

**FINAL—Archaeological Monitoring Plan for a Proposed  
Fenceline within the Mo‘omomi Preserve, Kaluako‘i  
Ahupua‘a, Kona District, Island of Moloka‘i, Hawai‘i**

**TMK: (2) 5-1-002:037 (por.)**



**Prepared For:**

The Nature Conservancy Moloka‘i Program  
PO Box 220  
Kualapu‘u, HI 96757



November 2015

**Keala Pono** 

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November 2015







## **MANAGEMENT SUMMARY**

Archaeological monitoring will be conducted for ground disturbing activity associated with construction of a predator control fence on a portion of TMK: (2) 5-1-002:037 in the Mo‘omomi Preserve in Kaluako‘i Ahupua‘a, Kona District, on the Island of Moloka‘i, Hawai‘i. The fence will keep axis deer, cats, dogs, and other predators away from sensitive coastal strand vegetation and the largest wedgetailed shearwater nesting colony on Moloka‘i. This monitoring plan is designed to identify and appropriately treat archaeological resources that might be encountered during construction. This includes Site 50-60-02-21, a lithic and midden scatter identified within the fence corridor during archaeological inventory survey. Full time archaeological monitoring will be carried out for all ground disturbance associated with construction of the fence.



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## INTRODUCTION

At the request of The Nature Conservancy, Keala Pono Archaeological Consulting has prepared an archaeological monitoring plan for TMK: (2) 5-1-002:037 (por.) in the Mo‘omomi Preserve in Kaluako‘i Ahupua‘a, Kona District, on the island of Moloka‘i. The Nature Conservancy is planning to build a predator control fence within the preserve.

An archaeological inventory survey for this project was requested by the State Historic Preservation Division (SHPD) in a letter dated January 16, 2014 (Log No. 2013.7123, Doc No. 1401MD02) in response to a Special Management Area (SMA) Assessment application for Maui County. This was completed in 2014 (Eminger and McElroy 2014) and accepted by SHPD on August 13, 2014 (Log No. 2014.02993, Doc No. 1408MD13). A cultural impact assessment (CIA) was also completed at that time (Lima et al. 2014).

This monitoring plan is designed to identify historic properties that might be exposed during the fence construction, and to treat them properly, in accordance with the State Historic Preservation Division (SHPD) *Rules Governing Standards for Archaeological Monitoring Studies and Reports* (§ 13-279-4). The plan includes background information on the project area and an outline of field methods and post-field actions proposed for the archaeological monitoring. Hawaiian words and flora and fauna are defined in the glossary at the end of the document.

### Project Location and the Undertaking

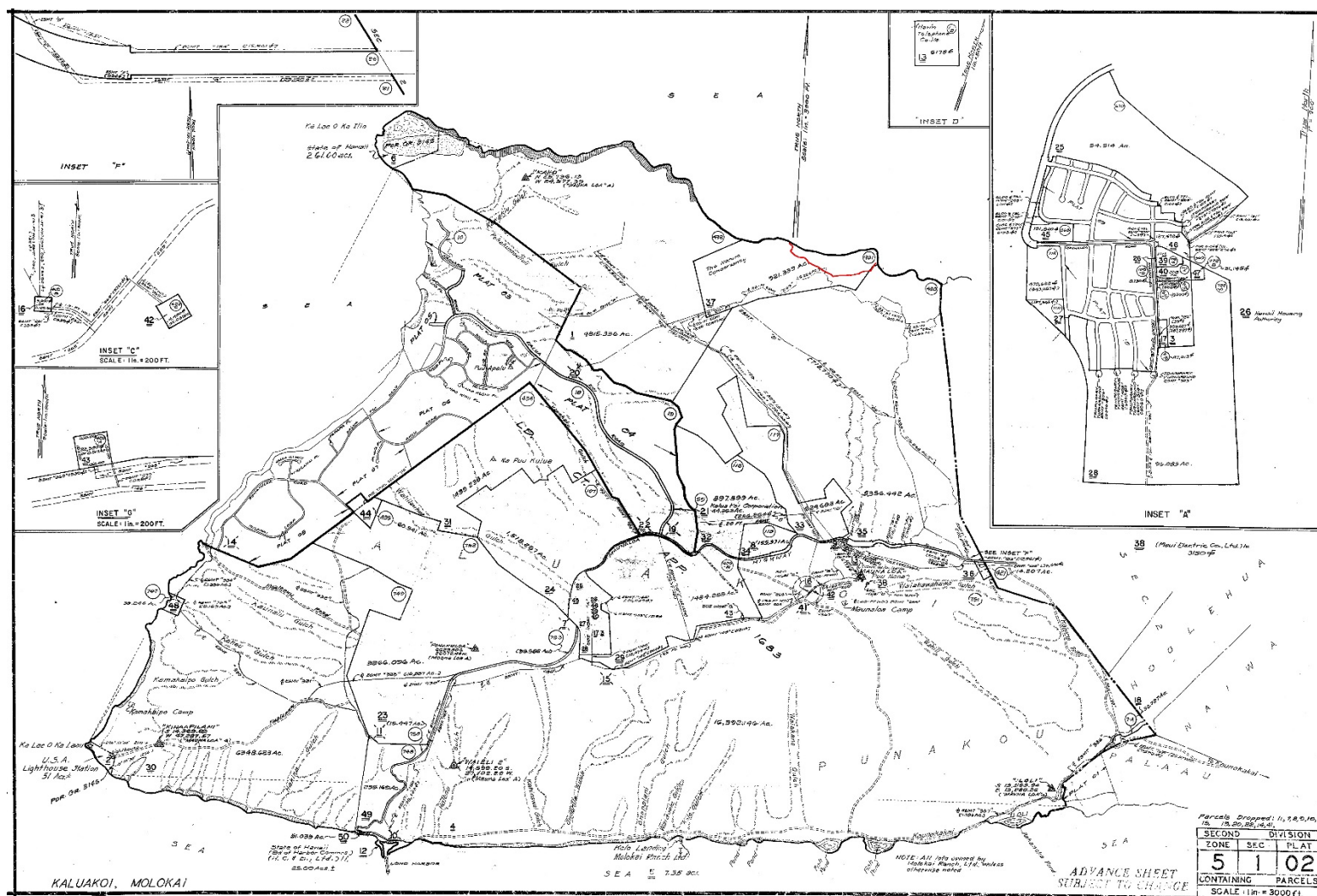
The project area is located in Kaluako‘i Ahupua‘a on the northwest shore of Moloka‘i. The Area of Potential Effect is a 2.46 km (1.53 mi.) long; 3.05 m (10 ft.) wide corridor that covers .739 ha (1.825 ac.) of TMK: (2) 5-1-002:037 in the Mo‘omomi Preserve (Figures 1 and 2). The east and west ends of the project corridor are on cliffs at the coastline, while the central portion of the corridor extends as far as 525 m (1,722 ft.) inland.

TMK: (2) 5-1-002:037 is a 921.339-acre parcel, owned and managed by The Nature Conservancy, who plan to construct a predator control fence across a portion of the parcel. The fence will be approximately 2.1 m (7 ft.) high and is intended to keep predators such as dogs, cats, and axis deer out of a 74.87 ha (185 ac.) area of native coastal vegetation and wedgetailed shearwater nesting grounds.

The project corridor extends from 10–40 m in elevation and topography consists of rolling sand dunes, a relatively flat back dune area, and clifftops of lithified dunes. The property is currently undeveloped and utilized occasionally by fishermen and beachgoers. Vegetation within the project corridor consists mainly of *kiawe* and grass.



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



## BACKGROUND

This chapter presents information on the Mo‘omomi region to provide context for the archaeological inventory survey. Topics of interest include the natural environment, traditional cultural background, historical background, and previous archaeological research.

### The Natural Environment

The Mo‘omomi landscape is unique on the island of Moloka‘i and supports a variety of plants, sea birds, and marine life. This section presents information on the geology, rainfall soils, flora, and fauna of the region.

#### Geology, Rainfall, and Soils

The Hawaiian Islands comprise one of the most isolated landmasses on the planet, situated roughly 2,500 miles from North America, the nearest continent. This extreme isolation has resulted in a very high rate of endemism among the plant and animal colonizers that successfully reached these islands and reproduced.

Over the eons, in a benign, ocean-tempered climate, these islands were slowly colonized by life. The colonizers then evolved into uniquely Hawaiian species, often many of them from a single ancestral type...adapting to the great variety of island habitats. (Culliney 1988:ix)

Centrally located within the chain, Moloka‘i is the fifth largest of the Hawaiian Islands. The bulk of Moloka‘i was formed by two large shield volcanoes, today called West Molokai and East Molokai. The West Molokai volcano is the older of the two. It is low and flat, only reaching an elevation of 421 m (1,381 ft.) at its highest point. At some point late in its history the northeast section of West Molokai broke off, fell into the ocean, and left slide scarps a few miles inland from Mo‘omomi. These are seen as the steep slopes west of the Ho‘olehua plain. One of the *pali*, or cliffs there is called the Hauakea Pali.

During or shortly after the late stage of alkalic volcanism, the summit and northeastern flank of West Moloka‘i collapsed into the ocean. Their departure left a set of large slide scarps across the sundered top of the mountain. Flows from neighboring East Moloka‘i built up against these scarps, showing that it is a much younger volcano. (Hazlet and Hyndman 1996:192)

The younger East Molokai volcano may have stood as high as 3,353 m (11,000 ft.) in the past, but has since subsided and weathered to its present 1,512 m (4,961 ft.) elevation. As the East Molokai volcano grew, it flowed out, met, and overlapped the older, dormant West Molokai volcano. Mo‘omomi is a coastal region along the north shore of Moloka‘i where the flows from the East Molokai volcano met the older West Molokai volcano (Figure 3). The East Molokai lavas built up against the faulted edge of West Molokai, though they never attained much height and this remained the lowest spot along that coastline. Thus, the sea cliffs that extend almost the entire length of this shoreline drop to sea level at Mo‘omomi, providing convenient access to the ocean (Figure 4). This easy access to the ocean and its resources at Mo‘omomi has been an important factor in the human history in this area of Moloka‘i.

Catherine Summers gave a useful, though unattributed, definition for the Mo‘omomi area in her review of Moloka‘i sites:



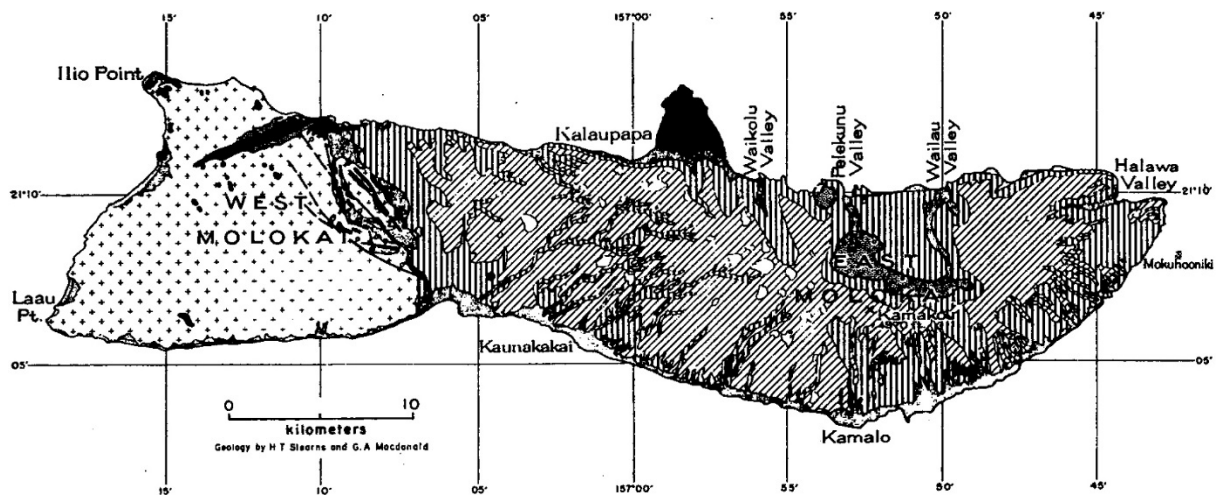


Figure 3. The younger lava flows of East Molokai (striped) meet the older basalts of West Molokai (stippled) at Mo'omomi (Macdonald et al. 1983:411).

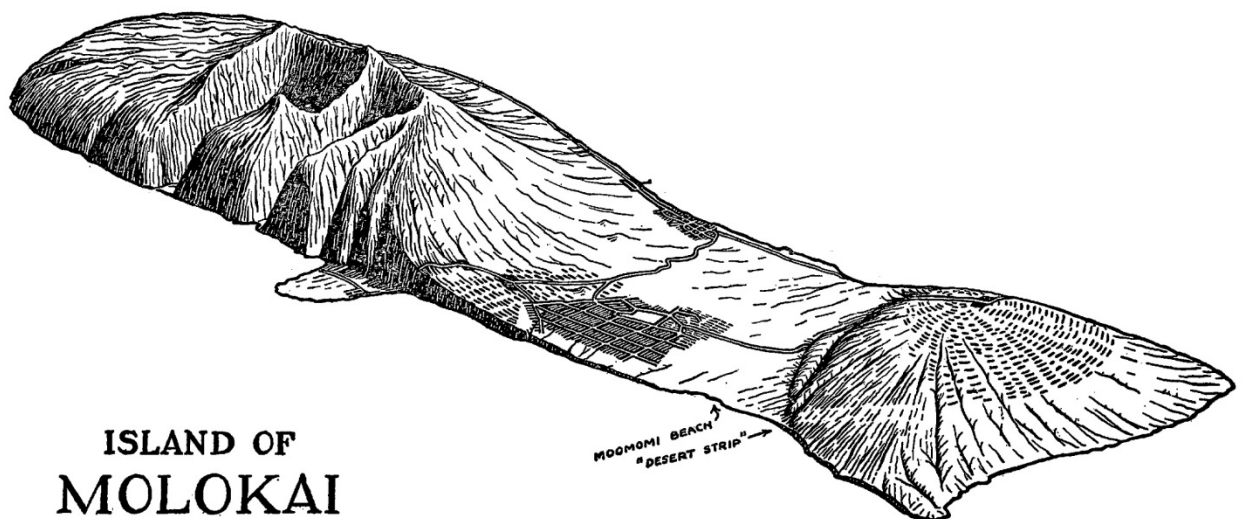


Figure 4. Topography of Moloka'i, illustrating the easy access to the beach at Mo'omomi (Keesing 1936:26).

Mo'omomi is an area of land which extends about 2 miles along the seashore from a little E of Na'aukahihi in Pala'au 2 to Kalani in Kaluako'i, and inland a mile or two. The area is mostly sand and sand dunes. (1971:40)

Pala'au 2 and Kaluako'i, mentioned in Summers' description of the boundaries of Mo'omomi, are *ahupua'a* along the northwest Moloka'i coastline. *Ahupua'a* are the traditional land divisions in the

Hawaiian Islands that, according to archaeologist Patrick Kirch, were established between A.D. 1450–1650 (1985:303–306).

The major traditional land division in Hawai‘i is the ahupua‘a, an ancient political land management division. The ahupua‘a is generally based on topographic features... This land division remains an important cultural feature on the land and is the basis for most land surveys and divisions that have happened since the time of the mahele. (Wingert et al. 2002)

Kaluako‘i is the largest *ahupua‘a*, or land division, on the island. With regard to *ahupua‘a*, Lyons asserts that, “in populous portions the sub-division was very minute” (1875). Consequently, the size of the Kaluako‘i Ahupua‘a would suggest a small population for this part of Moloka‘i, a situation borne out by the archaeological record.

Fresh water is scarce in the preserve, with the nearest major water source being Ka‘awaloa Stream, a non-perennial watercourse, which exits at the coast approximately 240 m (787 ft.) east of the east end of the project corridor. Rainfall is sparse, averaging 0–38 cm (0–15 in.) per year (Juvik and Juvik 1998). The following passages explain the rainfall patterns in Mo‘omomi:

Much of the precipitable moisture in the trade wind flow falls as orographic rain on the relatively high East Molokai mountains, resulting in a drier air mass by the time it reaches West Molokai. Thus, West Molokai is in the “rain shadow” of East Molokai. The low elevation of West Molokai prevents much of what moisture remains from being condensed out of the trade winds with the effect that West Molokai is dry. At Mo‘omomi precipitation averages only about 22” a year with most of the rain falling between October and March (Giambelluca et al. 2011).

Large-scale storm systems are the source of most of the rainfall over drier areas of Hawai‘i such as at West Molokai (Sanderson 1993).

The orientation of the East Molokai mountain lying in-line with, and splitting, the trade wind flow causes a cloud band to develop over West Molokai where the winds come back together. Although this line of clouds, and related rain showers miss the Mo‘omomi coastline, it can be clearly seen from there when it forms.

A convergence of trades diverted around the eastern mountain mass creates a cloud band which lies over the southern leeward coast and extends hundreds of kilometers downwind. This cloud band sometimes produces intense showers, called *nāulu* by the Hawaiians. These showers are noted for falling just offshore during the summer drought. (Sanderson 1993:34)

This regularly occurring cloud band with its associated showers was recognized by the Hawaiians and a poetical saying is recorded for this phenomena.

**Kaumaha i ka nāulu Kaluakoi.**

*Laden with the summer showers is Kaluakoi.*

Kaluakoi gets rain only in the summer time. (Judd 1988:56)

The two prominent geologic features that dominate the western landscape on Moloka‘i are the West Molokai volcano and the Desert Strip. West Molokai is roughly two million years old and its long dormancy has allowed a deep lateritic soil to develop that covers most of the region. “The Desert Strip,” was coined by Chester Wentworth, who described this extensive dune system as a “barren windswept country in which eolian features are developed with exceptional clarity and vigor” (1925:41). The dominant northeast trade winds have blown sand from Mo‘omomi almost completely across the northwest corner of the island creating an expansive stretch of sand dunes, both

consolidated and unconsolidated (Stearns 1985; Macdonald et al. 1983). The Hawaiians called this same area Keonelele, or “the flying sand” (Pukui et al. 1976).

The main part of the Mo‘omomi Dunes probably was formed during the latest ice age, when sea level was low and the reefs now submerged offshore were dry and feeding sand into the wind. Since then, slightly acidic rain has cemented some of the sand into hard limestone. (Hazlett and Hyndman 1996:203)

A soil survey was conducted in the islands, including Moloka‘i, in 1965 to “learn what kinds of soil are on the islands, where they are located, and how they can be used” (Foote et al. 1972:2). Among the observations made were slope characteristics, stream qualities, the kinds of plants growing in the soil, rock types and qualities, as well as specific details about the soils. The survey included excavations to record soil profiles.

A soil series is a group of soils with very similar profiles including such qualities as thickness, arrangement, and other characteristics and is named for a town or geographic location close to where that particular series was first identified and described. An example from Mo‘omomi is the “Hoolehua Series.” These series are subdivided into phases. Different phases represent varieties in soil surface texture, slope, amount of stone, as well as other characteristics and are named for a feature of that phase. For example, a phase of the Hoolehua Series found within Mo‘omomi is the “Hoolehua silty clay loam, 3 to 10% slopes, severely eroded” (HyB3).

Generally, soils in the project area are of the Very stony land-Rock land Association, described as “gently sloping to very steep, rocky and stony land types; on uplands and in gulches and valleys” (Foote et al. 1972). The following listing of soil phases can be found in the Mo‘omomi region. Specifically, soils within the project corridor consist of Jaucas sand, 0–15% slopes (JaC) on the east side and Jaucas-Blown-out land complex (JL) on the west side (Figure 5). Mala silty clay, 3–7% slopes (MmB) makes up a small portion near the center of the fence route, while rock outcrop (rRO) is found at the very end of the corridor on the west side.

#### BS Beaches

Beaches (BS) occur as sandy, gravelly, or cobble areas on all the islands in the survey area. They are washed and rewashed by ocean waves. The beaches consist mostly of light-colored sands derived from coral and seashells.

#### GL Gullied land

Gullied land (GL) occurs on the island of Molokai. It is so cut by recent gullies that it is non arable and the soil profile has been largely destroyed. Erosion is very active, and the soil is bare in many places. Kiawe, ilima, uhaloa, and piligrass provide some protection. Elevations range from nearly sea level to 1,200 feet. The annual rainfall amounts to 20 to 25 inches.

Gullied land occurs in the heads of drainage ways and in alluvial terraces along streams. Near the upper margins of the drainage ways, almost vertical-sided gullies have cut back the undisturbed soil areas, leaving remnants of deep soil between gullies. Farther down the slopes, these little spurs are also eroded to varying degrees; at still lower elevations, stones and bedrock are left in the gullies. Slopes on these gulches range from 25 to 70 percent.

#### Hoolehua Series

This series consists of well-drained soils in depressions and in drainage ways on the island of Molokai. These soils developed in old alluvium. The slope is generally 15 percent or less; locally, however, the slope may be as much as 35 percent. Elevations range from 400 to 1,300 feet. The annual rainfall amounts to 20 to 35 inches. Most of the rainfall occurs from November to April; the summers are hot and dry.

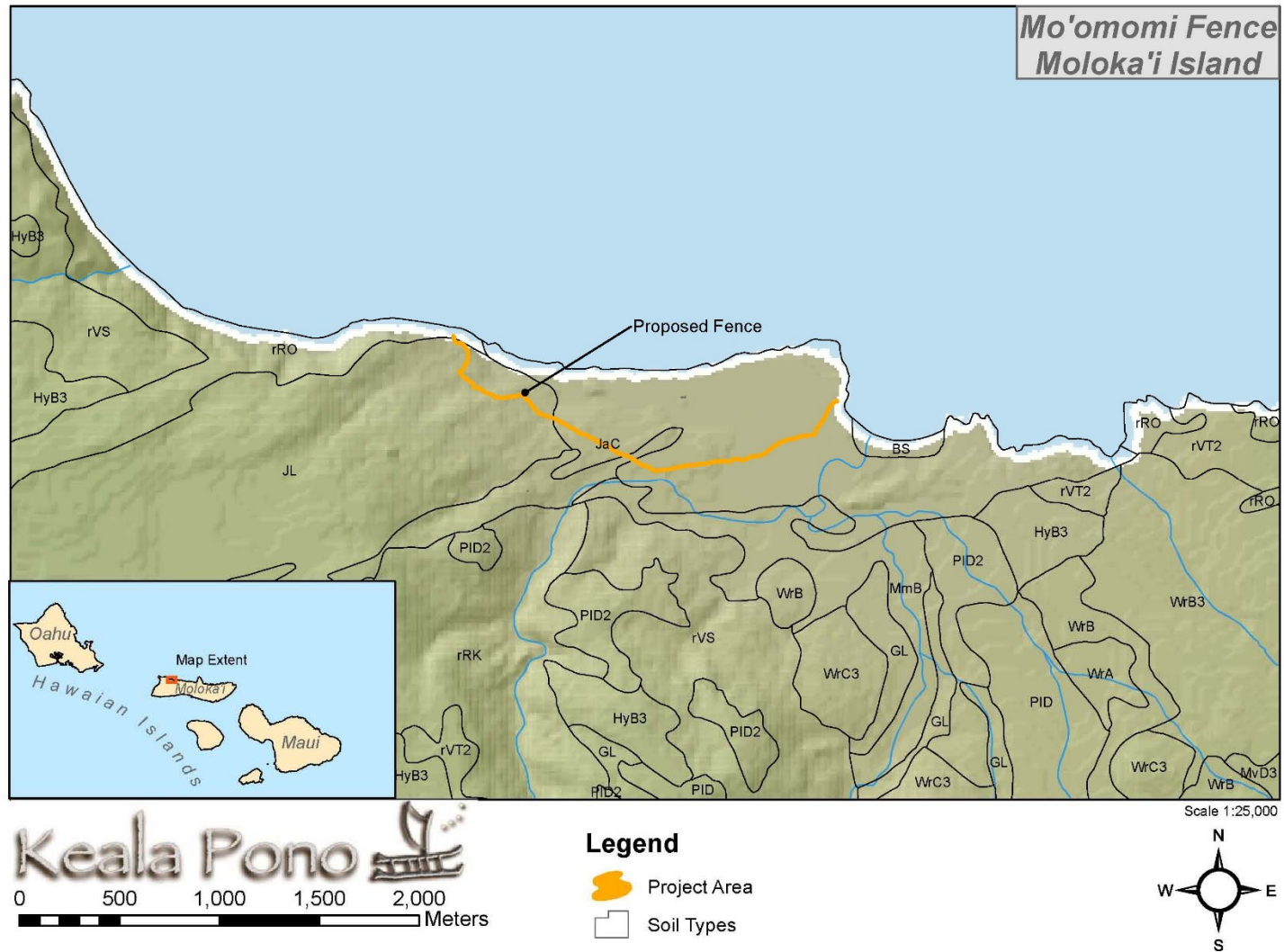


Figure 5. Soils in the vicinity of the project area (data from Foote et al. 1972).

HyB3      Hoolehua silty clay loam, 3 to 10% slopes, severely eroded

This soil occurs in the dry, windswept northwestern part of Molokai. The annual rainfall amounts to about 20 inches. Wind has caused much of the erosion, as evidenced by blown-out areas and areas of deposition. Most of the topsoil and, in some places, part of the subsoil have been removed; some lag gravel and stones remain on the surface. There are small dunes or hummocks in the most severely eroded areas. Runoff is rapid, and the erosion hazard is severe. Many of the blown-out areas are barren, but other areas are protected by uhaloa, lima, and finger grass. Revegetation of bare areas is difficult because of the drying winds and low rainfall.

#### Jaucas Series

This series consists of excessive drained, calcareous soils that occur as narrow strips on coastal plains, adjacent to the ocean. ... They developed in wind- and water-deposited sand from coral and seashells. They are nearly level to strongly sloping. Elevations range from sea level to 100 feet; but locally on West Molokai, the elevation is as high as 650 feet. The annual rainfall amounts to 10 to 40 inches.

JaC      Jaucas sand, 0-15% slopes

The slope range of this soil is 0 to 15 percent, but in most places the slope does not exceed 7 percent.

In a representative profile the soil is single grain, pale brown to very pale brown, sandy and more than 60 inches deep. In many places the surface layer is dark brown as result of the accumulation of organic matter and alluvium. The soil is neutral to moderately alkaline throughout the profile.

Permeability is rapid, and runoff is very slow to slow. The hazard of water erosion is slight, but wind erosion is a severe hazard where vegetation has been removed. ... In places the roots penetrate to a depth of 5 feet or more.

JL      Jaucas Blown-out land complex

This complex occurs as a long, nearly level to moderately sloping strip in the northwestern part of the island of Molokai. It is inland where strong prevailing winds have lifted and carried coral sand from sea level to elevations of about 650 feet. The Jaucas soil, which makes up about 25 to 70 percent of the acreage, occurs as small dunes. In many places it is mixed with fine material from Blown-out land, and the texture is loamy sand. Blown-out land consists of an exposed compact subsoil and substratum similar to those of Molokai soils. Included in mapping were a few limestone outcrops.

... Kiawe trees are scrubby and scattered because they cannot obtain moisture from the water table. ... Much of the area is barren. Strong winds are prevalent, and wind and water erosion is active.

#### Mala Series

The Mala series consists of well-drained soils on bottoms of drainage ways and alluvial fans on the coastal plains. They formed in recent alluvium. Elevations range from nearly sea level to 100 feet. The annual rainfall amounts to 10 to 25 inches. Most of it occurs between November and April. The summers are hot and dry; there is very little rain.

MmB      Mala silty clay, 3 to 7% slopes

On this soil, runoff is slow and erosion hazard is slight to moderate. In many areas the soil is slightly to moderately eroded. There are a few gullies formed by intermittent streams. In some places there are a few stones on the surface.

### Pamoa Series

This series consists of well-drained soils on uplands on the islands of Molokai, Lanai and Oahu. These soils formed in fine-textured old alluvium. They are gently sloping to moderately steep. Elevations range from 100 to 1,500 feet. The annual rainfall amounts to 15 to 30 inches, most of which occurs from November to April.

PID Pamoa silty clay, 5 to 20% slopes

This soil is gently sloping to moderately steep. Included in mapping were small, eroded areas and small, stony areas.

In a representative profile the surface layer, about 7 inches thick, is dark reddish-brown silty clay that has sub angular blocky structure. The subsoil, about 55 inches thick, is dark reddish-brown clay that has sub angular blocky structure. The clay is very sticky and very pastil when wet but friable when moist. The substratum is soft, weathered rock. The soil is neutral in the surface layer and in the upper part of the subsoil and slightly acid to very strongly acid in the lower part.

Permeability is moderately slow. Runoff is medium and the erosion hazard is moderate to severe. This soil is susceptible to gullyng and piping. ...In places roots penetrate to a depth of 5 feet or more.

