T. S. Dye & Colleagues, Archaeologists, Inc. 735 Bishop St., Suite 315, Honolulu, Hawai'i 96813

Preliminary Report on an Investigation of the Ages of Cultural Sites at Mūʻolea, Maui*

Thomas S. Dye, Ph.D.

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^{*}Report prepared for Nā Mamo o Mū'olea.

2 LAVA TUBE HABITATION SITE

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Abstract

This preliminary report of archaeological investigations at Mū'olea describes test excavations at five sites and a search for the location of a house used by David Kalākaua when he was monarch of Hawai'i. Excavations at two sites yielded information that can be used to establish when they were in use. The search for the Kalākaua house yielded a small number of historic artifacts.

1 Introduction

At the request of Jan Elliott and Nā Mamo o Mūʻolea, T. S. Dye & Colleagues, Archaeologists, Inc. investigated the ages of several cultural sites and searched for the former location of a house used by King David Kalākaua at Mūʻolea, Maui. The ca. 70 ac. Mūʻolea property is owned by the County of Maui; Nā Mamo o Mūʻolea is acting as stewards of the property under an agreement with the County of Maui. Mūʻolea was one of fifty lands awarded in the *māhele* to *aliʻi nui* Analea Keohokālole [1:229], mother of David Kalākaua.

An initial walk-through of the property was accomplished on September 27, 2007. This was followed up by four days of field work on November 7–10, 2007 directed by the author with the assistance of Jan Elliott, Naihe, Frank Olivera, Wyatt, Patrick, Claudia, and Kamalei Kalaola, Hank Eharis, Crystal and Dore Minatodani.

The Mūʻolea property has not been systematically surveyed for cultural sites. Winslow Walker recorded Kawaloa *heiau* on the slope above Papahawahawa gulch during his 1929–1930 fieldwork on Maui and interpreted it as an agricultural shrine that "stands in the midst of a potato growing district" [3:152]. This site was described in greater detail as site 50–50–17–128 by archaeologists with the Statewide Inventory of Historic Places in the early 1970s. The many other cultural sites on the property have been visited by several archaeologists over the years [e.g. 2], but a formal inventory has not been completed. An inventory survey will require a great deal of effort because of the dense vegetation cover over most of the area.

Instead of attempting to inventory the cultural sites of Mūʻolea, members of Nā Mamo o Mūʻolea decided instead to focus on two goals: i) investigate the ages of some prominent sites, in the hope of gaining some information about the time depth of traditional Hawaiian use of the land; and ii) carry out a subsurface reconnaissance survey in pasture land where a house used by King Kalākaua is believed to have stood, in the hope of identifying evidence for its location. Excavations were undertaken at five sites, including a lava tube habitation, a mule pen, a coastal enclosure, a coastal wall foundation, and a coconut grove.

2 Lava Tube Habitation Site

The lava tube habitation site is a lava tube, now partially collapsed, about 8.2 m wide and more than 2 m high. Large portions of the roof have collapsed, leaving an entrance to

the tube at the east end. A terrace approximately 3 m wide with a wall of stacked cobbles about 90 cm high at its edge fronts the lava tube, creating a relatively level and spacious living surface (fig. 1). Due to the roof collapse, space within the lava tube is rather close and cramped, but it was undoubtedly used for shelter and a cultural deposit is found on its floor



Figure 1. Panorama of lava tube habitation, looking east. Note the boulders collapsed from the roof of the lava tube at the left, and the top of the wall fronting the terrace in the bottom right corner. The scale, located at test unit 1, is marked in decimeters.

Two 0.25 m² test pits were excavated at the lava tube habitation. The first, test unit 1, was located at the east end of the entrance to the lava tube, at the back end of the terrace. The second, TU-2, was placed against the roof collapse near the middle of lava tube at the back end of the terrace (fig. 2).

Excavation of test unit 1 revealed a relatively complex cultural deposit covered by about 17 cm of culturally-sterile brown sediment. A cultural deposit 17–46 cm below surface yielded traditional Hawaiian artifacts and other cultural materials, including a broken *'ulu maika* and a polished fragment of an adze. At the base of this cultural deposit, a fire pit in the northeast corner of the test unit yielded abundant wood charcoal, a sample of which was sent to the Wood Identification Laboratory at International Archaeological Research Institute, Inc. for species identification (table 1). The identified species were all natives or Polynesian introductions; no historically-introduced species were identified. Two samples of identified charcoal have been submitted to Beta-Analytic, Inc. for ¹⁴C dating using accelerator mass spectrometry.

The excavation of test unit 2 failed to reveal a cultural deposit. These excavations indicate that the roof of the lava tube collapsed some time before the lava tube habitation was modified and used traditionally for habitation.

3 Mule Pen Site

The mule pen site is a large enclosure, 12.5×6 m, set against a hill side (fig. 3). The high north, east and west walls of the mule pen site are facings that serve to hold back the hill. The low south wall, which is discontinuous, abuts the east wall, indicating that it was built at a later time. The east wall appears to be a facing for a roadway above it, that leads down to the flat area south of the mule pen.

3 MULE PEN SITE



Figure 2. Completed excavation at the lava tube habitation, test unit 2. Note the strong brown color of the rocky sediment under the collapsed boulders. The scale is marked in decimeters.

