupi'o prepared some 'awa for his foster son, and at this time Kamehameha questioned his guardians: "Are we the only ones going? Where are all the rest of our people?" Kekūhaupi'o did not reply to this question but continued to prepare the 'awa and when it was ready poured it into the cup, then he turned and said: "*E Kalani ē!* Make offering to your god. Here is the 'awa to offer to your god, Kūkā'ilimoku." Kamehameha immediately agreed, drank from the cup and sprayed the 'awa as an offering, with a prayer to Kūkā'ilimoku, which was participated in by one of his guardians. The prayer was as follows:

*Eia ka 'awa,  
E Kūkā'ilimoku,  
He 'awa lani wale nō,  
He 'ai na ke kamaiki  
Inu aku i ka 'awa o 'Oheana,  
Pupū aku i nā niu a La'a,  
Ua la'a, ua noa ka 'awa,  
Noa honua, noa ē.  
A ua noa lā.*

Here is the choicest 'awa,  
O Kūkā'ilimoku,  
'Awa for the heavens only,  
Food from the little child  
Drink the 'awa of 'Oheana,  
Accompany [it] with the coconuts of La'a,  
It is consecrated, the 'awa is freed,  
Freed, established, freed.  
It has been freed.

When Pai'ea had completed the ceremonial offering, Kekūhaupi'o encouraged them to go, as it was not known what secret harm might come after them, as some of the chiefs had treacherous thoughts. Because of this thought by Kekūhaupi'o he directed them to leave the customary pathway, and to travel where they could not be followed. They climbed straight up from that place to a certain part of Mauna Loa and came down seaward at a certain part of Ka'ū named 'Ōhaikea. They spent the rest of that night in a cave called Alanapo. The next morning, after Kamehameha had made [page 93] his ceremonial offering and prayer to Kūkā'ilimoku, they left that place and climbed up another mountain trail till they reached the summit of Mauna Kea. At a place close to Lake Waiau, Kamehameha again made an offering... [Desha et al, in Frazier, 2000:94].



## **HISTORICAL OBSERVATIONS: TRAVEL IN THE SOUTH KONA-NORTH KA'Ū REGION (1823-1913)**

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Because of the remote nature, and the small population base of the South Kona-North Ka'ū lands, there was little opportunity for early historic visitors to travel into the interior lands of the Kaulanamauna-Manukā vicinity. Below, follow historical accounts, describing the lowlands and middle lands in the vicinity of what became the *Alanui Aupuni* (Government Road)—later Māmalahoa Highway, from the early historic period. This section of the study also includes important descriptions of the interior mountain lands, penned by those who were tasked to survey and produce the first maps of the region. The accounts were recorded between the 1820s to 1913. The accounts are important for their description of the cultural landscape and environs of the Manukā NAR and neighboring lands.

### ***The Journal of William Ellis***

Following the death of Kamehameha I in 1819, the Hawaiian religious and political systems began undergoing radical changes. Just moments after his death, Ka'ahumanu proclaimed herself “*Kuhina nuu*” (Prime Minister), and approximately six months later, the ancient *kapu* system was overthrown in chiefly centers. Less than a year after Kamehameha's death, Protestant missionaries arrived from America (see I'i 1959, Kamakau 1961, and Fornander 1973). In 1823, British missionary William Ellis and members of the American Board of Commissioners for Foreign Missions (ABCFM) toured the island of Hawai'i seeking out communities in which to further the work of the growing Calvinist mission. Ellis' writings (1963), generally the earliest detailed accounts (written in 1825) of settlements around the island of Hawai'i, offer readers important glimpses into the nature of native residency and history at the time.

During the visit, Ellis and his traveling companions walked through and canoed along the shore from Kapalilua, South Kona to Kapu'a and on into Manukā and Ka'ū. The following excerpts describe the landscape extending from sea to the upland field systems and areas of residence in the lands in the South Kona-North Ka'ū region, as they relate to our general understanding of the cultural-historical landscape of the period. It will be noted that Ellis and his associates, found little good to say about the nature of the land—it was almost impossible for them to procure any water or food. Like the observations made in 1779 by Captain Cook's men (Beaglehole, 1963), Ellis and party observed that it was the custom in these lands, for people to live near the shore, and keep cultivated fields miles above the coast in the forests:

### ***From Kalahiki to Kapua.***

About two p.m., we reached Taureonanahoa [Ka'uleonānāhoa or Nāpōhukuloloa at Kīpāhoehoe], three large pillars of lava, about twenty feet square, and apparently sixty or eighty high, standing in the water, within a few yards of each other, and adjacent to the shore. Two of them were united at the top, but open at their base. The various coloured strata of black, reddish, and brown lava, being distinctly marked, looked like so many courses of masonry. We sailed between them and the main land; and about five in the afternoon landed at Kapua, a small and desolate-looking village, on the southwest point of Hawaii, and about twenty miles distant from Kalahiti. Here we had the canoe drawn up on the beach until our companions should arrive.

After leaving Kalahiti, Messrs. Thurston, Goodrich, and Bishop, proceeded over a rugged tract of lava, broken up in the wildest confusion, apparently by an earthquake, while it was in a fluid state. About noon they passed a large crater [Kaluaolapauila, on the boundary of Kukuiopa'e and Kolo]. Its rim, on the side towards the sea, was broken down, and the streams of lava issuing thence, marked the place by which its contents were principally discharged. The lava was not so porous as that at Keanaee, but, like much in the immediate vicinity of the craters, was of a dark red, or brown ferruginous colour, and but partially glazed over. It was exceedingly ponderous and compact, many

[pg. 124] fragments had quite a basaltic shape, and contained quantities of olivine of a green and brown colour.

### ***Canoeing Through the Surf***

For about a mile along the coast they found it impossible to travel without making a considerable circuit inland; they therefore procured a canoe, and passed along the part of the coast where the sea rolled up against the naked rocks; and about one p.m. landed in a very high surf. To a spectator on the shore their small canoe would have seemed every moment ready to be buried in the waves; yet, by the dexterity of the natives, they were safely landed with no other inconvenience than a slight wetting from the spray of the surf.

### ***Camping at Honomalino***

Mr. Thurston preached to the people at the place where they landed. After which they took some refreshment, and kept on their way over the same broken and rugged tract of lava till about six p.m. when they reached Honomalino. Here they were so much fatigued with the laborious travelling of the past day, that they were obliged to put up for the night. They procured a little sour *poē*, and only a small quantity of brackish water. Having conducted family worship with the people of the place, they laid themselves down to rest on their mats spread on the small fragments of lava, of which the floor of the house was composed.

Early the next morning the party at Honomalino proceeded to ***Kapua***, and about eight a.m. joined those who had slept there.

### ***A Barren and Desolate Country***

At this place we hired a man to go about seven miles into the mountains for fresh water; but he returned with only one calabash full; a very inadequate supply, as our whole company had suffered much from thirst, and the effects of the brackish water we had frequently drank since leaving Honaunau.

Nothing can exceed the barren and solitary appearance of this part of the island, not only from the want of fresh water, but from the rugged and broken tracts of lava of which it appears to be entirely composed.

Unwilling to spend the Sabbath in the desolate and almost forsaken village of ***Kapua***, we prepared for a long day's journey, as we knew of no village before us containing more than five or six houses for nearly thirty miles' distance.

Before we left ***Kapua***, we were so favoured as to procure water enough to fill our canteens, and about 10 a.m. resumed our journey. Messrs. Thurston, Bishop and Goodrich, walked on by the sea-side. [pg. 125] About noon they reached ***Kaulanamauna***, and shortly after left Kona, and entered Kau.

### ***A General Description of Kona***

...The northern part, including Kairua, Kearake'kua, and Honaunau, contains a dense population; and the sides of the mountains are cultivated to a considerable extent; but the south part presents a most inhospitable aspect. The population is thin, consisting principally of fishermen, who cultivate but little land, and that at the distance of from five to seven miles from the shore. [Ellis 1963:126]

### ***Entering the Kau District***

The division of Kau commences at ***Kaulanamauna***, runs down to the south point of the island, and stretches about forty miles along the south-east shore. On entering it, the same gloomy and cheerless desert of rugged lava spread itself in every direction from the shore to the mountains. Here and there at distant intervals they passed a lonely

house, or a few wandering fishermen's huts, with a solitary shrub, or species of thistle, struggling for existence among the crevices in the blocks of scoriae and lava. All besides was "one vast desert, dreary, bleak, and wild."

In many places all traces of a path entirely disappeared; for miles together they clambered over huge pieces of vitreous scoriae, or rugged piles of lava, which, like several of the tracts they had passed in Kona, had been tossed in its present confusion by some violent convulsion of the earth.

### ***Volcanic Conditions in Kau***

From the state of the lava covering that part of the country through which we have passed, we should be induced to think that eruptions and earthquakes had been, almost without exception, concomitants of each other; and the shocks must have been exceedingly violent, to cause what we everywhere beheld.

Slabs of lava, from nine to twelve inches thick, and from four to twenty or thirty feet in diameter, were frequently piled up edgewise or stood leaning against several others piled up in a similar manner. Some of them were six, ten, or twelve feet above the general surface fixed in the lava below, which appeared to have flowed round their [page 126] base, and filled up the interstices occasioned by the separation of the different pieces.

One side of these rugged slabs generally presented a compact, smooth, glazed, and gently undulated surface, while the other appeared rugged and broken, as if torn with violence from the viscid mass to which it had tenaciously adhered. Probably these slabs were raised by the expansive force of the heated air beneath the sheet of lava. [Ellis 1963:127]

In the following narratives, Ellis mentions the canoe landing of Keawaiki, situated along the eastern shore of Manukā. Though not named, he also references the Kalaehumuhumu and Napu'uapele hills, while passing from Manukā into Kahuku. The strong wind mentioned by Ellis, is named Unulau, and is referenced in the account cited earlier, from the writings of Handy, Handy and Pukui (1972):

### ***Keawaiki—A Port of Refuge***

After about eighteen miles of most difficult travelling they reached **Keavaiti**, a small opening among the rocks, where, in case of emergency, a canoe might land in safety. Here they found Mr. Harwood and myself waiting; for, after leaving Kapua, we had sailed along close to the shore, till the wind becoming too strong for us to proceed, we availed ourselves of the opening which Keavaiti afforded, to run the canoe ashore, and wait till the wind should abate, though in so doing we were completely wet with the surf, and spoiled the few provisions we had on board.

The wind was still too strong to allow the canoe to proceed on her voyage; and those who had travelled by land felt too much fatigued to go on without some refreshment and rest. Desirous of spending the Sabbath with the people at **Tairitii**, which was still fourteen or fifteen miles distant, we determined to rest a few hours, and then prosecute our journey by moonlight.

A number of conical hills, from 150 to 200 feet high, rose immediately in our rear, much resembling sand-hills in their appearance. On examination, however, we found them composed of volcanic ashes and cinders; but could not discover any mark of their ever having been craters.

### ***Hard Conditions at Keawaiki***

When those of our party who had travelled by land had recovered a little from their fatigue, we partook of such refreshments as remained, and drank the little fresh water we had brought with us in the canoe. Being only about a quart between five persons, it was a very inadequate supply in such a dry and thirsty land, yet we drank it with thankfulness, hoping to procure some at *Tairitii* early on the following morning.

By the time we had finished our frugal meal, the shades of evening began to close around us. We called our little party together, and after committing ourselves, and those who travelled with us, to the watchful care of our merciful Father, we spread our mats on the small pieces of lava, and lay down to rest under the canopy of heaven. A pile of blocks of scoriae and lava, part of which we had built up ourselves, screened our heads from the winds. [page 127]

The thermometer at sun-set stood at 73°, yet during the evening the land wind from the snow-covered top of Mouna Roa blew keenly down upon us. We slept, however, tolerably well till midnight, when the wind from the shore being favourable, and the moon having risen, we resumed our journey.

### ***Travel by Moonlight to Kailikii***

I went with Mr. Harwood in the canoe to *Tairitii*, which we reached a short time before daybreak; but the surf rolling high, we were obliged to keep off the shore until daylight enabled us to steer between the rocks to the landing place. Some friendly natives came down to the beach, and pointed out the passage to the steersman, by whose kind aid we landed in safety about half past five in the morning of the 27<sup>th</sup>. Our first inquiry was for water; Mauae, the governor's man, soon procured a calabash full, fresh and cool, of which we drank most copious draughts, then filled the canteens, and preserved them for those who were travelling along the shore.

### ***Lack of Drinking Water***

About half-past eight, Mr. Thurston hastily entered the house; his first salutation was, "Have you got any water?" A full canteen was handed to him, with which he quenched his thirst, exclaiming, as he returned it, that he had never in his life before suffered so much for want of water. When he first discovered the houses, about two miles distant, he felt his thirst so great, that he left his companions and hastened on, running and walking till he reached the place where those who arrived in the canoe were stopping.

After leaving *Keavaiti*, Messrs. Bishop, Goodrich, and Thurston travelled over the rugged lava, till the moon becoming obscured by dark heavy clouds, they were obliged to halt under a high rock of lava, and wait the dawn of day, for they found it impossible to proceed in the dark, without being every moment in danger of stumbling over the sharp projections of the rocks, or falling into some of the deep and wide fissures that intersected the bed of lava in every direction.

After waiting about an hour, they resumed their journey; and Messrs. Bishop and Goodrich reached *Tairitii* nearly half an hour after Mr. Thurston's arrival... [Ellis, 1963:128]

### ***The Journal of Chester S. Lyman***

#### ***Walking the Upland and Coastal Trails of the Manukā-Kapu'a Region in 1846***

In 1846, Chester S. Lyman, "a sometime professor" at Yale University visited the island of Hawai'i. His narratives provide readers with important documentation pertaining to the native villages and landscape in Kona, and decline of the native population in the region. The original type-written manuscript (919.69 L 98), was viewed in the collection of the Hawaiian Mission Children's Society Library. The following excerpts penned by Lyman, describe his journey across Manukā, from the uplands, to the shore of Kapu'a, and descriptions of the neighboring lands:

September 3<sup>rd</sup>, 1846. At 12:30 I stopped to dine under the shelter of a block of lava about 16 miles from Waiohinu. While at dinner a slight shock of an earthquake occurred, there being a momentary jar somewhat as if produced by the falling of a heavy body near by.

Starting on at 1, I passed over a rough and sterile country till I entered a forest of *Ohia* and other trees and shrubs, which continued about 3 miles, to **Manuka**, where I arrived at 3:30 P.M. In the woods I found plenty of ohelos. It being too early to stop for the night, I concluded to push on for **Kapu'a** on the coast. The road most of the way was no road at all, but an exceedingly blind foot path, winding in various directions among the grass and lava, and utterly impossible to follow by any but a native eye. It seemed to grow rougher and rougher, and the path was very little if any "worked" or improved by leveling and laying flat stones to step on. The country generally seemed to be formed of flows of the roughest kind of clinkery lava, the irregularities being of all sizes from pebbles to up to hillocks. The way seemed long and weary, and when the sun had disappeared behind the ocean, and the shades of night were thickening around, we had but just attained a rough eminence from which **Kapua** was visible still some 3 or 4 miles distant. This part of the journey, which seemed uncommonly uneven, I was obliged to travel in darkness – the moon the first part of the evening being concealed by clouds.

The great advantage of traveling over clinkery lava by night is that the darkness makes the path all appear smooth and even, and you are saved the trouble of selecting places for your feet... At 8 o'clock I reached **Kapua**, which is rather pleasantly situated on a cove of the sea. It is on one of the clinkery flows, and the region around is very rough. I proceeded at once to the beach, and enjoyed the luxury of a bath, after which I went to the house where I was to stop near the beach, and took my supper and made preparations for sleeping... I here for a real (12 ½ cents) bought a fine watermelon, which was delicious and refreshing.

The distance of Kapua from Waiohinu by the path which is very crooked, must fully be 30 miles, perhaps more.

Friday, September 4<sup>th</sup>. Rose a little after 5 – the thermometer being at 78°, the sky clear and the air fresh and balmy... Our path was now over clinkers of the roughest sort, and as I was lame from a sore on my foot, I found walking exceedingly difficult.

A mile from **Kapua** we passed the little village of Koa [**Okoe**] and a mile or two further on, passing **Honomalino**, we came to **Milolii**, where there is an extensive and beautiful sand beach covered by a fine grove of cocoanuts. Here I took breakfast under their shade... ..In one of the villages of this region I noticed a neat Catholic church, built in the native style, with a small cross erected on the front corner of the roof... After two hours and a half of laborious and hot walking, I reached at 11:30 Kipahoehoe, a small village in a rough lava region about 9 or 10 miles from Kapua... [Lyman Ms. 1846:19-21]

One additional observation by Lyman, that is of interest to the present study, are his notes regarding the depopulating of the South Kona-North Ka'ū region, as a result of a severe drought. He raises the issue while describing the diminished congregation of the Kealakekua church —

One reason for the smallness of the congregation appears to have been the dispersion of the people in consequence of the great famine which prevailed on this side of the island for a year past. There has been a continual drought during that time, reducing every vegetable substance to tinder, in consequence of which the whole country was overrun by fire, presenting a most sublime spectacle by night and destroying many habitations.

The natives have suffered exceedingly for want of food and have been obliged to subsist on a species or two of roots, scarcely fit for food, and the few fish they could get from the sea... [Lyman Ms. 1846:23]

### ***Records of the Hawaiian Mission Station – South Kona and Ka‘ū, Hawai‘i***

In April 1824, the year following Ellis' visit, the first South Kona Mission Station was established on the flats of Ka‘awaloa by Reverend James Ely. The station was situated on land provided for that purpose by chiefess Kapi‘olani and her husband, Haihā Nāihe. It was from the Ka‘awaloa Station, and later the Kealakekua Station (to which the Ka‘awaloa branch was relocated), that activities of the South Kona, and for a while, the Ka‘ū churches were directed.

Early in the mission history, it was the goal to have a school (for both formal education and to spread the Christian word) in each native village. Every *ahupua‘a* with a population of around 40 inhabitants, had a school with a native teacher. Residents in *ahupua‘a* such as Kaulanamauna and Manukā, with smaller populations, attended facilities in the neighboring lands of Kahuku and Kapu‘a.

It is from the writings of the field missionaries, that we find important descriptions of the native communities and population at and in the lands of the South Kona-North Ka‘ū region. Selected excerpts from missionary letters and station reports (viewed in the collection of the *Hawaiian Mission Children's Library*), and selected government records pertaining to affairs of the Minister of Education, are cited below. The narratives provide readers with insight into the history of the region, and transitions in residency. Underlining of place names and emphasis given in selected narratives are used by the author of this study to draw attention to specific narratives —

Describing the nature of the South Kona-Ka‘ū parish, and difficulty in travelling between villages, Reverend Forbes observed:

#### 1833 - C. Forbes, at Ka‘awaloa:

...At our last general examination in May we visited every school as near as practicable...we found only about 1,300 readers among 36 schools. This examination does not include Kau or the south point of the Island where there are about 5,000 inhabitants, 25 schools & probably 1,200 readers... Probably no Station on the islands is worse situated for access to the people than is Kaawaloa. There is no way of getting from village to village south of the bay, but in canoes, unless we climb over vast shaggy beds of lava, and the people mostly coming under our charge are strewed along a shore probably 40 miles in length, besides some 5,000 who live on the south point of the Island...

Probably 1000 may be said to come directly under Missionary influence which leaves 9 or 10,000 destitute as the whole district includes 10 or 12,000 souls... [C. Forbes Ms. 1833:2-3]

#### November 8, 1835 – C. Forbes, writing from Kuapehu, reported:

...Our station embraces the coast delineated on the map from Kainaliu on the north west, to Puna on the southwest; a coast of nearly 90 miles<sup>[6]</sup>. Two weeks is the very least in which the whole field can be hastily visited by simply preaching at the more important villages... [MHM – 266.858 M69; Missionary Letters 1830-1836; Vol. 8:2317]

#### July 23, 1836 – C. Forbes, writing from Kaawaloa, reported:

Last fall I had every house numbered and its inhabitants from the borders of the Kailua Station [Kainaliu], southward & round to the borders of this station on the southeast, and found the whole population of my field to be as follows. This part of Kona 3,536

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<sup>6</sup> Map is not available in collection.

adults; 1,473 children...total 5,009... Kau adults 3,365...children 1,401...total in Kau 4,766... [Vol. 8:2330; MHM – 266.858 M69; Missionary Letters 1830-1836; Vol.'s 4 & 8]

Among the letters of Cochran Forbes, is a “Journal of occurrences showing my manner of spending my time” (October 10-26, 1836); the original handwritten letters are in the collection of the ABFCM-Hawaii Papers, Houghton Library, Harvard (a photocopy was viewed in the collection of Hawaiian Mission Children’s Library).

On October 10, 1836, Forbes sailed from Ka’awaloa, beginning his tour of the southern portion of his mission station. His journal offers readers a description of the villages he visited, the conditions of the schools, churches, and circumstances of the people, and conditions in the region. While Forbes at times wrote with a prejudice, his first-hand accounts are of value in understanding the historic landscape of the period.

On October 12<sup>th</sup>, Forbes traveled by canoe from Keālia along the coast of Kapalilua to Kapu’a. He then traveled north by foot and canoe along the coast to various villages back towards Keālia. His journal entries provide readers with descriptions of the region, and nature of the scattered settlements along the way:

This morning we left Kealia before daylight in order to avail ourselves of the land breeze. Had a pleasant sail a fair wind to Kapua, some 20 miles, where we have just arrived. Perhaps there are 40 souls in all in this village, almost as dark as 20 years ago. Their children of 3 to five years old are running as stark naked as they were born. I reproved the head and he said they abused maros when given them! A sufficient excuse with a heathen, for letting his children run naked! While I am writing, I am seated on their door sill as the best seat I can find. Asked the headman, “Have you no school here?” He replied “No.” “You are all living with dark hearts!” “Yes, in that way true!”

Shall now in a few minutes collect them and preach church to them, and press on to the next village... Three o’clock, having preached Christ to the poor sinners at Kapua and distributed some tracts among them and taken the names of about 20 who promise to meet daily to read as a school (they have no teacher) till I shall again visit them.

I came by foot to the next village (Okoe) where I got together about 30 souls and I have just closed my meeting. They are civil but alas do not seem to feel their need of Christ... I have two more villages to visit & preach at tonight... Left for this place (Milolii) where a few collected in the teacher’s house... Oct. 13<sup>th</sup> Left Milolii this morning by daylight and came on here to Hoopuloa the nearest village. The residents are all absent – gone up in the country for food. But found some forty here from a distant village. They have come here to get kukuis to pay their tax, laid by Gov. Adams, to finish the Kailua church. Collected them & preached to them and have just distributed tracts, they were careful to ask tracts for all their absent friends who are gone back into the country for food...

After preaching and breaking our fast on a roast fish & piece of bread we pursued our course to the next village, but the sea was so rough we could not get ashore and were obliged to pass by that and three other villages when we came to Opihali, where with much difficulty I got ashore and preached Christ to them and distributed tracts... [Forbes Ms. 1836:4-8]

April 1, 1842 – C. Forbes reported on activities and events during 1841-1842, describing the Ka’ū and South Kona fields:

...It will be remembered that heretofore this part of Kona together with Kau has always been reported under one, but...I shall speak of Kau separate, and shall also divide this part of Kona into two divisions.

I. Kau – Contains a population of over 4000 souls all quite accessible. The missionary may ride on horseback to almost every village in Kau. There are about 14 schools, some of which are flourishing and some by poorly managed. There are about 250 church members there who are now set off from this chh. and form a church by themselves, of which I hope Bro. Paris will take the pastoral charge. He has now been laboring there several months, and with great joy to the people who have long desired the gospel...

...II) I come now to the part of this field in which Bro. Ives has spent most of his labors the past year, which by itself forms a field of labor large enough for any one man. It commences at Kealia and extends to the borders of Kau & is 15 or 20 miles in extent. The population is near 2000.

In this district which is called Kapalilua there are 10 schools containing 400 scholars all which are now in an interesting condition. There are 450 church members in Kapalilua including Kealia. They have lately been set off from this chh. to form a separate church by themselves... Kealia is about 8 miles by water and 10 or 12 by land over a bad road from this place... [Report of the Mission Station at Kealakekua – MHM Kealakekua 1839-1857; Mss 2a H31 Kealakekua. Forbes 1842:4-5]

April 4, 1842 – M. Ives added a section to the Report of the Mission Station at Kealakekua, describing circumstances in Kapalilua (South Kona):

My labors have been confined mostly to Kapalilua. The population in that district is not quite 2000...The field at Kapalilua extends along a sea coast of 20 miles & sometimes 4 to 8 miles inland up a mountain. The villages there can be reached only by canoe & there is doubtless no place in consequence of bad landing where a meeting house will ever be built except near the two extremities of the field. Kealia lying entirely at this [northern] extremity is the most convenient place where the people may assemble... That is the spot where one would build. I could not think of reaching from that place the people some of whom live 25 miles distant without being from home much of the time... [Ives Ms. 1842:1-3; MHM Kealakekua 1839-1857; Mss 2a H31 Kealakekua]

April 1843 – C. Forbes reported:

Here we are with two churches scattered over a country 40 miles in extent, very bad travelling, only a part of it accessible on horseback and only two feeble missionaries for the whole field, where there is work enough to exhaust the energies of 4 hale men... [Ives Ms. 1843:3; MHM Kealakekua 1839-1857; Mss 2a H31 Kealakekua]

May 9, 1846 – M. Ives' report from the Mission Station at Kealakekua for 1845-1846 includes a description of the devastating impacts of a drought, fires, and then heavy rains upon the native population and landscape of South Kona, to Kapu'a and beyond. In the period between February 15<sup>th</sup> to December 18<sup>th</sup>, 1845, there was no rainfall, then on December 18<sup>th</sup>, there was "a terrific conflagration." Ives reported—

The drought aforementioned was followed by the epidemic common to all the island & by a scarcity of provisions scarcely before known even at Kealakekua. The consequence was that numbers flocked to Kau & other places where they found sustenance... It is now impossible for many of the natives to get taro & potatoe tops to start their plantations; such has been the devastation. A spark of fire dropped into the leaves would immediately kindle & the consequence was that the country from Onouli



to Kapua & onwards a distance of 30 miles including all our arable land except here and there a small patch where the owner with uncommon vigor defended it, was burnt over & the food thoroughly baked. Often the man after watching his plantation a whole night would leave it supposing it past danger when some sudden turn of the wind would change the direction of the fire, & before he could again reach it, his whole plantation be consumed.

There has been a decrease of children in our field the last 5 years, upwards of 250... The population in our field is diminishing. There is no place probably among us where it is on the increase. Kaawaloa which in 1835 numbered 460 inhabitants has now only 160 either on the land or considered as belonging to it... The famines too are thinning off our inhabitants.

There are two or three vessels constantly plying between our place & Oahu & every vessel that left for several weeks was loaded down with passengers so as scarcely to afford a foot room for the captain. But a part of these will never get back. They are trusted for their fare to Oahu & when they return they are required to pay the fare for both ways. Their lands in the mean time, lying uncultivated, they will have nothing to eat should they return... [M. Ives Ms. 1846:2-5; MHM Kealakekua 1839-1857; Mss 2a H31 Kealakekua]

On October 9<sup>th</sup>, 1848, the Minister of Public Instruction conducted an examination of schools on the island of Hawai'i. From his journal, we see that little attention was paid to land of Northern Ka'ū and Southern Kona, which was passed by canoe, with only a few villages noted on the way:

Oct. 9 Sailed at midnight from Kailikii in a canoe with Lapuwale & 3 other natives. In a dangerous sea, the outrigger gave way & but for the courage & skill of a native who sprang into the waves and seized it, & lashed it fast, we should have been capsized, where there was no possibility of landing. At about 1 o'clock in the morning, God be praised for our deliverance. As we passed along the coast of Kona, I visited the schools in the several villages & as in Kau, found the teachers doing but little... [HSA Public Instruction, Series 261 Box 1]

1855 – J.D. Paris (Station Report). Paris described the reorganization of the South Kona Mission Station, giving the boundaries of each out-station, and the population therein, beginning at Hōkūkano in the north, and extending to Miloli'i-Kapu'a in the south. The following narratives focus on the Miloli'i section of the station, where Paris describes the custom of living near shore, while maintaining upland cultivated lands, some three to five miles above the shore; such was the practice throughout the lands of the Manukā NAR and into neighboring lands of Ka'ū. By this time, places of worship at some areas were shifting upland (accessed by the *mauka* Government Road), while the schools along the coast continued to be used (under the Office of Public Instruction). Paris wrote—

Mr. Paris' Report 1855

Since our last Annual Report our Church in S. Kona has been reorganized or divided into six branches... This arrangement while it greatly augments the labors of the Pastor or Miss. is nevertheless we think, as this people are scattered over a large extent of country, & can never all meet together, greatly beneficial to them.

The first of these Churches extends geographically from Hokukano on the North to Onouli on the South... The other two Churches one at Kaohe & the other at Milolii. The former has 101 members the latter 140. Both these Chhs have comfortable houses to worship in. The one at Kaohe is of thatch, the one [at] Milolii is stone.

These Chhs are made up of the poor of this world & of the poor of Hawaii. Most of [the] people get a lively hood (!) principally by fishing – their villages are mostly near the sea

shore on the barren lava. Their food is cultivated back from the sea shore, the distance of from three to five miles, where the land is generally fertile & with proper culture would produce abundantly. During the year we ordained two Deacons at Milolii & one at Kaohe...

At Milolii. We have some good people & some of whom we stand in doubt. A few living epistles known & read of all men – some whose light shines more dimly & through many clouds & others whose light is darkness... The No. of Births in this District has been greater than in the two preceding (!) years & No. of deaths Smaller:

Births	81	—	Deaths	57...
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The health of the native population & foreign residents in South Kona has been during the past year unusually (!) good. We have had no Epidemics & but little sickness of any kind & comparatively but few deaths. It has been a year of peace & plenty. Our hills & valleys have been watered abundantly with the showers of heaven. The Earth has yielded its increase & the ocean abounded with fish. Some of our people we think are more diligent & industrious than in years past. More patches have been cultivated – more fields fenced – more trees planted more houses built & repaired, & more roads & paths made than in years past. In some of our Villages there is a very marked improvement about the houses & yards every thing wearing a more cheerful aspect.

We have no field waving with golden harvests (as on some other islands) but our people are multiplying their Coffee patches, & the number of Orange trees loaded with golden fruit, are rapidly increasing.

Some of the “thousand hills” are dotted over with cattle & horses; - and vast fields of barren lava, fertilized with streams of living goats... [Report of the Mission Station at Kealakekua – MHM Kealakekua 1839-1857; Mss 2a H31 Kealakekua. Paris 1855]

1863 – J.D. Paris' Station Report for 1863, included an overview of the history of the Ka'awaloa-Kealakekua Station. Of interest to lands in the Kapalilua region, are descriptions of the three primary church-school stations at the time, and that mission efforts in the region focused on the coastal region until the improvement and re-opening of the mountain road in 1852-1855:

Milolii & Kapua.

This Chh. has its station & house of worship at *Milolii* on the sea shore about 35 or 40 miles from the Miss. Station at Kaawaloa. They have a rough but good stone meeting house...on the sea shore, & another at *Kapua* 5 miles beyond, & another as far distant inland. These are small. Some of the members of this Chh. live at least 15 miles from the central part at Milolii. Except when the Missionary visits them, they never all meet at the same place.... The Chh. was organized in 1855 with 90 members – it now numbers in good standing 180... [Paris Ms. 1863:1-5]

By 1868, the superintendent of schools conducted an examination of schools on the island of Hawai'i. From his report, we learn of conditions of the schools at Kahuku—no school being present in Manukā or Kaulanamauna—and that the Kapu'a school, had been relocated to Okoe:

Kamaoa. School house of wood in good condition. 45 scholars. House stands on original lot, but unfenced.

Kahuku. Wooden house, thatched, in good condition, on original lot and unfenced. 16 scholars. Examined both these schools together and found their proficiency quite good. Kamaoa rather better than Kahuku... Leaving Kau, I visited the following schools in South Kona:

Arriving too late at **Kapua** to examine the school which is held at Okoe, and passing by Milolii which lies too far out of the way by the shore, I arrived at Papa... [HSA Public Instruction Reports, Series 261]

Forty-five years later, W.H. Kinney, described travel through the South Kona-North Ka'ū region, in a guide prepared for visitors to the island of Hawai'i. Kinney (1913) tells us that few houses were located along the shore, between Kapu'a and Kahuku. At Kapu'a, cattle were shipped, and other residences were used periodically by fisher-people:

A fair trail leads through KEALIA, a pretty village which is practically a suburb of HOOKENA, a streamer landing place, [page 63] which was once a village of much importance, but which is now being abandoned by the population, which is Hawaiian. Near the wharf was a place famous in ancient days for the playing of a game with *pupu* shells. In the great cliff south of the village are several caves, some of them still floored with sand, where tapa makers plied their trade. A very poor trail leads *makai* of this cliff to the KALAHIKI village, a small settlement on the south side of the bay, which may also be reached by a better trail on top of the bluff. Here are traces of a four terrace *heiau*. Beyond this there is no practicable trail leading south. There are a few very small fishing villages, Alae, Alike and Papa, which are reached by poor trails from the *mauka* road. It is necessary to travel from Hookena *mauka* to the main road, to Papa, and thence by either road or trail to HOOPULOA, the last steamship landing in Kona. This is another village which is dwindling in population, only a few Hawaiians and a couple of Chinese storekeepers remaining. A fair road leads across a barren *a-a* flow to MILOLII, the largest and best specimen of an exclusively Hawaiian village on the Island, which is seldom visited. It is splendidly situated by a sand beach, the sea coming right up to the yard walls, and is inhabited by a rather large population of Hawaiians, who prosper through the fishing which is almost phenomenally good. A fair trail leads South to HONOMALINO, where there are no houses, but a splendid sand beach, where turtle abound. The trail leads south, along the beach, to the OKOE landing, where there is only one house, and to KAPUA, used as a cattle shipping point, where there are two houses. Just south of this is AHOLE, where there is a perfect *papa holua*, about 400 to 500 feet long, appearing as if it had been built but yesterday. A few hundred yards south is KAUPU, where there are a few grass houses, and south of this, until Kau is reached, there are only a few widely scattered houses, used only occasionally for fishing. This region is seldom visited. Its chief points of interest are the remains of a *heiau*, *mauka* of the Catholic church at Milolii, some fine *papa konane* at the south end of the same village, a well preserved *kuula* (still used) where fishermen offer offerings of fruit to insure a good catch, by the beach south of Milolii, where the Honomalino ranch fence crosses the trail; while all along the trail are smaller *kuulas*, and at many points the foundations of villages, where old implements may still be found. [Kinney, 1913:65]

### ***Heiau Reported in Uplands of Manukā (1907)***

In 1906-1907, J.F.G. Stokes, an archaeologist working for the Bernice Pauahi Bishop Museum, conducted a survey of *heiau* (ceremonial sites) on the island of Hawai'i. In his survey (Stokes and Dye, 1991), Stokes reported on one *heiau* in uplands of Manukā, which now make up the NAR. This *heiau* (SIHP No. 3659), was described as:

*Heiau* of Kaupoku or Kaneikaupoku, land of Manukā, 2 or 3 miles northeast of the Kona-Ka'ū road. The story was that magical bananas grew there. [Stokes and Dye, 1991:113]

### ***Trails and Roads Through the South Kona-North Ka'ū Region***

*Ala hele* (trails) and *ala loa* (regional thoroughfares) are an integral part of the cultural landscape. The system of *ala hele* and *ala loa* provided access for local and regional travel, subsistence activities,

cultural and religious purposes, and for communication between extended families and neighboring communities. Trails were, and still remain important features of the cultural landscape today.

Historical accounts describe at least two primary trails of regional importance in South Kona, which generally merged into one major trail; with smaller trails on the cliff-side of the Kahuku bluff (Pali o Māmālu). The trail which crossed the *makai* (near shore) lands, linked coastal communities and resources together, was the primary route described by early visitors, as above. The other major trail, known as “*Keala’ehu*” (The path of ‘Ehu), passed through the uplands (in the vicinity of the present Māmalahoa Highway). This trail comes out of Ka’ū, passes into North Kona, and continues on to Ka’ūpūlehu, where it then cuts *makai* to Kīholo (meeting with the *makai* alignment of the *alaloa*).

The *alaloa* then continues into Kohala, passing through Kawaihae and beyond. This route provided travelers with a zone for cooler travel, and access to inland communities and resources. The trail also allowed for more direct travel between North and South Kona, and Ka’ū (see Malo 1951; I’i 1959; Kamakau 1961; Ellis 1963).

In addition to the *ala hele* and *ala loa*, running laterally with the shore, there are another set of trails that run from the shore to the uplands (*makai* to *mauka*). By nature of traditional land use and residency practices, every *ahupua’a* also included one or more *mauka-makai* trail. In native terminology, these trails were generally known as — *ala pi’i uka* or *ala pi’i mauna* (trails which ascend to the uplands or mountain). One such trail identified on historic maps is in Manukā, and passing from *mauka* to the *kīpuka* Kamilo’āina—an ancient dryland cultivating ground—and on to the shore by Nā Pu’u a Pele, where it connects with the main coastal trail (see *Register Map No. 2469*).

Along such trails are found a wide variety of cultural resources, including, but are not limited to residences (both permanent and temporary), enclosures and exclosures, wall alignments, agricultural complexes, resting places, resource collection sites, ceremonial features, *ilina* (burial sites), petroglyphs, subsidiary trails, and other sites of significance to the families who once lived in the vicinity of the trails. The trails themselves also exhibit a variety of construction methods, generally determined by the environmental zone and natural topography of the land. “Ancient” trail construction methods included the making of worn paths on *pāhoehoe* or ‘*a’ā* lava surfaces, curbstone and coral-cobble lined trails, or cobble stepping stone pavements, and trails across sandy shores and dry rocky soils.

By the 1830s, the growing missions and business interests, sought the improvement of routes of access around the islands—primarily to facilitate travel by horses and other hooved animals, and wheeled carts. In most cases, the native trails were not safe or even usable for such methods of travel. By the late 1840s, the major thoroughfares (such as the *ala loa* – *Keala’ehu*) became a part of a system of “roads” called the “*Alanui Aupuni*” or Government Roads. Work on the roads was funded in part by government appropriations, and through the labor or financial contributions of area residents and prisoners working off penalties.

It appears that in the Manukā vicinity, the *makai* trail was minimally improved in the 1840s, while the *mauka* trail, *Keala’ehu*, was modified by the 1850s, with improvements continuing throughout the century, until the *makai* route was all but abandoned by the 1860s. Generally, the *mauka-makai* trails in individual *ahupua’a* were maintained by the residents for their use (as protected by the Kingdom through *Kuleana Act of 1850*; and later, the *Highways Act of 1892*). Only selected *mauka-makai* trails were made into formal government roads. No record of such action was found in documents reviewed for lands that make up the Manukā NAR. This does not imply that the right of access for native tenants (as provided for in the *Kuleana Act of 1850*) in *ahupua’a* such as Kapu’a, Kaulanamauna and Manukā were not protected, it simply means that the Kingdom chose to expend funds on primary routes of benefit to the larger public.

The following communications are a part of a collection of records from native residents and government officials regarding travel through the South Kona-North Ka’ū region. The letters identify residents of given lands, the nature of trails and roads, and the evolution of travel in the region

through 1900. Underlining of place names and emphasis given in selected narratives are used by the authors of this study to draw attention to specific narratives.

The following communication from 1847—the earliest one describing “Government” road projects—describes the main route of interest through Kapalilua (South Kona), as being *makai*, where it meets with the route in Ka’ū:

**August 13, 1847**

**G.L. Kapeau, Governor, Island of Hawaii; to  
Keoni Ana, Minister of the Interior:**

*Aloha oe e ka mea Hanohano –*

I have a few questions which I wish to ask you. Will the police officers be required to pay, when they do not attend the Tuesday (*Poalua*) labor days? How about parents who have several children? What about school teachers and school agents? Are they not required to work like all other people when there is Government work on the roads and highways?

I believe that school agents, school teachers and parents who have several children, should only go and work on the weeks of the public, and not on the *konohiki* days....

...The roads from Kailua and down the *pali* of Kealakekua, and from Kailua to Honokohau, Kaloko, Ooma, the place where our King was cared for, and from thence to Kaelehuluhulu [at Kaulana], are now being surveyed. When I find a suitable day, I will go to Napoopoo immediately, to confer with the old timers of that place, in order to decide upon the proper place to build the highway from Napoopoo to Honaunau, and Kauhako, and thence continue on to meet the road from Kau. The road is close to the shore of Kapalilua. Also, the road that is to go *makai* of Kukalaula, below Keauhou [Ka’ū], and then continue to the shore of Puna and Hilo, will probably begin at Keaiwa.

The width of the highways around Hawaii, is only one fathom, but, where it is suitable to widen where there is plenty of dirt, two fathoms and over would be all right... If the roads are put into proper condition, there are a lot of places for the strangers to visit when they come here. The Kilauea volcano, and the mountains of Maunaloa, Maunakea, Hualalai.

There is only one trouble to prevent the building of a highway all around, the steep gulches at Waipio and Pololu, but this place can be left to the very last... [HSA, Interior Department, Roads; translation modified by Maly]

**March 29, 1852**

**Hudsonville (Onouli), Hawaii**

**T.H. Paris (Road Supervisor, S. Kona) to L. Kamehameha (Minister of Interior):**

...I received a letter from your chf. clerk, S. Spencer Esq., requesting me to forward a report respecting the road tax in my district. I hasten a reply and will give you the information referenced so far as I can. The balance of cash in my hands from last year is \$18. The whole amount rec’d. the past year was \$78.

The probable receipts for the next two years will not in my opinion, exceed two hundred dollars, and may be much less. The probable expenditures which should be made, during the next two years would not be less than two thousand dollars but we would be glad to get a less sum. I have been opening a new road, or rather an old one that has been closed for fifteen or twenty years past, which is the only practicable route to Kau. This can be made a good road with a little help from government, but will take a long time if we have to rely entirely on the road tax. I have worked hard the past year I have not depended on native lunas but have been with the men myself. More than this I am still willing to do all in my power to improve the road if you will only encourage us a little

with your help.

The tools that I have are few and in need of repair. I have not enough of money on hand to repair the tools for this years work. Please excuse the freedom I take in begging you to consider the matter and give us a little help... [HSA, Interior Department Roads Hawaii]

In the following communication from Geo. Kalaau, South Kona Road Supervisor, readers learn of road work in the district; with specific reference to Division 9, as the section extending from Milolii to Kapu'a. Kalaau also gives the number of residents in the division eligible to work on the road.

**December 22, 1854.**

**Geo. B. Kalaau (South Kona Road Supervisor),  
to Keoni Ana (Minister of the Interior):**

...I report to you the matters pertaining to the Road Tax of this District during this year, as follows:

1. The number of persons subject to Road Tax in this District. When I counted the persons from 16 years up to forty years and over, there were six hundred and forty-one persons, including foreigners and native Hawaiians.
2. The number of days worked by these persons, under the law of 1853, six days work by each, that being the full payment for the one year ending on the last day of December, 1854; and if these six days are multiplied with the six hundred and forty-one persons, the result will be three thousand eight hundred and forty-six, the number of days. But, I divided the work up in the nine divisions, as follows:

Division 1, from Puuhau to Onouli 1; Division 2, from Onouli 2 to Kealakekua; Div. 3, from Kiloa to Keei 1; Div. 4, Keei 2 to Honaunau; Div. 5, Keokea to Kealia 2; Div. 6, Hookena to Waiea; Div 7, Honokua to Kaohe; Div. 8, Kukuioape to Hoopuloa; Div. 9, **Milolii to Kapua.**

If the count of the days is by districts, it will be fifty-four days, because, I have given six days to each division, the same to all the sections... [describes collection of taxes]

6. Money disbursed and the balance. I paid out the sum of eight dollars, of the road tax, for a part between Hoopuloa and Milolii. A very bad place, plenty of rocks, therefore, I gave that money in order to fix up that place. There is no money balance...

The total number of people who required to contribute to the Road Tax in the District of South Kona:

From Honokua to Kaohe, the people in this division, 94.

From Kukuioape to Hoopuloa, the people in this division, 65.

**From Milolii to Kapua, the people in this division, 44...**

[HSA, Interior Department Misc. Box 146]

**May 1859**

**Bureau of Public Works Report on Expenditures:**

...For the Road from **Manuka to Kahuku** \$500.  
For the Road from Kukuioape to Milolii \$500...  
[HSA, Interior Department Roads Hawaii]

**1869**

***Petition of J.W. Maele and 97 native residents of South Kona, to F.W. Hutchinson (Minister of Interior):***

...We, the people whose names are below, petition to you about the Road Supervisor of Kona. We desire that S.W. Papaula be made the Road Supervisor of South Kona. That a straight road be opened from *Kaulanamauna* to Kealakekua, and that the places which are bad and in disrepair be made good, like the work (by Thomas Martin) on the road of Kau.

Please kindly consider our request to you. In truth of this request, we sign our names below... [HSA, Interior Department, Roads Hawaii Folder 6; translated by Maly]

***August 3, 1869***

***W. James Smith; to F.W. Hutchinson, Minister of the Interior (Regarding the Mauka Road from Kapua to Kahuku, and the Road crossing the 1868 lava flow):***

...As requested by your Excellency before leaving Honolulu, I would state for your information that upon arriving at Hawaii, I landed at a place called Kahaluu in N. Kona, and have since ridden through the districts of S. Kona, Kau, Puna, Hilo, a part of Hamakua, and Kohala, and in reference to the roads in the district of Kau, concerning which you wished to be informed, I am now able to say from comparison, that in my opinion the roads in that district, as a whole, are quite as good as those in any other district on this island.

There are many places, as in all the other districts, which should be improved, and which, with a little vigilance on the part of the Road Supervisors, could be much improved.

The road from Kapua, the last land in S. Kona, on the Kau side, which I am informed was constructed under the supervision of the present Supervisor, last year, or the year before, extends a distance of about twelve miles, I should judge, through the most rugged section of the country I have seen on the island, and considering the nature of the country over which it is made, and the material available for the purpose, it cannot be regarded other than a well executed most creditable piece of work. Men were at work extending the line of this road as I passed over it. No regular or well defined road has yet been made over the new lava flow at Kahuku, though considerable labor has doubtless been required to bring it to its present fair condition... [HSA, Interior Department Roads]

***August 30, 1869***

***R.A. Lyman; to F.W. Hutchinson (Minister of the Interior):***

...The old road at Kahuku can be reopened for about \$200.00 so as to be a good road. Most of the people go on the old road, some parts of the road in North and South Kona are being well worked. The new road from Kona to Kahuku is almost finished, and is a good road, except that it goes up & down the hills too straight, so that it will wear out quick on the rises... [HSA, Interior Department, Roads Hawaii Folder 5]

***August 1, 1871***

***Henry Cooper (South Kona Road Supervisor), to F.W. Hutchinson (Minister of the Interior):***

...I beg to inform you in regards to the roads in South Kona. I have worked the roads for about 18 miles from North to South, say from your Highness' place to Kukuioepae, the roads thus far are in fairly good order.

I have remade two miles of road on the beach across the lands of Keei & Honaunau, this improvement was much required as the road had become almost impassable. From Kukuiope to **Kapua** there is some 12 miles of bad road which I think can be done for (150) One hundred & fifty dollars p. mile. T. Martin says he will contract for two hundred dollars p. mile, but by shipping men or letting it out by contract it can be done for less. I would also say that on the newly made piece of road before mentioned, the natives allow their goats to run at large thereby doing more damage in one month than would be done by ordinary travel in a year. I have posted notices without effect, and would ask your Excellency's instructions upon the subject... [HSA Interior Department, Roads Hawaii Folder 8]

**July 21, 1877**

**Henry Cooper (South Kona Road Supervisor),  
to J.M. Smith (Minister of the Interior):**

...As you are aware from the report of the Royal Commissioners the roads in South Kona are not very good. From Kealakekua to Kukuiope about 18 miles the *mauka* road is not so bad but beyond that the road is bad until the boundary of T. Martin's road in the district of Kau. Nothing can be done on this road without assistance from the Government appropriation.

I think a good road 5 feet wide may be made for two hundred dollars a mile & I would suggest to your Excellency that one mile of said road be made by contract. The present formation is clinkers & very rough, uneven *pahoehoe* for near 15 miles... [HSA Interior Department, Roads Hawaii Folder 10]

**November 1880**

**W.T. Martin, Kau Road Supervisor; to  
Minister of the Interior**

**Explanation of the Roads and the Money Allotted:**

1) Road running to Kona from Mamalu, Kahuku and reaching Kaulanamauna, Kona. It is perhaps 13 or 14 miles long. Half of the road is 7 feet wide, and the other half 4 feet wide. Money considered by me, needed to finish it, \$1,200. One section of the road is let out to Keaka and his 8 fellow laborers for \$400... [HSA, Interior Department Roads; Maly, translator]

**July 14<sup>th</sup> 1887**

**C.N. Arnold Road Superintendent, Island of Hawaii;  
to L.A. Thurston, Minister of the Interior:**

...I have the honor to report the following work in progress, and recently completed on Hawaii.

**Kau District:**

..We are...engaged in this District on a new road across the Lava flow of 1887, the distance across this flow, including the openings is about 3 ½ mile. The estimated cost of this work is \$1800. I am sure I can complete it within that amount. This work was also offered for contract, but the lowest bid being in excess of my estimate, I was directed by the Minister to proceed there and give the work my personal attention. I was engaged at this work when I met with an accident, being bucked from my horse, which has delayed the work. The work is well under way, and three weeks more of labor will complete it. I regard this as an important work as without it the travel between Kau and the Southern Districts of Hawaii is practically suspended...

**South Kona:**

The road of this District are in good fair condition. A small amount could be spent to advantage in cutting the brush from the sides of the roads and throwing out the loose



rocks, \$400. would be enough for the District... [HSA, Interior Department, Roads, Box 39]

**October 28, 1889**

**S. Kekumano (South Kona Road Supervisor),  
to L.A. Thurston (Interior Department):**

...Work on the road to **Kapua** has ended. If the money is sent I will immediately go over the road to **Kapua**. The road from Pahoehoe to Honaunau has been put in good order, leaving only the section that runs to North Kona to be done.

I received a petition from the people of Papa and Hoopuloa, asking that this Road Board work on the road that runs up from the landing of Hoopuloa to the uplands at Papa; that One hundred dollars be sent to repair the areas that are in the worst condition. This road is the means of their livelihood, and how they transport their goods to the landing. There are 23 names on the petition... [HSA Interior Department Roads – Hawaii; Maly translator]

**Hookena**

**November 8, 1890**

**D.H. Nahinu (South Kona Road Board), to C.N. Spencer (Interior Department)  
(Reports that Road Board has appointed Cantoniers for South Kona):**

...Here also is a list of the size and different sections of the roads, their mileage and the people who are responsible to work them, and the pay that is considered right. There only remains the road that descends to the shore at Kaawaloa. If it is determined that the work should be done, it will be started immediately.