PID2 Pamoa silty clay, 5 to 20% slopes, eroded

On this soil, runoff is medium and the erosion hazard is severe. Both sheet and gully erosion are active. In most places about 75 percent of the surface layer has been removed. There are common shallow and moderately deep gullies that have cut into and channeled away part of the subsoil. ...Included in mapping were a few small, stony areas.

PJD2 Pamoa stony silty clay, 5 to 20% slopes, eroded

This soil has a profile like that of Pamoa silty clay, 5 to 20 percent slopes, except for erosion and stoniness. Runoff is medium, and the erosion hazard is severe. Both sheet and gully erosion are active. Most of the surface layer has been removed, and gullies are common. The gullies are steep-sided, and many extend to the bedrock.

rRK Rock land

Rock land (rRK) is made up of areas where exposed rock covers 25 to 90 percent of the surface. It occurs on all five islands. The rock outcrops and very shallow soils are the main characteristics. The rock outcrops are mainly basalt and andesite. This land type is nearly level to very steep. Elevations range from nearly sea level to more than 6,000 feet. The annual rainfall amounts to 15 to 60 inches.

rRO Rock outcrop

Rock outcrop (rRO) consists of areas where exposed bedrock covers more than 90 percent of the surface. It occurs on all five islands. The rock outcrops are mainly basalt and andesite. This land type is gently sloping to precipitous. Elevations range from nearly sea level to 10,000 feet. Included in mapping were a small area of lithified coral sand on Molokai...

### Very Stony Land

This land type consist of areas where 50 to 90 percent of the surface is covered with stones and boulders. It is mapped on the islands of Maui, Molokai, and Lanai.

rVS Very stony land

This land type occurs on Maui, Molokai, and Lanai. The slope ranges from 7 to 30 percent. Included in mapping were very steep gulches.

On Molokai and Lanai, this land type consists of stones and boulders underlain by soft, weathered rock and bedrock. In a few places there is a shallow, clayey soil among the stones and boulders. Elevations range from sea level to 1,500 feet. The annual rainfall amounts to 10 to 25 inches. The natural vegetation consists of kiawe, klu, pilgrass, and Japanese tea.

rVT2      Very stony land, eroded

This land type consists of large areas of severely eroded soils on Molokai and Lanai. About 50 to 75 percent of the surface is covered with stones and boulders. There are common shallow gullies and a few deep gullies. The soil material is like that of the Holomua, Molokai, Pamoia, and Waikapu soils. In most places it is less than 24 inches deep to bedrock, but it is deeper in a few low-lying areas. Slopes are mainly 7 to 30 percent, but they range from 3 to 40 percent.

This land type occurs in the same general area as Very stony land, but it is mostly upslope from these areas. Elevations range from sea level to 1,000 feet. The annual rainfall amounts to 10 to 25 inches. This land type supports a thicker stand of vegetation than Very stony land because it has more soil material. The dominant vegetation is kiawe, lima, pilgrass, and fingergrass.

Waikapu Series

This series consists of well-drained soils on uplands on the islands of Lanai and Molokai. These soils formed in fine-textured old alluvium. They are nearly level to moderately sloping. Elevations range from 100 to 1,250 feet. The annual rainfall amounts to 15 to 25 inches, most of which occurs from November to April.

WrA      Waikapu silty clay loam, 0 to 3% slopes

This soil is on uplands in depressions on old alluvial fans. There are a few stones on the surface and a few shallow gullies.

In a representative profile the surface layer and the subsoil are dark reddish-brown, friable silty clay loam. The surface layer is about 12 inches thick. The subsoil, about 48 inches thick, has sub angular and angular blocky structure. The soil is typically slightly acid to neutral...

Permeability is moderate. Runoff is slow, and the erosion hazard is slight. ...In places roots penetrate to a depth of 5 feet or more.

WrB      Waikapu silty clay loam, 3 to 7% slopes

This soil is on smooth alluvial fans on Molokai. Runoff is slow, and the erosion hazard is slight to moderate. Included in mapping were small areas where the slope is 7 to 15 percent.

WrB3      Waikapu silty clay loam, 3 to 7% slopes, severely eroded

This soil occurs as two areas in the northwestern part of the Hoolehua Plains on Molokai. It is similar to Waikapu silty clay loam, 0 to 3 percent slopes, except that it is severely eroded. Most of the soil surface layer and, in many places, part of the subsoil have been removed by erosion. The erosion is caused by strong winds, as well as by water. There are a few bare blown-out spots. Runoff is medium, and the hazard of wind and water erosion is severe.

WrC3      Waikapu silty clay loam, 7 to 15% slopes, severely eroded

This soil is similar to Waikapu silty clay loam, 0 to 3 percent slopes, except that it is severely eroded. Runoff is medium, and the hazard of wind and water erosion is severe. Most of the topsoil and, in most places, part of the subsoil have been removed by erosion. Moderately deep gullies occur in many areas. (Foote et al 1972)

## Flora and Fauna of the Preserve

While the Mo‘omomi area has been described as the “desert strip,” the coastal sand dune ecosystem at Mo‘omomi boasts an astounding diversity of plants and animals, both extinct and alive today (Figure 6).

### *Coastal plants and Plant Molds*

The plant communities of this ecosystem are described in the Nature Conservancy’s Draft Long-Range Management Plan.

Mo‘omomi Preserve’s rich coastal dune ecosystem contains seven native-dominated natural communities. The vegetation on the sea cliffs is primarily comprised of nehe (*Melanthera integrifolia*) and hinahina (*Heliotropium* spp.) coastal dry dwarf-shrublands. The area just inland of the beach contains communities dominated by the native grass ‘aki‘aki (*Sporobolus virginicus*), and the native shrubs naupaka (*Scaevola sericea*), ‘ilima (*Sida fallax*), and nehe. Non-native species, especially kiawe, become dominant immediately behind the native vegetation band, extending upslope. Some native communities persist inland, including the rare *Tetramolopium rockii* and ‘akoko (*Chamaesyce skottsbergii* var. *skottsbergii*) coastal dry dwarf-shrublands. (2011:5)

Wentworth observed that “in places which have been recently abandoned by the sand formations there are abundant moulds of plant stems and roots” (1925:49). Wentworth goes on to explain the formation of these root molds.

It appears that the cementing was achieved by waters carrying calcium bicarbonate which passes downward through the sand formations as they become stabilized and found the most favorable routes along the stems of plants. It is possible also that some chemical reaction between the decaying stems and the groundwater solutions favored deposition of calcium bicarbonate. (Wentworth 1925:49)

Olson and James thought that these molds “bear a strong resemblance in size and habitus to the thick, procumbent stems of the naupaka (*Scaevola sericea*)” (1982).

### *Sea Birds and Marine Life*

The first wedge-tailed shearwater nest was seen in Mo‘omomi in September of 1999. The Nature Conservancy then developed a protection plan and by 2010 the number of active wedge-tailed shearwater nests in the Preserve had increased to about 400.

Mo‘omomi is a nesting location for wedge-tailed shearwater seabirds, or ‘ua‘u kani in Hawaiian. The Nature Conservancy is taking an active role in protecting these ground-nesting birds from feral cats and dogs, as well as promoting scientific study.

Mo‘omomi is a breeding and nesting area for the Hawaiian green sea turtle (*Chelonia mydas*), or honu in Hawaiian, and they are actively monitored by Nature Conservancy staff and volunteers. It is believed that the females return to lay eggs on the same beach where she was hatched. Green turtles weight up to 400 pounds and may live as long as 100 years, though its life span is not known for sure. Honu are listed as “threatened” under the United States Endangered Species Act.

The endangered Hawaiian monk seal is also a known visitor to the Mo‘omomi area and the Nature Conservancy informs the State Division of Aquatic Resources of any sightings.



## **Fossils**

The Mo‘omomi dunes are one of the “four major [bird] fossil localities thus far discovered in the Hawaiian Islands” (Olsen James 1982) (Figure 7). The first fossil bird bones found at Mo‘omomi were discovered by Joan Aidem, an amateur naturalist, in 1971 and were from a flightless goose-like duck (*Thambetochen chauliodous*). This first skeleton was exceptional in that it was “preserved as a nearly complete articulated skeleton in a weakly cemented dune, rather than as scattered bones in unconsolidated sand, as is the case for the majority of bird remains recovered here” (Olsen James 1982). Since then fossils have been discovered representing 21 extinct species of endemic land birds on Molokai including a flightless ibis (*Apteribis glenos*), a long-legged Molokai owl (*Grallistrix geleches*), the world’s smallest extinct flightless rail (*Porzana menehune*), a small harrier (*Circus dosseus*), an eagle (*Haliaeetus* sp.), and a slender-billed crow (*Corvus viriosus*), among others (Olson and James 1984:771-772).

Fossil land snail shells are found in abundance at Mo‘omomi and represent three different groups: right-handed *Amastra*, the fat left-handed *Partulina*, and the thin left-handed *Newcombia* (Johnstone 1997:17). Some land snails found in association with fossil bones from the flightless goose at Mo‘omomi dated to about 25,000 years old (Stearns 1973).

## **Traditional Cultural Background**

This section of the report presents background information as a means to provide a context through which one can examine the cultural and historical significance of Kaluako‘i Ahupua‘a and Mo‘omomi. In the attempt to record and preserve both the tangible (i.e., traditional and historic archaeological sites) and intangible (i.e., *mo‘olelo*, *mele*, place names) culture, this research assists in the discussion of anticipated finds. Research was conducted at the Hawaii State Library, the University of Hawai‘i Hamilton Library, the Bernice P. Bishop Museum, the State Historic Preservation Division, as well as online databases such as Papakilo. Historical maps, archaeological reports, and historical reference books were among the materials examined.

Information obtained for the traditional Hawaiian period includes place names and wind names, information on subsistence activities, *mo‘olelo*, *mele* and *oli*, and *‘olelo no‘eau*. Throughout this report, “traditional” refers to the period before 1778 Western contact, and “historic” denotes the time after 1778.

## **Mo‘omomi Place Names**

Within various accounts, place names can contain significant information which further reveal traditional beliefs and practices associated with an area. The following compilation includes place names within the Mo‘omomi area along with any translation and lexicology information that could be obtained for each place. Information is quoted from Soehren (2010) unless otherwise attributed. Soehren (2010) used UL as an abbreviation for Emerson (1965) and PEM for Pukui et al. (1976).

### **Anahaki Gulch**

*Ahupuaa*: Palaa 2

Lexicology: ana-haki. PEM: broken cave.

Figure 2  
Natural Communities  
Mo'omomi Preserve

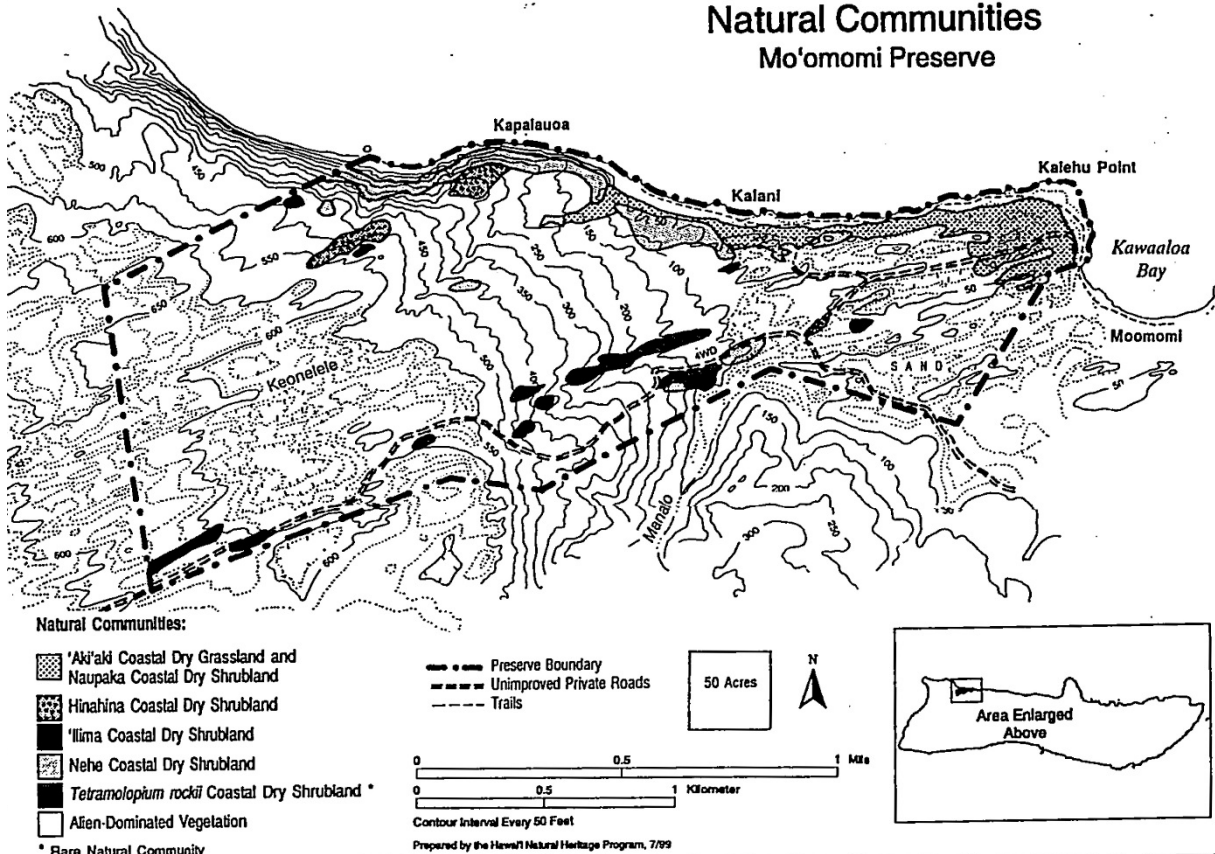


Figure 6. The natural communities of plants within the Nature Conservancy's Mo'omomi Preserve (The Nature Conservancy 2011).

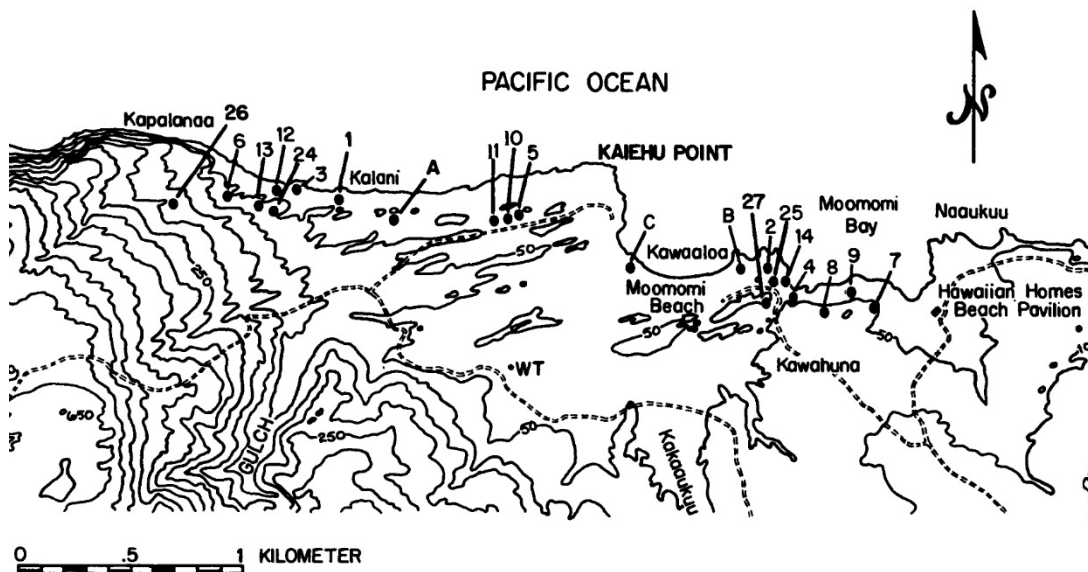


Figure 7. Fossil bird bone sites, archaeological sites identified with letters (Olsen and James 1982:16).

### **Hauakea**

*Ahupuaa*: Palaau 2

Feature: *pu'u*

This hill is called Waihuna (q.v) on USGS maps.

Lexicology: hau-ākea. PEM: not translated.

### **Hauakea Pali**

*Ahupuaa*: Kaluakoi

Feature: *pali*

Bounds the western side of upper Kakaaukuu Gulch, rises from about 400 ft. to summit of Puu Pili at 902 ft.

Lexicology: hau-ākea. PEM: not translated.

### **Kahinaakalani**

#### **Kahinaokalani**

*Ahupuaa*: Palaau 2

Feature: point

Also written Kahinaokalani. (Coulter 1935:145)

Lexicology: ka-hina-a-ka-lani. PEM: the grayness of the sky, heaven.

### **Kahuwai Gulch**

*Ahupuaa*: Kaluakoi

Feature: stream

Rises at 600 ft. elev. under Waihuna, enters Kakaaukuu Gulch at 45 ft. Misspelt “Kahuuwai” on USGS 1952.

Lexicology: kahu-wai. PEM: water tender.

### **Kahuuwai Gulch**

*Ahupuaa*: Kaluakoi

Feature: stream

Misspelt. See Kahuwai.

### **Kaiehu (Point)**

*Ahupuaa*: Kaluakoi

Feature: point

Lexicology: kai-ehu. PEM: sea spray.

### **Kaiolohia**

Kaiolohia “the *kula* from Palaau to Moomomi.” (Fornander n.d.:2)

Bay, north Lā-na‘i. Plain east of Mo‘omomi, Moloka‘i. *Lit.*, tranquil sea. (Pukui et al. 1976)

**Kaiolohia** (kā'i-olo'-hi'ā): choppy sea. Bay, Lanai. (Andrews 1922)

**kai.olo.hia** n. Calm, tranquil sea. (UL 207.) *Fig.*, peace of mind. (Pukui and Elbert 1986)

### **Kakaaukuu Gulch**

*Ahupuaa:* Kaluakoi

Feature: stream

Rises at 1100 ft. elev. under Puu Nana, flows north to Kaawaloa Bay. In PEM this is rendered Kaka‘a-‘u‘uku (the small rolling), perhaps a misreading. Perhaps Kākā-‘auku‘u? Called Kaka‘ako in Monsarrat (n.d.).

### **Kalani**

Bluff at beginning of cliffs called Kalanai in Monsarrat (n.d.)

### **Kahalelani**

*Ahupuaa:* Kaluakoi

Feature: point

Lexicology: ka-lani. PEM: the sky or the royal chief.

Kahalekalani is now known as Kalani beach. (Kaimikaua 1991:141)

### **Kaluakoi**

*ahupua‘a*

ka-lua-ko‘i. PEM: the adze pit.

Kaluakoi (kā-lu‘ā-ko‘i): the stone adz quarry. Land section, Molokai. (Andrews 1922)

### **Kapalauoa**

#### **Palauoa**

*Ahupuaa:* Kaluakoi

Feature: point

Lexicology: ka-pā-lau-o‘a. PEM: not translated.

Called Kapalaoa in Kīaimakani et al. (1862).

### **Kawaaloa (Bay)**

*Ahupuaa:* Kaluakoi

Feature: bay

“According to Coulter, this is Ka-wai-loa (the long stream)” (Pukui et al. 1976). However, Coulter is referring to a different place on the south shore. Coordinates approximate.

Lexicology: ka-wa‘a-loa. PEM: the long canoe.

Called Ka‘awaloa in Kīaimakani et al. (1862).

### **Kawahuna**

Feature: place

Perhaps the ridge above Mo‘omomi Bay. Elev. about 80 ft. Cf. Waihuna.

Lexicology: kawahuna. PEM: pronunciation and meaning uncertain. [Perhaps this should be Kawaihuna.]

Land section, Airport qd., north Moloka‘i. Many burials are located here. (Pukui et al. 1976)

## **Keonelele**

### **Ke One Lele**

#### **Onelele, One Lele**

*Ahupuaa*: Kaluakoi

Feature: place

Summers (1971): “Site 30. Burials at Keonelele... ‘the flying sand’ is a desert strip of land beginning at Mo‘omomi and extending W to Kaka‘ako Gulch near Okoli (‘Okole?) Hill.”

Lexicology: ke-one-lele. PEM: the flying sand.

**Ke-one-lele**, Desert area, ‘Īlio Pt. qd., north Moloka‘i, said to have been a burial site. *Lit.*, the flying sand. (Pukui et al 1976)

**Keonelele** Sand dunes, Mo‘omomi, Moloka‘i. Extensive, active belt of largely unconsolidated dunes that extends from Mo‘o-momi Beach almost completely across the western corner of West Moloka‘i. The belt was formed by the trade winds blowing sand inland from the beach. Some of the older dunes have lithified to form calcareous sandstone. Also known as the Desert Strip. *Lit.*, the flying sand. (Clark 2002)

#### **Manalo Gulch**

*Ahupuaa*: Kaluakoi

Feature: stream

Rises at 1240 ft. elev., joins Kakaaukuu Gulch behind the Moomomi dunes.

Lexicology: mānalo. PEM: potable.

## **Maohelaia**

### **Moohelaia**

Moohelaia

*Ahupuaa*: Kaluakoi

Feature: *wahi pana*

An unlocated place on Mauna Loa associated with the *hula*, named after a female deity who resided there. See PEM.

Lexicology: mo‘o-helāia. PEM: not translated.

### **Moomomi (place and bay)**

#### **Puumomi**

#### **Maomomi**

*Ahupuaa*: Kaluakoi

Feature: place

A region of fossil sand dunes along the shore of Kaawaloa and Moomomi Bays. See Summers 1971:40–41 for stories.

Lexicology: mo‘omomi. PEM: not translated.

Mo‘omomi. 1. Bay, beach, dive site, recreation center, surf site, Mo‘omomi, Moloka‘i. Narrow calcareous sand beach at the head of Mo‘omomi Bay fronting the Hawaiian Home Lands recreation center. The dive site and surf site are off the pavilion. 2. Coast, Mo‘omomi, Moloka‘i. General name for the 3 miles of calcareous sand beaches from the Hawaiian Home Lands recreation center to the sea cliffs at Keonelele. 3. Conservation area. Established in 1993 by Hui Malama o Mo‘omomi, a group of Moloka‘i residents who were concerned over the serious depletion of the ocean resources at Mo‘omomi, especially fish, lobster, and ‘*opih*i. The conservation area is not a Department of Land and Natural Resources’ Natural Area Reserve or Marine Life Conservation District. Mo‘omomi Bay is in the center of the area that extends east to Nihoa near the base of the Kalaupapa Trail and west to ‘Ilio Point. (Clark 2002:253)

### **Naaukahihi**

W.C.01, Naaukahihi point in Monsarratt (n.d.)

### **Nininiwai**

*Ahupuaa*: Naiwa 1

Feature: *kū‘ula*

“When one stands on Pu‘u Kape‘elua and faces toward Kualapu‘u, the area seen is the *kula* of Nininiwai, ‘pour water,’ which is mentioned in old chants (Pukui, personal communication).” The plain apparently spans Hoolehua 2, Palaau 2 and Naiwa 1. Lexicology: ninini-wai. PEM: pour water.

### **Palaau**

*Ahupuaa*: Palaau 1,2,3

Feature: *ahupua‘a*

Returned by Kealiihonui at the Mahele, retained by the Crown. Palaau is in three noncontiguous *apana*. Apana 1 contains Poho‘ele fishpond (q.v.), apana 2 is in the Hoolehua-Palaau Homesteads, Apana 3 contains Kauleonanahoa and other sites (Summers Sites 1–4). Coordinates are for Apana 3.

Lexicology: pā-lā‘au. PEM: wooden fence or enclosure.

### **Paulaia**

### **Puu Pili**

*Ahupuaa*: Kaluakoi

Feature: *pu‘u*

Elev. 902 ft.

Lexicology: pu‘u pili. PEM: pili grass hill.

### **Waihuna**

*Ahupuaa*: Palaau 2

Feature: *pu‘u*

“Waihuna hill, on the east side of Mahana Valley, is a small double fault block.” (SM 1947 Plate II #18) Elev. 750 ft. Called Hauakea (q.v.) on 1897 map of Molokai.

Lexicology: wai-huna. PEM: hidden water.

An 1862 newspaper article mentions a number of place names in the Mo‘omomi vicinity. The article is a *kanikau*, or requiem, that takes the reader from Moloka‘i to O‘ahu, where the authors shared fond memories with the deceased. Part of a longer *kanikau*, the Moloka‘i verses are reproduced below:

**‘Ōlelo Hawai‘i**

Ku‘u wahine mai ke kula loa e Kalae  
 Mai ka ihu e ka lio la e Pu‘u Kapele  
 Ku‘u wahine mai ka wai ‘āwili kai la e  
 Mo‘omomi  
 Mai ka lipoa ‘a‘ala la e Manawa‘anu,  
 Ku‘u wahine mai ke one loa la e Ka‘awaloa,  
 Mai ka pi‘ina ikiiki la e Mo‘ohelā‘ia  
 Ku‘u wahine mai ka ‘ai pā Kaiāulu la e  
 Keonelele  
 Mai ka ihona la o Lupepohaku  
 Aloha ‘ia wahi a māua e pili ai me ku‘u  
 wahine,

NA KĪA‘IMAKANI.

Ku‘u wahine mai ka uka anu la e  
 Wai‘āhualēle,  
 Mai ke kai hāwanawana la e Kapalaoa  
 Ku‘u wahine mai ka malu o ka ‘ohai o Ke-  
 ala-pūpū-a-Kiha  
 Mai ke one lele la e Keonehānau  
 Ku‘u wahine mai ke awa kū moku la e  
 Kauakini,  
 Mai ke kaha loa la e Pāpohaku,  
 Ku‘u wahine mai ka wai la e Puna-kohe-le‘a  
 Mai ka pi‘ina ikiiki la e Pu‘u Ka‘ae,  
 Ku‘u wahine mai ke kaha loa la e Kaunalā,  
 Mai ka lā welawela la e Kamāka‘ipō,  
 Ku‘u wahine mai Ka Lae o Kalā‘au,  
 Mai ka makani anu la e Hale Pohaku,  
 Ku‘u wahine mai ke one loa la e ‘Āhuakālai,

NA KAHANANUI.

Mai ka makani la he Kumuma‘oma‘o e  
 Haleolono  
 Ku‘u wahine mai ka ihu e ka wa‘a e Wai‘eli  
 I Hikauhi i Kaumanamana ke aloha,  
 Ku‘u wahine mai ka malu la e ke kou e  
 Waiakane,  
 Mai ka ipumakani la a La‘amaomao,  
 Ku‘u wahine mai ke kai nē leo le‘a la e  
 Punakou,  
 Mai ka i‘a kā i ka wāwae la e Hīlia,  
 Ku‘u wahine mai ka Moa‘e kū la e ‘Īoli,  
 Mai ka wai la e Pala‘iliahi,  
 Ku‘u wahine mai Ka-la‘i-a-ka-manu  
 ‘Elua la‘i, he la‘i ‘oko‘a ke Ka‘ao,  
 He la‘i ‘oko‘a ke Kiowea,  
 Ku‘u wahine mai ka i‘a nu‘u pu me ka lepo  
 Mai ka i‘a moe malie la i ka ‘alu wāwae  
 Ku‘u wahine mai ka lā ‘ai lau la o Ke‘i‘i,  
 Mai ka i‘a hō‘ala pō la e Pālā‘au,

**English**

My beloved wife from the extended kula of Kalae,  
 From the muzzle of the horse there, o Pu‘u Kapele  
 My beloved wife from whence fresh and salt water  
 intertwine there, o Mo‘omomi  
 From the fragrant lipoa at Manawa‘anu,  
 My beloved wife from the lengthy sands of  
 Ka‘awaloa,  
 From the stifling ascent of Mo‘ohelā‘ia,  
 My beloved wife from the Kaiāulu wind that wears  
 away Keonelele,  
 From the descent there at Lupepohaku,  
 Affectionately these places beheld us two.

By Kīa‘imakani.

My beloved lady from the cold uplands of  
 Wai‘āhualēle,  
 From the whispering sea of Kapalaoa,  
 My beloved lady from the shade of the ‘ohai of Ke-  
 ala-pūpū-a-Kiha,  
 From the flying sands at Ke-one-hānau  
 My beloved lady from the great port of Kauakini,  
 From the lengthy shore of Pāpohaku  
 My beloved lady from the water of Puna-kohe-le‘a  
 From the sweltering ascent of Pu‘u Ka‘ae,  
 My beloved lady from the lengthy shore at Kaunalā,  
 From the passionate day at Kamāka‘ipō,  
 My beloved lady from the point of Kalā‘au,  
 From the cool wind of Hale Pohaku,  
 My beloved lady from the lengthy sands of  
 ‘Āhuakālai.