 Table 1.
 Radiocarbon sample screening results

Bag	WIDL*	Taxon	Name	Origin	Habit	Part	\mathbf{N}^{\dagger}	Wt. [‡]
4	0718-1	cf. Myrsine lanaiensis	kōlea	native	tree	wood	5	0.20
4	0718-2	cf. Chamaesyce sp.	ʻakoko	native	shrub	wood	3	0.03
9	0718-3	cf. Aleurites moluccana	kukui	Polynesian introduction	tree	kernel	7	0.66
9	0718 - 4	Unknown 1				wood	5	0.21
9	0718-5	cf. Bidens sp.	koʻokoʻolau	native and historical introductions	shrub	wood	7	0.57
9	0718-6	Dodonea viscosa	ʻaʻaliʻi	native	shrub	wood	4	0.18

* Wood Identification Laboratory number.

[†] Number of identified pieces.

* Weight in grams.

Test unit 1 was excavated against the west wall to expose the stratigraphic position of its base. Excavation revealed that the base of the wall is set just slightly below present ground surface on culturally-sterile soil. The excavation was terminated at 25 cm below



Figure 3. Panorama of the mule pen site, looking generally west. The scale, at test unit 1, is marked in decimeters.

surface, when it became apparent that potential dating materials would not be discovered beneath the wall here. No materials were collected for dating the age of the wall.

4 Coastal Enclosure Site

The coastal enclosure site is a rectangular enclosure near the coast built of loosely stacked 'a' \bar{a} cobbles and boulders. A single test unit was excavated against the inside face of the south wall at its western end to determine the stratigraphic position of the base of the wall. Excavation revealed a weakly-developed, rocky, black soil high in organic materials developed on an 'a' \bar{a} flow. The 'a' \bar{a} matrix has common voids, sufficiently large to allow the easy movement of materials down through the stratigraphic column. In this situation, it is not possible to be confident that material found beneath the wall is actually older than the wall; it is just as likely to be younger material that has worked its way through the voids under the wall. Consequently, no materials were collected for dating and the age of the wall wasn't determined.

5 Coastal Wall Foundation Site

The coastal wall foundation site is a complex of features, now in generally poor condition, located in a low-lying area behind a rocky beach. The walls here are indicated by foundation stones, without a second or higher courses (fig. 5). Amorphous piles of stones were likely well-built platforms that are now deteriorated. In somewhat better condition are two low platforms that are likely graves.

Excavation was carried out to find the base of a 90 cm wide wall foundation that runs in a *mauka=makai* direction for about 27.5 m. Test unit 1 was set against the west face of the wall. Excavation consisted primarily of removing cobbles and a small amount of sediment to reveal that the base of the wall was set on the modern, cobbly surface. The numerous voids between the cobbles provide ample opportunities for modern material

5 COASTAL WALL FOUNDATION SITE



Figure 4. The coastal enclosure site, looking east. The scale is marked in decimeters.



Figure 5. Foundation stones of bi-faced, core-filled wall. Note the rocky surface outside of the wall. The scale is marked in decimeters.

to work its way down the stratigraphic column, a situation that is not suited to dating the wall with the $^{14}\mathrm{C}$ dating method in this way. No potential dating material was collected.



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Figure 6. Stratigraphy beneath the wall foundation, coastal wall foundation site. Note that the foundation stones of the wall were set on the modern, cobbly surface. The scale is marked in decimeters.

6 Coconut Grove Site

The coconut grove site consists of a variety of surface architectural features, including primarily walls, pits, and enclosures near a prominent coconut grove. These architectural features are in generally good condition and would repay the effort to clear and map them. The resulting maps would clearly document traditional Hawaiian settlement here.

Two test excavations were undertaken at the coconut grove site. Test unit 1 was excavated inside the south wall of a partial enclosure (fig. 7) to a depth of 50 cm. The foundation stones of the wall are visible at the surface, and the base of the wall was discovered at 22 cm below surface. There is no cultural deposit, *per se*, but a small piece of clear glass was found at a depth of approximately 34 cm below surface, beneath the wall foundation. Although there is a slight possibility that this small glass fragment worked its way down the stratigraphic column, this seems unlikely given the compact soil here. The most likely explanation is that the wall was constructed in the historic period, at a time when glass was being imported to Hawai'i.

A second test unit was excavated against the north wall of an enclosure immediately *mauka* of the partial enclosure at which test unit 1 was excavated (fig. 8). This unit was excavated to the base of the wall, which was set in what appeared to be a natural soil. No cultural deposit was present and no potential dating materials were collected.

The results of the excavations at the coconut grove site indicate that parts of the site were still under construction in the historic period. A site this size undoubtedly has a complex history of use, and the fact that it was still in use during the historic period does not mean that it wasn't established earlier, during the pre-Contact period.

7 THE KALĀKAUA HOUSE



Figure 7. Location of test unit 1 at the coconut grove site, looking south. The scale, which is marked in decimeters, indicates the location of the test unit.



Figure 8. Location of test unit 2 at the coconut grove site, looking north. The scale, which is marked in decimeters, indicates the location of the test unit.

7 The Kalākaua House

The location of the house used by David Kalākaua is believed by members of Nā Mamo o Mū'olea to be located in pasture land on a ridge at the west end of the property. The house reportedly burned down shortly after Kalākaua's death in 1891 [3:152]. The land was subsequently improved for pasture and there is no remaining structural evidence for the house.

Small shovel test units were excavated at two locations, the top of the hill below the road and the first flat back from the coast. Eight shovel tests were excavated at the top of the hill, all with negative results. On the first flat back from the coast, sixteen shovel tests were excavated, several of which yielded historic-era artifacts. These included small pieces of bottle and window glass, ceramics of various kinds, and charcoal in small quantities. The cultural deposit here is not particularly rich and the small size of the artifacts indicates that the deposit was likely disturbed when the land was improved for pasture. These excavations establish that a house was formerly located here, but whether or not this was the house used by Kalākaua remains to be determined.

Bibliography

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