

CULTURAL ATTACHMENT AND RESTORING KINDRED CONNECTIONS TO
UHIŪHI [*MEZONEURON KAVAIENSE* (H. MANN) HILLEBR.], A CRITICALLY
ENDANGERED, ENDEMIC TREE OF HAWAIIAN DRY AND MESIC FORESTS

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DEDICATION

This work of learning is dedicated to my:

- kūpuna wahine from Kaluahine to Lydia, from Anasaria to Ramona; and my kūpuna kāne from Wahinepee to Harold O’Toole, Sr. and Roland, from Milton to Fidel, and those between and beyond – you give me strength from Pō;
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PREFACE

‘Ano ‘ai... Welina! Greetings! By opening these pages, you have been chosen to embark on this labyrinthine journey through place, space, and time. This journey is a mo‘olelo (historical narrative) of creation and destruction, gods and humans, the empirical and theoretical, phenomena of the heavens and earth, ancestors and genealogies, perceptions and epistemologies, the physical and metaphysical, enumerations and utterances, the living and departed, and the conscious and unconscious.

Even as we may be without certainty as to where the road leads, the inner impulse of our guts will eventually bring us to where we will be most functional. We must pay heed to the strange callings of our inner voices, and trust that they are coming from the well-hidden past...

We are only beginning our journey; maka‘ala (be alert) for we seek to help prepare a better future for the keiki o ka ‘āina.^{1,2}

SETTING AND PLAYERS

Intrinsically, the Hawaiian Islands are truly one of a kind, living and breathing laboratories of evolutionary experimentation.³ They are exceptional variants of nature, and so are its people and other biota – isolated by thousands of miles of ocean, evolving under tropic skies, and guarded by majestic peaks born of lava and fire, and in the Hawaiian worldview – the divine.

¹ Quote from a letter by George Helm. Ritte, W. J., and R. Sawyer. 1978. *Na Mana‘o Aloha o Kaho‘olawe*. Honolulu: Aloha ‘Āina O Na Kūpuna, Inc., p. xii.

² Keiki (children) o (of) ka (the) ‘āina (land). Keiki could mean child, offspring, or descendant. Pukui and Elbert 1971, p. 131.

³ Quammen, D. 1997. *The Song of the Dodo: Island Biogeography in an Age of Extinctions*. New York: Simon & Schuster, Inc., pp. 18,19.

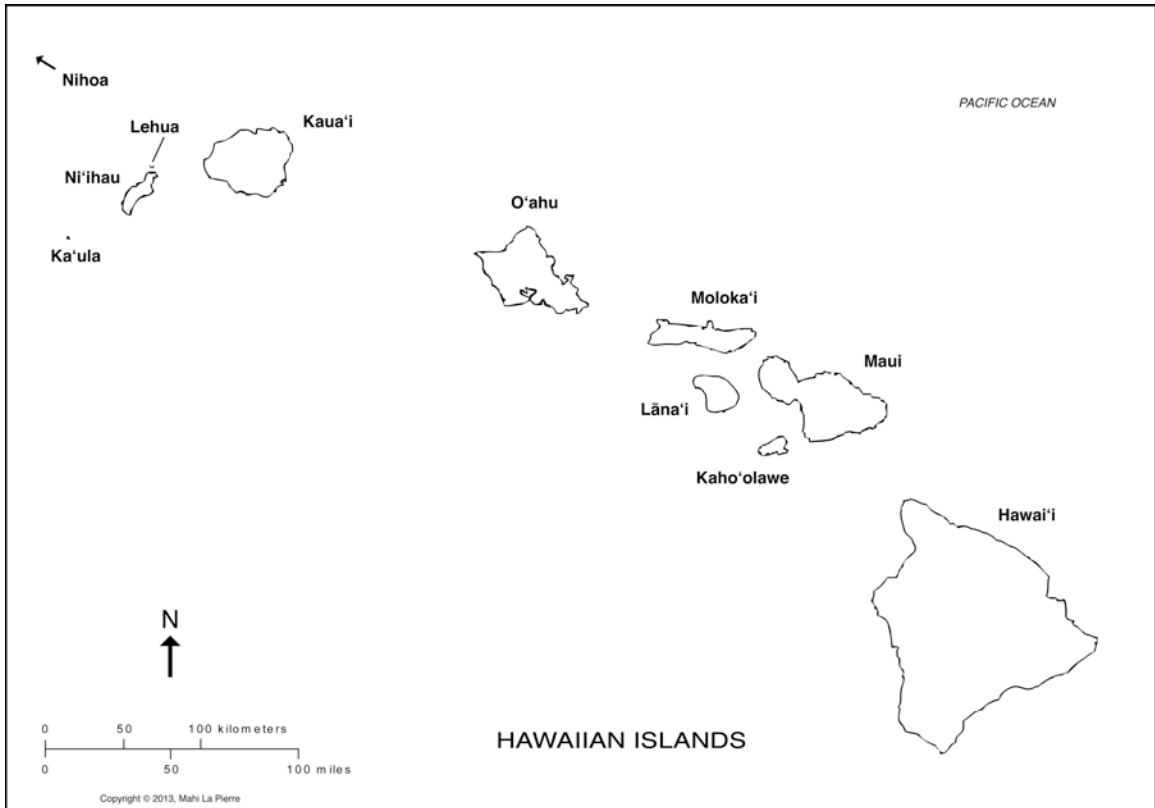


Figure 1. The main Hawaiian Islands [M. La Pierre, 2013]

The main Hawaiian Islands will be our setting, as we wander and dwell in several spaces, landscapes, philosophies, practices, and experiences of the past and present. We will holoholo (go for a walk) together and travel among the islands of Hawai‘i, learning of customs and beliefs of Native Hawaiians, as well as, the malihini (newcomers) from lands afar, we will come to know a little of their lives in these islands, and that of other inhabitants seen and unseen.

The central figure of this expedition is uhiūhi [*Mezoneuron kawaiense* (H. Mann) Hillebr.], a critically endangered, endemic tree species of Hawaii’s dry to mesic forest ecosystems. This thesis embodies an intimate quest to provide sound cultural arguments

for the preservation of uhiūhi through the sharing of its cultural significance and familial connection to Kānaka ‘Ōiwi⁴ (Native Hawaiian people). Additionally, it is hoped that this journey will serve as a template to assist Native Hawaiians and other native peoples in rekindling relationships with their homelands and their non-human kin of the natural and supernatural worlds.

DUALITY AND KINSHIP

On these Islands, the duality of life is blatantly apparent to those who knowingly look, listen, feel, smell, taste, and sense in other ways. In Hawai‘i, this duality is known as lua⁵. There are several meanings of the Hawaiian word lua, such as, a hole or pit, toilet, and the Hawaiian art of hand-to-hand combat. Lua also can mean the number two, second, secondary, the second of a pair, duplicate, match, companion, or mate.⁶ In the Hawaiian language, the kaona⁷, the hidden or double meaning, of the number two incorporates the Hawaiian concepts of duality and polar opposites, i.e., male and female, force and counterforce, action and reaction, and life and death.⁸

Hawaiians combined the art of fighting with the ideas of duality and polarity and so embodied *lua* in two of their primary gods, Kū and Hina, ruling the universe in perpetual balance... Their realms embrace the earth, the heavens, and all human generations, past, present, and yet to come.⁹

⁴ In the Hawaiian language, *kanaka* is translated as a human being, or person. *Kānaka* is plural of *kanaka*. *Ōiwi* means native, native son. Pukui, M. K., and S. H. Elbert. 1971. *Hawaiian Dictionary*. Honolulu: University of Hawaii Press, pp. 118,258.

⁵ Paglinawan, R. K., M. Eli, M. E. Kalauokalani, J. Walker, and K. P. Kikuchi-Palenapa. 2006. *Lua: Art of the Hawaiian Warrior*. Honolulu: Bishop Museum Press, p. 9.

⁶ Pukui, M. K., and S. H. Elbert. 1971. *Hawaiian Dictionary*. Honolulu: University of Hawaii Press, p. 196.

⁷ Kaona is defined as a hidden meaning in Hawaiian poetry; concealed reference, as to as person, thing, or place; words with a double meaning that might bring good or bad fortune. Ibid. p. 121.

⁸ Paglinawan *et al.* 2006, p. 9.

⁹ Ibid. p. 9.

In Hawaiian thought, this duality governs all aspects of our lives, and requires our attention and persistence if we are to find lōkahi (harmony) and balance. The opposites are all around us: the earthly and divine; darkness and light; birth and death; war and peace; male and female; upright and prostrate; land and sea; and so on.¹⁰

The *Kumulipo*, perhaps the most well known Hawaiian cosmogonic and genealogical chant, lists the pairings of opposites and counterparts that generated all of our planet's species.¹¹ As it documents the origin and evolution of the Hawaiian Islands themselves, the *Kumulipo*, which can be translated as the "foundation of darkness"¹², not only details the familial connection of the Native Hawaiian people to their primary gods and deified chiefs, but also their ancestral relationship to the stars in the sky and the plants and animals of the land and sea.¹³

The *Kumulipo* is not a scientific study of speciation in nature, but it presents the origin of living forms as a continuing chain of births from one living creature into another.¹⁴

The *Kumulipo* gives us our unique Hawaiian identity, and as a result all parts of the Hawaiian world are related by birth into one inseparable ancestry.¹⁵

Native Hawaiians descend from a tradition and genealogy of nature deities: Wakea, Papa, Ho'ohokukalani, Hina, Kane, Kanaloa, Lono, and Pele, the sky, the earth, the stars, the moon, water, the sea, natural phenomena as rain and steam; and from native plants and animals. The

¹⁰ Richard Paglinawan, personal communication, 2005.

¹¹ Paglinawan *et al.* 2006, p. 10.

¹² Kame'eleihiwa, L. 1992. *Native Land and Foreign Desires (Ko Hawai'i 'Āina a me Nā Koi Pu'umake a ka Po'e Haole)*. Honolulu: Bishop Museum Press, p. 2.

¹³ Beckwith, M. W. trans. ed. 1972. *The Kumulipo: A Hawaiian Creation Chant*. Honolulu: University of Hawaii Press, p. 7.

¹⁴ Johnson, R. K. 2000. *The Kumulipo Mind: A Global Heritage, in the Polynesian Creation Myth*, 1st ed. Honolulu: Anoa Press. p. vii.

¹⁵ Kame'eleihiwa 1992, p. 2.

Native Hawaiian today inheritors of these genes and mana, are the *kino lau*, or alternate body forms of all our deities.¹⁶

Therefore, all plant life, including uhiūhi, are more than just a trees to Native Hawaiians. They are our kin. Uhiūhi and all other natural and supernatural entities of the Hawaiian Islands are our family. The Kumulipo is an invaluable source of traditional Hawaiian ways of knowing, in essence, Hawaiian science.

WAYS OF KNOWING

In the Hawaiian language, akeakamai is one of the words to express the English word, science. Akeakamai can also translate as a lover of wisdom, seeker of knowledge, philosopher, scientist, philosophy, or scientific. It is a contraction of ake, or the liver organ, and akamai, meaning smart, clever, or expert. Ake, can also mean to desire or yearn, and Hawaiians believe that within the body exists the location of one's emotion and intelligence.¹⁷ This area within is your gut and bowels – your na'au. Na'au is Hawaiian for intestines, but also the word for the mind, the heart, and affections of the heart or mind.¹⁸

Here it is, the core of Hawaiian philosophy of knowledge. It boils down to the connection mind has with body and body has with intellect. For Hawaiians, separation of the two was an illusion: the stomach region was indeed the seat of emotion as well as the seat of intellect.¹⁹

The Hawaiian word, na'auao, is another word for science, and is also the term

¹⁶ Aluli, N. E. 1988. "Land Issues Are Integral Part of Life: Aloha 'Aina is More Than Popular Slogan," Star-Bulletin Ho'olako Year of the Hawaiian Progress Edition. Alto New Mexico: C. F. Boone Publishing Co., p. 25.

¹⁷ Pukui and Elbert 1971, p. 12.

¹⁸ Ibid. p. 237.

¹⁹ Meyer, M. A. 2003. *Ho'oulu: Our Time of Beginning – Hawaiian Epistemology and Early Writings*. Honolulu: 'Ai Pōhaku Press, p. 123.

for learned, intelligent, or enlightened.²⁰ If you have had a gut feeling, it is probable that it was your na‘au communicating with you and giving you a signal, a physical confirmation.

What is accepted as being science or scientific by most people of our modern society is quite different, and has little to do with feeling, emotion, divine entities, and kinship to plant and animal forms and natural phenomena. In the contemporary world, science is defined as:

to know, discern, distinguish; the state or fact of knowledge; systematized knowledge derived from observation, study, and experimentation carried on in order to determine the nature or principles of what is being studied; a branch of knowledge of study, esp. one concerned with establishing and systematizing facts, principles, and methods, as by experiments and hypotheses; or a systematized knowledge of nature and the physical world.²¹

Modern science and traditional Hawaiian science are analogous in viewing science as a systematized knowledge of nature and the physical world. The foremost difference is the importance of the link between spirituality and knowledge in traditional Hawaiian science.

Papakū Makawalu is the methodology by which Native Hawaiians examine, study, and understand their universe.²² It is not only the foundation of knowing, acknowledging,

²⁰ Pukui and Elbert 1971, p. 238.

²¹ Neufeldt, V., ed. 1988. *Webster's New World Dictionary, Third College Edition, Deluxe Color Edition*. New York: Simon & Schuster, Inc., p. 1202.

²² Kanaka‘ole, P. 2009. Papakumakawalu: An Overview of an Ancient System of Knowledge (Part 1). Retrieved June 2, 2013 from [<http://vimeo.com/4621142>].

and embracing our natural world and all systems of existence within the universe, but most significantly, it is becoming experts of these systems.²³

Papakū Makawalu connotes the dynamic Hawaiian worldview of the physical, intellectual and spiritual foundations from which life cycles emerge. Papakū Makawalu is an abstract from Wā ‘Umikūmākolu (section 13) of the Kumulipo. Wā ‘Umikūmākolu begins with Palikū and Paliha‘a, the male and female ancestors of Haumea. Haumea is the ancestor credited for the pedagogy of categorizing and organizing the natural world. The categorizing and organizing of the natural world was divided into three houses of knowledge and the combination of the three houses of knowledge is Papakū Makawalu.²⁴

Papahulilani, one of the three houses of knowledge, is the space from above one’s head to where the sun, moon, stars and planets exist. Another house, Papahulihonua, encompasses the earth and ocean and their development and evolution from natural causes. Papahanaumoku is concerned with plants and wildlife, including man, who experience life and death – uhiūhi, humans, and other plant and animal forms, and knowledge of them are found in this realm. The names of these houses of knowledge: Papahulilani, Papahulihonua, and Papahanaumoku also refer to a class of experts who are spiritually, physically, and intellectually in harmony with their specific ranges.²⁵

DUAL METHODS

On this journey together, we will delve into the duality of science in Hawai‘i. The opposites here are: 1) traditional Hawaiian science and worldview with its inseparable

²³ Edith Kanaka‘ole Foundation. Papakumakawalu. Retrieved May 2, 2013 from <https://www.edithkanakaolefoundation.org/current-projects/papaku-makawalu/>.

²⁴ Ibid.

²⁵ Ibid.

connections to Hawaiian gods and spirituality; and 2) modern science based on the scientific method where the supernatural or spiritual beliefs are not acknowledged.

The use of these two methods during this journey is crucial to our success. Our individual and collective knowledge systems, our ways of knowing, and our beliefs will be tested throughout this journey as well. The twist of this excursion is that we will encounter situations that will allow us, and challenge us to walk in two worlds. With a foot in each realm, we will simultaneously encounter and analyze, often conflicting epistemologies and philosophies. Rest assured – you will not be alone. The paths on which we will meander are well worn as they are travelled daily by many Kānaka ‘Ōiwi, others in these Islands, and others still around the globe.

At this point, it is critical that we are reminded of, or are introduced to, a few intensely important concepts and elements of Hawaiian culture, specifically to: mana^{26,27}, memory, ritual, and prayer. In her preface to her work, *Plants in Hawaiian Culture*, Krauss shares:

Every decision made, every task performed, every event, small or large, was accompanied by rituals and prayers, but many of these have been lost. Those that survived have been drawn from the memories of older Hawaiians and, increasingly these days, are being passed on to younger Hawaiians who are becoming interested in this aspect of their heritage.

Underlying all ritual activity was *mana*, the fundamental principle that shaped and guided ancient Hawaiian spirituality. *Mana* was an integral part of the life of these ancient people. For them, *mana* implies a pervasive

²⁶ Mana is a spiritual force that at times shows physical manifestations. It can be acquired as a gift of the gods, through ritual, prayer, the force of words, or through inheritance. Gutmanis, J. 1983. *Na Pule Kahiko: Ancient Hawaiian Prayers*. Honolulu: Editions Limited, p. 2.

²⁷ Mana is both an abstract and concrete force that has direct and indirect influences. Inherited mana is transferred from the gods to mankind in continual processes that began at birth, ended with death and was also informed by the ancestral pedigree. Acquired mana was amplified through the process of seeking knowledge and wisdom. ‘Aha Kāne 2012 Native Hawaiian Men’s Health Conference program, p.17.

supernatural power as an essential part of their existence and that of the world around them. *Mana* involves mystic and psychic faculties that have been largely lost, although Hawaiians today are conscious of these forces and some younger Hawaiians are being made aware of them.²⁸

In his work, *Kingship and Sacrifice*, Valerio Valeri adds:

... mana is a quality of divine origin. It is therefore predicated most often of the gods and of the persons or things that are closest to them: ali'i, priests, prayers, temples, sacred houses within temples (the *hale mana*), images of the gods (which are referred to as *akua*, like the gods themselves), ritual objects, and omens (*hō'ailona*).²⁹

There is a profound importance of memory for Kānaka 'Ōiwi to survive and thrive in their relationships to their akua (gods), land, and one another. Before the advent of a written language in Hawai'i, the Hawaiian people had an efficient memorization tool. It was the oli, or chant. The rhythm of the chants composed, like the Kumulipo, aided them in recounting mo'ō kū'auhau (genealogies), legends, and prayers.³⁰

ORIGINS OF THE HAWAIIAN ISLANDS AND PEOPLE

There are contradictory accounts of the origin of the Hawaiian Islands with much variation and inconsistencies. Hawaiian mo'ō kū'auhau have different starting points and lines, and these accounts are known to blend into one another. Some these genealogies include: Kumulipo, Paliku, Lolo, Puanue, and Kapohihi.³¹ In the Kumulipo, the Islands grew up from pō, the darkness within the Earth itself. In the genealogy of Wākea, the god

²⁸ Krauss, B. H. 1993. *Plants in Hawaiian Culture*. Honolulu: University of Hawai'i Press, pp. vii-viii.

²⁹ Valeri 1985, pp. 98-99.

³⁰ Pukui, M. K., E. W. Haertig, and C. A. Lee. 1972. *Nānā i ke Kumu: Look to the Source*, Vol. II, Honolulu: Hui Hānai, p. 55.

³¹ Malo, D. 1951. *Hawaiian Antiquities (Mooolelo Hawaii)*. Translated by N. B. Emerson. *Bernice P. Bishop Museum Special Publication 2*. Honolulu: Bishop Museum Press, pp. 2,3.

Wākea's wife, Papa, the female element, is credited with giving birth to the islands.³²

There are several versions of the genealogy of Wākea and Papa, one of the more notable differences being the order of the island's birth.

Paku'i, a celebrated historian and priest during King Kamehameha the Great's reign (circa 1796 -1819)³³, composed an oli listing Hawai'i Island as the hiapo (first-born child), then the islands of Maui, Kanaloa³⁴, Moloka'i, O'ahu, Kaua'i, Ni'ihau, and Lehua emerged as their children also. The last child was Kaula.³⁵

O Wakea Kahiko Luamea,
O Papa, o Papahanaumoku ka wahine,
Hanau Tahiti-ku, Tahiti-moe
Hanau Keapapanui,
Hanau Keapapalani,
Hanau Hawaii;
Ka moku makahiapo,
Keiki makahiapo a laua...

Wakea Kahiko Luamea³⁶,
Papa that gives birth to islands was the wife,
Tahiti of the rising and Tahiti of the setting sun was born,³⁷
Was born the foundation stones,
Was born the heavenly stones,
Was born Hawaii;
The first-born island,
Their first-born child...³⁸

³² Ibid. pp. 1-3,242.

³³ Born in 1736, Kamehameha of Hawai'i Island, also known as Kamehameha I, is renowned for uniting the Hawaiian Islands under his rule after fourteen years of battling chiefs that governed distinct island regimes. He ruled from c.1796 until his death in May 1819. Kamakau, S. M. 1992. *Ruling Chiefs of Hawaii*. Honolulu: Kamehameha Schools Press. p. 210.

³⁴ Kanaloa is a variant name for the island of Kaho'olawe. Pukui and Elbert 1971, p. 118.

³⁵ Fornander, A. 1918-1919. *Fornander Collection of Hawaiian Antiquities and Folk-Lore*. Trans. ed. by T. G. Thrum. Vols. IV-VI, Honolulu: Bishop Museum Press, Vol. IV, pp. 12-21.

³⁶ Footnote 1: Wakea, son of Kahiko, the ancient, the abyss. Ibid. p. 12.

³⁷ Footnote 2: Tahiti-ku and Tahiti-moe, lit. standing and sleeping Tahiti, or more properly *Kahiki*, Tahiti refers to distant lands eastward and westward of the place where the first of mankind were created. Pol. Race, Vol. I. Ibid. p. 12.

This oli continues and names Hāloa, as the first-born son of Wākea and the goddess Ho‘ohōkūkālani.³⁹ Hāloa, also known as Hāloa-naka-lau-kapalili⁴⁰, was born prematurely and died. He was buried near their house, and from his body grew the kalo (*Colocasia esculenta*) plant. The pair had another child also named Hāloa, who is recognized as the first man and ancestor to all Kānaka ‘Ōiwi. Therefore, the kalo plant is the elder brother of the Hawaiian people.⁴¹

Paku‘i’s chronology of the Hawaiian Islands⁴² contradicts the theory that the seventy million year-old chain of volcanoes including the Emperor Seamounts, the Northwestern Islands, as the main Hawaiian Islands are the product of drifting oceanic plates and the Hawaiian hotspot.⁴³ According to the hotspot theory, the Hawaiian Islands are drifting towards the northeast with Hawai‘i Island being the youngest of the islands.

However, an oli documenting the arrival and migration of the volcano goddess, Pele, and her siblings, including the youngest Hi‘iaka-i-ka-poli-o-Pele, in the Hawaiian Islands, does coincide with modern geology. This is fraction of the chant:

Aloha o Maui, aloha, e!
Aloha o Moloka‘i, aloha, e!
Aloha o Lana‘i, aloha, e!
Aloha o Kaho‘olawe, aloha, e!
Ku makou e hele, e!
O Hawaii ka ka aina

³⁸ Ibid. p. 12.

³⁹ Ibid. p. 14.

⁴⁰ Pukui and Elbert 1971, p. 382.

⁴¹ Malo 1951, p. 244.

⁴² Paku‘i’s oli of the birth of the Hawaiian Islands from Hawai‘i Island to Kaula in a northwest progression may have been the settlement route taken by particular migration to the Hawaiian Islands rather than the Islands’ formation. Davianna McGregor, discussion during phone conversation, May 3, 2013.

⁴³ Grigg, R. W. 2012. *In the Beginning, Archipelago: The Origin and Discovery of the Hawaiian Islands*. Waipahu, Hawai‘i: Island Heritage Publishing, pp. 6,7,12.

A makou e noho ai a mau loa aku;
Ke ala ho'i a makou i hiki mai ai,
He ala paoa ole ko Ka-moho-alii,
Ko Pele, ko Kane-milo-hai, ko Kane-apua,
Ko Hiiaka – ka no'iau – i ka poli o Pele,
I hiki mai ai.