By Kahananui.

From the wind there, Kumuma‘oma‘o at Haleolono,  
 My beloved woman from the canoe’s bow at  
 Wai‘eli,  
 In Hikauhi, in Kaumanamana beloved,  
 My woman in the shade of the kou of Waiakane,  
 From the wind gourd of La‘amaomao  
 My beloved woman of the teasing, pleasing ocean of  
 Punakou  
 From whence the fish are kicked ashore at Hīlia,  
 My beloved woman from the Moa‘e striking at  
 ‘Īoli,  
 From the waters of Pala‘iliahi,  
 My beloved woman from the Ka-la‘i-a-ka-manu  
 (The solace of the bird)  
 There is a twofold tranquility, the Ka‘ao is one  
 serenity  
 Kiowea is altogether a different serenity  
 My beloved woman from whence the fish pile up on  
 the silt

Ku‘u wahine mai ka i‘a nunu weuweu la e ka  
‘aina,  
Mai ka makani ko‘o lā‘au la e Molokai  
Ku‘u wahine mai ka pali hāuliuli la e  
Ko‘olau,

NA MAKILO.

Mai ka ‘io kāhea mai la i ka pali,  
Ku‘u wahine mai ka malu o ke kuawa e  
Kaiolohia,  
Mai ka luna aloha la e Kā‘ana,  
Ku‘u wahine mai nā lehua la e Kukalia,  
Mai ka pi‘ina ‘iki‘iki la e Mokulau,  
Ku‘u wahine aloha mai ka luna la e  
Maunaloa,  
Mai ka malu o ke kukui la e Kaka‘ako,  
Ha‘a mai māpu ke Akua i ke aloha,  
Ku‘u wahine mai nā ale hulilua la e ka  
moana,  
Mai ke kai loa la e Kaieiewaho,  
Ku‘u wahine mai ka lae oni la e Lē‘ahi,  
Mai ka ihu o ka moku la e Māmala,  
Ku‘u wahine mai ka pele ku‘ilua la e  
Honolulu,  
Mai ke kula loa la e Kahua,  
Ku‘u wahine mai ka malu o ka niu o  
Waikīkī.

NA KAHAULOA

Ku‘u kaikaina mai ka malu ka niu o  
Wai‘alae,  
Mai ke one loa la e Keālia,  
Mai ka wai lu‘upo‘o la e Kanalua,  
Ku‘u kaikaina mai ka pohu hau la e Kaliu,  
Aloha ‘ino no ku‘u pōki‘i  
Ku‘u hoa mai ka pi‘ina ‘iki‘iki  
Mai ke kula pili la o Hawai‘i loa,  
Ku‘u hoa mai ka malu hale lauiki o uka,  
Ku‘u hoa mai ka malu kukui o Palahalaha,  
Aloha ‘ia uka a kāua i noho ai,  
Ku‘u kaikaina mai ka ‘ohu o nā pali,  
Ku‘u kaikaina mai ka leo o ka manu o uka,  
Mai ka leo o ke kāhuli honi i ke ahiahi,  
Ahi ku‘u haupo ‘a‘ole ke hoa,  
Pupu‘u mehana ‘ole i ko aloha  
Ho‘okahi nō kapa e mehana nei,  
‘O ke aloha pau ‘ole i nā makahiki ‘elua.

NA KAHOLOLIO

Where the fish lay still in the footprint,  
My lady on the day we feasted there at Ke‘i‘i,  
From whence the fish rises at night in Pālā‘au,  
My lady from the trumpet-fish-among-the-sea-grass  
From the wind that buffets the canoe poler on  
Molokai,  
My beloved woman from the darkened cliffs of the  
Ko‘olau.

By Makilo.

From whence the hawk cries at the cliff,  
My beloved from the shade of the guava at  
Kaiolohia,  
From the love above at Kā‘ana,  
My woman from the lehua trees of Kukalia,  
From the sultry ascent to Mokulau,  
My loving woman from the heights of Maunaloa,  
From the shade of the kukui of Kaka‘ako,  
The very fragrance of God wafts through your love,  
My beloved from the two-fold swells of the ocean  
From the long channel of Kaieiewaho,  
My beloved woman from the point that juts out at  
Lē‘ahi,  
From the bow of the ship at Māmala,  
My beloved lady from the twice-struck bell of  
Honolulu,  
From the long field of Kahua,  
My beloved woman from the shade of the coco-  
palms of Waikīkī.

By Kahauloa.

My beloved younger sister from the shade of the  
coconut palms of Wai‘alae,  
From the long sands of Keālia,  
From the headwater pool of Kanalua,  
My beloved younger sister from the cool calm of  
Kaliu  
Alas my beloved younger sister,  
My friend from the sultry ascent,  
From the pili grasslands of Hawai‘i loa  
My beloved friend in the tranquility of the tiny leaf-  
thatched house in the upland  
My beloved friend in the tranquility of the kukui of  
Palahalaha,  
Affectionate memories of the uplands where we  
resided,  
My beloved younger sister from the mist of the  
cliffs,  
My beloved younger sister from the voice of the bird  
of the upland,  
From the voice of the *kāhuli* snail [singing] sweetly  
in the evening time,  
The pit of my stomach burns without my friend,  
I am drawn up, lacking the warmth of your love,  
[My] one blanket to warm by  
An infinite love in the [finite] two years.

By Kahololio



Aloha ku‘u wahine, ku‘u hoa pili o kaua,  
 O ke anu, o ke ko‘eko‘e  
 ‘A‘ole au i mana‘o e wehe mai ana ‘oe i ka  
 pili,  
 I ka lā ‘eiwa o Iulai, ua hele aku nō ‘oe,  
 Me ka pōmaika‘i a me ka lanakila  
 He ‘ū, he aloha nou no e Luka Maioholani  
 NA‘U NA KĪA‘IMAKANI

Farewell my beloved wife, my intimate friend  
 through rain  
 Cold, [and] damp,  
 I never thought that you would release your grasp  
 from mine,  
 [Yet] on the 9<sup>th</sup> of July, you departed,  
 Blessed and victorious  
 A lament, a loving farewell in thy honor, Luka  
 Maioholani.

Truly, KĪa‘imakani

### Wind Names

A general wind name for Kaluako‘i is Kumuma‘oma‘o, an easterly wind (Nakuina 2005). There was also the Kaiaulu wind of Keonelele (KĪa‘imakani et al. 1862): “Mai ka‘ai pa Kaiaulu la e Keonelele.” In addition, the winds of Moloka‘i were recited by Kuapaka‘a at the urging of his father, Paka‘a, and a wind specific to Mo‘omomi was noted:

*He kuapa ko Moomomi...*

The kuapa is of Moomomi...

**(Fornander 1918–1919:100–101)**

*Ma ke kuapa maluna mai o Moomomi...*

**(Ka Hae Hawaii 1861)**

### Subsistence

The *ahupua‘a* of Kaluako‘i literally means, the “the adze pit.” In this *ahupua‘a*, high quality basalt was used to make adzes and other tools. It is well known that lithic quarries occurred on select sites in the area, notably on the summit of Maunaloa at ‘Amikopala, and on northwest Moloka‘i at Mo‘omomi and ‘Īlio Point. Evidence of lithic tool production at Kaluako‘i was summarized by Dixon et al. (1994) as quarry and workshop areas, habitation compounds, and possible agricultural terracing for dryland agriculture.

Paradoxically, Dixon et al. (1994) propose the possibility of agricultural intensification in the Kaluako‘i area, a place lacking adequate rainfall and a place far away from the better-known taro-rich windward valleys of east Moloka‘i, which were well known for their intense agricultural production. It has been presumed that the adze quarries of Kaluako‘i were for manufacturing tools to be exported and used in taro production in the east valleys of Pelekunu, Wailau, and Hālawā. The unexpected discovery of a cluster of workshop/habitation compounds with possible agriculture terracing may suggest a more concentrated exploitation of lithic resources and dryland crops than was previously hypothesized. In other words, lithic tools were being produced not only for the wet windward valleys but also for use right in the Kaluako‘i area itself. This revised interpretation, suggests that long standing models that postulate cultural marginality in southwest Moloka‘i may need refinement (Dixon et al. 1994).

Jennie Wilson lived in Pelekunu Valley from 1902 to 1914 (Krauss 1994), and according to Cooke, said that the people of that windward valley would travel to Mo‘omomi every year to exploit the ocean resources that were so abundant at Mo‘omomi.

Mrs. Jennie Wilson, wife of J. H. Wilson, present Mayor of Honolulu, was born in Pelekunu valley. She told me that the inhabitants of Pelekunu would leave the valley at certain seasons of the year when schools of fish came to Moomomi. They would paddle by

canoe to Kalawao and carry their paiai (semi-hard poi) and other belongings up the pali and overland down the long western slope to Moomomi. Here they caught and dried fish to be carried back to their valley homes at Pelekunu. The name given to the district through which they traveled overland to Moomomi was called Kaiolohia (big ocean swells). The fact of this migration of the inhabitants of Pelekunu explains their need for ti leaf and its protection. Ti leaf was important in their cooking, for bundling preserved fish and for the hukilau (community fishing). (Cooke 1949:106)

In a 1996 interview with Kepa Maly and Scott Adams, Daniel Kekahuna describes the people from the windward north shore valleys of Waikolu and Pelekunu coming to Mo‘omomi to collect salt.

KM: ‘Ae... All of these areas along the ocean here, were old fishing ground too?

DK: Yes.

KM: Did people live out here then?

DK: Yes, they were living at Mo‘omomi, outside Mo‘omomi has a pen, down there.

SA: How about the guys from... [thinking]

DK: Waikolu, Pelekunu.

SA: Yes. They came down to make salt like that.

DK: Yes, they came down here for salt.

KM: Oh, where did you folks make salt?

DK: They pick up all the way from Mo‘omomi down to ‘Ilio.

KM: Ah, so there were areas for that? How did they make their pa‘akai? Natural poho, along the shore?

DK: Yes. When high tide, the waves come up. The water goes in the kaheka. Okay, then when hot, they pick up the salt. Like down at Kalaeoka‘ilio, Waihau bay, my wife has a couple of ponds down there, about four feet deep. (Maly and Maly 2003, v. 2:1092-1094)

Handy et al. (1991) make no mention of Mo‘omomi, because the area was probably not suitable for cultivation of crops. However, they do relate that “Kaluako‘i folk were sweet-potato planters and deep-sea fishers” (Handy et al. 1991:514, Remy n.d.). They go on to describe the traditional infrastructure of the *ahupua‘a*:

There were many fishermen’s shrines (*ko‘a*), and many temple sites (*heiau*) in Kaluako‘i, and *holua* slides, bowling places, and a “quarry for *konani*” (checkers-stones). The people lived on the shores, and paved trails led to their potato patches in the uplands. One such trail nearly a mile long led to the *‘uala* plantation of Paka‘a... (Handy et al. 1991:514)

Paka‘a and his son, Kūapaka‘a established remarkable sweet potato fields during the reign of Hawai‘i Island chief Kewaenuiaumi (15<sup>th</sup>–16<sup>th</sup> centuries). The father and son planted six fields of sweet potato to honor and represent the six districts of their home island, Hawai‘i. The fields were said to have been shaped like each of the districts of Hawai‘i Island (Handy et al. 1991).

### ***Nā Mo‘olelo***

Several *mo‘olelo* were found that pertain to the project lands. These include the legend of Umi-a-Maka who was victorious because he heeded his *kahuna*; reports of how the Kalaina Wawae footprints came to be; the story of Maohelaia, a place for the spirits; and accounts of a major battle in which Mo‘omomi played a part.

### *Umi-a-Maka*

In the story of Umi-a-Maka, there was a boy who was skilled in *mokomoko*, boxing, living near Naaukahihi at “the flying sands” (*ke one lele*) of Kawahuna. This boy challenged the champion Umiamaka to his choice of game. The game of *‘ulu maika* was chosen by him and the time set for the play. Umiamaka was not as strong as the boy from Naaukahihi, but he followed the advice of his *kahuna*. The boy from the north shore paid no heed to his *kahuna* knowing that he was the stronger of the two. When it came time for the contest Umiamaka hid with a black pig on the route his opponent would take to the game. When Umiamaka heard the joyful noises of his opponent’s people he pinched the black pig he was holding and made it squeal. At the noise, the god’s deserted the people of Mo‘omomi and they turned into *kauila* trees there at the gulch below Kukui on Maunaloa. The next day no people from the north showed up and Umiamaka was declared the victor.

Ia makou e kaalo nei mawaho pono o Punakou, kuhikuhi aku la au ia Maunaloa, kahi o na kanaka o Palaau huli makani (ma ka aoao akau o Molokai) i hooliloia ai i poe laau kauila. Wahi a ka moolelo a kekahi poe kahiko no keia wahi: I kekahi wa loihi i kaahope aku, aia hoi, e noho ana ma Kawailoa, maluna aku o Puu Iloli, he opio maamaa i na ike mokomoko, a o ke pookela o kana mau ike, o ia no ka ulumaika. O Umi-a-maka ka inoa o keia opio. E noho ana no hoi oia me kana wahine, i kulike no ke ano me kona. Ka u‘i nohonohea i na maka onaona ume lilo ka manao o ke kanaka puni ai pua-kihei lehua makanonou.

Aia hoi, ma ia manawa no, e noho ana ma Palaau huli makani, kokoke i kahi kai kuono o Naaukahihi i ke one lele o Kawahuna, he kanaka opio kelakela no hoi ma na ike mokomoko o kela me keia ano, elike no hoi me Umiamaka. Oia nei hoi, he oi ae ka ikaika me ko keia kaaka. Kakaikahi ka poe o ko Umiamaka wahi i ike i keia mea. No laila, i ka wawa ana o ko Umiamaka piha ike mokomoko, au hoounaia mai la i ona la he elele, e hoike mai ana no ka makemake o ke ahikanana o kela kaha a hoopapa ai laua, a na ia nei no hoi e koho ka alaua paani e hookuku ai. Ua hoko no hoi keia i ka ulumaika, a ua hoololoia ka manawa no ka hakoko ana.

Oiai ua mau ahikanana nei i hoomaamaa mau ana, elike no hoi me ke ano o ko ke au kahiko poe malama kapu akua, me ka hilinei paulele nui maluna o ka mana o na akua, pela no keia mau opio i ui aku ai i ko laua mau kahuna. Ua a‘o ai i ko Umiamaka kahuna iaia, e malama loa i kana mau kuhikuhi, oiai, “ke hoike nei ke akua iaia, aole i lihi launa aku kona ikaika i ko kona hoa mokomoko; aka, ke hooko oia i na kuhikuhi apau, e loa no ka lanakila maluna o ka hoa paio.

Ia wa hookahi no, ke hoike la no hoi ke kahuna o kona hoa paio, he oi ae kona ikaika i ko Umiamaka, nolaila, aohe kahalua ana. He hooluhi makehewa wale wale iho no ka hoopapau ana ma na mea like ole no ka hoomakaukau ana no ka mokomoko. Nolaila, ua hoopalaleha oia, a ua noho palaka.

No Umiamaka hoi, ua hoolohe oia i ka kona kahuna. Ua huli oia a loa kana wahi puaa hiwa paa, a i ka hiki ana i ka wa o ka hookuku ua pii aku la o Umiamaka a i ke poo o kahi owawa malalo aku o ka puu o Kukui, e kokoke la i ka piko o Maunaloa, pee. Maluna pono o ua wahi owawa nei ke ala e pii mai ai o ko kela aoao a iho ma ka aoao malalo nei.

Hoomanawanui o Umiamaka ahiki no hoi i ka hapalua po, o ua po pouli haalele loa no hoi. Lohe koliuliu aku nei keia i ka hauwawa mai o ka leo kanaka. O ka poe keia o ua hoa paio nei ona. Lilo ke kapu o ka huakai hana i mea ole ia lakou. O ka hula me ka uwauwa haakei wale iho la no ka hana. Ia lakou i hooko mai ai, ke hoomanawanui nei hoi keia i ke kalokalo i kona mau akua, me ka paa puliki malie no i kahi puaa ana. I ko ia nei ike ana ike aku i ka enemi ona, upiki iki iho nei keia i kahi puaa ana. O ko ia la alala ae la no hoi ia. Ia wa koke no, i puhee ai na akua o ua hoa paio nei ona, a lilo ana lakou apau i poe kumulaau kauila. O ko ia nei pea iho la no hoi ia a hoi ana i kauhale, me ka ike ole o kahi poe o kona wahi. O ke kahuna wale no ka mea i ike. I ke ao ana ae, kakali aku nei ka lehulehu, a o ka

hoea ole mai o ka hoa hookuku ona, a hala loa ka manawa, hooho ae ae nei no hoi ka poe,  
ua lilo ke eo iaia.

He nui wale aku na mea e pili ana ia Maunaloa me ka ululaau kauila. Eia i ka poe ike lapaau  
o ke au kahiko ka oi aku o ka paanaau. (Coelho 1922 09/14)

### ***Kalaina Wawae***

Stokes related the story he heard on Moloka‘i regarding the origin of the footprint petroglyphs at Keonelele.

...Kalaina, a prophetess (or as the narrator quaintly expressed it, a crazy woman) lived at Moomomi nearby. One day she went to the trail and made two box-like hollows in its surface. The next day she called the people to the place and showed them her work. “See what I have done. Bye and bye people will come from the sea with feet like these.” It is said that this announcement was a prophecy of the arrival of the boot-wearing Caucasian. On this account the place has since been known as Kalaina wawae, Kalaina’s feet.

Following this event, visitors from other parts of Molokai and the other islands of the group have been accustomed to leave their marks in similar form when traveling along the road. This account was received from one man. (Stokes 1910:62-65)

Daniel Kekahuna, a Ho‘olehua homesteader, expressed what he had heard about the story of Kalaina Wawae in an interview with Kepa Maly and Scott Adams in 1996.

DK: The most important one under there, it’s under the DLNR, I think now. Is where they get the Ka Laina Wāwae.

KM: ‘Ae, Ka Laina Wāwae. You are familiar with that place?

DK: I know that place. I took my wife.

KM: You can see the foot prints inside the stone?

DK: It’s not human foot prints.

KM: What kind?

DK: You see the name Ka Laina, it means line. But it was this lady’s name, Ka Laina, that is her name. They were all down Mo‘omomi at that time. There were a lot of people living there.

KM: So a lot of people lived down there?

DK: Yes.

KM: So in the ancient times, before the white man?

DK: Oh yes. I would say in the 1700s, 1800s, but more in the 1700s. See, this lady she could foresee the future. So she made cast of a foot print, and then the sand was still soft at that time. So she put one, she pound ‘em, the print of a foot. Then she took ‘em and pounded again... So I tried to find out about it. And old man Joe told me, “Boy, Ka Laina, that’s the lady’s name, and this foot print, she made a cast, and she pounded it in.” Get some small kind. I think the smallest is four inches. And the Hawaiian baby won’t get a four inch foot print. So down there is important. And Pu‘u Kalani is another one that has a hōlua slide.

KM: ‘Oia?

DK: Pu‘u Kalani is down Mo‘omomi side...

KM: ...How come Ka Laina made the foot prints?

DK: She could foresee the future. So when she made it, she said "Eventually, people will come, and walk that place." So some of the foot prints, Hawaiians never had shoes. But you look at the foot prints, it looks like they had shoes and get heels, because the back part is deeper. So she predicted that people would be walking there.

KM: So the idea was that she made it coming from makai, going mauka?

DK: Right.

KM: So people coming from the ocean and come across and walk on top the 'āina.

DK: Right. And they go up towards Keonelele. And what she predicted came true. (Maly and Maly 2003, v. 2:1092-1094)

### *Maohelaia*

According to Martha Beckwith, Maohelaia was a plain on Moloka'i where the friendless spirits are said to dwell. These spirits enjoy causing trouble so people would have avoided this plain. She refers to the newspaper article by Samuel Kamakau that appeared in *Ke Au Okoa* October 6, 1870.

The worst fate that can befall a soul is to be abandoned by its *aumakua* and left to stray, a wandering spirit (*kuewa*) in some barren and desolate place, feeding upon spiders and night moths. Such spirits are believed to be malicious and to take delight in leading travelers astray; hence the wild places which they haunt on each island are feared and avoided. Such are the plains of Kama'oma'o on the island of Maui, the rough country of Kaupea at Pu'uloa on Oahu, Uhana on Lanai, Maohelaia on Molokai, Mana on Kauai, Halali'i on Ni'ihau. In these desolate places lost spirits wander until some friendly *aumakua* takes pity upon them. (Beckwith 1970:154)

A i mahan i ka peelo e alai ana i ke ala-  
vui mai kela aoso mai o Alii, kiei ke pooma  
ka pali o Kapakolea, alaila makau ka uhane  
a auwana, a pili aoso ma ke kahawai ma ka  
hale hana ili, aole he alonui aupuni mamua,  
aka, he alonui kamaaina no Kauhilaale, a ua  
oleloia aia a komo ka auwana maloko o na  
palena, he make wale no kona uhane, a e ka  
lele i ka po pau ole ; aka, ua oleloia ua ola  
mai no kekahi poe uhane auwana ke loa i  
na uhane aumakua kokua, a o ka poe kokua  
ole, e make no i ka po pauole, a i o Milu la.  
Aia ma ke kula o Kaupea, ma ke kaha o  
Puuloa, e hele ai na uhane auwana e poipoi  
pulelehu, a e poipoi nanana oiai aole e hele  
loa na uhane auwana i na wahi-oleloia-  
mamua, a i loa paha i na uhane aumakua  
e poipoi nanana ana, a ua hoopakeleia, a o  
ka poe uhane kokua ole, he poe uhane hau-  
kae lakou, a mai ka wiliwili i Kaupea, i Ka-  
uehili, he nui no na wahi i oleloia ma keia  
ino. O Kaleia-a-kaubane, a me ka Ulu o  
Leiwalu, aia ma Hawaii, ma Maui, ma Molo-  
kai, ma Lanai, ma Kauai a me Nihaun, hoo-  
kahi no moolelo like no keia mau wahi ma ka

mabele ana i na ubane i ke ao kpewa a me  
ka auwana, a i ke ao sumakna, a i ka po pau  
ole. He wahi i oleloia ko na ubane auwana,  
o Kamaomao ko Mani, o Uhana ko Lanai, o  
Maohelaia ko Molokai, o Mana o Kauai, o  
Halalii ko Niuhau, a ma keia mau wahi e  
auwana hele ai na ubane makamaka ole.

(Kamakau 1870 10/06)

### ***Battle with O‘ahu***

Kuali‘i, the king of O‘ahu was living at Hilo when he learned of the trouble on Moloka‘i. Several battles had been fought and there was continual conflict between the chiefs of the windward side and the chiefs of the leeward side.

The cause of all the trouble was this: The chiefs on the Koolau side of Molokai were anxious to get possession of Kekaha, a stretch of country from Kawela to Maamomi [sic]; and the reason why these chiefs were so desirous of getting possession of this section of country was on account of the fishing. But the chiefs of Kekaha, knowing the value of these fishing grounds, were determined to hold on to them; so this determination on their part caused a general internal conflict at this time. (Fornander 1916-1917:416+)

Kualii left Hilo and ultimately arrived at Kamalo with his canoes and men. Paepae, a chief of Kekaha, landed at Kamalo at the same time and sought the help of Kualii.

I have come to entreat you to come to our rescue. The chiefs of Koolau have taken up arms against us with the intention of taking away from us our lands from Kawela to Maamomi. Because of this desire on their part we have had several disputes and a battle is about to commence. A minor engagement has already taken place, however, in which we were beaten. The majority of the chiefs are encamped on the top of Maunaloa. (Fornander 1916-1917)

Kuali‘i agreed to help the chiefs of Kekaha and the canoes proceeded to Kaunakakai. The chiefs met there in Kaunakakai before leaving for Mo‘omomi. The men sailed the canoes around West Moloka‘i, while Kuali‘i and the Moloka‘i chiefs walked over the land to Mo‘omomi. At Mo‘omomi the chiefs boarded the canoes and set sail for Kalaupapa where Kuali‘i and his men defeated the Kalaupapa chiefs.

The battle continued when the other chiefs of Ko‘olau arrived with their men. Following these battles, Kuali‘i “made a new division of the lands” and left Paepae and his wife Manau in charge of Moloka‘i before going live at Kailua on O‘ahu (Fornander 1916).

### ***Mele and Oli***

A *mele* found in an early Hawaiian newspaper references Maohelaia, a place in the Mo‘omomi area.

**“He Mele no Kawaikini.”** [excerpt]

Kiekie Haupu, ke poo o na mauna,  
Nani ka lala pali o Kaunuohua,  
Ke kui ia mai la e Honokikiopua,  
Hono na umauma pali o Malelewaa,  
Ka oiwi hemolele o ke alo o ka pali,

Pahee ke alo pali o Haihala i ka makani,  
Kupu no a kiekie iluna o Mauna Loa,  
Ka akelakela o na lehua o Kaana,  
I ku ia mai ke iu me Papalauahi,  
He like wale no ka hono o na kuahiwi,  
Ke nana iho ia Maohelaia,  
He nani ke kula pili o Kalaeloa,  
Ka molalelale i apua Kalamaula,  
I ka hoomea e ke kiu alani makani o Lehua,  
(Lohiau 1861)

An 1862 *mele inoa*, or name chant, for Kauikeaouli includes references to both Maohelaia (moohelaia in the *mele*) and Kaiolohia.

**“Eia Hou Keia Inoa no Kauikeaouli.”**

Kuu la i moohelaia,  
O na mauna o Maunaloa,  
O ka lipo ko Kaiolohia,  
He anoano ia i ka la,  
O a'u lehua i wini wai e,  
O kai peleiliahi,  
Kai ilikia e Kaikioe,  
O ke kaeleloli o Punalau,  
Kolohe wale ia ia'u e,  
Eia oe, —O-o-e, —Ie.  
O ka lai a ka manu ke aloha,  
Ua powa ia e ka makani,  
Na ka welelau kumu maomao,  
Nana i hoohaoe kekai,  
Ino ai hilia i hoohilia e,  
Eia oe, —O-o-e, —Ie.  
O oe no ka mea manao a loko,  
O ko lua leo i waiho mai,  
Malama no wau pulama,  
Ina iho na loko ka ole,  
Ua ikea i ka ohe-nana e-a.  
Na KAULUHAIMALAMA.  
(Kalanimoku 1862)

Kaiolohia is referenced in the book titled *Dynastic Chants, Ancestral Chants, and Personal Chants of King Kalākaua I*.

Ka lana me he moku hinai la i ka-i i Kanaloa,  
 Ka eleele me he pa wai hulu moa ala,  
 Ke a i kai e hana kaie-ie,  
 I ho-a like e like me kani ku,  
 Kowa wale ia i oki-a e ke kai-(ii),  
 Kai kuu makaeha i ke aloha,  
 Kalalao me he pula ala ia e oni nei,  
 Eia-na-e—(ii)  
 Wa i Maunaloa ka pihe a ka la,  
 Ke wawa mai la i maohela ia,  
 E hoeha ana ia Kaiolohia,  
 Make e no i ke kaha o lehua,  
 I ka iloli a ka la i palaaui,  
 Hapai ae la Hilila a i ka makani,  
 Hili e—  
 Hilihewa kau koho hewa ana ilaila,  
 Eia iho ko'u eleele moe i ke kihi—a,  
 Hina e!  
 Hina i Hilo ka puulena me ke ala,  
 Me ke onaona lau lehua o Haili,  
 Ilihia okoa no i ka maikai,  
 Alawa ae oe o kauka o Heia,  
 Hele a maemae na ki a wahine Kapu-e,  
 Kapu e—  
 Ua kapu ia mea na ke lii,  
 Ke ku la kaunuunu i ke kahakai-e,  
 Hina e! KAIHUA.

(Hawaiian Historical Society 2001:137)

Another *mele* found in the same book mentions both “Kaialohia,” thought to be Kaiolohia, and Maohelaia.

Lei Maunaloa kilohi i ka maikai,  
 Hanohano Kaialohia i ka makani,  
 Ke iki aku i ka lawelawe malie,  
 Waiho malie ka ia o Hilila i ka makani e—ilaila,  
 A malie kaaio lai ke kioea,  
 Maikai ka nana a ka la i ke kula,  
 I uliuli e mapu i ka lau laau,  
 Enaena i ke alo o Maohelaia,  
 Hihina kauwahi noe i ke pili,  
 I walea i ka makani haunailoli,  
 Hoi ka manu noho i Palaaui e—ilaila,  
 Lalaui ke kanaka ke kuleana o ka moe,



Owau nae kai ola i kou aloha,  
 Oe anei—e.  
 Malama na lima o ka malu kauwa,  
 E malama ana i ke kula o Kalae.  
 Kaili ala i Mapuakekua,  
 I mapu i ka la ke ala a ka maikai e—ilaila,  
 He maikai i ke kula na lehua o Kaana,  
 E hoopiha ana i piha ke alo pali,  
 Na kumu pali o Nihoa,  
 Ua maikai i ka hana ia e ke hukai e—ilaila,  
 Koi mai ana ke kulia moe ia nei,  
 Lohea ana kona inoa he kulia,  
 Oe anei—e.           NA HOAAI  
 (Hawaiian Historical Society 2001:172–173)

In Fornander's "Story of Lonoikamakahiki," the "barren coast of Puumomi" at Kaluako'i is mentioned in a chant.