The Divisions are thus:

...Section 6. Pahoehoe to Kaapuna, 5 miles. The roads needs improvement. J.W. Kuaimoku, cantonier. \$25.00 per month.

Section 7. Kaapuna to Honomalino, 5 miles of road in this section. Kalaimoku, cantonier. \$25.00 per month

Section 8. Honomalino to **Kaulanamauna**, adjoining Kau, 6 miles. Kalaimoku, cantonier. \$25.00 per month...

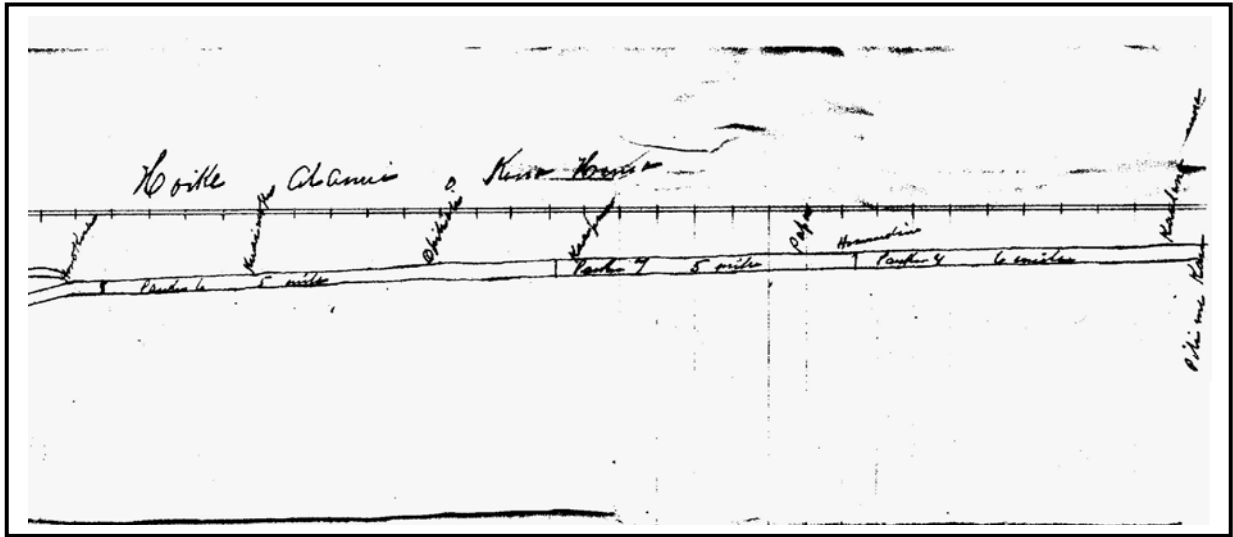
Here also is a diagram [Figure 2] which I have drawn of the road. It is perhaps not exactly right, but by it you can see the length of the road is 43 ½ miles... [HSA Interior Department Roads, Box 41; Maly Translator]

**March 31, 1892**

**Report of C.N. Spencer, Minister of the Interior  
(Regarding new road being built between Hookena and Kahuku):**

About five miles of this road is completed, and is certainly one of the best in the Kingdom. It will run for about thirty miles towards Kahuku, from which place to the Volcano, a good road will be finished during the present period.

The completion of a road which shall encircle Hawaii is a matter of impossibility as the work of a single period, but by doing a little each two years and not suffering what has been made to go to ruin, we shall have at length, by means of other roads running through the interior of the Island, and serving as it were, as tributaries to the belt road, opened up to cultivation and prosperity large and valuable tracts of land, at present of little use and scarcely known. [HSA, Interior Department Report, 1892:284]



**Figure 2. Portion of “Road Exhibit of South Kona” Showing Section between Honokua to Boundary of Ka’ū – Section 8 from Honomalino to Kaulanamauna.**

Bureau of Survey

Aug. 10<sup>th</sup>, 1894

**Frank S. Dodge, Assistant – H.G. Survey;  
to Hon. Jas. A. King, Minister of Interior:**

...Having recently returned from a tour of inspection of the Government roads of Hawaii, through the Districts of North and South Kona, Kau, Puna, Hilo, Hamakua and a portion of South Kohala, I would submit my report upon the same, with certain recommendations, and suggestions.

In company with Mr. W.E. Wall of this Bureau, I landed at Kailua, Kona, July 21<sup>st</sup> and proceeded southward as far as Kaawaloa that day, and thence on to Honomalino on the following day. Mr. Wall took observations for altitude, with a barometer – at many points along the line, and the results are now on file in this office, and will be of considerable value in case a detailed survey is to be made.

From my observations of the needs of the Kona District, and the evident progress now being made in its development, I should recommend that steps be taken at the earliest possible date for the improvement of the main road through the whole district, making it passable for loaded vehicles. A road twelve feet in width, with frequent turnouts would be a vast improvement over the present trail – and assist greatly in opening a large section of country. The general line of the present mauka road should be followed – with a few changes necessary to overcome excessive grades...

At Hookena, I had an opportunity of examining the new road constructed a few years ago from the harbor to the mauka road, and found it in good condition, and needing very slight repairs. It is one of the best roads on Hawaii, and shows conclusively what can be done with the materials close at hand, all through Kona.

At Papa, Hoopuloa and Honomalino there is a very general demand for better facilities for reaching the landing at Hoopuloa, and there is nothing in the way of construction except the elevation to be overcome, which is about seventeen hundred (1700) feet – requiring about four (4) miles of road on an 8% grade.

With the main road completed as a wagon road throughout the district, and the various roads to the steamer landings as above recommended, the two Konas would be far more accessible than at present, and their development much more rapid.

From Honomalino to the Kahuku Ranch the only road is about as bad as it can be, especially where it crosses the lava flows of 1868 and 1887, and it needs reconstruction over its entire length. Most of the land along this section of road is a barren waste and of little value for cultivation, but the main road should be built, as a very important link in the chain around the island... [HSA, Interior Department Roads, Box 41]

**December 31, 1897**

**T.H. Wright (South Kona Road Supervisor), to J.A. King (Minister of Interior)  
(Reports on conditions of roads in South Kona) :**

...Hoopuloa Road in fine condition with an exception of a Rock about  $\frac{3}{4}$  mile from the landing; order has been given to Member Buckholtz to remove same.

Road from Papa I to Honomalino fair.

Road from Honomalino to **Kahiawai** [Manukā] “boundary” very bad, portions overgrown by Lantana, Guavas, etc. etc., dangerous. Needs fixing, but is impossible for the Road Board to do so.

Road from Papa to the termination of S.W. Waiau Road [in Waikakuu vicinity] under repair by Road Board.

S.W. Waiau Road, known to the Konas by the name of Lazaro Road, lately built. It's one of the poorest built roads ever constructed. Banks decaying in some places, hardly any surface dressing. Very sharp turns, large hole on the sides where gravel has been dug... The other day portion of the banks by “Mr. Monsarratt's Plantation” caved, hardly any filling... [HSA Interior Department Roads, Box 41]

**January 29, 1900**

**Waiohinu, Kau**

**S.M. Kanakanui, Surveyor; to W.D. Alexander, Surveyor General:**

...I am in Waiohinu now with my traverse on this side of Kahuku Ranch, on line of the new road to Waiohinu now under construction. I have written you from Keei last month concerning the possibility of my continuing this work around, and I have been expecting a reply before this, but none has come.

The road after leaving Puu o Kamaoa in Kahuku to about a mile back of Col. Norris' is worthless. The road was built with light lava of '87, and the heavy wheels of our wagon went down a foot into these loose rocks and it was worse than sand. It takes 6 full horses to travel that stretch of only 3 miles. I will get the traverse down to Honuapo by Saturday... [HSA – DAGS 6, Hawaiian Govt. Survey]

**January 12, 1901**

**Kukuioape, S. Kona**

**S.M. Kanakanui, Surveyor; to W.D. Alexander, Surveyor General:**

My traverse is now at Alike today, and I expect to pass Papa by Tuesday, which time I think to take our supplies to **Kapua**. The condition of the road at this end is pretty poorly laid out and built, there are lots of dirt and loose rocks on the way, obstructing the travel, bends being too sharp that it takes professional drivers to pass with wagon load... [HSA – DAGS 6, Hawaiian Govt. Survey]

## **Government Survey Records: Interior Lands of the South Kona-North Ka'ū Region Described (1859 to 1891)**

Survey records of the Hawaiian Government, provide us with some of the most descriptive accounts of the lands in the South Kona-North Ka'ū region, found to date. Following the *Māhele 'Āina* (Land Division) of 1848, the Kingdom entered into a program of surveying entire *ahupua'a* and tracts of land. Throughout the middle, to later 1800s, the Hawaiian Survey Department, continued its efforts to improve maps depicting the islands, districts, and other land divisions. This work required intensive field surveys, and produced an amazing record of place names, and descriptions of the land and associated resources. This section of the study, includes descriptions of the land and surveys from letters and field books, and covers the lands of Kahuku and Keauhou, which cut off lands of the Manukā NAR; and also includes specific references to lands of the Manukā NAR, extending from the shore to the upper mountain limits. Among the important locational references in the communications, are Pu'u o Ke'oke'o (Keokeo), situated a distance upslope, above Manukā; Nā Pu'u a Pele, in Manukā (Manukaa); Ohepu'upu'u and Hanakeaumoe, in Kapu'a; and general references to Manukā, Kaulanamauna and Kapu'a. Other references cited from the communications, describe the general nature of the landscape, forest, and lava flows, and identify some of the traditional and historical uses of the resources in the region. The narratives provide modern readers with a sense of the landscape more than 130 years ago, and how it has, in some instances, changed.

The records were found in the collections of the Hawaii State Archives (HSA) and the State Survey Division. Underlining and emphasis is added by the authors, to draw the readers attention to specific references of interest.

***Waiohinu, Hawaii***

***28, June, 1859***

***Wm. D. Alexander; to Rev. R. Armstrong***

***(Regarding Survey of Kahuku and other Lands on Mauna Loa):***

...As Prof. Haskill is about starting for Hilo, I will send you a line or two by him. We arrived in Kona about three weeks ago. Made an excursion in company with Tom Paris, to the top of Mauna Loa. Explored the eruption of '59 for thirty miles, from where it is a mere crack as wide as your hand, to when it is a lava sea, four miles wide. There is still quite a rim of liquid lava flowing down the mountain in a subterranean tunnel. We had clear dry weather & enjoyed the trip highly. Left Kona last Friday in company with Prof. Haskill & arrived here Saturday night. The Liholiho reached Hilo last Friday, the 21<sup>st</sup>. I expect Henry & Justin here in a day or two with my theodolite transit, compass & chain. My sextant & chain brought with me. I expect to commence surveying next Friday, the 1<sup>st</sup> of July. Yesterday, I rode out to ***Kahuku*** to look at the land & engage kanakas. The old kamaainas agree very nearly in their statements which are as follows.

The boundary begins a little this side of the Kahuku church & runs straight to the sea with some zig zags, then along the shore a mile then up the mountain a few miles, & then it turns north, running parallel with the sea & cutting off all South Kona, till it meets Keauhou somewhere in the valley between Hualalai & M. Loa, & then turns & runs up to the summit crater of Mokuaweoweo.

On the other side the boundary runs up into the forest, & then turns eastward cutting off all the lands of Ka'u as far on Kaalala beyond Keaiwa more than half way to the Volcano, & then runs up the mountain. I shall not attempt to run the northern boundary, I think. I shall go ahead & survey the arable land, down to the sea, along the shore to ***Manukaa*** & up to the Gov't. road. My "*manao*" at first is to run the southern boundary to Kaalala by triangulation with the theodolite & sextant, and perhaps to the top of the mountain.

The fact is that **Kahuku** was a region of bird-catchers & was bounded by the limits of their favorite birds. The proportion of good land in it is very small. I doubt whether it is worth \$1500. I shall be very glad to receive any instructions from you. [HSA – Box 81, Series 261 Public Instruction: Re. Land]

**Makiki**

**September 21, 1874**

**W.D. Alexander, Surveyor General;  
to R.A. Lyman, Boundary Commissioner:**

...In regard to the boundaries of Kahuku in Kau, Hawaii, I can only state what was the testimony of the Ka-u people when I surveyed part of Kahuku in 1859.

I did not survey the line between **Kahuku & Manukaa**. The old Kamaainas however all agreed that Kahuku cut off all the South Kona lands at the upper edge of the forest. As they express it, wherever the “uwa’us” were found that was Kahuku. They testified that Kahuku extended to Ahu a Umi between Hualalai & Mauna Loa.

On the other side they testified that Kahuku in like manner cut off all the lands in Kau at the upper edge of the bush, the “*wahi oneanea*” being Kahuku, as far as Makaaka, near Keaiwa. Thence the boundary turned up & ran to Pohaku o Hanalei.

I think, however it was a question whether the summit crater of Mokuaweoweo belonged to Kahuku or Kapapala.

I gave a written statement at that time to Mr. Armstrong together with a map & the notes of survey, but I understand that they were in Mr. Robert Brown’s house at the time of the eruption of ’68 & were burned up. [HSA, Interior Department Survey, Box 22]

Government surveyor, J.S. Emerson and party, conducted initial field work in the South Kona region in 1884 to develop Register Map No. 1282. Letter to W.D. Alexander, regarding his progress in the field, and his field book (Register No. 257), include references to several named locations from Manukā through Kapu’a, with sketches of the landscape. His narratives also identify residents on the near shore lands of those *ahupua’a*. The following excerpts describe lands of the Manukā NAR vicinity.

**March 30, 1884**

**Napohakuloloa Station**

**J.S. Emerson; to W.D. Alexander:**

...On Saturday Mar 22 we left Kukuiopae early in the morning and landed at Lae o Heku at 7:30 A.M. This station we hurried through with all possible expeditions, it is a ragged and jagged mass of *aa*, and finished it up to my entire satisfactions on Wednesday morning, Mar. 26. Thence we came to this ill starved spot, arriving here at noon the same day. Dark clouds and rain have hindered the work at this place. On Friday afternoon the rising surf warned us to move the boat to a place of greater safety. It was accordingly anchored in Alike Bay, where it remained the next day. The last that was seen of it was about 9 or 10 o’clock Saturday night when it seemed to be all right.

This morning early I was awakened by a native who came to tell me that the boat had disappeared... I trusted my *kanaka* sailor that it was all right, and did not attend to it in person. The man whom I had engaged to take charge of the boat at Hookena failed me and I took another man, Keoni Miki, in his place. He is a good sailor and a faithful man and was guided in selecting the anchorage by advice of kamaainas... [HSA – DAGS 6, Hawaiian Govt. Survey]

**April 9, 1884**

**Puu Nahaha, Kona**

**J.S. Emerson; to W.D. Alexander:**

...It is with pleasure that I report the safe return of my runaway whale boat, none the worse for a thirty hours excursion out to sea. About 7 or 8 A.M. on Monday Mar. 31 a fisherman named Kaleimoku, living in **Kaulanamauna**, the last hamlet in S. Kona, was sitting down to his dish of fish & poi, when he noticed a white speck upon the horizon, rising & falling with the waves. Thinking it may be a canoe drifting with the tide, he quickly launched his own canoe, and with his wife & boy started in pursuit. When they had gone so far out to sea that they could no longer see the surf beating against the shore, his wife became very much afraid and tried to turn him back.

But he would hear no such timid proposal & pushed boldly on. As at length they neared what now they saw to be a whale boat, the woman's fears again arose, that there was a corpse on board and that they would be "tapu'd." But the prize was too great even for her superstitious fear, and soon they all sprang aboard & drew in the anchor which was still hanging from the bow and dragging by a long chain...

As I had finished up Napohakuloloa station on the day previous we at once started after breakfast, for Hanamalo reaching there before noon on Friday... [HSA – DAGS 6, Hawaiian Govt. Survey]

**J.S. Emerson – 1884**

**Primary Triangulations**

**Kona Hawaii Vol. VII (Reg. No. 257) [Figures 3 & 4]**

**April 17, 1884, from Milolii Station**

...Kahapaakai point ext.	Kapua
One of two places in S. Kona where salt is made.	
The other is in Kaulioli [Kauleolī].	
Kahapaakai rock in sea... Boundary bet. Okoe & Kapua.	
The boundary of these two lands runs straight from this rock to a pt. 10 fathoms S. of Puu Nahaha trig. station as surveyed by Fuller.	
Owea Coconut grove. 12 trees	Kapua
Owea bay tang. hd. of sand beach & boat landing	Kapua
Kahehena's grass h.	Kapua
Haleola pond. Sight on coconut tree by same.	Kapua
Lepeamoia cape N. of Owea bay.	Kapua
Nalupai.	Kapua
Ahole Bay tang. hd. of Nalupai bay.	Kapua
Kakio cape.	Kapua
Kamaohe cape.	Kapua
Niu Ou Coconut grove. Over 200 trees.	Kapua
Lae Kamoi Boundary between Kona & Kau... [1884:61]	

**April 23, 1884, from Wahapele Station**

...Kahehena's grass house	Kapu'a
Kakio Cape, extremity	Kapu'a
The <i>kamaaina</i> for this station is Makia, an old man... [1882:93]	

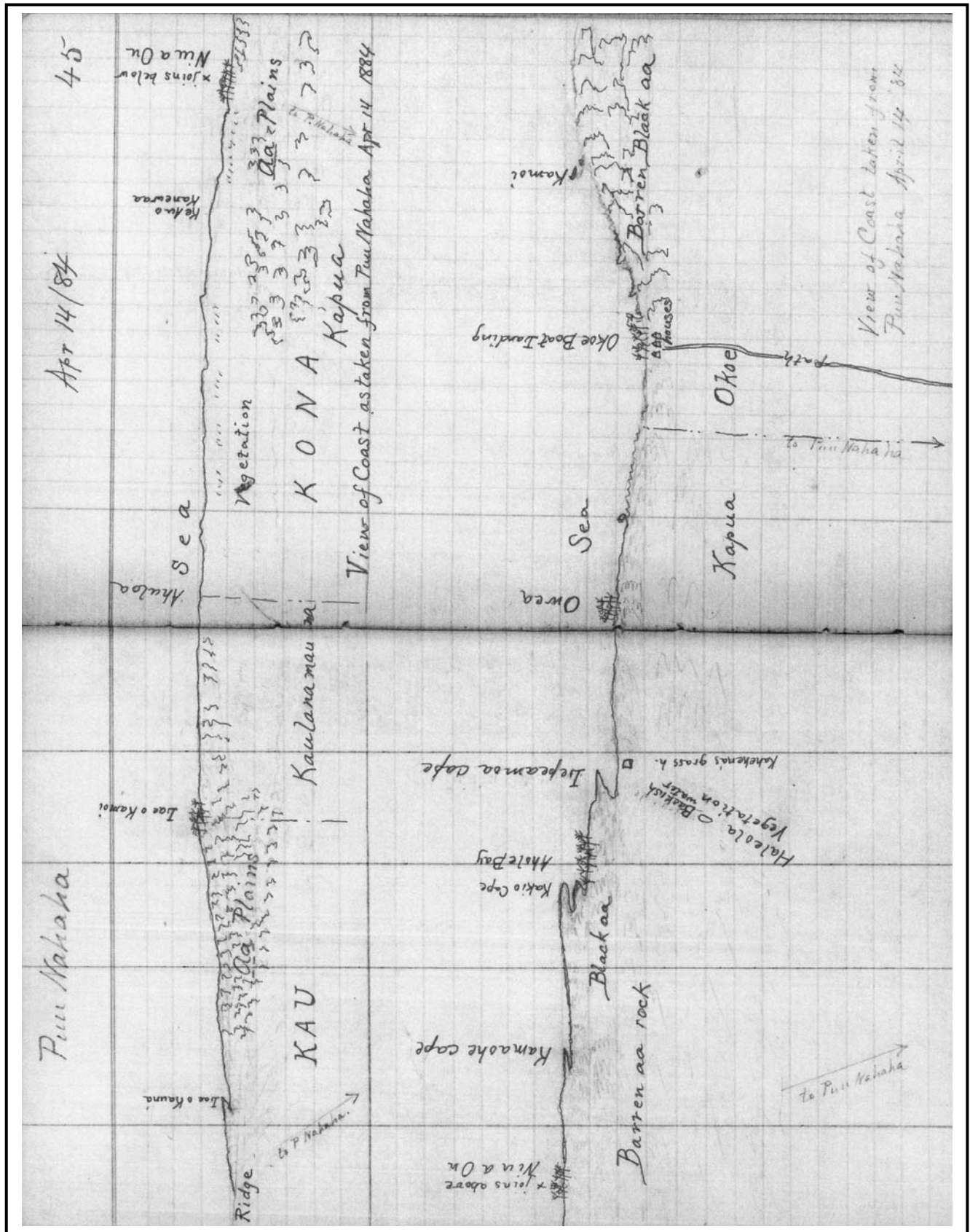


Figure 3. View from Puu Nahaha Trig. Station, South Kona.  
 J.S. Emerson Field Book No. 257, 1884:45 (State Survey Division)

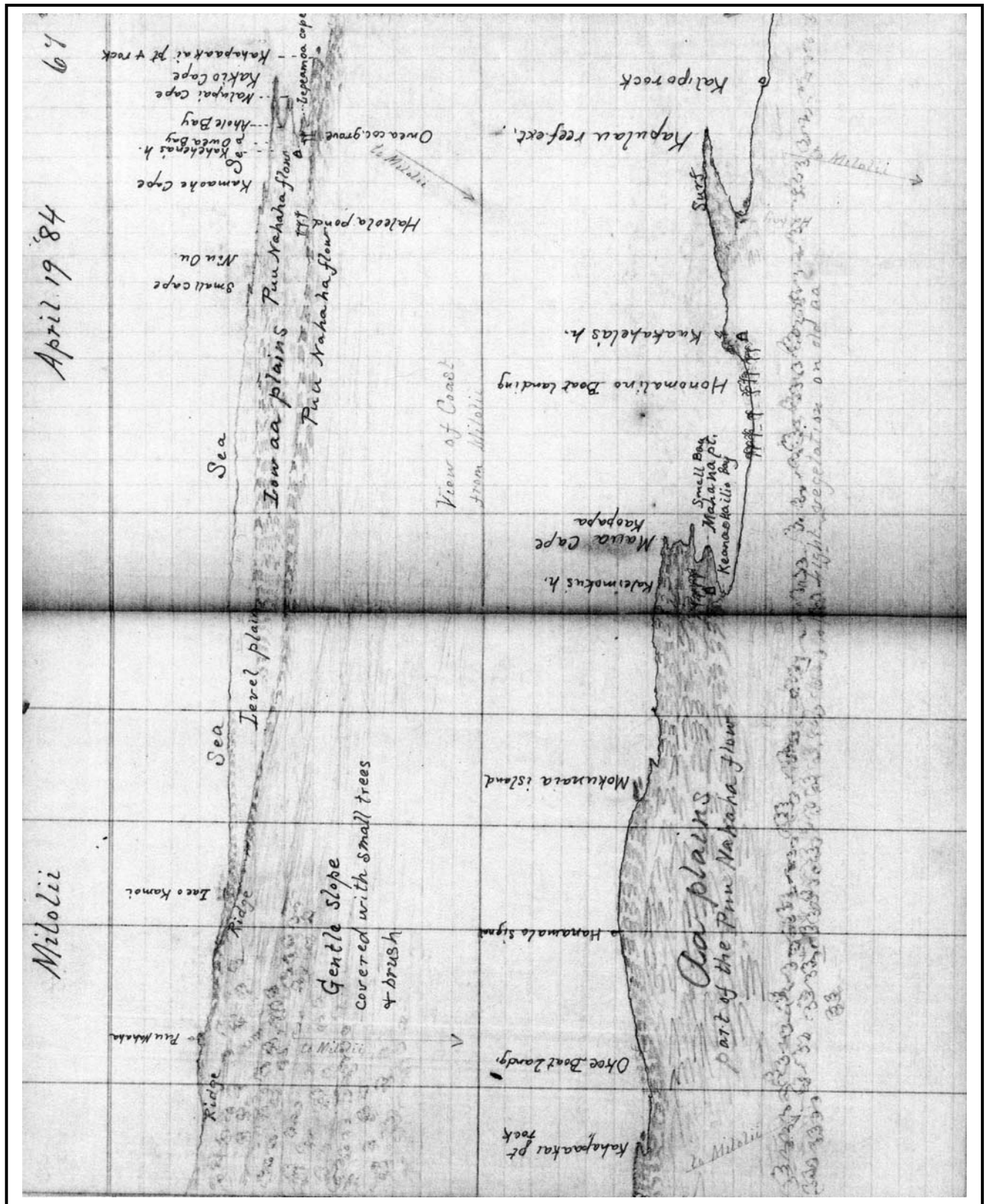


Figure 4. View from Milolii Trig. Station, South Kona.  
 J.S. Emerson Field Book No. 257, 1884:67 (State Survey Division)



**About 1900 feet above sea level.  
In Camp by Gov't. Road to Kau.  
Kaulanamauna, S. Kona, Hawaii  
Jan. 30, 1887**

**J.S. Emerson; to Prof. W.D. Alexander:**

...Late Monday P.M. Jan. 24<sup>th</sup> we started from Pahoehoe and reached Kukuiopeae 2<sup>nd</sup> in time to camp for the night. The smoke from the eruption covered the entire country to such an extent that all objects at a distance were quite observed, but not as much so as on the Thursday previous.

On Tuesday we passed through Papa where we bought a supply of pure water which has lasted nearly up to the present time. At Hoopuloa we spent the night at the nicely furnished house of G.L.W. Kealiikuli, with whom we have established our depot of supplies. We found him very short for water, his large cistern being nearly dry. Wednesday we gradually passed out of the smoke covered district and rejoiced once more in the bright clear sunlight. Late in the day we camped on Puu o Kamaoa by the Gov't road in Kahuku overlooking the present flow.

From my Δ station on this hill I observed & recorded the following bearings viz.

Papaakalo Δ	Mag Az.	197° 3'
Road to Kau direction of do.	Mag Az.	282° 55'
Puu Hou formed by eruption of 1868	Mag Az.	333° 40'
<b>Na Puu a Pele</b>	Mag Az.	52° 50'
Smoke column over source of eruption	Mag Az.	191° 10'
Steam columns in sea terminus of same	Mag Az.	0° 30'
(Nearest point in road covered by flow)	Mag Az.	282° 55'
Estimated distance of same		1 ¼ to 1 ½ miles

The first impression on reaching this fine point for observation was somewhat disappointing. A vast amount of smoke was pouring initially off from an unseen source high up on the slope of Mauna Loa whence it was deflated by a strong current of air and carried in a westerly direction forming a huge spreading cloud of darkness. The steam jets arising from the sea seemed dwarfed by the contrast. Before me lay an immense waste of horrid *aa* over which the late flow had so madly rushed to the sea in two streams, leaving its course now marked by black lines of *aa* rock, here and there lit up with patches of glowing red. In places flames burst out from burning trees as Pele slowly "ate up the land." There were long lines of smoke and rising waves of hot air, but very little fire. But this was a view by day. At night the scene was grand. The "cloudy pillar" over the source of the flow was brilliantly illuminated, and with the glowing red of the long lines of the flow, lit up the country in all directions with a light about equal to that from a full moon when slightly obscured by smoke or very thin clouds. The light was so diffused as scarcely to cast a shadow. The slight trace of a Shadow which I detected was cast opposite to the direction of the source of the flow. Thursday evening I visited the late flow at the Gov't road, but saw only a cooling mass of *aa* piled up like a rude stone wall to arrest further progress. The heat was "intense." (Pardon the use of that much shrugged adjective) A strong wind blew directly from the glowing surface and soon drove me back to a respectful distance.

The spot which I then approached had been covered by the flow since the previous evening. So the natives who had previously visited it said. On account of the roughness of the country I could not travel around by night to examine any part of the flow save that close to the road. I came away very much disappointed. The next morning I visited the flow again and was rewarded by a grand view of a fresh and active stream of *aa* just above the road. I managed to keep to the windward of it and study its actions in comfort.

As a whole the advancing column made extremely slow progress but in places the liquid portion showed considerable activity though weighed down by a mass of inert aa above it. The formation of a gully before my eyes explained how some ravines may be formed by Pele without resorting to erosion by water.

The work of the survey progresses satisfactorily. I have set two fine signals which command good views of the district to the Eastward beyond Mr. Jones. They are Papaakalo on a high hill *mauka* of road & Puu o Kamaoa by the road. I have also planned where to set my signals on the coast. On the boundary between Kahuku & **Manuka**. I have also set a good signal to tie up to the coast signals. What I am now after is to set a signal inland on the conspicuous hill Puu Keokeo by which I hope to connect the Kona & Kau systems of triangulation and get over an extended forest. I have the best guide to direct me and hope to start tomorrow. It will bring me near the source of the flow which I hope to visit. Please let Dr. Emerson see this letter & the last one as well. We are in good health in spite of rather rough weather. With *aloha*... [HSA, HGS DAGS 6]

***In Camp, 5950 ft. above sea level,  
By Namanuokehau Waterhole  
Kahuku, Hawaii  
February 17, 1887***

***J.S. Emerson; to W. D. Alexander:***

...We left our camp on the government road on Tuesday morning and arrived here yesterday noon. On Wednesday the entire day was spent in making the road passable through the *koa* trees. It had not been used for seven years and required considerable cutting. We are now encamped on the upper edge of the forest. All the country above us to the top of Mauna Loa is a barren waste of rugged aa with some *pahoehoe*.

This morning I went to **Puu o Keokeo** distant some two miles up the sides of the mountain. As the route lay over aa, impassable for our animals, we went on foot and were repaid by a magnificent view. Mauna Loa was covered with a considerable amount of snow. Near its apparent summit the familiar landmark, Pohaku Hanalei, stood boldly out, bearing North 19° 30' East (magnetic) and just in the rear of it arose a large mass of smoke, evidently volcanic, indicating more activity at that point than at any other further down in the course of the late flow. Commencing a little below and somewhat to the right of Pohaku Hanalei and extending for a considerable distance directly towards me, was a continuous steam crack, said by my native guides to have been there long before the late eruption. Whether that is the case or not it occupies a position directly in line with the late flow.

I have already called your attention to the remarkable line of volcanic cones down the side of Mauna Loa from Puu Ouo through Puu Kinikini towards Napoopoo. The late flow is near the line of another similar series of volcanic cones beginning with Pohaku Hanalei, passing through Puu o Keokeo and a series of other cones in its vicinity and terminating at the sea at **Na Puu a Pele**. Puu o Keokeo, like Puu Ouo, is composed of exceedingly light material. Its name is a misnomer for its color is decidedly red. I looked in vain for a piece of solid rock in its vicinity and I had to go to a great distance to get anything that I could mark with a cold chisel. The loose, spongy masses of rock which I found on the hill, fell to pieces with the slightest blow. After considerable labor we set up a huge signal commanding an extended view of the coast from Lae o Kamilo in Waiohinu to Hanamalo Point in the *ahupuaa* of that name in South Kona.

The late flow was spread out before me like a map. At about half a mile distance from me, about South 67° 30' East, was the beginning of a line of steam jets extending for over half a mile towards Mr. Jones' residence and marking the course of the late flow previous to its appearance above the surface.

At two P.M. we started to explore the late flow. As we descended we sank to our knees in the loose porous material of which the hill was composed. At the base for a time we passed over the aa on the old road by which Umi used to send his swift messengers to the coast at Kahuku. Leaving this ere long we passed over rugged fields of aa until we arrived at the upper extremity of the line of steam jets. The rocky masses had been terribly shaken and cracked. Through the fissures the steam was forcing its way to the surface loaded with sulphurous gases. I freely passed through the masses of steam without inconvenience, though at times I was forced to hold my breath on account of the irritating character of the gasses.

After descending thus a long distance along the line of the steam cracks, sulphur began to appear on the surface and the quantity increased as we proceeded; the cracks meanwhile grew larger, with here and there rounded shafts, through which poured out streams of hot sulphurous gases but no fresh lava had yet appeared. But at length after reaching the lower end of the steam jets nearly half a mile from their upper extremity, I came to the first view of fresh lava. It was a narrow crack but a few inches wide through which the black liquid mass from beneath had barely reached the surface. As I proceeded the lava stream gradually increased in width. Fragments had been thrown up with great violence and covered the old aa, rocks on either side of the narrow fissure with shining black fragments of the fresh lava which must have been thrown to a considerable height.

The fog was closing in upon us and a horrible stretch of aa must be crossed before I could reach my tent. I was compelled to tear myself away from a scene of the greatest interest. At the point at which I left, the flow might have been about forty feet wide and was intensely black.

My old goat hunters made splendid time over the rocks, and I had to adopt most unusual speed to keep in sight of them.

The country near the flow must have been terribly convulsed by the earthquakes.

Numerous fissures exposed the fresh surface of rocks which had lately been torn asunder. Projecting bluffs and crags had been thrown down and slabs of lava had been upset by earthquakes which in this vicinity must have been terrific.

Tomorrow my work will take me to the vicinity of the flow and I shall probably see more of it at a point lower down. I am very much pleased at the arrangement of the hills and when they are all located on the map I think they will greatly interest Mr. Green and other students of Hawaiian volcanoes... [HSA, HGS DAGS 6]

***Kukuiope, Hawaii***  
***September 14, 1890***

***J.S. Emerson; to Professor W.D. Alexander:***

...I have mastered the situation. The problem of how to locate Ka Lae and carry the Kona triangulation into Kau is solved. Success has crowned my efforts to get over or through the great forest belt and  $\Delta$  up ***Puu o Keokeo*** to the  $\Delta$  stations to the north of Kapalilua. Aided by the best men I knew of, we found a hill in Kaapuna overlooking the great forest and commanding a view of the following stations, viz. Puu Ohau, Keawekaheka, Palemano, Makolehale, W. Hualalai, Kapukawaa, Puu Nahaha, Hanamalo, Hanakeaumoe & the coast south as far as Kawili [at Ka Lae]. This gives me the line joining this Kaapuna station and Hanamalo as a fine base line to carry the triangulation up and on. By three intermediate points, all commanding a view of Hanamalo, and the coast to Hanakeaumoe, I pass from Kaapuna over the forest to ***Puu o Keokeo*** by four triangles revolving about Hanamalo as a pivot, with various

checks from other coast stations. Puu o Keokeo once connected with Hanamalo etc., the triangulation to the south and through Kau follows without difficulty.

Great praise is due my native men who have enabled me to accomplish all that I have attempted. Splendid fellows they are who have done fine work under the greatest difficulties and hardships. Their names are Chas Ka, Lapauila & Solomon Hu besides Kanakanui. The territory over which we have been traveling these three weeks might be called "a petrified section of Hell." You know what Kona rocks are. We have experienced the meanest, roughest and most treacherous portion of Kona. On Thursday, Sept. 4 my mule, Hiiaka, broke through the thin and brittle crust of rock and fell with all her load some three feet into a cave or lava tunnel. The poor creature was badly cut & bruised by the sharp & jagged rock before we could get her out of the hole. The mule Pele lost the shoes off of her hind feet and suffered greatly on the horrid aa over which she was forced to travel. Both she and Hiiaka are about used up for the present, but will probably be ready for duty in a week. My old mules, Kuhaimoana and Kamohoalii, never did me better service. They accomplished the entire trip without a mishap. Noble brutes, may they rest in a mule heaven after all their toil and service for science is ended!

On Sunday, Sept. 7 my admirable native guide, Lapauila, was so miserable and used up with rheumatic pains, that he was obliged to leave me and seek relief at home. We all have had our shoes torn and cut to pieces on the frightful aa. Nearly every one has suffered with sore and bruised feet and Kanakanui has had trouble with sore hands. But all have borne their troubles bravely.

For over two weeks the animals went without drink. In dry weather they would have given out altogether for lack of water, but fortunately or unfortunately, we had rain and mist every day save two or three that we were on the mountain. Our shoes were soaking wet much of the time. Nearly all our drinking water was from the rain caught on the fly. The rain and mist allowed us but a brief portion of each day to study the country. But for the intimate knowledge of the country possessed by my guides, we could have made almost no headway in such weather. Little by little our provisions gave out and we were reduced to very plain fare. The dogs have killed off the goats and have themselves gone in search of food elsewhere. After two days hunt, Chas Ka secured a pig when all our other meat had given out. But in spite of rain, obscurity, short supplies, sore feet and crippled animals, we all agreed to stick to it, to the end, and did.

During the past two days the weather has been beautifully clear. With enough of such weather I will locate South Cape.

My plan is now to hire a boat and reset all the needed coast signals as far as Ka Lae. Then with fresh animals set three signals to the north of Hookena and begin instrumental work at Kaapuna station. From Kaapuna I hope to occupy the stations in & above the woods in order as far as **Puu o Keokeo**. Tomorrow I expect to be in Hookena and read the letters and papers that have accumulated during the past three weeks. With *aloha nui* to yourself and the friends in the office... [HSA, HGS DAGS 6]

***In Camp, Hookena, Hawaii  
September 28, 1890***

***J.S. Emerson; to Professor W.D. Alexander:***

...I reached this place late last night to find your very kind and interesting letter of the 22<sup>nd</sup> awaiting my return. I have to report a most prosperous and completely successful trip to Ka Lae by boat. By dint of hard work and long hours, aided by the able seamanship of my sailor man and most unusual fortune with the weather, we have

accomplished, to my entire satisfaction, all that we proposed to do by this expedition. The work done was as follows:

1<sup>st</sup> The selection of a suitable point for a  $\Delta$  station to connect Hanamalo with Hanakeaumoe. This we found in perfection at **Ohepuupuu** in Kapua on top of a **Kuula** overlooking a large extent of country. A large **ahu** on top of a hill was there ready to my hand, thanks to my **kamaaina**.

2<sup>nd</sup> The resetting of nine old stations and the establishing of one new one in the following order going South viz. Kapukawaa, Milolii, Hanamalo 2, Puu Nahaha, **Ohepuupuu, Hanakeaumoe, Na o Puu Pele**, Puu Ki, Puu Hou & Ka Lae.

3<sup>rd</sup> A careful study of the mountain from the sea to settle certain points hitherto unsettled, as for example the real location of that elusive hill, Puu Eleele.

4<sup>th</sup> The securing of two hardy mountaineers to replace my former guides whom I thought best to dismiss with thanks.

Hanamalo was all but swept out of existence by the sea in '88. It is impracticable to restore it and Hanamalo 2, distant some 20 feet, now takes its place. It will be a pivot for all my mountain work. Puu Ki & Puu Hou signals (huge ahus) had been badly treated by the goats, or the earthquakes, and had either fallen or were about to fall. The flag pole at Ka Lae was gone. At Kapukawaa, Milolii, Hanamalo 2 and Puu Nahaha I took extra time to build signals that might be seen from Puu Ohau etc.

The preliminary work of planning and setting signals is now all but done. I may set a signal on Puu Eleele if I ever really reach it as I very much desire to do. In that case a signal on Lae Loa will be of great service by shortening the base line connecting with Kapukawaa, Hanamalo etc. I have never been so mystified by a hill's eluding my search as by this Puu Eleele. Now I have actually put a flag on the supposed hill and found that it was situated a mile, or so from the real hill I was in search of. The real Puu Eleele commands a view unsurpassed in extent by any hill in the forest belt in S. Kona, and yet I have never been able to reach it. I will not be balked in this way Puu Eleele must be found and broken in to service. My trip as I expected was a trying one. The kamaainas predicted that one would not reach Ka Lae in safety. But we were wonderfully favored and won quite a triumph. We left S. Cape Friday morning and until Saturday night were in a little boat most of the time, with very little sleep.

Kanakanui finds the work no pleasure trip. He does not stand roughing it as well as I do. He finds the aa awfully rough on his shoes and sore feet, and has had a hard time. I am sorry for him and try to make it as easy for him as I can, but I can't accomplish the impossible. Whoever ventures to come with me to S. Kona must of necessity travel over some of the worst aa in existence. Poor mules, poor men, I feel sorry for them all. But the work must go ahead and I can stand it if they can. Hiiaka was the most discouraged mule I think I ever saw. When we last saw her two weeks ago she was a most pitiable object, hardly able to rest her weight on her hind feet. The weather is superb, wonderfully clear. I begin my instrumental work at Kaapuna as soon as possible. Am in excellent health and spirits... [HSA, HGS DAGS 6]

***In Camp, Puu o Keokeo, Kau, Hawaii  
November 10, 1890***

***J.S. Emerson; to Professor W.D. Alexander:***

...Since my last to you I have been without intelligence from the outside world and have yet to read a month's mail accumulated during my stay on these mountain solitudes. This enforced lack of intercourse with the world of thought and action is the

necessary result of conditions beyond my control, and will, I hope, come to an end in a few days, when having satisfactorily finished my labors here, I will descend once more to the lower regions. The work has gone steadily and bravely on. The weather, though not the best, has been fairly good, and my observations have come rigidly up to the standard of excellence which I had determined upon. I have occupied the following stations:

Puu Ahinui	primary	Oct. 6 – Oct. 14
Kaapuna	primary	Oct. 15 – Oct. 21
Pualehua	primary	Oct. 22 – Oct. 27
Puu Hoomaha	primary	Oct. 28 – Nov. 1
La Ula	secondary	Oct. 31 P.M.
Namanuikēhau	tertiary	Nov. 3
Puu o Keokeo	primary	Nov. 5 – up to the present time

During the past week the weather has been the poorest for my work, and I am patiently working and waiting for a clearing up of the general obscurity. I propose to stay here until it does clear up and my mountain work is satisfactorily completed. My plan is then to occupy Puu Nahaha. I am glad to report my health as fully restored, and my men all well and contentedly doing their duty. As to the mules, poor creatures, they have had the hardest experience that I hope they will ever have. Poor, lame Hiiaka, by constant care and attention has recovered from a most serious trouble in her foot. Had I not personally looked after her, I fear she would have died of hunger and thirst.

On the morning of Nov. 1<sup>st</sup> the mule, Pele, was found fallen into a pit and sadly bruised and injured. We did all we could to save her, lifting her out and giving her whiskey and water. But it was too late. Her strength was gone and she died.

The Manuikēhau, or Honomalino, water hole has entirely failed me after the second visit to it. It is now quite dry. My mules have greatly suffered from thirst in consequence. They have had to travel great distances for water, until their shoes, put on Sept. 29, are now nearly worn away. I have also to report one new pack saddle smashed and another somewhat injured.

I am profoundly thankful that we have passed so nearly through this mountain campaign with no more serious disaster. I never again expect to be so long in such a horrible country. I know of nothing like it elsewhere in these islands. Had I not secured the very best men to help me, matters might have been frightfully worse. The great fissure of 1886 is a most interesting study. Near Pohaku o Hanalei great volumes of steam are pouring out continually. In the early morning and after a shower, numerous small steam jets appear all along the course of the fissure, particularly near the sulphur beds a mile and a half or two miles South of this hill. I find considerable heat in places, (Mabez would call it “intense heat” I suppose) where the sulphurous gases are coming freely up from an unknown depth. I was setting the signal here on Sept. 10 and then noticed the steam arising near Pohaku Hanalei, but not in such volumes as at present. My guide states that this steam first appeared at the time of the flow of 1886 and has often been noticed since.

I have carefully looked for the reflection of fire, in the clouds, at night, over Mokuaweoweo, but have thus far seen none. I should add that the summit of Mauna Loa can not be seen from any of the other stations which I have been occupying.

I think perhaps I shall require the aid of a couple of heliotropes when I occupy Puu Ohau, some two months hence. I fear that otherwise I will fail to see my very distant signals to the South. I will refer to the matter again more at length.

Kanakanui sends "aloha to all." With my *aloha nui* to yourself and friends in the office...  
[HSA, HGS DAGS 6]

**November 29, 1890**

***In Camp, Ohepuupuu, Kapua, S. Kona***

***J.S. Emerson; to Professor W.D. Alexander:***

...Enclosed please find Bills and Vouchers for Months of Oct. & Nov. T.K.R. Amalu's Bill of \$8.00 for mule shoeing has to go to Hookena to receive his signature. I hope to send it to you by next mail.

Your very interesting letters of Oct. 23<sup>rd</sup>, Nov. 3<sup>rd</sup> & Nov. 13<sup>th</sup> all reached me in a lump, Saturday evening, Nov. 22 from Hookena. All my efforts to get them sooner failed for various reasons. Yours of Nov. 26<sup>th</sup> reached me late yesterday P.M., as I was moving Camp from Hanamalo to Okoe. Many thanks for all these kind letters and the sympathy you ever show me. Since leaving the mountain I have occupied two very important stations, viz. Puu Nahaha & Hanamalo 2, with the best of results.

The weather is magnificent, the mountain signals clear and distinct and almost free from clouds all day. I never saw finer weather for my work. Puu Ohau & Makolehale signals have been remarkably distinct for such a great distance. Keawekaheka, since leaving Puu Nahaha, has sunk from view. Everything for the future, promises well. I feel rested and refreshed with a supply of proper food after some days of scanty fare. The few natives about here live on fish & a wretched substitute for poi made of wheat flour. I had to live on sweet potatoes, squash & dry fish for a week, while waiting for supplies. It made me nearly sick. There are no decent stores this side of Hookena. It is exceedingly dry weather, so the natives say, and all my fresh water has to be packed long distances from the few water holes up in the woods. May they not give out yet a while!

The following primary stations are yet to be occupied, viz. ***Ohepuupu, Hanakeaumoe***, Kapukawaa, Milolii. Puu Ki, by boat, ***Na Puu a Pele***, by boat, Keawekaheka, Puu Ohau and Makolehale. I expect to finish up my work by the last of January.

The problem yet to be solved is to see the South coast signals from Puu Ohau, etc. An ahu to the South shows only its non illumined side, however much cloth may be wrapped about it. I will, when I am ready, send for two heliotropes as a last resort if all other devices fail me.

I would suggest that my next work on Hawaii be the triangulations from Ka Lae to the Volcano. I have thought a great deal about the matter and would like in due time to tackle the job. I have a guide in view, the right man, his name is Lohiau, now in my employ. Suppose I begin next August. Meanwhile what shall I do with the mules, after I am through with them about February 1<sup>st</sup>? Three of them are in good order viz. Kuhaimoana, Kamohoalii & Kanaloa, while poor Hiiaka is delicate and hardly fit for use. Pele as you know is dead on the aa on the mountain, a sad fate. Shall I have them all with Mr. McDougall. I am afraid Kanaloa will go off. I would suggest that Notley come up here before I leave and go to work on homesteads in S. Kona. Kanakanui would be pleased to assist him, and Lohiau would be the best guide to all my stations and reference points. I would turn over my two tents, cooking outfit, mules etc. etc. to him as soon as I left, and would go over the ground with him if necessary. I speak of this now so that he may have ample time to get ready if you approve the plan.

The top of the mountain is invisible from here. ***Puu o Keokeo*** is the highest peak to be seen. No earthquakes, nothing unusual to report.

I fear that some of my letters to you, one or two, have gone astray. I wrote very fully and am sorry to have caused unnecessary anxiety. With *aloha nui*... [HSA, HGS DAGS 6]

**December 9, 1890**

**In Camp, Hanakeaumoe, Kapua, S. Kona, Hawaii**

**J.S. Emerson; to Professor W.D. Alexander:**

...Your very kind letter of the 4<sup>th</sup> with the newspapers came duly to hand. Many thanks for the same. I find it very slow work to get the address of my papers changed from Hookena to Hoopuloa. The result is that I am thus 10 days behind on news save at your very kindly send a paper properly directed.

I am heartily sorry that Notley is to leave the Gov't Survey. I wish there was some one to take up this work of cutting up the Gov't. lands in S. Kona, as I have done a good deal to get things ready for him. I shall hope to start the triangulation in Kau as my next field work on Hawaii.

After two or three dark days the weather is again most beautiful, bright and clear save when the excessive brightness makes it almost painful to look at stations to the South. A most serious defect in the transit is the lack of a brass sheath. Why was it not sent to me with the instrument? What has become of it? I miss it very much these bright days. Please have it sent if possible. While at **Ohepuupuu** I tried in vain to see Pua Ohau & Makolehale signals. The weather was too thick in that direction, save once, for an entire week.

As a practical solution of the problem of rendering distant signals to the South visible, I submit the following [Figure 5]: A 3 x 2 inch pole 16 feet high held in place by a stone ahu. A red and white flag. Red & white strips of cloth tacked to the pole and secured by ropes on each side in a plane at right angles to the line of vision. The stone ahu will appear black, while the red and white cloth will be lighted up by the bright light beyond. The contrast of colors will materially aid in rendering the object visible, I think.

Mr. Lyons made a good suggestion, a white sheet behind a black signal. I think the above will accomplish the same result. All my experiments thus far make me hope for success. I shall use heliotropes only as the last resort after this fails.

By return trip of W.H. Hall please send me 4 pcs. 3x2 in. North West Scanting 16 ft long, for flag pole, let them be rough without planing or paint.

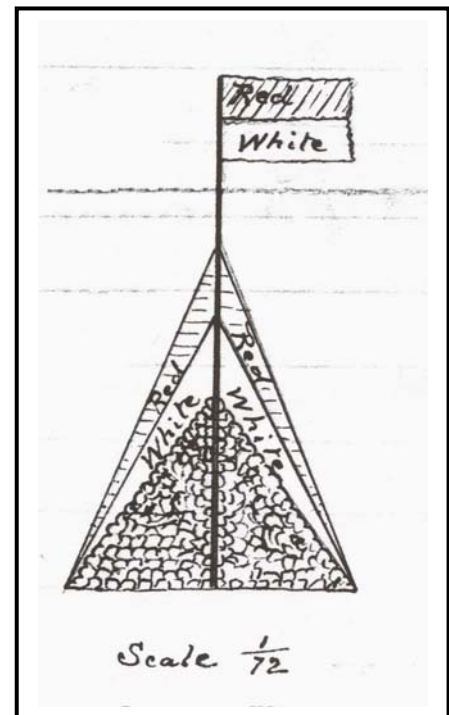
1 pc. 50 yds. more or less, common unbleached cotton cloth for flags etc.

21 yards, or more, of red cloth for flags, etc.

30 fathoms clothes line

4 Papers 8 oz. Carpet tacks.

My reason for troubling you to order these articles is that I don't want to get a lot of very high priced red cloth. Anything red will answer my purpose. Damaged stuff will do. Direct to Gov't Survey Hoopuloa, S. Kona. Please send Heliotropes next trip after.



**Figure 5. Survey Station.  
Ahu & Flag. J.S. Emerson,  
Dec. 9, 1890**



The cloth on the *ahu* and most of the flag at this station was devoured by a rascally goat whom I repeatedly saw at his tricks from my station at Ohepuupuu. The villain has fled. Only his death can atone for this insult to the flag.