Farewell to thee, Maui, farewell!
Farewell to thee, Moloka'i, farewell!
Farewell to thee, Lana'i, farewell!
Farewell to thee, Kaho'olawe, farewell!
We stand all girded for travel:
Hawaii, it seems, is the land
On which we shall dwell evermore.
The route of Ka-moho-alii,
Of Pele and Kane-milo-hai,
Route traveled by Kane-apua, and by
Hiiaka, the wise, the darling of Pele.⁴⁴

The Pele family searched for a suitable home and first landed on Nihoa. They continued their southeast journey in succession visiting the islands of Lehua, Ni'ihau, Kaua'i, O'ahu, Maui, Moloka'i, Lāna'i, and Kaho'olawe. They finally choose Hawai'i Island as their home.⁴⁵ It has been recently documented that this oral tradition of the Pele clan and their settling on Hawai'i Island describes two of the largest volcanic events since the arrival of humans in the Hawaiian Islands: the estimated 60-year long, 15th century 'Ailā'au eruption, and the development of Kīlauea volcano's summit that formed the large crater visible today.⁴⁶

⁴⁴ Emerson, N. B. 1993. *Pele and Hiiaka: A Myth from Hawaii*. Honolulu: 'Ai Pōhaku Press, p. xv.

⁴⁵ Ibid. pp. ix-xvi.

⁴⁶ Swanson, D. A. 2008. "Hawaiian Oral Tradition Describes 400 Years of Volcanic Activity at Kīlauea." *Journal of Volcanology and Geothermal Research*, doi:10.1016/j.jvolgeores.2008.01.033, p. 1.

NAMES AND NAMING

The uhiūhi tree has several botanical synonyms, and five Hawaiian language names, some with variations in spelling. The fact that uhiūhi has multiple names in multiple languages has caused some confusion. We are dealing with dozens of printed sources through a span of almost 150 years. The common name and Hawaiian name most extensively used is uhiuhi, spelled with no diacritical marks. In a range of publications, uhiūhi has been spelled several ways, as uhiuhi and uhi uhi⁴⁷, but one source in particular specifies its pronunciation. In his 1922 revision of Lorrin Andrews' Hawaiian dictionary, Henry Parker indicates the pronunciation of uhiūhi as (u'-hi-ū'-hi)⁴⁸, but spells it, as *uhiuhi*, without any diacritical marks or spacing.

Although I have not seen the spelling, *uhiūhi*, used in any document, for the purpose of this thesis, I am choosing to utilize the spelling, uhiūhi, which reflects the Parker manuscript's phonetics. See Table 1 for a listing of Hawaiian names for uhiūhi, related words, and source variations. Additionally, I will also be using *uhiūhi*, its Hawaiian name, in most instances in lieu of its scientific name, *Mezoneuron kavaiense*, to honor the ancient Hawaiian scientists who gave this extraordinary tree its local names within a Hawaiian context.

As this is a mo'olelo, the names of gods, people, places, and things will be referenced, as well as, their interconnected relationships and genealogies. Individual uhiūhi trees, items carved of uhiūhi wood, and other things have been given proper

⁴⁷ Medeiros, A. C., C. F. Davenport, and C. G. Chimera. 1998. *Auwahi: Ethnobotany of a Hawaiian Dryland Forest*. Cooperative National Park Resources Studies Unit, University of Hawaii Mānoa, Department of Botany. Technical Report 117, p. 36.

⁴⁸ Parker, Henry H. 1922. *A Dictionary of the Hawaiian Language by Lorrin Andrews, revised by Henry H. Parker*. Honolulu: Board of Commissioners of Public Archives, p. 593.

names. Relationships have begun with these entities and attachments have been established. In ancient times, a person's favored fishhook or inherited spear were given names and possessed mana, or supernatural or divine power.⁴⁹ Similarly, in modern times names are given to one's vehicle, pets, or often a favorite blanket or pillow.

In Hawai'i, one's possessions are often respected and honored like you would a fellow human, for they are entities in and of themselves. They are more than just things. Each person or thing has its own being and place, and a basic level of respect is warranted for each person or thing has its own mana.

I have included more names in the dedication and acknowledgments sections than one would normally in a thesis, but it is important for me to mention them by name as they have played a part in this uhiūhi journey. Additionally, the use of "the author" and "the reader" will not be utilized. In referring to myself, "I", "me", or "Mahi", one of my middle names will be used depending on company and setting. It is my desire to keep all on this journey from its inception to the present, including you, on a friendly plane of address. The feeling and intent of this paper is inclusive as we are now companions on this scholarly holoholo together.

THROUGH HAWAIIAN EYES

Starting in the mid-1800s, Native Hawaiian authors began documenting their knowledge in Hawaiian language newspapers. From 1834 to 1948, while literacy was at its highest, they documented their lives, traditions, practices, sacred spaces, place names, customs, and other events of the time. These men and women wrote explicitly in their

⁴⁹ Nā 'Ōlohe, Pā Ku'i-A-Lua, personal communication, 2000.

works that they were compelled to share this information because it was important and vital to the survival of Hawaiian culture and traditions. And that one day people would want to know of these things.^{50,51}

This journey would not be possible without the collective knowledge, empathy, concern, and foresight of these Kānaka ‘Ōiwi for that day of wanting to know has certainly come for a number of Native Hawaiians in regard to uhiūhi and Hawaiian cultural knowledge in general. Imagine putting on a pair of stylish “shades” with lenses enabling you to see and understand the Hawaiian worldview. Perhaps, we will be able to see in this manner during our brief holoholo together as we don the lenses of those who came before us, stand beside, and behind us. Their participation on this uhiūhi journey is vital.

LANGUAGE AND LAYOUT

My principle source for Hawaiian words, specifically their spelling and translations, is Pukui and Elbert’s *Hawaiian Dictionary* published in 1971 by the University of Hawai‘i Press. In regard to Hawaiian diacritical marks [kahakō (macron) or ‘okina (glottal stop)], they will be omitted or portrayed as they are in their original sources.

Chapter headings are borrowed from a pule moku pawa, or prayer for daybreak, a traditional chant taught by the late Kumu John Keolamaka ‘āinana Lake. This chant was

⁵⁰ Nogelmeier, M. P. 2010. *Mai Pa’a I Ka Leo: Historical Voice in Hawaiian Primary Materials, Looking Forward and Listening Back*. Honolulu: Bishop Museum Press, p. xii.

⁵¹ Keola Kawai’ula’iliahi Chan, personal communication, April 2011.

chosen because of its mana⁵² and presentation of the opposing forces of pō⁵³, the night, and the emergence of ke ao⁵⁴, the sun.

Aia ka pō	<i>There is darkness</i>
Aia ke ao	<i>There is light</i>
Pale ka pō	<i>The darkness covers</i>
Puka ke ao	<i>The light emerges</i>
Hiki mai ka lā	<i>Here comes the sun</i>
Puka ka haehae	<i>The rays break forth</i>
E kū, Kāne mehane	<i>Arise, Kāne of intense heat</i>
E hō mai ka ‘ike o te tama, tama	<i>Impart the sight to the child, the child</i>
E hō mai ka ikaika o te tama, tama	<i>Impart the strength to the child, the child</i>
E hō mai ka loa‘a o te tama, tama	<i>Impart all that should be gotten for the child, the child</i>
Eia mai Kāne‘ōnohi o ka lā	<i>Here is Kāne-orb-of- the-sun</i>

The opposing realms of pō and ao, of darkness and light, are yet another duality we will experience together. For the purpose of this uhiūhi journey, pō will also represent unconsciousness, obscurity, chaos, and the absence or loss of knowledge of uhiūhi, while ao will represent the collective regaining of uhiūhi consciousness, knowledge, and enlightenment.

E ho‘omākaukau! Prepare yourself! Let us begin our journey of mazes through pathways of knowledge and concealment, through darkness and light, and of multi-leveled consciousness with uhiūhi at its epicenter. May this thesis serve as a pua (a flower, a blossom, a coming forth) of knowledge, adding in a small way to our present

⁵² This oli was taught to Mahi by Sam ‘Ohukani‘ōhi‘a Gon on May 1, 2013 in preparation for the completion of this thesis. ‘Ohukani‘ōhi‘a Gon and others of Hālau Mele carry on Kumu Lake’s legacy of sharing and conducting Hawaiian rituals, protocol, and ceremonies. Mahi was a student in Kumu Lake’s introductory chant class in 2000.

⁵³ Pō is night, darkness, obscurity; the realm of the gods; pertaining to or of the gods, chaos, or hell; formerly the period of 24 hours beginning at nightfall, the Hawaiian “day” began at nightfall. Ibid. p. 307.

⁵⁴ Ao is defined as light, day, daylight, dawn; enlightened; to regain consciousness. Ibid. p. 24.

empirical and theoretical wisdom in regard to Uhiūhi – a once-treasured ancestor from the remote beginnings of time.⁵⁵ E holoholo mai kākou i nā ala o nā pua uhiūhi! Let us travel the paths of the uhiūhi blossoms!

⁵⁵ Pukui and Elbert 1971, p. 307.

Chapter 1. Aia Ka Pō, E Hō Mai Ka ‘Ike o Te Tama (There is Darkness, Impart Sight to the Child)

E kolo ana no ke ēwe i ke ēwe.

The rootlet will creep toward the rootlets.

Of the same origin, kinfolk will seek and love each other.⁵⁶

1.1. Quest for light and self

In 1999, I was given a piece of exceptionally dark wood – about a foot long and an inch and a half in diameter. It was visibly weathered, and had a few cracks and insect holes. It looked very old, and *ancient* was the first word that came to mind. My lua⁵⁷ instructors and veteran students shared that this branch was from an uhiūhi tree, a native species whose wood was used in fashioning Hawaiian weapons. They informed me that it was highly prized, and not easily obtained because of its scarcity and listing as an endangered species. I can vividly recall that scorching day in Nānākuli, O‘ahu – the unique, pleasant aroma of the wood filling the air as they cut, sanded, and shaped pieces of uhiūhi and other native and introduced tree species. Since then uhiūhi’s story and splendor have captivated me.

Thinking I would never get another piece of this wood, I chose not to shape it that day. As a matter of fact, I kept it for years in a special place like a treasure. I didn’t want to ruin it or waste it with my limited knowledge, skill, and experience. Why was uhiūhi

⁵⁶ Pukui, M. K. 1983. *‘Ōlelo No ‘eau: Hawaiian Proverbs & Poetical Sayings*. Honolulu: Bishop Museum Press, p. 39 (#322).

⁵⁷ *Lua* is the traditional Hawaiian fighting art. Paglinawan *et al.* 2006, p. 1.

so special? What does a live tree look like? Where are they found? Why was uhiūhi endangered? These are things I hoped to learn of one day.

My interest and learning of Hawaiian history, culture, and practices had continued to grow since the mid-1980s. After my first encounter with uhiūhi in Nānākuli, I had learned that uhiūhi was endemic to the main Hawaiian Islands, and was more rare than I had initially thought or could have imagined.⁵⁸ Still, it seemed to be an enigma – no one that I knew seemed to know that much about this species, and only a select few had seen uhiūhi in the wild.

Learning of an individual uhiūhi tree in the northern Wai‘anae Mountains on the island of O‘ahu, I hiked with friends in April 2002 to locate this tree. It was reported to be the last of its kind in this area. Having been monitored for years by natural resource managers and plant enthusiasts, this uhiūhi had unfortunately died a few years earlier. On our first visit to this uhiūhi, Māhealani Cheek and I were led by botanist-extraordinaire, Joel Lau. I affectionately call him *Master Lau* because of his forty-plus years of acquired and profound knowledge of Hawaiian plants, animals, and ecosystems based to a large degree on his vast experience exploring the Hawaiian Islands.

Besides looking for uhiūhi seeds to perpetuate the species, we were hoping that the uhiūhi wood, though dead and decaying, would still be suitable for shaping traditional Hawaiian implements. After a good ascent, we located the tree on a steep, talus slope and sifted through the surrounding rubble and leaf litter in hopes of finding uhiūhi seeds. It seemed like hours. One of the challenges for Māhealani and I was that neither of us had

⁵⁸ Wagner, W. L., and D. R. Herbst, and S. H. Sohmer. 1999. *Manual of the Flowering Plants of Hawai‘i*, Vol. 1 & 2 (Revised ed.). Honolulu: University of Hawai‘i Press, p. 647.

ever seen an uhiūhi tree or its seeds before. While we did find a number of lonomea (*Sapindus oahuensis*) seeds, we failed to find any uhiūhi ones. We later took the opportunity to salvage and gather some of the tree's wood.⁵⁹

For us, this quest was not simply to obtain raw materials for cultural and educational purposes. The focus of our day was to gain individual understanding and strengthen cultural connections to this native species, others in the area, and the 'āina itself. Working in the natural resource management, education, and conservation fields, I realized that I had experienced something irreversible. This tree, to whom I later gave the name *Pōka 'ī*,⁶⁰ meaning *night of the supreme one*⁶¹, or *ancient are the supreme ones*,⁶² had ceased to be a living part of this forest. Even though we didn't find any seeds and the wood gathered was bug-ridden, I was elated to find usable pieces of this precious uhiūhi wood. On the other hand, I was conflicted and emotionally overwhelmed by what we had witnessed. For me, as a Native Hawaiian artisan, the roots, trunk, and branches of a tree are comparable to the iwi, or bones, of dead ancestors. Kānaka 'Ōiwi believe the iwi of human ancestors are most cherished possessions.⁶³

As a Native Hawaiian, the conservation and preservation of uhiūhi and other native Hawaiian species is critically important and personal. Uhiūhi is family – it is kin. The uhiūhi tree, *Pōka 'ī*, those who have perished, and those still living are 'ohana (family).

⁵⁹ Mahi obtained an educational and cultural use permit for gathering the dead uhiūhi wood from the State of Hawai'i, Department of Land and Natural Resources – Division of Forestry and Wildlife.

⁶⁰ This uhiūhi tree was given the name, *Pōka 'ī*, after a beautiful, nearby bay in the Wai'anae area. Mahi often visits this bay after hikes on the west side of the island of O'ahu.

⁶¹ Pukui *et al.* 1974, p. 188.

⁶² Kamehameha Schools / Bishop Estate. Community Education Division, ed. 1988. *Hawaiian Place Names: The significance of Hawaiian sites, their locations, and interpretation of their names*. Hawaiian Studies Institute, p. 2.

⁶³ Pukui and Elbert 1971, p. 98.

Many people go to great lengths for the sake of their family members, and I am prepared to do so as well. It became a mission to learn all I could and immerse myself into the world of uhiūhi – to experience it in any way I could fathom.

1.2. Cultural attachment

In 2004, I went hiking with a female friend on the Palikea Ridge trail, which was at that time a part of Honouliuli Preserve managed by the Nature Conservancy of Hawai‘i (TNCH). I used to be an employee of TNCH and had worked in this area for about four years. This trail was one of my favorites and I knew it intimately. Almost ten years later, the same friend and I were talking about my uhiūhi research and our conversation touched upon our hike that day at Palikea. She recalled that as we walked she had observed me touching and whispering to the plants, trees, and rocks along the trails as I passed them.

It was though you were greeting old friends. It was intensely personal. Sometimes you would round a corner with anticipation awaiting the opportunity to greet your old friend. At one point, I remember you giving one of the trees a honi.^{64,65}

I am not sure exactly how and when these feeling and actions had developed, but it seemed quite normal to me. It definitely was a process over time of learning about and caring for this natural area and others in Hawai‘i from the ocean to the streams and mountain valleys. What was certain is that in many cases others with whom I frequented

⁶⁴ Honi is a greeting where individuals touch noses, also means to kiss. Pukui and Elbert 1971, p. 74.

⁶⁵ Noelle Kahanu, personal communication, May 11, 2013.

these areas and I had developed a connection to and relationships with these landscapes and the entities that inhabited them.

In 1995, the phrase *cultural attachment* was developed by James Kent and JKA Associates. They were working on a report regarding a proposal for a 765 kV transmission line planned to traverse Peters Mountain in West Virginia. They define cultural attachment as:

*the cumulative effect over time of a collection of traditions, attitudes, practices, and stories that tie a person to the land, to physical place, and to kinship patterns.*⁶⁶

The island environment of Hawai‘i from land to sea, from zenith to horizon, is full of natural entities, seen and unseen. These entities and phenomena are prime subject matter for which interpretations can be made, and to which attachments could develop. The cultural attachment definition will serve as a foundation in this investigation of uhiūhi, Hawaiian epistemologies, and Kānaka ‘Ōiwi relationships to their environment.

Cultural attachment is the result of having lived in an area – and having had your ancestors live in that area. Cultural attachment is the result of having made everyday decisions within the context of land, place, and kinship. Cultural attachment requires the active (rather than passive) process of people attempting to preserve their natural and social environment.⁶⁷

The JKA study team, which has conducted research in Hawai‘i, had found a distinction between cultural attachment and other attachments, such as attachments to views, rural lifestyle, property values, or other such phenomena. They found that cultural

⁶⁶ Kent, J. A., J. Ryan, C. Hunka, and R. Schultz (JKA Associates). December 1995. *Cultural Attachment: Assessment of Impacts to Living Culture-Chapter 4.15*. Volume II, Final Environmental Impact Statement, AEP 765kV Transmission Line Construction, Jacksons Ferry, Virginia to Oceana, West Virginia: U.S. Forest Service, George Washington & Jefferson National Forest, p. 1.

⁶⁷ Ibid. p. 6.

attachment is non-transferable, meaning that it is connected to a specific physical place and a specific group of related people.⁶⁸ Furthermore, there is a sense of stewardship towards the land, which is held in high regard and respected. It is not viewed as a commodity to be bought and sold, but to be used wisely and preserved.⁶⁹

Kent and his team found that the different areas that were to be affected by the transmission line had varied intensities of cultural attachment. The higher the cultural attachment of the area, the greater the impact the power line would have on the land, families and individuals, the physical place, and therefore the destruction to the cultural attachment of the area.⁷⁰ They assessed the impact of an intrusion, in this case the power line, on the cultural landscape of an area and how it disrupts and destroys culture.

An intrusion is an outside force brought into an area, which will create a significant long-term change in the relationship between people, and land, which cannot be absorbed into the existing culture, thereby changing that culture. In areas where cultural attachment is strong, because individuals have consistently made choices over time, which support their culture, an intrusion is a threat to the living culture.⁷¹

The intrusions in this particular case in West Virginia could not be alleviated through the relocation of people involved or by reimbursement because cultural attachment is both non-transferable and non-economic.⁷²

⁶⁸ Ibid. p. 3.

⁶⁹ Ibid. p. 6.

⁷⁰ The areas in question were rated in one of five categories: high, high/medium, medium, medium/low, or low. Ibid. pp. 9,11.

⁷¹ Ibid. pp. 10-11.

⁷² Ibid. p. 15.

1.2.1. Uhiūhi cultural attachment

I contacted James Kent and asked for his blessing on a novel, but related definition tailored for this uhiūhi thesis. Modifying their cultural attachment definition, I replaced:

- 1) “a person” with “Kānaka ‘Ōiwi”;
- 2) “land” with “Uhiūhi”;
- 3) “physical place” with “the Hawaiian Islands” ; and
- 4) “to” with “their collective” .

And so it was born, the *Uhiūhi Cultural Attachment* definition:

Uhiūhi Cultural Attachment is the cumulative effect over time of a collection of traditions, attitudes, practices, and stories that tie Kānaka ‘Ōiwi to Uhiūhi, the Hawaiian Islands, and their collective kinship patterns.

James Kent consented and expressed his approval:

I love the definition of how the uhiuhi tree functions in the cultural attachment definition. Lose the tree you lose the culture... Unlike other attachments, culture attachment was so precise that you could not “find” a new place or relocate. It would leave pukas⁷³ in the culture that could not be sustained by patching over. The final result was that the U.S. Forest Service declared that these historic Scotch Irish settlers (came there in the middle 1700s) were ‘endangered species’ because of their cultural attachment and therefore the power line had to find another route. Peters Mountain remains the culturally attached settlement that it was 300 years ago. It was a remarkable decision for a government agency and one that has had enormous impact on the social ecology scientific world as yours will on bio-geography.⁷⁴

⁷³ *Puka* is a Hawaiian word for a hole, door, or opening. Pukui and Elbert, 1971, p. 323.

⁷⁴ James Kent, e-mail correspondence, February 21, 2013.

1.2.2. Hawaiian worldview and cultural attachment

In his overview of the Hawaiian cultural landscapes, Kepā Maly, an esteemed cultural historian, has used the cultural attachment definition in the Hawaiian setting:

...in a traditional context, natural resources – such as rock outcrops, a pool of water, a forest grove, an ocean current, a mountain, the flat land expanse, the small hill and the natural lay of the land, and all creatures from the sea, land and air – are all valued as cultural properties by the Hawaiian people. It is this ‘cultural attachment’ to the natural world that defines a significant body of traditional cultural properties and cultural practices of the Hawaiian people.⁷⁵

In the Hawaiian worldview, humans, the youngest descendants among living entities, have the role of caretakers. We are the stewards of plants, animals, and all things of the land, ocean, and sky. Culturally, there is no separation between the Hawaiian people and their environment. The natural beings and phenomena are our kin, our family.⁷⁶ Humans have the kuleana⁷⁷, or responsibility, of caring for and protecting all other species on the Earth.⁷⁸

⁷⁵ Maly, K. 2001. *Mālama Pono i ka ‘Āina: An Overview of the Hawaiian Cultural Landscape*, 5 pgs., p. 2.

⁷⁶ McGregor, D. P. 1995. *Traditional Hawaiian Cultural, Spiritual, and Subsistence Beliefs, Customs, and Practices and Waiahole, Waikane, Hakipu‘u, and Kahana, Final report*. Native Hawaiian Advisory Council, p. 7.

⁷⁷ Besides its meaning of “responsibility”, the word kuleana can also be defined as right, title, property, portion, jurisdiction, authority, interest, claim, and ownership. Pukui and Elbert 1971, p. 165.

⁷⁸ Cook, B. P., K. Withy, and L. Tarallo-Jensen. 2003. Cultural Trauma, Hawaiian Spirituality, and Contemporary Health Status. *California Journal of Health Promotion* 1(Special Issue: Hawaii):10-24, p. 11.

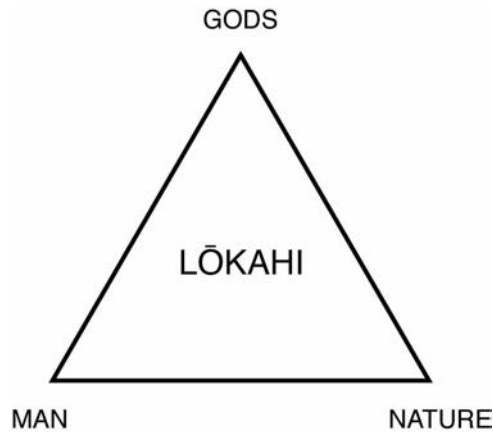


Figure 2. Lōkahi in the Hawaiian worldview

[M. La Pierre, 2013]

Hawaiian customs and practices are formed and based on lōkahi, or harmony⁷⁹, and the maintenance of spiritual, cultural, and natural balance with the elemental natural forces.⁸⁰ These customs and traditions have evolved with the overriding principles of coexistence, conservation, management, and interdependence of natural resources for survival of the gods, man, and nature.⁸¹ This lōkahi outlook can be expressed in triangular form⁸² where there is constant effort to keep harmony and balance between the gods-man, gods-nature, and man-nature relationships.

1.2.3. Uhiūhi cultural knowledge and attachment today

Currently, there are people I know in the Native Hawaiian community (educators, artisans, conservation professionals) that have some degree of knowledge of uhiūhi, but

⁷⁹ Pukui and Elbert 1971, p. 193, English-Hawaiian section, p. 71.

⁸⁰ McGregor 1995, p. 11.

⁸¹ Lynette K. Paglinawan, Pā-Ku‘i-A-Lua culture night presentation (Mahi’s notes), March 31, 2008.