Ka uala o Puukamaele,  
 O Kipapai o Honokaupu.  
 O ka Oopu o Waikolu,  
 E hoi ana wau e ai,  
 He kala kuu ia e ai ai  
 A maona.  
 He ia pa ia na kuu akua;  
 Hookomokomo ka waa  
 O Kaluakoi,  
 Ke kaha wale i Puumomi,  
 Hoomo Wailau  
 O Umipiilani.

*The potatoes of Puukamaele,  
 Of Kipapai, of Honokaupu,  
 Of the Oopu of Waikolu.  
 I am going home to partake of some food.  
 The kala shall be my fish  
 Until satisfied.  
 It is a fish sacred to my god.  
 Let the canoe enter  
 At Kaluakoi,  
 The barren coast of Puumomi,  
 At the entrance of Wailau,  
 Of Umipiilani.*  
 (Fornander v4:304)

Mary Kawena Pukui translated the following chant with reference to Kaiolohia, said to call one back to Kā'ana.

‘Ula Kala‘eloa i ka lepo a ka makani  
Kai ho‘onu‘anu‘a ‘ia ‘āpua Kalama‘ula  
‘Ikea ku‘u mana‘o i a‘u kula  
Hea mai Kaiolohia  
‘Eu ho‘i māua i Kā‘ana ē  
Aloha ia‘u ke kula o Niniwai  
O‘u hoa i Kala‘iakamanu ē  
Manu a hoa laukona i ke ke‘e lau  
Au‘a ‘ia e ka moe inā ke loha lā he ‘ai lili kā  
Aia ua ‘ike au

***Red is Kala‘eloa with Dust***

*Red is Kala‘eloa with dust raised by the wind,  
The dust concentrates at Kalama‘ula as though it were a basket.  
At the sight of it I thought of my plain.  
Kaiolohia calls to me  
To return to Kā‘ana  
In love am I with the plain of Niniwai,  
With my companions at Kala‘iakamanu (haunt of birds),  
Bird companions that shy away among the leaves.  
Love that is dreamt of is held back by jealousy,  
This is known.  
(Pukui 1995)*

***‘Ōlelo No‘eau***

A few ‘ōlelo no‘eau were found that refer to places near Mo‘omomi, although none could be found for Mo‘omomi specifically. The following Hawaiian proverbs and poetical sayings provide further insight to traditional beliefs and practices of these lands.

***Keala pūpū i Moloka‘i.***

*The path of seashells of Moloka‘i.*  
Among the noted things made by Kihaapi‘ilani, ruler of Maui, was a paved road lined with seashells at Kaluako‘i, Moloka‘i. (Pukui 1983:181)

***Ke one lele o Mo‘ohelaia.***

*The flying sands of Mo‘ohelaia.*  
When the sands of Mo‘ohelaia, Moloka‘i, were blown about by the wind, it was believed that ghosts were present. (Pukui 1983:191)

***Waiho akāka ke kula o Kaiolohia.***

*The plain of Kaiolohia lies in full view.*  
Said of something obvious. (Pukui 1983:318)

## Historical Background

This section presents information on Māhele-era land tenure, descriptions and maps from early visitors to Hawai‘i, and the history of deer on the island. Together, this information helps to paint a picture of what Mo‘omomi was like in the 18<sup>th</sup> to 20<sup>th</sup> centuries and gives us a better understanding of the region today.

### Historic Accounts from Early Visitors

In the summer of 1854, French naturalist Jules Remy traveled to the island of Moloka‘i. During his time on the island he made a number of excursions to study the plants of the island. Even though people tried to discourage him from traveling to the west end of the island, Remy went anyway. He describes the ride on horseback from Waialala, above Kalae, to Mo‘omomi.

June 22, 1854 - Thursday

#### Kalae to Kaluakoi

The western end of Molokai comprises a sort of district called Kaluakoi, of relatively considerable extent, easily accessible and easy to travel over, but the soil of which is too poor to attract people to live on it; and they also told me it was like a desert, and advised me not to visit it. All the more reason for me to judge it with my own eyes.

I separated myself from my personnel [at Waialala], whom I sent on to follow the abbe and to await me on the shore of Kaunakahakai, and at 9 o'clock I mounted my horse, accompanied by the three best riders in the country. The rain which fell gently since the morning gradually stopped and the sun shined forth with as fine effect as one could wish. We descended from the plateau by a gently inclined slope, leaning a little to the right, to the northwest. Out of one house situated at the edge of a winding ravine came a good man carrying a present for me of small dried fish. The pili grass which we trampled was bedecked with blue convolvulus. In the middle of a watermelon patch young people were playing noisily; at my approach the girls fled or hid in the shrubbery, while the boys gazed at me fixedly, gaping. Soon we reached the height of the escarpments which I had seen from Kalaupapa; here we rode for some time through stretches of bushes and scrub land: woody violets of the same species as that found on Niihau, called here pamakani, several compositae looking the same as those found on Niihau; wild celery (makou) which is very abundant; a Portulacaceae, etc., etc. (Remy 1893)

Remy goes on to discuss all the plants he saw as he rode through the Mo‘omomi sand dunes and then up the Keonelele slope.

Farther on we galloped over a sandy soil, where grew side by side a heliotrope (*hinahina*), a gnaphalium (*enaena*) which is tomentose in nature, a scaevola with yellowish flowers. On the same kind of soil I saw vast spaces entirely covered with frutescent, shrubby, leguminosae (*ohai*), spreading over the ground, with flowers of a superb red color; these were without a doubt, a kind of agati but differing from species seen on Kauai and on Niihau, which grows up to form large bushes and even small trees, instead of the one here which forms branches which are literally appliqueed on the sand as if buried in the sod.

We galloped without slackening our pace between the sea, which we saw on our right, and the rounded hillock called Maunaloa, which was on our left. We ascended a long hill with whitish compact terrain, on which grew frutescent solanaceae, three species of euphorbia, a crawling chenopodium, a labiate with linear leaves, and lichens in profusion. At the bottom of the hill were traces of former cultivation and of huts in ruins. Next was the great sandy plain covered with turf and thinly scattered plants: a hydrophyllaceae, a gentian, and a lepidium. (Remy 1893)

The plants that Jules Remy mentions in his travels over Mo‘omomi are included in his listing reproduced in

Table 1.

Archaeologists, as well as other historians, have consistently referred to the West end of Moloka‘i as a wasteland, described as “a desert strip” (Wentworth 1925), “dreary and barren” (Vancouver 1798 in Bonk 1954), and a “naked dreary barren waste” (Menzies 1920). Kamakau called Kaluako‘i “a desolate land, a land of famine” (1961). It seems, however, that not everyone shared these opinions and some people were very happy to live in such conditions. When Remy visited the west end of the island in 1854 he found two very content couples living there.

**Table 1. Mo‘omomi Plants ca. 1893 (after Remy 1893)**

| Remy | Family          | Genus           | Species                       | Variety               | St. John Page # |
|------|-----------------|-----------------|-------------------------------|-----------------------|-----------------|
| 1    | pili            | Gramineae       | <i>Heteropogon</i>            | contortus             | p. 31           |
| 2    | convolvus       | Convolvulaceae  | <i>Ipomoea</i> Sp.            |                       | p. 284          |
| 3    | watermelon      | Cucubitaceae    | <i>Citrullus lanatus</i>      |                       | p. 334          |
| 4    | pamakani        | Violaceae       | <i>Viola robusta</i>          |                       | p. 238          |
| 5    | compositae      | Compositae      |                               |                       | p. 348          |
| 6    | makou           | Cornaceae       | <i>Peucedanum sandwicense</i> |                       | p. 265          |
| 7    | portulacaceae   | Portulacaceae   | <i>Portulaca</i> Sp.          |                       | p. 156          |
| 8    | hinahina        | Boraginaceae    | <i>Heliotropium anomalum</i>  |                       | p. 288          |
| 9    | enaena          | Compositae      | <i>Gnaphalium sandwicense</i> |                       | p. 358          |
| 10   | scaevola        | Goodeniaceae    | <i>Scaevola Taccada</i>       | <i>serica naupaka</i> | p. 347          |
| 11   | ohai            | Leguminosae     | <i>Sesbania tomentosa</i>     |                       | p. 193          |
| 12   | solanaceae      | Solanaceae      | <i>Solanum nelsoni</i>        |                       | p. 301          |
| 13   | euphorbia       | Euphorbiaceae   | <i>Euphorbia</i> Spp.         |                       | p. 210          |
| 14   | chenopodium     | Hydrophyllaceae | <i>Chenopodium pekeloii</i>   |                       | p. 150          |
| 15   | hydrophyllaceae | Hydrophyllaceae | <i>Nama sandwicensis</i>      |                       | p. 287          |
| 16   | gentian         | Gentianaceae    | <i>Centaurium sebaeoides</i>  |                       | p. 278          |
| 17   | lepidium        | Cruciferae      | <i>Lepidium o-waihiense</i>   |                       | p. 166          |

All page numbers refer to Harold St. John’s *List and Summary of the Flowering Plants in the Hawaiian Islands*, Pacific Tropical Botanical Garden. Memoir No. 1 Lawai. 515 pp

### The Shore of Kaluakoi

At 3 o’clock, after having for a long time leaned steadily to the left, we arrived at the edge of the sea, facing the island of Oahu, from which we could make out in the west-northwest a small hilly area. As far as the eye could see on the flat shore where we were, there were only three small isolated huts. We went towards the least shabby of these, with the intention of spending the night. It was occupied by two fishermen and their wives, two couples who

were very simple and good-hearted. All that they had in the way of provisions, - some poi, sweet potatoes, and salted fish - they placed before us. Seeing that I was unable to drink the brackish water, which they were accustomed to drink, one of the women ran to fetch from the sand of a hillock a reddish liquid which I found more potable, but it, nevertheless, made me nauseated. Almost at once I felt sick at my stomach which filled me with disgust for the hospitable hut, also infested and infected with cockroaches, not to speak of other vermin. At the risk of sleeping under the stars, I decided to push on farther. In taking leave of my hosts, whose lot seemed to me much to be pitied, I advised them to start removing their penates to some more habitable place. Ah! How far from the mark we were! They replied to me with a sort of animosity, as if they doubted my good sense: **“Why should we think of changing the place of our abode? What place could be better than right here, where the sky almost never sends us rain, and where the sea gives us fish in abundance?”** [emphasis added]

### **South to Papohaku**

At 4:30 p.m. I took leave of these happy mortals to travel to the south... (Remy 1893)

George Cooke settled on Moloka‘i in 1908 with his family. He soon moved into the position of manager for the Molokai Ranch after his father bought up the stock in the company. In his book, he recounts early life on the ranch and how they would “break” new mules at Mo‘omomi.

At the beginning of our agricultural experiments, we had work mules available. Some of these had already been sold to the sugar plantations. Later, the light weight mares, unsuited for raising riding stock, were bred to a small jack. The light weight mules were much in demand by the sugar plantations for use as pack mules along the Hamakua coast of Hawaii.

The method of training these mules as pack animals was to drive them to Moomomi. Here they were blindfolded and, after the pack saddles were cinched, a bag of sand was loaded on each side. The blindfolds were removed and, after a few cavortings, the mules were tamed down enough to be led back to Kualapuu, where our main camp was located. Their loads of sand were used for concrete. By this method ‘two mynahs were killed with one pohaku (stone).’ (Cooke 1949:55–56)

Cooke also wrote about burials at Keonelele being from a shipwreck on the western shore of the island. He wrote that John Puaa told him they were Chinese “coolies.”

In the middle of what is now Keonelele pasture, there are many skeletons buried in a sandhill about a quarter of a mile from where the road to Ka Lae o ka Ilio crosses the drifting sands. These are the remains of Chinese coolies who were being transported by sailing vessel from China to the west coast of South America. Their ship was wrecked near Kamakaipo. Those who escaped inland died of hunger and thirst. Their bodies were collected by the Hawaiians and buried in the sandhills. This was told to me by John Puaa, a former luna (foreman) of our ranch. (Cooke 1949:106–107)

Daniel Kekahuna also discussed the Keonelele burials in an interview with Kepa Maly and Scott Adams in 1996. His details are very similar to those in Cooke’s book cited above.

KM: And then below, that’s Keonelele where the sand is pushed up?

DK: Yes.

KM: Keonelele is an important place?

SA: Today, the whole area they call Keonoelele, eh?

DK: Yes, but it’s not.

KM: So just the low side?

DK: Yes.

SA: Where are the skeletons?

DK: Down there. See where those white dunes are?

KM: Yes.

DK: All inside there, that's burial grounds. They say it's all Hawaiians, but I believe some were the Chinese coolies. Because they were bringing the Pākes to Hawai'i. They came as far as Kepuhi, I think it was, then they had a ship wreck. So they tried to walk, but they couldn't find water. But get water down there. The old Hawaiians, they knew where the water was. The Pākes didn't know, so they died inside there. (Maly and Maly 2003, v. 2:1092–1094)

In Kepa Maly's interview with Lawrence Joao, Sr. in 1996, "Braddah" Joao provides interesting details regarding the burials in the Mo'omomi area.

KM: Yes, let's talk about that. [referencing point on map of Moloka'i] ...In your youth, Māhana like this had old Hawaiian places too?

LJ: Oh yes, yes. But you can hardly see that already, because how many years cattle have been moving on top of that land.

KM: So the land is all...?

LJ: Everything is smashed down. And the closer you go down to the beach now; you go down to Mo'omomi side, so places over grown with kiawe, you can't see anything inside there.

KM: But underneath still has sites, yet?

LJ: Oh yes. Even get the heads over there with the round hole inside the skull, and with the lead... Hawaiians had no more lead before. Somebody must have slaughtered them. But I never heard my father them, or any body say that somebody murdered these people.

KM: So that's Hawaiian graves?

LJ: Yes...

KM: ...So this Keonelele, Mo'omomi, was a known burial area?

LJ: Sure! That's all sacred. (Maly and Maly 2003, v. 2:1102)

William Alanson Bryan visited Mo'omomi in the early 20<sup>th</sup> century during the research for his book, *Natural History of Hawaii: Being an Account of the Hawaiian People*. He published several photos of Mo'omomi, one of a rockshelter, labeled as "Abandoned cave dwelling in sandstone cliff at Moomomi" and another of fossil root casts, captioned "Exposed fossil root casts, in dunes on Molokai" (Figure 8). Another series of photos show the Mo'omomi landscape, one captioned "General view of the dune area at Moomomi" and another "Erosion of a solidified dune, Moomomi" (Figure 9).

Henry Rudolph Meyer was born in 1855 and was the third child of R.W. Meyer. By trade he was a farmer, but through the years he was also a mail carrier and a police officer. Of all the Meyer boys, Henry was the first to build his own home in Kalae. At some point, Henry Meyer "built a small house at Mo'omomi Beach for family use and later for others who would go to the beach" (Figures 10 and 11) (Meyer 1982:151). Charles Meyer writes about fishing excursions to Mo'omomi.

Fishing for ulua was a great sport for the Meyers. Around 1915 all of the Meyer brothers were able to purchase Model T Fords and on Sundays they would take their families to Moomomi beach to swim and to fish for uluas. (Meyer 1982:152)



PLATE 36. VARIOUS VIEWS ON MOLOKAI.

1. Upper falls of Moaula. 2. Sea-beach at Halawa valley, showing the sacred kamani grove to the left. 3. Hipua-pua Falls. 4. Abandoned cave dwelling in sandstone cliff at Moomumi. 5. Exposed fossil root-casts, in dunes on Molokai. 6. The great temple [heiau] Iliiopai, Mapulehu valley, from slopes above.

Figure 8. Rockshelter at Mo‘omomi (center) and fossil root casts (bottom left) (Bryan 1915:147).

It was not until around 1915 when the Meyers were able to relax from ranch operation that they began to go to Moomomi and other beaches to fish. The third generation of Meyers did much more fishing than did their forebears.

A good fishing partner of the author's was Albert Inaba, Principal of the Molokai High School for over 30 years. I recall one occasion in which we went to Hinanaulua (Honey Bee) and hooked over 125 enenui. On another trip to Paulaia beach (Moomomi large sand beach) we hooked 140 papiopio (pompano) or young ulua ranging in size from one to five pounds in less than five hours. (Meyer 1982:247)

When the homesteads were established in Ho‘olehua, the settlers would go fishing at Mo‘omomi. One of these early homesteaders was Mary Lee who came to Moloka‘i as a child with her family in 1925. As an adult she recounted memories of this time.

...the Waikapuu people knew how to fish so they went down to Moomomi (beach on Moloka'i) to fish for turtle. Turtle meat, fishing and torching and daytime working on the land. What you have you share, if you had plenty fish you share with others. (Dooley and Mowat 1979:22)



PLATE 37. SCENES ON AND ABOUT MOLOKAI.

1. Coast along the north-west end. 2. General view of the dune area at Moomumi. 3. Mountains back of Kamalo. 4. Falls at the head of Halaupa valley. 5. Gathering coral, Molokai reef. 6. Erosion of a solidified dune, Moomumi. 7. Mountains back of Kaluapaha. 8. Erosion of sandstone by the wind and waves.

Figure 9. Mo'omomi landscape (top center and top right) (Bryan 1915:149).

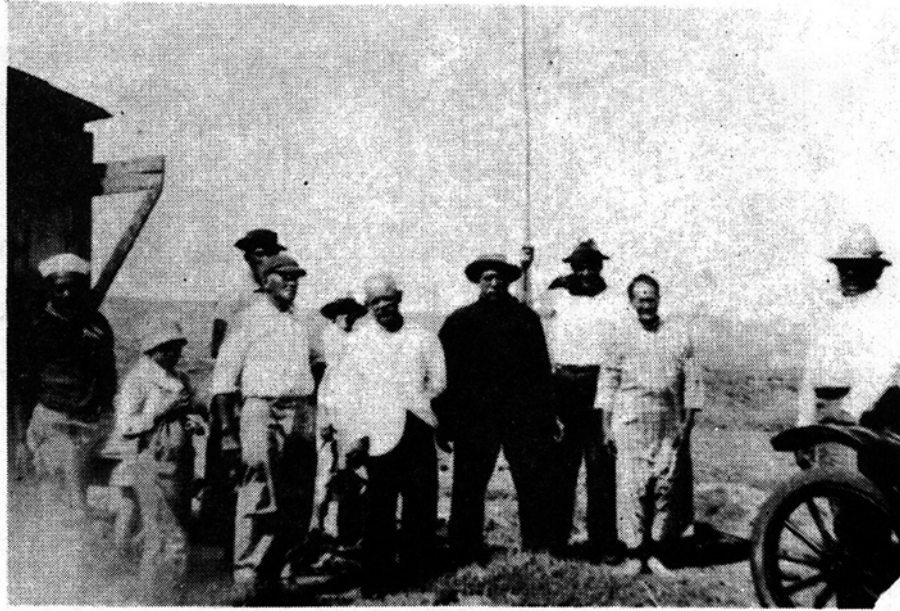
Keesing, in discussing issues involving the Hawaiian Homesteaders on Moloka'i, refers to a proposal to develop facilities at Mo'omomi Beach as a way for the upland Hawaiians to access the ocean resources.

Above all, some worthwhile activities for adolescents and young men and women who have finished school seem to be needed. ...A suggestion which would be of benefit to the homesteaders as a whole is that a community rest-house and camping place, with shade trees and a playground, be established at Moomomi, a beautiful beach several miles west of Hoolehua, easily accessible and with good fishing; this, too, it is thought, would counterbalance the unusual situation of having Hawaiians living on uplands away from the sea. (Keesing 1936:117)

Joseph Dowson, Sr. moved to Moloka'i in 1941 as a senior in high school. His father was a dentist on the island. Joseph describes activities at Mo'omomi the day Pearl Harbor was bombed.

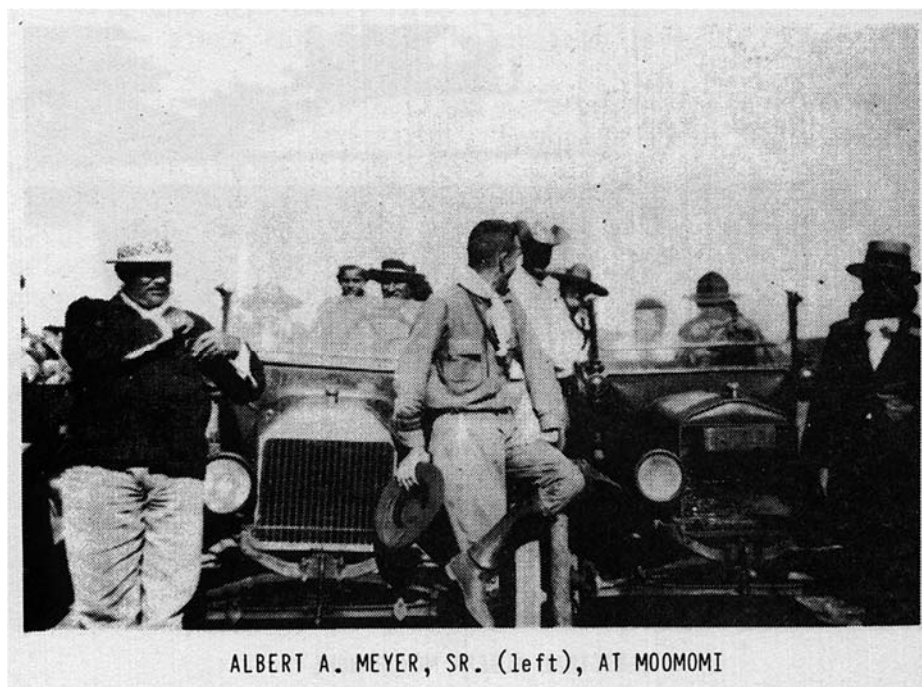


I took a group down to Momomi Beach to guard the beach that night for the invasion of the Japanese. This beach is famous on Molokai. We figured this is where the enemy would land. It's where the canoes take off. You sat and waited for the Japanese. You dug a semi-trench around you and you sat there with your gun all night. After dark, you heard the



A FAMILY OUTING AT MOOMOMI - 1915  
(From center to right): OTTO S. MEYER, HENRY R. MEYER,  
EMMA MEYER KAHINU AND ALBERT A. MEYER, SR.

**Figure 10. The Meyer family at Mo'omomi (Meyer 1982:151)**



**Figure 11. Albert A. Meyer at Mo'omomi (Meyer 1982:187)**

centipedes. They would come out because they would look for a warm spot. That place was famous for centipedes. In the morning, you would get up in this little dips, and the centipedes would try and crawl up on you—about twenty at a time. It was frightening. I couldn't stand those centipedes. The worst enemy wasn't the Japanese. It was those damned centipedes. (Rodriggs 1991)

### **Māhele Land Tenure and Land Ownership**

The change in the traditional land tenure system in Hawai'i began with the appointment of the Board of Commissioners to Quiet Land Titles by Kamehameha III in 1845. The Great Māhele took place during the first few months of 1848 when Kamehameha III and more than 240 of his chiefs worked out their interests in the lands of the Kingdom. This division of land was recorded in the Māhele Book. The King retained roughly a million acres as his own as Crown Lands, while approximately a million and a half acres were designated as Government Lands. The Konohiki Awards amounted to about a million and a half acres, however title was not awarded until the *konohiki* presented the claim before the Land Commission.

In the fall of 1850 legislation was passed allowing citizens to present claims before the Land Commission for lands that they were cultivating within the Crown, Government, or Konohiki lands. By 1855 the Land Commission had made visits to all of the islands and had received testimony for about 12,000 land claims. This testimony is recorded in 50 volumes that have since been rendered on microfilm. Ultimately between 9,000 and 11,000 *kuleana* land claims were awarded to *kama'āina* totaling only about 30,000 acres and recorded in ten large volumes.

Today, Kaluako'i is a single *ahupua'a* land division, but it seems that Kaluako'i was previously considered a *kalana*. According to Robert King, at the time of the Mahele, "...the *ahupuaas* of Kaluakoi 1, Kaluakoi 2 and the *ili* of Punakou, in the west end of the island were said to be in the

*kalana* of Kaluakoi” (1935). Chinen informs us that a *kalana* land division was simply a geographic subdivision, while *ahupua‘a* were land divisions that were personally administered by individuals.

“The largest unit or division of land was, naturally, the island. Each island was then divided into a number of districts called “*mokus*.” These districts or *mokus* were geographical subdivisions only, and no administrators were assigned to them. ...The unit next smaller to the district was the *kalana*. This, too, was a geographical subdivision only, and is not of much importance today.

A *moku* was divided for landholding purposes into units called “*ahupuaas*,” each of which was ruled by either a chief or a *konohiki*. The ideal *ahupuaa* extended from the sea to the mountains, enabling the chief of the *ahupuaa* and his followers to obtain fish and seaweeds at the seashore, taro, bananas, and sweet potatoes from the lowlands, and forest products from the mountains.” (Chinen 1958)

Within the *kalana* of Kaluako‘i, the *ahupua‘a* of Kaluako‘i 1 and 2 were held by Kupa and J. Stevenson, respectively. Both individuals returned their *ahupua‘a* to the Hawaiian Government at some point during the Māhele (Soehren 2010).

Five *kuleana* claims were presented to the Land Commission by residents of Kaluako‘i during the Māhele, all of them living along the southern coastline and not near the project area. None of these claims were awarded by the Land Commission and the entire *kalana* of Kaluako‘i remained with the Hawaiian Government (Hawaiian Kingdom 1846–1848, pp. 274–275, 313–314).

Charles Meyer described the succession of ownership of Kaluako‘i between the Māhele and its acquisition by Charles Reed Bishop in 1875, however he may be mistakenly attributing ownership to the *ali‘i* personally rather than to the Hawaiian Government.

This section of Molokai belonged to the Kamehamehas following the Great Mahele (land tenure revision by Kamehameha III) in 1848. This land was owned by Kamehameha IV and later by his brother, Kamehameha V. When Kamehameha V died in 1872 this land was willed to High Chieftess, Princess Ruth Keelikolani, a half sister of Kamehameha IV and V and a cousin of Bernice Pauahi Bishop. The West Molokai Section is known today as the Kaluakoi lands and these lands were given to Mr. Charles R. Bishop in 1875 as he was the husband of Bernice Pauahi Bishop, the daughter of Paki and Konia, and the last descendant of the Kamehameha dynasty. (1982:6)

In 1875, Charles Reed Bishop obtained a Land Grant from the Hawaiian Government (L.G. Number 3146) and purchased the entire 46,500 acre *ahupua‘a* of Kaluako‘i. Difficulties with the ranch eventually prompted Bishop to sell the property.

When the ranch seemed greatly burdened by problems such as frequent droughts, and loss of cattle and sheep due to sickness and poor reproductive performance, Mr. Bishop decided to have the Trustees of the Bishop Estate sell the Kaluakoi lands and reinvest the proceeds. (Meyer 1982:106)

On February 2, 1898, the Bishop Estate ranch lands, totaling over 60,000 acres by then, were sold at public auction for \$251,000 to Arthur Daggett McClellan. McClellan purchased the property for the Hartwell Company (*Hawaiian Star*, February 2, 1898). The new Molokai Ranch Company was then incorporated on February 5, 1898 with Alfred S. Hartwell as president. The other members were Arthur D. McClellan, Alfred W. Carter, W. R. Castle and Olaf Sorenson. No stock in the company was offered for sale (*Hawaiian Star*, February 5, 1898).