The weather seems unsettled. It thunders and is very hot.

I shall be very glad to get back to civilization once more after finishing my work.

Kanakanui surprised me a few days since by saying "This is a Hell sort of a country." He has reason for his disgust with the everlasting, ever present aa.

With *aloha nui*...[HSA, HGS DAGS 6]

***In Camp, Na Puu a Pele,  
Kau, Hawaii  
January 7, 1891***

***J.S. Emerson; to Professor W.D. Alexander:***

...With this I send you my accounts and vouchers in full up to Dec. 31 which I trust you will find satisfactory. The account shows a large balance in my favor, for the reason that since the 30<sup>th</sup> of September I have had no definite statement from you of the amounts that you have deposited to my credit with Bishop & Co. As soon as convenient please send me such a statement that I may close up my accounts for the year in proper shape. Furthermore, my agent, Mr. Magoon, proposes to invest a few hundred dollars, of my funds in the bank, at interest and for that reason I require to know just how much you have placed for me in the bank.

Kanakanui is a brick. He found the boat man at Hookena last Thursday in a very jolly mood, over the horse racing, drinking etc. But he was *pilikia loa* and could not come. After telling various lies, he finally refused to come at all, and let Kakanui take the boat without him. Saturday evening, Jan. 2 the boat arrived safely at Milolii. Kakanui had brought two or three passengers, giving them their passage for their assistance in managing the craft. Monday we made the passage to this place, arriving just at sun down. Tuesday we set up the transit on the station, but the weather was too dark to do any work. Today the morning was fairly bright and clear, but since noon it has been very dark, and now, 2:30 P.M., is raining. The prospect of good weather here is not very encouraging, but I will do the best with such weather as we have.

I have written to Col. S. Morris of Kahuku to see if he could pasture the mules for me. The tent fly reached me at last all right. It answers my purpose.

The great *pilikia* here is to obtain fresh water. It cannot be bought for money anywhere along the coast short of Hookena, and to get it from the few water holes in the woods requires three days of work with boat and pack animals. We have therefore given up tea and coffee and use brackish water for everything save drinking. Before long we will have to drink it. Meantime I have bought a good supply of cocoanuts. The water from the tent fly is thus far too salty to drink. If the storm continues it will soon become fresh. We are all well and hope to remain here until our work here is done. With *aloha nui* to Mr. Lyons and all the friends in the office, yourself in particular.

P.S. The Hall has just passed by. I will not get my letters from Hoopuloa in time to answer them this trip. [HSA, HGS DAGS 6]

**Hookena, Hawaii**

**February 1, 1891**

**J.S. Emerson; to Professor W.D. Alexander:**

...Since my last to you I have received yours of the 5<sup>th</sup>, 15<sup>th</sup>, & 26<sup>th</sup> of Jan. Many thanks for the financial statement. The tent fly reached me in good season and is all I want for a tent this trip.

The Census enumerator, one of the omnipresent Smith family, found my party of two at Kapukawaa, and so reported. There is or was a great "hoopaapaa" among the natives about the last item in the blank. Did it mean the amt. of property taxed or the amount of the tax paid on that property?

As to fresh water, I started South by boat, Jan. 5<sup>th</sup>, with 10 gallons. At **Napuu a Pele** I caught 20 gallons of rain water and bought 10 gallons at Milolii sending a boat at great risk to get it. On the 28<sup>th</sup> I used up the last drop and put to sea with only brackish water in the boat. On the 29<sup>th</sup> a sudden shower surprised me at Milolii. We hastily put the fly on the tent and caught 20 gallons before the rain ceased. After 25 days of very limited supply and one day of total privation, that 20 gallons of pure fresh water right from Heaven, was one of the most opportune surprises of my life. I was more grateful for it than words can express. For 25 days the dread of being without water was like a protracted night mare. Thank God, that experience is ended. On the night of Jan. 27, at Okoe, I fell quite sick from acute indigestion and passed a night of great pain. There was just one quart of dirty fresh water on hand. It was a most trying time I assure you. You need not send me water this trip I hope not to require it just yet.

I have received a very kind letter from the Duke of Kahuku, per his agent, offering me the use of his pasture in welcome for the four Gov't mules. I will send them there.

We left Puu Ki and its wild goats on Monday Jan. 26 at 1 P.M. with over cast sky and the fear of a coming storm. A passage of 25 hours brought us to Okoe, where we spent two nights. We landed at Okoe with great difficulty in the surf. Nothing but the consummate skill and daring of my brave kanakas saved us from great loss. The 29<sup>th</sup> was a day of strange adventure. After several hours hard work we got our precious cargo through the surf in safety by repeated trips of a canoe to the boat which was anchored outside. Arriving at Milolii at sun set, the whole village turned out with a long line to help "Emekona ma" [Emerson and companions] to land. It was a most remarkable display of aloha and of sagacity on their part. A canoe came out with the line which I secured to the boat, and men, women and children with willing hands pulled us ashore at the exact moment when it was most safe to do so. I shall never forget that scene as long as I live. They knew better than I the great risk of being caught in the coming storm and darkness, and their wise fore thought saved me from it all.

Kanakanui had the cruel misfortune of running a copper bolt into his leg for about an inch. I got Mr. Doyle, who has studied medicine at Notre Dame, Ill. to examine the wound, and to dress it. But the patient preferred a native woman to dress it with maia pilo root grated up with salt. I let him have his way and the wound seems to be doing well. In the general rush to pull the boat in, one native girl stumbled and fell, hurting her knee badly.

Everywhere in Kona the natives show me marked consideration and kindness. I never met a more generous and kind hearted people any where.

In spite of poor weather, I have made the best possible use of my time and have carried out all my plans fully and successfully. The triangulation thus far is fully up to

my standard and ahead of all my previous work. I stake my reputation with confidence on the result. Tomorrow my faithful comrade goes with me by Steamer to Kealakekua. We expect to occupy Keawekaheka Tuesday morning, and if the weather is decent we expect to see our signals to the South all right, without the use of heliotropes. I have "cuzelled my brains" to make those signals visible. Such signals can't help being seen. More about the result next time. My *aloha nui* to Mr. Lyons and all in the office, yourself in particular. [HSA, HGS DAGS 6]

## **THE LANDS OF MANUKĀ, KAULANAMAUNA, KAPU‘A AND VICINITY DESCRIBED IN LAND TENURE DOCUMENTS, AND GOVERNMENT COMMUNICATIONS**

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The most detailed descriptions of traditional residency and land use on the lands of Manukā, Kaulanamauna and Kapu‘a, including documentation of traditional and customary rights, are those found in the Kingdom collections, documenting the history of land tenure, and defining the boundaries of *ahupua‘a* which now make up the Manukā NAR. The following section of the study provides readers with references from the laws of the Hawaiian Kingdom, which established fee-simple land ownership and codified native tenant rights.

Subsequent to the definition of land rights, the Kingdom set about the processes to determine the metes and bounds of the lands which had been granted in fee-simple interest to various parties. As a result, detailed oral testimonies from elder native tenants were taken in court proceedings, which further documented the occurrence of traditional and customary practices, and nature of the resources within given *ahupua‘a*. From those records, which also follow in this section of the study, we learn of the traditional knowledge and occurrence of native practices in the lands which today are a part of, and adjoin the Manukā NAR.

### ***The Māhele ‘Āina (Land Division)***

In Hawai‘i prior to western contact, all land, ocean and natural resources were held in trust by the high chiefs (*ali‘i ‘ai ahupua‘a* or *ali‘i ‘ai moku*). The use of land, fisheries and other resources was given to the *hoa‘āina* (native tenants) at the prerogative of the *ali‘i* and their representatives or land agents (*kono‘hiki*), who were generally lesser chiefs as well. By 1845, the Hawaiian system of land tenure was being radically altered, and the foundation for implementing the *Māhele ‘Āina* (the Land Division and fee-simple right of ownership) was set in place by Kauikeaouli (Kamehameha III).

Following implementation of the *Māhele*, the King also initiated a land grant program, issuing fee-simple “Royal Patents” on granted land. In addition to the sale of fee-simple interests in land, the Crown and Government lands were also made available for leases and, in some cases, for sale. On December 10th, 1845, King Kamehameha III (Kauikeaouli), signed into law “Article IV—of The Board of Commissioners to Quiet Land Titles,” a joint resolution defining the responsibilities of the Board of Commissioners. Several actions were implemented by this law, among them:

SECTION I. His Majesty shall appoint through the minister of the interior, and upon consultation with the privy council, five commissioners, one of whom shall be the attorney general of this kingdom, to be a board for the investigation and final ascertainment or rejection of all claims of private individuals, whether natives or foreigners, to any landed property acquired anterior to the passage of this act; the awards of which board, unless appealed from as hereinafter allowed, shall be binding upon the minister of the interior and upon the applicant...

SECTION VII. The decisions of said board shall be in accordance with the principles established by the civil code of this kingdom in regard to prescription, occupancy, fixtures, native usages in regard to landed tenures, water privileges and rights of piscary, the rights of women, the rights of absentees, tenancy and subtenancy, — primogeniture and rights of adoption; which decisions being of a majority in number of said board, shall be only subject to appeal to the supreme court, and when such appeal shall not have been taken, they shall be final...

Section IX. The minister of the interior shall issue patents or leases to the claimants of lands pursuant to the terms in which the said board shall have confirmed their respective claims, upon being paid the fees of patenting or of leasing (as the case may be)... [In the Polynesian; January 3, 1846:140]

As the *Māhele* evolved, it defined the land interests of Kauikeaouli (King Kamehameha III), some 252 high-ranking *Ali'i* and *Konohiki*, and the Government. As a result of the *Māhele*, all land in the Kingdom of Hawai'i came to be placed in one of three categories: (1) Crown Lands (for the occupant of the throne); (2) Government Lands; and (3) *Konohiki* Lands. The "Enabling" or "*Kuleana* Act" of the *Māhele* (December 21, 1849) further defined the frame work by which *hoa'āina* (native tenants) could apply for, and be granted fee-simple interest in "*Kuleana*" lands (cf. Kamakau in *Ke Au Okoa* July 8 & 15, 1869; 1961:403-403). The *Kuleana* Act also reconfirmed the rights of *hoa'āina* to access on trails, subsistence and collection of resources necessary to their life upon the land in their given *ahupua'a*. The *Kuleana* Act, remains the foundation of law pertaining to native tenant rights. The Act was passed on August 6, 1850, and reads:

An Act confirming certain resolutions of the King and Privy Council passed on the 21st day of December 1849, granting to the common people allodial titles for their own lands and house lots, and certain other privileges... That the following sections which were passed by the King in Privy Council on the 21st day of December A.D. 1849 when the Legislature was not in session, be, and are hereby confirmed, and that certain other provisions be inserted, as follows:

**Section 1.** Resolved. That fee simple titles, free of commutation, be and are hereby granted to all native tenants, who occupy and improve any portion of any Government land, for the land they so occupy and improve, and whose claims to said lands shall be recognized as genuine by the Land Commission; Provided, however, that the Resolution shall not extend to Konohikis or other persons having the care of Government lands or to the house lots and other lands, in which the Government have an interest, in the Districts of Honolulu, Lahaina and Hilo.

**Section 2.** By and with the consent of the King and Chiefs in Privy Council assembled, it is hereby resolved, that fee simple titles free of commutation, be and are hereby granted to all native tenants who occupy and improve any lands other than those mentioned in the preceding Resolution, held by the King or any chief or *Konohiki* for the land they so occupy and improve. Provided however, this Resolution shall not extend to house lots or other lands situated in the Districts of Honolulu, Lahaina and Hilo.

**Section 3.** Resolved that the Board of Commissioners to quiet Land titles be, and is hereby empowered to award fee simple titles in accordance with the foregoing Resolutions; to define and separate the portions belonging to different individuals; and to provide for an equitable exchange of such different portions where it can be done, so that each man's land may be by itself.

**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.

**Section 5.** In granting to the People, their House lots in fee simple, such as are separate and distinct from their cultivated lands, the amount of land in each of said House lots shall not exceed one quarter of an acre.

**Section 6.** In granting to the people their cultivated grounds, or *Kalo* lands, they shall only be entitled to what they have really cultivated, and which lie in the form of cultivated lands; and not such as the people may have cultivated in different spots, with the seeming intention of enlarging their lots; nor shall they be entitled to the waste lands.

**Section 7.** When the Landlords have taken allodial titles to their lands the people on each of their lands shall not be deprived of the right to take firewood, aho cord, thatch, or ti leaf from the land on which they live, for their own private use, should they need them, but they shall not have a right to take such articles to sell for profit. They shall also inform the Landlord or his agent, and proceed with his consent. The people shall also have a right to drinking water, and running water, and the right of way. The springs of water, and running water, and roads shall be free to all should they need them, on all lands granted in fee simple. Provided, that this shall not be applicable to wells and water courses which individuals have made for their own use.  
Done and passed at the Council House, Honolulu this 6<sup>th</sup> day of August 1850. [copied from original hand written “Enabling Act”<sup>7</sup> – HSA, DLNR 2-4]

The most important source of documentation that describes native Hawaiian residency and land use practices — identifying specific residents, types of land use, crops cultivated, and features on the landscape — is found in the records of the *Māhele ‘Āina*. While the “Land Division” gave the *hoa‘āina* an opportunity to acquire fee-simple property interest (*kuleana*) on land which they lived and actively cultivated, the process required them to provide personal testimonies regarding their residency and land use practices. As a result, records of the *Māhele ‘Āina* present readers with first-hand accounts from native tenants generally spanning the period from ca. 1819 to 1855. The lands awarded to the *hoa‘āina* became known as “*Kuleana Lands*” and all the claims and awards (the Land Commission Awards or L.C.A.) were given *Helu* (numbers). The L.C.A. numbers remain in use today, and identify the original owners of lands in Hawai‘i.

The work of the Land Commission was brought to a close on March 31, 1855. The program met with mixed results, and it has been calculated that the total amount of land awarded to *hoa‘āina* (native tenants – the common people of Hawai‘i) equaled approximately 28,658 acres, of a total four million available acres (see Governor’s report 1902:7).

### ***Disposition of Lands of the Manukā Natural Area Reserve and Vicinity in the Māhele ‘Āina***

The lands which make up the Manukā NAR include two *ahupua‘a*, Manukā, in the district of Ka‘ū; and Kaulanamauna, in the district of Kona. In the *Māhele*, the following division of lands was agreed to by the King and participating *alii*:

<b><i>Kahuku</i></b>	Retained by Wm. P. Leleiohoku; January 28, 1848 (pp <sup>8</sup> . 23-24). Relinquished by Wm. P. Leleiohoku, May 27, 1850, in commutation for other lands retained by him (Native Testimony, Vol. 10:211). Held by the Board of Public Instruction until 1861, when it was sold by Royal Patent Grant No. 2791, to C.C. Harris; 184298 Acres.
<b><i>Manuka</i></b>	Relinquished by Wm. Lunalilo to King Kamehameha III; January 28, 1848 (pp. 19-20). Granted by King to Government Land Inventory; March 8, 1848 (p. 183).
<b><i>Kaulanamauna</i></b>	Relinquished by Wm. Lunalilo to King Kamehameha III; January 31, 1848 (pp. 49-50). Granted by King to Government Land Inventory; March 8, 1848 (p. 181).

<sup>7</sup> See also “*Kanawai Hoopai Karaima no ko Hawaii Pae Aina*” (Penal Code) 1850.

<sup>8</sup> All page references are to the “*Buke Mahele*” 1848.

**Kapua**

Retained by William P. Leleiohoku; January 28, 1848 (pp. 23-24). Land Commission Award No. 9971.

Within these lands, *hoa'āina* also made claims for small *kuleana*. Our review of all records of the *Māhele* revealed that the following number of claims were made in these lands<sup>9</sup>:

<b>Ahupuaa</b>	<b>Claims</b>	<b>Awarded</b>	<b>Not Awarded</b>
<b>Kahuku</b>	20	6	14
<b>Manuka</b>	7	0	7
<b>Kaulanamauna</b>	1	0	1
<b>Kapua</b>	11	8	3

From the claims and testimony of the native tenant claimants, we learn that residences were maintained on the lands of the Manukā NAR, and that activities by residents spanned the *ahupua'a*, from the shore, to the *kula* (open plains and dryland cultivating fields), and into the forest zone, where cultivation of crops occurred, and canoe logs were harvested. Cultivated crops included;

<i>Ipu</i>	gourds of various types
<i>Kalo</i>	taro
<i>Ko</i>	sugar cane
<i>Koa</i>	trees for canoes
<i>Kope</i>	coffee
<i>Kou</i>	<i>cordia</i> trees
<i>Lauhala</i>	pandanus
<i>Maia</i>	bananas
<i>Mamaki</i>	<i>Pipturus</i>
<i>Niu</i>	cocoanut trees
<i>Pu</i>	squash
<i>Uala</i>	sweet potatoes
<i>Uhi</i>	yams

Place names, as *'ili* or other localities, in which traditional subsistence activities occurred, at various elevational zones for these lands include the following citations from claims:

Kahuku — Awikahua, Halelehu, Haleohale, Kaluaiki, Kamakoa, Keopuka, Koaekoa, Kukaiokaoha, Kukuinui, Niau, Papalahaiu (Papahaiu), Pualoalo, Puukoa.

Manukā — Elehu, Kaahuaina, Kaiakeakua, Kamilo (*Kamilo'āina kīpuka*), Kononihonua, Kuiki (*kīpuka*), Lamakulua (*kīpuka*).

Kaulanamauna — none recorded.

Kapu'a — Ahole, Awela, Haleola, Kailiohia, Kalihi, Kauleokalani, Kipu, Kole, Niua'o'u, Puhinaki, Puuhinahina.

While the actual Manukā NAR does not include the land of Kapu'a—portions of that ahupua'a make up the older South Kona Forest Reserve—several native tenants of Kapu'a, at the time of the *Māhele 'Āina*, also documented that they maintained residences and cultivating fields in Manukā (this is also reflected in the tradition of Koihala, cited earlier in this study). The combined records from Manukā, Kaulanamauna and Kapu'a are cited from the original books of the *Māhele*, with translations prepared by Maly.

<sup>9</sup> The on-going research of *Kumu Pono Associates LLC* in the nearly 60,000 records of the *Māhele 'Āina*, may lead to modifications in these numbers at a later date.

**Claims and Awards in the Lands of Manukā, Kaulanamauna & Kapu'a (1848-1853)**

**Kapua & Manuka**  
**Kawaaohoole – Helu 8751**  
**Native Register Volume 4:383**  
**(Not Awarded)**

8751 Ke Kawaaohoole  
 Auhua oukou e ka poe Hoona  
 Kuleana Aina. O leku he ili Aina, he ili Aina  
 he kihapai Ma uoua, aia ma Kuiki kekahi  
 kihapai. Auhua oukou e ka poe Hoona Kuleana  
 Aina, aia ma Hoona ma Kapua o kole ka ili  
 Aina, o Kaulanamauna oukou a ou, he kihapai  
 kekahi, he kekahi, Na Kawaaohoole.

Here ye o Commissioners who quiet land titles, Elehu is an *ili* parcel; there is a cultivated *ili* at Awela; there is garden at Kuiki [Manuka]. Here ye o Commissioners who quiet land titles, there in Kona, at Kapua, is the *ili* of Kole, and the grove of coconut trees at Niuaou'u, also a cultivated area and shore fishery.

By Kaawaaohoole.

Note: This claim and the following claim both share the same *Helu* (8751); though different claimant names are give. The *ahupua'a* in the first claim is Kapu'a and Manukā; and the famed coconut grove of Niuaou'u in Kapu'a, is referenced along with three other named *ili*.

**Manuka**  
**Kahea – Helu 8751**  
**Native Testimony Volume 8:506**  
**(Not Awarded)**

Helu 8751 Kahea  
 Kaiovalua, Ailialina, Kōhikita, Ua ihu ma...  
 Ili o Aila ma Uanaka, Aiofua, Ma Ili i ka...  
 Ma Ili i ka M. N. 1849. Uo ma ma i ka...  
 Na palasa, Ua fono i ka aia o he...  
 (The text in this image is heavily crossed out with diagonal lines and is largely illegible.)



Kaiowalu & Keliainaole Sworn. We have seen his *Ili* of Elehu at Manuka Ahupuaa. Given by Puhi in the Year 1819. No one has objected to him. The boundaries are surrounded by the land of the *Konohiki*.

**Manuka**  
**Kauwe – Helu 8773**  
**Native Register Volume 8:168**

8773 #	<u>Kauwe</u>	Manuka Kau Hawaii
JG	<p>ʻAuhia oukou e ka pae ʻi oona          Suliana Aina e nōho ana ma ʻIwalewale          Orou Kahi meā Suliana Aina, iie ʻili          Kōia aia ma ka ʻili o Manuka          Na Kauwe.</p>	

Hear ye o Commissioners who Quiet Land Titles, sitting there in Honolulu. I am one who has a land claim. I have an *ili*. The *ili* is there in Manuka.

By Kauwe.

**Manuka**  
**Kauwe – Helu 8773**  
**Native Testimony Volume 8:503**  
**(Not Awarded)**

Helu 8773	Kauwe	Nov 29 1849
<p><del>Laniu and Kalaikoa</del> Kalaikoa Kōhikihia. Ua iho maua i kona          Apuna ʻIli o Kaiakekua ma Manuka Ahupuaa.          No Puhi mai i ka M.H. 1819. Uole ma heaia ia ia,          Na pāhane, Ua pūni i ka aina o ke Konohiki</p>		

Laniu and Kalaikoa Sworn. We have seen his parcel, the *Ili* of Kaiakekua in Manuka Ahupuaa. Gotten from Puhi in the Year 1819. No one has objected to him. The boundaries are surrounded by the land of the *Konohiki*.

Kapua  
 Lanai Ikaaka – Helu 6026  
 Native Register Volume 8:407  
 (Kapua Not Awarded)

6026 Lanai Ikaaka      Kahaione Hawaii Jan. 10, 1898  
 ʻŌ  
 Aloha oukou a pau e na luna honu kuleana aina, pauciki  
 mau honu kuleana aina, o Hana, pauciki he i'ouia ou ma  
 Hana, pauciki he i'ouia, pauciki kuleana, o Hana, pauciki  
 he i'ouia, o Piia, o Piia ia Kuakini, ouae no ka moke aina, via no  
 kua kuleana aina iu, he ahupuaa o Kapua no Kuakini mai a  
 ia Piia, via no kua kuleana aina iu he i'ouia o Wai'ohu, o Pahi'ia  
 he ahupuaa, o Wai'ohu he moke, no Hana, pauciki a ia Piia, via  
 kua kuleana aina iu o Makua he ahupuaa, aia ma ka moke  
 o Hana, no Kuakini a ia Piia, via kua mau kuleana aina la i  
 ke, ua mau aku hoi'ia i'ouia o laka, e laka no hoi'ia i'ouia  
 mau alii, no mau aku la, he laka la! he alii wale i'ouia  
 no ka mau aku ol.

Lanai Ikaaka.

Aloha to all of you commissioners who quiet land titles, my land claims are thus...

...My land claim in the ahupuaa of Kapua, was gotten from Kuakini, and by him from Piia...

Lanai Ikaaka.

**Kapua**  
**Kama – Helu 7927**  
**Native Register Volume 8:514**

7927 Kama  
 70. Eia he ihi oia no Namaielua mai; a mai he kai; a he  
 uka kalo, he 10 Mala uala, 4 Mala kalo, 1 Mala puu, Eia  
 he mau kihapai lele no Naolulo 6 Mala kalo - He mau  
 kuhakaha kekahi in, he 58 hea mi a pumi-  
 Kapalilua Kona Kona. Nai ma Kama.

Here is my *ili* land, gotten from Namaielua, extending from the shore to the upland taro planting area; there are also 10 sweet potato fields, 4 taro field, and 1 field of squash. Here are my detached cultivating grounds (*kihapai lele*), from Naolulo; 6 taro fields. I also have a house lot, it is 58 [fathoms] on all sides.

By me, Kama.  
 Kapalilua, South Kona.

**Kapua**  
**Kama – Helu 7927**  
**Native Testimony Volume 8:504**

Helu 7927 Kama  
 Ahuole ma Kaolulo Konoehiki. Ua ike mau i he Ili  
 Haleola ma Kapua Ahupuaa. Ua Namaielua mai M.H. 1819.  
 He palena Melehehe Konoehiki a pumi ma aua

Ahuole and Kaolulo Sworn. We have seen the *ili* of Haleola at Kapua Ahupuaa. Gotten from Namaielua in the Year 1819. The boundaries on upland, Kau, sea and Kona sides are all surrounded by the *Konoehiki*.

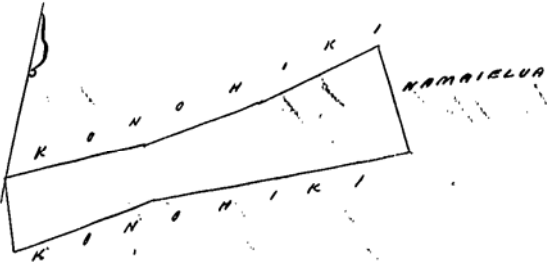
Kapua  
 Kama - Helu 7927  
 Mahele Award Book 3:541 - Notes of Survey  
 (Awarded 3 1/3<sup>rd</sup> acres)

*Helu 7927 Kama. Kapua, Kama, Kama. 46.*

*Ke ana o Kama, ma Kapua, Kama, Kama, Hawaii.  
 O kumaka ma ke kiki Kihina a v. kolo ana  
 Ak. 29° 15' Kum. 3.60 Ak. ma ke ana o Kamaileu.  
 Kum. 53° 15' " 4.55 " " " " " Kamaiki.  
 " 58° 15' " 4.30 " " " " " "  
 " 64° 45' " 4.88 " " " " " "  
 " 19° 45' Hik. 2.30 " " " " " "  
 Ak. 58° 30' " 5.10 " " " " " "  
 " 67° 45' " 9.10 " " " " " " a kiki i kahi  
 i kumaka i. Helu 3 1/3 Eka*

*Kama Hawaii June 21. 1853.*

*J. Fuller  
 Lumaanaama.*



*4 KH. ma I KINA*

*Ukupaula \$ 5.00*

*M. L. Lee  
 G. M. Robertson  
 J. Kakaulaha  
 J. H. Smith*

*Honolulu Oatoba 22. 1850.*

Kapua  
 Kapa – Helu 7934  
 Native Register Volume 8:516

576  
 7934 Kapua  
 76  
 Eia kōia iho aiaa no Namaielua mai, Kailiohia ka moaia,  
 eia kōia mau kuhapai i mahi ai, 10 Mula uala, 1 Mula  
 kaka, 6 Mula ipu, 2 Mula luhala, eia kōia mau kuhai -  
 pai lile Aholo ka moaia, 4 Mula uala, 1 Mula kaka,  
 eia kōia kuhapai lile iho, Haleola 3 Mula uala, Pahale -  
 22 ka loa, 16 ka lauhā, ka nui a pau loa 76 -  
 Kapua Kapalilua Apana 3. eia Kapua -

Here is my *ili* land from Namaielua, the land section of Kailiohia; here are my cultivated gardens, 10 sweet potato fields, 1 taro field, 6 gourd fields, 2 pandanus patches; here are my separate gardens. Aholo is the land section, with 4 sweet potato fields, and 1 taro field; I also have another garden in a separate place, Haleola; there are three sweet potato fields. The House site is 22 long by 16 wide, the total size is 76 [fathoms].

By Kapa

Kapua  
 Kapa – Helu 7934  
 Native Testimony Volume 8:504

Helu 7934 Kapua  
 Aholo me Kaolulo Koolihia. Eia iho mau aiaa  
 Ili o Kailiohia ma Kapua Ahupuaa, Na Lanai  
 i hana i mai i ka 1819. Aole mau heaheia ia ia,  
 Na palena, Me. Aiaa o Koolihia, K. Aiaa o Namaielua,  
 K. Kai, K. Aiaa o Namaielua.

Aholo and Kaolulo Sworn. We know his *ili*, Kailiohia at Kapua Ahupuaa, Lanai gave it to him in 1819. No one has objected to him. The boundaries: Upland, the land of Namaielua; Kau, the land of Namaielua; Sea, the shore; Kona, the land of Namaielua.

Kapua  
 Kapa – Helu 7934  
 Mahele Award Book 3:540-541 – Notes of Survey  
 (Awarded 3 acres)

*Helu 7934 Kapua. ✓ Kapua, Kona, Kona, Hawaii.*

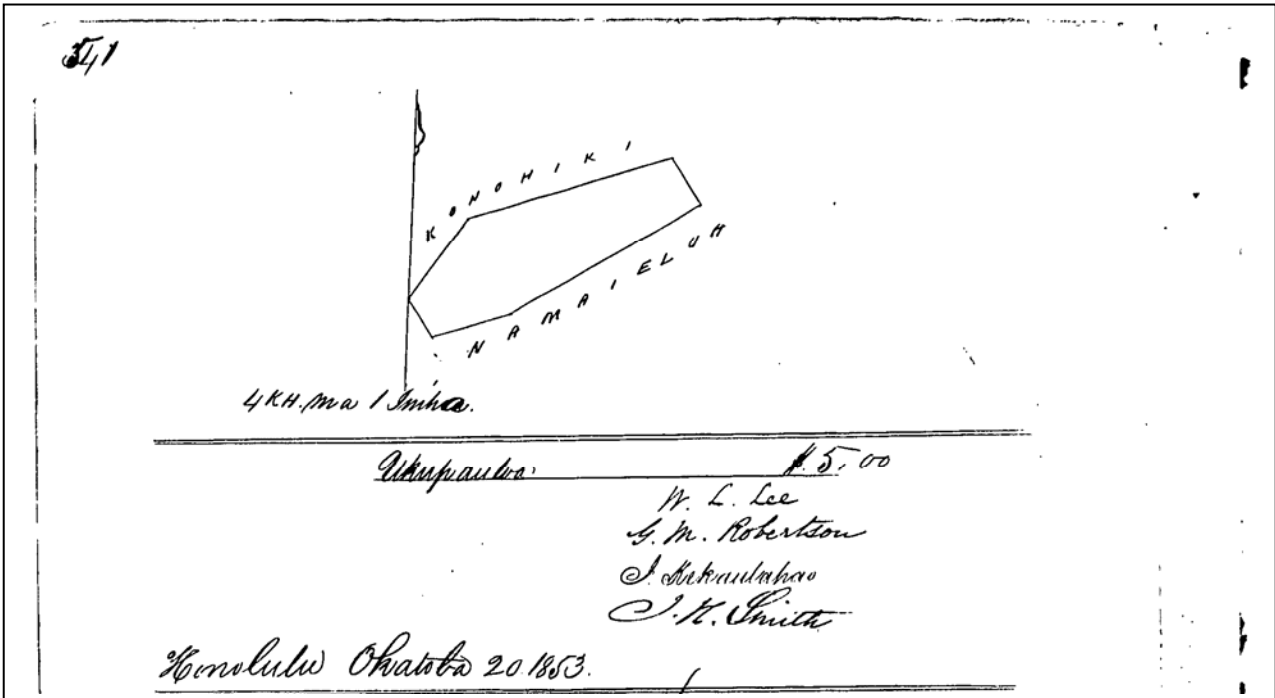
*Kapua: Kapa ma Kapua, Kona, Kona, Hawaii.*  
*Eluonaku ma ke kiki Okawa, a i kolo.*

<i>Kona:</i>	<i>31°30'</i>	<i>Hiki. 1.74</i>	<i>Ma. ma. Kona, Kona, Kona, Hawaii.</i>	<i>Kalukuluwa &amp; Kona, Hawaii.</i>
"	<i>58°30'</i>	<i>Kona. 7.40</i>	"	<i>Kona, Hawaii.</i>
"	<i>71°15'</i>	<i>" 2.70</i>	"	"
<i>Okawa:</i>	<i>35°30'</i>	<i>" 1.44</i>	"	<i>Kona, Hawaii.</i>
"	<i>38°</i>	<i>Hiki. 3.30</i>	"	"
"	<i>71°45'</i>	<i>" 7.24</i>	"	<i>" a kiki i</i>

*kahi i kono. Helu 3 Eka.*

*Kona, Hawaii. Ima 21. 1853.*

*J. Fuller  
 Linnanaama.*



**Kapua**  
**Kaaua – Helu 7940**  
**Native Register Volume 8:516-517**

*Kapua Kaaua*  
*He Ili iho iho aia ma Namaielua, Kipu ka maia.*

*517*  
*He ili aia iho maia iho a ka kai. Eia ko maia kikapai i*  
*mahi ai; 8 Mela uala, 1 Mela kolo, 2 Mela lauhala, 3 Mela ipu.*  
*Eia ko maia kikapai lile, Puhinaki ka moruina, 1 Mela uala,*  
*Ma Puuhinahina, ma Namaielua, maia 3 Mela uala, 1 Mela lau-*  
*hala, he sukala kikapai. Kāu ma Kaaua*  
*Kāu Kapalilu a Kapua 3.*

Here is my Ili land gotten from Namaielua. Kipu is the land section, the ili land is large, going from the uplands to the shore. Here are my cultivated fields; 8 sweet potato fields; 5 taro fields; 2 pandanus patches; 3 gourd fields.

Here are my separate planted fields, Puhinaki is the land section with 1 sweet potato field. At Puuhinahina, gotten from Namaielua, there are 3 sweet potato fields, 1 patch of pandanus, and also a house.

By me, Kaaua.  
 Kapua, Kapalilu, District 3.

**Kapua**  
**Kaawa (Kaaua) – Helu 7940**  
**Native Testimony Volume 8:505**

*Helu 7940 Kaawa*  
*Ahulole and Kaolulo Sworn. Ua iho maia i hana*  
*Ili o Kipu ma Kapua Ahup. Aole maia kuhua,*  
*Ma palena, Ma Konohiki, Ma Kaolulo.*

Ahulole and Kaolulo Sworn. We know his Ili, Kipu at Kapua Ahup. No one has objected. The boundaries are: Upland, the Konohiki; Kau, Naolulo; [remaining boundaries not given].

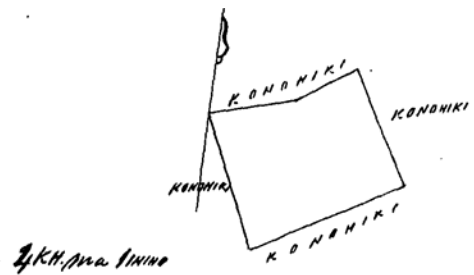
Kapua  
 Kaawa (Kaaua) – Helu 7940  
 Mahele Award Book 3:542 – Notes of Survey  
 (Awarded 2 2/10<sup>th</sup> acres)

*Helu 7940 Kaawa* ✓ *Kapua, Kaawa, Kaawa, Hawaii* 542

*Ke ana o Kaawa ma Kapua Ima Ima Hawaii.*  
*Usumaka ma ke kiki Ima a u holo.*  
 Ak. 23° 30' Ima. 4,50 Ak. ma ke ana. Konoiki.  
 " 73° " 2,85 " " " "  
 " 54° 30' " 2,24 " " " "  
 Ima 32° " 4,00 " " " " "  
 " 60° Ima. 5,70 " " " " " a kiki i kiki  
*i sumaka'i. He 2 2/10 Ak.*

*J. Fuller*  
*Lunawana.*

*Kaawa Hawaii June 21, 1853.*




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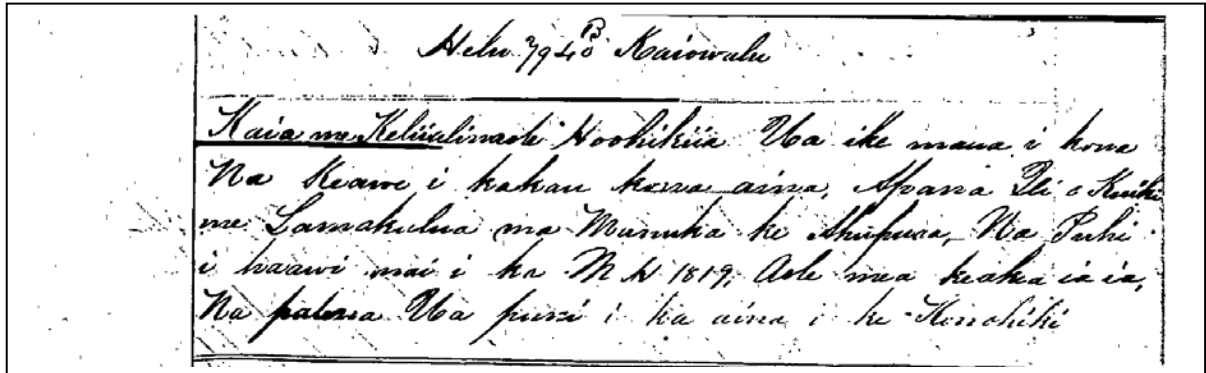
*Ukupa'aka* \$5.00

*W. L. Lee*  
*G. M. Robertson*  
*J. N. Kaulahao*  
*J. B. Smith*

*Honolulu Oka'aba 20, 1853.*



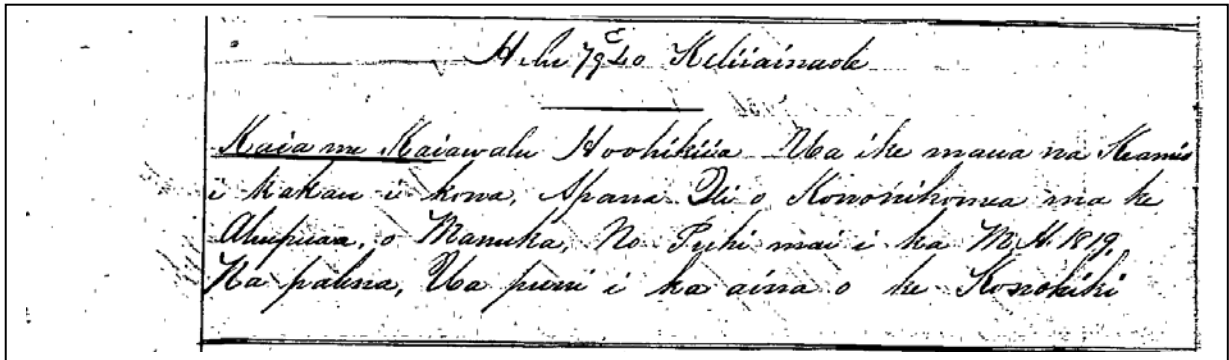
**Manuka**  
**Kaiowalu – Helu 7940 B**  
**Native Testimony Volume 8:505**  
**(Not Awarded)**



Helu 7940 B Kaiowalu  
Kaia ma Keliainaole Nookihiki. Ua ike maua i kona  
Na Keawe i hakanu kama aiaa, Apara Ili o Kuiki  
ma Lamakulua ma Manuka ke Ahupuaa, Na Puhi  
i hawai mai i ka M.H. 1819, Aole ma haka ia ia,  
Na palena Ua pui i ka aiaa i ke Konoehiki

Kaia and Keliainaole Sworn. We have seen his (land). Keawe wrote for his lands. An *Ili* parcel, Kuiki at Lamakulua in Manuka Ahupuaa. Puhi gave it to him in 1819. No one has objected to him. It is surrounded by the land of the Konoehiki.

**Manuka**  
**Keliainaole – Helu 7940 C**  
**Native Testimony Volume 8:505**



Helu 7940 C Keliainaole  
Kaia ma Kaiowalu Nookihiki. Ua ike maua ma Keawe  
i hakanu i kama, Apara Ili o Konoehonua ma ke  
Ahupuaa, o Manuka, Na Puhi mai i ka M.H. 1819,  
Na palena, Ua pui i ka aiaa o ke Konoehiki

Kaia and Kaiowalu Sworn. We saw Keawe write out his claim. An *Ili* parcel, Konoehonua in the Ahupuaa of Manuka, gotten from Puhi in 1819. The boundaries are surrounded by the land of the Konoehiki.

Kapua  
 Keliiainaole - Helu 7940 C  
 Mahele Award Book 3:543 - Notes of Survey  
 (Awarded 2 9/10<sup>th</sup> acres)

Helu 7940 C Keliiainaole Kapua, Kona, Kona, Hawaii

Ke ana o Keliiainaole ma Kapua, Kona, Kona, Hawaii  
 E hoomaka ma ke kahi Hiki a e holo.

Ak. 20° Kom. 4.00 Ak. ma ke ana Konaiki.

Kom. 57° 15' " 6.00 " " " " Konaiki.

" 59° 15' " 3.20 " " " " " "

" 118° Hiki. 3.70 " " " " " "

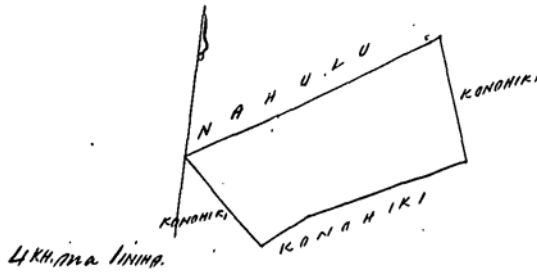
Ak. 52° " 1.85 " " " " " "

" 64° 30' " 5.70 " " " " " " akiki i akahi

i hoomaka'i. Helu 2 9/10 Ak.

Kona Hawaii June 21. 1853.

J. Fuller  
 Linaanaama



Ukupaulea \$ 5.00

W. L. Lee

G. M. Robertson

J. Stevanovich

C. H. Smith

Honolulu Oatoba 20. 1853.

Manuka  
 Kaia – Helu 7940 D  
 Native Testimony Volume 8:506  
 (Not Awarded)

506  
 Helu 7940 Kaia      Seku 7, 1829  
 Kaiawalu me Keliainaole Kōhōhiki. Ua ike māua i kōna  
 mā Keamia i Manuka, āpaua i kōna Kāmilo, mā Abasuka  
 mā Pūhi i ka wā mā i ka M. H. 1819. Uole māua kōna  
 mā palena, Ua pūni i ka uina o ke Kōhōhiki.

Kaiowalu and Keliainaole Sworn. We have seen his land. Keamia wrote it out. An ili parcel, Kamilo at Manuka. Puhi gave it to him in the Year 1819. No one has objected. The boundaries are surrounded by the land of the Kōhōhiki.

Manuka  
 Kalopi – Helu 8789  
 Native Testimony Volume 8:513  
 (Not Awarded)

Helu 8789 Kalopi      Seku 7, 1849  
 Palaualelo me Kaanaana Kōhōhiki. Ua ike māua  
 i kōna māua. Ihi o Awela 1, Awela 2, mā Kaahu-  
 aina mā Manuka Ahup. mā Kau, mā Pūhi mā i  
 i ka M. H. 1840, Uole māua māua i kahea iā iā,  
 mā palena, Ua pūni i ka uina o ke Kōhōhiki.

Palaualelo and Kaanaana Sworn. We have seen his Ili, Awela 1, Awela 2, and Kaahuaina in Manuka Ahup. at Kau. Gotten from Puhi in the Year 1840. No one has objected to him. The boundaries are surrounded by the land of the Kōhōhiki.

**Kapuakou (Kapua)  
Naluhielua – Helu 10380  
Native Register Volume 8:593**

593

10:380 Naluhielua Kapuakou Kapalua Hawaii -  
*He pahuale hou ke 80 awana ka loa, ke 60 awana ka laula, ke  
 mau mau ana hekaheka, 2 mo Lanai, mai 4 hikapai kele, 1 Mala  
 moai, 3 Mala wala -*  
 Hoi ma Naluhielua

I have a house lot, 80 fathoms long, 60 fathoms wide, also some land sections are mine, 2 from Lanai; 4 taro fields, one banana field, and 3 sweet potato fields.

By me, Naluhielua.

**Kapua  
Naluhielua – Helu 10380  
Native Testimony Volume 8:505**

Helu 10380 Naluhielua

*Ahuole ma Kaolulo Koonohiki Ua ike mauna i Kona  
 He o Makiote Kapua Ahup. Mai ma Makuaohonuwai mai  
 Mo Lanai Ma. H. 1819, a hiki i ka Ma. H. 1843 Uole hekeheke  
 Ma palena Makuaohonuwai Koonohiki a puaa ma a wao*

Ahuole and Kaolulo Sworn. We have seen his Ili, Ahole, Kapua Ahup. Gotten from the in-laws who got it from Lanai in the year 1819 to the year 1843. No one has objected. The Boundaries Upland, Kau, Shore and Kona, are surrounded by the Koonohiki on all sides.

Kapua  
 Naluhielua – Helu 10380  
 Mahele Award Book 3:543 – Notes of Survey  
 (Awarded 2 acres)

*Helu 10380 Naluhielua Kapua, Ika, Ika, Hawaii*

*Ke ana o Naluhielua ma Kapua, Ika, Ika, Hawaii*  
*kuomaka ma ke hiki o ka u a u holo.*

*Com. 56° Tok. 2,30 Ak. ma ke ana i hiki.*

"	46°30'	Am. 5,30	"	"	"	"
"	37°	" 4,60	"	"	"	"
AK.	35°30'	" 2,00	"	"	"	Kapa.
"	44°15'	" 9,06	"	"	"	Amahiki, a hiki i hiki

*i hiki ma ke ana. Helu 2 Eka.*

*Ika, Ika, Hawaii June 21, 1853.*

*E. Fuller  
 Lumaanaana*

10527  
 Ho  
 Namaielua Kapua Kapulilua Hawaii  
 Eia hoi kuhano o Kapua ke Ahupuaa no Leleiohoku mai, eia na mala  
 ai i mahiai, 6 Mala kaka, 8 Mala uala, 2 Mala maia, 2 Mala ka,  
 2 Mala laukaha, 10 Mala ipui, 1 Mala uhi, eia na palena o Kapua  
 mai, ke kua ma ka kama, ke ke a waa ma ka akau, 1 lota i, 1  
 pahale 70 a pumi  
 Nāi na Namaielua

Here is my claim, Kapua is the Ahupuaa, gotten from Leleiohoku. Here are the fields I cultivated; 6 taro fields, 8 sweet potato fields, 2 sugar fields, 2 pandanus patches, 10 gourd fields, and 1 yam field. Here are the boundaries in Kapua, the shore on the south, the canoe kua on the north; there is 1 fishpond, and 1 house lot, 70 [fathoms] in circumference.

By me, Namaielua.

504  
 Helu 10527 Namaielua Detemep. 7 1849.  
 Namaielua Hiale Kaula Hoolihia, Ua ike mana  
 Apama, Ii o Mālopa Kapua, Ahupuaa, Na Lani  
 i kaani mai i ka M. H. 1819, Apama 2 Ii o Kahi  
 Pūhāra hua, Apama 3 Kūhāni Kūhā, ma ka  
 ili o Kaula, Apama 4 Pahale ma ka ili o Kūhā  
 hā o Kaula No Lani mai i ka M. H. 1819, ake  
 ma a heaen ia ia  
 1 Na palena, Mauka Mahulu me Kūhāhā, Ma K.  
 Kōhōhō, Ma K. Kūhā, Ma K. Uia o Kūhāhā,  
 2 Na palena, Māhāhā, Kōhōhō a pumi ma ake  
 3 Na palena, Māhāhā, Kōhōhō a pumi ma ake  
 4 Na palena, Māhāhā, Kōhōhō a pumi ma ake

Ahuole and Kaolulo Sworn. We know his land. Parcel 1, the *ili* of Haleola, Kapua *Ahupuaa*. Lanai gave it to him in 1819. Parcel 2, the *ili* of Kalihi at Puuhinahina; Parcel 3, there are patches of taro and sugar cane in the *ili* of Kaule; Parcel 4, a house lot in the *ili* of Kailiohia, with 2 houses. Gotten from Lanai in the year 1819. No one has objected to him.

1. The boundaries: Upland, Nahulu and Naluhielua; Kau, the *Konohiki*; Shoreward, the Sea; Kona, the land of Naolulo.
2. The boundaries, Upland, Kau, Sea, and Kona, the *Konokiki* on all sides.
3. The boundaries, Upland, Kau, Sea, and Kona, the *Konokiki* on all sides.
4. The boundaries, Upland, Kau, Sea, and Kona, the *Konokiki* on all sides.

Kapua  
 Namaielua - Helu 10527  
 Mahele Award Book 3:544 - notes of Survey  
 (Awarded 4.47 acres)

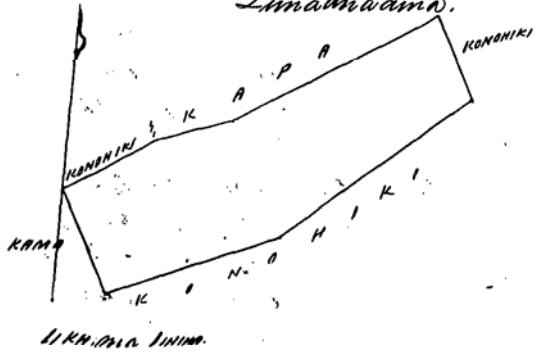
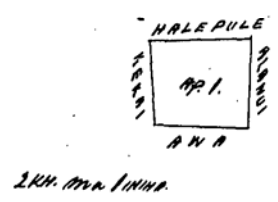
Helu 10527 Namaielua, Kapua, Kona, Kona, Hawaii

Ku'āina o Namaielua, ma Kapua, Kona, Kona, Hawaii  
 Ap. 1. Pakale, Chomaka ma ke kiki Okaa a e holo.  
 Kom 4° 40' 1.40 Ak. ma ke Okaa.  
 " 85° 30' Kom. 1.58 " " " "  
 Ak. 8° " 1.34 " " " " Kōa.  
 " 83° 15' 1.70 " " " " ka Halepule, a hiki i kahi i  
 hōmaka'i. Kōe 22/100 Akā.

Ap. 2. Aina mahiai, Chomaka ma ke kiki Hōkina a e holo.  
 Ak. 26° 45' Kom. 2.95 Ak. ma ke Aina Hōkina.  
 Kom. 58° 30' " 8.00 " " " " Kapā.  
 " 71° 15' " 2.70 " " " " "  
 " 57° 30' " 3.54 " " " " Hōkina.  
 " 29° 15' 3.60 " " " " Kōa.  
 Ak. 67° 30' " 6.20 " " " " Hōkina.  
 " 51' " 8.00 " " " " " a hiki i kahi i  
 hōmaka'i. Kōe 4/4 Akā.

Kona Hawaii June 21, 1853.

J. Fuller.  
 Linaawana.



Uhuapulea \$6.00

W. L. Lee  
 G. M. Robertson  
 J. H. Kaulahar  
 J. H. Smith

Honolulu Okaola 20, 1853.