⁸² This lōkahi triangle worldview graphic is a significant teaching tool within the Hawaiian cultural group, Pā-Ku‘i-A-Lua, and was initially shared with Mahi in 1998. Mahi perpetuates the use of this lōkahi triangle graphic in various Hawaiian cultural educational programs.

just over a handful have seen an uhiūhi tree in its natural habitat. The wild populations of uhiūhi are found on steep slopes or vast lava fields where you need an access permit, gate keys, and a four-wheeled drive vehicle just to get there.

Several botanists and plant enthusiasts have followed the saga of uhiūhi since the 1800s.⁸³ A firm botanical and biogeographical knowledge of uhiūhi is present at the federal, state, and private levels. As I asked around and continued my search for information on uhiūhi, I found that there is little to no botanical or cultural knowledge of uhiūhi amongst the general population, including both Hawaiians and non-Hawaiians.

One of the most significant cultural relationships that has been strengthened and rekindled in recent history is the Native Hawaiian people's familial connection to kalo, or taro (*Colocasia esculenta*).⁸⁴ Hawaiians revere the kalo plant as the elder sibling, Hāloa-naka-lau-kapalili, and there are reciprocal responsibilities toward each other, as in one's human family unit. As Hawaiians, it is our kuleana to honor and care for kalo. Kalo, in return, became the primary staple food providing Kānaka 'Ōiwi with its nutritious leaves, stems, and corm.⁸⁵ The relationship between kalo and Native Hawaiians had become strained beginning with European contact in 1778 and continued to decline with some Hawaiians choosing alternative work options. The most drastic were the changes to land tenure in the Hawai'i in 1848, and competition from farmers of other ethnicities.⁸⁶

⁸³ Bernice Pauahi Bishop Museum. Herbarium Pacifica, *Caesalpinia kawaiensis* database and specimen sheets (April 19, 2007).

⁸⁴ College of Tropical Agriculture and Human Resources, University of Hawai'i at Mānoa. 2008. *Taro Mauka to Makai: A Taro Production and Business Guide for Hawai'i Growers*. Second edition. College of Tropical Agriculture and Human Resources, University of Hawai'i at Mānoa, p. 18.

⁸⁵ Davianna McGregor, e-mail correspondence, March 4, 2013.

⁸⁶ College of Tropical Agriculture and Human Resources 2008, p. 18.

Today, the growing attachment to kalo and Hāloa-naka-lau-kapalili by some of Hawaii's Hawaiian and non-Hawaiian residents has transcended revival, and now kalo and its origins and Hawaiian kinship connections are in private and public school curricula. The making of traditional tools for processing kalo, pōhaku ku'i 'ai (stone food pounders) and papa ku'i 'ai (food pounding boards), workshops on how to grow and identify Hawaiian varieties has increased at the university and community levels allowing people to become more intimate with their sibling. Kalo is now growing in residential gardens, in public and private school campuses, new and revived lo'i kalo (irrigated kalo patches) in several Island urban and rural communities.

1.3. Research questions

So what has become of our ancestors knowledge of uhiūhi? What was the knowledge level of Hawaiians of old, and did they have an uhiūhi cultural attachment in years gone by? Was there a time when Hawaiians knew more of uhiūhi? And if they did, why did an apparent cultural detachment occur? Let us remind ourselves per Kent and his associates' that cultural attachment is non-transferable. Likewise, an uhiūhi cultural attachment is non-transferable as well. Uhiūhi is only of this place, and so are Hawaiians and their heritage.

Dr. Richard Kekuni Akana Blaisdell, emeritus professor of medicine at the Department of Native Hawaiian Health at the University of Hawai'i John A. Burns School of Medicine, expresses his pride and knowledge of this connection to the 'āina, and shared point of view of some Hawaiians:

The shapes of clouds, the cries of birds at night, the sounds of waves on the reef – all have messages for my people. This house, the trees outside, the earth beneath my feet – all are alive and aware. We’re talking to them, listening to them. We’re in constant communication with all that’s around us – people, other living beings, rocks, clouds, the sea, the spirits of our ancestors.

Our worldview requires being in the natural environment.

For us, this is our homeland – our only homeland. If our language and culture die here, they’re gone. And we vanish as a people.⁸⁷

I have heard him speak and felt his mana and beliefs running deeply through his veins.

His worldview is natural and comfortable to him.

Growing up in Hawai‘i, my family and I did not know or speak intimately of Hawaiian gods or kindred relationships to the land, plants, animals, and natural phenomena. This wasn’t the way I was taught as a child or even as a teen, although through the years I have been learning to feel and understand this connection to these things of Hawai‘i, my home. Since the mid-1980s, I have been literally lured by the call of nature: its landscapes, flora and fauna, and marvels of the sea and sky – and the call of Hawaiian culture.

The pursuit of my Hawaiian identity and curiosity of the cultural significance of Hawaii’s native species, like uhiūhi, have fueled this study – for these are the things I had hoped to learn, know, share, and perpetuate. The newly formed Uhiūhi Cultural Attachment definition is repeated here:

Uhiūhi Cultural Attachment is the cumulative effect over time of a collection of traditions, attitudes, practices, and stories that tie Kānaka ‘Ōiwi to Uhiūhi, the Hawaiian Islands, and their collective kinship patterns.

⁸⁷ Herter, E. ed. 1993. *Discovery: The Hawaiian Odyssey*. Honolulu: Bishop Museum Press, p. 47.

This intimate journey will investigate the following research questions:

- 1) Did Kānaka ‘Ōiwi have an uhiūhi cultural attachment?
- 2) If Kānaka ‘Ōiwi did have an uhiūhi cultural attachment, to what extent?
- 3) If Kānaka ‘Ōiwi had an uhiūhi cultural attachment, what were the intrusions that caused detachment?
- 4) Is it possible for Kānaka ‘Ōiwi culturally reattach to uhiūhi in modern times?
- 5) If so, by what means or processes could cultural attachment to uhiūhi be facilitated and achieved?

1.4. One path with dual methods

1.4.1. Hawaiian methods

The traditional teaching tenet of old Hawai‘i was based on: “Nānā ka maka. Ho‘olohe. Pa‘a ka waha. Ho‘opili”, or “Observe, Listen. Keep the mouth shut. Imitate.” Through centuries of practicing this concept the Hawaiian kūpuna (ancestors) knew:

- 1) I ka nānā no a ‘ike. By observing, one learns;
- 2) I ka ho‘olohe no ka ho‘omaopopo. By listening, one commits to memory; and
- 3) I ka hana no ka ‘ike. By practice, one masters the skill.

To this a final directive was added: Never interrupt. Wait until the lesson is over and the elder gives you permission. Then – and not until then – *nīnau*. Ask questions.

These precepts were followed long before reading and writing came upon the Hawaiian scene. They continue to be observed through the introduction of a written language and the establishment of schools. They influence many Hawaiian children of today, both at home and in the classroom.⁸⁸

⁸⁸ Pukui *et al.* 1972. Vol. II, pp. 48-49.

These principles are the foundation of my processes and procedures in acquainting myself with uhiūhi. The strategy was to engage of all of my senses. The five senses we commonly think of, sight, hearing, touch, taste, and smell, and also that of my na‘au – the knowledge, emotion, and intellect within. Many, including myself, are blessed with mentors aiding our quest for answers and connections to our Hawaiian heritage. This includes learning and trusting one’s na‘au. They urge us to experience, to live, and to do in regard to cultural practices for there is no substitute and no better way to learn.

It is as most mentors reminded me: practice culture, experience culture, and live culture. It is no longer enough to simply learn the history or language in an academic setting – one must teach how to fish in the language, how to weave lauhala in the language, how to mālama ‘āina (taking care of the land) via language. It is a call to practice. It is a reminder of the most importance aspect of a Hawaiian knowledge structure: experience.⁸⁹

The niho, or foundation stone, of my Hawaiian methods was to experience uhiūhi in various ways. Initially, some scenarios I anticipated for learning about and experiencing uhiūhi included: researching its historical and present ranges; visiting uhiūhi trees in their native habitat; trying to fashion and use items that were traditionally made from its wood; and investigating Kānaka ‘Ōiwi connections and relationships to uhiūhi.

1.4.1.1. Hawaiian measurement and scale

During this journey, I will be using a kukui nut as a Hawaiian gauge for sizing. A kukui nut was chosen for its familiarity by many Kānaka ‘Ōiwi and other Hawai‘i residents. Kukui, or kuikui, its name on Ni‘ihau, is the candlenut tree or *Aleurites*

⁸⁹ Meyer 2003, p. 159.

moluccana (L.) Willd.⁹⁰ If you are in Hawai‘i, it is likely that this conspicuous tree, designated as the official state tree of Hawai‘i⁹¹, is not far from where you are. Originally brought by Polynesian ancestors of the Hawaiians, the fruits, flowers, leaves, and bark of the tree have many uses; and the nuts themselves are burned as a source of light for lamps and torches.⁹² Kukui seeds range in diameter from 2.3 – 4 cm.⁹³



Figure 3. Kukui nut gauge

[Actual size 3.1 cm (1.22 inches) in diameter – Photo: M. La Pierre, 2013]

Throughout many of the observations, experiments, and experiences with uhiūhi this particular kukui nut, whom I named Kuikui⁹⁴, was present. He is 3.1 cm, or 1.22 inches in diameter, and will serve as our guide in matters of scale.

⁹⁰ Wagner *et al.* 1999, p. 647.

⁹¹ *Ibid.* p. 598.

⁹² Pukui and Elbert 1971, p. 64.

⁹³ Wagner *et al.* 1999, p. 598.

⁹⁴ Over a period of five to six years, Kuikui went through a lot and had to be glued back together once confirming his hardwork, and many hours of travel and photo shoots.

1.4.2. Conventional methods

During my early literary review of books, journals, newspapers, botanical databases, herbarium records, map collections, and on-line information, it appeared that the sources from around the 1960s to present were citing in most cases the identical sources from the late 1800s to mid-1900s. I believed the answers to my research questions dwelled in new sources not been previously referenced, and the further back in time I went the better.

The Hawaiian language newspapers printed from 1834-1927, are incredible archives of traditional Hawaiian knowledge. These firsthand accounts were being written and published by Hawaiians with keen knowledge of Hawai‘i, its culture, history, and landscapes. Some were writing for audiences worldwide, but many for the sole purpose of sharing and perpetuating Hawaiian culture and traditions before they were totally lost.⁹⁵ I am honored to share several contemporary translations of selected uhiūhi related articles and accounts translated by Hawaiian language scholars Mālia Kruger, Pōmaika‘i Benevedez, and Kaua Neumann. Their skill, passion, and knowledge will help us to learn and share in experiencing and understanding the Native Hawaiian worldview, and the information and happenings of the time being shared through the words of people who lived in the Hawai‘i of the past.

In addition, I sought the assistance and information of botanical experts and cultural practitioners, as well as, resource management professionals and land managers of city, state, federal, and privately owned areas. I scanned and surveyed private collections of artifacts in publications and museums worldwide, and collections and modern creations of local artisans.

⁹⁵ Nogelmeier 2010, p. xii.

Several experiments were conducted and data collection methods were employed to gain personal experiences with uhiūhi. The experiments were often inspired and driven by the desire to test information provided in the literary sources, and gain hands-on knowledge of the subject matter. I conducted analyses of seed and wood buoyancy, seed propagation, wood color variations, and wood aroma to gain insight to the many facets of this tree species. Its sap was also tasted when offered by one of my mentors. All senses were employed during this uhiūhi journey.

Data collected methods included: a Canon Powershot S3IS digital camera, an iPhone 4S, and a Garmin GPSmap76CSx unit.

1.5. Study species

1.5.1. Mann finds uhiūhi

At the Proceedings of the American Academy of Arts and Sciences on September 11, 1866, Horace Mann⁹⁶ presented his findings of a new Hawaiian tree species he named, *Caesalpinia kavaiensis*, or “the ‘Uhiuhi’ of the natives”⁹⁷ which he first discovered on the island of Kaua‘i around 1864.⁹⁸ The original text below may be the first printed non-Hawaiian words describing uhiūhi, this *new species* (sp. nov = species novum) to scientists of the Americas and the world.

⁹⁶ Mann, H. 1867. *Enumeration of Hawaiian Plants. From the Proceedings of the American Academy of Arts and Sciences*. Cambridge: Welch, Bigelow, and Company, p. 145.

⁹⁷ Ibid, p. 165.

⁹⁸ USFWS. *The Recovery Plan for the Caesalpinia kavaiensis & Kokia dryariodes. Threatened and Endangered Plants in the Hawaiian Islands*. Pacific Islands – Endangered Species. Retrieved February 26, 2006 from http://www.fws.gov/pacificislands/wesa/caekava_kokdryidx.html.

120. *CÆSALPINIA KAVAIENSIS* (sp. nov.): arborea, inermis; ramis novellis pubescentibus; foliis abrupte-bipinnatis; pinnulis 3–5-jugis; foliolis oblongis obtusis emarginatisve basi obtusis vel in petiolum brevem attenuatis; racemis plurifloris; pedicellis floribus duplo longioribus; staminibus corollam paullo superantibus; filamentis hirsutis. — On the leeward verge of the mountains of Kauai. — A small tree with remarkably durable, very dark-colored wood, the “Uhiuhi” of the natives. Leaves with about 3 pairs of primary pinnæ. Leaflets one or two inches long, $\frac{1}{2}$ to $\frac{3}{4}$ inch wide, paler underneath, glabrous excepting the base of the midrib below in the young parts. Flowers purple, $\frac{3}{4}$ of an inch long. (M. & B.)

99

Figure 4. Horace Mann’s description of uhiūhi

[Source: Mann 1867, pp. 164,165]

Endemic to the Hawaiian Islands, uhiūhi is a member of the Fabaceae, or bean or pea family. It is believed that uhiūhi was never abundant in the past 200 years, because of its relatively late discovery on the various islands.¹⁰⁰ Uhiūhi grow as large shrubs or trees up to 10 m (33 feet) tall, with trunks 31 cm (13 inches) in diameter, and thick, dark gray bark, its leaves are bright green above and lighter on its underside, are bipinnate.

⁹⁹ The “B.” in “(M. & B.)” at the end of excerpt is for Brigham. Mann acknowledged W. T. Brigham for accompanying him on visits to the various islands and aiding in collecting Hawaiian plant species.

¹⁰⁰ USFWS. *The Recovery Plan for the Caesalpinia kavaiensis & Kokia dryariodes. Threatened and Endangered Plants in the Hawaiian Islands*. Pacific Islands – Endangered Species. Retrieved February 26, 2006 from http://www.fws.gov/pacificislands/wesa/caekava_kokdryidx.html.



Figure 5. A spectacular uhiūhi in bloom

[North Kona, Hawai‘i Island – Photo: K. Wooton, January 2008]



Figure 6. Uhiūhi pods and seed

[Photo: M. La Pierre, March 2013]

Its pinkish, attractive pods are winged, and contain two to four pale brown to khaki colored seeds.^{101,102} The rattling of pods among its branches and the seeds within them produce a distinctive resonance even in slight breezes.¹⁰³ The nearly black wood is very hard, durable, and dense.¹⁰⁴ Some O‘ahu trees seem to have a more vine-like appearance than their Hawai‘i Island counterparts, and it has been noted that the crotches of uhiūhi trees in general are a point of weakness.¹⁰⁵

As the direct descendants of the gods, the ali‘i, or chiefly class, were often compared to various elements, entities, and natural phenomenon of nature. One instance was in reference to Nae-kapu-lani, the wife of Manokalanipō beloved ali‘i of Kaua‘i.

The beauty of his wife, Nae-kapu-lani, was compared to the *uhiuhi* tree that bears numerous dark red flowers on a widespread canopy. The heartwood of the uhiuhi is almost black while the sapwood is straw colored, a particular beautiful combination. Unlike most trees, the *uhiuhi* wood is so dense it sinks in water. Its wood was used for *pou* (house posts), a farmer’s ‘ō‘ō (digging tool), women’s *i‘e kuku* (tapa beaters), a warrior’s *ihe* (spear), and *kāma‘a loa* (sled runners). It was no small compliment to Nae-kapu-lani to compare her to an *uhiuhi* tree.¹⁰⁶

Uhiūhi flowers have stunning shades of pink, purple, orange, and red, and vary slightly in dominant color from one population to the next.^{107,108,109} Some sources state that uhiūhi

¹⁰¹Wagner *et al.* 1999. pp. 647-648.

¹⁰² Lamb, S. H. 1981. *Native Trees and Shrubs of the Hawaiian Islands*. Santa Fe, New Mexico, Sunstone Press, p. 48.

¹⁰³ Mahi La Pierre, personal observations of cultivated and wild uhiūhi trees on O‘ahu, Kaua‘i, and Hawai‘i Islands, 2006-2012.

¹⁰⁴ Mahi La Pierre, personal observations, 2002-2013.

¹⁰⁵ Joel Lau, personal communication, January 2007.

¹⁰⁶ Wichman, F. B. 2003. *Na Pua Ali‘i o Kaua‘i: Ruling Chiefs of Kaua‘i*. Honolulu: University of Hawai‘i Press, p. 55.

¹⁰⁷ Sohmer and Gustafson 1987, p. 76.

¹⁰⁸ Culliney, J. L., and B. P. Koebele. 1999. *A Native Hawaiian Garden: How to Grow and Care for Island Plants*. Honolulu: University of Hawai‘i Press, p. 137.

¹⁰⁹ Mahi La Pierre, personal observations of cultivated and wild uhiūhi trees on O‘ahu, Kaua‘i, and Hawai‘i Islands, 2006-2012.

blooms in the early spring¹¹⁰, and others mention blooming in the winter.¹¹¹ According to herbarium records, there is no clear flowering season,¹¹² but I have observed vigorous growth of flowers and pods in the winter months on Hawai‘i Island.¹¹³



Figure 7. Uhiuhi in bloom

[North Kona, Hawai‘i Island – Photo: M. La Pierre, February 2008]

1.5.2. Labyrinth of Epithets

In 1986, the U.S. Fish and Wildlife Service (USFWS) initially listed uhiuhi as an endangered species under the name *Mezoneuron kawaiense*.¹¹⁴ In a span of almost 150 years, uhiuhi and its taxonomic names have been formed, reformed, and reinstated. Genus

¹¹⁰ Rock 1913, p. 185.

¹¹¹ Culliney and Koebele 1999, p.137.

¹¹² USFWS. 1994. *Recovery plan for Caesalpinia kawaiensis and Kokia drynarioides*. U. S. Fish and Wildlife Services, Portland, OR, p. 20.

¹¹³ Mahi La Pierre, personal observations of cultivated and wild uhiuhi trees on O‘ahu, Kaua‘i, and Hawai‘i Islands, 2006-2012.

¹¹⁴ USFWS. 1986. *Determination of endangered status for Mezoneuron Kawaiense (uhiuhi)*. Fed. Reg. 51: 24672-24675, p. 24672.

names have fluctuated from *Caesalpinia*¹¹⁵, *Mezoneuron*¹¹⁶, and *Mezoneurum*, a variant spelling of the genus.¹¹⁷ As of October 2012, the USFWS proposed adopting taxonomic placement suggested by Wagner, formally recognizing uhiūhi as *Mezoneuron kawaiense*.¹¹⁸

As an added challenge, there are also variant Hawaiian names for uhiūhi. Its other Hawaiian names found in literary sources are: kalamona, kolomona¹¹⁹, and kea or kāwa‘u on Maui.^{120,121,122} The article below is somewhat confusing as Beniamina, a Maui resident in 1857, writes about the strong hardwood of a tree called “Kea”, and he compares it leaves to the “Uhiuhi”. The use of the name Kea makes sense as he is from Maui, and it is great description giving location of the trees and color of its wood.

Laa Paakiki.

E ka Hae Hawaii e: Aloha oe; eia kekahi laau hou a‘u i ike ai, aia mauka o Nuu, i Kaupo, kahi i ulu ai keia laau. O ka inoa o keia laau he Kea; he laau maikai, e ninau mai auanei paha oukou e ka poe heluhelu, "heaha ka maikai o ia laau?" eia kona maikai, o kona paakiki, oolea loa, o ka oi keia o na laau paakiki i ulu ma keia pae aina, o kona kino ua eleele a oolea loa, o kona lau ua like me ka lau o ka Uhiuhi; ...

Aloha kaua. BENIAMINA. Kipahulu, Maui H., Nov. 5, 1857¹²³

Hardwoods.

Dear Hae Hawaii, aloha to you. There is a new wood that I’ve become aware of in the uplands of Nuu, in Kaupo, the place where this wood

¹¹⁵ Mann 1867, p. 165.

¹¹⁶ Hillebrand, W. F. 1981. *Flora of the Hawaiian Islands*, Monticello, NY: Lubrecht & Cramer (Original work published in 1888), p. 110.

¹¹⁷ The original spelling of this genus was Mezonevron, sometimes spelled as Mezoneurum. USDA, ARS, National Genetic Program. *Germplasm Resources Information Network – (GRIN)* [Online database]. National Germplasm Resources Laboratory, Beltsville, Maryland. Retrieved June 8, 2013 from <http://www.ars-grin.gov/cgi-bin/npgs/html/genus.pl?18920>.

¹¹⁸ USFWS. 2012. Listing 15 species on Hawaii Island as endangered and designating critical habitat for 3 species; proposed rule. Fed. Reg. 77: 63931.

¹¹⁹ Kolomona, or kalamona is the name Solomon in Hawaiian. Pukui and Elbert 1971, pp. 113,151.

¹²⁰ Rock, J. F. 1913. *The Indigenous Trees of the Hawaiian Islands*. Reprint 1974, Vermont & Japan: Charles E. Tuttle Company, Inc., p. 181.

¹²¹ Wagner *et al.* 1999, p. 647.

¹²² Hillebrand 1981, p. 111.

¹²³ Beniamina. Laau Paakiki. *Ka Hae Hawaii*, November 18, 1857.

grows. The name of this wood is Kea; it is a good wood, yet you may probably be asking, dear readers, “What are the benefits of this wood?” Here is its quality: its hardness, a great strength, making it the best of the hardwoods that grow in this archipelago—with a body that is extremely strong and black. Its leaves similar to those of the Uhiuhi; ... Aloha. BENIAMINA. Kipahulu, Maui H., Nov. 5, 1857¹²⁴

Hillebrand lists uhiūhi as *Mezoneuron kauaiense*, and its Hawaiian names as kalamona or kolomona.¹²⁵ It is important to note that several other Fabaceae species share Hawaiian names with uhiūhi. An indigenous Hawaiian shrub, *Senna gaudichaudii* (Hook. & Arnott)¹²⁶, also known as *Cassia gaudichaudii*, is referred to as kolomona, kalamona, heuhiuhi, and uhiuhi.¹²⁷ A naturalized shrub or small tree, *Senna septemtrionalis*, with bright yellow flowers is also called kalamona, or kolomona, literally Solomon.¹²⁸ The confusion of multiple names for one species, and the sharing of Hawaiian names by several species documented by malihini and local sources will continue to be an issue as we move forward in this journey.

Once again, taxonomists may have decided to adjust to which genus uhiūhi belongs, and in terms of its Hawaiian names, it could have depended on what island you are on or with whom you were conversing to know which species was in reference. This journey of uhiūhi enlightenment has not been an easy one. Perhaps we should not be surprised as the meaning of the word *uhiuhi*, which is a reduplication of *uhi*, could mean a covering, a veil, to conceal or overwhelm, as well as to deceive or hide the truth.¹²⁹ The definition of

¹²⁴ Translation by Mālia Kruger and Pōmaika‘i Benevedez, February 2013.

¹²⁵ Hillebrand 1981, pp. 110-111.

¹²⁶ *S. gaudichaudii* has greenish white to chartreuse or pale yellow flower petals that are sometimes tinged with red. Wagner et. al 1999, p. 699.

¹²⁷ Ibid. p. 699.

¹²⁸ Ibid. pp. 701-702.