The project area lands were later purchased by The Nature Conservancy, who established the Mo‘omomi Preserve in June of 1988. The purpose of the preserve is “to protect the most intact

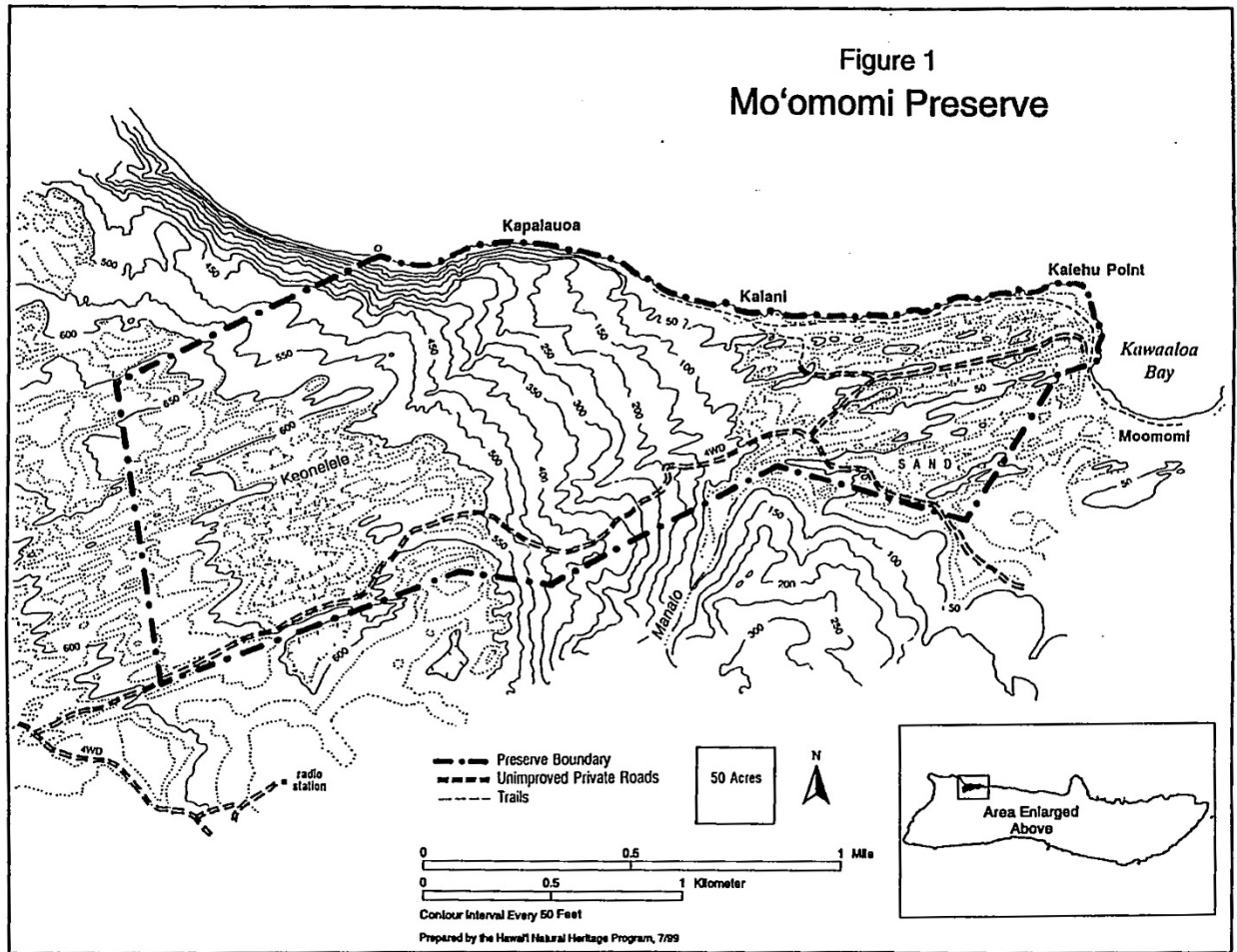
coastal sand dune ecosystem in the main Hawaiian Islands” (The Nature Conservancy 2011). The preserve includes 921 acres from sea level up to about the 210 m (690 ft.) elevation (Figure 12). The landscape “is characterized by sea cliffs...windswept sand beaches, a prominent foredune, and rows of unconsolidated upper sand dunes just inland of the beach” (The Nature Conservancy 2011).

### **Historic Maps**

Historic maps and photos help to paint a picture of Mo‘omomi in years past and illustrate the changes or lack of change that has taken place in the region. The earliest map found for the study area is a Hawaiian Government Survey map (Figure 13). It shows place names along the coast, as well as topographic features like beach and cliff zones, and the extent of sand deposition inland. A well and a house are depicted near Mo‘omomi Bay, and a windmill and possible water trough are illustrated inland.

A map from the same era depicts the water resources on the island of Moloka‘i (Figure 14). Like the former map, this one shows place names along the coast and the extent of the sand zone. An “Old Well” is labeled near the coast, and what possibly says “house” is written near the well. What appears to read “Mo‘omomi Well and Wind Mill” is shown in the vicinity of the windmill, suggesting the possible trough in the former map symbolized a well. A dashed line that skirts the coast and heads inland after the windmill probably represents a road or trail.

A 1922 USGS quadrangle shows the area in further detail (Figure 15). The region appears a bit more modernized, with Kawakiu Road and Kualapuu Road shown. A storage tank is illustrated at the end of Kawakiu Road, and the windmill is still depicted. The house and well at Mo‘omomi can no longer be seen, however. A 1952 USGS quad shows even further development of the roads in the vicinity of Mo‘omomi, and the windmill is still labeled (Figure 16).



**Figure 12. The boundary of the Nature Conservancy's Mo'omomi Preserve (The Nature Conservancy 2011).**

On a 1968 USGS quad, an alternate route to Kaiehu Point was added on the west (Figure 17). The coastal road at Mo'omomi Bay now continues past Naaukahihi, but the east-west connector road inland of Kawahuna is missing. The windmill is still shown but is now labeled at "WT."

The final map presented dates to 1983 (Figure 18). On this map there is a distinction between roads and 4WD trails, so the network of thoroughfares in the region can be seen in more detail. Two radio towers are depicted inland of Kapalauoa, and the windmill is replaced by a corral.

### **Historic Newspaper Articles**

A search was conducted for newspaper articles containing references to Mo'omomi, including the various place names and features of the area. For the English language newspapers, excerpts are taken from the longer articles, as the reader is referred to the original source for the full text. A long list of Hawaiian language newspaper articles pertaining to Mo'omomi was compiled, although only a selection of key articles are presented here. The complete list is provided in Appendix A of Eminger and McElroy (2014) for further research.

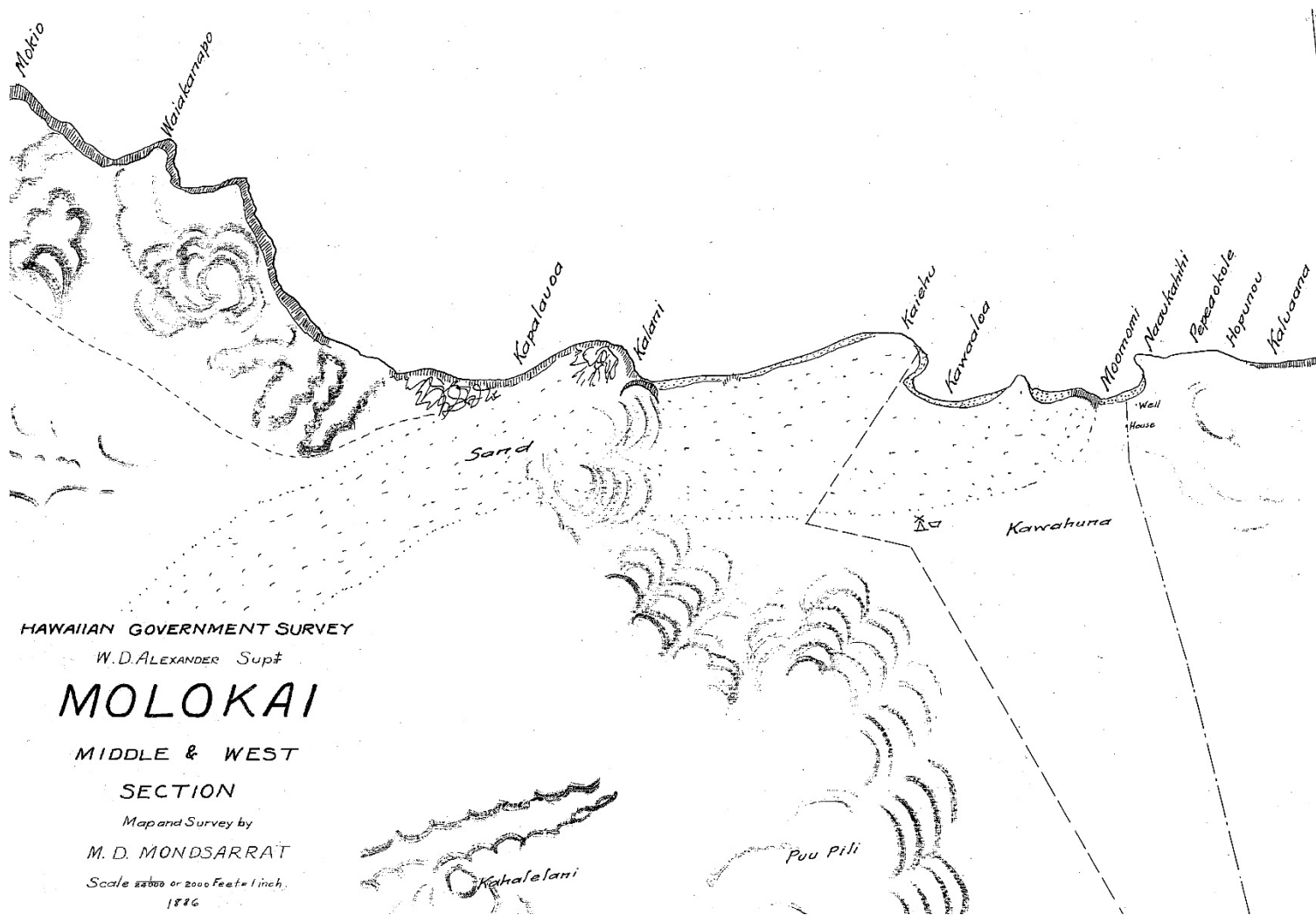


Figure 13. Portion of Hawaiian Government Survey Map of Moloka'i (Monsarrat 1886).







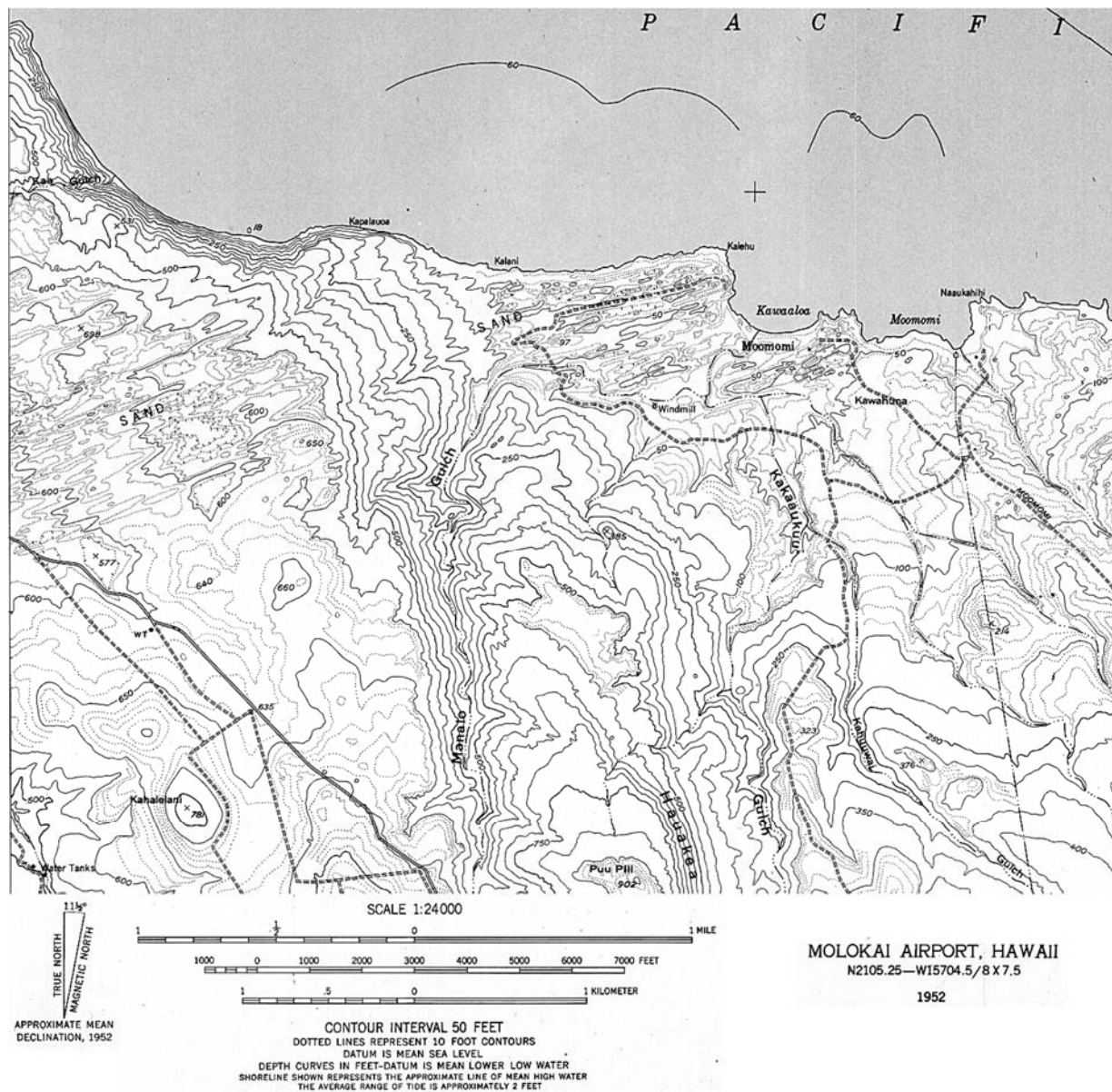


Figure 16. Portion of Molokai Airport Quadrangle (USGS 1952).



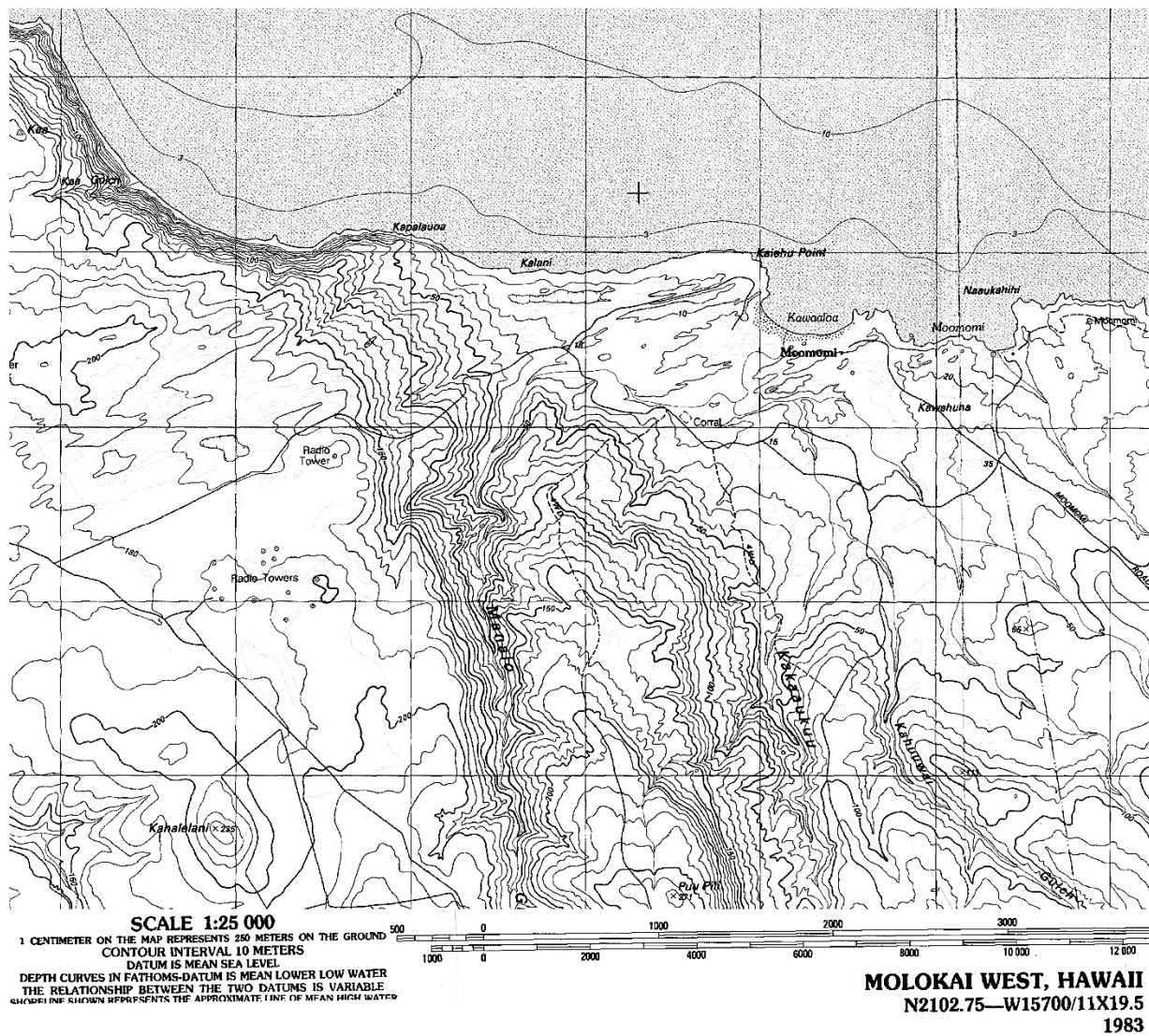


Figure 18. Portion of Molokai Airport Quadrangle (USGS 1983).

### *English Language Newspapers*

- 1859 The bark *Jacob B. Lancaster* sank off of Mo'omomi in July of 1859. A series of stories appeared in the local papers, primarily *The Polynesian*, detailing the accident and subsequent attempts at salvaging her cargo.

## **THE PACIFIC Commercial Advertiser.**

**THURSDAY, JULY 14.**

### **NOTES OF THE WEEK.**

**LOSS OF THE BARK "JACOB B. LANCASTER."**—On Monday afternoon, July 11, a boat arrived at this port, containing the captain, officers and crew of the American bark *Jacob B. Lancaster*, which foundered off Molokai on the 10th. Capt. Small has furnished us with the following particulars. The *Lancaster*, left San Francisco on the 28th of June, bound to Sydney and Melbourne, with a cargo consisting of 7504 bags of rice, 333 hhds. of ale and 50 flasks of quicksilver, manifested of \$32,000. After leaving San Francisco, had strong northwest winds to lat. 30, when the trades commenced. On the 8th of July, the vessel was found to be leaking, there being two feet of water in the hold when the leak was discovered. She was easily kept free, however, by the pumps, but her course was changed, and she was headed for Honolulu, in order to ascertain the cause of the leak and repair damages, if necessary. On Sunday, the 10th of July, about 12, M., the vessel being then abreast of Molokai, the leak was found to have increased, and on sounding, five feet of water was found in the hold. The pumps were manned with all the crew, but the water continued to gain on them, and on looking into the hold, the water was found within eighteen inches of the decks. The boat was then got out, the chronometer, ship's papers and a few provisions put into it, and the bark headed for the shore. After the officers and crew had entered the boat, it was found impossible to lie-to with any safety by the vessel, owing to the heavy sea. They therefore pulled in for the shore, the bark heading in shore also. The coast here being very bluff, they had to row westward some fifteen miles before they could find a place to land. Before reaching the shore, the bark careened over and disappeared, but whether she sank in deep water or struck the rocks first, and went over, the captain does not know, but thinks she must have struck bottom and then sank.



in deep water, as the shore is very bold. Immediately on landing, the captain procured a horse and rode back to where he supposed the vessel was left, but could discover no trace of her. After remaining on Molokai over night, where they were kindly treated by the natives, they set sail in their boat and reached this port about 4 P. M.

The *J. B. Lancaster* was owned in Philadelphia, was six years old, an extreme clipper model, and cost originally \$35,000, but was insured in Philadelphia for \$20,000. We cannot learn that there was any insurance on the cargo, which was owned in San Francisco or Sydney, about \$15,000 of it being shipped by Daniel Gibb & Co.

*(Pacific Commercial Advertiser 1859 07/14)*

1895 C. M. Hyde relates that the “natives fish with a net” at Mo‘omomi, but that it is a dangerous occupation as evidenced by the numerous skeletal remains exposed by the wind in the sand.

Near this Moomomi fishing station the land projects into the sea, forming a cove. But a canoe could not be managed easily on the turbulent waters amid the rocks that protrude above the waves. The natives fish with a net, but manage it by swimming hither and yon. That fatal accidents are incident to this hazardous plan of fishing would seem to be indicated by the many skeletons that the winds are continually excavating from the sandy point near by, which was apparently a burying ground in the olden times.

*(Hyde 1895 09/17)*

Hyde, in his “Rambling Notes on Molokai,” describes an underwater spring at Mo‘omomi Bay where “the natives get their drinking water...when occupying the spot temporarily as a fishing station.”

If in the fissure between two lands, Kalaupoi and Palaa, artesian wells could strike a water bearing stratum and bring water to the surface, the land that is not worth more than ten cents would be worth a hundred dollars an acre. That such a project is feasible and might be successful would seem to be indicated by the fact that at the northern end of the fissure is a spring beneath tide level. The natives get their drinking water there when occupying the spot temporarily as a fishing station.

*(Hyde 1895 09/17)*

In his paragraph on Keonelele, Hyde gives a very poetic description of seeing the sands blown in the wind saying that “the clouds of sand, as the sun strikes them, have the appearance of flames of fire.”

About half-way across the land of Kaluakoi, from north to south, rises a hill, Kahalelani, and from its top the eastern end of the plateau lies spread out, all good grazing land. West of this hill, across the land from north to south, stretches a line of yellow, shifting sand, Ke one lele. The clouds of sand, as the sun strikes them, have the appearance of flames of fire.

(Hyde 1895 09/17)

Hyde speculates that the footprints at Kalaina Wawae, or as he wrote “Ka laina wawae,” were formed when the sand was soft and subsequently hardened, preserving the footprints in sandstone. He offered the alternative possibility that they were natural formations simply having the appearance of human “foot-steps.”

Ascending from Moomomi to the ledge that forms the eastern boundary of the land of Kaluakoi, the traveler comes upon what the Hawaiians call “Ka laina wawae.” On what was once a sea beach, now hardened into solid rock, are human foot-steps or some of nature’s wonderful simulations of human forms. A slab or two might be removed and kept at the Bishop Museum, for exhibition or scientific investigation.

(Hyde 1895 09/17)

1897 One of the earlier articles discussing the potential sale of the Molokai Ranch appeared in the *Hawaiian Star* on December 21, 1897. The plan to start a sugar plantation was even proposed at that time.

**THE HAWAIIAN STAR.**

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**DECEMBER 21, 1897.**

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**WANT TO BUY THE RANCH**

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**HAWAIIAN CAPITALISTS MAKE A GOOD OFFER.**

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**For the Bishop Ranch on Molokai—  
Will Start a Sugar Plantation—Trustees May Sell.**

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The trustees of the Bishop estate are considering the proposition of selling the big ranch on Molokai belonging to the estate, at public auction.

They have put an upset price on the property of \$150,000, and are now waiting to hear from the attorneys to whom was submitted for interpretation a provision in Mrs. Bishop's will concerning the ranch. There is every reason to believe that a favorable answer will be received from the counsel.

An offer has already been made to the trustees for the property by Hawaiian capitalists. The amount of this offer is the same as is required as the upset price. From what can be learned at this early period the would be purchasers contemplate starting a sugar estate, providing water can be secured by wells.

The Bishop ranch comprises about two-thirds of the Island of Molokai. There are in the neighborhood of 66,000 acres owned in fee simple, while thousands of acres of land are leased. The ranch is well stocked and well equipped. The late Robert W. Meyer, formerly superintendent of the Molokai leper settlement, was in charge of the big estate at the time of his death. George J. Campbell is superintending the ranch at the present time.

Should the sale go through, the lands owned in fee simple, leases, the stock, buildings and everything in connection with the ranch, will be included in the upset price named.

The trustees are in meeting this afternoon and perhaps the Molokai ranch matter will come up.

(Hawaiian Star 1897 12/21)

1898 *The Pacific Commercial Advertiser* ran an article in the January 7, 1898 issue, describing the announced sale of Molokai Ranch. It is interesting to see the detailed listing of lands, including the 46,500 acre Kaluako'i parcel (Royal Patent 3146) which had been purchased from the Hawaiian Government by Charles Reed Bishop in 1875.

**MOLOKAI RANCH**

It Is to Be Offered at Auction  
Here Feb. 2.

**DECREE READY TO SIGN**

Trustees to Have Consent of Court.

A Great Estate — Lands and  
Stock—Upset \$150,000.

In the Court for the First Circuit this morning, Judge W. L. Stanley will sign the decree authorizing the sale of the Mo'okai ranch of the Bishop estate. This is the most extensive property put upon the market in the Islands for many years, if there ever was such an offer before. The trustees, with the consent of the Court, will have the sale at auction in Honolulu on the 2d of February.

The Molokai ranch comprises nearly 80,000 acres of land in fee simple and more than 20,000 of crown lands under lease for thirty years from January 1, 1888. There are more than 23,000 head of live stock on the place. Here is a description in detail of the property:

|  | Estimated<br>Area—Acres. |
|--|--------------------------|
| Royal Patent 3146, Ka'ua-koe .....   | 46,500                   |
| L. C. A. 11216, Nalwa and Leles .....  | 5,909                    |
| Royal Patent 6824, L. C. A. 7755½, Kahanui, Royal Patent 2557, Kipu and Manowainui ..... | 2,450                    |
| Royal Patent 3533, Kaulakakai .....  | 5,213                    |
| (Except 27 acres reserved for Homestead lots).   |                          |
| L. C. A. 7779b, Makakapaia .....   | 1,425                    |
| L. C. A. 8559b, Apana 28, Kawela uplands .....   | 7,700                    |
| L. C. A. 2937, Iloli .....   | 70                       |
| The above areas are approximately only.  |                          |

Crown Lands under lease for a term of thirty years from January 1st, 1888, at a rental of \$1,200 per annum.

|                                  | Estimated<br>Area—Acres. |
|----------------------------------|--------------------------|
| Palau and Leles (3 Apanas) ..... | 11,258                   |
| Ka'amaula .....                  | 6,747                    |
| Kapaakea .....                   | 2,178                    |

|                               |                |
|-------------------------------|----------------|
|                               | Approximately. |
| Estimated number of cattle... | 4,500          |
| Estimated number of sheep...  | 14,500         |
| Estimated number of horses... | 170            |
| Estimated number of goats...  | 4,000          |

The 2d of February will be on a Wednesday and the sale will be at noon at the mauka entrance to the Judiciary building. It will be in charge of Henry Smith, Commissioner. Maps of the property will be shown at the Bishop Estate offices, near the Bishop & Co. bank on Merchant street. The upset price will be \$150,000.

Terms Cash; or at the option of the purchaser not more than two-thirds

The 2d of February will be on a Wednesday and the sale will be at noon at the mauka entrance to the Judiciary building. It will be in charge of Henry Smith, Commissioner. Maps of the property will be shown at the Bishop Estate offices, near the Bishop & Co. bank on Merchant street. The upset price will be \$150,000.

Terms Cash; or at the option of the purchaser not more than two-thirds of the purchase money to be secured by mortgage on said premises for a term not exceeding five years, drawing interest at the rate of six per cent per annum.

All moneys payable in Gold Coin of the United States of America, and deeds at the expense of the purchaser. Sale subject to confirmation by the Circuit Court of the First Circuit.

At periods for several years efforts have been made to have this ranch placed upon the market. Several syndicates and individuals have expressed the intention of bidding. One combination—perhaps all of them—is said to have the project of conducting the ranch as a modern stock and dairy farm well under organization.

(Pacific Commercial Advertiser 1898 01/07)

The auction for Molokai Ranch was held on February 2, 1898 and reported in both *The Evening Bulletin* and *The Hawaiian Star* the same day. *The Pacific Commercial Advertiser* ran the story the following day. The "lively bidding" is described and the property was ultimately sold with a winning bid of \$251,000 going to Arthur D. McClellan, a wealthy capitalist from Boston.



FEBRUARY 2, 1898.

# MOLOKAI RANCH IS SOLD

Some Lively Bidding at the Judiciary Building.

Finally Knocked Down to A. D. McClellan for Two Hundred and Fifty-one Thousand Dollars.

There was a very large attendance at the sale of the Molokai ranch property at the Judiciary building at noon today and capitalists were as plentiful as flies in one of the trams. Acting President Cooper was there as were the other three members of the Cabinet and the Chief Justice and his two associates on the bench. In the crowd were noticed B F Dillingham, Chas S Desky, W F Allen, J A McCandless, H W Schmidt, J S Walker, J A Hasinger, J I Dowsett, Geo R Carter, Judge A W Carter, J Marsden, Cecil Brown, H M von Holt, Judge Stanley, C A Brown, Theo H Davies, A Hooking, Mark Robinson, Robert Lowers, Col McLeod and many others prominent in business and government circles.