Kapua, South Kona, District 3  
 Nahulu – Helu 10528  
 Native Register Volume 8:597

10,528 Nahulu Kapua, South Kona, District 3.  
 Eia hio ili aia no Namaielua ma Puuhinahina ka moaiia iki  
 mai ke kai a ka uku, Mala uku 4, Mala kolo 8, Mala main  
 Nui ma Nahulu

Here is my *ili* land, gotten from Namaielua, at Puuhinahina, a small land section from the sea to the uplands. There are 4 sweet potato fields, 8 taro fields, and a banana field.

By me, Nahulu.

Kapua  
 Nahulu – Helu 10528  
 Native Testimony Volume 8:504

Helu 10528 Nahulu  
 Ahuole and Kaolulo Sworn. We know his *ili*, Puuhinahina, at Kapua Ahupuaa, gotten  
 from Lanai in the year 1819. No one has objected. The boundaries Upland, Kau, and  
 Sea are the *Konohiki*; towards Kona, is Naluhelua.

Kapua  
 Nahulu – Helu 10528  
 Mahele Award Book 3:542-543 – Notes of Survey  
 (Awarded 3 36/100<sup>th</sup> acres)

Helu 10528. Nahulu. Kapua. Kona. Kona. Hawaii.  
 Ke ana o Nahulu ma Kapua. Kona. Kona. Hawaii.  
 E hana ma ke kiki o Kona a e holo.  
 Kona. 27° Hik. 3.60 Ak. ma ke ana o Kona.  
 " 57°45' Hik. 6.00 " " " Keli amole  
 " 59°15' " 3.20 " " " " "  
 Ak. 21°10' " 4.25 " " " " Kona.  
 " 69° Hik. 3.12 " " " " "  
 " 68°45' " 5.90 " " " " "  
 Kona. He 3 36/100 Ak.  
 Kona Hawaii June 21, 1853.  
 J. Fuller  
 Lunalanana.

543  
Waihanalo \$5.00  
 W. L. Lee  
 S. W. Robertson  
 J. A. Kaula  
 J. H. Smith  
 Honolulu October 20, 1853

Kapua  
 Naolulo – Helu 10530  
 Native Register Volume 8:597

10530 Naolulo.  
 He Eia' hivi ili' aino ma Namaielua mai, Kauleokalani' ka moai  
 ma, he wahi ili' aino muku, Maui' ka ukua kaula, a ka kula uala, 9 Ma  
 lu uala, 5 Maba kulo, 2 Maba ka, 1 Maui', 1 pun, 1 Mala. lauhala.  
 Eia' hivi hihapaa' lele ma Namaielua 1 Mala' ifu uimaka  
 Nae na Naolua.  
 Kapua Kona hema Apona.

Here is my *ili* land from Namaielua. Kauleokalani is the land parcel, it is just a little land section, from the upland taro planting area to the sweet potato fields (*kula uala*). There are 9 sweet potato fields, 5 taro fields, 2 sugar cane fields, 1 banana field, 1 squash field, and 1 pandanus patch. Here is my separate field from Namaielua, a field of eating gourds.

By me, Naolulo  
 Kapua, South Kona, District 3.

Kapua  
 Naolulo – Helu 10530  
 Native Testimony Volume 8:505

Helu 10530 Naolulo  
 Feb 7, 1849  
 Ahule ma Kaolelo Konoiki' Ua ike maui i kona Di  
 o Kauleokalani ma Kapua Ahupua'ia. Lanai i ha  
 aui' mai i ka M. H. 1819. Ua ike maui i ka  
 Ma'alahana M.H.H. Konoiki' a fa'au'ia i ka moai

Ahulole and Kaolelo Sworn. We know his *Ili*, Kauleokalani at Kapua. Lanai gave it to him in the year 1819. No one has objected to him.

The boundaries, Upland, Kau, Sea, and Kona, the *Konokiki* surround it on all sides.

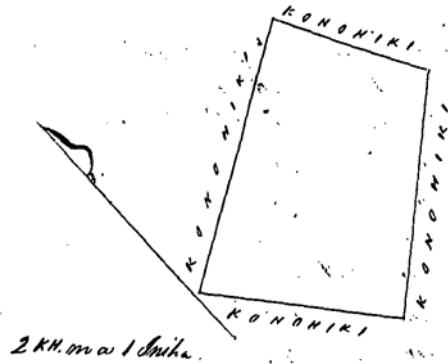
Kapua  
 Naolulo – Helu 10530  
 Mahele Award Book 4:540 – Notes of Survey  
 (Awarded 1 37/100ths acres)

Helu 10530 Naolulo. Kapua, Kona, Kona Hawaii

Ke ana o Naolulo, ana Kapua, Kona, Kona, Hawaii.  
 E hana ana ma ke hiki Kona ana a'ole  
 Kona 36°45' Heik. 3.60 Ke ana ke ana Kona hiki  
 Kona 52° " 1.00 " " " " "  
 " 27°30' Kona. 2.86 " " " " "  
 Kona 62°16' " 4.50 " " " " " a hiki i hiki i  
 Kona ana. He 1 37/100 Ana.

Kona Hawaii June 21, 1853.

J. Fuller  
 Lunaana ana.



W. L. Lee

G. M. Robertson

J. H. Kaula

J. H. Smith

Kona Hawaii October 20, 1853.

Manuka & Kapua Jan. 25, 1848  
Palaualelo – Helu 10681  
Native Register Volume 8:599

10681 Palaualelo 599  
Manuka Hawaii Jan. 25, 1848.  
E he lunia hona huluana aina, he ili aina keia ma Manuka,  
Lamakulua keia inoa. Heia keia i kikapua wata ma Kapua.  
Na Palaualelo.

O commissioners who quiet land titles, I have an ili land at Manuka, Lamakulua is the name. Here also is this, a sweet potato field at Kapua.

By Palaualelo.

Manuka & Kapua  
Palaualelo – Helu 10681  
Native Testimony Volume 8:503  
(Not Awarded)

Helu 10681 Palaualelo  
S. Laanui me Kauwa Sworn. Ua ike maua i kona  
Ili o Lamakulua ma Manuka Ahup. No Puhi  
mai i ka M.S. 1819. Ua ma ka ika ia ia,  
Na palena, Ua pui i ka aina o ke Konohiki.

S. Laanui and Kauwa Sworn. We have seen his ili, Lamakulua at Manuka Ahup. Gotten form Puhi in the Year 1819. No one has objected to him. The boundaries surrounding the land are the Konohiki.

**Pahoehoe 2 and Kaulanamauna  
Kepio – Helu 9737  
Native Register Volume 8:569**

9737 Kepio  
 He Pahoehoe ke ahupuaa 1 pahale, 1 ka hūhūpāi a kōio lōmā i' hana  
 ai, 9 kōilapūi' kele, 14 Māla wala, 1 Māla kōfē, 1 Māla maia, 27  
 nuu, 1 kōu.  
 Mōkūpuni o Hawai'i Apana 3.  
 Na Kepio

Island of Hawaii, District 3  
 Pahoehoe is the ahupuaa, 1 house lot, and the fields worked by my own hands; 9 taro fields, 14 sweet potato fields, 1 coffee field, 1 banana field, 27 cocoanut trees, and 1 kou tree.

By Kepio.

**Pahoehoe 2 and Kaulanamauna  
Kepio – Helu 9737  
Native Testimony Volume 8:577  
(Not Awarded)**

Helu 9737 Kepio  
 Kalama & Kaulua Kōhōkūia Ua ike māua i kōua  
 Apana 2 i' o Kaulanamauna ma Pahoehoe 2, Ahupuaa  
 No Kalama mai Mo. H. 1840. Apana 2. Pahale ma  
 Kaulanamauna Ahupuaa, wa pāua i kōua kōfē  
 wākahe, i ka lōhe ma māua o i kōua ka māua.

Kalama and Kaulua Sworn. We have seen his ili Parcel, Kamuku at Pahoehoe 2 Ahupuaa. Kalama gave it to him in the year 1840. Parcel 2, a House lot at Kaulanamauna Ahupuaa, it was enclosed by his grandfather, and we have heard that it was he, who planted the cocoanut trees.

## ***Leasehold Interests and Land Use in The Government Lands of Manukā And Kaulanamauna***

The lands of Manukā and Kaulanamauna, as well as those of Kahuku and Kapu'a, were put to formal ranching uses in the years following the *Māhele 'Āina*. Belonging to the Government land inventory, communications between lessees and the Interior Department document early ranching uses of lands in the Manukā NAR. The records tell us that in the earliest lease from 1867, Manukā and Kaulanamauna were leased to native tenants. While grants were being given for other lands in the region, neither Manukā nor Kaulanamauna were sold. They remained under government control, even when the two *ahupua'a* were leased to W.T. Martin, in 1874, as a part of a regional ranching operation. Interestingly, the early records describe goats as the animals of the ranch, and the rights of access to hunt them was controlled by the lessees, with no outsiders allowed, and public notices on such restrictions being published in the native language newspapers. By the late 1880s, ranching interests expanded from goats to cattle, which were fattened on the Manukā-Kaulanamauna pasture lands, as a part of the ranching operation owned by the Martin family.

The following documents were found in the collections of the Hawaii State Archives and Bureau of Conveyances, and describe land use on lands now situated within the Manukā NAR, from the 1860s to 1900. Emphasis of selected place names and text have been used here, to direct reader's attention to particular points of reference, and names of individuals who have resided upon, or held leases on Manukā and Kaulanamauna.

***February 11, 1861***

***H.L. Sheldon, Kona Land Agent;  
to S. Spencer, Clerk, Interior Department  
(Regarding application of G.B. Kalaaukane for land of Manuka):***

...Herewith I enclose a letter which I received from G.B. Kalaaukane respecting the Govt. land of Manuka, being the first land in Kau. As I don't know who is the Land Agent for Kau, I send the application to your Dept... [HSA, Interior Department, Lands]

***May 28, 1861***

***D.B. Lyman; to H.R.H. Lot Kamehameha, Minister of the Interior  
(Regarding Sheldon's application for a lease on the land of Manuka):***

...Judge Sheldon of Kona, Hawaii has applied for a lease of Manuka, a land lying in the district of Kau, between Kahuku & the border of Kona.

He wished a lease of the land for ten years. He offers \$50. per year payable every six months. The land is described as "a broad, short, rock land, food for nothing but goats. Has a good deal of wood on it, but it would cost as much as the wood is worth to get it to the shore." Mr. Sheldon wishes the land for raising goats. My son F.S. Lyman says "the land is almost entirely covered with aa, and as near as I can find out, the best thing that can be done with it is to lease it for the terms offered..."

P.S. I suppose the lease requested might disallow the cutting of wood or timber in any considerable quantities, if thought expedient by your Highness... [HSA, Interior Department, Lands]

***December 12, 1861***

***H.L. Sheldon; to H.R.H. Lot Kamehameha, Minister of the Interior  
(Regarding Application for Lease of Manuka):***

...The undersigned respectfully prays that he may be granted a lease for the term of ten years next ensuing, of that Government *ahupuaa*, or land situated in the District of Kau, Island of Hawaii, and known as Manuka, said land in such lease to be described by its ancient boundaries. And he offers to pay a year rental therefore of \$50., half yearly... [HSA, Interior Department, Lands]

**July 11, 1862**

**D.B. Lyman; to S. Spencer, Clerk of Minister of Interior  
(Regarding Application for Lease of Manuka):**

...Waihiu and Hilinai wish to lease Manuka, a comparatively worthless land in Kau, on the border of Kona, for five years at \$60. a year.

There have been other applications, but theirs is the most favorable for the government.

Would it not be well to explore the right of lease at public sale, taking \$60. a year for the first bid...? [HSA, Interior Department, Lands]

**1865, September**

**Government Lands by F.L. Lyman.**

...Not Sold or Leased, in Hilo, Puna & Kau, Hawaii.

...Kau...:

8. **Manuka**, *ahupuaa*. [HSA, Interior Department Lands]

**ca. Jan. 1867**

**Keaka, Paahao, Kamaka and Kaua;  
to Minister of the Interior:**

...We, the ones whose names are shown below, the persons residing on the Government land of **Manuka**, desire you to send up the lease of said land, in accordance with our talk at Waiohinu, at the house of W. T. Martin, at the time that you came with J. H. Coney. You said that you would return to Honolulu and confer with R. Keelikolani concerning said land, and if she has acquired it by lease, then you would write to W. T. Martin, and if not conveyed, then you would write also.

And, because we have heard today that R. Brown has acquired it by lease, therefore, we are going to be in trouble, we ask for your greatest kindness that you consent that said land be leased to us, for such proper sum that you may name for five years. We will not surrender the lease for said land, because, we have no kuleanas, and no purchased lands, so that we can give it up, you keep us in mind, the poor ones without land or it will be acquired by the foreigner, and we will then become wanderers.

Please consent that the lease be ours. You reply right away.

This letter was written by W. T. Martin, upon the request of these persons... [HSA, Interior Department, Lands]

**February 20, 1867**

**H.A. Wideman, Interior Department Clerk;  
to F.S. Lyman, Surveyor  
(Regarding lease of Manuka):**

...Keaka, Paahao & Kamaka have applied for the Lease of lands of Manuka. In Kau, I suppose.

Not knowing the extent or quality of the land, we are at a loss what to do in this matter & would therefore feel obliged if you would give us the necessary information..

Be please also to inform us of what you think would be a reasonable rent for the land... [HSA, Interior Department, Lands]



**Waiohinu, Feb. 18, 1868.**

**Keaka (by W. T. Martin), Hamohamo, Kakio, Kamaualena & Kuawaa;  
to H. A. Widemann, Esq.:**

...Because I am in trouble on account of my children being sick, so I will not come in person to Honolulu to meet you.

Therefore, I have given the sum of \$40.00 in the hands of W. T. Martin, and he will forward it to you, for that land of Manuka, Kau, which we leased in the year A. D. 1867 past. This is our request of you, that the lease be drawn up in the name of Keaka only, and we will be under Keaka. That Hilinai be set aside because he is against us, and he has taken the benefits from the land and given it to outside persons, and he has brought in ten dogs and more to chase goats, and we have warned him not to give away the benefits from the land to outside persons, and not to hunt the goats with dogs, or the goats will be scattered and go here and there, and the Government land would be without goats, but he did not agree, and he has denied that we had any authority on the land. Therefore, this is what is right, that it would be better that only Keaka be in the executed lease, and we under him that we might be all right. Set Hilinai aside. We are the only ones in this \$40., Hilinai has no money. He is saying that he will come to you for a lease of said land, for himself only, and that he will drive us out. Please consent to us, the greater number, or we will be in trouble through this Hilinai.

Through the direction of Keaka that their names be affixed to this petition, therefore it was affixed by W.T. Martin... [HSA, Interior Department, Lands]

**Kau, March 1870.**

**Keaka and Hilinai, et al.; to F.W. Hutchinson, Minister of the Interior.**

...We, Keaka et al, residents of the land of Manuka, because, we have not got altogether the rent of the land of Manuka, we ask you to be patient, and if we are ready by the arrival of the next vessel, then we will send it.

We also ask that you do not lease the land of Manuka to others, or we will then be greatly troubled... [HSA, Interior Department, Lands]

**Keaiwa**

**April 14<sup>th</sup>, 1870**

**J. Kauhane, Land Agent; to R.A. Lyman**

**(Regarding lands leased in the District of Kau; see also communication dated, January 2<sup>nd</sup>, 1872.):**

...I have received your letter requesting to submit a report on the total number of all government lands here in Kau, their description and acreage, including the lands which I have leased with the Minister (of Public Lands). All that which I know perhaps will be reported, but, the total number of acres of land, I do not know. The following is the report on the same...

District of Kau.

**Manuka** No. of acres.

Not known.

Time of Lease.

Not known.

Leaseholder.

Not known.

Pasture land.

Lease rate, not known. [HSA, Interior Department Lands]

**May 12, 1870**

**F.W. Hutchinson, Minister of the Interior;  
to W.T. Martin**

**(Regarding partnership in lease of Manuka and Kaulanamauna):**

...I hereby consent to lease to the three of you, W. Thos. Martin, Keaka and Hilinai, the Government lands of Manuka and Kaulanamauna, in Kau, Hawaii, lying on the South side of Kau, between the lands of Kahuku and Kapua, in Kona. Fifty Dollars (\$50.) shall be the rental for said lands per year, payable semi-annually in advance to commence from the 1<sup>st</sup> of June '70.

The lease to be held under a Tenancy at Will... [HSA Interior Department Letter Book, 1870:179]

**Waiohinu, Feb. 6<sup>th</sup>, 1871.**

**W. Thomas Martin, & Co.; to Mr. C. T. Gulick**

...Excuse me on account of the time for the payment of the rent of the Government lands of **Manuka & Kaulanamauna** having gone by, being \$25.00 for the half year just elapsed.

If there is any money thought to be due me for my position of Road Supervisor for Kau for the A. D. 1870, ended Dec. 31<sup>st</sup>., then, you pay that debt of mine, and credit my name, and if there is none, you let me know again so that I may understand, then I will make payment... [HSA, Interior Department, Lands]

**November 27<sup>th</sup>, 1871**

**C.T. Gulick, Interior Department Clerk;  
to W.T. Martin:**

Your communication of the 6<sup>th</sup> of November, requesting the Minister of the Interior to Ascertain the boundaries of **Manuka and Kaulanamauna** has been received. The Minister is of the opinion, that it is useless to ascertain the boundaries of these lands at this time, for the reason that the land owners, such as the Konohikis, are the proper persons to ascertain the boundaries of their lands. The law was made purposely for them, for their unsurveyed lands, and that the remaining portions of said lands shall belong to the Government.

As there have been numerous complaints made against you as Road Supervisor, the Minister has therefore decided that you resign from said office, and which is being carried out by this trip of the vessel. The Commission of Mr. Richardson of Kau, as your successor is herewith sent, and that you will turn over to him, all monies, books and tools in your possession, belonging to said office... [HSA Interior Department Letter Book, 1871:582]

**Kealakekua**

**January 2<sup>nd</sup>, 1872**

**Chas. T. Gulick, Interior Department Clerk;  
to H.N. Greenwell, Kona Land Agent**

**(Regarding Lease held by W.T. Martin, on lands of Kaulanamauna and Manuka):**

...I am directed by His Excellency the Minister of the Interior to acknowledge the receipt of your two letters of the 20<sup>th</sup> ult... With regard to Lands I would say that no lands have been sold or leased of late in Kukuiope #1. & #2., nor in Waikakuu, South Kona.

The Land of **Kaulanamauna** was rented to W.T. Martin in June 1870 from year to year, for which together with a land in Kau known as **Manuka** he pays \$50.—a year, but the land of **Kaulanamauna** was at that time represented to be in Kau... [HSA, Interior Department Letter Book 10:601]

**Waiohinu, Sept. 3, 1872.**

**W. Thomas Martin, & Co. [Keaka & Hilinai mā];  
to Mr. C. T. Gulick, Interior Department Clerk**

...I thank you very much for your great kindness to me in helping me with the position of Shipping Agent, I have received it, and I am greatly indebted for your kindness.

Because of my having heard rumors from the mouths of some of my friends, and whether it is true, and this is the rumor:

I was told that W. C. G. Jones and Co., the Company of Kahuku, had petitioned the Minister of the Interior for the lands of **Manuka** and **Kaulanamauna** to belong to them? If this rumor that I have heard be true, then you and the Minister consider us, the poor people. Therefore, I ask, and the others too, you and the Minister, to have the lease made to us of said lands for the term of 10 years, in such an amount that you may decide upon, because, it is not right that we be deprived of said lands, and to be given to rich foreigners, and our animals driven off together with our families, and to become wanderers of the land like people from foreign lands. Therefore, you be patient in consulting with the Minister about this matter so that we will be all right, and let us know right away, while the time is proper... [HSA, Interior Department, Lands]

**August 28, 1874**

**W. Thos. Martin; to W.L. Green, Minister of the Interior:**

...I received the leases of the lands of Manuka & Kaulanamauna, and I signed my name to the said documents in the presence of a visitor in my house.

This is the mistake in said documents, it is stated the Government lands **Kaulanamauna & Manuka**, (in Puna), this is wrong. What is proper is at Kau. This part of the document should be changed if you consent to let me put in the word in place of Puna, Kau. That is ended.

I am inquiring of you as follows: All of the trees of the Government lands remaining unleased, like my lands; are the trees of said lands allowed to be cut and taken away and sold for money, or not? If the trees on other lands are permitted, then, it is not equitable. There is here in Waiohinu, many natives who come personally on the remaining Government lands under charge of J. Kauhane, and the trees are allowed to be cut down for selling purposes, and they are hauling it right along to this hour, and at the end of the year, each will have received a hundred dollars, less or more.

Therefore, I believe that this permission should be opened on all Government lands, and if not, they should all be prohibited, so that there will be no difference of receiving the benefit, or of being denied... [HSA, Interior Department, Lands]

One of the early large ranching interests to hold leases on the lands of Manukā and Kaulanamauna, was W. Thomas Martin, whose family played an important role in development and management of ranches in Ka'ū for nearly 100 years. In 1877, Martin took out a mortgage on his fee-simple and lease-hold interests in Ka'ū, and through the conveyance recorded in the Bureau of Conveyances (BoC), provides us with a description of land use activities in Manukā and vicinity.

**March 7, 1877**

**W.T. Martin; to W.H. Reed**

**Chattel Mortgage of Ranching Lands and Livestock**

W. Thomas Martin, party of the first part, conveys to W.H. Reed, party of the second part...in consideration of the sum of Two Thousand (\$2000) Dollars, has bargained and sold and by these presents does bargain and sell unto the said party of the second part...the following described goods, chattels and property, namely fifty head or

thereabouts of mules and asses; thirty head of working oxen, now at Waiohinu...and branded **TM** and **HM**. One hundred and fifty cows and steers, now in the District of Kau...and branded **TM** and **HM**; also Three Thousand Goats marked by having both ears cut, now on the lands of **Manuka** and Kiolakaa in the District of Kau, Hawaii; and all the offspring and progeny of said goats; also all the tight, title and interest of the said party of the first part in and to the lands known as **Manuka** and **Kaulanamauna**, in the District of Kau...being a lease by the Hawaiian Government to the said party of the first part for a term of years, of which twelve years are yet remaining... [BoC Liber 48:454-456]

Martin subsequently repaid his mortgage, and continued his lease-hold interest at Manukā and Kaulanamauna through the early 1890s.

Additional records describing lease-hold interests and later applications by native residents of Manukā and Kaulanamauna to have the lands laid out into homestead lots follow below:

**Waiohinu**

**Dec. 15, 1887**

**W.T. Martin; to L.A. Thurston, Interior Department:**

...Enclosed please find draft No. 1177 favor of P. Lee for \$30-dollars and No. 4897 certificate for \$20-dollars in payments of Lease of **Manuka** and **Kaulanamauna**. [HSA, Interior Department, Lands]

**Waiohinu, Hawaii**

**February 1, 1889**

**H.S. Martin; to L.A. Thurston:**

...On my return from Honolulu, I saw Mr. J.W. Kuaimoku of Kona, who spoke to me, asking if I wanted to secure the land of **Kaulanamauna** under a lease. I told him that I have had the lease of that land together with **Manuka**, both lands in the Kona district, for the last 15 years and paying a yearly rental of \$50.- dollars. The lease runs as follows.

**Manuka & Kaulanamauna.** Land in Puna to W.T. Martin.—

It should be Kona, and not Puna. If you wish to have the lands leased out; I will be very happy to secure it. Mr. Joseph Emerson will give you full particulars about those lands. [HSA, Interior Department, Lands]

**March 4, 1889**

**J.S. Emerson; to L.A. Thurston:**

...For the regard to the Gov't Lands of **Kaulanamauna** and **Manuka** I would report as follows. No reliable surveys or maps of these lands have yet been made. My estimates therefore are based on imperfect data. **Kaulanamauna** is the most Southern land in South Kona, about eight miles South of Hoopuloa landing. Its area, I estimate at 15000 Acres. **Manuka** which adjoins it, is in the District of Kau and is bounded by Kahuku on the East. Its area I estimate at 8000 Acres.

These lands are regarded as fairly good pasture lands, and are now used for fattening the cattle brought from Henry Martin's ranch in South Kau. It seems to me that lands are worth certainly not less than 20 cents per acre. At that rate **Kaulanamauna** ought to be worth \$3000.00 and to rent for \$300.00 per annum, while **Manuka** would be worth \$1600.00 and should rent for \$160.00 per annum. With my present information, I regard these figures as the best that can be given. Before selling or leasing for a long term of years accurate surveys should be made.

As to the land of Olelomoana 2 in S. Kona, it is one of the unassigned lands, claimed by the Government... [HSA – DAGS 6, Hawaiian Govt. Survey]

**March 5, 1891**

**J.T. Baker; to C.N. Spencer, Minister of the Interior:**

**(Applies to purchase lease of Manuka and Kaulanamauna):**

...The undersigned respectfully makes application for a lease of the lands of Manuka and Kaulanamauna, Kau, Hawaii, for ten or fifteen years, for the sum of \$75. per annum... [HSA, Interior Department, Lands]

**March 5<sup>th</sup>, 1891**

**Government Survey Report on Application for Gov't. Land.**

**Applicant J.T. Baker.**

Nature of Application.

To lease lands of **Manuka & Kaulanamauna**, in Kau.

Nature of Land.

Rocky, dry grazing land, and old lava tracts. Woodland above.

Are there springs, ponds, or streams on this land that should be preserved under Sec. 48, Civil Code.

None to my knowledge.

Estimated value of land.

Roughly estimated at \$5000.

Supplementary remarks and recommendations.

It is very difficult to put a value on these lands, but from the large area (estimated approximately), and by comparison with other rentals received, I should judge \$200. per year to be a fair upset price. These lands are on the confines of Kau district, Kaulanamauna being in Kona, and Manuka, adjoining, in Kau.

J.F. Brown. [HSA, Interior Department, Lands]

**July 18, 1891**

**J.T. Baker; to J.H. Boyd**

**(Regarding Application for Lease of Manuka and Kaulanamauna):**

...I pray your kindness that you enter in the application of ours for Manuka and Kaulanamauna, which the Minister spoke about, that if it were \$100.00, then he would advertise, and you let him know that I agree to give a Hundred Dollars per annum for said lands, whether for 15, or 20 or 25 years lease. And will you please let me know by letter to Hilo, I want to secure these lands for our work, if Kapua is also included. I will not forget, I will keep on getting the half-whites only. I wish us to be the leaders of our blood, and standing together in this work, and to show our love of country through proper living and work... [HSA, Interior Department, Lands]

**September 24, 1891**

**W.D. Alexander, Surveyor General;**

**to C.N. Spencer, Minister of the Interior**

**(Regarding survey of Kaulanamauna and Manuka):**

...I have the honor to enclose herewith descriptions of two lots in Kaohe, Hawaii. The description of the lands of Kaulanamauna and Manuka is being drawn up. Notes of survey and full instructions will be sent by this mail to Waipuilani....

Description of **Kaulanamauna and Manuka**, Hawaii

Beginning at a point called Ahuloa on the sea coast on the boundary between Kapua and Kaulanamauna, and running — North East along the said boundary as per Certificate No. 101. to top of Crater called **Puu Ohohia**, on the boundary of Kahuku, the direct distance being 61500 ft. Thence, South west along Kahuku Grant 2791 to C.C. Harris, as per Certificate 85; to point at sea coast called **Lae humuhumu**; the direct distance being 65000 ft. Thence along the sea coast to the initial point, the direct distance being 34500 ft. more or less.

Area 26000 Acres more or less.

Noted compiled from map by J.S. Emerson. Reg. No. 1295.

Frank S. Dodge [HSA, Interior Department, Lands]

**July 28, 1893**

**Sam Kauhane; to J.A. King, Minister of the Interior  
(Applies to lease Manuka and Kaulanamauna):**

...I, the undersigned, make application that the lease of the Government Lands in Kau, that is, Kaulanamauna and Manuka, be granted for the rent of one hundred per annum... [HSA, Interior Department, Lands]

**August 8<sup>th</sup> 1893**

**Government Survey Report on Applications for Gov't. Land.**

Applicant.

Saml. Kauhane.

Nature of Application.

To lease lands of **Kaulanamauna & Manuka**, Kona.

Amount offered.

\$100. per year.

Survey perfected or not.

General survey of outside boundaries. No survey in detail.

Area.

Total for the two lands estimated at 26000 Acres, more or less.

Nature of Land.

In general, dry and barren. Probably 1/3 or more of nominal value only. Such portions as are of value are in scattering patches. The upper portion of the tract is wooded, but more thinly than the majority of Kona lands.

Objections, if any, to granting application.

This tract of land seems to me in many ways similar to that tract of Crown land called Puuwaawaa, advertised for lease as 40000 acres at \$350 per year. On this basis of valuation, these Gov't. lands would be worth \$250 per year.

Supplementary remarks and recommendations.

I have reason to believe that these lands are good fattening lands for cattle at certain seasons of the year.

In so large an area some portions even though small might at some future time be used in cultivation, and a reservation made in a lease to lower the same. These lands were formerly leased at \$50 a year to T. Martin, but I do not consider that figure as any criterion of value, and would now consider \$200. per year a reasonable upset price.

J.T. Brown... [HSA, Interior Department, Lands]

**No date (ca. July, 1893)**

**Jos. M. Kamikina and 12 others, Petition for Homestead Lots in Manuka & Kaulanamauna;**

**to J.A. King, Minister of the Interior:**

...We, the undersigned, persons desiring to take and homestead on the Government lands of **Manuka and Kaulanamauna**, Kau, Hawaii, each covenant and agree to take and homestead on the above lands at the time when the homestead lands are all surveyed, if the Government is not ready to bear the cost of the surveys of the homestead lots, we agree to bear that burden if the Government will consent to make it a part of the purchase price of the area of the lots. We agree to occupy and cultivate on said lots without any delay, and to observe the Homestead laws...

Jos. M. Kamikina; Miss Kamaka; Miss Mery; J.H. Keaka; T.N. Kapaelauhala; M. Kamaka; J.H.K. Nahoā; H.J. Kalina; H. Pio, *Konohiki*; G.B. Kapo; Kaaihue; Kaholo. [HSA, Interior Department, Lands]

**August 16, 1893**

**J.M. Kamikina, Manuka, Kau;**

**To J.A. King, Minister of the Interior**

**(Regarding Application Above — that Manuka and Kaulanamauna be made into Homestead lots):**

...We sent a letter asking Your Excellency, that is for the homesteading of lands on Manuka and Kaulanamauna.

A reply to this has been awaited for, and none has come... [HSA, Interior Department, Lands]

**September 3, 1893**

**J.M. Kamikina and 20 others Apply for Development of Homestead Lots on Manuka and Kaulanamauna;**

**to J.A. King, Minister of the Interior:**

...We, the undersigned, native Hawaiians living on the lands of **Manuka and Kaulanamauna**, in the District of Kau, Hawaii, whereas we wish to acquire means of living in comfort, and do some things which would benefit this living, and whereas we have not received any homes, neither lands from the beginning, but have lived a long time on the above lands, therefore we ask that there be surveyed and set apart some homestead for us on the lands of Manuka and Kaulanamauna...

J.M. Kamikina; Keaka; Hoopii; Kamaka; Kanoho; Kapea; Kamaka; G.B. Kapo; *Konohiki*; Samuela Kauhane; Kaholo; Pio; Kia; Halena; Lohiau; Kahele; Enoka; Mele; Kalili; Lahela; Kapoli...

[Note attached to above petition]

In re. Petition to have **Kaulanamauna and Manuka**, Kau, Hawaii, laid out into Homestead Lots.

The boundaries of these lands have not been definitely located, neither is it known for a certainty that any portions of the same would be suitable for Homesteading.

In view of these facts, it would seem advisable that someone either in Kau or from Honolulu, that has some knowledge of land matters, be authorized to inspect these lands and ascertain if any part or portions of the same could be laid out for Homestead purposes. Should tracts be found suitable for this object, he be instructed to canvas among the people who are desirous and willing to take up lots, more especially those

living in the locality, and have them pledge in writing that they will take the lots when laid out. This will assure the Government a guarantee that the labor and expense that they will be put to, which will be considerable – to lay out these lots, will not be through away.

A mere petition to lay out lots, involves little or no responsibility on the part of the signers, and does not warrant the Government to make any outlay.

The matter of appropriation to defray the expenses of this work, is an important point to be considered in this connection. [HSA, Interior Department, Lands]

**September 12, 1893**

**Samuel Kauhane; to J.A. King, Minister of the Interior**

**(Regarding his application to lease Manuka and Kaulanamauna):**

...I am in receipt of your letter of Aug 11<sup>th</sup>, informing me about the **Manuka and Kaulanamauna** lands, at Kona, Hawaii. I made a trip around those lands before I offered you my price for the lease of those lands, and found that the largest portions of the above said lands are covered with lava, and that there are but few places here and there surrounded by lava flows, fit to do anything with, and be able to pay the rent on the places. I could give but \$100. for the lease of those lands, and otherwise would be quite impossible for me to pay... [HSA, Interior Department, Lands]

**September 20, 1893**

**J.F. Brown, Government Surveyor;**

**to J.A. King, Minister of the Interior**

**(Describes the lands of Manuka and Kaulanamauna, in regards to Homestead applications):**

...In the matter of the petition, herewith, that the lands of **Manuka and Kaulanamauna** in Kau, Hawaii, be laid out in Homesteads, I beg to report.

That these lands contain as near as can be estimated 26000 Acres, a large part of which is totally unsuitable for homesteads. I do not know from personal knowledge, but am informed that there is a limited amount in the vicinity of the Gov't. road which might be adapted to homestead purposes. From former experience, however, with petitions, and lists of names of this kind, I should advise that the land be laid out, only after inspection of the ground and canvas among the people of the locality to make sure that lots would be taken up. Signing names to a petition to divide up lands (at considerable expense to the Gov't.) involves little responsibility on the part of the signers, and gives no guarantee that the labor and expense will not be thrown away.

In the mean time it may be said that the lands are not under lease to anyone, and that there is no probability of any one occupying or resident on the land being disturbed.

I understand that there is no specific appropriation for homestead work of this kind, which I presume is a point to be considered in this connection.

The lands of Manuka & Kaulanamauna are on the limits of the Kona & Kau districts... [HSA, Interior Department, Lands]



**November 17, 1893**

**J.H. Boyd, Interior Department Clerk;**

**to J.A. King, Minister of the Interior**

**(Reports on Recommendations for Homestead Lots  
in Manuka and Kaulanamauna):**

...In accordance with your letter of instruction of the 30<sup>th</sup> ult., I beg to make the following report on the Government Lands of **Kaulanamauna and Manuka** in South Kona, Hawaii.

**Kaulanamauna.** Is a small piece of Government land lying between the Crown Land of **Kaua** [Kapu'a] and the Government Land of **Manuka**. I found upon investigation a considerable portion of this land to be suitable for Homesteading, more especially above the road running to the edge of the thick forest and from the boundary of Manuka to Kaua, containing about 200 Acres more or less. Below the road is a narrow strip of about 50 to 75 acres, that could be laid into lots. The cost of surveying I should judge, will not be much; the land is easy of access and not overgrown with heavy under brush.

**Manuka.** Is an enormous large tract of lava land with intervening Kipukas suitable for agricultural purposes as well as for Homesteading. There are about 8 or 9 of these Kipukas, averaging from 10 to 50 acres each. One of these Kipukas is inhabited by a very industrious Native family who are anxious to Homestead the same. The remainder of this land is nothing but barren lava field of very little value, if any. The expenses of surveying will be nearly double the cost of surveying the Kaulanamauna lots. It is hard of access and the Kipukas are in different parts of the land.

Petitioners.

I met them as well as others, who are anxious to obtain lots at the boundary of **Kapuaa and Kaulanamauna**; they were industriously erecting a stone wall for the Waiohinu Grazing and Agricultural Co. They appear to me as men that will make good and industrious homesteaders.

I called them together and explained in detail what was expected of homesteaders under the homestead law. I further informed them that the expenses of surveying &c. may possibly have to be met by those who are willing to pledge themselves to take lots in proportion to the land acquired by them. They were all unanimous in expressing their appreciation of the action taken by the Government in sending someone to explain matters to them, but felt, in case the expenses of surveying were charged to them that the Government in their generosity should deduct the cost of survey from the appraised value of the lots.

In conclusion I will therefore recommend that the available tracts of the above Government lands be plotted out into Homestead Lots, and that an economical surveyor be sent up to do the work... [HSA, Interior Department, Lands]

The homesteading proposition was not acted on, and ranching interests were continued. It is also likely that through the early 1900s, a few native families, probably also tied to the ranching operation, continued to reside on lands which they had worked, as described in the preceding communication. Incorporation of the forest lands of Manukā, Kaulanamauna and Kapu'a in the South Kona Forest Reserve in 1911, further precluded development of other land uses on the mountain lands.

***Proceedings of the Boundary Commission:  
Documenting Traditional and Customary Practices,  
Historical Land Use and Land Boundaries (1873-1876)***

In 1862, a Commission of Boundaries (the Boundary Commission) was established in the Kingdom of Hawai'i to legally set the boundaries of *ahupua'a* that had been awarded to *Ali'i*, *Konohiki*, and foreigners during the *Māhele*. By the middle 1860s, land owners, or their lessees in various districts on the island, were petitioning to have the boundaries of their respective lands settled. Initially, G.M. Robertson, who was also a judge, began taking testimonies from native residents. Following Robertson's death, brothers, Rufus and Fredrick Lyman continued the work and collection of detailed testimonies for the Third and Fourth Judicial Circuits (Island of Hawai'i).

In 1874, the Commissioners of Boundaries were authorized to certify the boundaries for lands brought before them (W.D. Alexander in Thrum 1891:117-118). The primary informants for the boundary descriptions were old native residents (generally born between the 1780s to 1820s) of the areas being discussed. The native witnesses usually spoke in Hawaiian, and their testimony was translated into English and transcribed as the proceedings occurred.

Readers will note that there are significant inconsistencies in spelling of various words, including place names, people names, and features on the landscape. This is problematic, but with the help of maps produced as a part of the surveys to establish boundaries, and other period maps, many of the locations described can be identified. We have also observed that in some testimonies, when the original translator-transcriber used two of the same vowels, it indicated that he/she heard a lengthened pronunciation of a particular vowel. This emphasis of pronunciation is now indicated by a macron mark—for example, the word “*neenee*” (for *nēnē*), the native goose formerly hunted on the mountain lands. While in the modern context of the language, two of the same vowels are generally both pronounced, and broken by an *'okina* or glottal mark.

The narratives cited below, are verbatim transcripts from the testimonies given by native residents or land owners, and those given by surveyors who recorded the boundaries based on the testimony of native guides. The testimonies include descriptions of the primary lands which rise up from the ocean and form the boundaries between the Ka'ū and Kona Districts. The native testimonies describe a wide range of traditional practices including—travel; land use; resource collection; the traditional practices associated with the collection of, or “hunting” birds; and the subsequent practices associated with hunting introduced ungulates—all of which were under the control of *Konohiki*<sup>10</sup>; and changes observed in the landscape. It is of importance to note that the boundaries were known by the native tenants, and the rights to take or hunt resources in traditional times were fiercely protected—individuals without chiefly, genealogical claims, or residency ties to given lands were not allowed to trespass and take resources from the *ahupua'a*.

Because Manukā and Kaulanamauna were given by the King to the Government Land inventory, there were no specific testimonies for the boundaries between those two lands. Their neighbors—Kahuku to the south; Kapu'a to the north, and Keauhou 2<sup>nd</sup> on the *mauka* side were described by native witnesses and surveyors. From their testimonies we learn about the lands that make up the Manukā NAR and practices of the traditional residents.

Underlining, square bracketing, bold and italic print are used by the compilers here, to highlight place names and particular points of historical interest recorded in the testimonies. The proceedings for the cited lands are given in alphabetical order, and date of recordation.

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<sup>10</sup> In regards to hunting, it will be noted that descriptions of traditional hunting practices are limited to native species of birds, including the *ua'u*, *nēnē*, *mamo* and *'ō'ō*; while description of historical hunting practices are limited to goats, which were hunted under contract of *Konohiki*, the Crown, or the Government.

### **Boundary Commission Testimonies and Records of Court**

The *ahupua'a* of Keauhou 2<sup>nd</sup>, cuts off nearly all of the lands of South Kona, and meets Kahuku, where they run together up to the summit of Mauna Loa. The testimonies for the mountain lands of Keauhou, are of particular importance to the historical record, as they describe sites, features, traditional, and historic practices in Keauhou and the lands which bound it. The following documentation is excerpted from the larger collection of testimonies for Keauhou, and includes specific references to lands in the study area, as well as in the larger region. While not always located in the immediate NAR, such historical descriptions provide us with an understanding of the kinds of traditional practices which may have occurred in the area, as well as describe the types of sites that may be encountered in the Manukā NAR.

#### **Ahupuaa of Keauhou 2<sup>nd</sup>, Kona Hawaii Boundary Commission Volume A No. 1:240-241**

Honorable R.A. Lyman  
Boundary Commissioner  
for Island of Hawaii, Haw Is.

The undersigned would herewith make application for the settlement of the boundaries of the following named Ahupuaas or lands belonging to the Estate of Kamehameha Fifth, viz.

...**Keauhou 2**, Kona, Hawaii. Bounded by Gov't [sic] lands of **Keauhou 1<sup>st</sup>** & **Honalo**, also by G.W.C. Jones & Co. land of **Kahuku** of Kau, also by Kaula, Malumalu & Kaupulehu...

Your Honor will therefore please appoint a day for hearing the above application & grant a certificate in accordance therewith.

(Signed) Chas. R. Bishop  
Jno O. Dominis  
Admstrs. Est. of His late Majesty  
Kamehameha V.  
by F.H. Harris, their attorney

Hilo  
August 16, 1873 [page 241]

#### **Keauhou 2<sup>nd</sup>—Volume A No. 1:256-272**

The *Ahupuaa* of **Keauhou 2<sup>nd</sup>**, District of N. Kona  
Island of Hawaii

On this, the Fourth day of August A.D. 1873, the Commission of Boundaries for the Island of Hawaii, 3<sup>rd</sup> J.C. met at the house of Moses Barrett at **Keopuka**, South Kona, for the hearing of the application of Jno. O. Dominis, Administrator, Estate of Kamehameha V; for the settlement of the boundaries of **Keauhou 2** in North Kona, Hawaii. After due notice served, personally on all owners of adjoining lands and their Agents as far as known.

Present: J.G. Hoapili for applicant,  
Estate of M. Kekuanaoa, C.R. Bishop, Hon.  
Mrs. C.R. Bishop, Madam Akahi, Her Excellency,  
R. Keelikolani and Kaopua.

Lumaheihei for Mrs. W.K. Lumaheihei;  
Reverend J.D. Paris for self.

For Petitioner see Folio 241

#### Testimony

Keakaokawai, <sup>K</sup>. Sworn

I was born at **Kealakekua** a few years before  
the death of Kamehameha 1<sup>st</sup> [ca. 1816] (Note. this is the same  
witness that was on **Kahuku** boundaries). I moved at time  
of *Kaua o Kekuaokalani* (1820) to **Lehuula** (was  
grown at that time); I now live at **Hookukano**,  
North Kona and am a *kamaaina* of Kona.

I used to go on the mountain with my Father col-  
lecting sandal wood and catching birds; his  
name was Kauluahi, an old bird catcher and  
*kamaaina* now dead..

...In olden times, Keaumokunui, the  
*Alii nui* of **Keauhou** claimed all the geese  
on **Hookukano**, **Kealakekua** and other lands  
and used to divide the geese. The *uwao* [*uwau*] were  
left for *konohiki* of these lands. The land  
was not the property of the **Keauhou** chief when  
my father and I divided the geese with the  
**Keauhou** *konohiki*; but the *Uwao* we had to  
divide with the *Konohiki* of **Hookukano** and  
not with the *Konohiki* of **Keauhou**, unless we took  
the *uwao* on **Keauhou**... [page 257]

...I have forgotten the names of the places  
beyond here on the boundary of **Keauhou** and  
other lands along there. I have not been along  
there often. **Kanupa** is the place where **Keau-**  
**hou** joins **Kaulanamauna**, a[t] **Kipapale**  
**ana**, junction of **Keauhou**, **Manuka** and  
**Kaulanamauna**. All kinds of trees grow there,  
also small spots of *pahoehoe* in the *aa*. I have  
only been there once when I went with my Father before  
I was fully grown. Do not know as I could find  
it now. <sup>X</sup> Thence *mauka* to **Kilohana**, on an  
*aa* flow where we used to catch birds and  
where **Kahuku** joins **Keauhou**. Thence  
along **Kahuku** to **Kulauala**, on Umi's road;  
From **Puuloa** to **Kanupa** **Keauhou** used to  
take the *pahoehoe* above the woods, and the Kona  
lands reached to the *mauka* edge of the woods  
from **Kilohana** along **Kapapala** to **Pohakuhanalei**,  
a hill on the top of the mountain; thence the boundary

runs down to **Kolekole**, a hill where **Humuula** joins **Keauhou** and cuts **Kapapala** off... [page 258]

...Hukiku was the **Konohiki** of **Keauhou** at the time I went with my father and others catching geese. He told us that one half of the geese caught belonged to **Keauhou**. [page 259] and he claimed the geese on all the different lands, but always used to divide them. I was not old enough to catch geese at that time, but only went along with my father...

...I have never seen **Puueleele** or **Ohialele**. I have never seen and do not know where the places called **Puukeokeo**, **Hanamauloa**, **Pohakuloa**, **Kaaalohi**, **Puuhoohia**, **Hapaimamo**, **Halepohaha**, or **Puulonalonga** are. I do not know the boundaries between **Keauhou** and **Kahuku** near the woods but know them near the top of the mountain. Do not remember the name of the place where **Kapapala** and **Keauhou** cut **Kahuku** off...

...Continued until August 5<sup>th</sup> A.D. 1873. Witnesses not having arrived.

R.A. Lyman  
Boundary Commissioner, 3<sup>rd</sup> J.C. [page 260]

Keopuka, August 5<sup>th</sup> A.D. 1873

Case continued by adjournment from the 4<sup>th</sup> inst. Present: J.G. Hoapili, J.D. Paris, H.N. Greenwell, H. Cooper and others... [page 261]

Palea, <sup>K</sup>. Sworn  
I was born at **Kalahiki**, South Kona, Hawaii and have always lived there; was born at the time of *Kuewai o ka Lae* [*Ku'i wai o Kalae*; ca. 1772]. Know the land of **Keauhou**. ...I know the boundaries between **Kalahiki** and **Keauhou**. My Father, Kanahuna (now dead) was appointed by **Keauhou** **Konohiki** to watch the bird catchers on our land and other lands, to see if they did not take the geese and *uwao*, which belonged to **Keauhou**. and he told me the boundaries between these lands and **Keauhou**. He said that **Kalahiki** ran through the woods; small *ohia* trees, *kapiopio*, and *mamani* to the *pahoehoe*; then you come to **Keauhou**. I do not know where the boundary of **Kauhako** and **Kalahiki** on **Keauhou** is. Thence the boundary runs along the head of **Kalahiki** to *lae aa*, in *lae aa* **Waiea** joins **Keauhou** cutting off **Kalahiki**. Thence along above the *mamani* to **Lumia**,

junction of **Honokua** (a *punawai*) water hole on a hill. I do not know the boundaries beyond this point; Have seen Umi's road, when we were on the mountain gathering sandalwood. Have heard that **Kahuku** joins **Keauhou**... C.X.d. [page 263]

Kakio<sup>K</sup>, Sworn  
I was born at **Keauhou** at the time Kamehameha came from Hilo to **Kealakekua** and from there to Honolulu, at the time of *Oku* [ca. 1804]. I have always lived here and know the land of **Keauhou 2<sup>nd</sup>** and its boundaries. I used to go after sandalwood on the mountain, with Kapohakaimokumaha (now dead). He was a *kamaaina* in the mountain and used to go across to Hilo... [page 266]

R.A. Lyman  
Boundary Commissioner 3<sup>rd</sup> J.C.

Boundary Commission met at **Keauhou**  
North Kona Hawaii August 11<sup>th</sup> A.D. 1873  
according to adjournment from the 9<sup>th</sup> inst.  
Present: J.G. Hoapili.

Waiau<sup>K</sup>, Sworn  
I was born at **Kanauwaue** [Kanaueue], North Kona, Hawaii at the time Kamehameha 1<sup>st</sup> returned from Honolulu; at the time of Palakee. Lived at **Kainaliu** until about eleven years ago when I moved to **Kealia**, South Kona [page 268]. Know the land of **Keauhou**, used to go after birds with my father, Naume, an old bird catcher and he pointed out the boundaries to me, as it was *kapu* to go after birds and not divide them with the *Konohiki*; used to go frequently not very far above here...

...the boundary runs along **Kealakekua** to **Haliilaukoa**, a place near Umi's road; Kuluahi said it reached to Umi's road, but this place is only near it. It is on the soil across *aa*, where bird catchers used to live; thence to **Kukai**, along a grove of *koa* trees, small *pahoehoe*. I do not know the points between. We did not go beyond there in olden times. We used to fight with Kau people here. Kuluahi and Kalalahu's father were chased by Kau people a little above **Pupuawai**. [page 269]

**Keauhou 2<sup>nd</sup>–Boundary Commission Volume A, No. 1:448-451**

The *Ahupuaa* of **Keauhou 2<sup>nd</sup>**, District of North Kona Island of Hawaii, 3<sup>rd</sup> J. C.

Continued from Folio 272

Honolulu, March 12<sup>th</sup> 1874  
Present S. K. Kaai

Kupakoa<sup>K</sup>. Sworn  
I was born at Holualoa North Kona Hawaii at the time of building **Kiholo** [ca. 1810] lived at Kona until the year 1867, when I moved to Honolulu and I still reside here. Know the land of **Keauhou** and a part of its boundaries. Puhi<sup>K</sup> a cousin of Keakaokawai's now living at **Kalihi**, pointed out the boundaries to me. He was a *kamaaina* of the mountain having been born and brought up there. (S.K. Kaai says he is old and sick). I do not know the boundaries at shore, only on the mountain...

...**Keauhou** 2<sup>nd</sup> does not reach to Mokuweoweo. Thence to **Pohakuhalei**, a rock on the Southern slope of the mountain. Thence down to **Puulonalona**, a hill along **Kahuku**, where **Kapua** joins **Keauhou**. I have been there. Thence towards Kona along the *mauka* edge of the woods, cutting off South Kona lands, to **Honaunau**, to a place called **Ohiakuapu**, a grove of *koa* trees that runs *mauka*. **Honaunau** takes the *koa*; thence along *mauka* edge of woods, the grove of *koa mauka* being on **Keauhou** to **Keahou**, an old lava flow, junction of **Kealakekua**... [page 449]

**Keauhou 2<sup>nd</sup>–Boundary Commission Volume B:253-259**

The *Ahupuaa* of **Keauhou** 2<sup>nd</sup> District of North Kona Island of Hawaii 3 J.C.