¹²⁹ Pukui and Elbert 1971, pp. 336,337.

concealment could be a reason for the naming of this tree as *uhiuhi* because of its hidden or concealed nature of its flower structure.¹³⁰

Uhiūhi's other Hawaiian names, kāwa'u and kea, sometimes spelled ke'a, have meaning worthy of note if we are interested in deciphering how its got these names. Kāwa'u means to scrape, but can also mean to detain, to delay, or keep back.¹³¹ The word ke'a, can be in reference to a cross, crucifix, a cross piece as in the sticks connecting double-hulled canoes, or a bow or dart. Ke'a can also mean to cross, hinder, obstruct, intercept, or block. All three words, uhiuhi, kāwa'u, and ke'a have restrictive or deceptive interpretations as if holding something or information back. See Table 1 for detailed meanings of uhiūhi's Hawaiian names and related words.

1.5.3. Landscapes where uhiūhi once lived

Uhiūhi is historically known from dry and mesic forests between 80 to 920 m (262 to 3,108 feet) elevation of the main Hawaiian islands of Kaua'i, O'ahu, Maui, Lāna'i, and Hawai'i.¹³² Much of its present habitat is rough and unforgiving terrain, and is not easily accessible.¹³³ Now believed to be extinct on Maui and Lāna'i, these extinctions of uhiūhi are fairly recent. On the island of Lāna'i, a single live tree was last observed in 1990 and is

¹³⁰ Mark Merlin, personal communication, May 2, 2013.

¹³¹ Pukui and Elbert 1971, p. 129.

¹³² Wagner *et. al* 1999, p. 648.

¹³³ USFWS. 1994. *Recovery Plan for Caesalpinia kavaiensis and Kokia drynarioides*. U. S. Fish and Wildlife Services, Portland, OR, p. 7.

thought to have died sometime in 1995.^{134,135} While on Maui, uhiūhi was last reported from Kaupo Gap in 1913.^{136,137}

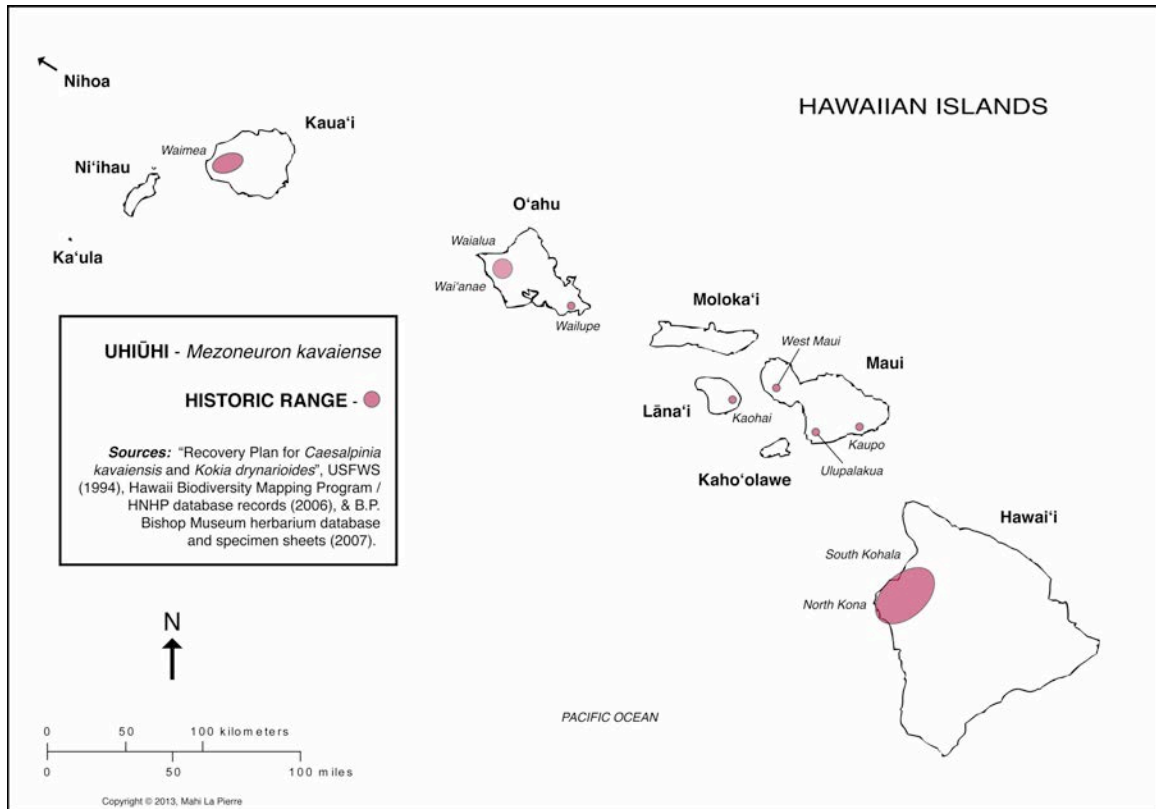


Figure 8. Uhiūhi Historic Range [M. La Pierre, 2013]

1.5.4. Uhiūhi current status

Uhiūhi is on the verge of extinction. It is estimated that between 90 and 140 naturally occurring uhiūhi trees remain within three Hawaiian landscapes on three islands, and

¹³⁴ Lau, J. Q. C. Hawai'i Natural Heritage Program, Field notes on observation of *Caesalpinia kavaensis*: CaeKav_P96LAU01.030, May 19, 1996.

¹³⁵ Joel Lau, personal communication, January 26, 2007.

¹³⁶ Hawaii Natural Heritage Program. Center for Conservation Research and Training, University of Hawai'i at Mānoa. March 14, 2006. Element Occurrence Summary Sheets for *Caesalpinia kavaensis*.

¹³⁷ Herbarium Pacifica, Bernice P. Bishop Museum. April 19, 2007. Database sheets for *Caesalpinia* spp.

nowhere else in the world.¹³⁸ Only one individual survives in the Waimea district of Kaua‘i,¹³⁹ four trees are in the northern Wai‘anae Mountains on O‘ahu in the Waialua district¹⁴⁰, and the remainder are on the northwest and west slopes of Hualālai Volcano in the adjoining districts of South Kohala and North Kona on the island of Hawai‘i.^{141,142}

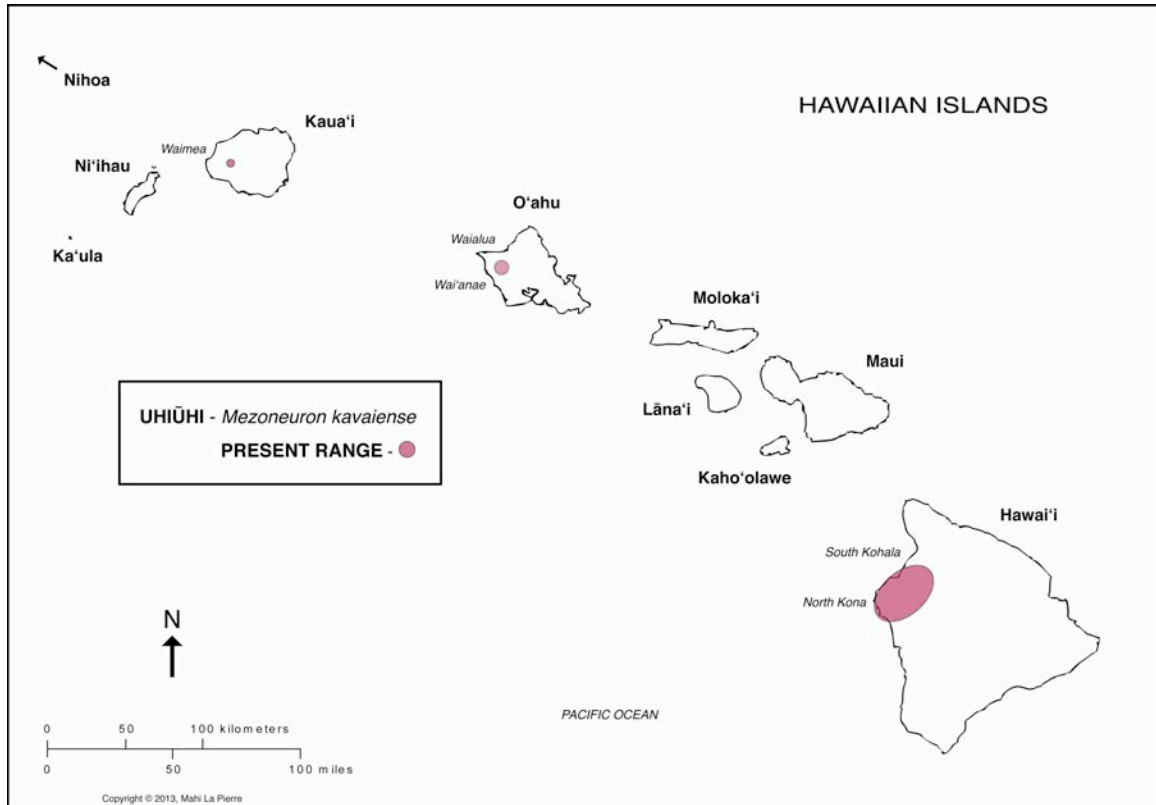


Figure 9. Uhiühi Present Range [M. La Pierre, 2013]

¹³⁸ USFWS. 2012. *Listing 15 species on Hawaii Island as endangered and designating critical habitat for 3 species; proposed rule*. Fed. Reg. 77: 63927-64018, p. 63980.

¹³⁹ Thought to be extinct on Kaua‘i in the wild since the 1990's, an individual tree was found by NTGB staff in December 2011. *The Bulletin of the National Tropical Botanical Garden*, Volume XXIX-1, Spring 2012, pp. 22,23.

¹⁴⁰ Mahi, personal observations, with The State of Hawai‘i, O‘ahu Plant Extinction Prevention (OPEP) program staff, 2007, 2008 and 2011.

¹⁴¹ Mahi, personal observations, 2007 and 2008.

¹⁴² USFWS. 2012. *Listing 15 species on Hawaii Island as endangered and designating critical habitat for 3 species; proposed rule*. Fed. Reg. 77: 63927-64018, p. 63980.

1.5.5. Associates and threats

On Kauai, uhiūhi is known from dry forests with lama (*Diospyros sandwicensis*), wiliwili (*Erythrina sandwicensis*), ēlama (*Diospyros hillebrandii*), mehamehame (*Flueggea neowawraea*), and āulu or lonomea (*Sapindus oahuensis*).¹⁴³ Uhiūhi associates on O‘ahu include: ‘ōhi‘a (*Metrosideros polymorpha*), lama, ‘a‘ali‘i (*Dodonaea viscosa*), maile (*Alyxia stellata*), hame (*Antidesma pulvinatum*), lonomea, alahe‘e (*Psydrax odorata*) and wiliwili.¹⁴⁴ On Hawai‘i Island, uhiūhi grows along with lama, kauila, maua (*Xylosma hawaiiense*), and kulu‘i (*Nototrichium sandwicense*).¹⁴⁵

Presently surviving in areas with poor soil nutrients, uhiūhi is threatened by urban development, habitat degradation, ungulates, wildfires, invasive plants such as *Pennisetum setaceum* (fountain grass), rodents, invasive insects such as *Xylosandrus compactus* (coffee twig borer), and the collection of wood and seed by unauthorized individuals.^{146,147,148}

Much as they are globally, tropical lowland dry forests are among the most imperiled habitats in the Hawaiian Islands.^{149,150} Highly impacted by humans and often dominated by introduced species, Hawaii’s dry forests have not received the attention lavished on more glamorous upland species and habitats.

¹⁴³ USFWS 2010, p. 8.

¹⁴⁴ Ibid.

¹⁴⁵ Culliney and Koebele 1999, p. 136.

¹⁴⁶ USFWS 2010, p. 8.

¹⁴⁷ Betsy Gagne, personal communication, March 1, 2006.

¹⁴⁸ Mahi La Pierre, personal observations, O‘ahu and Hawai‘i islands, 2007, 2008, 2011.

¹⁴⁹ Janzen, D. H. 1988. Tropical Dry Forests. In *Biodiversity*, edited by E. O. Wilson, 130-144. National Academy Press, Washington, DC, p. 130.

¹⁵⁰ Loope, L. L. 1998. Hawaii and the Pacific Islands. In *Status and Trends of the Nation’s Biological Resources, Vol. 2*, edited by M. J. Mac, P. A. Opler, C. E. Puckett Haecker, and P. D. Doran. 747-774. Reston, VA: U.S. Department of the Interior, U.S. Geological Survey, p. 761.

The most disturbing part of this is that uhiūhi is plagued by many forms of threats that vary in size, destruction potential, biological class, and of the earthly elements that demand our attention. Ironically, the primary threat to uhiūhi and Hawaii’s ecosystems is in the mirror. Anthropogenic causes are the most devastating.

One of the threats to the Uhiuhi’s survival is man [sic] himself. Many of our trees have chain saw scars and several stumps have been found where the whole tree has been harvested.

The Waikoloa Dryland Forest Recovery Project¹⁵¹ may be the last chance to save this beautiful, endemic tree in its natural habitat.¹⁵²



Figure 10. The taking of iwi

[North Kona, Hawai‘i Island – Photo: M. La Pierre, January 2008]

While surveying trees in Pu‘u Wa‘awa‘a on Hawai‘i Island, Kunāne Wooton, Ikaika Nakahashi, and I were led by then preserve manager, Mike Donoho. We had the GIS coordinates for a specific tree and were having trouble locating it. Mike has seen the tree in question less than a month earlier, but to our dismay, we found its stump among the

¹⁵¹ Waikoloa Dryland Forest Recovery Project is now called Waikoloa Dry Forest Initiative (WDFI). Beverley Brand, personal communication, February 26, 2013.

¹⁵² Waikoloa Village Outdoor Circle, January 2008, 10(1): 2.

grasses – riddled with chainsaw marks (Figure 10). Someone had cut it down, taken the large branches, and left the smaller ones to rot in the sun.

To us, as Native Hawaiians, this cruel act is was a homicide, the killing of one’s family member. They cut a living ancestor tree, and took its iwi, which have mana and are sacred.

In Hawaiian belief, *mana* could be emitted from a rock, the bones of the dead, the medicine that cures or the potion that kills. *Mana*, in man or object owed its primary origin to the gods. While personal “magnetism” in the Western sense is entirely a human attribute, Hawaii’s *mana* was a human quality tinged with the supernatural.¹⁵³

While visiting uhiūhi locations on O‘ahu and Hawai‘i Island populations, I had observed a good number of dead trees, and the destructive effects of its multiple threats to the existence, including damage caused by ungulates, wildfires, invasive plants, insects, rodents, and the illegal harvest of its wood.¹⁵⁴ It was sobering to experience such damage to this kindred tree species, and I could not help but feel quite helpless and overwhelmed in aiding in its preservation and conservation.

1.6. Around the bend

Our itinerary for this uhiūhi journey, as mentioned, will be through various realms of time, space, place, and the acquisition, possession, loss and regaining of Hawaiian cultural knowledge, mana, and identity. Chapter 2 will focus on examining the historical existence of an uhiūhi cultural attachment of Kānaka ‘Ōiwi, as well as, investigating the extent of knowledge and connection to uhiūhi by Native Hawaiians. Chapter 3 will

¹⁵³ Pukui *et. al* 1972, p. 150.

¹⁵⁴ Mahi La Pierre, personal observations, O‘ahu and Hawai‘i islands, 2007, 2008, 2011.

concentrate on uncovering and presenting evidence of possible intrusions that caused cultural detachment with uhiūhi. Chapter 4 will document the means and processes using two methods – traditional Hawaiian science and modern science – that could facilitate cultural attachment to uhiūhi by Kānaka ‘Ōiwi. And to conclude, Chapter 5 will summarize the findings and recommendations of this research project.

Chapter 2. Aia Ke Ao (There is Light)

Ua lehulehu a manomano ka 'ikena a ka Hawai'i.
Great and numerous is the knowledge of the Hawaiians.¹⁵⁵

2.1. Knowledge and mana amongst them

All knowledge, exploits, and achievements are manifestations of mana in the Hawaiian worldview.¹⁵⁶ One's demonstrated skills in one's occupation or endeavors are an illustration of one's mana. The successful farmer, fisherman, healer, and the skilled warrior were held in high esteem. The connection of mana to ways of knowing and accomplishments provided opportunities for one to gain, display, and increase one's mana.¹⁵⁷ On the other hand, mana can be diminished or lost if abused or misused. Failures or inadequacies could lessen one's mana as well.^{158,159}

2.1.1. From the simple to the sacred

It is recorded that uhiūhi was a preferred type of native hardwood used in making implements for processing kapa (barkcloth), farming and fishing implements^{160,161}, house posts, hōlua (sled) runners, and weapons, including spears.^{162,163}

¹⁵⁵ Pukui 1983, p. 309 (#2814).

¹⁵⁶ Valeri, V. 1985. *Kingship and Sacrifice: Ritual and Society in Ancient Hawaii*, Translated by P. Wissing. Chicago: The University of Chicago Press, pp. 98-104.

¹⁵⁷ Keola Kawai'ula'iliahi Chan, personal communication, 2012.

¹⁵⁸ Pukui *et. al* 1972, p. 152.

¹⁵⁹ Kaulukukui, T. K. 'Aha Kāne Native Hawaiian Men's Health Conference 2012 – Mana Panel. Retrieved June 2012 from [<http://vimeo.com/album/2036944/45099906>].

¹⁶⁰ Krauss 1993, pp. 25,34,61,63.

¹⁶¹ Buck 1957, pp. 12,13,170,338.

¹⁶² Pukui and Elbert 1971, p. 337.

¹⁶³ Abbott, I. A. 1992. *Lā'au Hawai'i: Traditional Hawaiian Uses of Plants*. Honolulu: Bishop Museum Press, pp. 110-111.

In this chapter, we will look into the past to learn to what extent uhiūhi was known and used by Kānaka ‘Ōiwi. Not only the uses of its flowers, bark, leaves, and wood, but also other aspects of its character that could lead to the development of an attachment by Kānaka ‘Ōiwi. We will examine some of the traditional practices and ways through which their uhiūhi cultural attachment could be formed through fairly simple items, like farming tools to more sacred connections to chant, religion, and healing.

Ua oleloia ka lahuikanaka Hawaii, he lahuikanaka ikaika i ka hana, a he loea a me ke akamai, a ua kuonoono me ka naauao ma kekahi mau hana, ua lokomaikai ma na mea kino, aohe i like me na lahui e e noho ana ma keia Moana Pakipika.¹⁶⁴

It was said of the Hawaiian people, that they were a strong race in their work, skilled and intelligent, rich with enlightenment in some works, well-dispositioned in the physical, unlike other peoples that live in the Pacific Ocean.¹⁶⁵

During this journey, I will concentrate on resources that declare uses of uhiūhi that are not extensively known or published. Though I will not be discussing in detail every ethnobotanical use of uhiūhi that I had found during this journey, I have included a partial list in Table 2 for you to acquaint yourselves with uhiūhi’s many traditional uses, relationships, and attachments that were made with this wonderful, ancestor tree. Table 2 lists categories borrowed from Buck 1957 and Krauss 1993. They are: food (farming); fishing; houses; ornaments & personal adornments; clothing, wearing apparel; musical instruments; games, recreation & sports; medicine & medicinal herbs; war & weapons; and death & burial. I added the category “other” to accommodate the use of uhiūhi as an “edge tool”, or a tool with a cutting edge.

¹⁶⁴ *Ka Nupepa Kuokoa*, December 7, 1867.

¹⁶⁵ Translation by Mālia Kruger and Pōmaika‘i Benevedez, February 2013.

2.2. Intensive botanical knowledge of Kānaka ‘Ōiwi

In a lecture presented at the Kamehameha Schools in the early 1900s, Albert Judd comments on the breadth of the botanical knowledge of the Hawaiians of old.

The Hawaiians were intimate with the botanical world. They were close observers of nature. They brought certain plants of these islands to a high degree of development. They know every plant and tree of the mountains and of the lowlands; they discovered the value of every useful root, bark, fruit, wood and leaf.¹⁶⁶

He continues conveying the names of important Hawaiian plants and details of their uses for food, houses, clothing, ornamentation, and medicine. His passage below corroborates the extensiveness of their knowledge as he lists uhiūhi used in house construction.

The house building and furnishing, the clothing, utensils, and fishing gear, showed the Hawaiian’s knowledge of and dependence on, the plant life of the islands. The corner posts were, when possible, made of the durable uhiuhi, the thatch of pili grass.¹⁶⁷

2.3. Uhiūhi in the Kumulipo genealogy

In the 12th section of the Kumulipo, *Uhiuhi* is listed as the wife of *Kauwila*. *Kauwila* literally meaning “the lightning”^{168,169}, also spelled *kauila*¹⁷⁰, is the name of two Hawaiian endemic tree species, the endangered *Colubrina oppositifolia* Brogn. ex Mann, and the rare *Alphitonia ponderosa* Hillebr. Like uhiūhi, the two *kauwila* are traditionally prized for

¹⁶⁶ Judd, A. F. 1981. In *Ancient Hawaiian Civilization*, Revised Edition, "Trees and Plants", 277-285. Japan: Charles E. Tuttle Company, Inc., p. 277.

¹⁶⁷ Ibid. pp. 277-278.

¹⁶⁸ Beckwith 1972, p. 227.

¹⁶⁹ Liliuokalani (translated by). 1978. *The Kumulipo: A Hawaiian Creation Myth*. Kentfield, CA: Pueo Press, p. 61.

¹⁷⁰ Pukui and Elbert 1971, p. 129.

similar hardwood ethnobotanical purposes.¹⁷¹ Uhiūhi and *C. oppositifolia* are found in dryland forest ecosystems.¹⁷² With a few exceptions, the two kauwila and uhiūhi share several historic ranges, especially on the islands of O‘ahu and Hawai‘i.^{173,174,175} The pairing of the uhiūhi and kauwila trees in the Kumulipo is another example of the pairing of opposites and sometimes contemporaries in the methodology of Papakū Makawalu. These three ancestor tree species are not only found in similar landscapes and share ethnobotanical uses, but they also reside in the Papahanaumoku house of knowledge encompassing trees, plants, and all entities that goes through a life cycle.¹⁷⁶

Five wāhine (women) – one from Kaua‘i, two from O‘ahu, and two from Maui – travelled to the uplands of Puna and areas of Hilo, and share of their journey in a 1877 *Ka La Hui* article. They list uhiūhi as one of the plants they saw during their holoholo.

We left “Panaewa, District of the Large Lehua Blossoms,” the welcoming home of the torrential rains, and we emerged, quickly passed in front of the beauty of Hanakahi, and we fondly remembered many beloved memories, while the misty evening breeze wafted the fragrance, and the following song lines came to mind: “If us two, my love, were in our memories at Hanakahi, the wafting fragrances of the beautiful Hau of the Uplands.” In no time, we were stepping on the sands of Ohele, the sands of Waiolama, and finally the sands of Punahoa. And on the streets of the town leading to the homes, meeting up with all the friends. In good health with everything else on this journey called “The Traveling Companions of

¹⁷¹ Buck, P. H. 1957. *Arts and Crafts of Hawaii*, Bernice P. Bishop Museum Special Publication 45. Honolulu: Bishop Museum Press, pp. 12,170.

¹⁷² Sohmer and Gustafson 1987, p. 45.

¹⁷³ Kwon, J. A., and C. W. Morden. 2002. “Population genetic structure of two rare tree species (*Colubrina oppositifolia* and *Alphitonia ponderosa*, Rhamnaceae) from Hawaiian dry and mesic forests using amplified polymorphic DNA markers.” *Molecular Ecology* 11: 991-1001.

¹⁷⁴ Hawaii Heritage Program, The Nature Conservancy of Hawai‘i. Element Occurrence Record: *Alphitonia ponderosa*.

¹⁷⁵ Hawaii Heritage Program, The Nature Conservancy of Hawai‘i. Element Occurrence Record: *Colubrina oppositifolia*.