Promptly at noon Auctioneer Morgan read off the terms and conditions of the sale and description of the property included in the ranch. He was followed by Commissioner Henry Smith who gave notice on behalf of the trustees of several small parcels of land which were excluded from the sale, having previously been deeded to the late R. W. Meyer. Mr. Smith also stated that the trustees reserved two acres at Kaunakakai for fifty years to be used as a public landing place and, lastly, that the trustees sold only such rights as were vested in them and would give no covenants in the deed.

The auctioneer then announced that he was ready for bids, following it up with the announcement that \$150,000, the upset price, had been bid.

Judge Carter asked whom by and the auctioneer held that he was not obliged to give the name of the bidder.

Judge Carter insisted that he was and offered the upset price himself.

The auctioneer entertained the bid but immediately afterwards said \$151,000 had been offered.

Judge Carter again insisted on his right to hear the bid made and to know who was bidding against him.

Mr. Morgan again ruled against him and refused to disclose the name of the bidder.

W. A. Kinney, counsel for the Bishop Estate, who was present was appealed to but refused to interfere, saying that any rights would be preserved by entering a protest, which was done.

The bidding then went between Judge Carter and his unknown opponent by raises of \$1000 at a time until \$210,000 had been offered. By that time the unknown bidder had been discovered by most of those present to be C. S. Desky, who raised his next bid to \$215,000. Judge Carter dropped out of the bidding at this point and a stranger took it up, raising Mr. Desky another \$1000.

Desky quickly raised \$5000 and the stranger another \$1000 and thus it went on until Mr. Desky made his last bid of a quarter of a million dollars. The stranger promptly raised the bid to \$251,000, and Mr. Desky said his limit had been reached. The property was then knocked down to the stranger, who gave his name as A. D. McClellan.

Mr. Desky refused to state for whom he was bidding, other than that it was for Bruce Waring & Co., but it is generally understood that he represented a syndicate of local capitalists.

Mr. McClellan, who bought the property, is a wealthy capitalist of Boston, who arrived here just two days ago. He was here about a year ago and looked over the property. He is said to be the gentleman in whose interest Judges Hartwell and Carter have been acting of late.

(Evening Bulletin 1898 02/02)

# THE HAWAIIAN STAR.

HONOLULU, H. I., WEDNESDAY, FEBRUARY 2, 1898.

## THE BIDDING WAS LIVELY

THE MOLOKAI RANCH BROUGHT  
\$251,000.

Arthur D. McClellan Purchases It for  
the Hartwell Company—Charles S.  
Desky was Strong Opposition.

The Molokai ranch was sold at noon today to Arthur Daggett McClellan, for \$251,000. Charles S. Desky, representing a strong company of capitalists, was in the race for the property up to the last moment, but when he offered \$250,000 he reached his limit, and allowed the successful bidder to take the big ranch for a sum that was but one thousand dollars higher.

When Auctioneer Morgan climbed up on top of a chair in front of the Judiciary building this noon to call for bids, there were some two or three hundred of the city's most representative men in attendance. Special Commissioner Henry Smith read to the assemblage the various bits of properties that had previously been sold by the trustees of the Bishop estate, as well as the several small grants that had been made from time to time. He then pointed to the map which was suspended in the hall and explained the property that was offered for sale. There were over 60,000 acres in fee simple and about half that number of acres held in lease. At least one-third of the purchase price would be required in cash and the other two-thirds to be secured by mortgage and payable within five years' time.

Mr. Morgan then called for bids. Judge Alfred W. Carter mentioned the upset price, \$150,000, as a starter. Charles S. Desky bid \$155,000. Judge Carter raised a thousand and Mr. Desky saw him. Then Judge Carter wanted to know who was bidding, and the auctioneer replied that he would learn that when the property was sold. But the judge insisted that he had the right to know and entered a protest. Attorney Kinney for the trustees noted the protest.

The bidding then went on, the price rising steadily one thousand dollars at a time. When it reached \$196,000, Mr. Desky jumped to \$200,000. But this did not discount Judge Carter and he went one thousand higher. Desky mentioned \$205,000, and Carter said \$206,000. Desky unhesitatingly went to \$210,000, and Carter bid \$211,000.

At this stage of the bidding Mr. McClellan, who was standing near Judge Carter, held a hasty conference, and the former continued the bidding. Mr. Desky went to \$250,000, and Mr. McClellan promptly named \$251,000. The bidding then stopped and the property was knocked down to the highest bidder.

(Hawaiian Star 1898 02/02)

## THE RANCH IS SOLD

A. D. McClellan of Boston  
Pays \$251,000 for It.

Large Real Estate Deal—Rapid Bidding Runs Price Up—Mr. Desky's Quarter Million.

A quarter of a million dollars land deal was made yesterday when Henry Smith sold at auction, in front of the Judiciary building, that piece of property known as the Molokai ranch, belonging to the Bishop estate. The upset price was \$150,000. The property sold for \$251,000, just \$1,000 more than C. S. Desky had bid. Beginning at \$5,000 advance on his opponent's figure, Mr. Desky had gradually come down to \$1,000 a raise.

Jas. F. Morgan officiated as auctioneer. The sale began at noon as it was advertised and drew a large crowd of business men and capitalists, many of whom were there, not to buy, but because of their interest in such a large land deal. The price at which the ranch sold represented only a part of the money to be invested, as it will take a small fortune to run the ranch and put it in condition.

It had been understood on the streets for some time that a number of men had banded themselves together to obtain possession of this valuable property. It was said that the combination was ready to put up a handsome amount rather than lose the ranch.

When the sale began on the announcement of the auctioneer that he had been offered an upset price of \$150,000, Judge A. W. Carter insisted that the name of the bidder be given in order that the others who were after the property might know whom they were fighting. It was his opinion that he was the bidder himself and he again offered the same price. The auctioneer accepted the bid but stated at once that he had been offered \$151,000, and called for other bids when Judge Carter again insisted that the name of the opposing bidder be given. The sale went on and the name of the unknown bidder was not given.

C. S. Desky also entered the field against Judge Carter. The bidding was confined to these two and they soon ran the bid up to \$225,000, at which price, Judge Carter dropped out of the field. It looked for a moment as if Mr. Desky would get the ranch at that figure, but Mr. A. D. McClellan, who arrived on the Australia from Boston and whose interests Judge Carter has been representing, began bidding against Mr. Desky as soon as Judge Carter had finished.

The price was soon run up to \$250,000. This was Mr. Desky's figure and he went no higher. The ranch was then knocked down to Mr. McClellan for \$251,000.

- 1922 Kenneth Emory wrote an article on the footprints made in the lava on the slopes of Kahikinui in Maui. In that article he states that the footprints at Mo‘omomi were chipped out of the coral “within the last hundred years.”

MAUI NEWS, FRIDAY, JUNE 2, 1922.

### Foot Prints in Maui Lava Flows

(By K. P. Emory of Bishop Museum)

For years natives have told stories of foot prints in the lava flows of Kahikinui, Maui, on the slopes of Haleakala. The most recent of those flows is hundreds of years old. Were there people in those days to flee before the advancing lava? There could be no better proof than human foot prints made in the lava while it was still scorching hot but plastic.

J. V. Marcel of Kaupo took K. P. Emory and T. K. Maunupa, who were recently on Maui in behalf of the Bishop Museum, to the locality of those strange foot prints.

#### Perhaps Hand Carved

But not among the whole 30 prints is there a single natural progression. It doesn't seem possible that people who made these prints either stood or walked or ran. It is Emory's belief that they sat on the hard pahoe-hoe, perhaps a hundred years ago, and chipped them in the rock, as natives have chipped foot prints in the coral at Moomomi, Molokai, within the last hundred years.

But unlike the foot prints at Moomomi, these of Maui are exactly proportionate to the feet of native children.

(Emory 1922 06/02)

### *Hawaiian Language Newspapers*

Note: Articles appearing in the Hawaiian newspapers generally did not contain diacritical marks ('*okina* and *kahakō*), and are presented here as found. Only excerpts are listed for longer articles and the reader is referred to the original sources for the complete text.

- 1861 In this article regarding cattle rustling on Moloka‘i, the thief claims it is turtle meat from Mo‘omomi. Upon further examination the thief admits that it is stolen beef.

“No ka Aihue.”

E ka Hae Hawaii e---Aloha oe:

Ke hai aku nei au ia oe, i kekahi hihia nui i hookolokoloia, ma ka aha apana o Molokai no ka aihue bipi. He kanaono ka nui o ka poe i hoopai ia, a he poe hoahanau kekahi oia poe aihue, a he mau Luna Ekalesia kekahi oia poe; ua hui pu a hana i kela hewa aihue; a ma ka

hookolokolo aha, ua hookuu ia kekahi poe, a ua hoopaa ia kekahi poe; o kekahi luna o ka ekalesia kekahi i hoopaa pu ia e ua aha la.

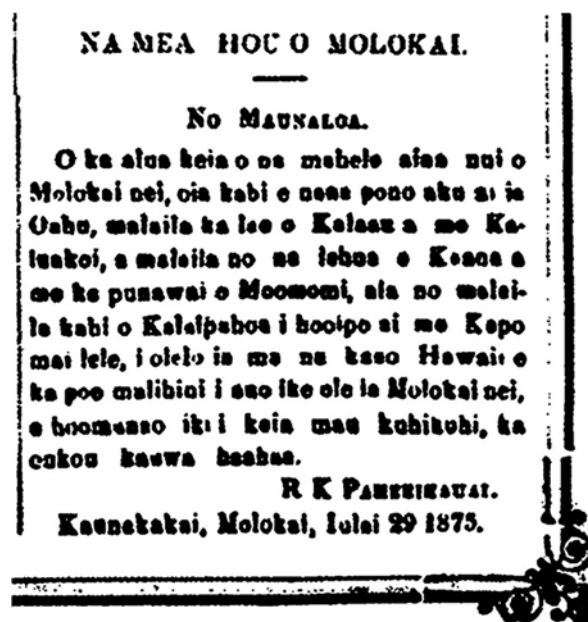
Eia ke kumu o ka ike ia ana o keia poe aihue. Ua haohao nui na haole mea bipi i ka nalowale o na bipi, e holo ana ma Kalae ma ka puai komohana o Molokai. A i na la hope iho nei o kela makahiki i hala iho nei, a malaila wau, a ua nalowale kekahi o ka'u mau bipi, a ia'u malaila, e nene ia ana ka aihue bipi, a he olelo ano e ke olelo ia ana. He io honu no Moomomi, a ua niele aku au, a ua hu mai ka haina he io bipi aihue, nolaila, ua hoopii ia keia poe imua o ka ahahookolokolo no ka aihue. (*Ka Hae Hawaii* 1861 02/06)

1870 Maohelaia on Moloka'i is said to be a place of wandering spirits, of friendless spirits.

He wahi i oleloia ko na uhane auwana,  
o Kamaomao ko Maui, o Uhane ko Lanai, o  
Maohelaia ko Molokai, o Muna o Kauai, o  
Halalii ko Niihau, a ma keia mau wahi e  
auwana hele ai na uhane makamaka ole.

(Kamakau 1870 10/06)

1875 The "spring of Mo'omomi" is mentioned in this article by Paheekauai published in 1875. This spring can be seen from Maunaloa.



(Paheekauai 1875 08/07)

#### No Maunaloa.

O ka alua keia o na mabele aina nei o Molokai nei, oia kahi e nana pono aku ai ia Oahu, malaila ka lae o Kalae a me Kaluakoi, a malaila no na lehua o Kaana a me ka punawai o

Moomomi, aia no malaila kahi o Kalaipahoa i hooipo [?] ai me Kapo mai lele, i olelo ia ma na kaa o Hawaii e ka poe malihini i ano ike ole ia Molokai nei, e hoomanao iki i keia mau kuhikuhi, ka oukou kauwa haahaa.

R K PAHEEIKAUAI.

Kaunakakai, Molokai, Iulai 29 1875.

(Paheekauai 1875 08/07)

In an article describing a tour over Moloka'i, the commanding view from Maunaloa is described. The party left there for Mo'omomi at 12 o'clock, riding on horseback on the plain of Maohelaia. From there they saw the plains of Kaiolohia and Ulaokalaeloaikalepoakamakani, as well as Keonelele spread out on the plain of Papohaku. They arrived at Mo'omomi at 12:30 before setting out for Puupaneene [a place along the *pali* in Kalae by the Kalaupapa Lookout], arriving there at 3 p.m.

## Ka Nupepa Kuokoa

HONOLULU, AUGUST 21, 1875.

haalele ia Palaa no Maunaloa ma ka hora 9 a. m. hiki i luna oia maana nana na ea huinui oluolu maikai, i ka hora 11 a. m. hiki makou ilaila, na piha ko makou ike ana i na aoao a pau o ka aina o Kalae, e ike ana makou i ka aoao hitina o ka moku-puni Oahu a waiho wale imua o makou me he mea la e uae mai ana ka ua mea o ke koke, e ike ana hoi ia Maui o Kama a me Lanai a ke Aea ua hele mai la luna a koke ke imua o makou oia e ku ana makou i lona o Maunaloa. Haalele ia Maunaloa no Moomomi ma ka hora 12, e hoohuli ana i na lio i luna o ke kula o Moohelaia e nana ana hoi i ka waiho kahela mai a ke kula o Kaiolohia a me ke kula o Ula-kaleloaikalepoakamakani, i ka waiho mai hoi a Keonelele me he kumoena la i hohola ia i ke kula o Papohaku. Aole hoi auanei oe e manao iho ia ike ana la, aia na wahi kanaka i ka huki a ka ihu o ka lio. Hiki ma Moomomi i ka hora 12½, haalele ia laila ia hora no no Puupaneene, e kiei ana i ka pali o kuu uina hanaa hiki i laila i ka hora 3 p. m.

(Ka Nupepa Kuokoa 1875 08/21)

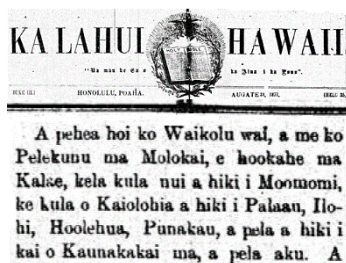
**1876** The places along the north shore of Moloka'i are noted as the *Kilauea* passes by, Mo'omomi among them, before Kalaupapa came into view.

Ua ike pono aku la makou i ka aina e waiho mamao mai ana, a e kamoe loihi ana i ka hema maluna ae o ka iliwai, a e nihi kololio mai ana na kehau kakahiaka e hui me ka noe anu hoopulu lelehua o na pali. Ke au ae la ka Lae o Kalaau ma ko makou welau hema, a e oni ae ana hoi ka Lae o ka Ilio mamua pono o makou, a ia makou i kaa pono ae ai maluna o

Moomomi, ike pono aku la makou ia Kalaupapa e waiho ponaha ana ma kealo pali; ma keia wahi ua ano ike koliuliu ia aku la o Lae Kapuupoi e honi ana i na ea kai ma ka hikina loa o Halawa, a pela mai me na makalae o Wailau, na pali o Pelekunu, a me na olaelae o Kalawao, a me na Hui o Haupu, [he mau moku iloko o ke kai.] Aia hoi ka Lae o Kahio ke inu la i ke kai me he kamelo kuapuu la i ke anu. Ma ko'u hoomaopopo iho, ua kupono kamoku o Hoina i ke kulana i lia ia'i, a puana'e la i keia mau lalani:

“E Hina! nou ko‘u ilihia,  
 A lia e kuluma ilaila,  
 O kou mau pali launahela,  
 I ipo lauahi kamahela,  
 A o ke ahe lau olu kehau,  
 I iniki hooipo a mau.”  
 (Ka Lahui Hawaii 1876 06/29)

**1877** The large plain of Kaiolohia to Mo‘omomi is mentioned in this article on geography. The plain runs to Mo‘omomi, to Pala‘au, Iloli, Ho‘olehua, Punakou, etc. to the sea at Kaunakakai, etc.



(Kanepuu 1877 08/30)

**1884** Kihapiilani is instructed to go to Moloka‘i and make a road on the isthmus of Kaluako‘i. The road is to run from Kaha [the leeward side of the island] at ‘Iloli and turning at the sand of Mo‘omomi. White shells were to be placed on both sides of the road and between the rocks. If people were to travel over the road at night the way would be seen because of the whiteness of the shells.



# Nupepa Kuokoa:

KE KILOHANA POOKELANO KE LAHUI HAWAII

HONOLULU, POAONO, IULAI 12, 1884.

KA MOOLELO O

## Kihapiilani,

KA MEA NANA KIPAPA KANAHELE

O OOPULOA, I ME KE ALA PUPU

I MOLOKAI.

[KAKAUIA NO KE KUOKOA.]

A pau o Maui, holo aku oe i Molokai e hoala i na kua-apa, a e hana oe i alanui ma ka puuli o Kaluakoi mai ke Kaha aku o Ilii a huli ma o o ke one o Moomomi, a e kau oe i pupu keokeo ma kela aoao keia aoao o ke alanui a mawaena ka pohaku.

A ina e hele kanaka i ka po, alaila, e maopopo auanei ka mea e hele ana o ke alanui ma ke keokeo o na pupu, eia auanei ka hana kaulana i ka wa e paa ai i ka aina ia oe, a eia kahi mea nui au e hana ai, e malama i na kanaka i ka ai ka ia, ke kapa a me ka malo, i ke kanaka nui a me ke kanaka iki, i ka wahine a me na keiki, i ka hahine me ka elemakule, oia no ka mea e laka ai ke kanaka, a no ka enemi auanei ka manao mai o oe ka hua paio, a i loa a hoou mai ia oe i ke kua, aole e paa aku na kanaka, no ka mea ua hana lo-komaikai oe ia lakou i na mea e pono ai na kanaka, a e hooko oe i keia mau mea a'u e olelo nei ia oe me ka poina ole, a mai hoohalike oe me kou hanau mua, aka hoi, no ka wa ilihune keia manao ana ou e ku oe i ka moku, he mau hana okoa aku kau, alaila aole oe

i ike aku i ka mea nona ka aina, nolaila e malama oe i kela mau olelo a'u e kanoa ma nei ia oe. Ae mai la o Kihapiilani. (Aho, ke ike ae ia oe ka mea heluhelu i na olelo a ke alii Umi i hoike pau aku ia imua o kana kaikoeke nolaila ke hoomanao ae la paha oe e ka mea heluhelu ma ke poo o keia moolelo i ka nahaie Oopulua o Maui a me ke ala pupu i Kaluakoi, ma Molokai, maloko mai no ia o ko ke alii Umi ma noono ana, a ke waiho nei na hoike oiaio o ia mau hana ana a Kihapiilani ma na alanui kahiko o Maui nei.)

Ina paha ua ike kekahi mea heluhelu ana i kela moolelo i kekahi mea e pili ana i ka Kihapiilani mau hana kaulana i pili ma kekahi buke ma ke kula nui o Lahainaluna ma ke ku mua loa ana mai o Lono Kapena Kuke ma Hawaii nei, aia maloko o ia buke na olelo e pili ana i ua alanui nei n Kihapiilani i hana ai.

Ma kahi i loa i ka mea e kakan nei o kekahi o ia mau lalani i pili a i paa naau hoi i kekahi poe e ae e noho mai nei, oia paha keia mau lalani:

Kahawai i Kawapapa  
Ka pii'na i Pihche,  
Ka iho'na i Kohalaoka  
Hele aku he ino he a kanahele,  
He alanui kai kanaka o Hono  
maele--kauahela i Oopulua,—kua-pa o  
Manoni,— ke ala pupu i Molokai.

(Ka Nupepa Kuokoa 1884 07/12)



**1893** This excerpt describes spirits, or ghosts, and their mischievous doings. Wooden pieces are thrown in the air by them, coffins, rocks, doors and windows of houses, etc. All these things may be seen in the burial places. These things are frequently seen at Keonelele, Maohelaia, and Kualapuu at Kaiolohia.

Aka, he poe kino wailua, he aka hoi o ke kino maoli o ke kanaka i make aku, a ua kapa ia paha e kakou ma keia moolelo he lapu. Ma na kakahiaka nui lailai e ike ia ana kekahi mau hana a keia poe. Oia hoi, e hoolei ia ae ana i ka lewa he mau apana laau, na pahu kupapau, na pohaku, na ano puka hale, a pela aku. E ike mau ia ana keia mau mea a pau ma na wahi kanu kupapau a pau, a i kapa ia e kekahi poe he ilina. A pela no me na wahi i kapaia o Leinakauhane. He ike pinepine ia no hoi keia mea ma ko Molokai mau waihona kanaka nui, e like me ke one lele, Maohelaia a me Kualapuu ma Kaiolohia. (*Hawaii Holomua* 1893 01/24)

**1896** While passing Moloka‘i, the sights along the coast are described. At 4 o’clock in the early morning the group passed outside of the *kaikū‘ono*, or guards, of Mo‘omomi and the dark lavas were the only things seen.

Hora 2 a.m. a ‘oi, kā‘alo a‘ela mākou ma ka Lae-o-ka ‘Īlio, a nānā wale akula nō nā po‘e o ka moku i kahi o ka moku kālepa Wilikoki e moe lōli‘i ana i ka hohonu ma lalo iho o ka pali kūhōhō.

Hora 4 wana‘ao, kā‘alo a‘ela mākou ma waho o ke kaikū‘ono o Mo‘omomi, a ‘o ke ‘a‘ā hāuliuli wale nō ke ‘ike ‘ia aku me nā hu‘akai e kuakea mai ana i nā lae pōhaku.

Hora 5, kawewe aku la ke kaulahao me ka anaka o ka Iwalani i ke awa o Kalaupapa, (Ringer 1896 12/07)

**\*kai.kū.‘ono** n. Guards posted at the entrance to the hale nauā enclosure (Malo 191.) Emerson (Malo 200) lists this as kaikuone. (Pukui and Elbert 1986)

**nau.ā** n. A secret society formed or revived by King Ka-lā-kaua for the study of the ancient Hawaiian religion and manner of living. Hale nauā, a place where genealogy was scanned to see whether applicants were related to the high chief and therefore eligible to become members of the royal household. Emerson says nauā was the word of challenge addressed to those applying for admission. (Malo 191–2, Emerson note 199–200.) (Pukui and Elbert 1986)

**1921** This article published by Geo. Pooloa discusses the different types of rocks and uses. Mentioned in the article is a white rock with sand that comes from the underwater cave of Mo‘omomi. The underwater cave is guarded by a great large eel. The rock was used to help children with certain types of sickness, along with a prayer.

**HEOAHU UA POHAKU ANA NEL**

Mr. Solomon Hanohano; Aloha nui kaula:—E ae mai kou oluolu i kowa o ka kaula hiwahiwa no ka manawa.

Ma ko'u nana ana i keia mau pohaku e kau nei ma ka puka aniani, a e nana nui ia nei e ka lehulehu, a ua lilo i mea kamailio nui ia i kekahi manawa.

He pohaku ana ia e waiho nei, Heoahi ia, ma na inoa ka like ole o na manao e ku nei ka ninau? Heoahi ua pohaku nei, kona ano he mau pukapuka liilii, me kona kino apuni, a o ka pohaku Alae Ana, he ulaula kona kino apuni, pohaku Ana Pele, ha elele uwa-hi kona ano, a he mau pukapuka nunui a liilii.

He olai ia pohaku ana, he oi kona kino, a he keokeo kona ano ke nana iho oe, iaia a he pukapuka oneone liilii ooi. O kahi e loa nui ai keia mau pohaku Ana, o ke kahawai, i kekahi manawa e loa no iluna o ka aina, mamuli o ka malama ia i ke au i hala.

O ka hana a keia mau pohaku, no na imu puua, imua o ke alo o na alii, a i kekahi manawa imua o na makaai-nana e ikeia ai i ka wa kalua puua, a e huli ae kaula e nana ae i keia pohaku ana, he keokeo kona kino, a he oneone kona mau pukapuka, a he pa-kiki ke nana iho. A o keia pohaku Ana, e loa ai, aia i Moomomi, he Ana huna, maloko mai o ke kai e luu ai a hooa iloko o keia Ana i ka aina, he puhi ke kiai, a oloko aku he moo ma Kulae Molokai, a e huli aku kaula a nana aku, aia ia pohaku Ana e loa ai i Aalaloa, he Anahuna ia, maloko o ke kai e luu ai, pae aku i ka aina, o Maui ka aina.

O keia ka pohaku Ana he hanala i laau ea, fio na keiki liilii, ame kekahi ano ma'i e ae e ola ai keia noho ana, keokeo a aeae alaila hanaila me na leo pule. Amama ua noa.

E huli ae kaula e nana i ka pohaku pele, he hulalali kona kino elele, a he ano kalakala a ooi ke nana iho. Aohe au i ike he mea e hanaia nana, koe wale iho no o kou hele e makaikai i ka lua o Pele ma Hawaii i mea e hooma-nad ai no kau huakai i hele ai i kela aina.

E huli ae kaula ia wahi e loa ai ka pohaku ana keokeo, iloko o ke one ma ka lae ae nei o Kaena, Oahu nei; a e huli ae kaula e nana no ke ano o ka pohaku Kuula, he nui no na ano o ka pohaku ala, he uuku kona kino, a hi-nubinu, he ololohio, aole e loa ia oe, ma ka moehane, e kuhikuhi ai ia oe me na mea e hana ai nana apau, i ka makaukau ana e hele aku e kii i kahi i kuhikuhi ai ia oe, e malama oe i na rula, o nele auanei kau huakai i hele ai e huli, a i ole i ka aina nei, me na leo pule pu i ke au i hala.

O kekahi pohaku Kuula, ke nana aku, he kino wahine, a i ole he kino kane, a i ole he poo kanaka, aia a nui kona makemakeia oe ia wa auanei e ha-lawai ai oe me ia me ka kukaioloa ana iloko o ka moehane, a mai wala-ue i ka poe apau, o hooa auanei i na pomaikai e loa ana ia oe, ma ke kuhikuhi ana ia oe, a o kekahi ano pohaku Kuula ala, he uuku no kona kino, he nemonemo maikai, a o keia ano pohaku, i kahakai e noho ai ma ka aeone, ina e makemake keia pohaku ia oe e hoohi-hi mau ana kou mau maka i ka nana iaia, ke kaalo ae ma ia wahi au e hele nei ame ka manao aloha, a he limu lipoo ko lakou aahu hoihoi loa ke ma-lamaia. A he mama ko lakou mau kino i kahi wa.

O ka pohaku Alae lepo ulaula he laau ia, no kekahi ano ma'i i ike, he mea e ola ai i na aina e loa ai, ma Manoa.

Aia ia Pohaku Ana e loa ai iloko o ke kai ma Kekaa, kahi keia e lele-kawaia ai e ke Alii Kahekili ia au i hala, a o ka ninau pohaku Kuula, he nui kona kino, a he palahalaha omua ke nana iho i kona ano. A he nee-nee i kekahi manawa ke haihai na rula o ka malama ana i na Pohaku Kuula.

Ke loa na ike kupanaha ia oe i ka wa pokole e hooa mai ana maluna ou, a e pahola aku ai ia mau ike i ka laula o ka aina no ka manawa.

He pohaku kaulaiki he akala kona kino ke nana aku iaia, aole he nui o kona pukapuka, a he hamani wale iho no.

He pohaku ana, he po'i haelele kona ano, a he mau pukapuka nunui a liilii, kona ano oloko he liilii.

Pohaku pukapuka kona kino apuni, he nunui kona pukapuka, o kona nao oloko he kekee ke naha ae.

Pohaku Kaihuokapuaa, he pohaku nunui ia, he ahinahina kona ano, he nunui kona nao oloko ke naha ae.

Pohaku Peahi, he uliuli kona ano, a he manamana kona nao oloko ke naha ae he koku lima.

O na pohaku Kupua e waiho nei i ka aina, a kou meakakau i ike ai, he ike no ke ano me keia mau pohaku ma kekahi mahale, mamuli o ka lilo o kekahi pohaku i na waikane nui o ka aina, pela i au ai i ke kai keia mau pohaku.

Ke manaolana nei au ua lawa ka ninau pohaku ana.

Me ka mahalo.

GEO. POOLOA,

In this *mo'olelo*, or story, it is said that Kalae was a *kapu* land from ancient times, that bodies were not buried there. The place for the bodies of that land was near the sea at Mo'omomi.

## NUPEPA KUOKOA

DEKEMABA 23, 1921

HE AKUA E KE KANE, HE IKE  
OLE E KA WAHINE E!