Case continued from March 12<sup>th</sup> 1874.  
See Folio 451 Book A.

North Kona June 8, 1874  
Case opened at the house of Chas. Hall, Honuaino North Kona on this, the 8<sup>th</sup> day of June A.D. 1874. Notice of hearing served by publication in the Hawaiian Gazette of May 20<sup>th</sup> 1874, and due notice personally served on owners or Agents of adjoining lands as far as known. Present J.G. Hoapili for applicant and Hawaiian Government.

Testimony  
Chas. Hall<sup>K</sup>. Sworn. (same witness as on **Kahuku**)  
I have lived in Kona thirty-seven years, and know the land of **Keauhou** 2<sup>nd</sup>, am a *kamaaina* of Kona and know a part of the boundaries of **Keauhou**. Kahilo, Kuluahi, father of Keakaikawai, and Kini pointed them out to me at

different times... [page 253] Going to Kau with Kini we went from **Waiio** to **Hale o Umi**, since destroyed by the lava flow. I cannot give the boundaries from **Waiio** to **Kukuioepae** as I have not been along there in the woods.

**Keauhou** cuts **Manukaa** off to the westward of **Halepohaha**. I know the boundary as I used to drive goats there. I have always heard that **Keauhou** cuts all South Kona lands off at the *mauka* edge of the woods. On the North side Kahilo pointed out the boundary as running along the base of **Hualalai**, passing Kohala side of **Huaumi (or Ahuaumi)**. He is the only one who pointed this out to me...

...Evidence taken on **Kahuku** March 13<sup>th</sup> 1873 for boundaries of **Keauhou**, adjoining **Kahuku** as Mr. Hall states that he will give his testimony just the same as at that time.

See Folio 143 and 144, Book A.

Know the land of **Keauhou** in Kona. I have often gone onto the plains above the woods and have come across from Kona to Kau twice; above the woods. It was a long time ago. Came up through the woods to **Hale a Umi**, and looked at it, it is about eight or ten miles above the woods, but was covered up by the lava flow of 1845 or thereabouts. From there I went to **Ahuaumi** up above there and slept there in a crack of the *pahoehoe*. [page 254]

The father of Keakaikawai was my *kamaaina*, from there we went to the Bay. I think **Hale-o Umi** is *mauka* of Kipahoehoe, the distance between this and **Ahua Umi** is about fifteen or eighteen miles. **Hale o Umi** is on **Keauhou**. Heard that **Ahua Umi** is on the boundary of Kau and Kona, about nine or ten miles from here. Kini was my *kamaaina* the second time I came across. Keakaikawai's father piloted me all over **Mauna Loa** and **Mauna Kea**. One **Ahua Umi** is near **Hualalai** (2<sup>nd</sup> Ahu a Umi); he told me **Kahuku** and **Keauhou** ran straight up **Mauna Loa**, following a ridge all the way...

...I could talk better native when I came across from Kona to Kau than at the present day. Came down here from **Ahua Umi**. I have been up from **Kapua** to **Ahu a Umi** and understood that **Keauhou** cuts off **Kapua** below **Ahu a Umi**. Also **Kaulanamauna** is cut off and from there the boundary of Kau and Kona runs



direct to the top of the mountain. My opinion of the direction of the line of boundary between the Districts is based on the direction at shore. There is no land in South Kohala running side by side with Kona lands, to the top of **Mauna Loa**, cut off by Hamakua. Kona and Kau run to the top of the mountain... [page 255]

...Have never heard what land Mokuweoweo is on. Have always heard that **Kahuku** joins **Keauhou mauka** and that **Kahuku** and **Kapapala** join at **Pohakuhanalei**, on the northeast slope of **Mauna Loa**, but I do not know how far this way they join. Have worked in the woods and above **Kahuku mauka** of **Waiohinu**, catching goats and heard that **Waiohinu** cuts off all the lands of **Kapapala**. I can show pretty nearly the place where **Hale o Umi** was. **Hale o Umi** was built of six stones [mounds] and was so close to the mountain that I could not see far towards Kau or Kohala. At **Ahu a Umi** on the boundary of Kona there are four or five piles of stones in a *mawae* or crack; there are two red hills in an easterly direction from **Ahu a Umi**, and a water hole near one of them. From this point it is two or three miles directly towards the sea, before you come to the thick woods... [page 256]

### **Keauhou 2<sup>nd</sup>–Boundary Commission Volume B:319-320**

Land of **Keauhou 2<sup>nd</sup>** North Kona, Nov. 16, 1874  
From Folio 259 of this book

Balance of the testimony of Komaka [Witness on land of **Kahuku**, Kau]  
From **Ka Hale o Umi**, junction of **Keauhou** and **Kahuku** I have always heard that **Keauhou** cuts off the Kona lands at the *mauka* edge of the woods. Do not know what lands run through woods. Heard **Kaapuna** ends at Ahinui, **Opihale 2<sup>nd</sup>** at Ulimau, a *punawai* about as far as [page 319] from here to Capt. Gates' house, above woods. Thence along edge of *koa* along **Opihali 1<sup>st</sup>**, thence along **Olelomoana 2<sup>nd</sup>**, along *koa* grove, thence along edge of woods along land of **Kolo**; thence along **Kukuiovae**, along *koa* grove. I pointed out this place to **Keanapaakai**. Thence to **Kukuiovae 1<sup>st</sup>** along hollow Kapai, *mauka* end of **Kukuiovae 1<sup>st</sup>**. Runs up as far as hollow extends. The Kau boundary is the Kona side of goat pen above the water hole where we got water

the first night. Thence along **Kaohe** 5, 4, 3, 2, 1, along edge of woods. **Kaohe** of Kaopua ends *mauka* of Polewai at **Kapualei**, a short distance from where we ate. The lands this side of there end at the *koa*. Have heard Pahoehoe ends at Kamakaili, the *lae mamani* in *awaawa*; thence along **Alae** to **Puuoluamanu**; thence along **Honokua** 2 to Kaopapa, a cave near the *Koa*; thence along **Honokua** 1st... [page 320]

**Kapua Ahupuaa**  
**District of South Kona, Island of Hawaii**  
**Boundary Commission Volume A No. 1 pages 242-244**

Honorable R.A. Lyman  
Boundary Commissioner  
Island of Hawaii

The undersigned would herewith make application for the settlement of the Boundaries of the following Ahupuaas & Lands belonging to Her Ex. R. Keliikolani; viz... [page 242]

**Kapualeiholaikē** [Kapua] Kona, Hawaii  
adjoining lands Okoe, Kau-  
lanamauna, Govt. & Keauhou,  
Est. Kam. V...

Your Honor will therefore please appoint a day for hearing the above application & grant a Certificate in accordance therewith.

(signed) R. Keliikolani  
per F.H. Harris  
Atty. at law  
Hilo, August 16, A.D. 1873 [page 244]

**Kapua Ahupuaa,**  
**District of South Kona, Island of Hawaii,**  
**Boundary Commission, Hawaii, Volume B page 185-189**

The *Ahupuaa* of **Kapua**, District of South Kona  
Island of Hawaii 3<sup>rd</sup> J.C.

On this the 3d day of June A.D. 1874 by adjournment from the first instant, the Commission of Boundaries for the Island of Hawaii, 3 J.C. met at the house of \_\_\_\_\_ at **Hoopuloa** in the District of South Kona for the hearing of testimony for the settlement of the boundaries of **Kapua** situated in the District of South Kona, Island of Hawaii. Application made by J.O. Dominis, for Her Ex. R. Keliikolani. Notice served by publication in the *Hawaiian Gazette* of \_\_\_\_\_.

Due notice personally served on owners or Agents of adjoining lands as far as known. Present Moi for Applicant; J.G. Hoapili for Hawaiian Government

For Petition see Folio 242 Book A.

#### Testimony

Nakai<sup>w</sup>. Sworn.

I live at **Alika**, South Kona Hawaii. I was born at **Manuka** Kau at the time of *Apape welu kamaka Haikule*, before the *hoku weluwelu*. Know the land of **Kapua**, my parents used to live on **Kaulanamauna**. I have always lived there. I moved away from there at the time of the famine about the time the first steamer came to the Islands (J.G. Hoapili says this was about the time Kamehameha III went across the mountain.) Kaaloa my grandfather, lived on all three of these lands. My parents (now dead) told me the boundaries. In old times they were very particular about the boundaries of lands. **Kaulanamauna** bounds it on the Kau side. **Okoi** [Okoe] on the Kona side, I do not know the *mauka* boundary. The boundary at the sea shore on the Kau side is at a fishing place called **Ahuloa**, there is a large rock there called by that name; thence *mauka* to **Kaana-malu**, a cave; the boundary runs along near the Kona edge of the *aa* flow, but the cave is on the Kona side of the *aa* a long distance from the [page 185] boundary. The boundary is on the Kona side of the *aa*; thence to **Kulukahi** a cave with water in it; the boundary follows along the edge of the *aa* from the lower cave to this upper one; thence to Keahialoa, a small *ulei* bush inside of the wall on the *makai* side of the Government road; the boundary leaves the *aa mauka* of **Kulukahi** and then runs up a ridge till you get to **Keahialoa**, thence to Kona side of **Alala**; this is way in the woods. The old cultivating grounds along here belonged to **Kaulanamauna**. The road is not on the boundary, it is on the Kona side of a place called Waianeki, the boundary is at a very small stream of *aa* a long way on the Kona side of **Waianeki**; thence up the Kau side of the stream to **Kawiliwahine**, a *koa* grove; the boundary passing through the middle of the grove; there is a *kualapa* running along here; thence passing through the grove the boundary runs to a place covered with grass &c. This is as far as I know the boundaries on the Kau side. I have never heard where the land ends. I do not know

any thing about the boundary on the Kona side.  
I can point out the boundaries on the Kau side.

C.X.d

Makea<sup>K</sup>. Sworn

I was born at **Alika**, South Kona, Hawaii at the time of Umikaua and now live there. I lived at **Manuka** for a while. The last witness is my wife and she was the cause of my going there. I know the boundary of **Kapua** at the shore. Keau, my father (now dead), told me that **Ahuloa** was the boundary between **Kapua** and **Kaulanamauna**. From the shore to the Government road. I do not know the boundaries; the boundary there is the *pa heiau* [temple enclosure] *makai* of the road. This is as far as I know the boundaries. I have never heard where **Kapua** ends.

C.X.d

Haolelo<sup>K</sup>. Sworn

I was born in Kau after the *oku* [1804], now live at **Kapua**, District of South Kona. In Kameha- [page 186] meha's time I lived at **Kaulanamauna**; during Governor Adam's lifetime I moved to **Kapua**. I was old enough to cook food when I went to **Kapua**. I know the *makai* boundaries. When I formerly lived there, Kila was *konohiki* of **Kaulanamauna**, and Puhi was *konohiki* of **Kapua**. Kila showed me the boundary between **Kaulanamauna** and **Kapua**.

Commencing at the sea shore, at **Ahuloa**, the sand being on **Kaulanamauna**, and the *aa* on **Kapua**; thence to the Hilo side of **Keana-malu**, the boundary is at a ridge of *aa*; thence up the ridge to a place called **Napapa**, an old cultivating ground, where the boundary leaves the *aa*, thence along the *Kualapa* to **Keahialoa** an enclosed spot with an *ulei* bush in it; an old cultivating ground at the Government road, thence to **Alula**, an old cultivating ground. This place is not on the boundary, but in the middle of **Kapua**. It is near the boundary on **Kaulanamauna**. This is all I know. I do not know the boundaries on the Kona side.

C.X.d

There is an *awaawa* on the Kona side called **Makalii** this runs *makai* to the sea. It runs from the Government road to the sea; I have forgotten the name. I do not know anything about fishing

rights. I have always heard **Kahuku** cuts **Kapua** off on the *mauka* end but I do not know where. I think **Kapua** ends *mauka* of the woods; it ends in the *ohia* woods. I do not know what land cuts it off *mauka*.

Note.

Commissioner declines to question him anymore.

Palapala<sup>W</sup>. Sworn (Rather a young woman)  
I live at **Kapua**, after I was married before I came here, it was about ten years ago when I moved to **Kapua**, and I have lived there ever since. The last witness told me the boundaries. My husband is dead. For two years previous to his death he had charge of the land. Before he was *Konohiki*, the last witness showed us the boundary. My husband was from Kau. **Ahuloa** is the boundary at the seashore on the Kau side between **Kapua** and **Kaulanamauna**. I have heard that the sand is on **Kaulanamauna**; thence to **Keanamalu**, on **Kapua**; thence along [page 187] the Kona side of a ridge of *aa* to an old resting place called **Kukuioioina**, a *kukui* tree near the cultivating ground called **Napapa**; thence up the ridge of *aa* to the Government road to an enclosed spot with an *ulei* bush in it thence to **Alula** a *kukui* grove. The boundary is on the Kona side of the grove; thence to **Alala** a place in the woods where they used to gather fern root; thence to the Kona side of **Waianeke**. I have heard that the boundaries end at **Keokeo**, a hill. I have heard **Manuka** cuts **Kapua** off. The sea bounds it on the *makai* side. The fishing rights extend out to the black sea. **Okoe** is the boundary on the Kona side. **Kipea** is the boundary at the sea shore. There is an *awaawa* there; thence up to *awaawa* to the Government road. This is as far as I know the boundaries. I have heard it follows up the road to **Makilileile** [sp?]. I have never been there. I have never heard of the boundaries *mauka* of this point.

C.X.d

Pupule<sup>K</sup>. Sworn

I was born at **Okoe**, Kona, Hema Hawaii, at the time of building the first Church at Kailua, have always lived there. My Grandfather pointed out the boundaries to me. **Okoe** bounds it on the Kona side. **Kaalapili** a point in the sea is the *makai* boundary; there is an *awaawa* there called **Mawae**; thence up the *awaawa* to the woods; to some water holes. **Waialohi** is on **Kapua**, **Pohokinikini** is on **Okoe**. **Honomalino** then bounds it. This is all I know about the

boundaries. Bounded on the *makai* side by the sea; ancient fishing rights extending out to sea. I have heard that **Ahuloa** is the boundary at shore on the South side, but between the shore and the Government road, I do not know the boundaries. The boundary at the Government road is an enclosed spot *makai* of the road.

C.X.d

Kuakahela <sup>K</sup>. Sworn

I live at **Honomalino**, was born at **Kaulanamauna** before Kukuinui, and lived there till 1848. I then married and came to **Honomalino**, and [page 188] have lived there ever since. Have heard a part of the boundaries of **Kapua**. My father in law told them to me. He belonged on **Kaulanamauna** but was *kamaaina* of a part of **Kapua**. I went with him and he showed me some and told me other points on the boundary of **Kapua**.

**Ahuloa** is at the sea shore, the sand is on **Kaulanamauna**; thence along the *aa* to **Kahepapa** where the boundary leaves the *aa* and runs up a short distance to **Keahialoa**; thence to **Uwo**, a wall with an *ulei* bush in it, at the Government road; thence to the Kona side of **Polula**; thence to the Kona side of **Alala**, in the woods; thence to the Kau side of **Puuki**, an *aa* flow; thence to and across the *aa* to *koa* woods, to a place called **Kawiliwahine** where they make canoes for both lands; thence to **Koolau** where **Kapua** ends, it is here cut off by **Kaulanamauna** and **Honomalino**, this is where *Kokoolau* grows, in the *koa*. Thence *makai* along **Honomalino** to **Mawae**; thence along the *awaawa* to **Pokinikini**, a water hole at the *mauka* corner of **Okoe**; thence along **Okoe**, along the *awaawa* to **Makalei**, at the sea shore. I can go and point out all the places I have been to and I can tell the marks the *kamaaina* showed me. Bounded *makai* by the sea, ancient fishing rights extending out to sea.

C.X.d

Pilialo <sup>K</sup>. Sworn

I was born in 1847 at **Honomalino** and have always lived there and know the boundaries of **Kapua**. The last witness' father in law pointed them out to me, when I was in the woods. **Ahuloa** is the boundary at shore, on the South side; thence *mauka* to **Keanamalu**; thence along a ridge of *aa* to **Keanipapa**, where the boundary leaves the *aa*, and follows up a ridge to **Uwo**, at the Government road; thence up to the Kona side of **Alala**; thence to **Kawili-**

**wahine**, thence to **Koolau** where it is cut off by Kau and **Honomalino**; thence *makai* to **Mawae**; thence down the *awaawa* to **Pohokinikini**, a *punawai*; thence down the *awaawa* along **Okoe**, to the sea shore. Bounded *makai* by the sea.

C.X.d

Case continued till further notice.

R.A. Lyman  
Commissioner of Boundaries 3d J.C..

For Certificate See Folio 23 & etc. I. No. 101 for costs see same folio.

Hilo June 14, 1876 Map and notes of survey filed. Could not find any *kamaaina* for boundary above woods, as I (D.H. Hitchcock) ran straight through on *aa*.

Boundaries decided to be as set forth in notes of survey Certificate of Boundaries to be issued as of today, R.A. Lyman.

For Certificate see No. 101, for costs see same folio  
Folio 231 Liber I. [page 189]

**Kapua Ahupuaa,**  
**District of South Kona, Island of Hawaii**  
**Boundary Commission, Hawaii; Volume C, No. 3 pages 231-232**

For evidence see  
Folio 185. Book B, or No. 2.

Land Boundary                      No. 101

Commission                      Hawaii 3d J.C.

Certificate of the Boundaries of **Kapua**, District of South Kona, Island of Hawaii, Third Judicial Circuit.

Upon the application of H. R. H. R. Keelikolani by F.H. Harris, Atty. at Law and by virtue of the authority vested in me by law, as Sole Commissioner of boundaries for the Island of Hawaii 3d J.C.

I hereby decide and certify the boundaries of the *Ahupuaa* of **Kapua**, Situated in the District of South Kona, Island of Hawaii, to be as hereinafter set forth.

Given under my hand at Hilo, Hawaii  
This Fourteenth day of June A.D. 1878.

R. A. Lyman  
Commissioner of Land Boundaries  
Third Judicial Circuit.

Boundaries of **Kapua**

Commencing at the Sea Coast on the Edge of *aa* flow boundary line of **Kaulanamauna** and running:

1. North 42 ½ ° West 14,000 chains along the coast and across the *aa* flow [page 231];
  2. North 17° West 38.20 chains along coast;
  3. North 33° West 28.25 chains along coast;
  4. North \_\_\_\_\_ 28.40 chains along coast to cocconut grove No. 1;
  5. North 4° East 15.88 chains along coast to cocconut grove No. 2;
  6. North 13° West 52.00 chains along coast to long point;
  7. North 16 ½° East 76.20 chains to *Ahu* on *aa* on *Mawae*;
- Thence following *Mawae* along boundary of **Okoe**

As follows:

8. North 64° East 153.20 chains to *ahu* on rock along *Mawae*;
9. North 59° East 41.00 chains along *Mawae*;
10. North 48 ½° East 24.00 chains along *Mawae*;
11. North 37° East 20.00 chains along *Mawae* to road;
12. North 54° East 420.00 chains through woods along **Okoe** and **Honomalino** to boundary line of **Kahuku**;
13. South 16° East 34.00 chains to *ahu* on boundary of **Kahuku**;
14. South 9° East 26.00 chains to *ahu* on boundary of **Kahuku**;
15. South 31° West 413.00 chains along line of **Kaulanamauna**;
16. South 44° West 339.00 chains along line of **Kaulanamauna**; to coast & point of Commencement and containing an area of 14,240 Acres.

R.A. Lyman

Commissioner of Land Boundaries  
Third Judicial Circuit.

Surveyed by D.H. Hitchcock...[page 232]

**Kahuku Ahupuaa,  
District of Kau, Island of Hawaii,  
Boundary Commission, Hawaii, Volume A, No. 1:122-158**

The *Ahupuaa* of **Kahuku** District of Kau  
Island of Hawaii, 3rd J.C.

On this, the eleventh day of March A.D. 1873 the Commission of Boundaries for the 3<sup>rd</sup> J.C., Island of Hawaii met at the Court House, **Waiohinu**, Kau, pursuant to notice in *Hawaiian Gazette* of February 5th and *Au Okoa* of February 6th, 1873, and notice personally served on owners of adjoining lands as far as known for the hearing of the application of **Kahuku** Ranch Co. for the settlement of the boundaries of *Ahupuaa* of **Kahuku** situated in the District of Kau, Island of Hawaii.

Present: G.W. Jones; L. Kaina; W.H. Reed and  
C.E. Richardson on part of applicants.

J.G. Hoapili for Crown Commissioners, Her Excellency  
R. Keelikolani, for Districts of Kona and Kau  
and Government Lands in Kona.



J. Kauhane for Hawaiian Government, W.T. Martin for self and leasee of land of **Pakininui**, L.R. Macomber and others for self, and J. Kauhane for Kau Lands.

Petition read as follows

**Kahuku** April 8<sup>th</sup>, 1872  
(Copy)

Hon. R.A. Lyman

Hilo

Sir:

We wish to apply to you as the Boundary Commissioner for the Island of Hawaii for a settlement of the boundaries of the land of **Kahuku** Kau, recently purchased by us.

As near as we can ascertain, the lands joining **Kahuku** on the Kona side are: **Manuka**, belonging to the Government  
**Kaulanamauna**, belonging to the Government  
**Kapua**, belonging to the Govss. of Hawaii  
Okoe, belonging to the Government  
Honomalino, belonging to the Crown  
Omokaa, belonging to the Government  
Kalihi, belonging to the Government  
Milolii, belonging to the Government  
Hoopulooa, belonging to the Government  
Anapuka, belonging to the Government  
Papa 1<sup>st</sup>, belonging to the Government  
Papa 2<sup>nd</sup>, belonging to Kaopua  
Alika, belonging to the Government  
Kipahoehoe, belonging to the Government [page 122]  
Kaapuna, belonging to Kahaulelio and the land of **Keauhou** in Kona, the owners of which we are unable to give, but which we understand joins **Kahuku**, on the top of the mountain.

On the Kau side the lands adjoining **Kahuku** are:

Paakini Nui owned by His Majesty  
Kiao, owned by W.T. Martin  
Palena, owned by W.T. Martin and B. Naihe  
Na Keaa owned by Govt.  
Waiopaa owned by Govt.  
Mohoai owned by Govt.  
Puueo owned by Govt.  
Kawela owned by Govss. of Hawaii  
Waiopua owned by L. Macomber  
Kau owned by Government  
Napapohaku owned by Government  
Kiolakaa owned by Government  
Waiohinu owned by Crown  
Hionaaa owned by Government

Kalaiki owned by Government  
Na Hilea owned by His Majesty  
Ninole owned by Government  
Wailau owned by Government  
Punaluu owned by His Majesty  
Mohokea owned by Govss. of Hawaii  
Moaula owned by Government  
Makaka 2d owned by Government  
Paanau owned by Mrs. Bishop  
Kauhuuhuola owned by F.S. Lyman  
Wailoa owned by F.S. Lyman  
Keaiwa owned by F.S. Lyman  
Kaalaala owned by Government  
Kapapala owned by Crown

Very Respectfully yours  
(Sig) Kahuku Ranch Co.

Testimony

W.T. Martin Sworn

I live at **Waiohinu**, Kau, Island of Hawaii. Have lived here twenty years, and am interested in a number of lands in Kau. They are **Kiao**, owned by me; **Manukaa** and **Kaulanamauna** and **Pakiniiki**, which I lease; **Keaa**, owned partly by me and partly by Government; and **Waiohinu**, leased from Crown Commissioner and Kiolaku. Have leased the *pulu* privilege on **Kaalaiki** from the Government Land Agent, Kauhane... [page 123] ...Have heard of boundaries of **Manukaa** having leased and had charge of said land for about ten years; had been catching wild goats there. Have been told that the boundary at the beach is at a point called **Kalaehumuhumu** between **Manukaa** and **Kahuku**; thence *mauka* to a place called **Papale o Kamaiwa** near the old road. I have not seen the place; the boundary of the new road is at a place called **Puuohilea makai** of the road. Some men that were at work showed it to me. *Mauka* of said road is a large hole. Have heard the *mauka* boundary is at a place called **Puulonolona**, have since heard that the boundary at the road is at **Kahiawai**; heard this after the land was sold to Brown; have since heard that the boundary is between **Puuohilea** and **Kahiawai**, but do not remember the name of the place; did not hear of the last named boundary in old times. Kauwaa<sup>K</sup> and Keaka<sup>K</sup> pointed out boundaries to me. Kauwaa<sup>K</sup> told me **Manukaa** was cut off by **Keauhou** and **Kaalaala** at **Pahoehoeopoha**.

Have heard within the last few days from Nauka<sup>K</sup> about the boundaries of **Keauhou**. I do not know the boundaries of **Manukaa**; the only places I have been to on the boundaries are **Puuohilea** and **Papaleokamaewa**. Cannot say what part of the point at sea shore is called **Kalaehumuhumu**.

I have seen an advertisement by Keka *ma* in the paper (I do not know what year it was printed) in which they mentioned a great many names of lands; **Puuulaula**, a red hill; **Kalaehumuhumu**; **Puulonolona**, also a place at the road, the name of which I forget. Do not remember the names of the other places. I was Government agent of the land of **Manukaa** at the time it was leased to Keaka *ma* by the year. I have had conversations with Mr. Jones about boundaries of lands and have told him the names of lands in Kona adjoining **Kahuku**. I think it was in the Coffee shop at **Waiohinu** where the conversation took place. I can point out boundaries of **Manukaa** [page 124] on the new road. Messers Spencer and Haley had an interest in **Kahuku** and **Manukaa** at the time the road was built...

L.R. Macomber Sworn

I live in **Kau** in the District of Kau. First came into said place in the year 1853. As a witness Mr. Jones has not talked to me in reference to the boundaries of **Kau**. I have lived on **Kahuku** some length of time and know some of the boundaries. Am a carpenter by trade and have been in the habit of going into the woods after timber. Went after shingles for the Mission House in 1854 and the natives told me the Koa woods were on **Kahuku** and the *ohia* woods were on **Waiohinu**... [page 125]  
...Have heard a water hole called **Waiokalala**, situated on the old road pointed out to me as the boundary between **Kahuku** and **Manukaa**. I would know the place if I saw it, as the natives have shown it to me a great many times. A large rock at a point on the Kau side at Sea-shore is the boundary of **Manukaa**. I think the name of the point is **Kalaehumuhumu** but have not been there. Have always heard **Kahuku** joined **Keauhou** in Kona on the mountain and **Kapapala** on the other side. An old man at Oloo told me **Kahuku**, **Kapapala**, **Keauhou** of Puna, and **Waiakea** all join at **Makapana**, a round hill on the Hilo and Puna slope of **Mauna Loa**. Kenoi<sup>K</sup> said the same. Have always heard that **Kahuku** cuts off all Kona lands until it joins **Keauhou** on the slope of **Mauna Loa**. I do not know the Boundaries; it was said to contain over 300,000 Acres. I worked for Rev. Mr. Kinney on **Kahuku**. He obtained the privilege of cutting timber from Mr. Armstrong, who was then Minister of Public Instruction...

W.T. Martin Recalled.

I have never heard of any *Ili aina* in **Kahuku** at Sea-shore but that **Kahuku** extends from **Pakininui** to **Manukaa**. [page 126]

Kumauna<sup>K</sup>. Sworn

I was born at **Kahuku** before Kamehameha 1<sup>st</sup> went to Maui, and before the building of the *Peleleu* canoes [before 1795]. My parents told me the boundaries of **Kahuku**. At night we used to go out and catch birds to eat, and I asked them the boundaries as I did not wish to trespass on other lands, as we belonged on **Kahuku**. If people of other lands came onto **Kahuku** their birds and property were taken away from them and given to our chiefs. I know the land of **Manukaa** and the boundary between said land and **Kahuku**; my grandfather told me; *Kalaehumu-humu* a ridge of stones at a point at the Seashore is the boundary between **Manukaa** and **Kahuku**. Thence the boundary runs *mauka* to **Pohakuloa**, a large stone, thence *mauka* to **Puainako**, a resting place on the old road, thence *mauka* to **Kahiawai**. A swail runs from the beach up to this place and belongs to **Manukaa**. The boundary of **Kahuku** being on the upper edge toward **Waiohinu**, said boundary not reaching the swail until you get onto the new road, thence from **Kahiawai** to **Kahonopu** (a large rock); thence to a large hole or crater, with trees growing in it, called **Puuohia**; thence runs along the *pali* to a cave called **Kumualii 1<sup>st</sup>**, thence the boundary between **Manukaa** and **Kahuku** runs toward Kona to **ana Ohialele** (a cave where natives used to live). **Kapua** being on the *makai* side and **Kahuku** on the *mauka* side, above the woods on the *pahoehoe*; thence to a large hill named **Puuelele**, woods being on the *makai* side of said hill. Thence to **Kumualii 2d**, a cave where **Kalahiki** joins **Kahuku**. Thence to **Heiau** of **Kaakaioakaaha**; thence to a cave **Keanahua**, where **Kahuku** joins **Keauhou**, thence to **Ahu a Umi**; thence to **Maunalei** on **Mauna Loa** where **Kahuku** joins Hamakua... have heard Keaka, Nauka, and another wish to put the boundary of **Manukaa** way into **Kahuku** and I have come to tell the true boundary and *pali aku*...

(Note Witness asked to go to **Kahuku** and point out the boundaries; he is old and deaf; applicants request that as the old man seems tired and confused his testimony be taken at **Kahuku** on some other day. Thursday, the \_\_\_\_\_ set to take the testimony at **Kahuku**. [page 127]

Witness is a very old man and is tired and confused, is unable to hear or answer the questions put to him.)

Kamakana<sup>K</sup>. Sworn

I was born on **Kahuku**. Am *Kamaaina* of the lands of **Kahuku** and **Manukaa**, having lived on both lands. I am now living on lands this side of **Kahuku**; was quite large when they collected Sandal wood. My Great Grandparents, Punoho and Nahea, had

charge of **Kahuku** and **Kiao**. Kumauna and Nauka told me the boundaries when I lived on **Kahuku** years ago.

Boundary, as told me by them, commences at Sea beach at a place called **Kalaehumuhumu**; thence to **Pohakuloa**, a large rock. Thence to **Puainako** on the old road to Kona; thence to **Kahiawai** a hollow this side of said hollow at the new Government road to Kona, is where **Kahuku** joins **Kahiawai**; thence to **Kahonupu** a hill; thence to long rock called **Pohaku-*loa***; thence to a hill called **Kahapaimamo**; thence to a hole or crater named **Puuohohia** [Puu Ohohia], where there are whirlwinds (Note: I asked Nauka what lands are here; He told me it was the *mauka* boundary of **Manukaa**), this is *mauka* of the *koa* woods, on the *pahoehoe*; thence to **Kumualii**, a cave; thence to a hill; thence to cave of **Ohialele**, where the natives used to sleep; said cave is *mauka* of **Honomalino**. This is as far as I went with Kumauna and Nauka. They showed me the boundaries to said cave and told me **Kahuku** went clear to **Keauhou**.  
We always used to take goats off of the mountain beyond this cave of **Ohialele**, without opposition from anyone... [page 128]

...Kumauna and Nauka told me the boundaries of **Kahuku** from the shore of **Manukaa** to **Ohialele** is **Honomalino** (Note that is what I have testified to today.) And the same as to the east side of **Kahuku**. I can go and point these boundaries if you wish. **Ohialele** is *mauka* of **Honomalino**, not of **Kapua**. **Manukaa** is not very wide before you come to the land of **Kaulanamauna**. Nauka<sup>K</sup> told me **Kaulanamauna** joins **Honomalino** in the *Koa* woods, cutting off **Kapua** and joining with **Kahuku** at Ohialele.

Note: Kona witnesses having come a long way are now to be brought in and testify to Kona boundaries. The Kau boundaries to be taken up afterwards.

Nauka<sup>K</sup>. Sworn<sup>[11]</sup>

I was born at **Kalihi** in South Kona at the time of Kauhivolua, and after the building of the **Peleleu** Canoes [ca. 1795]. Kaanalohe<sup>K</sup> and Kakoo<sup>K</sup> a son of his, both guides on the mountain, pointed out and told me the boundaries of **Kahuku** at the time I used to go on the mountain with them.

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<sup>11</sup> **Nauka**: It will be noted in the testimony of this witness that questions were raised as to the validity of his testimony. On March 12<sup>th</sup>, 1873, Nauka, returned to the Commissioner, and swore that his testimony had been “untrue.” This said, there is some confusion as to what the witness actually meant in his “confession,” as locations he named, such as “Hapaimamo,” are given by other witnesses. The testimony is included here, as there are significant points raised, which are of importance to the descriptions of Manukā and practices on the mountain lands.

(Note Witness kept saying he came to testify for his *Haku*, pointing to W.T. Martin. Was asked who his *Haku* was? And replied W.T. Martin sent for me.)

Commencing at the sea shore the boundary between **Manukaa** and **Kahuku** is at a place called **Kalae-humuhumu**; Thence to **Puulauula**, a red hill on the *pahoehoe*; thence to **Kaoma**, a *lae aa*; thence to Halepulekahiko [the old church]; thence to **Papalekumaiwa**, *makai* of the old Government road; thence to **Kamokulimu**, a cave of water on the *mauka* side of the New Government road; thence to **Haawikiaiki** [sp?], a point of trees (*lae laau*); thence to **Hinaawaawa**, a hollow [page 129] on the Kau side of a hill called **Puulonalona**; thence between two hills; thence the boundary runs between two hills called **Puukuloa**, one hill being on **Manukaa** and the other on **Kahuku**. Thence to **Kapoalaala**, a brittle shiny lava which breaks through when stepped on. Here **Manuka** and **Kahuku** end. The *uwao* [*uwau*] all belonged to **Kahuku**, save a few in the woods which belonged to **Manukaa**; the geese all belonged to **Kahuku**.

**Kaalaala** of Kau cuts off **Manukaa** and **Kahuku**, and joins **Keauhou** of Kona. The *pahoehoe* near the edge of the woods, on the Kau side of **Kapeleoike**, is the boundary of **Kahuku** and **Kaalaala**.

Question. Do you solemnly swear that the above statement is true? That the *pahoehoe* near the woods on the Kau side of **Kapeleoike** is the boundary of **Kahuku** and **Kaalaala**?

Witness would not answer the question, but avoiding it kept on telling about other boundaries. After being warned several times he was fined for Contempt of Court.

**Kapeleoike** is an old lava stream from the top of the mountain into the woods and is the boundary of **Waiohinu**. **Kaalaala** cuts off **Kahuku** and **Manukaa** at the shiny *pahoehoe*. Just above the woods, **Waiohinu** is cut off by **Kaalaala** and not by **Kahuku**. **Puuhooia** is the boundary between **Kaulanamauna** and **Manukaa**; said place belongs to **Manukaa**. **Kahuku** is cut off on the Kona side by **Manukaa**. The *pahoehoe* called **Kaalohi**, is the *mauka* boundary of **Kahuku** and **Kaalaala** runs along said *pahoehoe* and cuts off **Kahuku**. **Kapapala**, **Hilea** or **Punaluu** do not come near **Kahuku**. **Waiohinu** cuts off **Kahuku** on the Kau side at **Kahoolio** on **Kapeleoike** at a large rock called **Kapalio** near the upper edge of woods. Half of the **Peleioike** running into the woods belongs to **Waiohinu** and half to **Kahuku**. This is in the *koa* woods. From there I have not come down on the boundary and do not know the boundaries *makai*; have been there many times. I do not know the boundaries of **Pakininui**... [page 130]

Keaka told me to come and give correct evidence as to the boundaries between **Manukaa** and **Kahuku**; he said Martin sent for me. Had some conversation with Martin in regard to boundaries but no one has told me what to say. (I stated about **Kaalaala** cutting off all Kau lands clear to **Manukaa** of my own knowledge. I lived on **Manukaa** during Kamehameha 1<sup>st</sup> reign, at the time of Kuewaioka Lae [Kui wai o Ka Lae, ca. 1772], and was old enough to cook food at that time. Know the boundaries above the woods, but not in the woods. Know Kamakana<sup>K</sup> having lived on **Manukaa** with him, but never went with him or showed him any boundaries. Know a place called **Peahi** on **Kahuku** in the centre of the *pahoehoe*, *mauka* of the Koa forest; the *Hapu* [*Hapuu*] is very large there. There is a grove of Koa trees Kau side of this place, but no water in the vicinity. **Halepohaha** is *makai* of this place toward Kona; **Halepohaku o Umi** is at that place. **Puainako** is a place on this side of the old road to Kona; this side of **Kahiawai**, an *awaawa* in the centre of **Manukaa**. The only place called **Pohakuloa** is an *Ahua pohaku* near (a good ways from) the shore *mauka* of **Puuapele**, two large hills on shore way in the land of **Manukaa**. Another place called **Pohakuloa** is a large rock in the centre of **Manukaa**. *Mauka loa*, a *puu mauka* of that is called **Hapaimamo**, said place taking its name from the color of the earth and stones being like to the yellow feathers of the *Oo* and the black feathers of the *mamo* bird, like on *amakihi*, *iiwi*. (I have never made any different statement than the above.)

**Keauhou** comes across, *mauka* of **Honomalino** and joins **Manukaa** cutting off **Kapua** in the woods. **Kaulanamauna** runs to the cave **Kumualii** above the woods, cut off by **Honomalino** and **Manukaa**. **Puukeokeo** is at the shiny lava on the boundary between **Keauhou**, **Manukaa** and **Kaalaala**; thence **Keauhou** and **Kaalaala** run to a large red hill called **Puuulaula** near **Mauna Loa**; half way up the mountain on the Kona side there is a high ridge of stones running up the mountain. **Kaalaala** is on one side of this ridge and **Keauhou** [is on the] Kona side... [page 131]

I was born at the time of Kauheeholua they had around the island. Kalauni in Kohala and Kanihokawala at **Manukaa**, before *Kalaiana o ke Kiamoku* [making the sailing ship] at **Honaunau**. I was old enough to cook food at the time of the building of **Kiholo** [ca. 1811].

Keakaokawai<sup>K</sup>. Sworn

I was born at **Kaawaloa** shortly before Kamehameha 1<sup>st</sup> death [ca. 1818] and now live at **Hokukano**, North Kona. I know parts of the boundaries of **Kahuku**, **Maunukaa**

and **Honomalino**. **Keauhou** of Kona runs up to **Mokuaweoweo**. Kapapala comes to the crater on the other side. **Humuula** and **Kaohe** join **Keauhou** at **Puukulua** on the plain between **Mauna Kea** and **Mauna Loa**. **Humuula** comes up the side of the mountain below **Pohakuhanaiei**. This rock is a long way from **Mokuaweoweo**. **Kapapala** comes near to this rock. **Pohakuhanaiei**, said rock was lost sight of during the earthquake time [1868]. There is a hill there now. I have been up there catching goats since the change made by the earthquake which was in 1868. **Kahuku** comes to this place. The steam first showed itself up there and afterwards the lava flowed out in the woods of **Kahuku**. A new crater *makai* of **Pohakuhanaiei** is on the boundary between **Kahuku** and **Keauhou**. When we were upon the [page 132] mountain. **Honomalino** does not join **Kahuku**. **Keauhou** is the only land in Kona that does join it.

The *mauka* boundary of **Manukaa** joining **Keauhou** at a grove of *Koa* and *Mamani* trees, a short distance above the *koa* woods at a cave called **Kanupa** where Natives used to sleep, thence follows up a ridge of *aa* to the hill where **Pohakuhanaiei** used to be.

I have not seen **Halepohaha**, but have heard that it is on **Kahuku**. The water on **Mauna Loa** is in a crack near **Mokuaweoweo** and is always frozen over. Said crack is on the Kona side of the crater...

...I went up to **Kaulanamauna** with my father and he pointed out the *mauka* boundaries of **Manukaa** and **Kahuku**, joining **Keauhou**; thence the boundary between **Kahuku** and **Keauhou** runs up a ridge of the mountain. We were after birds at that time and I have never been there since. I know the boundary well, up toward **Pohakuhanaiei**, but cannot tell where it is near the woods...

...Witness has been quite sick for several days, is tired and requires rest. Court adjourned till 12<sup>th</sup> inst. as it is now Eleven O'clock at night.

(Sig) R.A. Lyman  
B.C. 3<sup>rd</sup> J.C. [page 133]

### **Waiohinu March 12<sup>th</sup> 1873.**

Boundary Commission met according to adjournment from the 11<sup>th</sup> inst; nine o'clock A.M.

Nauka<sup>K</sup>. His confession.  
All the testimony I gave yesterday is untrue. I make this statement, that I may correct what I said.

The boundary at **Kalaehumuhumu** is correct, but all the testimony I gave in reference to the boundaries



between **Manukaa** and **Kahuku** is false, and also what I stated in reference to the boundaries between **Kaalaala** and **Kahuku** and between **Waiohinu** and **Kahuku** is untrue.

I solemnly swear that this statement is true and that the one I made yesterday is false.

Keaka<sup>K</sup> is the person that told me to come here, but all that I said was of my own free will. No one tried to influence me, and I have now asked a hearing that I might confess and do away with my fault.

(Note) Nauka<sup>K</sup> Witness of yesterday having asked a hearing; it was granted by the Commissioner.

Naihe<sup>K</sup> Sworn.

I was born at Kohala, came to **Kahuku** in 1847 and have resided on **Pakini** or **Kahuku** most of the time since. I have been in the habit of catching wild goats on **Kahuku**. Keaka<sup>K</sup> was my first *kamaaina* and pointed out the boundaries to me. We lived at a place called **Puueo** and first went after goats on the *pahoehoe* called **Kamania**, on **Kahuku**. Keaka said a place called **Kamiloaina**, beyond **Puainako** belonged to **Kahuku**. **Kahiawai** was on **Kahuku**, but if the wild goats went beyond the *awaawa* of **Kaheawai** we had to let them go as beyond that was on the land of **Manukaa**. Keaka, Kila, and others were with me at **Halepohaha** catching goats. We used to go as far as **Puulonalona** and **Kapuhonu** but beyond that they said the goats belonged to **Manukaa**. On the side toward Kona, we used to go *makai* of **Puuohooia** [Puu Ohohia]. Kila<sup>K</sup> who was *kamaaina* there said that the land below the *Koa* grove called **Kaewa**, belonged to **Manukaa**. At another time we went to **Kumualii** cave and slept there all night. In the morning we went as far as **Ohialele**, after goats. They said it was on **Kahuku**. We could look down to **Palilua** in Kona, from there. Keaka at that time lived on **Kahuku**; he moved onto **Manukaa** since 1860. [page 134]

We used to go after goats when the Board of Education owned **Kahuku** and also when Mr. Harris owned it. Have heard that Keaka advertised changing the boundary of **Kahuku** after he had moved to **Manukaa**. The boundary between **Paakini** and **Kahuku** at Sea shore on the east side of **Kahuku** is between **Kaunueaea** and **Palaki** is on **Kahuku**, a pile of stones marked the line thence to **Kaulukaumaha** where a pile of stones marks the boundary...

Kumauna<sup>K</sup> was the *kamaaina* who pointed out these boundaries to Mr. Alexander when we went to **Ohialele**. We here told him the boundary of **Kahuku** went to **Ahu a Umi**.

We used to go after goats on the Kau side of **Kahuku** and were told **Waiohinu** was *makai* of **Kapeleaike**. We went after the goats on the *pahoehoe* which was said to belong to **Kahuku**, said *pahoehoe* being above **Punaluu** and **Moaula**. Was told the woods belonged to other lands. Have been to **aa Poochina**, heard that **Kapapala** and **Kaalaala** join **Kahuku** there...

If goats ran below **Kahipa** near **Punalonalona** below the *koa* groves, they were on **Manukaa** and the same way, going to **Kumualii** and **Ohialele**. **Kahuku** extends nearly to the woods and I have always heard that **Puukeokeo** belongs to **Kahuku**. The kamaainas told me all South Kona lands [page 135] were cut off by **Kahuku**. Kumauna's son, and Kila, now dead, showed me the boundaries...

...I first went after goats when Mr. Armstrong had charge of the land, and have been in the habit of going every year since. We used to go in gangs of eight or ten. Have been to **Ahu o Umi** and **Umi road**. Said road crosses **Kapapala**, from there you can look down on **Punaluu**. It is way above the woods. Was told the woods belong to **Waiohinu**. We went where we could see the *aa poochina*, but did not go to it.

Have been with Kenao<sup>K</sup> after goats, a few times, went with him on **Pakininui** boundary when it was surveyed. Went near enough to *aa poochina* to see dry trees, but was several miles off from it. The **Heiau** of Umi is at **Halepohaha** on Umi road. Know **Ahu o Umi** in Kau toward **Kapapala** also the famous one in Kona.

L.R. Macomber wishing to correct a name of a place that he gave yesterday, is allowed a hearing. Says:

There is a water hole near a hollow, said hole was called by me **Waiakalala**, the real name is **Kaheawai**, it is near the boundary of **Manukaa** and **Kahuku**.

Kenoi,<sup>K</sup> Sworn.

I was born on **Kahuku** and lived there until I was 19 years of age. Since then I have lived in Honolulu, twenty-one years. Kahikilani, my father (now dead), told me my age. My older brother[s] Kaana, Kila, Kaleo and Kalua showed me boundaries when we went to catch wild goats. They showed me the boundaries between **Kahuku** and **Manukaa**. I had to chase the goats for them, as I was a boy.

**Kalaehumuhumu** is the boundary on the old road at shore. Thence the boundary runs to **Pohaku-loa** to **Puainako**, thence to **Kahiawai**, an *awaawa* on **Manukaa**. This side of said *awaawa* is **Kahuku**;

thence the boundary runs to **Kahonopu**, a hill; thence to **Puuohoohia** [Puu Ohohia]; from thence the boundary turns [page 136] toward Kona and runs to **Kumualii**, a cave in a grove of trees; thence to **Ohialele**, a cave; **Kahuku** being *mauka* and Kona lands *makai* of said cave, which is situated in a grove of small trees; thence the boundary runs to **Puueleele**. Was not told the exact spot called **Puueleele**. We slept at **Ohialele** and went after goats to **Puueleele** as they said our goats were at that place; thence the boundary runs to **Kumualii**, a cave; thence to **Kakaiokaaha**, a *heiau*, and stone houses; thence to **Keanaohua**, a cave. I went as far as this place and could come back in a day to **Ohialele** by cutting across the land. I do not know what land in Kona cuts off **Kahuku**. Have heard that **Kahuku** runs to **Ahuaumi**. **Keanaohua** is some distance above the woods; between the woods and the mountain. I do not know the boundaries of lands on the top of the mountain or what land joins **Kahuku**. Have never been on the **Kilauea** side of the land above the woods, and do not know the boundaries there...

... The goats run all over the land, and so we used to go to all these places after them. **Kahonopu** is in the middle of the woods at **Puuohoohia**. At this place the trees are very small. We used to chase the goats when they went onto Kona lands. We did not go near **Ahuaumi**.

L.E. Swain Sworn

I have lived at **Waiohinu**, Kau, for the last ten years. I am a *kamaaina* on part of **Kahuku**, having lived there over three years catching wild goats and picking *pulu*. We used to catch goats on the mountain, and also toward the shore near the **Manukaa** boundary. I saw the plot of lower part of **Kahuku** boundary between **Manukaa** and **Kahuku** was at **Puupele** on sea shore, toward Kona and runs straight up through the road, *awaawa*. Keaka told me the boundary at shore was at a small hill on Kona side called **Kalaehumuhumu** and runs up to large *awaawa* at the Government road. Charley Spencer also pointed out this same *awaawa* to me the first time I went [page 137] to Kona, and told me it was the boundary of **Kahuku** and **Manukaa**. It is the largest *awaawa* from **Kahuku** *pali* to **Manukaa** houses; and is on the old road. I do not know the name of it. When I was picking *pulu* on **Papa** and **Honomalino** in Kona, in the years 1869 and 1870, Nauka told me **Kahuku** joined **Honomalino** just above the woods. I asked, as I wished to catch goats on the mountain, but he said the mountain belonged to **Kahuku** and that **Manukaa** did not run onto the mountain or have any goats there. I also had some conversation with Malaihi about it. I went as far as **Waiahiki**, it is just above the woods on the land of **Manukaa**. I have always heard

that **Kahuku** cuts off all Kona lands, and at the boundary of **Keauhou** there is quite a large pile of rocks.

Kaiwi and Naihe told me about boundaries. At this point Kaiwi said he had seen the place and Kumauna was the one who told him it was the boundary.

After Keaka left my employ, he said the boundary of **Manukaa** was about two or three miles this side of where he pointed it out while with me. He moved to **Manukaa** and put a notice in the papers about the boundaries. The Browns, when they owned **Kahuku**, depended on the plan of lower part of land as surveyed by Alexander for their boundaries. I have seen the *ohia* tree in the woods which is marked. I understood it was the boundary between **Puueo** and **Waiohinu**. Kalakalohe said all the *koa* woods belonged to **Kahuku**. I do not know the boundaries on **Kapapala** side... [page 138]

Note.

J. Kauhane, Government agent declined to examine witness as he was much too young when on the mountain to learn anything of the boundaries of the lands; but agrees to the boundaries of **Manukaa** as given by Kamakana *ma* and to boundaries of **Pakininui**.

Commission adjourned to meet at **Kahuku** on the 13<sup>th</sup> Inst. at nine o'clock A.M.

Kahuku March 13<sup>th</sup>, 1873

Boundary Commission met according to adjournment

Kumauna <sup>K</sup> States: ... [page 140]

From *mauka* boundary of **Manukaa**, **Kahuku** cuts off all the Kona lands above the woods to a cave called **Ohialele** and to **Puueleele**. Kapuna [**Kapua**] comes near this hill; thence to **Kumualii**, a sleeping place. **Kalahiki** is *makai* of said place, in the woods; thence to *heiau* **Kakaiokaaha** (*he heiau no Umi*) the place there is called **Kaalaehu**, where the people used to go down after food and water; thence to **Keanahua**, and a little beyond this place **Keauhou** joins **Kahuku**; thence the boundary between **Keauhou** and **Kahuku** runs *mauka* to **Ahuaumi**; thence to (**Maunalei**) or a large rock called **Pohakuhana-lei**.

I have been told by my grandparents that **Kahuku** extends to **Ahuaumi**. Have been as far as **Keanahua** but could not see **Ahuaumi** from that place.

Hooupu told me these boundaries. He said **Pohakuhana-lei** was the *mauka* boundary of **Kahuku**.

Nauka <sup>K</sup> was very young at the time of **Kue wai o ka Lae**, he has never been with me on the mountain.

Kamakana and my children have been frequently with me, and I have told them the boundaries.

**K[ɛ]janahua** is a small cave where we used to camp situated on the *pahoehoe* and *aa* nearer the woods than the mountain.