¹⁷⁶ Edith Kanaka‘ole Foundation. Papakumakawalu. Retrieved May 2, 2013 from <https://www.edithkanakaolefoundation.org/current-projects/papaku-makawalu/>.

the Uplands of Puna.” If the nation of Hawaii is patient, we will list the names of the forest plants we saw while traveling. Here is the list below: “Aalii, aaka, ahakea, ahuawa, akala, akia, akiohala, akolea, akulikuli, auhuhu, alani, alahee, alaalapuloa, ananu, ape, apiipii, awa, awapuhi, e-a, ekaha, ekoko, ieie, iii, iiwi, ihi, iliahi, ilima, iniko, iwaiwa, oi, oha, ohe, o’he, ohelo, ohia, ohai, olapa, olena, olona, opiko, onaona, uala, uhi, uhiuhi...

LILIA H. RICHARDS of Koloa, Kauai.

CHARLOTTE A. HANKS “ Honolulu, Oahu.

LIZZIE CHUNG HOON “ “ “

ELIZA N. CROWNINGBURG no Makawao.

CLARISA JACKSON “ “ ¹⁷⁷

The women mention several places of the Hilo and Puna districts of Hawai’i Island¹⁷⁸, which have never been recorded as part of uhiūhi’s historical range.

Another article in the *Hawaiian Gazette* in 1891 also mentions uhiūhi in an area not recognized as a historic range for uhiūhi. Lionel Stagge pens a description kea and uhiūhi as part of Thomas G. Thrum’s native wood exhibit on display in Honolulu which had 105 specimens, 95 of which were indigenous.

The Kea or Kalamona, *Mezoneuron Kanaiense* [sic], is a hard, dense wood not unlike ebony, except that the Kea has a more distinct grain. Unfortunately this is also a scarce variety and is not large in its growth.

Another rich black wood in the exhibit is the Uhiuhi (not identified), and is as hard and close grained as the Kea; perhaps more so. It does not all grow so dark, a specimen from North Kona showing a reddish black, while another from Kau is several shades lighter still. The Uhiuhi was used for spears, war clubs, agricultural implements, tapa beaters, etc., and even as an edge tool.¹⁷⁹

¹⁷⁷ Richards L. H., C. A. Hanks, L. Chun Hoon, E. N. Crowningburg, and C. Jackson. *Ka Lahui Hawaii*. March 29, 1877. Translation by Mālia Kruger and Pōmaika’i Benevedez, February 2013.

¹⁷⁸ Pukui *et al.* 1974, pp. 40,178,193,194,226.

¹⁷⁹ Stagge 1891, p. 1.

Stagge provides information on density, wood color and grain, and on location of the trees. It is somewhat confusing, as *Uhiuhi* is listed separately from the *Kea* and *Kalamona*, and only the latter are identified with the botanical name of *Mezoneuron Kanaiense*, which is misspelled. What is most interesting in his article is the reference to the place name *Kau*. *Kau* could be the land division in North Kona district¹⁸⁰, a land division in the district of Kā‘ū, both on Hawai‘i Island, or it could be referring the district of Kā‘ū itself. When describing wood color, Stagge distinguishes a North Kona specimen from one from *Kau*. This leads me to believe that *Kau* is not the land division, *Kau*, in North Kona, but the area *Kau* between Wai‘ōhinu and Ka Lae (South Point) in Kā‘ū, or Kā‘ū district.^{181,182}

Combining the information from the five wāhine who travelled through Puna and Hilo districts and viewed plants including uhiūhi, and the information provided through Thrum’s wood collection regarding a specimen’s origin as *Kau*, I propose adding two general areas: 1) *Kau* in Kā‘ū, and 2) the Puna and upland Hilo border as additions to the historic range of uhiūhi (Figure 11).

On Hawai‘i Island, previously undocumented uhiūhi have been found on surveys in the past decade.¹⁸³ It may not be too far-fetched to think these people encountered uhiūhi in these locations as well.

¹⁸⁰ Kamehameha Schools, Learning Resource Support. 2011. Map: *Nā Ahupua‘a Moku o Hawai‘i*. Version 2011.0.

¹⁸¹ Pukui *et al.* 1974, pp. 71,91.

¹⁸² Juvik, P., J. O. Juvik, and T. R. Paradise. 1998. *Atlas of Hawai‘i, 3rd edition*. Honolulu: University of Hawai‘i Press, pp. 20,21

¹⁸³ USFWS 2012, p. 63980.

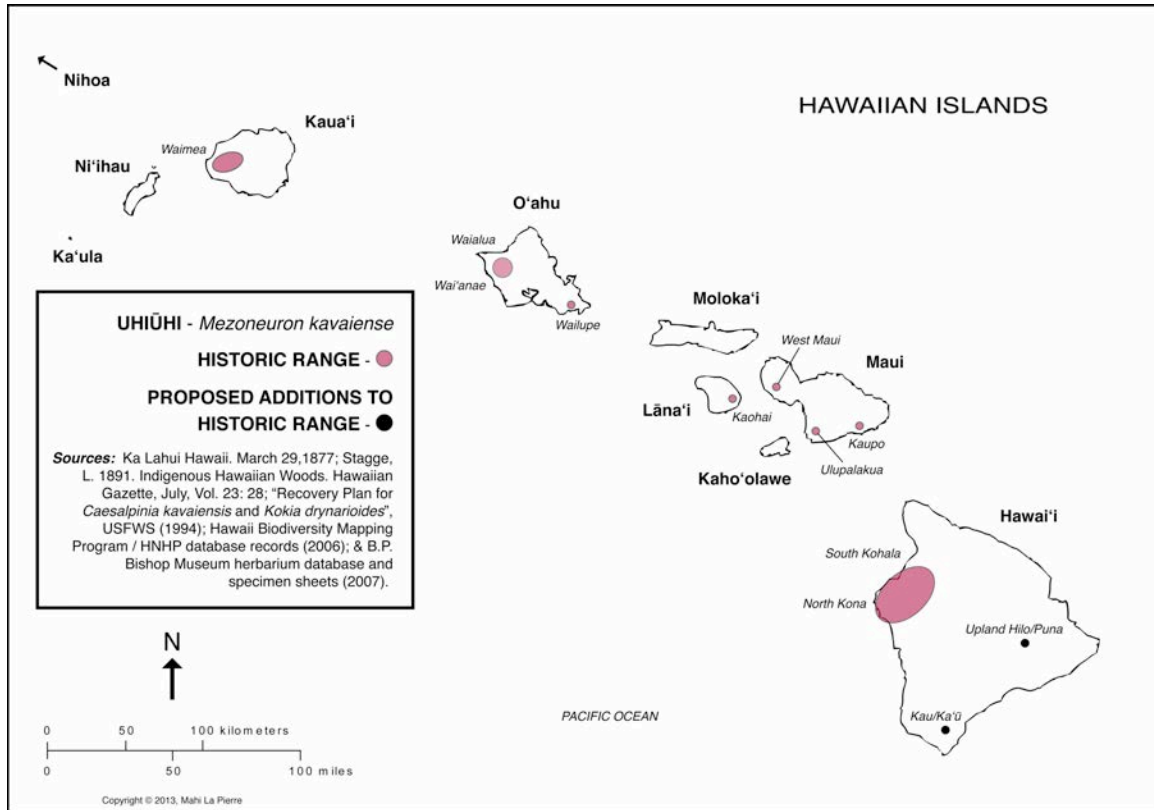


Figure 11. Uhiuhi Proposed Historic Range

[M. La Pierre, 2013]

2.4. The goddess Hi'iaka chants of uhiuhi

First printed in March 1915, *Pele and Hiaka: A Myth from Hawaii* by Nathaniel B. Emerson recounts a vicious battle between Hi'iaka-i-ka-poli-o-Pele (Hi'iaka) and Mo'olau, the Mahiki dragon and his forces.¹⁸⁴ A duality in and of herself, as both warrior and healer¹⁸⁵, Hi'iaka, the youngest sister of the volcano goddess, Pele, was tasked with finding and retrieving Lohi'au, Pele's dream lover from Kaua'i. On Hi'iaka's epic journey from Hawai'i Island to Kaua'i, she encountered many powerful mo'o (lizard,

¹⁸⁴ Emerson 1993, pp. 49-55.

¹⁸⁵ Ibid. pp. 15,138-152.

dragon, or water spirit)¹⁸⁶ with whom she had to placate or fight as she traveled through their various domains.

Emerson documented two oli uttered by Hi‘iaka to Mo‘olau which mention, according to his translation, a flowering plant species spelled as *uhiuhi*, as well as, *uhiuhi* in his manuscript. Hi‘iaka and Mo‘olau fight so intensely that they are overcome with exhaustion, and for a while they seem to consent to a rest and recovery period.

Encouraged by the presence of her relatives on the battlefield, Hi‘iaka petitions:

A Moolau, i ka pua o ka uhiuhi,
Helele‘i mai ana ka pua o Ko‘o-ko‘o-lau
Lohi‘a e na mo‘o liilii –
Na mo‘o liilii ke ala
E kolo i ke kula,
E iho i kai o Kawaihae, la.
Hea a‘e la ka mo‘o liilii:
E hakaka kaua; paio olua auane‘i.
He ‘kau Mo‘o-lau, o Mo‘o-lau akua, e!

TRANSLATION

In the wilds of Mo‘o-lau,
The uhiuhi’s time for bloom –
The petals fall of Koolau’s flower:
The little dragons have found the way
By which they can crawl to the plain,
Go down to the sea at Kawaihae.
The little demons now announce
That you and I shall battle wage:
We two, indeed, must fight, they say –
A god is Mo‘o-lau, a host of gods!¹⁸⁷

¹⁸⁶ Pukui and Elbert 1971, p. 383.

¹⁸⁷ Emerson 1993, pp. 52-53.

Mo‘olau fights her head on, but divides his forces attempting to catch her by surprise with a flanking attack. She recognizes his deceitful plan and calls out to him:

MELE HO’-ULUULU

A Mo’o-lau, i ka pua o ka uhiuhi,
Pala luhi ehu iho la
Ka pua o ke kauno’a i ka la;
Na hale ohai i Kekaha, o Wa’a-kiu; —
E kiu, e kiu ia auane’i kou ahiahi;
E maka’i ia olua auane’i.
He akua Mo’o-lau, o Mo’o-lau akua, e!

TRANSLATION

In the jungle of Mo’o-lau,
The uhi-uhi’s season of bloom;
The flower of the rootless kau-no’a
Is wilted and bent in the sun;
My bower in Kekaha’s invaded:
Some creature is playing the spy.
I, in turn, – be warned – will spy out
Your quiet and rest of an evening:
This to you, you, god Mo’o-lau!¹⁸⁸

While Emerson does not note a botanical name, it is possible that the *uhiuhi* or *uhi-uhi* recorded in these oli is the uhiūhi tree. Place names that Hi‘iaka mentions, specifically Kawaihae and Kekaha, are areas of South Kohala and North Kona on Hawai‘i Island. Kawaihae is located in the South Kohala, and Kekaha is a region of the North Kona, both districts are still home to uhiūhi.^{189,190,191}

Emerson translated this chant almost 100 years ago. Hi‘iaka’s oli may still have other

¹⁸⁸ Ibid. p. 53.

¹⁸⁹ Pukui *et al.* 1974, p. 97,106.

¹⁹⁰ Juvik *et. al* 1998, p. 18.

¹⁹¹ Fujii and Salmoiraghi 1995, p. 24.

clues to the landscape, the uhiūhi, and others that witnessed her battle with Mo‘olau.

Kaua Neumann, a student of Hawaiian language who has experience in propagating and growing uhiūhi, offers a contemporary look with Hawaiian eyes into the world of kaona – enlightening all of us on this journey of the Hi‘iaka’s possible hidden meanings and intentions. An excerpt of this work is presented below and in its entirety in Appendix A.

At Moolau in the flowers of the uhiuhi
The flowers of Kookoolau falls
Overwhelmed by the small mo‘o (sparkling from the small lizard)
The lizards fall and stumble
crawling on the plains
headed seaward to Kawaihae
the small lizard calls
We should fight, you two will battle
It is the time of Moolau, Moolau is ghost

At Moolau in the blossoms of the uhiuhi
Buried and cast aside
In the blossoming of the kauno‘a in the day
The houses of ohai in Kekaha named Waakiu
Observe, your slander will be observed secretly
You two will be watched
A Moolau ghost named Moolau!¹⁹²

2.5. Uhiūhi as metaphor

Hawaiian language newspapers were also testing grounds and platforms for debates among authors of different districts and backgrounds.¹⁹³ Some authors would proudly boast of the superiority of the ways of their ancestors or the ‘āina of their upbringing. One such author, Olawahie, in his rebuttal to a responder to a previous article, displays his mana and knowledge of uhiūhi using it as a metaphor.

¹⁹² Translation by Kaua Neumann, February 2013.

¹⁹³ Keola Chan, personal communication, May 2011.

I have seen your responses to my questions that were printed in No. 14 of Nupepa Kuokoa. I saw your answers were incorrect and you have missed the point. So your answer is just like this plant called Uhiuhi. But, when I saw the first part of your response, it was as if you were ready to correctly answer the question, but, you once again are just like the plant listed above, so you acquired the plant of Kekuaokalani, whose name is it, I cannot recall it, and like the place called Waikiki-kai, that I got the main results and all the other results I have forgotten. Maybe this forgetting is a blessing.¹⁹⁴

The author uses the uhiuhi tree skillfully and elegantly as a metaphor. Using the kaona of the word uhiuhi, the author sarcastically responds and mocks the reader's answers as being deceiving, hidden, and with no substance. Oratory, in this case the use of metaphor, requires a collective cultural understanding of words, meanings, and traditions in order for effective interpretation of what is being communicated from author to reader.¹⁹⁵

2.6. Uhiuhi of the farmer

The author of this article informs us of the intelligence and demeanor of Kānaka 'Ōiwi, and their knowledge of various hardwoods used for farming tools, like the 'ō'ō or digging spade, before the coming of iron to the Islands.

Farming was the primary work of the kupuna of Hawaii, for they were very smart and intelligent. But, they were inconsistent in their farming, unlike today, where we have iron tools. For instance, the iron spade with prongs; the working hand was helped by the strong woods of the uplands that were used for digging, such as the uhiuhi plant, the mamane, the oa, the kauila, the koaie, the hame, the ulei, the alahee, and other hardwoods. They were carved with a stone adze much like the crushing spade, and other spades forged in the fire, and that is how farming was strengthened. Some people worshipped Kanepuaa and Kukeolowalu when they farmed.

¹⁹⁴ Olawahie. *Ka Nupepa Kuokoa*, July 6, 1865. Translation by Mālia Kruger and Pōmaika'i Benevedez, February 2013.

¹⁹⁵ Nogelmeier 2010, p. 93 and Ong 1995, p. 10.

This was a small percentage. Most people just farmed and the first seed was planted, it became an offering to the god.¹⁹⁶

With the advent of iron, uhiūhi's value and other hardwoods as a resource lessened, moreover, as kalo farmers declined after 1778 so did their planting and harvest rituals.¹⁹⁷ Perhaps the knowledge and use of uhiūhi to fashion farming tools, or fishing implements, declined as people chose other occupations.¹⁹⁸

2.7. Uhiūhi of fisherman

Lā'au melomelo (bait sticks)¹⁹⁹, fish spears, he'e (octopus) spears, as well as, and large hooks for sharks, and large fish were all uses of uhiūhi wood by Hawaiian fishermen.²⁰⁰ Other uses for uhiūhi wood for fishing in Hawai'i are summarized in Table 2.

An obscure fishing technique associated with uhiūhi is Hawaiian 'ōpelu (*Decapterus macarellus*), or mackerel scad, hoop net fishing.²⁰¹ 'Ōpelu are found in small schools outside of the breaking waves above coral reefs. Fishermen lower a large, hooped bag net, and slowly entice them closer and closer, and finally into the body of the net using weighted chum bag to lure the 'ōpelu (Figure 12).

The method of capture described here has been in practice in the Hawaiian islands since long before of the white man into the Pacific...

¹⁹⁶ *Ka Nupepa Kuokoa*, December 7, 1867. Translation by Mālia Kruger and Pōmaika'i Benevedez, February 2013.

¹⁹⁷ College of Tropical Agriculture and Human Resources 2008, p. 18.

¹⁹⁸ Ibid.

¹⁹⁹ Rock 1913, p. 185.

²⁰⁰ Kamakau, S. M., and ed. Dorothy B. Barrère. 1974. *Works of the People of Old (Na Hana a ka Po'e Kahiko)*. Translated by M. K. Pukui. *Bernice P. Bishop Museum Special Publication 61*. Honolulu: Bishop Museum Press, pp. 70,77,86.

²⁰¹ The wood of two native shrubs, 'ūlei (*Osteomeles anthyllidifolia*) and kalamona, also known as kolomona (*Cassia gaudichaudii*) were used for the hoops of 'ōpelu nets. Kahā'ulelio, D., and ed. M. P. Nogelmeier. 2006. *Ka 'Oihana Lawai 'a: Hawaiian Fishing Traditions*. Translated by M. K. Pukui. Honolulu: Bishop Museum Press, p. 105.

Local knowledge will be the only guide here. The season seems to coincide with the ripening of the Avocado pears ashore. This is fortunate, as Avocado pears make an excellent bait, although it is not indispensable...

The old Hawaiians used to make these nets from a local fibre, Olona (Touchardia latifolia), the bark was stripped from wild saplings, soaked, scraped, and the best fibres twisted into a cord, which was reported to be stronger than hemp. They made the hoop from uhiuhi wood (Mezoneurum kauaiense, Mann. Hillebrand). There is an old net still in good condition in the Bishop Museum in Honolulu which is made of these materials.²⁰²

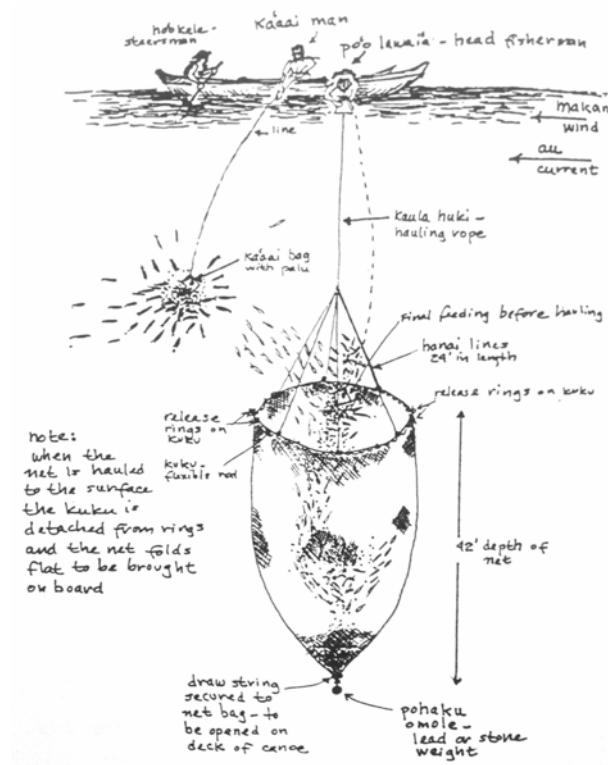


Figure 12. Hawaiian ‘ōpelu net fishing from canoe

[Drawing: Eric Enos, 1996]²⁰³

²⁰² Powell, R. April 1968. *Hawaiian "Opelu" Hoop Net Fishing Gear*. Noumea, New Caledonia: South Pacific Commission, pp. 2-3.

²⁰³ ‘Ōpelu Project ‘Ohana. 1996. *From Then to Now: A Manual for Doing Things Hawaiian Style*. Wai‘anae, Hawai‘i: Wai‘anae Coast Community Alternative Development Corporation, p. 56.

The solitary source listing uhiūhi as a type of wood used in this technique is a paper prepared in 1968 by Ronald Powell, a former Fisheries Officer of the South Pacific Commission (SPC) who was documenting fishing craft, gear, and methods in use in the South Pacific area.²⁰⁴ There was no bibliography or references section, however, he does acknowledge “the generous assistance and advice of Vernon E. Brock, Michio Takata and the Fishermen of the Kona Coast of Hawaii.”²⁰⁵ The key factor here is that the information came directly from fishermen of the Kona region, the northern of which is the historic and present range of uhiūhi. It is plausible that these fishermen may have had access to uhiūhi trees and knowledge that was handed down through generations.

On a visit to B. P. Bishop Museum in Honolulu, I was unsuccessful in locating the ‘ōpelu net Powell mentions. I looked at two beautifully made ‘ōpelu nets, but unfortunately, no wood of any kind was attached to them, stored with them, or documented as being connected to these nets in their accession documents.^{206,207}

2.8. Competitive sports

2.8.1. Pahe’e sliding darts

Abraham Fornander brings to light a Hawaiian game called pahe’e where a moa²⁰⁸, or sliding spear, was slid along on an earthen track 40 to 200 fathoms in length.

KA PAHEE.

He laau i kalai ia, eia no inoa. He koaie, he ulei, he o’a, he mamane, he kauwila, he uhiuhi. Hookahi anana ka loa o kekahi ihe a me ka hapa. He

²⁰⁴ Ibid. p. 1.

²⁰⁵ Ibid.

²⁰⁶ Mahi La Pierre, personal observations, May 31, 2013.

²⁰⁷ Betty Lou Kam and Kamalu du Preez, personal communication, May 31, 2013.

²⁰⁸ Moa were usually 10 – 22 inches in length and tapered at one end. Pukui and Elbert. 1971, p. 229.

hailima kekahi, a he iwilei kekahi, a pela aku. O ke kahua e pahee ai, he kahua i hana awaawaa ia, he kaau anana ka loa o kekahi kahua, elua kaau anana ka loa kekahi. O ke kanaka ikaika loa i ka pahee, elima kaau anana ka loa o ke kahua. He umi ai e pahee ai, alaila, eo kekahi. Pau ka waiwai i ka lilo. Pela no e pili ai a lilo kahi malo i ka hope, a o mua kahi mai i ka lima, alaila oki.²⁰⁹

PAHEE.

A piece of wood is made of *koaie*, *ulei*, *o 'a*, *manae*, *kauila*, or *uhiuhi*. Some spears are a fathom and a half long, some four and one-half feet (*hailima*), some a yard, and so on. The tracks where the game is played are roughly formed, some being forty fathoms long, other two times forty fathoms. For a very powerful man a track five times forty fathoms long is necessary. Ten counts are required to win. Goods are all lost. The betting sometimes is continued until the girdle at the waist is lost also, and the loser stands stark naked; then the game ceases.²¹⁰

2.8.2. Hōlua sledding

The needed skills to ride a hōlua sled and the fact that it is for the elite athlete are revealed in *Na Kupepa Kuokoa* in December 1867.

He hana hooikaika kino no ia, a ua pilikia pinepine ka poe hawawa. O ka poe maa nae ma ia hana, ua lele ka ulu o na wawae a me na lima, a ua lele aku na puanaana o na lima me na ooloo wawae; a o ka hanu o ke kanaka, ua hoomaha oia iloko o ke ea mama loa. Ua oi kona mama mamua o ka lio kukini a me ke kaa ahi holo mama. O ka papa heeholua, he koaie, he uhiuhi, he mamane, he oa, he mau wahi papa lahilahi...²¹¹

It was definitely an exercise, a constant problem for the unskilled individual. But for those who were able in such a task, their legs and arms bounced, the joints in their arms and legs bounced; and the breathing of that person was labored and he needed rest. His speed was greater than a

²⁰⁹ Fornander 1918-1919, Vol. VI, p. 200.

²¹⁰ Ibid. p. 201.

²¹¹ *Ka Nupepa Kuokoa*, December 28, 1867.

messenger horse and a steam engine car. The holua sled, of koaie, uhiuhi, mamane, oa, was flexible...²¹²

This reveals that koaie (*Acacia koaia*), uhiūhi, māmane (*Sophora chrysophylla*), and o‘a²¹³ were woods suitable for hōlua sled runners.

2.9. Uhiūhi heals

The early records of American and European explorers and adventurers describe the physical appearance and attributes of Hawaiians they encountered, and give us insight into the general state of health of the Hawai‘i at contact. The foreigners and native writers noted that diseases were not common, and that epidemics and infections were relatively unknown to the Kānaka ‘Ōiwi.²¹⁴ With the arrival of more and more ships of foreign men, it was not long until the Hawaiian picture of health painted by these accounts was a thing of the past.