Nolaila e waiho kaua e ka mea helu-  
helu i ke Keiki hookama a kaua, e hoo-  
maha ana i ka maopaopa, a e aui ae  
hoi kaua i ka mea nana ka puolo haule  
wale i ke alanui, ame ka noho ana o  
keia aina o Kalae.

He aina kapu keia mai kahiko mai,  
aole e kanuia i ke kupapau, nia ka ili-  
na kupapau o keia aina i kai o Moo-  
momi, a no ia kapu, ke kumu o ka loa  
o keia opeope ia Kalimahopu.

(*Ka Nupepa Ku'oko'a*, December 23, 1921)

**He Akua e ke Kane, He Ike Ole a ka Wahine e!** [excerpt]

Nolaila e waiho kaua e ka mea heluhelu i ke Keiki hookama a kaua, e hoomaha ana i ka maopaopa, a e aui ae hoi kaua i ka mea nana ka puolo haule wale i ke alanui, ame ka noho ana o keia aina o Kalae.

“He aina kapu keia mai kahiko mai, aole e kanuia i ke kupapau, aia ka ilina kupapau o keia aina i kai o Moomomi, a no ia kapu, ke kumu o ka loa o keia opeope ia Kalimahopu. (*Ka Nupepa Ku'oko'a*, December 23, 1921)

**1932** A bottle was found by Kauila Sylva while fishing at Mo'omomi. The bottle had been floating for four years and had a book inside. The bottle had been thrown from an oil-carrying steamship on February 16, 1928, 16 days out of San Francisco, bound for Sanahai [Shanghai?].

## KE ALAKAI O HAWAII

POAHA, IAN. 14, 1932

LOAA AKU HE OMOLE MAHO-  
PE O KONA LANA HELE  
ANA NO 4 MAKAHIKI

He buke i uwepa la maloko o  
kekahi omole mahope iho o ko-  
na lana hele ana no aneane e  
eha makahiki kai i loa aku  
la Kauila Sylva, oia! oia e la-  
wala ana ma na kahakai o Moo-  
momi, Mokokai, ma ka lapule  
aku la o ka pule i hala.

Ua kakaula maloko o ka bu-  
ke ka inoa o Thomas Gault, he  
wiliki no luna o ka mokuahi la-  
we aila Takoma ame ka Buke a  
Ioane ke Kaula.

Ua hooleia ka omole mal ka  
mokuahi lawe aila aku ma ka la  
16 o ka mahina o Feberuari 1928,  
ua like ia me 16 la mai Kapala-  
kiko no Sanahai.

(*Ke Alakai o Hawaii* 1932 01/14)

This is an obituary including the places that the deceased had traveled in life. The seashore at Mo'omomi is addressed, the long sands of Kaawaloa [probably Kawa'aloa], and the point of Mokio.

E Hoolihua e ka aina o ka Hoo-  
puiapua i hookumu maia i loko ou  
e Hawaii aloha. O Molokai-nui-a-  
Hina e, aole loa ana oukou e ike  
hou iaia, a lohe hou hoi i ni leo  
aloha o ko makou mama. E na se-  
kai e Moomomi e, o ke one loa o  
Kaawaloa o ka lae oni se i ke kai o  
Mokio, aloha wale ia nui sekai u ko  
makou mama e hele ai. E ke ala-  
kahi o Molokai o Kaunakakai, e ke  
ala loa o na Kamiloloa, e Kawela o  
Makoleia, o Puakoolau, o Kamalo;  
ola mau aina aine ia mau sekai a ko  
makou mama e nane ai, ua hau  
kona behi hou ana ma ia mau wahi.

O Pukoo, o Kupeke, he mau ala  
ia e hele pu ia ai, ana na kulu paka  
ua oia mau aina aloha kahai e ko ma-  
kou mama aloha e hele hou ana i ke  
alakahi ou e Molokai-nui-a-Hina e.

(Mahiai 1932 02/23)

This obituary is for the same person, Mary Kapo Sylva, as the February 23, 1932 one previously. In it, Mo'omomi is addressed as the place that their loved mother traveled to, the long sand of Kawa'aloa, and the point jutting out into the sea at Mokio.

# **KE ALAKAI O HAWAII** **POAHA, FEB. 25, 1932**

E Hoolihua e ka aina o ka  
hoopuiapua i hookumu ia ai o  
Molokai-Nui-a-Hina, aole loa ou-  
kou e ike hou ana i ko makou  
mama aloha, a lohe hou hoi i  
kona leo aloha.

E Moomomi e, o la kahakai a  
ko makou mama aloha e hele ai  
o ke one loa o Kaawaloa, o ka  
lae oni se i ke kai o Mokio, aloha  
ia mau kahakai a ko makou ma-  
ma aloha e nane ai, ua pau ko-  
na kaalo hou ana ma ia mau ka-  
hakai.

O ke Alakahi o Molokai, o  
Kaunakakai i ke alala o Kami-  
loloa, e Kawela e o Makoleia,  
o Puakolau, o Kamalo, o ia mau  
aina aine na kai aloha a ko ma-  
kou mama e hele ai.

O Pukoo a Kupeke he mau ala  
ia e hele pu ia ai, a me ua kulu-  
pakaua ola mau aina aloha a ko  
makou mama aloha e hele pu ai,  
ua pau kona hele hou ana i ke  
Alakahi ou e Molokai-Nui-a-  
Hina e.

(Mahiai 1932 02/25)

## The Introduction of Deer

The story of deer on Moloka'i is not easy to establish since different sources report conflicting "facts," but it seems likely that they arrived on Moloka'i in 1867. They were placed under the King's protection and by the turn of the century had become so numerous as to warrant an eradication attempt in the mountains.

Hunting for deer and feral goats and pigs on Meyer lands and in the Forest Reserve on Moloka'i dates back to around 1867 when axis deer (*Axis axis*) were first imported from India as a gift from the Hawaiian Consul in Hong Kong to Kamehameha V. A *Hawaiian Gazette* article of December 17, 1867 notes that Kamehameha V was very interested in obtaining these speckled Indian deer. Dr. William Hillebrand, a doctor and botanist who traveled to Calcutta, arranged for shipment of eight deer from the upper Ganges. Of these, three bucks and four does survived the voyage.

An article from the *Pacific Commercial Advertiser* dated December 21, 1867 reports on the spectacle:

"These really beautiful animals, the spotted Indian deer brought by the Lock Na Garr, which lies at market wharf, have been visited by many of our residents the past week. On Wednesday one of the hinds gave birth to a fine kid, as healthy and frisky as if born in his own mountain home. It is a male, and the officers of the ship have named him Kamehameha VI. As this ship goes to sea tomorrow, the deer will be transferred to the King's yacht, and taken to Molokai, where we hope they will rapidly increase and stock the whole island." (Meyer 1982:241)

Several other sources describe the arrival of the animals and how they quickly spread:

Wild deer are abundant here despite long killing of them by hired hunters because they were formerly a threat to crops and even to general vegetation. The animals are descended from some spotted Indian deer shipped to Kamehameha V from Hong Kong in 1867. Seven does and a buck were put aboard the British vessel "Loch-Na-Garr" and dispatched to Honolulu, but one doe died, perhaps of seasickness, on the long voyage. The remaining six, with their lordly buck, were sent on the king's yacht "Kamaile" to the royal estate on Molokai. One of the does gave birth, on this inter-island passage, to a fine kid whom the facetious officers of the yacht promptly nicknamed Kamehameha VI. (Clark 1953:256–257)

As the property on Molokai belonged to King Kamehameha V, he placed a kapu (prohibition) on the deer. The deer increased under this protection. They sought the mountain areas as their habitat because they were crowded out by the large herds of cattle that ranged on the low lands. In this highland area in thirty years the deer increased to a great number. The American Sugar Co., Ltd. engaged Theodore Meyer to build a forest fence to keep the cattle from entering the forest. This however did not keep out the deer. (Cooke 1949:68)

Island sportsmen are familiar with the deer hunting on the west end of Molokai. These shy, spotted animals have their origin in Japan. On a tour through the Orient in 1869 the Duke of Edinburgh was presented with a herd of deer by the Mikado. The surplus, six does and one buck--part of a sizeable herd intended for the London zoo--were set free on Molokai by King Kamehameha V. Living under the rigid protection of a strict "kapu" they flourished in the mountain areas just above Kalae. As an indication of their great fertility, just 30 years later the American Sugar Company hired two professional hunters to thin their numbers. Nearly 4000 animals were killed in the forest reserve. (Judd 1936:6)

Sometime around the turn of the 20<sup>th</sup> century, maybe 1898 or 1900, two professional hunters from the mainland were employed by Moloka‘i Ranch (then ASCo) to eradicate the deer from their lands in the mountain. The number of deer reportedly killed ranges from 1,000 to 4,000, 8,000, to as high as 10,000. The following accounts inform on the deer situation on Moloka‘i during the historic period:

...in 1898 deer on Molokai became so prolific that hunters from the Mainland were employed to reduce the deer population in order to protect the forests.

...According to George P. Cooke, A.W. Carter was authorized in 1898 by the Directors of the American Sugar Company, Ltd. to hire two professional hunters from California to shoot off the deer. These men were paid forty dollars per month and were allowed to sell the skins. Approximately 10,000 deer were killed in a two-year period.

Henry Pendergast Meyer, youngest son of R.W. Meyer and an excellent marksman, was asked by the two mainland hunters to help rid the forests of the deer. Because the islands of Kauai, Maui and Hawaii were the main sugar plantation areas, deer were not shipped to these islands for fear that they would decimate the sugar crops.

After 1915 the deer migrated to the west end of Molokai to the drier section, reducing the herd in the forest lands. This migration was probably due to the unlimited hunting with hunting dogs in the forest lands. The west end of Molokai was owned by Molokai Ranch, Ltd., and hunting was restricted.” (Meyer 1982:241)

When I [George C. Munro] took over the management of the Molokai ranch in 1899 two hunters with hounds were engaged in killing the deer on the borders of the rain forest. We could not hope to exterminate the deer on Molokai as there were other landowners there who wished to perpetuate them - the deer on Molokai - for a food supply and later for hunting concessions. (*Elepaio* 1970:14)

#### Deerslayer Bill Has Real Record

Maui was amazed at word coming from Molokai early in 1900 of the activities of one “Deerslayer Bill” and his partner. “Deerslayer Bill” was no fictionary hero of dime store novel fame but a real hunter, who with his partner had been employed for the past two years by the American Sugar Company.

For their services in killing off the deer that overran the island they received \$60.00 a month and the skins of all the animals they killed, and by the early months of 1900 they had more than 8000 skins to show for their labors. They had been offered \$1.25 apiece or \$10,000 for the lot, but were holding out for \$1.50 apiece for the skins. (Maui News 1928:4)

In November 1898, A.W. Carter was authorized by the Directors of ASCO to obtain the services of two professional hunters from California to shoot off the deer. These men were engaged at forty dollars per month with perquisites and were allowed to sell the skins. It is commonly reported that these two men, in the year in which they operated, killed between three thousand, five hundred and four thousand deer. (Cooke 1949:68)

Three bucks and four does (hinds) were in the original band of deer, and these were released on Molokai, where they readily took to the mountains. They increased so rapidly that, in 1898, the American Sugar Co. imported two professional hunters from California to try to reduce their numbers. It is said the California hunters shot twenty-five deer a day and used only the skins, discarding the meat. The hunters’ cabin is still standing at Maunahui, although almost falling apart. (Cooke 1964:72)

AUSTIN'S HAWAIIAN WEEKLY.

## Round about Honolulu

\* \* \*  
Deer slaying goes on apace on Molokai.  
Deerslayer Bill are reported as having 8000  
deer skins for which they are holding for a  
higher prices.  
\* \* \*

(Austin's Hawaiian Weekly 1900:10)

## THE INDEPENDENT

TUESDAY, SEPT. 17, 1901.

### CORRESPONDENCE.

#### Slightly Mistaken.

I notice in the sporting columns of the Advertiser of yesterday that reference is made to the game deer on Molokai in regard to which the sporting editor is slightly mistaken. The first deer which came to Hawaii arrived in 1871, and was sent by order of Kamehameha V. to his ranch on Molokai. It is stated by the Advertiser that two men were employed some three years ago by the Republic of Hawaii to destroy the deer and that they slaughtered about 4000 deer in three months. The fact is that the American Sugar Company engaged two hunters to rid its lands of the deer, and they shot less than 1000 deer during one year.

MOLOKAI NIMROD.

(The Independent 1901)

### Review of Archaeological Studies of Mo'omomi

Among the pioneering archaeological work in Hawai'i were the excavations carried out in the Mo'omomi area by William Bonk in the 1950s (Bonk 1954). Since then there have been a number of archaeological surveys and studies that document the prehistory of this relatively harsh, but resourceful landscape. Marshall Weisler (Figure 19) has been responsible for much of the recent work in the region (Weisler 1987, 1989, 1991; 2011; Weisler and Gargett 1993; Weisler et al. 2006; Weisler et al. 2009; Khaweerat et al. 2010). The following project summaries provide information on archaeological investigations relevant to the project area (Table 2). Where enough information was provided, archaeological sites and project locations are illustrated in Figure 20.

#### *Heiau of Molokai* (Stokes 1909)

The only site near the project area that J.F.G. Stokes recorded during his survey on Moloka'i was the *ko'a* on Na'aukahihi Point on the east side of Mo'omomi Bay. He recorded the dimensions and condition of the site as well as his interpretation of the surface remains that were there. Stokes noted the following:

...bones of ulua, uhu, aholehole and other fish, turtle and dog, in addition to sea-shells, pieces of coral and driftwood. These were remains, apparently, of offerings which had been swept off or fallen from the altar - a flat stone built into the western wall... (Stokes 1909)



**Figure 19. Marshall Weisler at Mo'omomi (Cluett 2013).**

#### **“Notes on Hawaiian Petroglyphs” (Stokes 1910)**

Stokes also visited the site of the “numerous oblong depressions, said to represent human footprints” that were carved in the “air-formed sandstone” at Keonelele (Stokes 1910:62) (Figure 21). A legend relating to their origin is noted. Stokes also describes how three slabs of sandstone were removed and sent to the Bishop Museum, while a fourth was left in place and walled in to protect it from roaming cattle.

#### ***A Report of a Trip to the Western End of Molokai* (Emory 1922)**

Kenneth Emory walked the Mo'omomi area in 1922 and noted “human burials, an *ulumaika* stone, “sharp flints,” and ‘*opihi* shells scattered over the landscape” (Weisler 1991:13), however that appears to be the extent of this early survey.

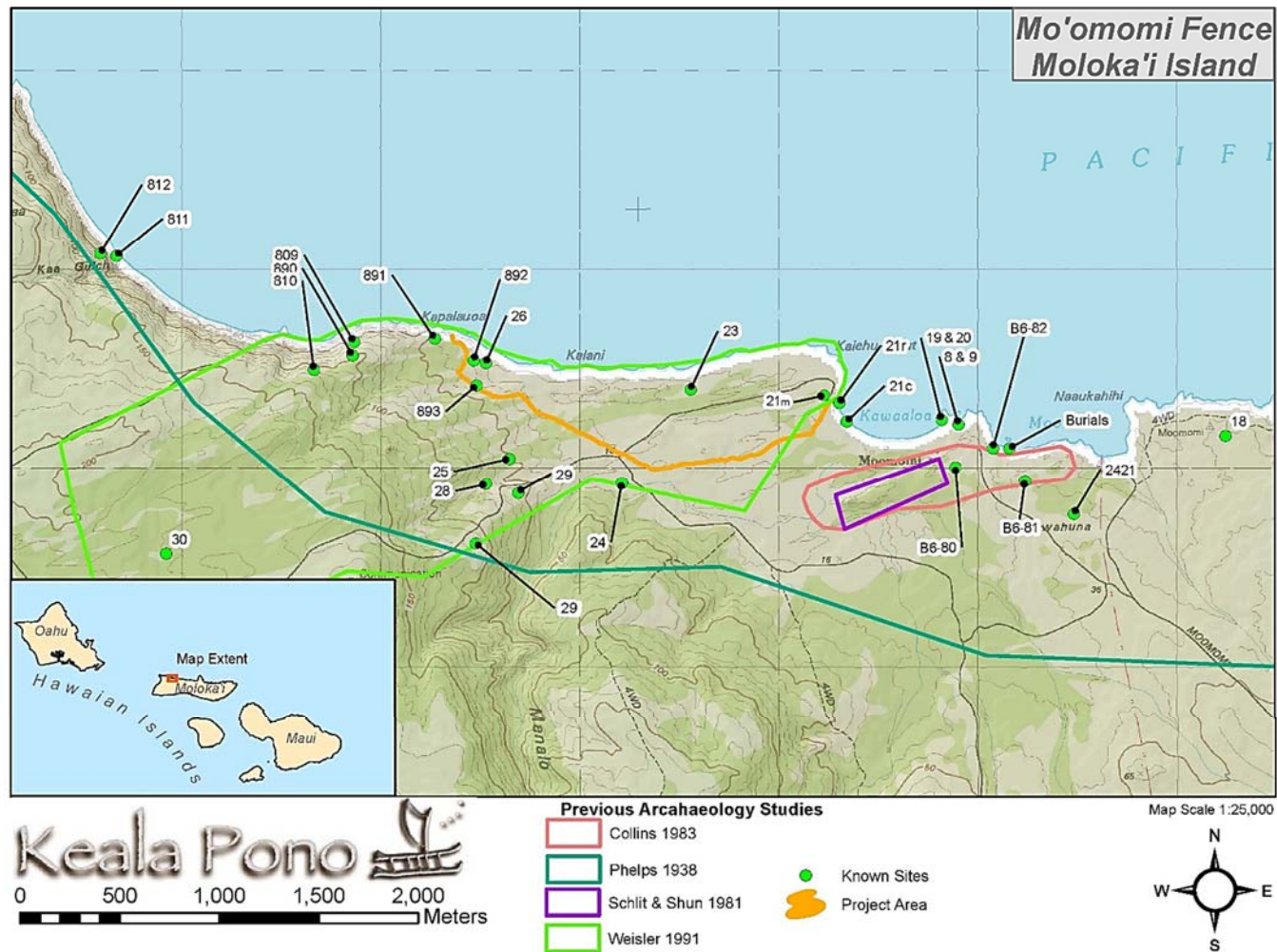
#### **“Desert Strip of Molokai” (Wentworth 1925)**

In his study of the sand dunes that stretch from Mo'omomi inland, Chester Wentworth of the University of Iowa reported on the “human relics” of the area. These stone implements included adzes, adze blanks and numerous chips and spalls. He believed that the “very compact, fine-grained” material from which the adzes were made by “chipping and rubbing” was derived from dike rock (Wentworth 1925:53). He estimated that the chips he saw “show at least two generations of etched surface” (Wentworth 1925:54). Wentworth also wrote about the cowry shells he saw that had been modified for use as a lure in octopus fishing (the *lūhe'e*). Also mentioned were smoothing pebbles, coral files, and charcoal.



**Table 2. Archaeological Studies of Mo‘omomi**

| Author & Year            | Location                                | Work Completed   | Findings  |
|--------------------------|---|--|---|
| Stokes 1909              | Pala‘au 2                               | Survey of <i>heiau</i>   | <i>Ko ‘a</i> at Na‘aukahihi Point   |
| Stokes 1910              | Keonelele, Kaluako‘i                    | Site visit   | Kalaina Wawae petroglyphs   |
| Emory 1922               | West Moloka‘i                           | Survey   | Burials, artifact, lithics & midden   |
| Wentworth 1925           | West & Central Moloka‘i                 | Survey   | “Human relics” (lithics)  |
| Phelps 1937              | Island-wide                             | Survey   | Two burial areas, <i>ko ‘a</i>  |
| Cooke 1949               | Island-wide                             | Informal interest and documentation                            | Enclosures, caves, burials, petroglyphs, artifacts  |
| Bonk 1954                | West Moloka‘i                           | Survey & excavation  | mapped and excavated 9 sites, 6 of these in the Mo‘omomi area   |
| Summers 1971             | Island-wide                             | Compilation  | <i>Ko ‘a</i> , probable house site, campsite, 3 bluff shelters, a burial, a <i>heiau</i> , a rock shelter, petroglyphs, a quarry, and a burial area |
| Schilt & Shun 1981       | 50-Mo-B6-80                             | Reconnaissance survey  | Marine shell remains, lithics, an adze preform, ash lenses, fish bones, extinct bird bones  |
| Collins 1983             | 50-Mo-B6-80                             | Mapping, stratigraphic recording                               | Marine shell remains, lithics, 2 hearths, avifaunal remains   |
| Dye et al. 1985          | Mo‘omomi Quarry Complex<br>50-Mo-B6-101 | Mapping, photos, rock type analysis, dating, artifact analysis | Lithic collection and analysis  |
| Weisler 1987             | Kipu                                    | Artifact analysis  | Adzes probably from Mo‘omomi Quarry   |
| Weisler 1989             | Mo‘omomi area                           | Radiocarbon dating   | Review/list of dates  |
| Weisler 1991             | Mo‘omomi Preserve                       | Intensive survey & archaeological study                        | 6 rockshelters, 3 coastal middens, 2 lithic sources, 1 petroglyph locale, and 1 religious site (possible <i>heiau</i> )                             |
| Weisler and Gargett 1993 | Sites excavated by Bonk (1954)          | Examination of avian bones                                     | Looked at archaeological evidence for habitat alteration  |
| Weisler et al. 2006      | Mo‘omomi <i>ko ‘a</i>                   | U-Series dating  | Sample dates  |
| McCoy 2007               | Island-Wide                             | Radiocarbon review   | Review/list of dates  |
| Weisler et al. 2009      | West Moloka‘i                           | U-Series dating  | Sample dates  |
| Khaweerat et al. 2010    | Mo‘omomi Bay                            | Stratigraphic analysis, U-Series dating                        | Sample dates  |
| Weisler 2011             | West Moloka‘i                           | Site comparison/analysis                                       | Use chronology  |
| Eminger & McElroy 2014   | Current Project Area                    | Archaeological Inventory Survey                                | One previously documented site, a midden and lithic scatter; also noted sparsely scattered lithics and midden on the west side                      |
| Lima et al. 2014         | Current Project Area                    | Cultural Impact Assessment                                     | Interviewed 8 community members   |



**Figure 20. Location of archaeological sites and previous studies in relation to the project corridor. Site numbers are State Inventory of Historic Places (SIHP) numbers, prefixed by 50-60-02-, except for those designated with B6, which are Bishop Museum sites for which SIHP numbers could not be found.**



Figure 21. The Keonelele footprints (Stokes 1910:64–65).

### *A Regional Study of Molokai, Hawaii (Phelps 1937)*

With the encouragement of Dr. Edward S.C. Handy and endorsed by the Bishop Museum, Southwick Phelps spent four months on Moloka‘i conducting a regional study of the material culture and two months “in an examination of the literature pertaining to the island’s history” (Phelps 1937:2). Phelps divided the island into three regions based on three geographic features: topography, the water supply, and the nature of the coastline. Mo‘omomi was categorized as Region IIIB: fairly level, no constant streams and little rain and subdivided as “B” due to the generally steep coastline, deep offshore waters and strong tradewinds. Phelps recorded three archaeological sites in the Mo‘omomi area. Site 10 is an “area of burials in sands,” Site 14 also is an “area of burials in sands,” and Site 18 is a *ko‘a*, presumably the *ko‘a* at Na‘aukahihi Point.

### *Moololo o Molokai (Cooke 1949)*

George Cooke moved to Moloka‘i in 1908 to work as assistant manager of the American Sugar Company (later renamed back to Molokai Ranch). Later that year Cooke’s father bought up the interest in the ranch and George Cooke became manager, a position he held for the next 40 years. During his years on the ranch Cooke collected lore and became familiar with many of the archaeological sites on Moloka‘i. In the Mo‘omomi lands he discusses rock enclosures with ti plants growing within them on the leeward side of gulches, the “remnants of Ka Laina Wawae” (Figure 22), two caves a fisherman found in ridges containing burials and *lauhala* baskets of salt, as well as the Keonelele burial area (Cooke 1949:106). Cooke was also an avid collector of artifacts that he found while in the field, though he kept no records. He states, “from the top of Mauna Loa to Moomomi, many Hawaiian curios have been found in windswept and eroded areas, among these, adzes, mirrors, lehu stones and sling stones” (Cooke 1949:121).

### *Archaeological Excavations on West Molokai (Bonk 1954)*

In the summer of 1952 William Bonk and Ronald Brown surveyed West Moloka‘i and recorded and mapped a number of shelters and house sites. While camping at Mo‘omomi, Bonk’s team under the direction of Kenneth Emory of the Bishop Museum, mapped and excavated nine sites, six of which were in the Mo‘omomi area. All excavations produced charcoal, *kukui* nut fragments and abundant marine remains. Bonk estimated the older sites, as indicated by deeper stratification, to be seven to nine hundred years old. Seven of the sites dated into the modern period.



KA-LAINA-WAWAE, MOOMOMI, 1910  
(Footprints in sandstone)  
Note watch and cattle bones, to indicate size.

**Figure 22. The Keonelele footprints, photographed by Cooke (1949:107).**

A conclusion which comes immediately to the fore, as a result of the investigation of west Molokai, is that the contents of the sites excavated bear out what we had every reason to expect, that this was a decidedly marginal land for the inhabitants of Molokai. Fishing and the quest for adze stone brought people into the area, and fighting probably sent refugees into it, but temporarily. ...only a few fisherman families seem to have found it worth while to build homes on west Molokai. (Bonk 1954:139)

***Molokai: A Site Survey (Summers 1971)***

In her compilation of Moloka'i sites, Catherine Summers listed eleven sites in Mo'omomi. East to west, these sites include a *ko'a* at Na'aukahihi Point, a probable house site at Kawa'aloa as well as a probable campsite and bluff shelter there, a burial at Kaiehu Point, what was thought to be a *heiau*, a rock shelter, the Kalaina Wawae footprint petroglyphs, another two bluff shelters, an adze quarry, and burial area at Keonelele (Summers 1971:41+)

***Archaeological Reconnaissance Survey of a 20-acre Parcel of Land at Kawa'aloa Bay, Mo'omomi, West Moloka'i (Schilt and Shun 1981)***

Ameron HC&D (formerly the Honolulu Construction & Draying Co.) contracted the Bernice P. Bishop Museum's Department of Anthropology to conduct an archaeological reconnaissance survey in preparation for a planned sand mining operation. Twenty acres *mauka* of Kawa'aloa Bay were surveyed by A. Rose Schilt and Kanalei Chun. They were in the field for two days in July of 1981 walking "meandering transects" (Schilt and Shun 1981:3) and no excavations were made. They reported a blow-out area and the "remnant of a sand-mining operation conducted at some time in the past" immediately east of their survey area (Schilt and Shun 1981:2). They reported "archaeological and paleontological remains in the walls and floor of the blow-out and the pit" (Schilt and Shun 1981:2). Throughout their survey they recorded concentrations of marine shell remains and basalt flakes, a partially polished adze preform, an ash lens, fish bones, as well as the remains of the Bonin petrel, *Pterodroma hypoleuca* and an extinct flightless goose, *Thambetothen chauliodous*. The site

of these cultural remains has been designated 50-Mo-B6-80 and was interpreted as a “probable habitation or camping site for marine exploitation” as well as adze manufacture and finishing (Schilt and Shun 1981:9). They summarized their report by saying that “all of our researches indicate that the project parcel and the access road area lie within a zone of combined archaeological, paleontological and botanical significance (Schilt and Shun 1981:10).”

***Archaeological Investigations of Site 50-Mo-B6-80, Moloka‘i Island (Collins 1983)***

Molokai Ranch, Ltd. contracted the Bernice P. Bishop Museum’s Department of Anthropology to conduct fieldwork at Site 50-Mo-B6-80 (previously surveyed by Schilt and Shun, 1981), as well as an additional four acres surrounding the site. This is just southeast of Kawa‘aloa Bay and is the site of a planned sand mining operation anticipated to last 20 years. Assisted by Marshall Weisler, Sara Collins “mapped the site area, recorded stratigraphy, and collected artifactual, faunal, and carbon samples” (Collins 1983). Their fieldwork agreed with the interpretation by Schilt and Shun (1981) and she wrote that site B6-80 was “used intermittently over a considerable span of time” (Collins 1983:25). In addition to confirming Schilt and Shun’s earlier assertion that this site is “archaeologically and paleontologically significant,” she went on to admonish that “the site should not be disturbed until more archaeological investigation is conducted” (Collins 1983:26).