The sea bounds **Kahuku** on the *makai* side and the land had ancient fishing rights. The cave **Kanupa** is between **Puuolonolono**, **Puukeokeo** and **Pohaha** on the *aa*; a hill called **Hapaimamo** is on **Kahuku** and the boundary between **Kapuhonu** and [page 141] **Puuohia** [Puu Ohohia] runs *makai* of this hill. I am an old canoe maker.

C.X.d

**Kahuku** is an *Ahupuaa* of Kau, Hawaii. I am a *kamaaina* of Kau and used to follow the bird catchers. The children of Hoopuu told me the boundaries.

Kaneakakaiuli<sup>K</sup> used to go into the mountain with his father. Keawekoa was the husband of Kaahaiea, daughter of Kaneakakaiuli<sup>K</sup> parents of my wife. Ohuli<sup>K</sup> was one of the old *kamaainas*. **Kumualii 2<sup>nd</sup>** is where the Hamakua natives had the fight, when they came onto **Kahuku** after birds.

In ancient days the people of **Kahuku** did not go fishing, but were after birds of all kinds to eat and this is the reason all the land on the mountain belonged to **Kahuku**. My *makuahonoai* and others always took their weapons with them as they used to have fights when they found people from other lands catching birds. The sandal wood belonged to **Kahuku**. There was none in Kona except on **Kapua**, and when the other Kona people came on **Kahuku** after it the **Kahuku** people would take it away. **Kaalaala** had scattering *koa*. \_\_\_[blank]\_\_\_ had large *koa* on it. **Kapua** and **Honomalino** are *makai* of **Ohialele**. **Puueleele** is a small hill. I do not know for certain what land is *makai* of it. Have heard **Papa** and **Opuloa** [Hoopuloa] are. It is not far from the woods or from **Kumualii 2<sup>nd</sup>** (small cave). From this point you can see the sea breaking on the points of **Kalahiki** and along the sea shore. I do not know the name of the land joining **Kahuku** at this place. **Kakaiokaaha heiau o Umi** on the road to Kona. **Kaala o Ehu** a small *heiau*, there are many stone houses there but I do not know the name of the place or land...

...There are **Hale o Umi** at **Halepohaha**, also a large number of them at the *heiau*, have not heard of any **Ahu o Umi** or **Kauhale o Umi** near **Pohakuhanalei** (Note Witness is old, deaf and feeble, suffering with asthma and has to rest frequently.) [page 142]

C.X.d by Kauhane. **Kakaiakaaha** on the boundary of **Kaalaala** and **Kahuku**, is a small *heiau* on the *pahoehoe* above the woods. One of the stories of ancient days is, that a Chief got a great many birds on an *ohia* tree and carried it from the *heiau* **Kakaiokaaha** to **Puulonolono**...

C. Hall Sworn (Witness J.G. Hoapili)

I live at **Kainaliu**, Kona Akau, have lived on these Islands over forty years, sometime in Hilo, but most of the time in Kona. Know the land of **Keauhou** in Kona. I have often gone onto the plains above the woods and have come across from Kona to Kau twice above the woods. It was a long time ago. Came up through the woods to **Hale o Umi** and looked at it. It was about eight or ten miles above the woods, but was covered up by the lava flow of 1845 or thereabouts, from there I went to **Ahuaumi**, up above here; slept there in a crack in the *pahoehoe* (The father of Keakaokawai<sup>K</sup> was my *kamaaina*). From there we came to the Bay. I think **Hale o Umi** is *mauka* of **Kipahoehoe**, the distance between this and **Ahuaumi** is about fifteen or eighteen miles. **Hale o Umi** is on **Keauhou**. Heard that **Ahuaumi** is on the boundary of Kona and Kau about nine or ten miles from here.

Kini was my *kamaaina*, the second time I came across. Kekaokawai's father piloted me all over **Mauna Loa** and **Kea** [**Mauna Kea**]. One **Ahuaumi** is near **Hualalai** (2<sup>nd</sup> Ahuaumi). He told me **Kahuku** and **Keauhou** ran straight up **Mauna Loa** following a ridge all the way. I have heard that **Ahuaumi** near **Hualalai** is on **Keauhou**... [page 143]

...I could talk better native, when I came across from Kona to Kau than at the present day, came down from **Ahuaumi** here. I have been up from **Kapua** to **Ahuaumi** and understand that **Keauhou** cuts off **Kapua** below **Ahuaumi**, also **Kaulanamauna** is cut off and from there the boundary of Kau and Kona runs direct to the top of the mountain.

My opinion of the direction of the line of boundary between the Districts is based on the direction at shore. There is no land in South Kohala running side and side with Kona lands to top of **Mauna Loa** cut off by Hamakua. Kona and Kau run to the top of the mountain; **Humuula** runs up a long way but not to the top. There are two places on the mountain called **Pohakuhanalei**; one is a rock on the North East slope; the other a crater on the South slope; the latter is not pointed out as a boundary. I have only crossed the boundary they pointed out to me. A ridge running up

to the top of the mountain and to the other side; said ridge running between the crater of **Mokua-weoweo** and **Pohakuhanalei**... .. can show pretty nearly the place where **Hale o Umi** was. **Hale o Umi** was built of six stones, and was so close to the mountain that I could not see far towards Kau or Kohala. At **Ahuaumi**, boundary of Kona there are four or five piles of stones in a **Mawae** or crack; there are two red hills in an easterly direction from **Ahuaumi**, and a water hole near one of them; from this point it is two or three miles directly toward the sea before you come to the thick woods.

Commission adjourned to 9 A.M.  
March 14, 1873 [page 144]

Kahuku, March 14<sup>th</sup> 1873  
Boundary Commission met according to adjournment.

J. Kaulia<sup>K</sup>. Sworn

I live at **Waiohinu**, Kau, and according to my parents' statement, I was born about three years after the missionaries first arrived on the Islands [born ca. 1823]. Am *kamaaina* of **Kahuku** and some other lands in Kau. In 1848 was *Hope Luna Auhau* [assistant tax collector], Moke Keawe and Kaahulama were also *Hope Luna Auhau* of Kau and Pipi, *Luna Auhau*. Pipi ordered me to inquire about boundaries of land as it was at the time they were setting apart the *la kohu* [select fish] and the *Laau kohu o na konohiki* [select wood of the *Konohiki*]. Pipi had lived in Kau a long time, and told me the boundaries. He said **Kalaehumuhumu** was the boundary between **Manuka** and **Kahuku**, and **Kaumuuala** between **Kahuku** and **Pakini**; and **Kahiawai** *awaawa* belonged to **Manukaa**, and from there to **Kualapapili** \_\_\_\_\_[blank]\_\_\_\_\_ boundary of **Kahuku** and **Pakini**. Haumea was *konohiki* of **Kahuku** at that time. *Uhu ia kohu* [*Uhu* was the select fish] and *Koa laau kohu* [*Koa*, the select tree]. Afterwards I came to live at **Kaanaholua** (near **Pohakuloa**) on **Kahuku** and near the boundary of **Manukaa** and **Kahuku**, catching goats.

Kawaa and Maewa and people of **Kahuku** pointed out the boundary to me. At time of making old road to Kona by S. Laanui keiki o Lilikalani. I wanted to get long poles and he told me to go to *awaawa* o **Kahiawai**, as those on this side belonged to **Kahuku** and were *kapu*; he was *konohiki* of **Manukaa** at that time.

After Kamehameha III went on to the mountain from **Kahuku**, I went up. Haalulu, an old

*kamaaina* of **Kahuku** was my *kamaaina*. I do not know whether he is dead now or not. Paahao of **Kahuku** and others also went with us. Went to **Hale pohaku** and built a pen. Haalulu told me **Puuohohia** [Puu Ohohia] was the boundary between **Manukaa** and **Kahuku**. We did not go there but went round to **Ohialele**, a cave which he said was the boundary between **Kahuku** and Kona. I think it is *mauka* of **Milolii**; did not say what land joins there. We were catching goats for Kila of **Kahuku** and I never heard of Kona people claiming them. [page 145] After **Kahuku** became School land I was *Kahu Kula* [school Master] and Mr. Armstrong made me *konohiki* of **Kahuku**. This was in 1850 or as near as I can remember between that year and 1854. I took charge of the land according to the boundaries that I have stated without opposition. In 1870 I was *konohiki* of **Manukaa** and used to catch wild goats with Keaka *ma*.

Kakio<sup>K</sup> claimed to be one of the lessees of land and got his *kuleana*. Keaka said the boundary was **Waiakaalala** near **Puuohilea**, between **Kahuku** and **Manuka** and tried to persuade me to catch goats there. Halulu told me **Kahuku** ran way beyond **Ohialele** and joined **Keauhou** of Kona. I went with him to **Puukeokeo** and he told me that **Ahuaumi** on Umi's road beyond **Keokeo** was the boundary between **Keauhou** and **Kahuku**. I have been two or three times to **Ohialele** and **Puukeokeo**. Umi's road was very distinct in olden times.

C.X.d

Haalulu told me **Kahuku** went *mauka* of **Kukuipae**. In 1857 I lived a year at **Kaapuna** in Kona, the natives there said there were wild goats on the land. I told them I had heard the *pahoehoe mauka* of the woods was on **Kahuku** and they said the goats were in the *Koa* woods.

Kaiwi Sworn

I was born at **Kahuku**, Kau at the time of *hookupu mamoma ka Lae* [tribute of *mamo* feathers at Kalae in 1835], and have always lived there till a few weeks since. My *kupuna* and *kamaainas* pointed out boundaries to me as folks living on **Kahuku** were not allowed to take things from other lands. They told me **Kalaehumuhumu** was the boundary of **Kahuku** and **Manuka** at Sea shore, the sea bounding **Kahuku makai**; thence to **Pohakuloa**; thence to **Puuainako** on the old road; thence to a large stone near *awaawa*, **Kahiawai** near the new road; thence follow up the Kau side of the *awaawa* to **Kapuhonu**, from thence the next point on the boundary, that I know



of is **Puuohoohia** [Puu Ohohia] between **Kahuku** and **Manuka**; thence to **Kumualii**, a cave; thence to **Ohialele**, a cave on **pahoehoe**. I have been to **Ohialele** and this side of there since the lava flow. Saw a goat pen a little beyond **Kumualii** and close to the woods. Nauka<sup>K</sup> built it and told me it was on **Honomalino**. I have been up to a cave way beyond **Ohialele** on the **pahoehoe** with sons [page 146] of Kumauna (now dead) and brought goats from there to **Halepohaha**. It took two days to drive them. Since then, I do not remember how long since I lived at **Kukuipae** and went up to catch goats. While there saw this cave called by them **Kaanapaakai** and recognized it as the one I slept in before. They said the land belonged to **Kukuipae**, said cave is a half mile or more from the woods. Never heard of **Puuhilea** being the boundary of **Kahuku** before seeing the notice in the paper, which was published by Keaka. Have always heard **Keauhou** joined **Kahuku** on the mountain. When Keaka lived on **Kahuku** we always used to chase goats at **Puulonolono**. When he moved to **Manuka** he claimed **Puulonolono** for that land. I have seen two **Ahua o Umi**, on Umi's road way beyond **Puukeokeo**. I think they are further toward Kona than **Ohialele**. Have not seen a place called **Keanahua**. Have heard **Kahuku** joins **Kaalaala** on the mountain but do not know the boundaries.

C.X.d J.G. H. [Hoapili]

There are a good many places on the mountain called **Ahuaumi**, and **Hale o Umi**, and **Alanui o Umi** between **Kahuku** and Kona.

Paahao<sup>K</sup>. Sworn

I was born and now live on **Pakini**; have lived on **Kahuku** and often chased goats there.

Kamakahuna and Haalulu, old kamaainas, pointed out some of the boundaries to me. Commencing at the sea shore at a place called **Kalaehumuhumu**; thence **mauka** to **Pohakuloa**; thence to **Puainako**; thence to **Kahiawai**; thence to **Kahonopu**; thence to **Puuohoohia**; from thence to **Kumualii**, a cave. **Manuka** ends at **Puuohoohia** and Kona joins **Kahuku** there.

Thence to **Ohialele**, was told **Kahuku** went up to **Keauhou**. Have been told by old kamaainas that **Kahuku** joins **Kaalaala** and **Kapapala** on **Mauna Loa**, but have never seen the boundary; have frequently been catching wild goats with Kaulia, now in court. He was our **luna**.

I have often seen houses built by Kona natives and fires in them, and goats running down but have never seen the natives.

At the present time I am taking care of goats [for] W.T. Martin. [page 147]

C.X.d by J.G.H.

Have seen several **Kauhale o Umi** in the mountain and a **heiau o Umi**; once after chasing goats beyond **Keokeo**, on my way home I saw a road which kamaainas told me was Umi's road and lead to **Ahuaumi** in Kona. Have not heard that the road I saw is the boundary of **Kahuku** and have not seen the famous **Ahuaumi**. Have heard **Kahuku** and **Keauhou** join.

J. Kauhane, Agent of Government lands of Kau states that he is satisfied with the evidence as to boundary between **Manuka** and **Kahuku** and that he has no testimony to introduce as to that boundary, but reserved his right to bring in evidence as to boundaries of Government lands adjoining **Kahuku** on the East side. The evidence to be heard on the return of Commission from **Ohialele**.

Commission Adjourned until Monday the 17<sup>th</sup> day of March, when they will proceed at **Ohialele** to look at boundaries.

R.A. Lyman  
Commissioner of Boundaries, 3<sup>rd</sup> J.C.

Following adjournment of the above proceedings, J.G. Hoapili, wrote to John Dominis, describing problems encountered during the testimony, in confirming the boundaries between Kahuku and Keauhou, noting that through persistent questioning, it was learned that several "Ahuaumi" were known in both Kahuku and Keauhou:

**March 17, 1873 – Waiohinu, Kau**  
**J.G. Hoapili, Deputy Commissioner of Crown Lands;**  
**to Jno. O. Dominis, Commissioner of Crown Lands:**

...Within four days, all of the testimony of all the witnesses was finished about Kahuku, as to its boundaries.

We have received the benefit for the two lands of Waiohinu and Kapapala, greater area of land, and plenty of *pulu* and *koa*.

The thing that greatly worries me is the boundaries of Kahuku joining Keauhou, in Kona, but, because I found another witness for our side joining Keauhou, and examining the truth of their testimony, so I am feeling better, because it was stated by their chief witness, that the boundary of Kahuku joining Keauhou, is Ahuaumi in North Kona. So I tried hard by cross-examining, then, the truth came out, that it was only hearsay on his part.

And by examining other witnesses of theirs, they said, that ere were other Ahuaumi here in Kahuku, and other valuable testimony that Umi is here in Kau.

But, in all of the testimony, the true boundary of **Keauhou and Kahuku** are *mauka of Kapua and Honomalino*.

Therefore, we are going up with the Commissioner to ascertain the true boundaries of Keauhou and Kahuku in the mountain, bearing all of the difficulties, or the land will be grabbed up.

It seems that I am the only one, no other one is helping me in this work here.

I do not know what the Commissioner thinks, or what his decision will be. After we go up and examining the boundaries are over, then I believe I will return to attend to my own work. Am I to go to where the Commissioner is going to render his decision?

The decision is to be rendered this coming May... [HSA, Interior Department, Lands]

***The Boundary Commission met according to adjournment and proceeded to Ohialele, March 17<sup>th</sup> 1873.***

***Journal of trip to Ohialele.***

We left **Kahuku** Monday March 17<sup>th</sup> 1873 at 7 A.M.  
Party: R.A. Lyman, C.E. Richardson, J.G. Hoapili,  
Geo. W.C. Jones, W.K. Moi, C. Macomber, Naihe,  
Kaiwi, Kenao, Kamakana, Kumauna and others.

On the way we visited a large boulder on Kau side of **Kahiawai**, a short distance *makai* of the Government road, at an elevation of 1800 feet. Said boulder overhangs the *awaawa*. At the Government road there is a pile of stones erected and whitewashed and **Kahuku** is cut in the *pahoehoe* near the *awaawa*. Saw **Kahonupuu** in the distance. It bears N. 30 E. by pocket compass from the pile of white washed stones.

Kumauna remained at **Manuka** and Keaka joined us there, elevation 1660 feet.

Lunched at **Kapua**, elevation 1500 feet. Thence [page 148] to **Honomalino** where Nauka's son Pilialo joined us; thence to the upper edge of the woods on the *mauka* part of **Honomalino** where we pitched camp at an elevation of 5500 feet.

March 18<sup>th</sup> 1873

Went from camp to **Ohialele** on foot over a road of rough *pahoehoe* covered with bushes and grass. **Ohialele** is a rocky knoll, of scrub *ohia* with a number of caves on it, a short distance below the *Koa* woods. There is a clump of *Koa* trees a few hundred feet *makai*. Erected a pile of rocks and cut the name **Ohialele** on the *makai* side, elevation 5900 feet.

(Note. J.G. Hoapili on part of Crown Commissioner and Government Land Agent in reply to being asked if the boundaries were satisfactory? Stated that he had no further evidence as to boundaries from **Puuhoohia** [Puu Ohohia] to **Ohialele**.)

From thence proceeded up the mountain to Umi's road, elevation 7100 feet. Here we could see **Pohakuhanaiei** on the top of **Mauna Loa**. **Puuulaula**, a small red hill under a black ridge of lava was a little *makai* of us. **Pohakuloa** No. 3 on over left and a hill called **Hanamauloa** on our right. Thence we went to the hill called **Hanamauloa**, elevation 7200 feet, for a better view but the clouds shut the mountain in and we could only see black lava extending to the left of **Ohialele**; said to reach as far as **Puuelele**. From **Hanamauloa** we returned to camp. **Kaulanamauna** joins the land of **Manuka** at **Puuhoohia** [Puu Ohohia].

March 19<sup>th</sup> 1873

Left camp and proceeded in a South Easterly course to **Puuhoohia**. On the way crossed the junction of **Kaulanamauna** and **Honomalino** with **Kahuku**, below the cave **Kumualii**.

(Note, Before leaving camp J.G. Hoapili stated that he had no further evidence to introduce as to boundary of **Kahuku** and adjoining lands from **Ohialele** to top of **Mauna Loa** and returned to Kona.) Erected a pile of stones on a hill *makai* side of crater of **Puuhoohia** [Puu Ohohia]. Thence proceeded to a hill or rocky mound about two miles *makai* of **Puuhoohia**, almost in a direct line from there to **Kahonopu**, erected a pile of stones white washed them and cut **X** in a rock near the base of the pile of stones; thence went *mauka* past the base [page 149] of **Hapaimamo** down past **Ahuana** and **Hale Pohaha** to **Kahuku** Ranch premises.

Commission adjourned to meet at Keaiwa March 21<sup>st</sup> 1873 to take testimony of J. Kauhane, witnesses as to boundaries of Government Lands as one of them is too old and feeble to come to **Waiohinu** or **Kahuku**.

R.A. Lyman  
Boundary Commissioner 3<sup>rd</sup> J.C.

Description of rocks and places on the boundary omitted in the journal.

**Puuhoohia** is an extinct volcano.  
The sides of the crater are covered with pumice and

growth of scrub *ohia*, *pukeawe* &c., the side toward the mountain is smooth regular outline, all the higher knolls being on the *makai* side. The natives say when the Kona winds are blowing a whirl wind is formed sending up clouds of sand &c, elevation 5430 feet. At an elevation of 4820 feet there is a rocky knoll, the line of boundary follows along this knoll on black *aa* from ***Kahonupu*** to ***Puuohohia*** [Puu Ohohia]; ***Kahonopu*** from this point appears to be two large rocks on the *pahoehoe* with scrub *ohia* around them. Hapaimamo in ***Kahuku*** is a large smooth hill formed of pumice and sand with red spots on it and on the plain around it. It is an old crater with a gap in the south side where a stream of *aa* has flowed out.

R.A. Lyman  
Boundary Commissioner 3 J.C...

***Kauhuhuula*** March 21st 1873.

Boundary Commission met at 2 p.m. according to adjournment.

Present: Geo. W.C. Jones, C.E. Richardson, J. Kauhane on part of Hawaiian Government for Kau lands, W.K. Moi, actg. for J.G. Hoapili for Hawaiian Government lands in Kona, Crown Commissioner and Her Ex. R. Keelikolani, F.S. Lyman, &c. [page 150]

...Office of Boundary Commission  
Hilo May 14<sup>th</sup> 1873.

The Boundary Commission met to take testimony of Kenoi and Awakamanu, as to boundaries of ***Kahuku***, after due notice to all parties interested.

Present: Geo. W.C. Jones, C.E. Richardson and W.H. Reed on part of applicants; J. Kauhane for Hawaiian Government, W.P. Ragsdale, acting for J.G. Hoapili on part of Crown Commissioner and Hawaiian Government... [page 155]

Awakamanu <sup>K</sup>. Sworn  
I was born at ***Kahuku*** at time of *Okuu* [1804] and lived there until the time of *Hookupu mamu* at Ka Lae (1835) in time of Kamehameha III. Am a *kamaaina* of ***Kahuku***, now live on ***Olaa*** in Puna. I used to go after birds, and the boundaries were pointed out to me by Moo <sup>K</sup>. for if we of ***Kahuku*** caught birds on other lands, they were taken away from us. ***Kalaehumuhumu*** is boundary between ***Manuka***, and ***Kahuku***; thence to *Awaawa*

called **Kahiawai** by the road. **Kahuku** running on this side; thence to a large hole with water in it, called **Kamokulimu**; thence to **Puulonolono**, a grove of trees; the boundary on Kona side of grove; thence to hill called **Puuhoohia**. **Manuka** ends at this hill and **Kahuku** runs over to **Ohialele** cutting off the land of **Kaulanamauna** and **Kapua** and **Honomalino**. **Ohialele** is a mound with a cave. From this point you can see the surf break at **Kapua**. **Kahuku** joins land of **Keauhou** at **Pauewalu** (a place where Moo<sup>K</sup> killed eight Kona men. They shut him up in a cave and when he got out he killed them.) From **Ohialele** the boundary [page 156] between **Kahuku** and **Honomalino** runs to a grove of trees called **Kamokupukala**, **Ohia** trees on the *pahoehoe* beyond **Ohialele**. I think about a mile distant. **Kamokupukala** is on **Kahuku**; the boundary between **Honomalino** and **Kahuku** runs *makai* of this grove to Pauewalu above the woods. Pauewalu is a *lae aa* a long distance from **Ohialele**. **Ohialele** is a high ridge of Aa that breaks through when you walk on it, and is about half way between **Puuhoohia** [Puu Ohohia] and **Pauewalu**. **Honomalino** reaches to this point. I think we never went beyond here to catch birds as **Keauhou** folks would take them away. The boundary between **Kahuku** and **Keauhou** runs *mauka* to a water hole, **Waio**, where the cattle that were let go from **Holualoa** used to drink. I do not know as I could identify the place now. The high aa is boundary. **Kahuku** is on Kau side of aa.

There are two small hills near the aa a good ways above Umi's road. The water hole, **Waio** is close to the foot of the mountain, *mamani* grows there. The aa from **Pauewalu** ending before you reach the hole. Cannot see woods from there. Do not know anything about the boundary of **Kahuku** and **Keauhou** above this place. **Pakininui** joins **Kahuku** at **Kulauala** and runs up in to the woods to **Kilohana**. The koa is all on **Kahuku**, the **Pele o ike** is in the woods. I have not been up the boundaries through these woods. Went to **Apoohina**. There Moo<sup>K</sup> told me **Kahuku** and **Kapapala** and **Makaka** joined. **Makaka** *makai* and **Kapapala** on the North side of **Apoohina**... [page 157]

#### **Kahuku, Kau**

#### **Island of Hawaii Boundary Commission Volume B:310-314**

The *Ahupuaa* of **Kahuku**, District of Kau, Island of Hawaii, 3rd J.C.

On this the 6th day of November, A.D. 1874  
the Commissioner of Boundaries for the

Island of Hawaii, 3rd J.C., met at Waiohinu,  
Kau, on the application of \_\_\_\_\_[blank]\_\_\_\_\_

Continued from folio 158, Book A or No. 1

Testimony on **Kahuku**, Kau, Hawaii.

Waihou, **Kahuku**, November 6<sup>th</sup>, 1874  
Present: G.W. C. Jones & C.E. Richardson.  
The Commissioner of Boundaries went to look at  
boundaries between Nakeaa, **Waiopua**, **Mohoae**  
and **Kahuku**... [page 310]

R.A. Lyman  
Boundary Commissioner, 3<sup>rd</sup> J.C.

Letter from W.D. Alexander to R.A. Lyman, Esq..

Honolulu, Sept. 21<sup>st</sup>, 1874

R.A. Lyman, Esq.

Dear Sir:

In regard to the boundaries of  
**Kahuku** in Kau, Hawaii, I can only  
state what was told me by the Kau people,  
when I surveyed part of **Kahuku** in  
1859.

I did not survey the line between [page 311]  
**Kahuku** and **Manukaa**. The old kamaainas  
however all agreed that **Kahuku** cut off  
all the lands of South Kona at the upper  
edge of the forest, as they expressed it,  
wherever the "ua'us" were found, that was  
**Kahuku**. They testified that **Kahuku**  
extended in a northerly direction to Ahua  
Umi which lies between **Hualalai** and  
**Mauna Loa**. On the other side they testified  
that **Kahuku** in like manner cut off all  
the lands in Kau at the upper edge of  
the bush (the "*wahi oneanea*" being **Kahuku**),  
as far as Makaaka, near Keaiwa. From  
thence they said the boundary turned *mauka*  
and ran up to Pohaku Hanalei.

I think, however, it  
was a question whether the summit crater  
of **Mokuaweoweo** belonged to **Kahuku** or  
**Kapapala**.

I gave Mr. Armstrong, then  
President of the Board of Education, a  
written statement at the time, with  
estimates of the amount of arable,

land, grazing land, *Koa* timber &c, on the land, but I understand that all the papers were burned up with Mr. Brown's house at the time of the great eruption of 1868.

Yours truly,  
W.D. Alexander.

Journal of trip to look at the boundaries of **Keauhou 2** & **Kahuku** &c.

Nov. 10<sup>th</sup> 1874. Left Pahoehoe, South Kona 9 o'clock a.m. Went through woods **Kukuioape** & Kolo in 4 hours, got to cave called **Keanapaakai** in 5 hours. Kamaainas Kaauhana & Komaka say this cave is where *Konomanu* [bird catchers] of Kona, **Kahuku**, Hilo & Hamakua used to meet. Went from there to cave called **Pulilili** at elevation of 5550 feet in 5½ hours, slept at **Ahu o Keoua** ½ mile *mauka* of cave, is Umi's lower road, at that point road paved with flat rocks. **Kauhale o Keoua**, **Ahu o Keoua**, 3 piles of stones. These three piles of stone can be seen distinctly from **Keanapaakai**.

Nov. 11<sup>th</sup>. Komaka & Kaanana sworn to point out boundaries as they knew them. [page 312]

Left camp at half past 6 a.m., passed spring called **Paahulu** to cave called **Kapai** where sandal wood gatherers used to live just above *Koa* woods, **Kukuioape** 1<sup>st</sup>; next went on to old *mauu*, which *kamaaina* say extends from a little *mauka* of where we were to *makai* of upper Govt. road, and land extends to *mauka* end of it. Kukuioape 2<sup>nd</sup> extends to *awaawa* on the Kona side of goat pen, above the woods. Kukuioape 1 to **Keauhou 2**, on the Kona side of *awaawa* 2. Got to spring called **Poliwai** in *mamani*. In time of Kamehameha III used to chase goats all around to Poha. Have here [heard]. **Kaohe** is along here, do not know where it ends. Elevation 6100 ft. thence to *Ahua* a short distance, where can just see top of **Mauna Loa**, quite a hollow on left, facing mountain filled with *mamane* trees, called **Kamakaele**, ridge just across *awaawa*; land of **Alae**. There is a hill beyond **Lumia**, **Honokua**. **Kaohe** is *makai* and on the Kau side of the hill. The way is *mauka* of *ahu* 4 piles of stones. **Puuulaula**, a long ridge parallel with **Mauna Loa**, way *mauka*, half way between **Ahua Keoua** and **Poliwai**, water hole *makai* of *Kualapa* called **Umiwai**, not a long distance (½ mile perhaps). Next on to **Puuoluamanu** hill, a small crater, and *awaawa*, *makai*. Road from here to **Alae** runs *makai* of this place to tall tree in



woods. Crossed **Honokua**, old trail, goat pen running *makai*, going over *aa*, and across *aa* that runs down to **Waiea**; then small strip of *pahoehoe mauka* of *koa* woods on **Kalahiki**; thence came a good way to trail up from **Kealia**. *Lae mamani*, said to be on **Hookena**, is on north side of **Kealia** trail; went in a northerly direction and into point of *koa* woods where several water pools are *mauka* and *makai* of trail some distance apart. Camped  $\frac{1}{4}$  past 3 P.M. Largest pool *makai* has rushes in it, called **Komakawai**, found by guides when chasing goats a few years since. Elevation of camp 8800 feet.

Nov. 12<sup>th</sup>. Left camp at 7:40 A.M. frost and ice all over grass from shower last evening. Strawberry [ ] leaves covered with ice. Came through *Koa* and *Mamani* 1 hour and 20 minutes. Frost on grass in shade at 9 o'clock. Across *aa*, highest point on *aa* 7300 feet [page 313] directly *makai* of black *aa* on side of mountain. *Aa* partly covered over with grass & bushes, and down *Pahoehoe*; got to camp in *Koa* grove on *Pahoehoe* 4,000 feet at half past 3 P.M.

Nov. 13<sup>th</sup>. Left camp at  $\frac{1}{2}$  past 7 A.M. Came down across *pahoehoe*, through *Mamani* and got into *Koa* woods, then struck across towards **Hualalai** until we came to an old *aa* flow; then followed down south edge of *aa* into woods, until after 4.00 P.M. Camped at elevation of 4300 feet.

Nov. 14<sup>th</sup>. Left camp a little before 7 A.M., made a road through woods and reached **Kealakekua** at 2.00 P.M., making six days traveling from Hilo to Kona. Divide between **Kahuku & Keauhou**.

R.A. Lyman  
Com. of Boundaries, 3d J.C... [page 314]

**Kahuku, District of Kau, Island of Hawaii,  
Boundary Commission, Volume B:315-319**

**The Ahupuaa of Kahuku, District of  
Kau, Island of Hawaii, 3<sup>rd</sup> J.C.**

Case continued from November 14, 1874  
See folio 314, Book B.

Keopuka, S. Kona, November 16, 1874.

Due notice of hearing personally served on owners or agents of adjoining lands as far as known. Present: C.E. Richardson on part of owners of **Kahuku**; S.K. Kaai and J.G. Hoapili on part of Administrator of Estate M. Kekuanaoa, Hawaiian Government, Crown Lands, R. Keelikolani, Madam Akahi, Mrs. C.R. Bishop & Honorable C.R. Bishop, &c, &c. Wall also present.

#### Testimony

Rev. J.D. Paris, sworn, says, I came to Hawaii in 1841. I now live in Kona, Hawaii, have lived in Kona since 1852. Lived in Kau at **Waiohinu** from 1841 to 1849, from 1849 to 1852, was on visit to the States. I know land of **Kahuku** in Kau, and **Keauhou 2d** in N. Kona. I have heard about some of the boundaries of **Keauhou** and **Kahuku**.

While I was in Kau I heard about Kahuku in 1847. When Kamehameha III went on the mountain he stopped at my house on the way up and on the way back. I heard from them that they went up on **Kahuku**. Dr. Judd and C.G. Hopkins, were in the party. They said that they went on the mountain and I understood them to say that the boundary of **Kahuku** ran on this, the Kona side of the mountain; I heard while I was in Kau, I think from the *kamaaina* of **Kahuku**, that the boundary of **Kahuku** ran along Umi's road to Ahua o Umi taking [page 315] the top of the mountain. I did not know where the road was & often went to **Kahuku** to hold meetings with the people, but did not talk with them about boundaries, but sometimes overheard them talking and asked some questions. I afterwards asked where **Keauhou** and **Kahuku** joined, think that it was when Prof. Alexander was going to survey **Kahuku**. I went with him as far as **Milolii** in South Kona and had some talk with *kamaaina* about boundaries. I think it was at that time that I was told that **Kahuku** joined **Keauhou**. I did not hear where, but got the impression that it was above here as the goat catchers in S. Kona told me that they got their goats from **Kahuku**, where they went in the mountains, as most of the goats were on **Kahuku**.

At that time I understood that **Kahuku** cut off all Kona lands to *mauka* of **Kealakekua** and Onouli nui. Several years afterwards I heard that **Keauhou** cut off all the Kona lands and lay between Kona lands and **Kahuku**, but I do not remember who the parties were who gave me the information. When I first came to Kau and Kona, there were a good many old men living who were said to be kamaainas. I think they are most all dead. I do not remember Kumauna and Awakamanu, but remember Kila. A good many natives took English names and I do not remember their other names. The time I went to **Milolii** with Alexander was the time that he was on the way to survey the land, and he was making inquiries about the land and I got the general impression in the talk with the *kamaaina* that the boundary runs on this side of the mountain. I asked questions for Alexander, and they said the boundary ran along to Umi's road to the **Hale a Umi**. They said that [page 316] there were some piles of stones there. I did not know about the **Ahu o Umi** until 1859; I do not remember what year Alexander surveyed it. I bought the land of **Kealakekua** in 1863. I had the impression from my talks with kamaainas at that time that **Kealakekua** ran up to **Alanui o Umi** and joined on to **Kahuku** on South side and **Keauhou** on north side. I understood that it ran through the woods to **Alanui o Umi**, but do not remember who told me so. I understood that other lands ran upon South side of **Kealakekua** and joined on to **Kahuku**, Kahauloa on South and **Kahuku** on the east. I thought as I went through Kona on tours that the natives got the goats on **Kahuku** from the mountain, but can not say that they told me so.

C.X.d.

By S.K. Kaai.

At time Kamehameha III went on to the mountain I understood that Umi's road ran from Kau to Kona. I do not know where the boundary of **Kahuku** joined Umi's road. Thought

it was between **Manukaa** and place where Wall lives. I do not know where the Hale o Umi stood, but that it was on this side of the mountain. Afterwards heard after I bought land of **Kealakekua** [\_\_\_\_], **Keauhou**, that it ran *mauka* of South Kona lands. Did not get the *kamaaina* at **Milolii** as he, Alexander, was on the way to Kau to get *kamaaina*.

By J.G.Hoapili  
The mountain I am talking about is **Mauna Loa**. At **Milolii** the natives said that **Kahuku** ran beyond the top of the mountain - **Mauna Loa**.

Komaka<sup>K</sup>, sworn  
On the mountain. Continuation of examination as all parties are represented. [page 318]

I was born at **Kukuioepae**, Kona. I was told that I was a year old when Naihe died [1831] at **Kealakekua**. I now live at **Kukuioepae**. Have seen the land of **Kahuku**, and have heard about the land of **Kahuku** from Kuaio, an old bird catcher, my *kupuna kane*. He is dead. I lived on the mountain with my father, Paihiha from **Hualalai** to the Palilua. He was a *kamaaina* of the mountain, a bird catcher. I went with him after goats. My *kupuna kane* told me that the boundary of **Kahuku** ran along Kona from **Ohialele mauka** of Kaapuna and Kipahoehoe to **Na Hale o Umi**. **Ohialele** is a cave near woods, sometimes water there. It is on Kau side of Koa grove called **Ahinui**. Thence the boundary runs *mauka* to **Na Hale o Umi**, some stone houses on Kau side of Paepu to Umi's upper road; thence along road to **Na Ahu o Umi**. do not know which *ahu*. Have heard there were 6 hills of stones for the 6 districts. Was told that it was bounded by **Keauhou makai** of road. Have heard that **Humuula** bounds it on the other side. My *kupuna* told me the birds on the mountain belonged to **Keauhou** and **Kahuku**; did not hear where the division was. I was told that a Kau bird catcher, named Kau, killed a **Keauhou** bird catcher at **Keanapaakai mauka** of **Kolo**, and put his bones in the cave. I also heard that **Kahuku**

and **Keauhou** bird catchers fought at Pauewalu and elsewhere.

Do not know which side was victorious at Pauewalu. I have seen Pauewalu, a cave on Pahoehoe. It is some distance *makai* of Umi's upper road, and *mauka* of Land of Pahoehoe.

C.X.d.

I was old enough to go on the mountain when my *kupuna kane* died, but not old enough to carry burdens. I did not recollect these [page 318] things about boundaries from my *kupuna kane*, telling me, but when my father, Paihipa told them to me, I remembered that I had already heard the same things from my *kupuna kane*.

My father told me about the boundary from **Ohialele** to **Na Hale o Umi**. I can not say how many times I went there with my father, 5 or 6 times, as I often went there for goats with him. It was said that Kuakini's goats from Alike got on the mountain, and goats from **Kahuku** belonging to Puuaiole & Puu also went on to the mountain, and Palila on **Hualalai**. I was grown, I think it was in 1848, when we went after goats at **Hualalai**. Kapeau was governor. And when at Palilua, Leleiohoku was governor. When we were after goats at Palinui at Keanapaakai, Naaniani said the goats belonged to Kuakini or the Governor, and Kila said they belonged to **Kahuku**, but gave in to Naaniani. There are several hundred **Hale o Umi** at the place this side of **Ohialele**. Thence to **Alanui o Umi**, and along Alanui o Umi to **Ahu o Umi**. This is all I have heard.

C.E. Richardson filed a sketch of **Kahuku** made by W.D. Alexander and statement, dated September 21<sup>st</sup> 1874.

No more witnesses on hand.

Case continued till further notice.

R.A. Lyman, Boundary Commissioner, 3d J.C.

See folio 371 of this book... [page 319]

In between October 1874 to February of 1876, the Commissioner of Boundaries, rested the case for Kahuku. As time drew to an end of the rest, and the Commissioner prepared to settle the case, concerns regarding the boundaries and acreage of Manukā were raised by W.T. Martin, lessee of Manukā and Kaulanamauna. Martin wrote to W.L. Moehonua, Minister of the Interior on January 18<sup>th</sup>, 1876, and observed:

...I have the opportunity to again write you, my lord, about that matter which I told you in the past, but you did not make any reply, therefore, I thought, that maybe you did not receive that letter.

It is this:

I informed you in that letter, that the Government lands of Kau had been cut, that is the lands of Kahuku and Manuka. The acres cut, not being less than five thousand, and ten if a proper survey is made. This is how that is known. Kahuku has been all surveyed before the decision of the Commissioner of Boundaries of Hawaii had been issued, and Manuka was included in Kahuku now. You should consider this matter and decide upon what is right, while there is still time remaining up to the 16<sup>th</sup> day of February, then, the Boundary Commissioner will render his decision of the boundaries of Kahuku... [HSA, Interior Department, Lands]

***Ahupuaa of Kahuku, District of Kau,  
Island of Hawaii, Boundary Commission, Volume B:383-389***

The *Ahupuaa* of **Kahuku** Kau.  
Continued from Folio 381 of this Book.

Hilo Feb. 26<sup>th</sup>, 1876.

Notice of filing of survey of **Kahuku** and of time set for hearing of all objections to granting of Certificate of Boundaries in accordance with notes of survey made by D.H. Hitchcock, personally served on all interested parties or their agents.

The *Kilauea* coming in late, the hearing was adjourned until 10 o'clock of Thursday forenoon, February 17<sup>th</sup>, 1876.

R.A. Lyman  
Com. of Boundaries 3d J.C.

Hilo, February 17<sup>th</sup> 1876.

Commission of Boundaries for the 3d J.C. sat according to adjournment. Present: C.E. Richardson and D.H. Hitchcock on the part of applicants and Madame Akahi, S.K. Kaai for H.R.H. R. Keelikolani's lands in Kona. J.W. Keaomakani for J.G. Hoapili for Keelikolani's lands in Kau, and Kaopua's lands in Kona. J. Kauhane for Hawaiian Government, and E.G. Hitchcock for Agent of Crown Lands, and D. Kahalelio.

Map and notes of survey of **Kahuku** filed,  
and also map and notes of survey of **Kapapala**.

Testimony.

D.H. Hitchcock sworn, says:

I surveyed the land of **Kahuku** and made the map of land and notes of survey. On the Kau or East side I took the land surveyed by F.S. Lyman between this land and **Pakini Nui**, and the notes of survey given in Royal Patents of adjoining lands to the *makai* edge of the woods... [page 383]

...On the Kona side I commenced at pile of stones at **Kaheawai**, and surveyed along land of **Manuka** to pile of stones at **Puainako** at old Govt. road, and thence *makai* to **Kukuihaa**, running on the Kona side of this place, and from there I made a straight line to point **Kalaehumuhumu** at shore, the line passing about a chain on the Kona side of cave **Pohakuloa**. Since I surveyed this line I have heard from a **Manuka** man that there is another place called **Pohakuloa** way towards **Waiohinu** of this point and that the boundary of **Kahuku** is at that place. It would make a very crooked boundary if it goes there. The line surveyed does not join the *mawae* until you get to road. The *mawae makai* of that is on **Manuka**. From Govt. Road I went *mauka* to **Honopu**, and thence to pile of stones on ridge at **Pohakuloa**, the pile put up when the Commissioner went there with Jones, Richardson and Kaiwi. Thence, I ran to pile of stones on hill **Puu-ohoohia**; thence *makai* to *aa*, where Kaiwi said **Kapua** comes through. I find that the *Kokolau* is at upper edge of woods, and so I surveyed along *mauka* edge of woods to 31.00 chains *makai* of the water hole above **Honomalino**, and thence I surveyed along edge of woods to **Ohialele**. From there on it was hard to tell where the edge of the woods is.

I surveyed along cutting across **Kipuka** and points of woods. I decided to call the upper edge of woods where we found the big stumps of trees that had been destroyed by fire. As they say the country was burnt over formerly. Above there the trees do not look over 20 years old. [page 384]

Above **Kaapuna** we surveyed around a large point of woods. Above lands of **Honokua**, **Hookena** and **Kealia**, I had *kamaaina* sent up by Lumilumi, *konohiki* for R. Keelikolani. The line of survey I have filed follows the woods as given in the compromise, and does not follow the points given by the *kamaaina*. I had a *kamaaina* with me named Kamaka, but he could not point the points in the boundary claimed by him, and got lost in trying to go back a short distance to the camp. The *kamaaina* Komaka (the one who went with the Com. of Boundaries on mountain) pointed out all the places he said he could without any difficulty.

Before I made the survey I sent word to W.T. Martin, Mr. Kauhane and others, but they did not send any one to go with me, and point out the boundaries claimed by them.

The survey running to place called **Komakawai** cuts off a corner of the land **Kealia** belonging to Madam Akahi.

**Komakawai** is on the land **Kealia** that belongs to Keelikolani. I will change the notes of survey there. In my survey I have run a straight line from **Komakawai** to **Mokuaweoweo**, and from Mokuaweoweo straight to **Kilohana**...[page 385]

...**Kahuku**, Kau Continued.

Hilo, Hawaii, Feb. 23d 1876.

The Commission of Boundaries for the 3d J.C. met at Court House to have decision of boundaries of **Kahuku**, Kau given.

Present: C.E. Richardson & D.H. Hitchcock for owners of **Kahuku**, E.G. Hitchcock, attorney for Agent of Crown Lands, and J.W. Keo-makani for J.G. Hoapili, Agt. for Govt. lands in Kona, Agt. for R. Keelikolani and Kaopua. All parties interested in boundaries of **Kahuku** personally served with copy of decision as to boundaries between **Kahuku** and their several lands.

Copies sent by mail this day.

Decision

I decide the boundaries of **Kahuku**, starting on Kona side adjoining land of **Manuka** at point at sea shore called **Kalaehumumu**, and running *mauka* as given in D.H. Hitchcock's notes of survey of **Kahuku** to the south boundary of land of **Kealia**, owned by Madam Akahi; thence along said boundary to *mauka* of **Komakawai**, to point where boundary of this land intersects Hitchcock's line from **Komakawai** to **Mokuaweoweo**, and from this point to follow Hitchcock's notes of survey to **Mokuaweoweo** on top of mountain. Thence down to **Kilohana** and to *mauka* edge of woods, and along *mauka* edge of forest to point called **Namanuhaalou**, and there to follow upper of woods as boundary of this land and **Waiohinu** (See decision boundaries of **Waiohinu** given at **Waiohinu**, Kau, Oct. 14, 1873, Folio 404 Book A) to big *koa* tree; Thence *makai* through woods and to shore as given in Hitchcock's notes of survey and along shore to place of commencement.

Certificate of Boundaries to be issued as of today as soon as corrected notes of survey are filed.

R.A. Lyman  
Com. of Boundaries, 3d J.C.

The Atty. for Agent of Crown lands asks for a few minutes to consult the Agent of Crown lands to see if can compromise the boundary between this land and **Waiohinu**. Granted. The attorney for Agent of Crown Land's returning, he and C.E. Richardson on part of owners of **Kahuku** agree to have a line from the big *koa* run to a point 12.00 chains *mauka* of Hitchcock's line, below point marked A; thence to point marked **A**, and on to boundary between **Waiohinu** and **Kaalaiki** as run by Hitchcock, as boundary between **Waiohinu** and **Kahuku**.



R.A. Lyman  
Com. of Boundaries, 3d J.C. [page 388]

Hilo Hawaii March  
23d, A.D. 1876

No appeal as to boundaries of **Kahuku**, Kau, Hawaii, has been noted or perfected.

For decision of **Kapapala** see Folio 443 Book \_\_\_\_  
For Certificate of **Kapapala** see Folio 178, Liber I, No. 84  
For Certificate of Boundaries of **Kahuku** see No. 85, Folio 183, Liber I.

R.A. Lyman  
Com. of Boundaries, 3d J.C.

Hilo April 3d, 1876  
Rec'd. notice of appeal this day by Schr. *Pauahi*, dated Honolulu March 23d 1876 and signed by The Atty. General, giving notice of appeal by Minister of Interior, to the May term of the Circuit Court of the 3d J.C...

R.A. Lyman  
Com. of Boundaries, 3d J.C.

***Ahupuaa of Kahuku, District of Kau,  
Island of Hawaii, Boundary Commission, Hawaii, Volume 1, No. 3:183-187***

For Testimony of **Kahuku**  
See Folio 122, Book A  
For Decision see Folio 388, Book B.

Land Boundary Commission                      No. 85  
Hawaii, 3d J.C.

Certificate of the Boundaries of **Kahuku**, District of Kau, Island of Hawaii, Third J.C..

Upon the application of the Kahuku Ranch Co. and by virtue of the authority vested in me by law, as sole Commissioner of Land Boundaries for the Island of Hawaii, 3d J.C..

I hereby decide and certify the boundaries of the *Ahupuaa* of **Kahuku**, situated in the District of Kau, Island of Hawaii, to be as hereinafter set forth.



Given under my hand at Hilo, Hawaii,  
this Twenty-third day of February A.D. 1876

R.A. Lyman  
Commissioner of Land Boundaries  
Third Judicial Circuit.

Boundaries of **Kahuku**

“Variation East 8° 20’ is the true Meridian”

Commencing at the South West corner of this land, at point on the coast called **Kaumuuala**, the North West corner of the land of **Pakini Nui** at a large *ahu pohaku* and running along the coast (Magnetic) North 78° 05’ West 512.00 chains to *ahu* near the coast on boundary of the land of **Manuka**, at place called **Kalaehumuhumu** [page 183] Thence along boundary of Manuka as follows:  
North 5½° East 460.00 chains to *ahu* near *aa* at place called **Kukuihaa**; Thence North 26½° East 80.00 chains to large *ahu* on old Govt road at place called **Puuainako** (on edge of a large cave); Thence North 23° West 22.80 chains to large pile of stones at new Govt. road, on the south bank of *Mawae* at place called **Kahiawai**; Thence North 35° 35’ East 166.80 chains to a small rocky hill in the woods called **Honopu**; Thence North 3½° East 240.00 chains to *ahu pohaku* on Rocky mound on the *makai* line of large Sand Flat and a short distance South of *Aa* flow to place called **Pohakuloa**; Thence North 19 ¾° East 95.00 chains to *ahu* on top of Crater called **Puuohohia** (quite a good sized hill); Thence South 60° West 77.00 chains to *ahu* on edge of *aa*, and corner of land of **Kapua**; Thence along boundary of lands of **Kapua**, **Honomalino** and other Kona lands as follows:  
North 9° West 26.00 chains to small *ahu* in edge of *Koa*  
North 16° West 122.00 chains to a small *ahu* in edge of *Koa* below **Honomalino** water hole and on the trail from **Honomalino** to mountain;  
North 14½° East 31.00 chains along line of forest to *ahu* in *Kipuka*;  
North 32° West 26.00 chains to *ahu*;  
North 12½° West 72.00 chains to *ahu* in *kipuka makai* of **Ohialele**;  
North 55° West 152.00 chains to *ahu* in *kipuka* near edge of forest line on *aa* flow;  
North 59° East 85.00 chains to *ahu*;  
North 3° West 80.00 chains to *ahu* in small *kipuka* surrounded by scattering trees on *aa* flow; [page 184]  
North 6° East 38.00 chains to *ahu* on road through woods from *Kukuiopae*, some half a mile from lower edge of *Kipuka*;  
North 28° East 172.00 chains to *ahu* \_\_\_[blank]\_\_\_ in scattering woods, and the corner of land of *Pahoehoe 2d*;  
North 3° East 361.00 chains along boundary of lands of *Pahoehoe 2d*, *Honokua* and *Hookena*; Thence North 9° East 40.00 chains to water hole called *Komakawai* at corner of land of *Kealia 1<sup>st</sup>* (The line from this point to top of *Mauna Loa* and crater of *Mokuaweoweo* is North 68° East); Thence North 85° East 115.00 chains to *mauka* boundary of *Kealia 1st* opposite place called *Keanahalulu*; Thence to where this line intersects the direct line from *Komakawai* to top of the mountain North 40.00 chains; Thence North 68° East 638.00 chains along boundary of *Keauhou* to center of crater of *Mokuaweoweo*; Thence

South 40° East 695.00 chains to *ahu* on hill *mauka* of  
*Koa* woods at place called Kilohana; Thence  
 South 24° 40' East 34.00 chains to large *Koa* tree standing  
 in *Koa* woods marked  corner of Kaalaala on  
 boundary of this land and Kapapala (Kapapala bounds  
 this land from Mokuaweoweo to this point). Thence  
 along *mauka* line of heavy forest  
 South 23° West 102.50 chains to *ohia* tree marked  in  
 edge of timber;  
 South 30 1/4° West 240.00 chains to *ohia* tree marked **X** on 4 sides;  
 South 42° West 114.00 chains to *ohia* tree marked **K** on North  
 side and **V** on South side;  
 South 46 1/2° West 234.00 chains to *ahu* near edge of woods;  
 South 32° West 72.00 chains to *ohia* tree marked **X** and **A**;  
 South 76° West 40.00 chains to *ohia* tree marked **K**;  
 South 13° West 30.75 chains to *ohia* tree blazed on 4 sides; [page 185]  
 South 35° West 38.50 chains to *ohia* tree marked **X**;  
 South 46 1/4° West 73.00 chains to *ohia* tree marked **A** on boundary  
 of land of **Waiohinu**;  
 South 16 1/2° East 12.50 chains to *ohia* tree (as compromised);  
 South 45 1/2° West 185.00 chains to Big *koa* tree marked **X** on 4  
 sides as marked by F.S. Lyman, Northwest corner  
 of land of **Waiohinu**. thence along *aa* flow as follows:  
 South 48 1/4° East 5.08 chains to *ahu* on edge of *Aa*;  
 South 37 1/4° East 20.10 chains to *ahu* on edge of *Aa*;  
 South 16 3/4° East 234.00 chains to point *Aa* in woods;  
 South 38° East 120.00 chains to *Ohia* tree marked **X**;  
 South 20 1/2° East 41.00 chains to *Ohia* tree marked **X**;  
 South 5 1/2° East 29.00 chains along Govt. land of **Puueo**;  
 South 14 1/2° West 37.50 chains;  
 South 47 3/4° West 33.00 chains;  
 South 75 3/4° West 18.60 chains to corner of land of **Pakini iki**;  
 North 14° West 244 chains to corner of **Pakini Nui**;  
 North 53 1/2° West 9.10 chains to *ohia* tree on North side of **Puu o Kahuku**;  
 South 28 1/4° East 80 chains to top of **Puu o Kahuku**;  
 South 121.15 chains to *ahu* on *aa* flow of 1868;  
 South 67° West 26.00 chains to land held by Naohe's Patent;  
 South 69 1/2° West 20.00 chains across top of Naohe's land to  
 where an old *Wiliwili* tree formerly stood;  
 Thence along land of **Kiao** as follows:  
 South 65 3/4° West 1.55 chains;  
 South 85° West 9.23 chains;  
 North 87 3/4° West 8.16 chains;  
 North 67° West 1.32 chains to top of *Pali*;  
 North 82° West 9.75 chains;  
 West            14.30 chains;  
 South 89° West 14.44 chains to *ahu*;  
 South 79 3/4° West 10.26 chains to *ahu*;  
 South 76° West 7.15 chains to *ahu*; [page 186]  
 South 74° West 17.62 chains to *ahu*;  
 South 58 1/2° West 12.48 chains to *ahu* and rock marked **Kahuku A**;  
 South 25 1/4° East 43.68 chains to *ahu*;  
 South 34 1/2° East 12.95 chains to *ahu* on edge of *Aa* flow;  
 South 8 1/2° East 13.50 chains to *ahu* on edge of *Aa* flow;  
 South 6° East 52.90 chains to *ahu* on edge of *Aa* flow;

South  $3\frac{1}{2}^{\circ}$  West 40.42 chains to *ahu* at corner of lands  
**Kiao** and **Pakini Nui** at place called Kaumukauna [?]  
Thence along boundary of **Pakini Nui**;  
South  $34\frac{1}{2}^{\circ}$  West 328.50 chains to point of commencement  
on sea coast.