Information on the medicinal uses of uhiūhi is scant. I will introduce the three sources I located in detail so that this kind of important work of healing may be perpetuated.

The first is an excerpt from an interview with Moanalua, a traditional medical practitioner from Wailuku, Maui, before the Executive Committee of the ‘Ahahui Lā‘au Lapa‘au of Wailuku, Maui on January 22, 1867 who shares information on the condition called *me‘eau*.²¹⁵

Me‘eau is the illness: Cut and gather a lot of Uhiuhi leaves, four boughs of Kukui flowers. They are pounded until soft and place inside of a piece of cloth. It is squeezed and the thickened liquid is scraped into a small bowl.

²¹² Translation by Mālia Kruger and Pōmaika‘i Benevedez, February 2013.

²¹³ A Maui name for the native tree, kauila (*Colubrina oppositifolia*). Pukui and Elbert 1971, p. 253.

²¹⁴ Chun, M. N. 2008. *Ola: Traditional Concepts of Health and Healing, Ka Wana Series, Book 4*, Pihana Nā Mamo: The Native Hawaiian Special Education Project, Curriculum Research and Development Group, University of Hawai‘i, p. 2.

²¹⁵ *Me‘eau* is “itch, mange; to itch, to afflict with blight; mangy, itching.” Pukui and Elbert, 1971, p. 225.

The patient first bathes in the water and the sores and inflammation [sic] (pu‘upu‘u and mākole) are cleaned. The medicine is smeared externally on the sores and left to dry in the sun. [The patient] is smeared five times. [This is done] until the medicine is encrusted and can peel away (‘āka‘a).

The very last thing to do is to: The Kalo potion is taken five times and Kowali is also taken. This is the cure.²¹⁶

From the year 1922, employees of the Board of Health of the Territory of Hawai‘i are our second source of uhiūhi medical connections. While brief, David Ka‘aikamanu, a healer from the Hānā-Kīpahulu districts of Maui, compares uhiūhi’s beauty to that of the koa (*Acacia koa*). He recommends its use to treat *ma‘i pelekane*, or foreign illnesses of which they were not so familiar.²¹⁷ See Table 2 for direct quotation.

The third source, again from the Territorial Board of Health, is the most detailed and declares that the bark and young leaves of the uhiūhi tree are good for blood purification. They list in detail the names of other Hawaiian plants in the recipe, and comment on the lands where uhiūhi is known to grow: Hawai‘i, O‘ahu, Kanaio on Maui, and Kaua‘i.²¹⁸

Uhiuhi. *Caesalpinia kavaiensis* H. Mann

This tree grows like the Koa. This tree is hard to find in the mountains of the [sic] Hawai‘i and O‘ahu, but it is found growing sparsely on the mountain of Haleakalā, on the side turning towards Kanaio, and on the mountains of Kaua‘i is where this tree is found a lot.

The flesh of the trunk of this tree is black and it is hard. The bark is tough and blackish. The young leaves and the bark of this tree are a good blood purifier.

This is how the preparation is done: One man’s hatful of young leaves and leaf buds of the Uhiuhi, four pieces of bark from the area close to the

²¹⁶ Chun, M. N. ed. 1994. *Must We Wait in Despair: The 1867 Report of the ‘Ahahui Lā‘au Lapa‘au of Wailuku, Maui on Native Hawaiian Health*. Honolulu: First People’s Productions, p. 166.

²¹⁷ Chun, M. N., J. K. Kapunihana, J. K. Akina, and D. M. Kaaiakamanu. 1998. *Native Hawaiian Medicine. Vol. II* [In Hawaiian, with English translation]. Honolulu: First People’s Productions, pp. vii,viii,51.

²¹⁸ Chun, M. N., and Hawaii Territorial Board of Health. 1994. *Native Hawaiian Medicine* [in Hawaiian, translated to English]. *A new revised and enlarged translation*. Honolulu: First People’s Productions, pp. 249-250.

ground of the uhiuhi, the inner bark of the trunk of the Hāpu‘u, with the outer rough bark peeled off to yield the flesh and about one and half arm’s length long, (this is the same size and preparations for the tap root sections of the Kī (burnt to make ‘Ōkolehao), two pieces of ‘Ulu bark, the bark of four ‘Uhaloa tap roots, and two and a half sections of Kō Kea.

All of these ingredients are pounded into a mash. It is strained with ‘Ahu‘awa sedge until it is clean.

One kualimu ‘Ōpihi shell full of the bitter liquid of burnt Kī (‘Ōkolehao) is added. It is shaken before drinking it three times a day. Anything can be eaten, and a purgative medicine is taken, too.²¹⁹

²¹⁹ Ibid.

Chapter 3. Pale Ka Pō (The Darkness Covers)

Uhi mai ka lani pō.

The night sky spreads forth [ignorance].²²⁰

3.1. Collapse of a culture

As we have seen in Chapter 2, uhiūhi was culturally significant in many facets of Hawaiian life showing that Kānaka ʻŌiwi did have an uhiūhi cultural attachment. In this chapter, we will examine some intrusions that caused the alienation and detachment of Kānaka ʻŌiwi from their land, religion, and cultural traditions including those connected to uhiūhi.

3.2. Change comes from within

Within six months after the death of Kamehameha I in May 1819²²¹, his surviving wives, Keopuolani and Kaʻahumanu, publicly ate with young aliʻi, Liholiho (then known as Kamehameha II) and his brother, Kauikeaouli, (later to become Kamehameha III) defying the ʻai kapu, or sacred law against women and men eating together.²²²

The ʻai kapu was a part of the highly stratified social structure of the kapu system in ancient Hawaiʻi, a set of rules and regulations where religion directed all aspects of Hawaiian society and the relationships and interactions between classes of people, between gods and humans, and between nature and people. Religion regulated and determined one's

²²⁰ Pukui and Elbert 1971, p. 336.

²²¹ Kamakau 1992, p. 210.

²²² Johnson, R. K. 1983. *Religion Section of Native Hawaiian Study Commission Report*, Honolulu: State of Hawaiʻi, Office of Hawaiian Affairs, p. 231.

status, as well as the management, division, and distribution of land and goods.²²³ This rebellious act gave way to the overthrow of the kapu system, and began the downward spiral of identity loss and cultural detachment of the Hawaiian ali‘i and general populous from their gods and the land itself, both formerly thought of as a beloved relations.

The overthrow of the *kapu* system by native Hawaiian society was the most significant departure, then, effecting culture change in religion and politics after contact with Europeans between 1778 and 1819. (Note that this is still within the pre-conversion period.) It was a significant alteration in attitude as *belief* or *faith* in the efficacy of *mana* of the great male *akua* gods to influence positive outcome in human spheres of power and action from a supportive spiritual force.²²⁴

3.3. Change from beyond

This breakdown in Hawaiian religion and politics facilitated the religious conversion instigated by the first wave of Christian missionaries to Hawai‘i in 1820. The missionaries frowned upon the worship of the ancient Hawaiian gods, and other Kānaka ‘Ōiwi pastimes and practices where gambling or other undesirable, “un-Christian” behavior took place.²²⁵ It is not surprising to see how cultural traditions such as the healing arts, fishing and farming, sports and games, traditional house building, fighting arts, and the rituals connected to them declined. The Hawaiian people’s cultural attachment to the various ecosystems and specific resources, such as uhiūhi, which provided the raw materials for these traditions also in turn declined. Besides the cultural practices

²²³ Buck, E. 1993. *Paradise Remade: The Politics of Culture and History in Hawai‘i*. Philadelphia: Temple University Press. p. 33.

²²⁴ Johnson 1983, p. 232.

²²⁵ Emory, K. P. 1981. In *Ancient Hawaiian Civilization*, Revised Edition, "Sports, Games, and Amusements", 145-157. Japan: Charles E. Tuttle Company, Inc., pp. 145-146.

themselves, Hawaiians were quickly losing their identity and public opportunities to display and gain mana.

In the great shock to Hawaiian culture occasioned by the first contact with the Europeans, most of the Hawaiian athletic sports and games immediately went almost or completely out of existence. This was due to two main factors. The first was the absorption of the Hawaiian in their adaptations to the new life. They were busy learning to read and write. They were earning money to buy clothes and other foreign articles and to pay the greatly increased taxes of the chiefs. The second was the fact that because their pastimes were bound up with their ancient mode of life, religious belief and practices, all these ancient pastimes were discouraged by the missionaries. A stigma or feeling of inferiority and disgrace was attached to everything connected with their former life.²²⁶

In 1848, another catastrophic event changed traditional land tenure in the Hawaiian Islands, and resulted in further detachment of Native Hawaiians from their ‘āina, literally meaning, that from which one eats. What is known as *Ka Māhele*, or the division, introduced the foreign concept of landownership where land was now a commodity that could be bought and sold. Traditionally, all people had access to the land. The ‘āina was not owned by anyone, not even by those of the chiefly class. The ‘āina was born of the gods, and therefore a god itself.²²⁷

Before the Māhele, land was kin and a resource where the maka‘āinana, the commoners, were allowed to work the land, and give tribute to the ali‘i. The chiefs administered the land, provided commoners with a land base, and provided favors or protection when warranted.²²⁸ The relationships and obligations between the Hawaiian ali‘i

²²⁶ Ibid.

²²⁷ Kame‘eleihiwa 1992, pp. 8-9.

²²⁸ Ibid p. 10.

and common people were now severed, as were the relationships and obligations of both ali‘i and commoners to the gods, including the land itself.

3.4. Cultural trauma and death of knowledge

Although the events discussed above are of the past, they have caused losses of cultural knowledge and cultural trauma that remain a part of the lives, minds, hearts, and bodies of the descendants of the Hawaiian people since foreign contact in 1778 with the landing of Captain James Cook. Native Hawaiians have decreased in numbers since then.

It is estimated that before Cook the Hawaiian population was as large as 800,000 to 1,000,000²²⁹, and dwindled fewer than 40,000 in the 1890s.²³⁰ New diseases – whooping cough, leprosy, influenza, small pox, and measles, began in the 1820s and proceeded to into the mid-nineteenth century devastating the Hawaiian population. The small pox epidemic alone killed close to one-tenth of the native population.²³¹ With every Hawaiian lost to disease, so was his or her cultural knowledge. More so, when an elder in the Hawaiian community died, so did their many years and stored volumes of knowledge.²³²

The rapid decline of the Hawaiian people is directly related to the loss of cultural knowledge among the general populous. By 1903, the Hawaiian language was also waning

²²⁹ Stannard, D. E. 1989. *Before the Horror: The Population of Hawai‘i on the Eve of Western Contact*. Honolulu: University of Hawaii Press, p. 50.

²³⁰ Minerbi, L. 1994. “Sanctuaries, places of refuge, and indigenous knowledge in Hawai‘i.” In *Land use and agriculture: Science of Pacific Island Peoples, Vol. II*, edited by J. Morrison, P. Geraghty, & L. Crowl, 89-129. University of the South Pacific – (Suva, Fiji), Institute of Pacific Island Studies, pp. 92.

²³¹ Stannard 1989, p. 45.

²³² Emerson, N. B. 1998. *Unwritten Literature of Hawaii*. Honolulu: Mutual Publishing, p. 4.

because the English language was being used in local academic institutions and spreading among the Hawaiian population.²³³

Minerbi writes of five interrelated factors explaining of the decline of Kānaka ‘Ōiwi:

- (1) rapid depopulation due to introduced infectious diseases to which the indigenous Hawaiian people did not have immunity;
- (2) foreign exploitation resulting in the introduction of a market economy, taking of land, illegal overthrow of the monarchy in 1893, and annexation to the United States in 1898;
- (3) cultural conflict between Hawaiian values and Western values;
- (4) adoption of harmful ways, including life-style and diet; and
- (5) neglect, insensitivity, and sometimes malice toward Native Hawaiians by those in power.²³⁴

Cultural Wounding is a term used to indicate incidents of violations to one’s self, insults attached to cultural artifacts. These cultural artifacts may include: physical characteristics; family genealogy; geographic place of origin; traditional religious practices; traditional cultural practices; gender roles; and, distortions of the historical record.²³⁵

It could be further deduced that an uhiūhi cultural attachment was heavily strained and in most case severed by these intrusions which caused cultural trauma: disease, cultural conflicts, foreign exploitation, harmful life-styles, conflict of cultural values, and neglect and insensitivity by powers in control.

²³³ Nogelmeier 2010, p. 35.

²³⁴ Minerbi 1994, pp. 92-93.

²³⁵ Cook *et. al* 2003, p. 18.

3.5. Former knowledge of trees lost

In Chapter 2, sources mentioned the vast knowledge of the Hawaiian people in regard to plant life and their uses. Stagge wrote in the *Hawaiian Gazette* in 1891 that T. G. Thrum had some difficulty in assembling a collection of indigenous wood samples because some of them are thought to have gone extinct, and the fact that he could not easily find people knowledgeable of Hawaiian trees.²³⁶

All the islands do not produce the same trees throughout. Ascertaining the locality of certain kinds a difficulty arose as to the right party familiar with the woods of the forest to procure the coveted kinds. This has been no easy task. The canoe builders of the islands, than whom there were none better acquainted with the various trees, are gone as a class, and the kahuna – who ranks as a “medicine man” – while naturally familiar with many varieties through their profession, it is more largely with herbs and shrubs or small tree growth...

It has been found, further, that woods well known to the ancient Hawaiian are either lost or unknown to those of today, though it is a well-known fact that a number of the woods had different names on different islands.²³⁷

3.6. Culture smothered and degraded

This 1838 article in *Ke Kumu Hawaii* lists several sports, including hōlua sledding, and their connection to laziness, wrongdoing, and indifference.

NO KA PALAKA.

No ka palaka mai ka molowa, ka nanea, ka lealea, ka paani, ka heenalu, ka lelekawa, ka mio, ka heeholua, ka lelekowali; ka hoolele lupe, kela mea keia mea o ka palaka, oia ka mole o keia mau hewa he nui wale.²³⁸

²³⁶ Stagge 1891, p. 1.

²³⁷ Ibid.

²³⁸ *Ke Kumu Hawaii*, January 31, 1838.

CONCERNING APATHY.

Apathy comes from laziness, pleasure, fun, sports, surfing, cliff diving, mio, holua sledding, lele koali; kite flying, all things apathetic, that is the root of these tremendously great wrongs.²³⁹

The excerpt below from 1834 discusses traditional practices of Hawaiians, calling them strengths that can be “bad” or “good”. Warrior arts and lua fighting are listed as skills that could kill or injure another. Certain practices like spear or dart throwing and hōlua sledding, and other games were considered “bad strengths” due to their association with gambling and laziness. Because daggers, clubs, spears, and hōlua sled runners were traditionally made of hardwoods, such as uhiūhi^{240,241}, when these traditional cultural practices declined, so did the connection and attachment to uhiūhi.

No kekahi hana kahiko.

He mea hoakaka keia i ka ikaika o ko Hawaii nei kanaka, i ka ikaika i ka pono a me ka hewa. Eia na mea e hooikaika ai. Ina i ao i ke koa, he ikaika ia e make ai ke kino. Ina i ao i ka mokomoko, he ikaika ia e eha'i ke kino. Ina i ao i ka lua, he ikaika no ia e make ai kekahi kanaka. Ina i ao i ka haihai waa, he ikaika ia e lilo ai ka waiwai a kekahi; a me kana waiwai no hoi kekahi. Ina i ao i ka pahee, a me ka maika, a me ke kukini, a me ka noa, a me ka haihai holua, a me ka hooholo moa, a me ke koi. He mau ikaika pili waiwai keia mau ikaika a pau. Eia kekahi mau ikaika ino. Ina ikaika i ka palaualelo, he aihue kona ano.²⁴²

Regarding some traditional works.

This is an explanation of the strength of the Hawaiian people, in strengths both good and wrong. These are the things that are strengthened: if one learned to be a warrior, he possessed the strength to kill someone. If one learned boxing, he possessed the strength to injure others. If one learned lua fighting, he possessed the strength to kill someone. If one learned canoe racing, he possessed the strength to obtain the wealth of another;

²³⁹ Translation by Mālia Kruger and Pōmaika'i Benevedez, February 2013.

²⁴⁰ Buck 1957, pp. 425,439.

²⁴¹ Fornander 1918-1919, pp. 200-201.

²⁴² *Ka Lama Hawaii*, March 21, 1834.

and by their wealth I mean everything. It was the same if you learned pahee, maika, kukini, noa, holua racing, hooholo moa, and koi. These were all strengths in gambling. Here are some bad strengths. If you are lazy, your demeanor is that of a thief.²⁴³

The cultural wounding inflicted by these articles is most attached to cultural artifacts: traditional religious practices and traditional cultural practices, which appeared frivolous to foreigners. Hōlua sledding is a prime example, as it was both a cultural and religious traditional practice.^{244,245} The deterioration of Kānaka ‘Ōiwi traditional practices and cultural knowledge are undoubtedly reasons for detachment with uhiūhi, and the effects of cultural wounding due to this deterioration and degradation of culture continues to haunt the Native Hawaiian community to this day.²⁴⁶

3.7. Changes to vegetative ecosystems of the Hawaiian Islands

3.7.1. Early Hawaiian population impacts

Minimal impact to the vegetation of the Hawaiian Islands began with the arrival of Polynesian settlers around the year 300 A.D. when the populations were initially quite small, perhaps 100 individuals. With a dramatic population increase around 1100 A.D., lowland agricultural fields, which were cleared using fire, crept higher and higher into the valleys. Agricultural systems in Hawai‘i had two main forms: wetland kalo cultivation,

²⁴³ Translation by Mālia Kruger and Pōmaika‘i Benevedez, February 2013.

²⁴⁴ Ferrar 2001, p. 30.

²⁴⁵ Pōhaku Stone, personal communication, July 2010.

²⁴⁶ Cook *et. al* 2003, pp. 11,18.

and dryland cultivation of ‘uala, or sweet potato (*Ipomoea batatas*), kalo, and other food plants.²⁴⁷

The Kānaka ‘Ōiwi population increased to an estimated several hundred thousand around 1650 A.D., and so did their impact on coastal and lowland ecosystems. Along with the expansion house sites and agricultural fields, upper forest regions were also affected as Hawaiians found many native plants, including uhiūhi, useful for building materials, medicine, clothing, and tools.²⁴⁸

3.7.2. Post-contact impacts upon the land

The landscapes where uhiūhi and other treasured hardwood trees evolved have been under siege for over 200 years, and this has hindered access to these trees and the perpetuation of kindred relationships.

Captain Vancouver first introduced cattle (*Bos taurus*) into the Hawaiian Islands in 1793 and 1794. A kapu was placed on them to allow them to increase, and they continued to be a problem as late as the 1850s on Hawai‘i Island and O‘ahu destroying Hawaiian farms and forests. Cattle along with goats (*Capra hircus*) and sheep (*Ovis aries*) introduced in the late 18th century have had a severe impact on native vegetation since their arrival and continue to ravage native ecosystems.²⁴⁹

The first extensive, destructive exploitation to Hawaiian forests was the historic harvest and trading of sandalwood or ‘iliahi (*Santalum* spp.) with China, which was most

²⁴⁷ Cuddihy, L. W., and C. P. Stone. 1990. *Alteration of Native Hawaiian Vegetation*. University of Hawaii Cooperative National Park Resources Studies Unit, University of Hawaii, Manoa. Honolulu: University of Hawaii Press, pp. 17-19,25.

²⁴⁸ Ibid. p. 34.

²⁴⁹ Ibid. p. 40.

extensive between 1815 and 1826. Besides the heavy cutting of forests to pay the debts of the Hawaiian royalty, the lowland forests were also burned to detect the fragrance of sandalwood trees.^{250,251} Other impacts on forests resources included: whaling and the trade of firewood; pulu trade of the hāpu‘u-pulu (*Cibotium glaucum*); and the sugar cane (*Saccharum officinarum*) industry.²⁵²

²⁵⁰ Culliney, J. L. 2006. *Islands in a Far Sea: The Fate of Nature in Hawai‘i*. Revised edition. Honolulu: University of Hawai‘i Press, p. 190.

²⁵¹ Cuddihy and Stone 1990, pp. 38-39.

²⁵² Ibid. pp. 38-39,41,43.

Chapter 4. Puka Ke Ao (The Light Emerges)

Our moment on earth is only a temporary flash. Who can guide us but those who sit in the dark distance, who are there forever.²⁵³

4.1. Reattachment of Kānaka ‘Ōiwi

In Chapter 3, we examined several events and shifts in the Hawaiian social, economic, religious structure of the time that resulted in a tremendous loss of cultural practices, knowledge, and Hawaiian identity. These intrusions of the past have contributed to Kānaka ‘Ōiwi detachment from uhiūhi.

In contemporary times, many Hawaiians maintain strong connections and knowledge of culture and traditions as they strive to reverse over 200 years of cultural decline. This renewed Hawaiian consciousness, reassertions of Hawaiian identity, and growing pride in being Hawaiian blossomed in what has been called “the Hawaiian Renaissance” of the early 1970s.²⁵⁴

This era brought an intense growth of knowledge and an increase of cultural reattachment of Kānaka ‘Ōiwi through the revival and renewed interest in Hawaiian language, chant and music; hula kahiko (ancient hula) and men’s hula; canoe paddling and sailing, especially in regard to the voyaging canoe *Hōkūle‘a*; ancient and modern art forms; and politics, particularly the protests by Kānaka ‘Ōiwi to stop the U.S. Navy’s bombing of the island of Kaho‘olawe.^{255,256}

²⁵³ Quote from a letter by George Helm, Ritte, W. J., and R. Sawyer. 1978. *Na Mana‘o Aloha o Kaho‘olawe*. Honolulu: Aloha ‘Āina O Na Kūpuna, Inc., p. xiii.

²⁵⁴ Kanahale, G. S. 1979. The Hawaiian Renaissance. The Polynesian Voyaging Society Archives. Retrieved June 9, 2013 from

<http://kapalama.ksbe.edu/archives/PVSA/primary%202/79%20kanahale/kanahale.htm>.

²⁵⁵ Ibid.

4.2. Personal cultural reattachment

4.2.1. Getting schooled

I had witnessed some of these rebirths as a child of the 70s and 80s. I had paddled for our canoe club in high school, but it was not until the mid-1980s when I started to learn about my Hawaiian heritage. I took several classes at the University of Hawai‘i at Mānoa that gave me an opportunity to learn of my Hawaiian identity and culture from Hawaiian scholars: 1) an ethnic studies course, ES 221 Hawaiians, taught by Davianna McGregor; 2) Hawaiian language courses where instructor Larry Kimura had us converse only in Hawaiian once we entered the classroom; 3) a land tenure in Hawai‘i course taught by Marion Kelly; and 4) a course offered by Haunani-Kay Trask on Hawaiian history that led me to question some Hawaiian culture and history sources.

4.2.2. Lua as a way of life

In 1998, a high school friend, Lopaka Inciong, invited me to join an organization, Pā-Ku‘i-A-Lua, that was perpetuating the Hawaiian warrior art of lua as well as the values, traditions, practices, ceremonies, and rituals it embodied. Lua groups, such as Pā-Ku‘i-A-Lua, referred also here as the Pā, did not emerge until the early 1990s. However, several contemporary ‘ōlohe lua (lua masters or instructors) of various lua groups started their journey of lua revival in the 1970s.²⁵⁷

²⁵⁶ Mahi La Pierre, personal observations, 1970s to present.

²⁵⁷ Paglinawan *et al.* 2006, pp. 3-4.