***Adz Quarries on Moloka‘i and O‘ahu, Hawaiian Islands (Dye et al. 1985)***

Three quarry complexes were studied including the Mo‘omomi Quarry Complex, site 50-Mo-B6-101. Fieldwork at the Mo‘omomi complex was conducted in June of 1985 under the direction of Tom Dye. A plane-table map was produced at a scale of 1:400, photographs were taken, and 30 random 1 m<sup>2</sup> sampling units were set up and collections made. Subsequently, all collections were cataloged and analyzed. Additionally, some of Bonk’s 1952 charcoal samples were radiocarbon dated. In summary, they wrote that the situation of the Mo‘omomi Quarry Complex in this area is “surrounded by lands that offer no possibilities for prospective farmers. Thus, the Complex most likely lacked a permanent local community, and was worked by craftsmen who made their homes and distributed their products elsewhere” (Dye et al. 1985:91).

***Observations and Regional Significance of an Adze Preform Cache from Kipu, Moloka‘i, Hawaiian Islands (Weisler 1987)***

Eleven quadrangular adze preforms, complete but without final polishing, were found by Dr. Richard Langer in Kipu, Moloka‘i, while he was working in his yard. This location has been designated as Site 50-60-03-884 (Figure 23). This is the “largest collection of adze preforms found in a non-quarry context in Hawai‘i” (Weisler 1987). Weisler’s analysis of the collection was limited to measurement and direct examination only since the preforms could not be removed for thin-section analysis. After examining the material, Weisler wrote that the “Kipu adze preforms appear to be from the Mo‘omomi quarry” (Weisler 1987). This was determined by comparing the Kipu preform collection material with the “texture, colour, flow structure, and presence/absence of vesicles” of specimens from the eight known quarries on West Molokai (Weisler 1987).

***“Chronometric Dating and Late Holocene Prehistory in the Hawaiian Islands: A Critical Review of Radiocarbon Dates from Moloka‘i Island” (Weisler 1989)***

In his critical review of radiocarbon dates, Weisler presented six dates from the Mo‘omomi coastline that included one date from a geologic sample. Two charcoal samples and a fish bone were dated from Kawa‘aloa Bay (AD 1176–1296, 1673–1943, and 1229–1952 respectively), a charcoal sample





from a rock shelter at Mo‘omomi (AD 1445–1635) and a charcoal sample from the Kalani rockshelter (AD 1330–1640). The geologic sample consisted of fossil land snail shells that dated to 27,000 years before present.

***The Archaeology of a Hawaiian Dune System: The Nature Conservancy’s Mo‘omomi Preserve, Moloka‘i (Weisler 1991)***

Marshall Weisler was contracted by The Nature Conservancy in 1991 to conduct archaeological work within the Conservancy’s 920-acre Mo‘omomi Preserve. Archaeological work included survey and mapping, as well as excavations and analysis of select sites. Fieldwork was conducted in June of 1989 with a small crew. His study within the Preserve included a “total of 13 archaeological sites...including 6 rockshelters, 3 coastal middens, 2 lithic sources, 1 petroglyph locale, and 1 religious site, a possible heiau” (Weisler 1991).

Site 50-60-02-21 is the only site in the immediate vicinity of the current project corridor. The site has also been designated 50-Mo-B6-3 by the Bishop Museum and Mo.1 by Bonk (1954). It includes Features 21c, a pit, 21m, a midden scatter, and 21r, a rockshelter.

Feature 21m is the only feature that extends into the project corridor. It is a major midden site, consisting of a scatter of artifacts and midden that has eroded from an extensive cultural deposit, 90 m x 20 m in area. The deposit is approximately .5 m thick and includes scoop hearths, midden, and oven stones. From a mere 1.22 m<sup>3</sup> excavation unit, 6,287 artifacts were collected, most of which were basalt flakes.

**“Pacific Island Avian Extinctions: The Taphonomy of Human Predation” (Weisler and Gargett 1993)**

Weisler and Gargett looked at archaeological evidence indicating the possible effects that humans had on endemic bird species. The human impacts that leave evidence in the archaeological record include habitat alteration and human predation. The sample bird bone used in this analysis came from nine West Moloka‘i archaeological sites, all excavated by Bonk in 1952.

**“Thorium-230 Coral Chronology of a Late Prehistoric Hawaiian Chieftdom” (Weisler et al 2006)**

Five “high-precision 230Th” dates are presented in this study by Marshall Weisler for the *ko‘a* located at Na‘aukahihi Point at Mo‘omomi Bay (Site 50-60-02-0018). Other sites along this leeward Moloka‘i coastline were also dated with this same technology and, taken as a whole, suggest that “expansion to leeward Moloka‘i began a century or two later than the radiocarbon chronology suggests.” The following table displays the very precise coral dates for the Na‘aukahihi *ko‘a*:

| sample# | Site | Corrected Age I | Corrected Age II |
|---------|------|-----------------|------------------|
| 14      | 18A  | 1416+/-3        | 1417+/-3         |
| 15      | 18A  | 1709+/-2        | 1709+/-2         |
| 16      | 18A  | 1419+/-4        | 1420+/-4         |
| 17      | 18A  | 1427+/-3        | 1428+/-3         |
| 18      | 18A  | 1432+/-3        | 1434+/-3         |

(Weisler et al. 2006)

### **“Revised Late Holocene Culture History for Moloka‘i Island, Hawai‘i” (McCoy 2007)**

Mark McCoy reviewed 175 radiocarbon dates from Moloka‘i and adds to Marshall Weisler’s 1989 summary of 45 radiocarbon dates. All of the Mo‘omomi sites listed in this study are taken from Weisler’s previous paper and no new dates are reported for this area.

### **“Late Holocene 14C Marine Reservoir Corrections for Hawai‘i Derived from U-Series Dated Archaeological Coral” (Weisler et al. 2009)**

Twelve corals from archaeological contexts were analyzed and dated. Only one of the samples was from Mo‘omomi (Figure 24):

OZJ968 Mo‘omomi

*Pocillopora* sp. branch coral (114.3 g) from archaeological site 01-242, a coastal midden with buried shrine. The dedicatory coral (field object 4) was collected from excavation unit N26W6, layer IIIB, spit 6, 50 cm below surface (Weisler et al. 2006: Figure 2). Collected on 28 January 1999 by MIW and submitted by MIW on 9 May 2007.

*Comment:* cal AD 1476-1697, 100% probability; cal AD 1536-1657, 100 % probability.  
(Weisler et al. 2009:966)

### **“Human-Caused Stratigraphic Mixing of a Coastal Hawaiian Midden During Prehistory: Implications for Interpreting Cultural Deposits” (Khaweerat et al. 2010)**

Fifteen corals that were excavated at a site fronting Mo‘omomi Bay were analyzed contextually to study the effects of stratigraphic mixing. This study is possible because of the high precision of U-Series dating of coral. Corrected dates of these samples ranged from AD 1516 to 1621.

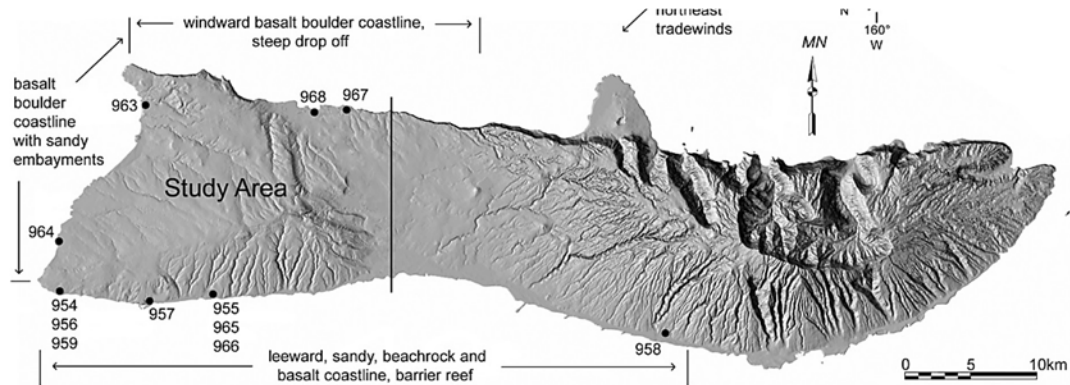
### **“A Quarried Landscape in the Hawaiian Islands” (Weisler 2011)**

Utilizing 64 dates obtained from archaeological contexts, Weisler determined a “temporal sequence of use beginning in the Late Expansion Period (AD 1400–1650)” (Weisler 2011). That is, he asserts that the West Moloka‘i stone quarries began being visited and exploited by the Hawaiians sometime between about AD 1400 and 1650. The Mo‘omomi Quarry was described as being the largest quarry in the northern region of the *ahupua‘a* of Kaluako‘i. This is actually a complex of quarry sites, each being distinct flows with differing geochemistry. While there are “no habitation sites directly associated with this source,” almost all of the sites showing evidence of habitation contain lithics from this quarry (Weisler 2011).

### **Archaeological Inventory Survey for the Current Project**

Archaeological inventory survey, consisting of pedestrian survey and subsurface testing was conducted along the proposed fence route (Eminger and McElroy 2014). Pedestrian survey identified remnants of one previously recorded archaeological site on the east end of the project corridor. Site 50-60-02-21 Feature M is a scatter of lithics and midden eroding from a subsurface cultural layer within the dunes to the west of the project boundaries. The scatter is most dense to the north and west of the project area and the site may be associated with the Mo‘omomi Rockshelter, Site Mo1 (Bonk 1954) or Feature 21r (Weisler 1991), that is situated along the cliff just below the project area to the east. There is no surface architectural component to Site 21, and excavation revealed that there is no subsurface cultural layer within the project boundaries. The material within the corridor is scattered on the surface and in secondary context.





**Figure 24. Location of coral samples dated by Weisler et al. (2009:957).**

Very sparsely scattered lithics and midden were also observed throughout much of the western side of the project corridor. The density of material was nowhere near that of the Site 21 area, however, and most material occurs outside the boundaries of this study. Another surface find was a possible hammerstone, collected from the middle portion of the corridor. It was not associated with surface architecture, a subsurface cultural deposit, or other cultural material.

Subsurface testing was conducted in 13 locations throughout the proposed fence line route to determine the presence or absence of subsurface cultural material or deposits (Eminger and McElroy 2014). Stratigraphy consisted of sand dune and aeolian deposits, and exposed lithified dune bedrock is on either end of the corridor. Scant remains of the Site 21 lithic and midden scatter were found in excavation nearby, yet the material was only found near the surface and was not associated with a cultural feature or deposit. Finds in other areas of the corridor included faunal remains, marine shell, invertebrate, land snail, and charcoal. The faunal material, land snail, and most of the marine shell are thought to have been deposited naturally. The charcoal was all found near the surface in the form of isolated, scattered fragments not suitable for radiocarbon dating.

### **Cultural Impact Assessment for the Current Project**

A cultural impact assessment was conducted for the current project (Lima et al. 2014). Background research was completed for the region and four ethnographic interviews were conducted with eight individuals. The individuals interviewed were homesteaders, fishermen, gatherers, cultural practitioners, and/or *kūpuna*. In addition, one of the interviewees is the Molokaʻi representative for the statewide ʻAha Moku, and another heads Hui Mālama o Moʻomomi, a nonprofit organization that protects the area.

The interviewees did not have information on specific archaeological sites within the project corridor. They all felt that the area is rich in cultural history and is a special place that should be cared for properly. It was stated that Moʻomomi is a known burial area and an important place where subsistence activities were carried out in the past and are still being carried out. One consultant noted that the whole area should be considered an archaeological site.

### **Archaeological Sites in the Vicinity of the Project Corridor**

There are five archaeological sites located in the immediate vicinity of the project route (see Figure 20). These include Sites 50-60-02-21, -26, -891, -892, and -893. Only a portion of Site 21 was found

within the project corridor during a recent archaeological inventory survey (Eminger and McElroy 2014).

Site 21 consists of three components: Features 21c, a pit, 21m, a midden scatter, and 21r, a rockshelter (Weisler 1991). The site has also been designated 50-Mo-B6-3 by the Bishop Museum and Mo.1 by Bonk (1954). It is Feature 21m that was found within the project corridor.

Situated approximately 125 m to the southeast of the proposed fenceline, Feature 21c is the farthest away from the project corridor. It consists of a 39 cm-diameter circular pit located within cemented sand at Kawa'aloa Bay. It was filled with turtle, fish, and bird bone but severely eroded when described by Weisler, who collected the faunal remains and radiocarbon dated fish scales to AD 1255 (1989:81). Weisler states that the feature represented "the best evidence, to date, of the association of cultural remains and extirpated avian fauna; in this example, dating to the mid-13<sup>th</sup> century" (1991:81).

Located just northwest of and within the project corridor, Feature 21m of Site 21 has been described as "one of the largest known middens along the north coast of Moloka'i" (Weisler 1991:66). It consists of a scatter of artifacts and midden that has eroded from an extensive cultural deposit, 90 m x 20 m in area. The east end of the cultural layer is where the erosion is taking place, and the deposit is approximately .5 m thick and includes scoop hearths, midden, and oven stones (Weisler 1991:26). A total of 6,287 artifacts were collected from the 1.22 m<sup>3</sup> excavation, which consisted of only one test pit. Of these, 6,138, or 97% were unworked basalt flakes. Other items included adze blanks and preforms, polished flakes, volcanic glass, worked bone, fishhooks, worked shell, and coral and sea urchin spine files. Two radiocarbon samples were obtained from hearth features near the base of the cultural layer, returning age determinations that calibrated to AD 1660–1955 and AD 1520–1955 (Weisler 1990:75).

Feature 21r is a rockshelter situated along the cliff on the west side of Kawa'aloa Bay, approximately 5 m to the east of the project corridor. It has been posited that "the use of this rockshelter was probably contemporaneous with the large midden above and small refuse pit to the south" (Weisler 1991:77). It is a large rockshelter, measuring 18 m wide, 1.2 m high, and has a 6.7 m-wide level floor. The site was extensively excavated by Bonk, who recovered items such as fishhooks, shell and dog tooth ornaments, volcanic glass, and evidence of adze manufacture and use (1954). In some areas, midden was found as deep as 70 inches (177.8 cm) below the surface (Bonk 1954:29). Bonk suggests three periods of use for the shelter: 1) an initial use as a camp or fishing station; 2) a period of fishing and manufacturing fishhooks; and 3) a later use again as only a fishing station (1954:138).

Site 26, also known as 50-Mo-B6-10 (Bishop Museum site number) and Mo. 2 (Bonk 1954), is the Kalani Rockshelter. Located 100 m east of the project corridor on the cliff overlooking Kalani Beach, the shelter measures 9 m wide and 3 m deep, and exhibits a large boulder that shields the living area from the elements. The shelter was excavated extensively by Bonk (1954). Although the surface within the shelter was covered in midden and stained with charcoal and ash, only 34 artifacts were recovered. These included evidence of adze manufacture, a basalt knife, a basalt awl, fishhooks and fishhook manufacturing material, and two shell beads.

Site 891 is situated approximately 90 m west of the west end of the project corridor, on the lithified dune cliff overlooking Kapalauoua. The site is listed as a small midden in The Nature Conservancy's GIS database, but no other information could be found.

Site 892 is a surface midden scatter located just east of the project corridor, near the west end of the corridor, on the slope of a sand dune. The site is situated just above the Kalani Rockshelter (Site 26),

implying an association with the shelter. Although outside the project boundaries, a dense concentration of marine shell and lithic material was noted in this area during the current survey.

Site 893 is located 10 m north of the project corridor, within the western half of the corridor. This is 100 m south of the Site 892 midden in an area of rolling sand dunes 200 m inland. The site was listed as “other site” in The Nature Conservancy’s GIS database, and no other information could be found.

### Summary and Settlement Patterns

Located on the northwest coast of Moloka‘i, Mo‘omomi’s unique landscape supports a variety of plant and animal life and also contains fossilized plant and animal remains. The well-watered windward areas of Moloka‘i were the first places settled on the island by humans. Much later, by what is termed the Late Expansion Period (AD 1450–1600), people began to venture into the dry leeward areas of the island. While it is not possible to account for the intangible qualities of human nature in the archaeological record, such as simple curiosity or the desire for adventure, what is reflected is the quest for quality stone for tools and the exploitation of the rich fisheries at Mo‘omomi. These were the resources that probably motivated much of the activity along the Mo‘omomi coast.

There is no evidence that Mo‘omomi ever supported a large population. Habitation sites consist of shelter caves, sandstone overhangs and scattered “camp sites” along the coast. There is a formal *ko‘a*, or fishing shrine, at Mo‘omomi Bay and a larger *heiau* farther east. Located nearby are high quality rock exposures known as the Mo‘omomi Quarry Complex. These were utilized as a source of raw materials for tools, evidence of which occurs throughout the region.

The sea fishery would have been exploited during the calm summer months but impossible to access during the winter when the high surf is relentless. There is growing evidence that the birds of the area were a source of food, perhaps an important one if settlement persisted into the winter months.

Burials are found throughout the sand dunes of Mo‘omomi. There are historic-era accounts relating that the Mo‘omomi area was a “place for the dead.” While there is no empirical evidence to suggest that bodies were brought to Mo‘omomi from elsewhere to be buried, that remains a possibility.

An important cultural site of Mo‘omomi is the Kalaina Wawae footprints. Opinions are varying on how the footprints were formed, and *mo‘olelo* tell us that they were part of a prophecy that foretold the coming of Westerners.

In the early 1800s there began a long-term population decline on Moloka‘i that continued until the pineapple plantations started and the Hawaiian Homesteading began in the 1920s. What little population Mo‘omomi might have supported probably declined with the larger trend, with the result that Mo‘omomi was abandoned in the 19<sup>th</sup> century. Further evidence from the Māhele supports this idea. There were no *kuleana* land claims submitted to the Land Commission from Mo‘omomi in the Māhele. For the whole of the Kaluako‘i district only five claims were submitted, but all of these were located along the south shore on the opposite side of the mountain, and none were awarded. Mo‘omomi, and all of Kaluako‘i, became Government land at that time and remained so until it was sold to Charles Reed Bishop in 1875.

The first documented use of Mo‘omomi in the historic-era appears to be as a fishing destination for the Meyer family about 1915. Later, sometime after 1920, the Hawaiian Homesteaders frequented Mo‘omomi for its fishing resources. Del Monte, one of the past pineapple companies on the island, built a beach house at Kawa‘aloa Bay for the use of its employees. This beach house has since fallen into disrepair. Today, families continue to camp and fish at Mo‘omomi during the summer months.

## **Archaeological Implications and Anticipated Finds**

Kaluako‘i was known as an area for the manufacture of adzes and supports several basalt quarries and lithic scatters. These have been found within the Mo‘omomi region, along with the material remains of adze making and camps associated with that activity. Adze manufacturing remains that might be encountered within the project area include surface scatters of lithic material, such as basalt flakes, cores, and shatter, as well as artifacts such as adzes, adze preforms, and hammerstones. Surface scatters of midden or subsurface cultural layers and firepits in association with these items might indicate encampments that were utilized for tool making.

Mo‘omomi is also renowned for its fisheries, and was known as a region of marine resource exploitation in the past. Fishing related items might be found within the project corridor. These might take the form of fishhooks or fishhook manufacturing debris, tools for making fishhooks such as coral and sea urchin spine files, sinkers, and marine shell and bone midden. Subsurface firepits and cultural layers might also be found along with these remains, and these may represent marine resource exploitation camps. Mo‘omomi is also known as a place for human burial, and these may be encountered, particularly in areas of Jaucas sand where burials commonly occur, even though no burial remains were found during archaeological inventory survey (Eminger and McElroy 2014).

## **PROJECT DESIGN**

Archaeological monitoring will be conducted for all ground disturbing activity during construction of the fence in Mo‘omomi. This may include but is not limited to excavation for post holes, grading, and/or tree removal/brush clearing. If brush clearing does not involve ground disturbance, then this activity will not be monitored.

### **Project Personnel**

A senior archaeologist, qualified under §13-281, HAR, will serve as principal investigator for the project. The principal investigator will be responsible for overall project organization and management, will ensure high standards for field sampling and laboratory analyses, may conduct field visits and direct supervision of field personnel as appropriate, and will review the content of the monitoring report. The archaeological monitor will have sufficient fieldwork experience in Hawai‘i or have completed sufficient college-level coursework in Anthropology and Hawaiian Archaeology. If archaeological remains are identified, the monitor has the authority to halt ground disturbing activities in the immediate area of the find.

### **Fieldwork**

Prior to fieldwork, the archaeological monitor and/or principal investigator will meet with the construction team to discuss the monitoring plan. The archaeologist will ensure that the construction team understands the purpose of the monitoring and that the monitor has the authority to halt construction activity.

Field recording and sampling may include, but are not limited to, the drawing of stratigraphic profiles, photography, and controlled excavation of exposed features. Accurate map locations of test units, stratigraphic profiles, and archaeological features, deposits, and artifacts will be maintained. Field recording and sampling are intended to mitigate any potentially adverse effects to historic properties. Standards of documentation, recording, and analysis shall accord with HAR §13-279.

If human remains are discovered during monitoring, work in the vicinity of the remains will cease and the archaeological monitor will protect any exposed bones, secure the area, and notify the proper authorities. No further work will take place in the immediate vicinity, although work in other areas of the project site may continue. In the event of inadvertent discovery of non-burial historic properties, SHPD shall be consulted concerning appropriate mitigation measures. Any inadvertent discovery of burial historic properties will follow procedures as indicated in HAR §13-300-40 and HRS Chapter 6E-43. All burial material will be addressed as directed by the SHPD/DLNR.

### **Treatment of Site 50-60-02-21 Feature M**

Site 50-60-02-21 is a midden and lithic scatter that eroded from an extensive cultural deposit, 90 m x 20 m in area (Weisler 1991). The site is located on the east end of the project corridor, where within the project boundaries it occurs as a surface scatter with no subsurface component (Eminger et al. 2014). The material within the corridor is scattered sparsely on the surface and is in secondary context, having eroded from the cultural deposit outside the project boundaries to the west.

Before fence construction begins in this area, the archaeologist will mark the boundaries of the surface scatter with pin flags or flagging tape, and any surface cultural material that might be displaced by construction will be collected. Ground disturbance within the site boundaries will be carefully monitored and will be halted if remains of the cultural deposit are found, so that it can be systematically excavated with controlled test units, and excavated material can be screened.

## **Post-Field Actions**

The nature and scope of post-field actions will vary according to the results of the fieldwork. At minimum, if no archaeological remains are discovered, a report documenting the negative findings will be produced and submitted to SHPD. If archaeological remains are discovered, appropriate analyses will be conducted and reported.

Laboratory analyses of cultural materials and sediments will be conducted in accordance with HAR §13-279 and will follow the SHPD *Rules Governing Standards for Archaeological Monitoring Studies and Reports* (§ 13-279-4). The specific procedures employed in laboratory analysis will vary according to the kinds of remains that are recovered. For example, artifacts will be measured, weighed, sketched or photographed, and identified as appropriate. Faunal material will be weighed, counted, and taxonomically identified to the highest level of detail possible.

Materials not associated with burials will be temporarily stored at the contracted archeologist's facility and returned to the landowner upon completion of analyses. The landowner will then consult with SHPD to determine the final disposition of the materials.

Preparation of a final report shall conform to HAR §13-279. Photographs of excavations will be included in the monitoring report even if no historically-significant sites are documented. A draft monitoring report shall be prepared and submitted to SHPD in a timely manner, within four months following the end of fieldwork. A revised final report will be submitted within one month following receipt of review comments on the draft report. Should burials and/or human remains be identified, other letters, memos, and/or reports may be required.

## **SUMMARY AND CONCLUSION**

In summary, archaeological monitoring will be conducted for ground disturbing activity associated with construction of a predator control fence on a portion of TMK: (2) 5-1-002:037 in the Mo‘omomi Preserve in Kaluako‘i Ahupua‘a, Kona District, on the Island of Moloka‘i, Hawai‘i. An archaeological inventory survey of the fence corridor identified a portion of Site 50-60-02-21, a previously recorded lithic and midden scatter, on the east end of the fence route and also noted sparse cultural material on the surface of the west end of the route. This archaeological monitoring plan sets forth standards and provisions for monitoring during fence construction, including treatment of Feature M of Site 50-60-02-21, the lithic and midden scatter located within the project boundaries.

Full time archaeological monitoring will be carried out for all ground disturbance associated with construction of the fence. Site 21 will be clearly marked before construction in that area begins, and any surface cultural material that might be displaced by construction will be collected. Ground disturbance within the site boundaries will be carefully monitored and will be halted if remains of the cultural deposit are found, so that it can be systematically excavated with controlled test units, and excavated material can be screened.

## GLOSSARY

|                                 |   |
|---------------------------------|---|
| <b><i>ahupua‘a</i></b>          | Traditional Hawaiian land division usually extending from the uplands to the sea.   |
| <b><i>ali‘i</i></b>             | Chief, chiefess, monarch.   |
| <b>Area of Potential Effect</b> | The geographic area or areas within which an undertaking may directly or indirectly cause changes in the character or use of historic properties, if any such properties exist.   |
| <b>boulder</b>                  | Rock 60 cm and greater.   |
| <b><i>Cellana</i></b>           | ‘ <i>Opihi</i> , or limpets, four types of which are endemic to Hawai‘i: <i>Cellana exarata</i> (‘ <i>opihī makaiauli</i> ), <i>C. sandwicensis</i> (‘ <i>opihī alinalina</i> ), <i>C. talcosa</i> (‘ <i>opihī ko‘ele</i> ), and <i>C. melanostoma</i> (no Hawaiian name). ‘ <i>Opihi</i> are a prized food in Hawai‘i and considered a rare treat today. |
| <b>cobble</b>                   | Rock fragment ranging from 7 cm to less than 25 cm.   |
| <b><i>Cypraea</i></b>           | Mollusks of the Family <i>Cypraeidae</i> , prized for their shells. Thirty-four species are known in Hawai‘i, five of which are endemic to the Hawaiian Islands. They are commonly known as cowrie shells.  |
| <b>gravel</b>                   | Rock fragment less than 7 cm.   |
| <b><i>heiau</i></b>             | Place of worship and ritual in traditional Hawai‘i.   |
| <b>‘ili</b>                     | Traditional land division, usually a subdivision of an <i>ahupua‘a</i> .  |
| <b><i>kahakō</i></b>            | Macron.   |
| <b><i>kahuna</i></b>            | An expert in any profession, often referring to a priest, sorcerer, or magician.  |
| <b><i>kapu</i></b>              | Taboo, prohibited, forbidden.   |
| <b><i>kauila</i></b>            | The name for two types of buckthorn trees native to Hawai‘i ( <i>Alphitonia ponderosa</i> and <i>Colubrina oppositifolia</i> ). Produced a hard wood prized for spear and a variety of other tool making.   |
| <b><i>ko‘a</i></b>              | Fishing shrine.   |
| <b><i>kuleana</i></b>           | Right, title, property, portion, responsibility, jurisdiction, authority, interest, claim, ownership.   |
| <b><i>kukui</i></b>             | The candlenut tree, or <i>Aleurites moluccana</i> , the nuts of which were eaten as a relish and used for lamp fuel in traditional times.   |
| <b><i>lauhala</i></b>           | Leaf of the <i>hala</i> , or pandanus tree ( <i>Pandanus odoratissimus</i> ), used for matting and basketry.  |
| <b><i>Littorina</i></b>         | The periwinkle, a small edible marine snail.  |
| <b><i>lūhe‘e</i></b>            | Octopus lure.   |



|                             |   |
|-----------------------------|---|
| <b>Māhele</b>               | The 1848 division of land.  |
| <b><i>makai</i></b>         | Toward the sea.   |
| <b><i>mauka</i></b>         | Inland, upland, toward the mountain.  |
| <b><i>mele</i></b>          | Song, chant, or poem.   |
| <b><i>mo‘olelo</i></b>      | A story, myth, history, tradition, legend, or record.   |
| <b>moorhen</b>              | The bird <i>Gallinula chloropus</i> , also known as the swamp chicken. The cry of one species, the ‘ <i>alae ula</i> , <i>G. chloropus sandvicensis</i> , is believed to be a bad omen. |
| <b>mountain apple</b>       | The ‘ <i>ōhi‘a ‘ai</i> , or <i>Eugenia malaccensis</i> , a forest tree that grows to 50 ft.high.  |
| <b><i>Nerita</i></b>        | A marine shell, <i>pipipi</i> , common in the intertidal zone and often eaten in traditional Hawai‘i.   |
| <b>‘<i>okina</i></b>        | Glottal stop.   |
| <b>‘<i>ōlelo no‘eau</i></b> | Proverb, wise saying, traditional saying.   |
| <b><i>oli</i></b>           | Chant.  |
| <b>stone</b>                | Rock fragment ranging from 25 cm to less than 60 cm.  |
| <b>‘<i>ulu maika</i></b>    | Stone used in the <i>maika</i> game, similar to bowling.  |

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