Containing an area of 184,298 acres more or less.

As surveyed by D.H. Hitchcock

R.A. Lyman  
Commissioner of Land Boundaries  
Third Judicial Circuit... [page 187]

## KA 'ĀINA A ME NĀ KINI KINO LAU MA LAILA (THE LAND AND MULTITUDES DWELLING THEREON)

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As discussed in earlier sections of this study, Hawaiian traditions and beliefs, shared spiritual and familial relationships with the natural resources around them. Each aspect of nature from the stars in the heavens, to the winds, clouds, rains, growth of the forests and life therein—and everything on the land and in the ocean—was believed to be alive. Indeed, every form of nature was a *kino lau* (body-from) of some god or lesser deity. In the traditions for the lands of Kahuku, Manukā, Kaulanamauna and Kapu'a, we find that the native tenants called upon the nature forms of the forest, winds, and rains, to ensure abundant growth of crops that were cultivated to sustain the population. The upland cultivating grounds, were reportedly extensive; with one system extending from Kaulanamauna to lands beyond Kapu'a, and known by the name, *Pu'epu'e-ku'u-kalo-i-amo-ia-kiola-āina-ia-a-koekoena-kiola-ia-i-ka-mauna-a-me-ka-moana*. In Manukā, such localities as Haliukua, Kuiki Lamakūloa and Kamilo'āina, were forested *kīpuka* at various elevations, which were developed into dryland planting fields. These lands and resources were called upon, and some aspects of them deified, as the *kino lau*, the myriad body-forms of the gods and creative forces of nature that gave Hawaiians life.

In the Hawaiian mind, care for each aspect of nature, the *kino lau* of the elder forms of life, was a way of life. This concept is expressed by Hawaiian *kūpuna* (elders) through the present day, and is passed on in many native families. When discussing the relationship of native families with the lands and resources around them, it is not uncommon to hear *kūpuna* express the thought — “*E mālama i ka 'āina, a e mālama ho'i ka 'āina iā 'oe! E mālama i ke kai, a e mālama ho'i ke kai iā 'oe!*” (Care for the land, and the land will care for you! Care for the sea, and the sea will care for you!). This concept is one that is centuries old and is rooted in the spirituality of the Hawaiian people. Importantly, the converse is that when one fails to care for, or damages nature—the *kino lau*—around them, they are in-turn punished. This is expressed in many traditional sayings, one being, “*Hana 'ino ka lima, 'ai 'ino ka waha!*” (When the hands do dirty-defiling work, the mouth eats dirty-defiled food!). In this cultural context, anything which damages the native nature of the land, forests, ocean, and *kino lau* therein, damages the integrity of the whole.

Of course, since traditional times, many things that were a part of the native Hawaiian natural and cultural landscape have disappeared—being destroyed by changes in land tenure, changes in residency and subsistence practices, and by the introduction of tens-of-thousands of alien species, which have overrun the formerly balanced and fragile bio-cultural systems that made Hawai'i unique.

Writing in the late 1860s and early 1870s, native historian, S.M. Kamakau, related to readers some aspects of the Hawaiian association and understanding of the mountain lands and forests. While describing traditional knowledge of the divisions of land, Kamakau wrote:

Here are some other divisions of the islands, together with their descriptive names.

Heights in the center or toward the side of a land, or island, are called *mauna*, mountains, or *kuahiwi*, “ridge backs.” The highest places, which cover over with fog and have great “flanks” behind and in front (*kaha kua, kaha alo*)—like Mauna Kea—are called *mauna*; the place below the summit, above where the forests grow is the *kuahiwi*. The peak of the mountain is called *pane po'o* or *piko*; if there is a sharp point on the peak it is called *pu'u pane po'o*; if there is no hill, *pu'u*, and the peak of the mountain spreads out like the roof of a house, the mountain is described as a *kauhuhu mauna* (house ridgepole mountain); and if there is a precipitous descent, *kaolo* [from the peak] to the *kauhuhu mauna* below this is called a *kualo* (“block”). If there are deep ravines (*'alu ha'aha'a*) in the sides of the mountain it is called a *kahi po'ohiwi mauna* (“shoulder edge” mountain). A place that slopes down gradually (*hamo iho ana*) is called a *ho'oku'u* (a “letting down”); a sheer place is called a *pali lele koa'e* (cliff where *koa'e* birds soar), or a *holo* (“slide”), or a *waihi* (a “flowing down”). Rounded ridges that

extend from the mountains or “ridge backs” or hills are called *lapa* or *kualapa* or *mo’o*—and, if they are large, *’olapalapa* or *’omo’omo’o*. Depressions between *lapa* or *mo’o* are *awawa*, valleys.

Here are some names for [the zones of] the mountains—the *mauna* or *kuahiwi*. A mountain is called a *kuahiwi*, but *mauna* is the overall term for the whole mountain, and there are many names applied to one, according to its delineations (*’ano*). The part directly in back and in front of the summit [Kamakau 1976:8] proper is called the *kuamauna*, mountaintop; below the *kuamauna* is the *kuahea*, and *makai* of the *kuahea* is the *kuahiwi* proper. This is where small trees begin to grow; it is the *wao nahele*. *Makai* of this region the trees are tall, and this is the *wao lipo*. *Makai* of the *wao lipo* is the *wao ’eiwa*, and *makai* of that the *wao ma’ukele*. *Makai* of the *wao ma’ukele* is the *wao akua*, and *makai* of there the *wao kanaka*, the area that people cultivate. *Makai* of the *wao kanaka* is the *’ama’u*, fern belt, and *makai* of the *’ama’u* the *’apa’a*, grasslands.

A solitary group of trees is a *moku la’au* (a “stand” of trees) or an *ulu la’au*, grove. Thickets that extend to the *kuahiwi* are *ulunahale*, wild growth. An area where *koa* trees suitable for canoes (*koa wa’a*) grow is a *wao koa* and *mauka* of there is a *wao la’au*, timber land. These are dry forest growths from the *’apa’a* up to the *kuahiwi*. The places that are “spongy” (*naele*) are found in the *wao ma’ukele*, the wet forest.

*Makai* of the *’apa’a* are the *pahē’e* [*pili* grass] and *’ilima* growths and *makai* of them the *kula*, open country, and the *’apoho* hollows near to the habitations of men. Then comes the *kahakai*, coast, the *kahaone*, sandy beach, and the *kalawa*, the curve of the seashore—right down to the *’ae kai*, the water’s edge.

That is the way *ka po’e kahiko* named the land from mountain peak to sea. [Kamakau 1976:9]

In the traditional context above, we find that the mountain landscape, its’ native species, and the intangible components therein, are a part of a sacred Hawaiian landscape. Thus, the landscape itself is a highly valued cultural property. It’s protection, and the continued exercise of traditional and customary practices, in a traditional and customary manner, are mandated by native custom, and State and Federal Laws (as those establishing the South Kona Forest Reserve and Manukā Natural Area Reserve; and the Endangered Species Act).

In this discussion, protection does not mean the exclusion, or extinguishing of traditional and customary practices, it simply means that such practices are done in a manner consistent with cultural subsistence, where each form of native life is treasured and protected. *Kūpuna* express this thought in the words, “*Ho’ohana aku, a ho’ōla aku!*” (Use it, and let it live!).

### ***Transitions in the Health of Hawaiian Forests Following Western Contact***

We find that shortly after western contact, the introduction of alien herbivores, and financial value being placed upon resources of the forests and mountain lands, the health and integrity of the resources began to decline. After western contact, the forests were primarily evaluated in the terms of the western economic system. While in the centuries prior to the arrival of westerners in 1778, and subsequently into the reign of Kamehameha I, the system of land tenure and management mirrored the natural landscape of the islands, later management systems focused on what, and how much could be gotten from the land.

Immediately, upon western contact, foreigners looked at the land—first as a source of provisions for ships; and second as a means for earning money, through the trade of natural resources such as *’iliahi* (sandalwood). In 1778, European boars, goats, rams, and ewes were introduced by Captain Cook. While offered as a “gift,” one of the motivating factors was that leaving the animals behind would produce a breeding stock to supply other foreign ships (Beaglehole 1967:276, 578-579). Later, in 1793, cattle were brought to Hawai’i by Captain Vancouver. Given as “gifts” to Kamehameha I, the

cattle were first let off at Kawaihae (then at Kealakekua), and were placed under a ten-year *kapu* to protect them and allow them to reproduce (Kamakau 1961:164). Between 1793 and ca. 1811, new stock was added, and the numbers of cattle, goats and sheep had increased dramatically. These introduced stock rapidly became a problem to the native population and forests.

In this part of the discussion, it is appropriate to note that the European boar was significantly larger, and thus stronger, than the Polynesian introduced *pua'a*, or pig (Beaglehole 1967:579). Our review of more than 60,000 native Hawaiian land documents dating from 1846 to 1910 revealed many references to *pua'a* (pigs), but nearly every reference was in the context of them being near-home, and as being cared for (raised), not hunted. In the same review of the native Hawaiian land documents, and a large collection of writings from native authors (e.g., D. Malo, 1951; J.P. Ii, 1959, S.M. Kamakau 1961, 1964 & 1976), every reference to traditional collection or “hunting” (a word seldomly used in the historical records), was in the context of native birds—those used either for food, or from which feathers were collected for royal ornaments and symbolic dress.

After ca. 1815, we find that when native Hawaiians went “hunting” in the uplands—as described in testimonies and historical texts of the time—they were hunting bullocks, goats and other introduced grazers, and this was generally done on the demand of their landlords, and later for the growing ranches being established in the islands. The historical record indicates that the first full-scale efforts of western-style hunting in lands of the Kona-Ka'ū region began around 1840 (cf. Government Communications in this study). Those early outings were focused on taking wild goats and cattle for leather and tallow, on behalf of *ali'i* and other large land-holders.

### ***Immergence of Hawaiian Forestry Programs***

Throughout the middle and late 1800s, efforts at control of the introduced herbivores increased, but with only minimal success. So significant was the threat of these introduced animals to the Hawaiian landscape, that on September 19, 1876, King David Kalākaua signed into law, an Act for the Protection and Preservation of Woods and Forests. By that Act, the Minister of the Interior was authorized to set apart and protect from “damage by trespass of animals or otherwise, such woods and forest lands, the property of government...best suited for the protection of water resources...” (Hawaii Laws Chapter XXX:39). The Minister of the Interior was authorized to appoint a superintendent of woods and forests:

...who shall, under the direction of said Minister, enforce such rules and regulations as may be established to protect and preserve such reserved woods and forest lands from trespass. Said superintendent shall have charge of the construction of fences and barriers required to protect the said woods and forest lands, and shall be responsible for their being kept in good condition... (ibid.).

The above Act was further defined by an Act of the Legislature of the Hawaiian Kingdom, approved by Queen Lili'uokalani on January 4, 1893, which established the Bureau of Agriculture and Forestry. Among the Bureau's goals was the “preservation of forests.” On June 14, 1900, the members and functions of the Bureau were absorbed by the Board of Commissioners of Agriculture and Forestry (Hawaii State Archives – Com 2, Box 11). It is under this board, that we see the establishment of Forest Reserves around the Hawaiian Islands, including the South Kona Forest Reserve, covering the lands of Ka'ōhe 1-5, Waikaku'u, Kukuiopa'e, Kolo, 'Ōlelomoana 1-2, 'Ōpihihali 1-2, Kīpāhoehoe, Honomalino, Kapu'a, Kaulanamauna, and a portion of Manukā (Ka'ū), as established by Governor's Proclamation on May 17, 1911.

In a 1924 review of the history of forestry programs in Hawai'i, C.S. Judd, Superintendent of Forestry, wrote the following account to Governor Farrington. Eighty years later, his words still present readers with an important frame work for the on-going efforts in protection of Hawai'i's native forests:

Forestry is practiced in the Territory of Hawaii primarily, not for timber production, but for the conservation of water. Probably in no other section of the world is the relation between a satisfactory forest cover on the mountains and the supply of water for domestic and agricultural uses better or more ably demonstrated...

The chief product, and, the most valuable, coming from the main forested and mountainous regions of the Territory, comprising about one-fourth of the total land area of the eight islands (4,099,860 acres) is water. Because of the comparatively limited terrain, short and steep water sheds, heavy rainfall in certain regions and the great need for irrigating the dry but fertile, sun-warmed lowlands, the value of this liquid product of the forest, on which domestic needs and prosperity of the community depend, is most highly appreciated and every effort is being made to conserve and maintain its sources in the forests.

***Character of the Native Forest.***

The forest of comparatively small trees found growing naturally on the mountain slopes is admirably suited to prevent erosion and to convert surface runoff into underground drainage, the desideratum in water conservation. The happy combination of small trees, bushes, ferns, vines and other forms of ground cover keep the soil porous and allow the water to percolate more easily into the underground channels. The foliage of the trees breaks the force of the rain and prevents the impacting of the soil by rain drops. A considerable portion of the precipitation is let down to the ground slowly by this three-storied cover of trees, bushes, and floor plants and in this manner the rain, falling on a well-forested area, is held back and instead of rushing down to the sea rapidly in the form of destructive floods, is fed gradually to the springs and streams and to the underground artesian basins where it is held for use over a much longer interval.

***Protection of the Forest.***

Forest practice in the Territory of Hawaii, therefore, resolves itself into what is known as "forest protection" and the main efforts of the foresters are exerted in maintaining and build up the native forests on the mountains so that they will function to the highest degree in conserving the rainfall.

The native forest, however, is peculiarly constituted in that it is readily susceptible to damage. The shallow-rooted trees depend for proper moisture and soil conditions on the undergrowth of bushes and ferns, and when the latter, the first to be attacked by stock, are injured or removed, the tree roots dry out, the trees are weakened and begin to decline, and an opening is made in the forest for the invasion of destructive insects and fungi and of the more vigorously-growing foreign grasses and other plants which choke out native growth and prevent tree reproduction. It is always dangerous for this reason to make any opening in the native forest and the only safe way to preserve it and keep it healthy and vigorous is to maintain it inviolable from all attacks and keep the ground well shaded and dark.

***Damage to the Forest.***

The chief damage to the native forest is done by cattle and other grazing stock which first attack the toothsome ferns and other plants which give the shallow-rooted trees the protection which is necessary to their existence.

The fencing of exposed forest boundaries to keep out stock and the extermination of wild stock where it exists in the forest constitutes an important item in forest work in the Territory...



### **Forest Reserves.**

Forest lands devoted to the purpose of water conservation have been officially recognized under the law and set apart as forest reserves by proclamation of the Governor. In this manner during the past two decades 50 of such forest reserves have been set aside on the five largest islands of the group. These embrace a total area of 840,984 acres of which 579,905 acres or 68 per cent is land belonging to the Territory... [Hawaii State Archives – Com 2, Box 15; October 10, 1924]

## ***A Historical Overview of the Forestry Program in South Kona and Ka'ū***

The following narratives, are excerpted from reports and surveys of the resources and mountain lands in the South Kona-North Ka'ū region. The narratives provide readers with a history of forestry development and conservation programs, from Manukā to Waiea, and document the work between government agencies, private land owners, and members of the public to set aside and preserve those resources. The narratives provide a regional synthesis and provide us with a glimpse into the condition of the resources some 100 years ago, and help us assess past programs, while planning for future conservation efforts. Emphasis in the texts is used by the authors here, to draw reader's attention to particular areas of interest.

### ***Agriculture and Forestry Reports [HSA]***

#### ***Report of the Division of Forestry***

#### ***Forestry Report 1904***

***By Ralph S. Hosmer, Superintendent of Forestry.***

#### ***...Kau.***

##### ***West Kau.***

In the other end of the Kau District the forest problems are of a different character. Here it has been proved possible to develop water by the aid of the forest; springs and brooks yielding a regular supply when their sources are protected by a forest cover.

Messrs. C. Brewer and Company, largely at the instance of Mr. George H. Robertson, and Mr. Julian Monsarrat, have for a number of years kept fenced in and protected from cattle, a private forest reserve of some twelve miles in length, by from three to four miles in breadth, containing 25,000 acres, more or less. From this area enough water has been developed to carry on successfully a large sugar plantation.

Other interests in Kau, particularly the Hutchinson Plantation Company, are desirous of extending this reserve or making other similar ones, with government cooperation. The investigation on the ground which will lead to recommendations in regard to these proposed reserves will be made as early in the coming year as circumstances permit. It is an important question and should be taken up as soon as may be.

Another large problem which awaits solution in Kau is the clothing of the barren lava flows with vegetation. It is hoped that when the more pressing work of establishing forest reserves is accomplished this subject can be tackled. It offers many difficulties but is for that reason all the more worth while.

Attention is called to the reports of Messrs. Julian Monsarrat and Geo. C. Hewitt, the District Foresters for Kau.

#### ***Kona.***

The district of Kona embraces so large an area that it can best be considered by sections.

### **South Kona.**

South Kona from the Kau boundary to and including the land of Honokua is a region of comparatively recent origin. [page 52] While not as young geologically as parts of Kau it yet contains many square miles of rough "a-a," and fields of "clinkers" but scantily, if at all, covered with vegetation.

Among the rocks, however, are pockets of rich and very fertile soil, so that in limited areas almost every kind of valuable plant, suited to this latitude and climate, can be made to grow luxuriantly. But unfortunately for the producer the market is limited and far off and the cost of transportation high.

There is much forest in this section and some of it would be of no small commercial value were there a better chance of getting out the lumber. At present only a few trails penetrate the forest, making but a narrow belt along the Government road accessible. Beyond this the country is practically unknown. Matters in South Kona would be greatly simplified if a classification of the Government land into its several classes were made, when an intelligent plan of development could be formulated. Were this done there would be found many areas of lava too rough for any sort of agriculture, or even grazing, which might be made to produce trees. In my judgment all of the land in South Kona which can be developed ought to be thrown open while the remaining a-a and clinker fields, should be left in forest. Further recommendations are unnecessary at this time.

Mr. Franz Buchholtz, the District Forester for South Kona, has for some years carried on valuable experiments in tree growing in this district. In his report will be found some account of them, with other pertinent observations. His report should be read... [1904:53]

**November 21, 1910**

**R. S. Hosmer, Superintendent of Forestry,  
to Board of Commissioners of Agriculture and Forestry  
(Regarding establishment of the South Kona Forest Reserve):**

...I have to submit a report with recommendations in regard to the creation of a forest reserve in the District of South Kona, Island of Hawaii. The area proposed to be set apart include the greater part of the section of forest land from the land of Waiea to and including the land of Manuka, just over the boundary line in the Kau District, lying between the upper limit of the area that has been cleared for agriculture and the boundary of the land of Kahuku, well up on the slope of Mauna Loa. For convenience in description this proposed reserve has been divided by the surveyor into two sections, Waiea-Kipahoe and **Kapua-Manuka**. These are separated by a block of privately owned land, in part homesteads, that it is not deemed advisable to include at present in the proposed reserve. For these two areas I propose the name South Kona Forest Reserve.

The proposed South Kona Forest Reserve is made up of both government and privately owned land. The total area is 50,612 acres. Of this, 31,730 acres, or 63 percent, belongs to the Territory. A considerable part of the government land (13,915 acres) is not under lease so that it can be set apart at once unconditionally. The remainder will come into the fully reserved class upon the expiration of the existing leases. So far as it has been possible to ascertain the owners of private lands within the proposed reserve are generally in favor of the forest policy of the Government and intend to manage their holdings in general conformity with the plans proposed by the Territorial Government. In particular, the Bishop Estate, owners of the land of **Kapua**, have already, in a recently executed lease, made provision for the reservation of the forest on that land within the boundaries recommended in the present report. As

elsewhere in the Territory, the private owners in South Kona are unwilling to turn the management of their lands over to the Government until a definite system of administration has been inaugurated.

The accompanying table, compiled along with the technical description by Mr. Geo. F. Wright, when in the employ of the Territorial Survey Office, gives the ownership and area of the lands in the proposed reserve.

The boundaries of the South Kona Forest Reserve have been so drawn as to include practically all the valuable forest still belonging to the Government in South Kona, with such private tracts of like character as lie between the strips of Government land.

From a glance at the map showing Government holdings it will be seen that with the exception of one or two small pieces in the center of the district, the Government lands in Kona are pretty much together at the south end. But they are not in a continuous block, being instead a series of strips, alternating with other lands of varying width in private ownership.

The main Government road in South Kona runs at an elevation of from 1200 to 1500 feet, gradually rising toward the South. The lower edge of the woods, which is also the upper line of the land that has been cleared for agriculture is a little less than 2000 feet in elevation from Waiea to Kipahoe. On that land and also on **Kaulanamauna and Manuka** in Kau the forest comes farther down. But these three last named lands are covered in large part by old aa flows, so that, except in kepukas [*kīpuka*] of varying size where the soil is good, there is little agricultural land. The forest, principally of *Ohia Lehua*, grows on the aa flows. As much of it is of excellent quality, the *makai* line of the proposed reserve has been brought down below the Government road to include these stands.

The upper boundary of the reserve follows the boundary of the great land of Kahuku which is in private ownership. The elevation varies from 5000 to 6000 feet. Above the boundary on Kahuku are a considerable number of groves of small sized *Koa* trees, and also an open stand of short and scrubby *Ohia*, that extends well up onto the slope of Mauna Loa. There is, however, little or no forest of commercial value on this portion of Kahuku, which is to be ranked as indifferent grazing land.

The forest in the proposed South Kona Forest Reserve consists of two sharply defined belts. From the lower boundary up to about 4000 feet, *Ohia Lehua* is the predominant tree, in mixture with others of the less important native species. In spots and strips, especially toward the south end of the district, usually on old aa flows, are pure stands of *Ohia*, of good size and height and excellent quality. The trees in these stands are usually from 18 to 24 inches in diameter breast high and from 80 to 100 feet tall. Unfortunately these good stands are all limited in area. No exact survey of them has ever been made nor any careful estimate as to the yield per acre.

Above the elevation of 4000 feet throughout South Kona—and the line is sharply marked—is a belt of nearly pure *Koa*. The trees are of good size, from 3 to 5 feet in diameter, and of fair height, 60 to 80 feet. This belt is approximately a mile wide. The large trees do not extend much above 5500 feet in elevation. Above that, on Kahuku, the forest is one of the character already described.

At the extreme south end of Kona and on **Manuka** there is a small section of great botanical interest, in that here are found trees and shrubs that occur only in one or two other places in Hawaii. This area is similar in character but not as large as the section between Puuwaawaa and Huehue at the North end of the Kona District.

It is unfortunate, but true, that throughout the Kona District there are no streams and only a few springs that actually deserve the name. In the proposed South Kona Forest Reserve special attention was paid to locating all the known sources of water and Mr. Wright's original map shows the various waterholes. As a whole this forest is unexplored. For fifteen miles along the coast from Waiea to the Kau line, not more than eight trails go through the forest, and these are of the roughest sort and almost impassable in bad weather. With such inadequate means of access it is impossible to do much more than fix the outside boundaries of the forest.

A more intimate knowledge of it must be left till later. Personally I have seen as much of South Kona, as is now feasible without the cutting of special trails. This report is based on observations made during several visits at different times, as well as upon additional data secured by Mr. Wright at the time he fixed the forest boundaries.

***Object of the Reserve.***

The purpose of creating the South Kona Forest Reserve is essentially to bring these government forest lands under the department of the Territorial Government especially charged with caring for the forests, in order that plans for their wise use may the more easily and effectively be put into execution.

It goes almost without saying that the first need in South Kona as in other Hawaiian forests is to safeguard in an adequate way all the present known sources of water, and also such localities as give promise of being possible of development. These areas should be kept permanently under a dense forest cover for their chief value is as producers of water.

*In South Kona however, the chief value of the forest rests in wood rather than water. It is one of the few forest areas in the Territory where the Hawaiian trees have commercial value for lumber and where it is advisable that the forest be looked upon as a producer of wood rather than primarily as a protective cover.* In earlier reports I have made clear the distinction between “protection” and “commercial” forests, and have done all I could to establish it as a policy that wherever water was to be got, the right thing to do was to hold the area strictly intact as a “protective forest.”

Now, just as most of our already established forest reserves, especially on the windward side of the islands, are of the protective class, so the proposed South Kona Forest Reserve stands as a type of the commercial class. Judiciously handled I believe that when the right time comes, this forest should be logged, provided of course that the work is done under careful restrictions and in accordance with forestry methods. This can best be accomplished if the area is set apart now as a forest reserve.

It is not necessary at this time to go further into the matter of how logging operations should be conducted. If the lands are set apart now, plans for the wise utilization of the timber on them can follow. It need only be said here that in all such work the ultimate object is to put all the land to the best use. If some of the area now under forest proved to be agricultural in character and was so located that it could be opened up to advantage, the policy of wise use would require that it be taken out of the forest reserve and so developed. If it were land that because of its character can produce trees better than other crops or that for other reasons was more needed in forest, the thing to do is to manage the forest so that one stand of trees may be succeeded by another. This area, set apart as a forest reserve will be in a position where plans for its wise use—be it by protection or by conservation utilization—can more effectively be put in force.

Believing then, that the best interests of the Territory will be served by the setting apart of these lands as a forest reserve, I do now recommend that the Board of Agriculture and Forestry approve this project and call upon the Governor of the Territory to hold the required hearing and thereafter, by proclamation, to create the South Kona Forest Reserve... [HSA GOV 3-1 - Forestry]

**January 28, 1911**

**Minutes of a Public Hearing...of the Territory and the Office of Commissioners of Agriculture and Forestry:**

...South Kona Forest Reserve.

The Governor opened the hearing by asking Mr. Hosmer to explain the situation.

Mr. Hosmer stated that the object of the hearing was to consider the creation of a large forest reserve in the southern part of the South Kona District, Hawaii, including as well one or two lands over the boundary in Kau. The idea is to reserve the section of Government forest, with certain privately owned lands, within boundaries which he pointed out on the map. The value of this forest is primarily because of wood which it contains. Unfortunately in South Kona there are very few permanent springs and no running streams. Watershed protection is therefore unnecessary. This forest is to be considered from the standpoint of commercial value. In fact the South Kona forest is one of the comparatively few areas of native Hawaiian forest that belong to and are typical of what has locally been termed the "commercial forest class." The forest contains a great deal of Ohia and Koa timber which, no doubt will, in time, have considerable market value, and ought to be conservatively lumbered. The proposition of making this section a forest reserve is that when that right time comes, it can be handled by, and be in the control of, the technically trained forest officials of the Territorial Government. The total area of the reserve is 50,612 acres—63 percent—belongs to the Territory. Of that area, 13,915 acres are now under lease. The leases expire at various times...

...In connection with this reserve, Mr. George F. Wright formerly in the Survey Office, has got together on the official map all the topographic data that is available, especially as to trails and waterholes in South Kona.

Mr. Castle asked if the land is set off as a forest reserve if it would prevent its being opened for homesteading.

The Governor replied that its reservation would not prevent its being opened up for homesteading. That land in a reserve may be withdrawn at any time by the Governor, after due notice and a hearing.

The Governor said that the object of this reserve seemed to be not so much for conserving the rainfall as for timber.

Mr. Hosmer said it was one of the few forests in Hawaii that can be considered from the commercial instead of from the water-bearing standpoint. The water-bearing forests make up nine-tenths of these Islands. This South Kona area is typical of the other tenth...

The Governor asked if much of this area were fenced.

Mr. Hosmer replied that but very little was now fenced. There are however some fences to be built. Mr. W.R. Castle has stated that he intends to do considerable fencing in the near future.

Mr. Castle said that he intended to fence the Papa and Alika lands. And too, he wished to add, that the Government must not forget in an inadvertent moment that the finest *Koa* forest is right there. The trees are anywhere from three to six and eight feet in diameter. The trunks are very tall and not much broken by branches.

The Governor then asked what he (Mr. W.R. Castle) thought ought to be done with it.

Mr. Castle answered that there is no reason why the Government should not derive considerable revenue from the forest, under proper methods of lumbering, that is, taking care that the small trees are not broken down. With a traction engine such as Mr. Bolte now runs, almost all of it can be made accessible.

The Governor asked if Mr. Bolte had a license from the owners of the private lands where he is now operating.

Mr. Castle said "Yes, he has."

The Governor asked what the lumber was.

Mr. Castle replied that just now it was *Ohia*, but he went up there to cut *Koa*. "I am sorry to say that I had nothing to do with this license. It was made before I acquired Papa. The supposed arrangement I put a veto on immediately."

The Governor asked how much of this land was homesteaded.

Mr. Castle replied "The Alika pieces which you see cut into 559 acre lots. Mr. Arnemann has established himself and done some actual farming and work of that kind. Mr. Domkowics has a place next to him and has a few cattle. The soil there is good — very rich."

Mr. Castle further stated that he was present, as well as to represent his own lands, in the interest of Mr. On Tai who owns the land of Kaapuna and leases certain other tracts.

The Governor asked if Mr. On Tai expected to fence his land.

Mr. Castle responded that he believed he did not.

The Governor asked if there were other private owners.

Mr. Hosmer replied that Mr. W.R. Castle owns more than anyone else in that section. So far as J.B. Castle Interests are concerned, they wish to cooperate with the Government in its forest program of reserving these lands. "One of the largest private holdings is the Hui land of Honokua. There are a good many owners in Honokua. I think there are 28 shares, of which Mr. J.B. Castle now owns 15 or 16. I think he recently got two more, which makes the 16 shares. He would like very much to have the forestry proposition carried out and the lands reserved."

Mr. Castle said *Kapua* was a fine land and worth something now. There is now a wagon road leading up instead of a trail, which he had made.

The Governor asked if there was any objection to setting this land apart.

Mr. Hosmer said that no formal objection had been received but that Mr. T.C. White, Local Land Agent in Kona had informed him that homestead applications were pending on Waiea and Pahoehoe.

Mr. White thought this was a desirable thing that these people should be given a chance to get this land. Mr. White had expected to see the people and have them send down a letter to be read at the meeting this morning. No letter has come. But Senator Baker is present and he represents one at least of these associations.

Mr. Hosmer stated that there was no especially fine timber on these lands desired for homesteads, but rather a good stand. "It should be said in this connection that all through this portion of South Kona, especially as one gets near the southern boundary, there are some remarkable stands of Ohia. The trees are from 18 inches to two feet in diameter and 100 feet tall. With the exception of one other spot in Kau, it is unquestionably the best Ohia in the Territory. But it is all in pockets. There is no continuous forest of fine trees."

The Governor asked about the soil there.

Senator Baker said that the higher parts were perhaps a-a, that he had not been there, but he knew that the lower lands consisted of very good soil.

Mr. On Tai stated that about a mile from the Government road and extending a good way *mauka*, the soil is generally very good.

Mr. Castle stated that the lower forest line was the upper edge of the cultivated land, that he had ridden through Kona on the Government road and was very much surprised in going up into the forest that the moisture and heat there has had its natural effect, in forming soil on fairly recent lava flows. There is a tremendous lot of arable land up there, but of course it is mostly over 2000 feet in elevation.

The Governor asked what, if anything, could be raised up there?

Mr. Castle stated that he had tried planting tobacco 2000 feet up and it grew wonderfully well. A variety of things grow very well indeed. Cotton is also being tested there and is doing well. Fodder grasses grow well and potatoes and celery.

Mr. On Tai stated that he would like to speak of his South Kona land and the rocks it has. They are planting Tobacco on smooth rocks. In South Kona the pebbles are sharp rocks. They are smoother in North Kona. "In South Kona we found it very rough. I used to plant taro there. In some places I could stick a cane-knife in the ground almost its entire length. After being cultivated you will find the soil begins to disappear and as the time goes on the rocks all stick up again. That is why the lands in South Kona, 1000 feet and below, contain so many loose rocks. In the taro patches around South Kona, you can see the rocks creeping up. Years ago this used to be soil land. Actual cultivation will probably prove fatal..."

...Mr. Hosmer stated that there is unquestionably a lot of good land in the proposed reserve, which ought in time to be opened up. The policy of this Board has been, and of late it has been established as the policy of the Territory, that potentially agricultural land, covered by forest, should be lumbered before the title passes from the Territory, the revenue so derived being a Government realization. This should be done here. After the lumbering, this land could be opened up.

The Governor said "Your idea would be, then, to keep it not as a forest, but for the purpose of agriculture—cutting the big trees."

Mr. Hosmer replied that there was a great deal of land in South Kona which never can grow anything but trees.

The *a-a* makes it very rough, but out of certain *a-a* fields grows a very good stand of *Ohia*. This sort of land should be kept permanently in the forest reserve. Where there is agricultural land, it should, sooner or later, be opened up.

The Governor asked if there were any persons that want to cut timber now; is it the policy of the Board to grant licenses for the near future; or are there definite applications?

Mr. Hosmer said that some time ago Mr. J. B. Castle made a blanket application for all the Government forests in Kona; Mr. C. C. Bolte had also made some tentative propositions. But neither of these companies have come to a point where they are ready to do anything definite.

The Governor asked if it would not be well to make the boundary stop at Kaohe 1-3. There might be applications for homesteading in the near future. There is not much forest on it. At the time that this investigation was made the proposition to homestead these lands had not come up.

Mr. Hosmer said that some time ago an application was made for a lease of Waiea for grazing. This had been denied.

Mr. On Tai said that they had been trying to develop their lands for pasture, that they had spent a lot of money for seed from the coast and a lot of money for fencing, and that they would like to have their land excluded from the reserve. If it is made a reserve it will simply knock them out altogether.

Senator Baker said "We do not have water on this land, and it is dry, and we should like to have some protection. It would not affect your lands, it would merely be a recommendation... [HSA Board of Agriculture and Forestry Hearing Minutes; Com 2 Box 9]

In 1911, Governor Freer signed into law, Governor's Proclamation, establishing the South Kona Forest Reserve. The reserve lands were described in three sections, the third being the Kapu'a-Manukā section (*Figure 6*). Excerpts from the proclamation, and notes of survey for the Kapu'a-Manukā section follow below:

**May 17, 1911**  
**Governor W.F. Freer**

**PROCLAMATION OF FOREST RESERVE IN THE DISTRICTS OF  
SOUTH KONA AND KAU, ISLAND AND COUNTY OF HAWAII.**

Under and by virtue of the authority vested in me by the provisions of Chapter 28 of the Revised Laws of Hawaii, as amended by Act 65 of the Session Laws of 1905, and by Act 4 of the Session Laws of 1907, and of every other power hereunto enabling, I, Walter F. Freer, Governor of Hawaii, with the approval of a majority of the Board of Commissioners of Agriculture and Forestry, having held the hearing of which notice has been duly given as in said acts provided, do hereby recommend and approve as a Forest Reserve to be called the "South Kona Forest Reserve," those certain pieces of government and privately owned land in the Districts of South Kona and Kau, Island of Hawaii, which may be described roughly as being the area of forest lying between the upper edge of the section of cleared land along the Government Road and the western boundary of the land of Kahuku, extending from the land of Kaohe to the land of Manuka, inclusive and containing an area of 36,952 acres, more or less, in the Districts of South Kona and Kau, Island and County of Hawaii, Territory of Hawaii, more particularly described by and on maps made in August, 1910, by the Government



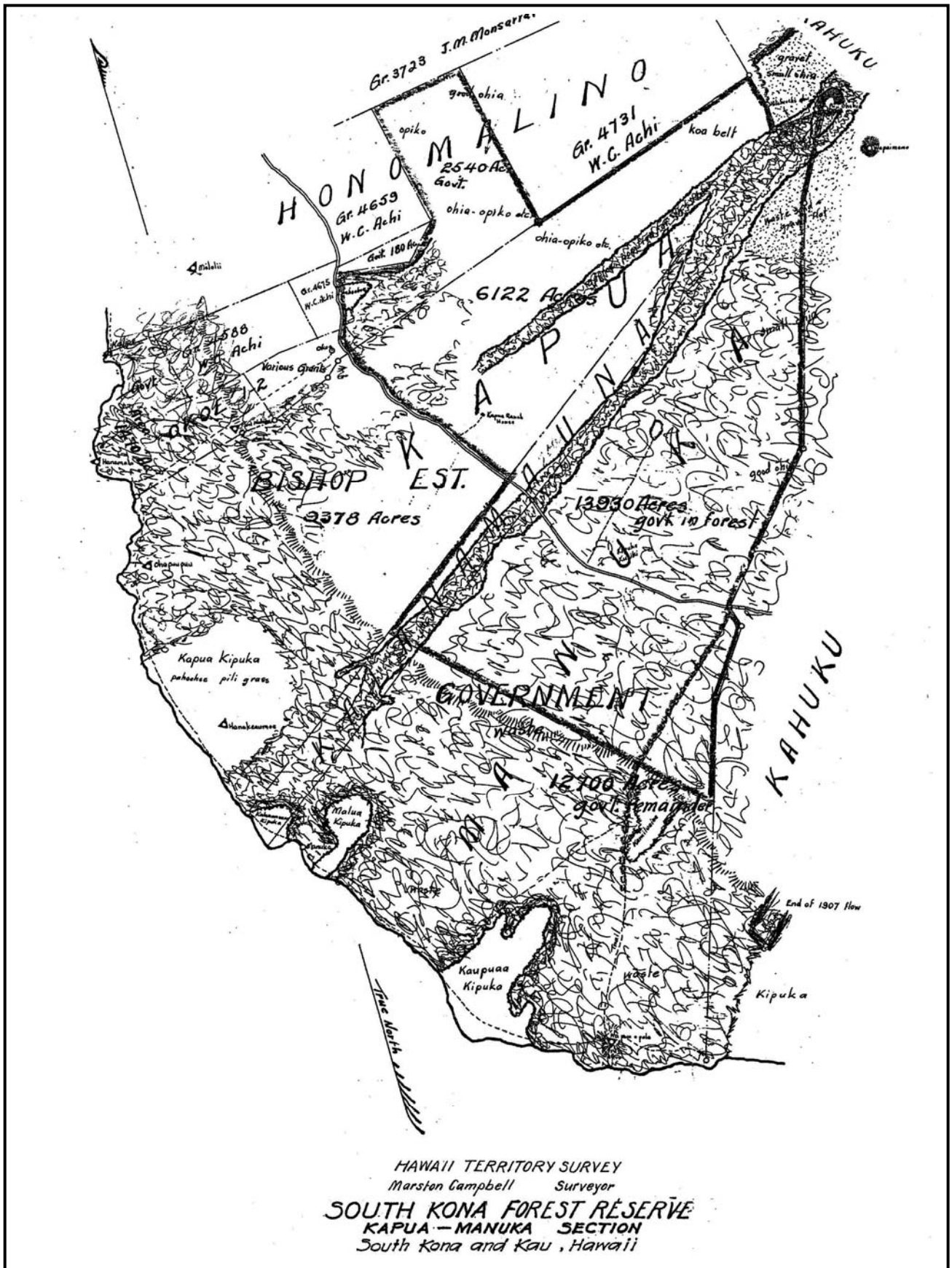


Figure 6. Kapu'a-Manukā Section of the South Kona Forest Reserve (C.S.F. 2211; G.F. Wright & M. Campbell, Surveyors, 1910)

Survey Department of the Territory of Hawaii, which said maps are now on file in the said Survey Department marked Government Survey Registered Maps Nos. 2468 and 2469 and “Waiea-Kipahoe Forest Reserve” and “Kapua-Manuka Forest Reserve” respectively, and a description accompanying the same in three parts numbered C.S.F. 2211, 2245 and 2246, which said description now on file in the said Survey Department, is as follows:

***Kapua-Manuka Section.***

Including portions of the lands of Honomalino, Kapua, and Kaulanamauna, in South Kona, and portion of the lands of Manuka, in Kau, Island of Hawaii. C.S.F. 2211.

Beginning at Government Survey Trig. Station “Puu o Ohohia” (marked by a large *ahu*) at the East corner of this reserve and at the common corners of the lands of Kaulanamauna and Manuka on the Kahuku boundary, from which station the true azimuth and distance to Government Survey Trig. Station “Puu o Keokeo” is 211° 52’ 08” 13078.1 feet , as shown on Government Survey Registered Map No. 2469, and running by true azimuths:

1. 28° 55’ 30” 6621.6 feet along the land of ***Kahuku*** to a + on set stone and *ahu* at ***Pohakuloa***, a small rocky hill in large sand flat;
2. 16° 41’ 16705.0 feet along the land of ***Kahuku*** to ***Honopu***, a small black rocky hill on *aa* flow;
3. 40° 33’ 11883.0 feet along the land of ***Kahuku*** to \_\_\_[blank]\_\_\_ on *pahoehoe* and *ahu* at ***Kahiawai*** on the lower side of the Government Road and on the south side of a gulch;
4. 345° 02’ 1528.0 feet along the land of ***Kahuku*** to a bottle placed in the center of Hitchcock’s old *ahu* at ***Puu Ainako***, on the lower side of a gulch and just north of the Government Road;
5. 34° 30’ 5280.0 feet along the land of ***Kahuku*** to an unmarked point;
6. 17° 52’ 7000.0 feet along the land of ***Kahuku*** to an unmarked point;
7. 134° 29’ 24460.0 feet across the Government lands of ***Manuka and Kaulanamauna*** to an unmarked point on the ***Kapua*** boundary;
8. 233° 20’ 20” 13000.0 feet along the land of ***Kapua*** to a + on set stone and *ahu* on lower side of the Government Road at place called ***Uwe***;
9. Thence along the upper side of the Government Road across the lands of ***Kapua*** and ***Honomalino*** to an unmarked point, the direct azimuth and distance being: 158° 00’ 18000.0 feet;
10. 277° 20’ 5000.0 feet along Grant 4659 to W. C. Achi;
11. 221° 56’ 3104.0 feet along Grant 4659 to W. C. Achi;
12. 170° 05’ 8550.0 feet along Grant 4659 to W. C. Achi;
13. 260° 15’ 6375.0 feet along the land of Papa 2<sup>nd</sup> to *ahu*;
14. 350° 159’ 11750.0 feet along Grant 4731 to W. C. Achi, to *ahu*;
15. 250° 53’ 17165.0 feet along the land of ***Kapua*** to *ahu* on the ***Kahuku*** boundary;
16. 345° 39’ 2244.0 feet along the land of ***Kahuku*** to Hitchcock’s old *ahu*;
17. 1° 04’ 1711.0 feet along the land of ***Kahuku*** to *ahu* on the North edge of *aa* flow;
18. 263° 44’ 3676.0 feet along the land of ***Kahuku*** to the point of beginning.

Area 22,592 Acres.

And as provided by law, subject to the existing leases, I do hereby set apart as parts of the South Kona Forest Reserve those portions of the government lands known as Kaohe Tract (1555 acres), Kukuiopae Tract (2760 acres), Olelomoana-Opihihali Tract (3885 acres), Kipahoehoe (4590 acres), Honomalino (2540 acres), and **Kaulanamauna** (2060 acres) in the District of South Kona and **Manuka** (11,870 acres) in the District of Kau, altogether an area of 29,260 acres, more or less, that lie within the metes and bounds of the above described South Kona Forest Reserve. IN WITNESS WHEREOF, I have hereunto set my hand and caused the Great Seal of the Territory of Hawaii to be affixed. Done at the Capitol in Honolulu, this 17<sup>th</sup> day of May, A.D. 1911.

W.F. FREAR  
Governor of Hawaii.

Subsequently, in 1929, one acre of land was withdrawn from the Kapu'a-Manukā section of the South Kona Forest Reserve, for the Manuka Comfort Station. The station served as a base of operations for forestry field work. Over the years reports on the condition of the forest lands were submitted to the Board, and in a communication dated October 7, 1936, we learn that some, if not all of the lands in the South Kona Forest were being impacted by the intrusion of cattle.

**October 7, 1936**

**Report on Hawaii Inspection Trip, by Territorial Forester (July-August 1936);  
to Board of Commissioners of Agriculture and Forestry:**

...South Kona Forest Reserve

Working out from the Manuka Ranger Station, where I spent the previous night, I made a 13 hour mule trip through very rough country to the upper lands in the South Kona reserve to ascertain the extent of cattle trespass.

Going up the old road to the abandoned Yee Hop *koa* mill, I rode across and along the *mauka* boundary of this reserve at the general elevation of 5,000 feet on the Papa Trail crossing the government lands of Kipahoehoe, Olelomoana-Opihihali, Kukuiopae and Kaohe 1-3, coming down the Kaohe Ranch trail, one of the steepest and worst trails in the Territory.

When this reserve was originally set aside, on the recommendation of my predecessor 25 years ago, there was an existing government lease on the Olelomoana-Opihihali tract of 3,885 acres. All of this land was not grazed; only the *mauka* section of about 1145 acres. This was fenced off so that the cattle could not wander down the slope and get lost or go wild in the dense jungle lower down the mountain. This lease expired in 1926 but cattle are still at large on this land and adjacent government lands within the forest reserve boundary.

On the other government lands in forest reserve in this section which were never under lease, the upper portions have been and still are being grazed in conjunction with better grazing land leased from Kahuku Ranch just above the forest reserve further up the slopes of Mauna Loa. These grazing lands (mostly low *ohia* trees with a ground cover of *amaumau* fern) are separated from the heavy forest down the slope by a wire fence, now somewhat out of repair because of rotted posts.

The logical location for the upper forest reserve boundary is this fence. The wire is still sound and all that is needed to make it stock proof is to replace the posts, timber for which is at hand... [Hawaii State Land Division Files]

In 1945, the Territorial Survey Department conducted a survey of the near-shore *kīpuka* (areas of older lava flows and vegetation, surrounded by newer lava flows), in Manukā and Kaulanamauna. Of

importance, these *kīpuka* represent areas of traditional residence, and are crossed by the *ala hele* (*mauka-makai*), and *ala loa* (lateral to the shore), which were used in ancient times (*Figure 7*).

**C.S.F. 10,176**  
***Kipukas in Kaulanamauna and Manuka***  
***Districts of South Kona and Kau***  
***Island of Hawaii***

Furnished Land Office  
July 18, 1945

***KAULANAMAUNA KIPUKA*** – All of the land included within the *Kipuka* of this name situate within the land of Kaulanamauna, district of South Kona and the land of Manuka, district of Kau, island of Hawaii, as shown on sketch plan hereto attached and made a part hereof and containing an area of 110 acres, a little more or less; together with a right of way but not exclusive in the nature of an easement over and across the trail running from said *Kipuka* in a southeasterly and a northeasterly direction to the Government Main road, as shown on aforesaid sketch plan or over and across any trail hereinafter established by the Commissioner of Public Lands; reserving, however, a right of way in the nature of an easement of the trail over and across the said *Kipuka* as shown on said sketch plan or any modification thereof as may be established by the Commissioner of Public Lands.

***MALUA KIPUKA*** – All of the land included within the *Kipuka* of this name situate within the land of Manuka, district of Kau, island of Hawaii, as shown on sketch plan hereto attached and made a part thereof and containing an area of 216 acres, a little more or less; together with a right of way but not exclusive in the nature of an easement over and across the trail running from said *Kipuka* in a southeasterly and a northeasterly direction to the Government Main road, as shown on aforesaid sketch plan or over and across any trail hereinafter established by the Commissioner of Public Lands; reserving, however, a right of way in the nature of an easement of the trail over and across the said *Kipuka* as shown on said sketch plan or any modification thereof as may be established by the Commissioner of Public Lands.

***KAUPUAA KIPUKA*** – All of the land included within the *Kipuka* of this name situate within the land of Manuka, district of Kau, island of Hawaii, as shown on sketch plan hereto attached and made a part thereof and containing an area of 765 acres, a little more or less; together with a right of way but not exclusive in the nature of an easement over and across the trail running from said *Kipuka* in a southeasterly and a northeasterly direction to the Government Main road, as shown on aforesaid sketch plan or over and across any trail hereinafter established by the Commissioner of Public Lands; reserving, however, a right of way in the nature of an easement of the trail over and across the said *Kipuka* as shown on said sketch plan or any modification thereof as may be established by the Commissioner of Public Lands; and also a right of way from the Kauna Point Lighthouse Station to any existing trail or modification over and across this *Kipuka*.