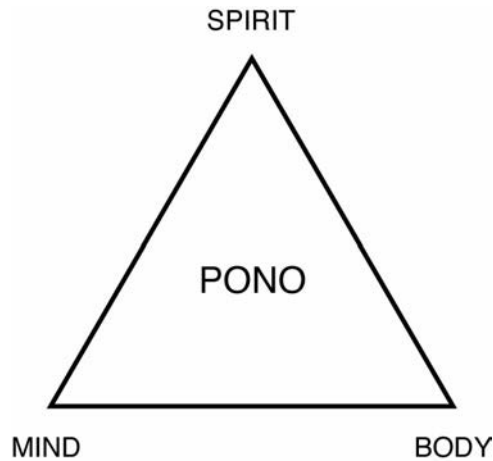


Figure 13. Pono and personal well-being

[M. La Pierre, 2013]

The Pā's teachings are based on the Hawaiian worldview and teaching tenets of observing, listening, keeping the mouth shut, and imitating; honoring and understanding the duality of life; and maintaining and striving for a balance between, gods, nature, and man (Section 1.2.2., Figure 2). Additionally, in regard to personal health and well-being, an individual must continually work toward maintaining a sense of pono²⁵⁸ between one's spirit, mind and body²⁵⁹ as depicted in Figure 13.²⁶⁰

Fortunately, I had found this knowledgeable and supportive cultural vehicle to learn my cultural heritage. The Pā has enhanced my life in countless ways. Led by 'Ōlohe Kukui Lua Richard Paglinawan, Pā-Ku'i-A-Lua incorporates values and traditions of

²⁵⁸ Pono has several meanings besides well-being, including defined as goodness, uprightness, morality, moral qualities, correct or proper procedure, and excellence. Pukui and Elbert 1971, p. 314.

²⁵⁹ Lynette Paglinawan, personal communication, August 2013.

²⁶⁰ This pono triangle graphic is a significant teaching tool within the Hawaiian cultural group, Pā-Ku'i-A-Lua, and was initially shared with Mahi in 1998.

Hawaiian warriors to enable modern Kānaka ‘Ōiwi men and women to lead successful and meaningful lives.²⁶¹

Paglinawan stresses we do our *homework*, our own research, not to blindly accept what is read or shared, but experience them first hand to make your own observations and conclusions. Some of this homework was to learn how to fashion various Hawaiian weapons of wood, stone, shark teeth, and cord. This task is an opportunity to get into the mindset of your ancestors, know how to use these weapons, how they were made, and the science, technology, and engineering that are required for their manufacture.

The first piece of uhiūhi that I received was from the Pā in 1999. After having the first uhiūhi piece for about four years, I attempted to work this ancient wood. It was nerve-wracking, but it was also extremely rewarding. Under its gray-black and weathered, bug eaten exterior was incredibly stunningly hard wood and a dark rich dark brown grain. I named this piece, “The Ancient One” (Figure 21, far right).

This part of our lua training – the learning of native biota, their uses, and the land and ocean realms where they lived – intrigued me and a good number of my fellow lua students, several will be mentioned in this chapter. We have concurrently and collectively spent many hours learning about Hawaiian hardwoods and the forests they inhabit.

4.3. Conventional approaches to learning

4.3.1. Herbarium records

In April 2007, I was able to examine all uhiūhi herbarium specimen sheets located at the B. P. Bishop Museum’s Herbarium Pacifica. This was a great opportunity to see what

²⁶¹ Kamilo Lara, personal communication, August 2012.

uhiūhi leaves, seedpods, and flowers looked like before getting into the field. The staff also shared a copy of their database records for *Caesalpinia*²⁶² species including uhiūhi. I was also able to examine and take a photo of their uhiūhi wood sample in their collection to help me in distinguishing and identifying pieces of wood or artifacts.

4.3.2. Experiencing uhiūhi in its native habitat

To experience uhiūhi using all of my senses, I visited populations of uhiūhi and surveyed its historic ranges on O‘ahu and Hawai‘i Island after obtaining access and collection permits.²⁶³



Figure 14. One of four uhiūhi trees remaining on O‘ahu
[Wai‘anae Mountains, O‘ahu – Photo: S. Ching, July 2011]

On O‘ahu, I observed and spent time with a total of seven mature individuals at Mokulē‘ia and Kamananui in the Waialua district, three of which are now deceased. I

²⁶² Uhiūhi was formerly of the genus *Caesalpinia*.

²⁶³ In addition, because uhiūhi is an endangered species, a collection permit had to be obtained from the State of Hawaii’s, Department of Land and Natural Resources, Division of Forestry and Wildlife before leaves could be sampled for genetic analysis.

was able to accompany botanists, Ane Bakutis and Susan Ching, from the Division of Forestry and Wildlife's O'ahu Plant Extinction Prevention (PEP) program on several of their uhiūhi surveys on O'ahu (Figure 14). PEP programs statewide focus on native plant species with 50 or less individuals left in the wild.²⁶⁴ While on the steep slopes in the Waialua district, we hiked to two mature uhiūhi, one had just fallen over and was dying. I also observed up to five other uhiūhi trees that were already dead. Seeing the dead uhiūhi with their exposed iwi inspired me to continue my research.

In the lowland dry forest ecosystem of Hawai'i Island where, as of 2012, there are believed to be between 90 and 140 individual uhiūhi trees,²⁶⁵ I visited forty-six uhiūhi in South Kohala and North Kona districts. Exploring uhiūhi habitat for the first time on Hawai'i Island, I was honored to have some of my mentors and former co-workers, Joan Yoshioka, Joel Lau, and Dr. Sam 'Ohukani'ōhi'a Gon III join me and share their knowledge (Figure 15).

Learning within these uhiūhi landscapes with a dozen of land managers and conservation professionals was a key factor on this uhiūhi journey as they imparted their knowledge of uhiūhi with me. The uhiūhi, its associates, threats, and ranges also enlightened me with each succeeding visit.

²⁶⁴ Ane Bakutis, personal communication, January 2007.

²⁶⁵ USFWS. 2012. *Listing 15 species on Hawaii Island as endangered and designating critical habitat for 3 species; proposed rule*. Fed. Reg. 77: 63927-64018, p. 63980.



Figure 15. In the domain of Hawai'i Island uhiūhi
 [Mahi, Joel Lau, Joan Yoshioka, and Sam 'Ohukani'ōhi'a Gon
 South Kohala, Hawai'i Island – Photo: B. Brand, December 2007]

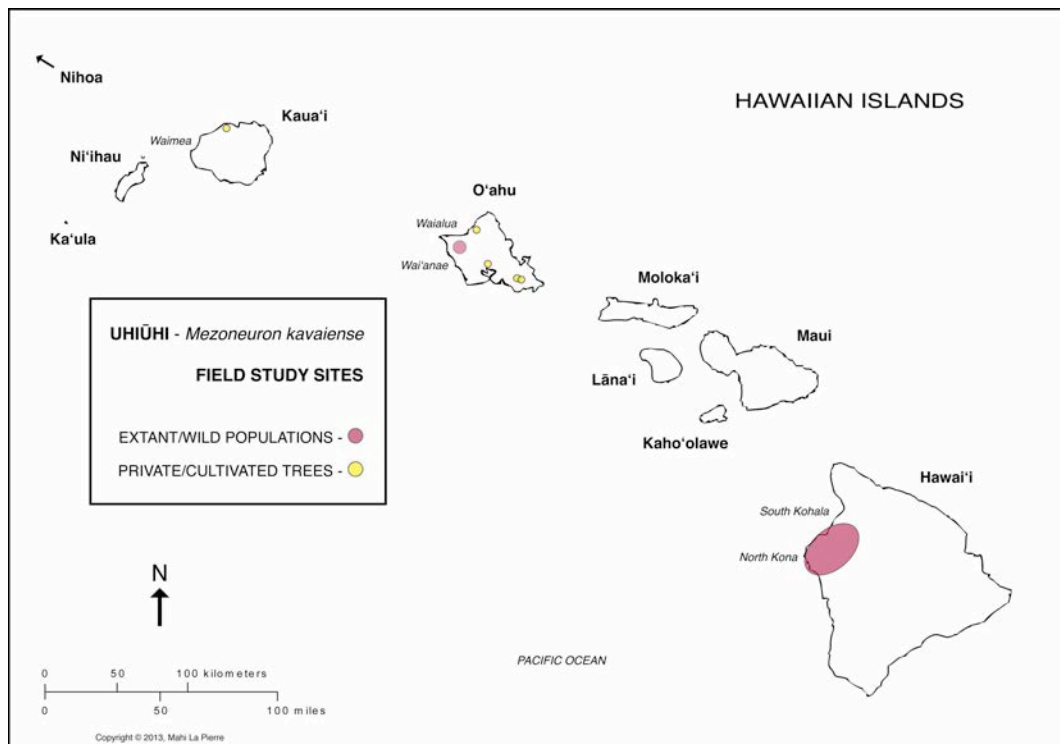


Figure 16. Uhiūhi Field Study Sites [M. La Pierre, 2013]

4.3.3. Seeing uhiūhi DNA with my own eyes

In terms of the conservation of the species genetically, uhiūhi and its small population size is a concern. Federal and statewide conservation actions for uhiūhi include mapping the genetic diversity in its surviving populations in the wild to be able to maintain existing genetic variation levels of the species.²⁶⁶

The gathering of genetic material of these individual uhiūhi trees and the extraction of deoxyribonucleic acid (DNA) from them will aid in research to determine the genetic variation and population structure of the remnant populations on Kaua‘i, O‘ahu, and the island of Hawai‘i to aid in preservation and management decisions and efforts.²⁶⁷



Figure 17. Purified uhiūhi DNA

[Bishop Museum’s Pacific Center for Molecular Biodiversity
Kapālama, O‘ahu – Photo: M. La Pierre, June 2008]

²⁶⁶ Division of Forestry and Wildlife, Department of Land and Natural Resources, State of Hawaii, Hawaii’s Species of Greatest Conservation Need Fact Sheet for *Uhiuhi*. Retrieved November 4, 2006 from

http://www.state.hi.us/dlnr/dofaw/cwcs/files/Flora%20fact%20sheets/Cae_kav%20plant%20NTBG_OK.pdf.

²⁶⁷ Ibid.

While conducting DNA extractions at Bishop Museum, Pacific Center for Molecular Biodiversity (PCMB), I noticed that once the uhiūhi DNA had been purified I actually could see a mass of tiny strands in the tubes (Figure 17). DNA is visible without the use of microscopes and is observable with the naked eye²⁶⁸, but as this was a new experience I wasn't sure what I was observing. After viewing several tubes of uhiūhi specimens in the natural as well as the artificial light of the lab closely, I realized I was actually seeing the DNA, the chemical essence of these uhiūhi, my ancestors (See Section 4.4).

4.3.4. Uhiūhi seed propagation

In 2008, I taught a class I called *Hana 'Imi Na 'auao*, or Hawaiian Science, at Hālau Lokahi Public Charter School. In the third quarter, approximately 50 high school students took the class. We were studying plants and animals of Hawai'i, and one of our projects was an uhiūhi seed propagation experiment exploring seed treatment options and success.

During the course, I had hoped to impress on them the importance of observation and data collection, and to find out through what senses they learned most efficiently. The students carried out the experiment in excellent fashion and honed their skills of observation. They concluded that uhiūhi seeds that were soaked in water and scarified grew the fastest with a 71.42% germination rate. The details of this uhiūhi propagation experiment are found in Appendix B.

²⁶⁸ Institute for Molecular Bioscience, The University of Queensland, Australia. 2013. Strawberry DNA Extraction Experiment. Retrieved February 17, 2013 from <http://www.imb.uq.edu.au/strawberry-dna-extraction-experiment>.



Figure 18. Uhiūhi seedlings grown by students
[Kapālama, O‘ahu – Photo: M. La Pierre, February 2008]

4.4. Relationships with individual uhiūhi trees

One of the most humbling and spiritually rewarding experiences I have had as a lua student is participating in the reburial of human iwi, or bones, of Kānaka ‘Ōiwi that have been disturbed often by weather or modernization. I will never forget my first involvement in April 1999, when I was asked to carry the iwi to their final resting site. The iwi of humans, trees (wood, branches, etc.), and animals all hold reverence in the Hawaiian worldview as they are all our relatives. Though human iwi are more sacred than animal bones, and in this case the iwi of trees, I have come to see a correlation between all of these iwi. It is our kuleana to care for them, and protect those that are still living, and honor those who have died.

Let me introduce you to two individual uhiūhi trees whose wood has been given new life, and in turn, they have given us new life and knowledge. The need to be creative in

finding woodworking solutions for whatever you are making has been a major lesson for me, and a few close friends. We are not buying wood off the shelf, already squared-off, and milled, but using the dead iwi of these trees, like uhiūhi, and using them to perpetuate elements of Hawaiian cultural traditions.

4.4.1. My name is Pōka‘ī

Pōka‘ī’s was the first wild uhiūhi tree that I visited with Joel Lau and Māhealani Cheek in 2002 (Section 1.1). Additional dead limbs and roots were gathered and cared for after a second visit to the tree by myself, Māhealani, Mahauwela Tolentino, and Kunāne Wooton. Pōka‘ī’s iwi provided the bulk of the uhiūhi raw material that we and a few others have used to regain an understanding of Hawaiian hardwoods, weapon making, other woodcrafts, and related traditions and rituals. What Pōka‘ī had provided might not have been much in the opinion of others, but it was invaluable to us. We now have the kuleana of giving her iwi new life and perpetuating the mo‘olelo of uhiūhi.

The opportunity to work intimately with the iwi of this tree ancestor is an honor and is not taken lightly. I have include genealogies of traditionally inspired as well as modern items created from Pōka‘ī’s wood by the four of us and other artisans in Tables 3 to 7. Each in their own way, these Kānaka ‘Ōiwi and other artisans have nurtured the beginnings of an uhiūhi cultural reattachment.



Figure 19. Gathering iwi of Pōkaʻī

[Mahauwela Tolentino, Mahi, and Māhealani Cheek gathering iwi of Pōkaʻī
Waiʻanae, Oʻahu – Photo: K. Wooton, June 2002]

4.4.2. My name is Tuahine

Over the past seven years, I had visited quite a few cultivated uhiūhi in arboretums, private gardens, nurseries, and collections on Kauaʻi and Oʻahu. But a particular uhiūhi tree whom I named Tuahine, after a gentle Mānoa rain on Oʻahu, is the one that I had become attached to more than the others. I met her around 2004, when she was living at the courtyard of Harold St. John Hall of the Botany Department at University of Hawaiʻi at Mānoa (UHM). She was just beautiful. The origin of Tuahineʻs seed and when she was planted is unclear.^{269,270,271}

²⁶⁹ Kawika Winter, e-mail correspondence, March 7, 2013.

²⁷⁰ Kim Bridges, e-mail correspondence, February 19, 2013.

²⁷¹ Will McClatchey, e-mail correspondence, February 20, 2013.

Towards the end of 2012, Ikaika Nakahashi, a former UHM Botany graduate student who accompanied me on two field studies of uhiūhi, had informed me that Tuahine was cut and possibly dead.²⁷² I went to see if Tuahine was okay, but the reports were true. It is theorized that Tuahine had been vandalized and cut back, resulting in her death sometime in 2012.²⁷³



Figure 20. Tuahine in her prime
[Mānoa, O‘ahu – Photo: M. La Pierre, September 2007]

²⁷² Chris Ikaika Nakahashi, personal communication, 2012.

²⁷³ Michael Thomas, e-mail correspondence, February 14, 2013.



Figure 21. A club, Hāwea, Hāloa, and the Ancient One
[Maunaloa, O‘ahu – Photo: M. La Pierre, July 2013]

Returning to UHM for graduate school in 2004, I frequented the courtyard and visited with Tuahine often. After getting permission from Will McClatchey, former collections manager of the Botany Department – two dead limbs were gathered, one in 2005 and one c. 2008. From the iwi gathered in 2005, I fashioned Hāloa, a barbed spear, that has been used in numerous educational presentations and workshops and more than a dozen ceremonies, rituals, and cultural events (See Figure 21, center, and Table 8).

Devastated, I wrote a kanikau (dirge) for Tuahine in February 2013 to commemorate the tragic loss of a relative and beloved friend. The excerpt below is the first two verses (See Appendix D).

was your last breath at the turning of the early hour, when the rooster
crows at the first light of dawn, the beginning of the morning light, just
before its reddish glow?
did you pass yesterday, last week, or the month before my beloved friend?

when did you pass from this life, releasing your spirit, and leaving your physical body for us, your family and friends to weep in grief on this side of the dark river of death? when?

you give us hope as you pass from this life into pō,
our duty is clear as it ever was
we are ashamed we were not there to comfort and protect you
oh what pity for our dear companion forever gone

Rubellite Johnson gives a detailed description of kanikau and their purpose below.

The Hawaiian kanikau – ‘a dirge, lamentation, chant of mourning’ – is a *mele*²⁷⁴ with the express purpose of celebrating those who have gone “*i ke ala ho ‘i ‘ole mai*”, or, “on the pathway of no return” to use one of the stock phrases of poetry. It comes from two words: ‘kani’ meaning to ‘sound’, and ‘kau’, meaning to “to set”, or “to place” and also “to chant, as for a person or place”. The kanikau, however, is a dirge not only for the dead; it can be a lament for anyone who is leaving for a long time, or having left is perhaps never to return or to be seen again.

The kanikau was, of itself, a poem in praise of the life of a person... with a person’s having lived, with his or her connection to others who may remember him or her in circumstances where they were raised together, went to school together, and in walks of life where the person was truly known. A kanikau for the ali‘i²⁷⁵ also expressed pride in the greater Hawaiian family and nation.²⁷⁶

I decided to put pen to paper after driving by the Mānoa area the day after I visited Tuahine and confirmed her death. At the time, I did not understand why I was crying like a baby as I recalled my visits to observe, talk to, study, and care for this particular uhiūhi tree. Later I realized that must have developed a deep attachment that I was not consciously aware of. My pain was evidence of my cultural attachment. Not knowing for

²⁷⁴ Mele is a song, chant of any kind, poem. Pukui and Elbert 1971, p. 226.

²⁷⁵ The word, ali‘i, is defined as chief, chiefess, king, queen, noble; royal. Pukui and Elbert 1971, p. 19.

²⁷⁶ Johnson, R. K. 2010. *Mourning Chants: Kanikau. Keeping Maui’s History Alive*. Maui Historical Society. Retrieved May 27, 2013 [<http://www.mauimuseum.org/chants.htm>].

sure, I assumed she had been abused and cut, and was angry and even felt guilty because I had not visited her for a while. With her death, I part of me died also.

On February 17, 2013, before Tuahine’s remaining iwi were removed from the courtyard a service was held. Attending were family and friends as well as caretakers of the area, collections manager, Michael Thomas and student helper, Max Bender. I recited part of her kanikau.

Tuahine and her remaining limbs are pictured in Figure 22 with Kunāne and Kamakanuionālani Wooton blessing her after those attending and the surrounding area was cleansed with the burning of ‘iliahi wood. An offering of ‘awa (*Piper methysticum*) was poured upon Tuahine’s limbs before we removed all the iwi down to the last root. Some of these rituals, Kunāne and I had learned from our teachings from Pā-Ku‘i-A-Lua.



Figure 22. Blessing Tuahine

[Mānoa, O‘ahu – Photo: D. Tenney, February 2013]

4.5. Shaping wood as the wood shapes you

Almost 20 years ago, when I started carving things out of wood, I asked my uncle, Leonard O'Toole, for some advice. Extremely creative and skilled in manipulating wood, bone, leather and metal, he surprised me with his concise and puzzling answer. He explained: "The wood will show you... it will tell you how to carve it." Not a year goes by when I don't remember his words. I think I understand them a little bit more now. Little by little, the things we are making are really molding us.

These things take time, effort, and determination, but they also take keen senses, especially the inner sense, the na'au. Native Hawaiian artist, Rocky Jensen shares:

I have studied under these faceless masters forever. And I still do...
I hear their voices through repeating their work. Every day is a learning experience. I go through life as a student. Insight is another thing.
It could be a word, it could be something I've read before, thousands of times. Suddenly, I'm awakened to a new perspective about my culture, and who I am.²⁷⁷

I try to keep tabs on all of them, for they are my children... When I 'sell' a piece, I'm exchanging one treasure for another, but i still maintain my connection to all that comes out of my hands. Everyone who owns my works knows this of me.²⁷⁸

4.5.1. Uhiuhi wood observations

Many people, Hawaiian and non-Hawaiian, have described the beauty, density and color of uhiuhi wood in many ways, for almost 150 years. Some sources describe its color as *dark colored*, some say *black* or *almost black*, some say that its *reddish black* or

²⁷⁷ Quote by Rocky Jensen, renowned Hawaiian artist. Shafto, T. D., and L. McDaniel. 2009. *Contemporary Hawai'i Woodworkers: the Wood, the Art, the Aloha*. Mountain View, Hawai'i: Contemporary Publications, p. 86.

²⁷⁸ Ibid.

a few shades lighter.^{279,280,281} This can be a little confusing, but at first I relegated to the fact that uhiūhi’s color variation was due, in part, to the characteristics of its habitat: climate, soil, elevation, and other ecological factors. In 1891, Lionel Stagge, in his article in the Hawaiian Gazette entitled, “Indigenous Hawaiian Woods,” explains the difficulty in describing T. G. Thrum’s extensive Hawaiian wood sample collection exhibited in Honolulu:

In the attempt to describe this collection, the writer finds much difficulty to portray accurately, in a brief space, the beauty of grain and shades of color to set the same intelligently before the reading public. Colors, however, and even grain is sometimes found to vary accordingly to soil climate, and further experience in this interesting search may show differences to the foregoing.²⁸²

I hope we can agree, that many times words cannot truly and accurately describe things. The words, *reddish*, *brown*, and even *black*, may have different interpretations from person to person, place to place, and culture to culture.

4.5.2. Uhiūhi wood color variation

In 2002, when another lua brother, ‘Ipo Muller initially helped us process the uhiūhi wood of Pōka‘ī on his band saw, we noticed the wood was brownish with darker streaks, but was considerably lighter in color than any artifacts or reproductions of uhiūhi wood that I have seen in publications, at Bishop Museum, or private collections.

²⁷⁹ Stagge 1891, p.1.

²⁸⁰ Beniamina 1857.

²⁸¹ Rock 1913, p. 185.

²⁸² Ibid. p. 7.

I had made a niho ‘oki, or shark-toothed knife²⁸³ from this wood for Joel Lau as a makana (gift) for all this assistance and sharing his knowledge over the years, especially in regard to uhiūhi. Eleven years passed until we got an answer to the uhiūhi wood color variations. In February 2013, I visited Joel and noticed how dark his niho ‘oki (top, Figure 23) had become. It was very dark, almost black and the hemp cordage that I used to attach the shark tooth was brittle and breaking. I had made a similar tool (bottom, Figure 23) for myself out of the same plank of uhiūhi wood – two niho ‘oki were cut out adjacent to one another.



Figure 23. Two uhiūhi niho ‘oki
[Maunalua, O‘ahu – Photo: M. La Pierre, February 2013]

Joel’s niho ‘oki was almost black with dark grayish streaks, and totally different in color than mine. I kept mine in a case out of the elements, while Joel’s was placed on a shelf in his home. The contrasting hue and general look of Joel’s was amazing for me to

²⁸³ A shark’s toothed knife, as used for wood carving and cutting hair. Pukui and Elbert 1971, p. 245.

see. Its dark color looked similar to some artifacts I have seen, but still not as dark as some of them. I showed them to Kunāne and he shared that the patina, or discoloration, was probably due to exposure to the sun's ultraviolet light rays, temperature, and moisture.

4.5.3. My uhiūhi children

Throughout this journey a large part of my experience was getting to know how to process and work with uhiūhi wood to learn of its characteristics, and to hopefully gain some insight into why it was highly valued historically. Today, laws are broken as some extremely rare live uhiūhi trees are cut, and common decency, respect, and Hawaiian familial relationships seem forgotten. Figure 24 below shows most of my uhiūhi creations that I have fashioned from Pōkaʻī and Tuahine. See full list and descriptions in Table 3 and Table 8.