R.D. King  
Principal Cadastral Engineer  
[State Survey Division]

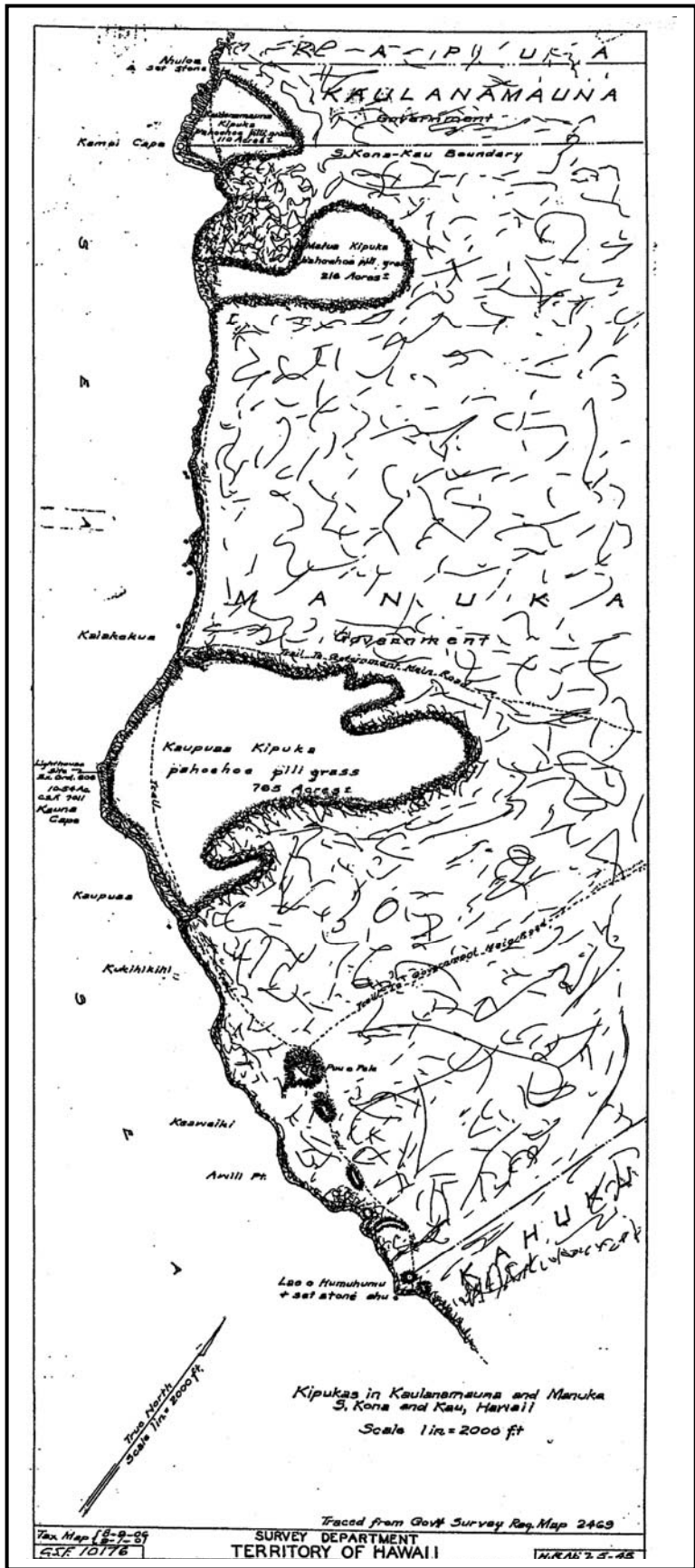


Figure 7. C.S.F. 10,176 – Depicting Kīpuka of Kaulanamauna and Manukā , and Trails (R.D. King, 1945)

In 1952, 13.25 acres of land were set aside from the Manukā-Kapu'a section of the South Kona Forest Reserve for the Manuka Park (C.S.F. 11,475, and Governor's Executive Order No. 1518). The park was designed as a comfort station and visitor attraction, where people could see native plants found in the region, as well as introduced species of interest. The 1952 Annual Report of the Board of Agriculture and Forestry reported that Resolution 3, passed on dated April 25, 1952, and described the park in the following statement:

This area has high values as a picnic area midway between Kailua and Kilauea. It also will have scientific values when the arboretum of native trees and plants has been completed. The park area will also include an area devoted to the testing of exotic flowering trees which will add to its educational and recreational interests [1952:94]

The diagram of the park (*Figure 8*), identifies the locations of selected features within the park boundaries. Then in 1965, further modifications to the Manuka State Park were undertaken as the "Hawaii Belt Road" was widened and improved (C.S.F. 14,794). The accompanying map (*Figure 9*), depicts features in the park, indicating the location of several historical resources (certain culturally sensitive sites have been removed from the maps).

In 1972, Handy, Handy and Pukui, wrote about experiences in Manukā, and features seen around Manukā Park between the 1930s to 1960s. They observed:

In its median area mountainward Manuka has verdant forest and pasture lands, and old accounts attest to some Hawaiian population in ancient times, as does a burial cave on the present site of the State Forest Reserve Park...

Ample evidence exists at the Manuka park area of Hawaiian habitation long ago. This area is well watered by rain. The present 'ohi'a forest of trees a hundred years old or more is growing where there were once house sites and cultivated patches. The park keeper, Otto Breckerhoff, showed us the wild sweet-potato plants found growing in the area where the park was cleared by bulldozers. Farther inland there is an area of better soil where mountain taro was growing wild [the kīpuka of Haliukua and Lamakuloa]. There were here also several varieties of native Hawaiian banana. Just outside the park limits near the water tanks is a walled enclosure which may have been a house site. There grows a ti plant, always a sign on such terrain of former human habitation. Below here in the park there are five mango trees, indicating that the site was not abandoned before the mango was introduced.

Just within the crescent formed by these mango trees were five graves, made with lava blocks at ground level, each with a skeleton lying at full length in a state of perfect preservation. The park keeper says that he measured the largest of these and that from the top of the skull to bottom of feet it measured 94 inches. If so, the skeleton must have been disarticulated. The bones are said to have been massive in proportion, and the teeth perfect. This find is interesting in view of the fact that the area was called Kanaka-Ioloa (Very-long-men) and is said to have been inhabited by people who were very tall. Below this grave is a shallow well or water hole about three feet in diameter with sides made of carefully laid lava chunks. To the west of the park, amongst the 'ohi'a trees, runs a low wall carefully laid out. Near it is an old kukui tree, evidencing human habitation, since the kukui does not grow wild here. Most of the wild sweet-potato plants are near this area. [Handy, Handy and Pukui, 1972:569]

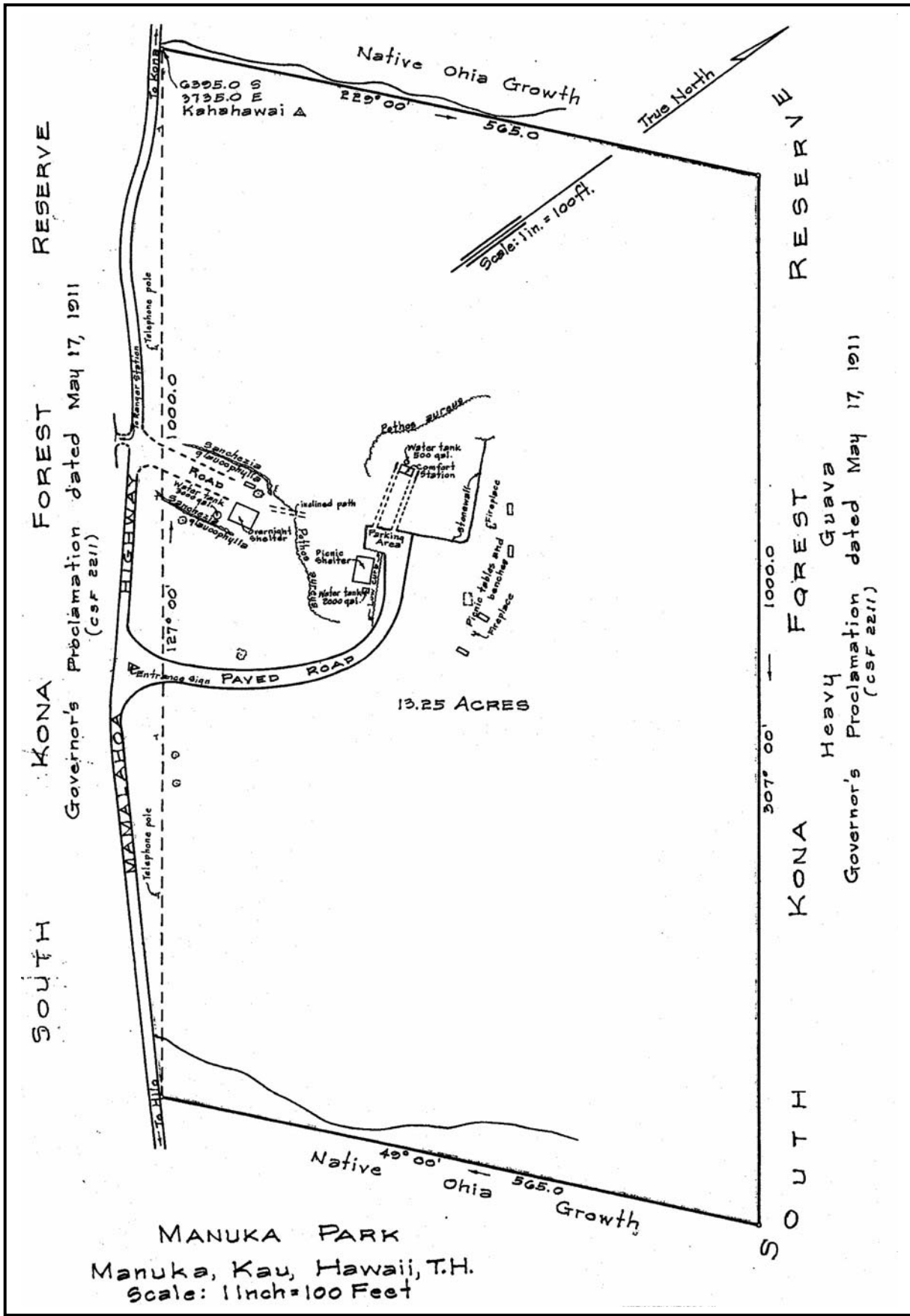


Figure 8. Map of Manuka Park. C.S.F. 11,475 (May 21, 1952; not to Scale)

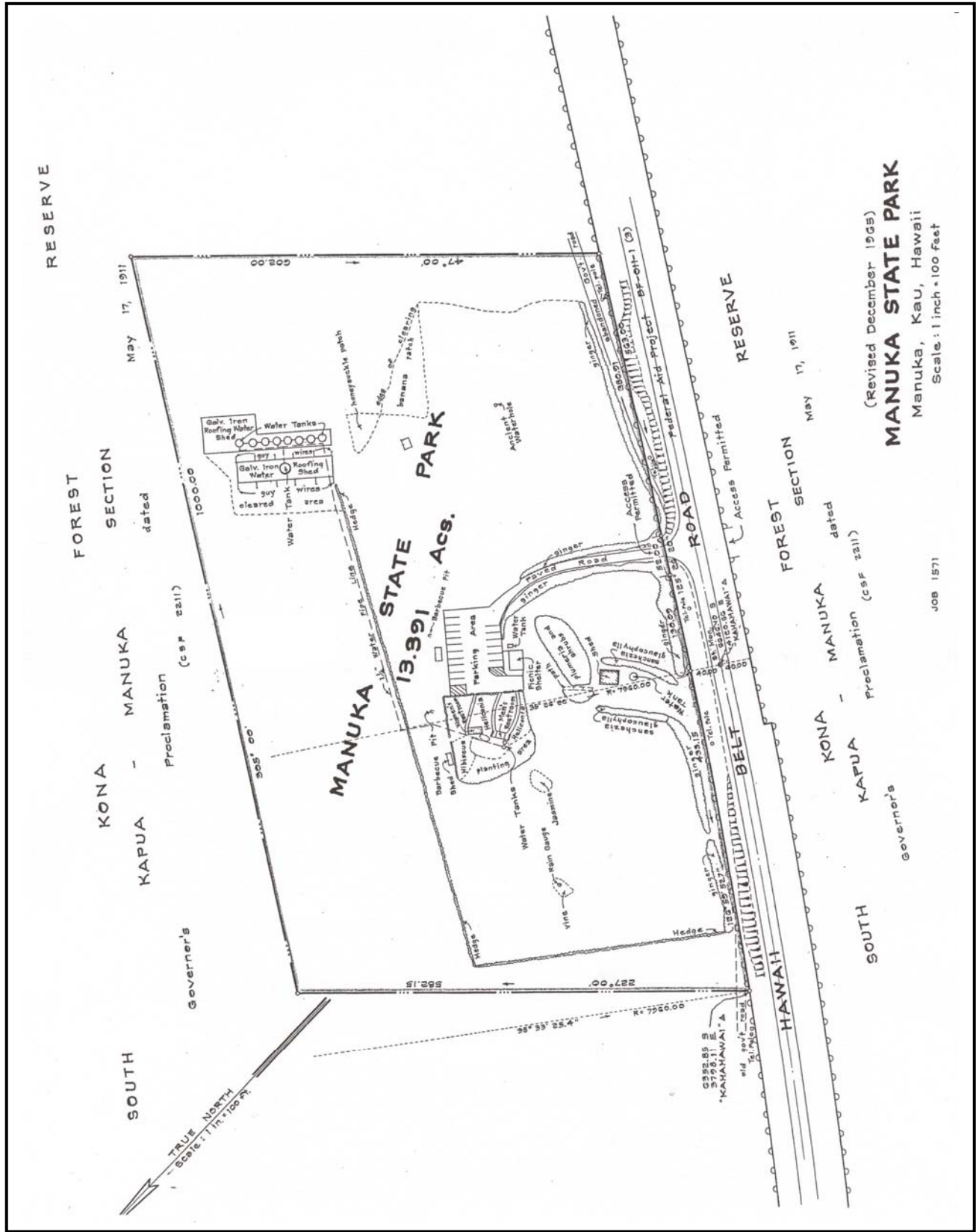


Figure 9. Manuka State Park. C.S.F. 14,794 (December 27, 1965; not to Scale)



## **MANUKA NATURAL AREA RESERVE**

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The Manukā Natural Area Reserve is made up of lands that were originally set aside in 1911 as a part of the territorial government's resource conservation program. In 1970, Hawai'i became one of the first states in the country to designate unique natural resources as a part of a system of Natural Area Reserves. In accordance with State Law, the NARS are mandated to "preserve in perpetuity specific land and water areas which support communities, as relatively unmodified as possible, of the natural flora and fauna, as well as geological sites, of Hawaii" (HRS 195-1).

In 1979, as a part of the ongoing program to designate unique natural systems as Natural Area Reserves, the lands of Manukā and Kaulanamauna were surveyed for withdrawal from the South Kona Forest Reserve as the formal, first step towards establishment of the Manukā NAR (cf. Gov's. E.O. No. 3159). Those lands were described in C.S.F. 18,638, by the following notes of survey:

**WITHDRAWAL  
PORTION OF SOUTH KONA FOREST RESERVE  
KAPUA-MANUKA SECTION  
(Governor's Proclamation dated May 17, 1911)  
Manuka, Kau, Island of Hawaii, Hawaii**

For Tracing – See Plat 214  
Withdrawn by Gov. Ex. Ord. 3159 (Dec. 20, 1982)  
(E.O. Folder 67-A)

DLNR  
7-18-79 (L.F. 186)

C.S.F. 18,638

STATE OF HAWAII  
SURVEY DIVISION  
DEPT. OF ACCOUNTING AND GENERAL SERVICES  
HONOLULU

May 4, 1979

WITHDRAWAL  
PORTION OF SOUTH KONA FOREST RESERVE  
KAPUA-MANUKA SECTION  
(Governor's Proclamation dated May 17, 1911)  
Manuka, Kau, Island of Hawaii, Hawaii

Being portion of the Government Land of Manuka.

Beginning at the southwest corner of this parcel of land and on the boundary between the lands of Kahuku and Manuka, the coordinates of said point of beginning referred to Government Survey Triangulation Station "PUU O KAMA OA" being 5,537.29 feet South and 21,534.20 feet West, as shown on Government Survey Registered H.S.S. Plat 214, thence running by azimuths measured clockwise from True South:-

1. 134° 30' 32" 22,214.00 feet along the remainder of the Government Land of Manuka;
2. 233° 01' 02" 12,503.00 feet along the Government Land of Kaulanamauna, over and across Mamalahoa Highway to Government Survey Triangulation Station "KAHAHAWAI";

3. 232° 29' 42" 59.37 feet along the Government Land of Kaulanamauna and over and across the Old Government Road;
4. 232° 29' 42" 420.26 feet along Parcel A of Highway Maintenance Baseyard (Governor's Executive Order 2172);
5. 232° 29' 42" 32,720.62 feet along the Government Land of Kaulanamauna;
6. 28° 57' 02" 6621.60 feet along Grant 2791 to C.C. Harris to a "+" cut in rock on hill called "Pohakuloa";
7. 16° 42' 32" 16,702.50 feet along Hawaiian Ocean View Estates, Unit 4 (File Plan 1011), along Grant 2791 to C.C. Harris to a "+" cut in rock on hill called "Honopu";
8. 40° 32' 50" 11,761.75 feet along Hawaiian Ocean View Estates, Unit 4 (File Plan 692), along Grant 2791 to C.C. Harris;
9. 40° 58' 117.86 feet over and across Mamalahoa Highway and along Grant 2791 to C.C. Harris;
10. 344° 59' 05" 1562.42 feet along Grant 2791 to C.C. Harris;
11. 34° 31' 32" 5319.32 feet along Grant 2791 to C.C. Harris;
12. 17° 53' 32" 7000.00 feet along Grant 2791 to C.C. Harris to the point of beginning and containing an AREA OF 11,822.6 ACRES.

SURVEY DIVISION  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
STATE OF HAWAII  
By Ichiro Sakamoto  
Land Surveyor

Compiled from R.M. 2468  
& other Govt. Survey Records. [State Survey Division]

In 1982, the Manukā-Kaulanamauna lands withdrawn from the South Kona Forest reserve, where described in preparation for Governor's Executive Order No. 3164, which would establish the Manukā Natural Area Reserve. The notes of survey provided the following description of the land area:

**C.S.F. 19,618**  
**MANUKA NATURAL AREA RESERVE**  
**Kaulanamauna, South Kona and Manuka, Kau,**  
**Island of Hawaii, Hawaii**

For Tracing see Plat 215-A [see *Figure 10*]  
Gov. Ex. Order 3164 dated Jan. 12, 1983  
(E.O. Folder 3164)

DLNR  
10-22-82 (L.F. 186)

STATE OF HAWAII  
SURVEY DIVISION  
DEPT. OF ACCOUNTING AND GENERAL SERVICES  
HONOLULU

October 15, 1982

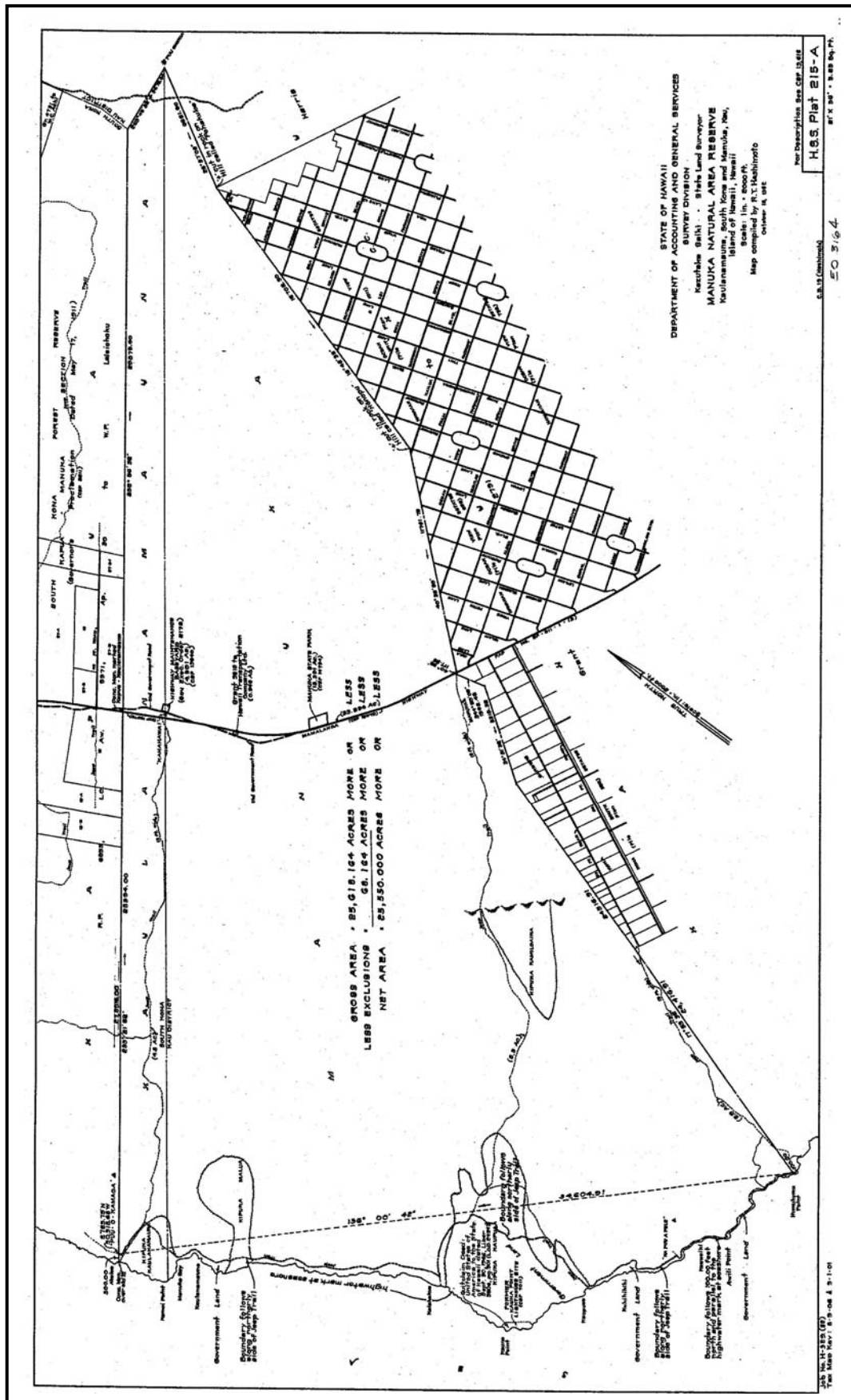


Figure 10. The Manukā Natural Area Reserve, Districts of Ka'ū and South Kona, Island of Hawai'i (Hawai'i State Survey Plat Map No. 215-A; 1982)

**MANUKA NATURAL AREA RESERVE**  
**Kaulanamauna, South Kona and Manuka, Kau,**  
**Island of Hawaii, Hawaii**

Being portions of the Government Lands of Kaulanamauna and Manuka.

Beginning at the west corner of this parcel of land, on the northerly side of Jeep Trail and on the boundary between the lands of Kapua and Kaulanamauna, the coordinates of said point of beginning referred to Government Survey Triangulation Station "PUU O KAMAOA" being 2,785.75 feet North and 50,918.68 feet West, as shown on Government Survey Registered H.S.S. Plat 215-A, thence running by azimuths measured clockwise from True South:-

1. 233° 21' 52" 27,894.00 feet along R.P. 6853, L.C.Aw. 9971, Ap. 30 to W.P. Leleiohoku to a concrete monument marked Kapua-Kaulanamauna;
2. 232° 56' 32" 29,875.00 feet along R.P. 6853, L.C.Aw. 9971, Ap. 30 to W.P. Leleiohoku;
3. 263° 45' 32" 3676.00 feet along Grant 2791 to C.C. Harris;
4. 28° 57' 02" 6621.60 feet along Grant 2791 to C.C. Harris to a "+" cut in rock on hill called "Pohakuloa";
5. 16° 42' 32" 16,702.50 feet along Hawaiian Ocean View Estates, Unit 4 (File Plan 1011), along Grant 2791 to C.C. Harris to a "+" cut in rock on hill called "Honopu";
6. 40° 32' 50" 11,761.75 feet along Hawaiian Ocean View Estates (File Plan 692), along Grant 2791 to C.C. Harris;
7. 40° 58' 117.86 feet over and across Mamalahoa Highway and along Grant 2791 to C.C. Harris;
8. 344° 59' 05" 1562.42 feet along Grant 2791 to C.C. Harris;
9. 34° 31' 32" 5319.32 feet along Grant 2791 to C.C. Harris;
10. 17° 53' 32" 24,416.91 feet along Grant 2791 to C.C. Harris to a point 100.00 feet north from the high-water mark at seashore;
11. Thence along Government Land, 100.00 feet north and parallel to the high-water mark at seashore and along the northerly side of Jeep Trail, the direct azimuth and distance being: 136° 00' 42" 34,604.91 feet to the point of beginning and containing a GROSS AREA OF 25,618.164 ACRES, MORE OR LESS and a NET AREA OF 25,550.000 ACRES, MORE OR LESS, after excluding and deducting there from Exclusions (68.164 ACRES) listed as follows:-

EXCLUSIONS:

1. Highway Maintenance Baseyard (Gov. Exec. Ord. 2172) 4.591 Acres
2. Grant 9818 to Hawaii Transportation Company, Ltd. 0.948 Acre
3. Manuka State Park 13.391 Acres
4. Mamalahoa Highway 33.234 Acres
5. Jeep Trails 16.0 Acres

TOTAL AREA OF EXCLUSIONS 68.164 Acres

SURVEY DIVISION  
DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES  
STATE OF HAWAII  
By Robert T. Hashimoto  
Land Surveyor

Compiled from data furn.  
By N.A.R.S., U.S.G.S. Map,  
R.M. 2468 and other Govt.  
Survey Records. [State Survey Division]

On January 12<sup>th</sup>, 1983, Governor George Ariyoshi, signed Executive Order No. 3164, establishing the Manukā NAR, comprised of lands from the *ahupua'a* of Manuka and Kaulanamauna. The Executive Order, below, set the foundation for the long-term protection and conservation of the unique natural and cultural resources within the NAR lands:

***Executive Order No. 3164***  
***Setting Aside Land for Public Purposes***  
***January 12<sup>th</sup>, 1983***

By this Executive Order, I, the undersigned, Governor of the State of Hawaii, by virtue of the authority in me vested by Section 171-11, Hawaii Revised Statutes, and every other authority me hereunto enabling, do hereby order that the public land hereinafter described be, and the same is, hereby set aside for the following public purposes:

FOR NATURAL AREA RESERVE, to be under the control and management of the Department of Land and Natural Resources, State of Hawaii, being the lands situate at Kaulanamauna, South Kona and Manuka, Kau, Island of Hawaii, Hawaii, and designated as ***MANUKA NATURAL AREA RESERVE***, containing a gross area of 25,618.164 Acres, more or less, and a net area of 25,550.000 Acres, more or less, after excluding and deducting there from exclusions of 68.164 Acres, all more particularly described in Exhibit "A" and delineated on Exhibit "B", both of which are attached hereto and made a part hereof, said exhibits being, respectively, a survey description and survey map prepared by the Survey Division, Department of Accounting and General Services, State of Hawaii, both being designated as C.S.F. No. 19,618 and dated October 15, 1982.

SUBJECT to disapproval by the Legislature by two-thirds vote of either the Senate or the House of Representatives or by majority vote of both, in any regular or special session next following the date of this Executive Order.

In Witness Whereof, I have hereunto set my hand and caused the Great Seal of the State of Hawaii to be affixed. Done at the Capitol at Honolulu the 12<sup>th</sup> day of January, Nineteen Hundred and eighty three.

George R. Ariyoshi  
Governor of the State of Hawaii [Natural Area Reserve Collection]

## **Overview of Resources and Management Objectives for the Manukā NAR**

In 1992, the Department of Land and Natural Resources, Natural Area Reserves System staff prepared a general management plan for the Manukā NAR. The following narratives taken from the 1992 plan, describe resources of the Manukā NAR and program objectives:

### **A. General Setting**

Manuka Natural Area Reserve occupies 25,550 acres on the southwest slope of Mauna Loa on the island of Hawaii... Elevations range from near sea level to 5,524 feet near **Puu Ohohia** at the reserve's apex. Rainfall averages from 30 inches annually in the lower elevation to 40 inches at the reserve's apex. Precipitation is probably higher along a band in the mid-elevations (ca. 1,800 - 3,200 feet) where daily cloud cover results in fog drip. March is the wettest month, averaging 3 - 4 inches, and June the driest with only 1 - 4 inches (Giambelluca, Nullet, and Schroeder 1986).

Highway 11 runs through the center of the reserve at about 1,800 feet elevation. Along the highway in the center of the reserve, Manuka State Park encloses 13 acres and provides visitor facilities including a restroom, arboretum, and camping area. Manuka State Park and two other parcels along Highway 11 are excluded from the reserve. One parcel of 5 acres is used as a highway maintenance base yard and the other (less than one acre) is privately owned. The coastal area, two *kipuka* (Kaulanamauna and Kaupuaa), the *mauka-makai* jeep roads, and **Kaheawai Trail** are not included in the Natural Area Reserve, but are state lands.

The reserve's eastern boundary borders developing residential subdivisions (Oceanview Estates). A resort development project is also planned for the *makai* lands along the eastern boundary... The western boundary borders agricultural lands, a large portion of which are macadamia nut orchards.

Above Highway 11, trails and roads provide access into the reserve from all sides. A loop trail from Manuka State Park extends up to 2200 feet in the central portion of the reserve. Trails from the Ocean View Estates subdivision lead into the reserve along the eastern boundary; a four-wheel drive road leads from the northern part of the subdivision onto Kahuku Ranch lands and across the reserve's apex. On the northwest boundary, Mac Farms of Hawaii has a road leading up from Highway 11. What appears to be an old, overgrown road and is now a foot trail, crosses into the center of the reserve along the 2,600 feet contour from Mac Farms road.

Two rough four-wheel drive roads lead from Highway 11 to the coast. One road, known as Manuka Bay Road, begins close to the northwestern boundary and leads down to Manuka Bay. The other road crosses private lands just east of the reserve, and becomes the reserve's eastern boundary from 700 feet elevation to **Humuhumu Point**. A coastal jeep road begins at Manuka Bay and extends just past **Kipuka Kaupuaa**. These roads are frequently used by fisherman and campers. **Kaheawai Trail** begins at Highway 11 near the eastern border and extends to the coast at **Kipuka Kaupuaa**. Though shown on maps as a four-wheel drive road, it is overgrown and only useable as a foot trail.

### **B. Flora and Fauna**

Eighteen natural communities were observed in the reserve during the 1989 survey.. Of these, four non-vegetated aquatic and subterranean communities were seen: two kinds of anchialine pools (one rare) and two kinds of uncharacterized lava tubes. The fourteen vegetated communities ranged from coastal dry shrublands to subalpine forest including the rare *Koa*/*Ohia* Montane Mesic Forest and *Pili* Lowland Dry Grassland communities.

Of the seven rare plants confirmed within the reserve boundaries, 3 were observed during the 1989 field survey...

Four common native birds were seen during the 1989 survey of Manuka reserve. 'Amakihi (*Hemignathus virens*), 'apapane (*Himatione sanguinea*), 'elepaio (*Chasiempis sandwichensis*), and 'i'iwi (*Vestiaria coccinea*). Two rare birds, the 'io, or Hawaiian hawk (*Buteo solitarius*), and the 'alala, or Hawaiian crow (*Corvus hawaiiensis*), and the rare 'ope'ape'a, or Hawaiian hoary bat (*Lasiurus cinereus semotus*) are known from the reserve... Of these only the 'io was seen during the 1989 survey.

Non-native birds commonly seen in the reserve during the 1989 survey included Japanese white-eye (*Zosterops japonicus*), northern cardinal (*Cardinalis cardinalis*), zebra dove, (*Geopelia striata*), spotted dove (*Streptopelia chinensis*), Japanese bush-warbler (*Cettia diphone*), kalij pheasant (*Lophura leucomelana*) and common mynah (*Acridotheres tristis*).

A high diversity of native invertebrates including anchialine pool shrimp, crickets, spiders, flies, bees, wasps, planthoppers, and antlions (*Eidoleon wilsoni*) were seen during the 1989 survey. Non-native invertebrates present in the reserve included mosquitoes, ants and yellow jackets (*Vespula* sp.), which are species of management concern because of their effects on native invertebrates.

#### **A. Key Management Considerations**

The overall management goal is to protect, maintain, and enhance the reserve's native ecosystems. The following key points were considered in the development of management programs to achieve this goal:

- 1) Since the Manuka reserve is very large, intensive management of the entire reserve is not realistic at this time. Management priorities for specific areas are based on biological resources, the extent of current disturbances, the nature of biological threats within and near the area, and the feasibility of management.
- 2) Invasive nonnative plants and feral animals constitute a severe threat to the reserve's native vegetation. Invasive nonnative plants threaten the integrity of the reserve's natural communities by competing with native plants for space, light, and nutrients and facilitating the invasion of nonnative insects and birds.

Feral animals destroy native plants, distribute nonnative plant seeds, and create openings in the native ground cover. These openings contribute to soil erosion and facilitate the establishment of nonnative plants. Control of invasive weeds and feral animals will be necessary to preserve the integrity of the natural communities.

- 3) Marijuana cultivation in the reserve is a major problem. Clearings created by cultivators damage native plants and facilitate nonnative plant invasion. Cultivators protecting their plantings can jeopardize the safety of legitimate reserve users. Native hardwood removal is another problem in the reserve. The stump of a rare *kauiha* (*Colubrina oppositifolia*) tree, one of less than fifty known in the reserve, was seen during the 1989 survey near Manuka Bay Road.
- 4) *A number of archaeological sites are present in the reserve including burial caves and petroglyphs in the coastal area, and farming terraces in the forested area. The Kaheawai Trail below Highway 11 is an old Hawaiian foot trail which passes by rock carvings. These sites should be maintained and used as educational resources. Additional archaeological surveys and research are*

needed throughout the reserve. The Hawaii Island Burial Council should be consulted regarding the management of any burial caves in the reserve.

### **B. Management Units**

The reserve has been divided into five management units....:

- 1) Kipuka Unit - this 600-acre unit extends from the top of the reserve down to 4600 feet elevation. Pioneer vegetation on lava flows surrounds several kipukas which contain *Koa*/*Ohi'a* Montane Mesic Forest, *Ohi'a* Subalpine Dry Forest, and *Pukiawe* Subalpine Dry Shrubland communities. Some old light pig and goat damage and only a few nonnative plants were present in the *kipuka* communities.
- 2) Upper Pioneer Unit - this 2300-acre unit extends from 4600 feet down to 3200 feet and contains primarily pioneer vegetation on lava flows, though portions of the *Ohi'a* Montane Mesic Forest community are also present along the lower and western boundaries. The communities in this unit were not surveyed for ungulate damage or weed infestation.
- 3) Ohi'a Unit - this 5100-acre unit extends from 3200 feet down to Highway 11. *Ohi'a* Lowland and Montane Mesic Forest, and Pioneer Vegetation on Lava Flow communities are found in this unit. Several rare plants and animals including the *'alala* have been reported in this unit. This unit contained widespread pig damage; several nonnative plants were present in the lower elevations which have a great potential for spreading.
- 4) Lowland Unit - this 7900-acre unit extends from Highway 11 down to the 600 foot contour interval. Mesic and Dry Lowland *Ohi'a* and *Lama* Forest communities, and patches of *A'ali'i* Lowland Dry Shrubland and Nonnative Dominated communities are present. In this unit, there was light pig damage in the upper forested regions; nonnative plant infestation was widespread.
- 5) Lower Pioneer Unit - this 9600-acre unit extends from 600 feet elevation down to the coastal boundary. Pioneer vegetation on lava flows dominates, while patches of *Ilima* Coastal Dry Shrubland, *Pili* Lowland Dry Grassland, Nonnative Dominated communities, and anchialine pools and lava tubes are also present. Light goat damage was found in the coastal regions.

### **C. Management Programs**

The following four management programs outline the long-term goals for the reserve. A six-year implementation schedule is proposed. The four programs form an integrated management package.

#### **1. NONNATIVE SPECIES CONTROL**

##### **a. Feral Ungulate Control**

GOAL: Reduce ungulate populations to the lowest possible level in areas of the reserve dominated by native species.

Statement of the Problem: Feral pigs and goats are a serious concern in the Manuka Natural Area Reserve. Figure 5 shows the degree of ungulate damage encountered along the transects in the 1989 survey. Pig damage was most abundant in the mesic *ohi'a* forests of the Ohia management unit, particularly near the northwestern boundary between the reserve and macadamia nut orchards. Goat sign was found in the uppermost and coastal regions of the reserve. Left unchecked, ungulate populations will continue to degrade the native



ecosystems for which the reserve was established.

Public hunting is well established in the reserve. The Ohia, Upper Pioneer, and Kipuka management units are within Public Hunting Unit B which allows year round hunting with dogs.

The Lowland and Lower Pioneer management units are within Public Hunting Unit C which allows hunting only from June to August without dogs.

The reserve is very large, but accessible along all of its boundaries. In the densely vegetated Ohia unit where pigs are widespread and existing trail access is limited, access improvement may help to direct and distribute hunting pressure.

### **Consideration of Alternative Actions:**

- 1) Control ungulates using public hunting pressure. Though, public hunting can be a viable tool for ungulate control in the early stages of a removal program, public hunting alone is not effective in reducing ungulate populations to the levels necessary to prevent further degradation of the natural communities. Increased hunter presence in the reserve could provide additional corridors contributing to nonnative animal and plant invasion.
- 2) Control ungulates using trained staff hunters. Staff hunters may include volunteer or paid hunters appointed as agents of the state. Trained hunters using dogs in a systematic hunting program could lower ungulate populations to remnant levels. However, increased hunter presence in the reserve could provide additional corridors for nonnative animal and plant invasion.
- 3) Control ungulates with fencing. Fencing will prevent the movement of ungulates into certain areas and direct predictable ungulate movements within intensive control areas. However, fencing is expensive to build and maintain, and may not be necessary to adequately control ungulate damage in all areas of the reserve.
- 4) Control pigs using snares. Snaring is an effective control technique, especially in fenced areas which channel pig movements. However, snaring is not compatible with intensive public use or hunting with dogs.

Recommended Action: Initially alternatives 1, 2, and 3 are recommended. *Fencing is recommended along the northwest boundary of the Lowland and 'Ohi'a management unit and will be considered around the upper Kipuka management unit. Ungulate removal will consist of public hunting supplemented by staff hunting with priority given to the 'Ohi'a, Lowland, and Kipuka management units. Access improvement is proposed in the Ohia management unit to facilitate ungulate control activities.* Three projects, fence construction and maintenance, ungulate removal, and access improvement are described below.

Close monitoring will be essential to determine hunting effectiveness (See Monitoring program). Other alternatives such as snaring in remote areas or areas closed to public hunting, and additional fencing may need to be reconsidered if monitoring indicates continued or increased ungulate damage.

**Project 1** - Fence construction and maintenance. Fence lines are planned along the northwestern boundary of the Lowland and 'Ohi'a management units to prevent pig migration between the reserve and the adjacent macadamia nut orchards... Fencing around the Kipuka management unit may also be necessary, as the rare Koa/'Ohi'a

Montane Mesic Forest community is present in some of the kipukas.

The fences will consist of 47 inch high galvanized woven wire supplemented along the ground surface by one strand of barbed wire. Woven wire and barbed wire will be secured to steel posts placed no more than 10 feet apart. Concreted galvanized pipes will be used to secure the fence line at certain corners.

Fence line locations will be carefully cleared to minimize disturbance to existing vegetation. A botanist will walk the flagged fence route to search for rare plants to be avoided during the clearing of the fence line. Strict sanitary procedures will be followed by field personnel to prevent introduction of weeds on their boots, clothing, and equipment...

**Project 2** - Ungulate removal. Both public and staff hunting are recommended to control pig and goat populations in the reserve.

In the Lower Pioneer and Lowland management units, public hunting restrictions currently in place should be relaxed to allow year round hunting with dogs and no bag limits. Special hunts could be used to increase public hunting pressure. All public hunters should be obligated to report data on health, sex, and age of ungulates captured to NARS staff. Data accumulated during control activities will be compiled and analyzed with other monitoring data to determine program effectiveness.

Staff hunting should focus initially on the more remote regions of the reserve where public hunters are less likely to visit, such as the upper kipukas. Aerial hunting may be necessary to control regional goat populations. The frequency of staff hunting expeditions should be adjusted according to hunting success and monitoring indicators. To the extent possible, ground staff hunting should be carried out by volunteer hunters who have their own hunting dogs. Volunteer hunters should receive training and logistical support to assist staff in intensive ungulate removal efforts...

**Project 3** - Access improvement. A 5.25 mile central loop trail branching off of the existing loop trail from Manuka State Park is planned for the 'Ohi'a management unit... This should help to direct and distribute hunting pressure in the central and upper portions of this unit. The proposed trail would be primarily used by hunters and management personnel, but could also be used by hikers. *Prior to trail clearing an archaeological and a botanical survey should be carried out along the proposed route.*

Both the **Manuka Loop Trail** and the **Kaheawai Trail**, as well as Manuka Bay Road will also be maintained. Strict sanitary procedures will be followed by management personnel to prevent introduction of weeds on their boots, clothing, and equipment...

#### **b. Nonnative Plant Control**

GOAL: To limit the spread and, where possible, eradicate invasive nonnative plant infestations.

Statement of the Problem: There are many nonnative plants present throughout the reserve. Figure 5 shows the distribution of some of the priority weeds encountered along the transects sampled during the 1989 survey.

Nonnative plants were widespread in the Lowland and Lower Pioneer management units. Some areas were dominated by nonnative species such as kukui (*Aleurites moluccana*), Christmas berry (*Schinus terebinthifolius*), guava (*Psidium guajava*), *Lantana camara*, natal redtop (*Rhynchelytrum repens*), molasses grass (*Melinis minutiflora*), kiawe (*Prosopis pallida*), koa haole (*Leucaena leucocephala*), and fountain grass (*Pennisetum setaceum*)...

Grasses such as fountain grass and broomsedge are known to increase fuel loads and fire frequency. Fountain grass was only found in the coastal area. Broomsedge was found in the lowland 'ohi'a forest on the southern side of the reserve. Control of fountain grass and broomsedge especially in areas in close proximity to high quality native dominated communities will help reduce the risk of fire damage or destruction (See Fire Control program).

Common weeds in the *Lama* and 'Ohi'a Lowland Dry Forests of the Lowland management unit included Christmas berry, *honohono kukui* (*Oplismenus hirtellus*), Jamaican verbain (*Stachytarpheta jamaicensis*), *Lantana camara*, *laua'e* (*Phymatosorus scolopendria*), and guava.

In the 'Ohi'a management unit, several weeds were common. Weed infestation was heaviest in the lower elevations. Some of the more prominent weeds in the 'Ohi'a Lowland Mesic Forest included *pamakani*, *Desmodium* sp., Hilo grass (*Paspalum conjugatum*), sweet granadilla (*Passiflora ligularis*), guava, and thimbleberry (*Rubus rosifolius*). A localized infestation of shampoo ginger (*Zingiber zerumbet*) was present. A few trees planted at the Manuka State Park arboretum appeared to be spreading into the reserve including trumpet tree (*Cecropia peltata*).

In the 'Ohi'a Montane Mesic Forest, weeds were not as common but include *pamakani*, dogtail (*Buddleia asiatica*), Hilo grass, sweet granadilla, *Phaius tankervilleae*, and *Youngia japonica*. A localized infestation of banana poka (*Passiflora mollissima*) was present.

The communities in the Upper Pioneer management unit were not surveyed for weed infestation.

In the *Kipuka* management unit, weeds were infrequent. The most prominent weed in the *Koa*/*Ohi'a* Montane Mesic Forest and 'Ohi'a Subalpine Dry Forest *kipuka* communities was meadow ricegrass (*Ehrharta stipoides*). Weeds were generally sparse on the pioneer vegetation on lava flows communities throughout the reserve. However, some weeds such as broomsedge (*Andropogon virginicus*), *Pluchea symphytifolia*, and *pamakani* were present.

#### **Consideration of Alternative Actions:**

- 1) Attempt to control all nonnative plant species in the reserve. This alternative would require substantial resources and is not practical.
- 2) Control and eradicate priority weeds in the intact communities of the reserve. In the rest of the reserve, control priority weeds as necessary to prevent their expansion in the reserve.

Recommended Action: Alternative #2 is recommended. Nonnative plant removal will be undertaken regularly during monitoring surveys, and along fence lines, jeep roads, and trails. Localized populations of invasive weeds such as banana poka and shampoo ginger will be located and removed immediately before they spread. Nonnative dominated areas and large infestations of weeds such as fountain grass and guava will be monitored and controlled to prevent their further spread.

Strict sanitary procedures will be followed to prevent introduction of weeds by management personnel on their boots, clothing, and equipment. The use of manual and chemical weed control methods will be determined by the type of weed, the value and accessibility of the area it is invading, and the effectiveness of the control measure. Bio-control is an important potential tool in the management of widespread nonnative

plant infestations. The Natural Area Reserves System program will continue to support interagency bio-control projects.

Detailed records of the effectiveness of control measures used in the reserve will be kept. Communication with the National Park Service and other agencies involved in plant control work will ensure that the best available control techniques are utilized...

### **c. Other Nonnative Species**

**GOAL:** To reduce the impact of other types of nonnative species (including mosquitoes, ants, yellow jackets, and fish) which could threaten the integrity of the native ecosystems within the reserve.

**Statement of the Problem:** Several nonnative invertebrates (mosquitoes, ants, yellow jackets (*Vespula* sp.)) were encountered during the 1989 survey that are of management concern. Mosquitoes are known to carry avian malaria, which has contributed to the decline of native forest bird populations (Van Riper et al. 1982). Ants are known to prey upon endemic invertebrates including native pollinators (Reimer 1990). Yellow jackets are of similar concern as they prey upon endemic invertebrates, some of which may be native pollinators (Beardsley 1980).

Little information is available regarding the status of these problem invertebrates in the reserve. Dr. Neil Reimer has received a research grant from the Natural Area Reserves System Program to conduct a baseline survey of the ant fauna of all of the Natural Area Reserves. However, additional research is needed in order to determine the magnitude of the threat posed by these species, and recommend strategies for their control. Van Riper (1982) recommended limiting mosquito breeding sites by controlling feral pigs, which create wallows which eventually fill with water and become mosquito breeding sites; as well as actively pursuing removal of other sources of stagnant water within the vicinity of the reserve.

Also, nonnative fish were observed in the anchialine pond communities during the 1989 survey. Both native and nonnative fish are of management concern due to their effects on native invertebrates. Maciolek and Brock (1974) associated both nonnative and native fish presence with diminished populations of the shrimp *'opae'ula* (*Halocaridina rubra*). Additional surveys are needed to document the resources of the anchialine ponds and determine the threat posed by native and nonnative fish.

**Recommended Action:** Encourage and where possible provide financial support for research into the status of potentially problematic nonnative species, and actively pursue management recommendations resulting from this research. The feral ungulate control program discussed above should help to reduce the breeding sites for mosquitoes. Removal of other stagnant water sources within the area should also be actively sought. Any *Vespula* nests found during management activities should be removed...

## **2. MONITORING AND RESEARCH**

**GOAL:** To monitor the state of the biological, cultural, and physical resources of the reserve; gauge the effectiveness of management projects; and promote research to guide management programs.

**Statement of the Problem:** The management programs discussed above were developed using only limited information from preliminary surveys. Additional research

and survey work are needed to identify resources within the reserve, i.e. for the anchialine pond and lava tube communities, and well as invertebrate fauna. Monitoring and research will be necessary to determine the effectiveness of the management programs and identify additional management needs. Systematic monitoring at specific locations is necessary to accurately assess changes in the abundance and distribution of native and nonnative plants and animals. Lack of a monitoring program could result in inefficient management due to poor understanding of the area's biological needs.

Recommended Action: Establish a systematic monitoring program and increase monitoring intensity for select problems and areas as needed. Continue to encourage and foster management related research throughout the Natural Area Reserves System by providing logistical support and financial assistance in the form of annual research grants.

Monitoring activities will entail recording specific data at permanent points and transects in the reserve. A minimum crew of two people will be necessary for transect surveys. An annual reconnaissance over flight is also recommended. Immediate goals of the monitoring program are to determine: 1) the effectiveness of hunting activities in reducing ungulate damage, 2) the success of weed control activities, 3) the presence of new nonnative plant infestations, and 4) the status of native vegetation...

### **3. FIRE CONTROL**

Goal: Prevent all wildfires in the reserve.

Statement of the Problem: Fire is a potential problem in this reserve. Dry to mesic conditions prevail throughout the reserve. High risk areas for fire ignition are Highway 11, which bisects the middle of the reserve; Manuka State Park, which provides camping facilities; and the Lower Pioneer management unit which contains fountain grass and below which campers often frequent the coastal areas. Fountain grass and broomsedge in the Lower Pioneer management unit are a problem as they provide easily combustible fuel and resprout and increase their domain after successive fires.

Recommended Action: Establish a fire management plan for the reserve which will include the mapping of priority areas. Ensure NARS personnel are adequately trained for fire control. Establish contacts with other fire fighting agencies who could provide manpower and equipment in the event of a fire in Manuka. Control and if possible eradicate fountain grass and broomsedge infestations especially in areas in close proximity to high quality native dominated communities. Post signs in Manuka State Park and in the frequently used camping areas along the coast to warn of high fire risk.

Minimum impact methods of suppression should be applied whenever such methods are sufficient. Bulldozers could be used along all existing roads; however, bulldozing and other extreme fire control measures would not be justified within the reserve unless a fire cannot be otherwise controlled and the bulldozing damage is outweighed by a probable greater loss of natural and archaeological resources (NARS 1990). A fire cache should be established near the reserve at Kiolakaa cabin... [DLNR-NARS, 1992]

This study has been undertaken to provide resource managers and the public with important background information, documenting the wide range of cultural values, practices, and knowledge of resources of lands within and adjoining the Manukā Natural Area Reserve. An understanding of the cultural environment will help resource managers and the public ensure that the unique Hawaiian qualities of the Manukā NAR, remain a healthy and resilient part of the cultural landscape through future generations.

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