Figure 24. Uhiūhi children of Mahi
[Maunalua, Oʻahu – Photo: M. La Pierre, March 2013]

4.6. Rebuilding an ancient hale pili in modern times

For a little over two years beginning in August 2006, I was honored to assist in several phases of the B. P. Bishop Museum's hale pili (traditional Hawaiian grass house) restoration by the non-profit organization, Leo Kānaka, directed by Pōmaika'i Kaniaupio-Crozier. This hands-on journey interested me because this hale pili was an extraordinary relic of Hawaiian culture and history. Additionally, several of this authentic house's posts were fashioned of uhiūhi wood. Believed to have been built before the year 1800, the original house from which the posts and rafters were gathered was found abandoned in Miloli'i Valley, Kaua'i²⁸⁴. Due to the forward thinking of its then curator, William T. Brigham, the hale pili was disassembled and rebuilt in Bishop Museum's Hawaiian Hall in 1902. Although somewhat modified from its original structure, it remains as the only genuine Hawaiian house using posts from a traditional Hawaiian home standing today.

Of this house's 18 pou, or house posts, five were easily identified as uhiūhi because of its unique color, grain, and density. Four of these uhiūhi pou were set along the back wall between two corner posts. The other uhiūhi pou was on the left side of the solitary entrance. Two of the other pou were tentatively identified as naio (*Myoporum sandwicense*), also known as false or bastard sandalwood, and the other eleven pou were not identifiable by those on hand at that time.²⁸⁵ Traditionally, the same type of wood

²⁸⁴ Summers, C. C. 1988. *The Hawaiian Grass House in Bishop Museum*, Bishop Museum Special Publication 80. Honolulu: Bishop Museum Press, p. xi.

²⁸⁵ Pōmaika'i Kaniaupio-Crozier, personal communication, October 2008.

would be used for the posts or rafters in order for the occupants “to live quietly and comfortably in the house.”²⁸⁶

The selection of timbers was nevertheless no haphazard choice. The Hawaiians had a remarkable knowledge of trees and plants; they gave them names and exploited their useful qualities in a way that their descendants have wholly forgotten. They were not likely to pick out a tree that was not durable, and they had a building requirement that the post and connecting rafters, forming with the ground a pentagon, should be, so far as each set went, of the same kind of wood; with this exception they were free to use any durable and otherwise suitable wood.²⁸⁷



Figure 25. Locking in uhiūhi house posts

[Kapālama, O‘ahu – Photo: Leo Kānaka, March 2008]

The fact that this particular hale had several types of wood for posts could indicate that uhiūhi was not very abundant in the area by the 1800s, and that woods readily available to the builders were used in its construction.

²⁸⁶ Brigham, W. T. 1908. *The Ancient Hawaiian House V2, No. 3: Memoirs of the Bernice Pauahi Bishop Museum of Polynesian Ethnology and Natural History*. Honolulu: Bishop Museum Press, p. 267.

²⁸⁷ *Ibid.* p. 267.

4.7. A hōlua is born

Another use of uhiūhi wood was for hōlua, or Hawaiian sleds. Traditionally, hōlua were seven to eighteen feet long^{288,289} with two wooden runners often made of uhiūhi or māmane wood²⁹⁰ lashed together about 6 inches wide at the tail end, and only about 2-3 inch gap between the leading tips of the runners.²⁹¹ Upon these runners, attached by a series of ke‘a (cross pieces) much like a double-hull canoe, was a long, thin platform. Riders would lie upon their bellies, and hurl themselves head first down huge, lava rock ramps. Many of these kahua hōlua, or stone slides, are mostly in ruin or completely destroyed.²⁹²

In September 2006, my neighbor and childhood friend, Dan Tenney, and I planned to make and ride our hōlua – one for each of us. Unable to get uhiūhi wood, we used ‘ōhi‘a (*Metrosideros polymorpha*) as a substitute for traditionally used woods for the runners. In an attempt to make the sleds as authentic as possible, we visited the hōlua in Bishop Museum’s collections. We were able to examine two intact hōlua and a couple sets of unassembled runners. One of the two sleds, believed to be around 600 years old²⁹³, once belonged to Lonoikamakahiki²⁹⁴, a Hawai‘i Island chief renowned for his debating and boxing skills.²⁹⁵

²⁸⁸ Ellis, W. (Rev.). 1839. *Polynesian Researches*, Vol. 4, London, pp. 299-300.

²⁸⁹ Buck 1957, p. 379-382.

²⁹⁰ Malo 1951, p. 224.

²⁹¹ Mahi La Pierre, personal observation at B. P. Bishop Museum Collections, October 2006.

²⁹² Ferrar, D. 2001. Riding the Mountain, Learning to Bleed. *Hana Hou: The Magazine of Hawaiian Airlines* 4(5): 28-37, p. 30.

²⁹³ Marques Hanalei Marzan and Kamalu du Preez, Bishop Museum, personal communication, October 2006.

²⁹⁴ Bernice Pauahi Bishop Museum. 2006. *Ethnology Database: 00320 – Detailed Artifact Search Results*. Accessed March 2, 2006. <http://www2.bishopmuseum.org/ethnologydb/detailed.asp?ARTNO=00320>.

²⁹⁵ Pukui and Elbert 1971, p. 392.

Tom “Pōhaku” Stone, credited with reviving the ancient art of riding hōlua, states that the cultural practice of he‘e hōlua, or Hawaiian sledding, was last performed in 1825 at Kāneaka, a mile-long kahua hōlua, in Keauhou, North Kona on Hawai‘i Island.²⁹⁶ I was able to visit Kāneaka and walk a fraction of its length. It was huge, and just wide enough to accommodate two riders.²⁹⁷ The sleek construction of a hōlua sled coupled with the intensity of risking life and limb upon jagged basalt ramps suggested that it was much more than a competitive sport. Kenneth Emory concurs stating the ritual aspects of contests.

No important contest was engaged in without first consulting auguries, and without approaching the gods with prayers and offerings to win their favor. Over every sport some god presided. When a man felt he was in harmonious relations with the mysterious forces about him, he was quite likely to accomplish superhuman feats of strength and skill. He would have true mana.²⁹⁸

Through Stone’s many years of researching, fashioning, and riding hōlua, he concludes that he‘e hōlua was a ritual honoring the goddess of lava and fire, Pele.²⁹⁹ It was a competitive sport at times, and in other instances, especially when riding on the lava platforms – it was a sacred and possibly bloody, ritual offering of one’s self to the volcano goddess.³⁰⁰

On my hōlua, of the thirteen ke‘a connecting the runners and upper rails, only the first and the last are of uhiūhi wood from Pōka‘ī of Wai‘anae. Midway on the outer sides of each runner, I inlaid a geometric, bird-shaped design – the right half of it was uhiūhi and

²⁹⁶ Pōhaku Stone, personal communication, July 2010.

²⁹⁷ Mahi La Pierre, personal observations, 2005.

²⁹⁸ Emory, K. P. 1981. In *Ancient Hawaiian civilization*, revised edition, "Sports, games, and amusements", 145-157. Japan: Charles E. Tuttle Company, Inc., p. 148.

²⁹⁹ Pukui and Elbert 1971, p. 396.

³⁰⁰ Pōhaku Stone, personal communication, July 2010.

left half was māmane, a fairly light colored, yellowish wood. This not only honored two traditional woods of the hōlua, but also symbolizes the duality of life and death.

I named my hōlua, *He‘ulahiwanui*. “Hanau ko ia ka lani he ulahiwa nui” is line in a chant retold by the priest Kapaahulani which tells of a chief being conceived and born, and likened to a “great red fowl”.³⁰¹ My hōlua’s name was given to honor of the ali’i hōlua riders of the past, and because its runners are a reddish, or ‘ula, color.



Figure 26. He‘ulahiwanui takes flight

[Haha‘ione, Maunaloa, O‘ahu – Photo: D. Tenney, January 2007]

We first rode He‘ulahiwanui on a small gradual slope at Koko Head Elementary School on O‘ahu just to see how it worked towards the end of 2006. On the second riding of He‘ulahiwanui in Haha‘ione, also on O‘ahu in January 2007, a rider walked away with a couple of bruised ribs. Others left with a few cuts, turf abrasions, a ripped toenail, and black-and-blue, battered egos. It was a small, gradually sloping, grassy hill – nothing terribly threatening like the hōlua slides of the past, but we rode He‘ulahiwanui and he

³⁰¹ Fornander 1918-1919, Vol. IV, pp. 372,373.

functioned perfectly. So far, he has been ridden about 100 times by Hawaiian and non-Hawaiians alike from ages six to fifty-five.

4.8. ‘Ūkēkē of lovers

The ‘ūkēkē, or Hawaiian musical bow, is used to accompany the song and the oli. ‘Ūkēkē are usually a little over an inch (2.5 cm) wide and 17 – 24 inches (approximately 43 – 61 cm) in length.³⁰² This seemingly simple, two to three stringed instrument is placed in the mouth, which acts as a sound chamber. Strummed with the thumb or fingers and manipulated by one’s mouth shape, lips, and the tongue, the ‘ūkēkē’s main purpose is for serenading and sharing coded messages between lovers.³⁰³

Kauila³⁰⁴ was the most widespread choice of wood for fashioning an ‘ūkēkē, but the wood of uhiūhi, ‘iliahi, and ‘ūlei (*Osteomeles anthyllidifolia*) among others, “were also declared suitable”.³⁰⁵ Because it was used for ho‘oipoipo (courting)³⁰⁶, the missionaries despised it and demanded that Kānaka ‘Ōiwi cast aside this harmful stringed instrument.

While the ukeké was used to accompany the mele and oli, its chief employment was in serenading and serving the young folk in breathing their extemporized songs and uttering their love-talk – *hoipoipo*. By using a peculiar lingo or secret talk of their own invention, two lovers could hold private conversation in public and pour their loves and longings into each other’s ears without fear of detection – a thing most reprehensible in savages. This display of ingenuity has been the occasion for outpouring many vials of wrath upon the sinful ukeké [by the missionaries].^{307,308}

³⁰² Buck 1957, p. 388.

³⁰³ Roberts 1967, pp. 24,25.

³⁰⁴ It is not clear if Roberts is referring to the species *Colubrina oppositifolia* or *Alphitonia ponderosa*. Wagner *et al.* 1999, pp. 1092,1094.

³⁰⁵ Roberts, H. H. 1967. *Ancient Hawaiian Music*. New York: Dover Publications, Inc., p. 21.

³⁰⁶ Ho‘oipoipo means to make love, court, woo; love; romantic. Pukui and Elbert 1971, p. 96.

³⁰⁷ Emerson 1998, p. 148.

³⁰⁸ Roberts 1967, pp. 18,19.

Fortunately, scholars like Mary Kawena Pukui believed in the significance of this instrument and taught its practice to other Kānaka ‘Ōiwi. One of these Hawaiians was Ka‘upena Wong, who shared his astonishing knowledge of this instrument, and how to play such a song of love talk, *Mele ‘Ūkēkē* (Appendix C), which was taught to him by Pukui. I had met Ka‘upena through Noelani Mahoe of Pā-Ku‘i-A-Lua where she would share her knowledge of Hawaiian language, music, and oli.

Both Mahoe and Wong are titans in Hawaii’s music industry, having been inducted into the Hawaiian Music Hall of Fame in 2008. That day in Pauoa is burned into my uhiūhi memory. I was privileged to have this rare opportunity to learn first hand from experts in Hawaiian language, oli, and music.



Figure 27. Learning the ‘ūkēkē

[From left: Noelani Mahoe, Mahi, and Ka‘upena Wong
Pauoa, O‘ahu – Photo: K. Hāpai, July 2008]

I couldn’t believe my eyes and ears – seeing and hearing what Ka‘upena was doing with the ‘ūkēkē. I also knew with his gift of ‘ike (knowledge) and blessings to share it that I had taken on a new kuleana – to learn and perpetuate the ‘ūkēkē’s story.

On the table in front of us in Figure 27, is the first ‘ūkēkē I made of ‘iliahi wood. The one Ka‘upena is holding was very dark brown, tight-grained with black streaks. It sure looked like uhiūhi to me, but it was not his – it was on loan. A month later, I presented each of these the two with their very own ‘ūkēkē – neither had owned one previously. I received a handwritten card from Ka‘upena (a.k.a. Uncle Pally), and he wrote:

It pleases me so much to know that the instrument was handcrafted by you; and that it represents, in a very tangible way, your commitment, your dedication to the skilled artisans from our cultural past. Once again friend, Mahi, thank you, mahalo for my very special gift – helu ‘ekahi!³⁰⁹

Since then, I have experimented in making about 20 plus ‘ūkēkē of various native woods, mostly of ‘ōhi‘a. The most recent ‘ūkēkē completed, named Hāwea, is made of uhiūhi wood and uhi, or pearl shell (Figure 21).

4.9. Uhiūhi attachment by others

Fellow lua students, ‘Ipo, Kunāne, Māhealani, Keoki, Mahauwela, and others that I met through the Pā found we had much more in common than our Hawaiian ancestry. Each in our own way wanted to regain, reattach, learn, and relearn those Hawaiian traditions and practices that were lost once lost – not only those connected to the art of lua. We have shared numerous fun, challenging, dangerous, and whimsical times with friends and family exploring cultural connections and landscapes in Hawai‘i and across the South Pacific. I am honored to share some of their cultural knowledge, values, thoughts, experiences, and creations from the iwi of Pōka‘ī here in Tables 4, 5, 6, and 7.

³⁰⁹ Excerpt from card written from Ka‘upena Wong to Mahi, September 2, 2008. Helu ‘ekahi means number one.

4.9.1. Uhiūhi as culture and ancestor

Māhealani Cheek, a fellow Pā-Ku‘i-A-Lua member, and I have been on many cultural quests together on several Hawaiian Islands. He had also independently done some exploring on his own on Hawai‘i Island in uhiūhi country in North Kona. In February 2013, he was serving in the U. S. Air Force in Afghanistan when I emailed him asking for his thoughts and remembrances of our uhiūhi ventures in 2002 to recover the iwi of Pōka‘ī (Figure 28). Below is an excerpt of his first response:

I still remember looking for seeds in hopes to save that last one, in a forest which seemed to overtake the UhiUhi. I remember the shaping with IPO. I never got my masters because I traded that time in Thesis for time with IPO, Ka Aina, Ka Laau. Those days are still felt in my fingertips in my na'au. I long to live again as I suffer in this forest I stand as strong as that tree once did as the world passes by.

I am crying now because I miss that day. I am trying to be careful not to get my computer wet.

UhiUhi to me is our culture. Strong trees, but changing climate, soil composition, forest hegemony (overtaken by foreign tree that choke out the kanaka) force an adaptation required and not often achieved. Given its natural state which has allowed it to flourish in its native habitat.

So am I forced to adapt...³¹⁰

He told me that these thoughts and memories of Hawai‘i sustained him and helped to keep him strong while living and working in such a hostile environment. He touched my heart with his words and I felt some of his pain being away from his home and family, including uhiūhi and other ‘āina related entities. Māhealani added:

If a ohana lives next to an Uhi Uhi Ohana and learns from that ohana- then that Kanaka Maoli ohana can (possibly) become like the UhiUhi.

³¹⁰ Māhealani Cheek, e-mail correspondence, February 14, 2013.

I do not talk of absolutes like my ohana will do this and we will do that, but instead we learn what it means to be Kanaka maoli from the environment much like the first of the first who ever came to Hawaii would have had to in order to develop into a great society before the environmental change (not the height of our society).

The ike is there in our Naau from the Naau of our Kupuna – UhiUhi.³¹¹



Figure 28. Māhealani carrying iwi of Pōkaʻī
[Waiʻanae, Oʻahu – Photo: K. Wooton, June 2002]

4.9.2. Perpetuating culture through art

Kunāne Wooton and I have travelled many miles together on foot and across the ocean from Hawaiʻi to Tahiti and the Marquesan Islands learning about and sharing Hawaiian cultural traditions. He had visited and gathered Pōkaʻī's iwi with us in 2002, explored and helped document the uhiūhi at Puʻu Waʻawaʻa on Hawaiʻi Island, and participated in honoring Tuahine at her service.

Kunāne combines his Hawaiian cultural foundation and artistic skills in several media

³¹¹ Māhealani Cheek, e-mail correspondence, February 18, 2013.

to create traditional and modern art pieces and implements. Kunāne had made a pair of hula sticks (left, Figure 29) for his daughter Kamakanuionālani. He chose to use uhiūhi wood because he wants her to hear the sound heard by Kānaka ‘Ōiwi of the past who knew of native hardwoods, like uhiūhi. He realizes the importance of these nuances in knowing what our kūpuna heard and did, what they smelled, tasted, and how they felt. He is passing on these traditions and opportunities of learning of their Hawaiian heritage to her.³¹²



Figure 29. Uhiūhi children of Kunāne
[Kahalu‘u, O‘ahu – Photo: M. La Pierre, February 2013]

He also showed me a club and an opu‘u, a bud-shaped pendant, he made for his daughter using uhiūhi wood as well (center and right, Figure 29). The choice of uhiūhi wood for these projects is no accident, and not just for appearance. Kunāne shares his design process of the opu‘u:

There’s three black lines on it that are made out of uhiuhi and it’s sectioned through the ivory and those three black lines are representative

³¹² Kunāne Wooton, personal communication, February 13, 2013.

of the three piko that embody Hawaiian philosophical concepts... Yeah, you got your piko, the one on your head, the one in your belly button, and then your ma‘i³¹³ so that’s the three lines...

I chose to use uhiuhi in it because I’m playing with the word, uhi. It’s a covering that protects you. I wanted to use the wood as a cross-section of black going through the ivory to represent the piko and her connection to her kupuna, all of our ancestors that came before, and then her connection to me and mom. It’s embodying the timeline of her life... how she is connected to her kupuna, to us, and then later in the future she’ll be connected to her own child...³¹⁴

4.9.3. Uhiuhi attachment unbroken

Keoki Baclayon, another lua brother, teaches courses on lā‘au lapa‘au (traditional Hawaiian medicine) at University of Hawai‘i at Mānoa. I do not think it was a coincidence that I received a notice in November 2012 to attend his public defense of his thesis, “E Kū Makani: A ‘Life History’ Story of Kahuna Lā‘au Lapa‘au Levon Ohai³¹⁵”, his mentor. Below is my only encounter with someone of this modern time stating that they use uhiuhi medicinally. Keoki wrote:

I’m glad you asked about uhiuhi. Ohai mentions it being used for skin problems, like rashes, however, his preference is pōhinahina because its more available. My family uses it to regulate high/low blood pressure, diabetes, and to strengthen the liver/kidneys. In both cases, the leaves are used and depending on how the practitioner wants to deliver the medicine to the body (topically, ingesting etc.) based off of his or her assessment of the person, it is then prepared accordingly. This could be as a kāpa‘i (poultice), ‘au‘au (bath), inhalation, infusion, decoction etc.³¹⁶

³¹³ The meaning of ma‘i in this context is genitals. Pukui and Elbert 1971, p. 204.

³¹⁴ Kunāne Wooton, personal communication, February 13, 2013.

³¹⁵ Levon Ohai of Kapa‘a, Kaua‘i was an esteemed instructor of traditional Hawaiian medicine at the University of Hawai‘i at Mānoa. He passed from this life on March 3, 2012.

³¹⁶ Keoki Baclayon, e-mail correspondence, February 21, 2013.

I humbly asked if he could share of his healing genealogy, and where his family would get uhiūhi material. He responds to my questions in italics below.

have you used it yourself? made it for others, never needed it personally, prefer using local herbs because its so difficult to find
seen or heard of others using it? Levon Ohai
your kumu is ohai and anyone else? primarily my dad Kealohanui Baclayon, his mom Emily Kualu (deceased) & Levon Ohai...

do you come from a line of healers? yes.
they use it now? not sure, unable to keep up with everyone
would they like more grown? yes, perhaps we should plant uhiuhi in the place of Tuahine
where do they get their la'au from now? kōke'e
would you use it more you think if it was more available? yes; do you have access to uhiuhi that it can be planted / transplanted or grown?
was "recipe" or "recipes" passed down? yes, and new ones created because of impressions of the spirit.³¹⁷

I was very fortunate to be able to connect with Keoki. His information on uhiūhi is an excellent reminder that even though much cultural knowledge and traditional were lost, not all was lost. Ohai, Keoki, and their families' uhiūhi attachment although strained by availability were not broken and continue to this day. Families like theirs are treasures because of their continued use and ongoing relationship and attachment to uhiūhi.

4.10. Not all knowledge was lost

Although there had been a severe loss of cultural identity and traditional practices by the general Kānaka ʻŌiwi populous beginning in 1778, Hawaiians did not lose all of their cultural knowledge.

³¹⁷ Keoki Baclayon, e-mail correspondence, February 22, 2013.

There were cultural strong holds in rural communities throughout the Hawaiian Islands who withdrew from the majority of the social, economic, and political changes taking place in Hawai‘i during these times. These Native Hawaiians became known as kua‘āina.³¹⁸ The term kua‘āina, literally “back land”, was typically a term for a rustic, countrified person.³¹⁹ That connotation changed during the Hawaiian cultural renaissance of the late twentieth century when these people were recognized as the keepers of cultural knowledge.³²⁰

A kua‘āina came to be looked upon as someone who embodied the backbone of the land. Indeed, kua‘āina are the Native Hawaiians who remained in the rural communities of our islands, took care of the *kūpuna* or elders, continued to speak Hawaiian, bent their backs and worked and sweated in the taro patches and sweet potato fields, and held that which is precious and sacred in the culture in their care.³²¹

Hawaiian ali‘i, such as Kamehameha I, wisely established schools of learning as they saw the importance and need to preserve Hawaiian traditions, including the fighting art of lua. The teachings from these schools have continued to this day. One example is Pā-Ku‘i-A-Lua who traces its lua genealogy back to Kamehameha I and includes lua masters: Kekūhaupi‘o, Napuaiki, Fred Beckley, Manase Makekau, Jonah Kūhiō Kalaniana‘ole, Curtis Iaukea, Chad Pi‘ianaia, John Wise, and Charles W. Kenn.³²²

Lua’s counterpart, lā‘au lapa‘au, or the healing arts were partly preserved when eight Kānaka ‘Ōiwi took matters into their own hands in 1866. They knew something had to be done to prevent the increasing Hawaiian population decline to foreign epidemics, and

³¹⁸ McGregor, D. P. 2007. *Nā Kua‘āina: Living Hawaiian Culture*. Honolulu: University of Hawai‘i Press, pp. 3-6.

³¹⁹ Pukui and Elbert 1971, p. 155.

³²⁰ McGregor 2007, p. 3-6.

³²¹ Ibid. p. 4.

³²² Paglinawan *et al.* 2006, p. ix,17-20.

formed the ‘Ahahui Lā‘au Lapa‘au of Wailuku on the island of Maui. Through their deliberations the members discussed how to address, investigate, and research medical treatments for the betterment of public health. The group conducted interviews, in the Hawaiian language, with healing practitioners on Maui, worked towards the certification of these master healers³²³, and preserved their invaluable cultural knowledge which has since been compiled into a book, *Must We Wait in Despair: The 1867 Report of The ‘Ahahui Lā‘au Lapa‘au of Wailuku, Maui on Native Hawaiian Health.*³²⁴

In 1886, Hawaiian ali‘i, King Kalākaua, founded the Hale Naua Society hoping to increase the number of Kānaka ‘Ōiwi in government positions, and also to preserve and spread Hawaiian cultural knowledge and traditions.³²⁵ The original hale naua, headed by the king with a large assembly of people, including many skilled genealogists, investigated the family history of those related to the king.³²⁶

During Kalākaua’s time, the name of the organization was interpreted as the “House of Wisdom” and later as the “Temple of Science”. The Hale Naua Society sought to revive many elements of Hawaiian culture that were being lost. They diligently spread the knowledge held by priests and experts of every specialty from genealogical research to divination and canoe building. Kalākaua adamantly encouraged the expansion of art, literature, and modern science.³²⁷

³²³ Chun 1994, p. iii-v.

³²⁴ Ibid.

³²⁵ Karpel, K. 1999. The Hale Naua Society. *Hawaiian Journal of History* 33: 203-212 (Hawaii Historical Society). Retrieved August 4, 2013 from <http://evols.library.manoa.hawaii.edu/bitstream/handle/10524/509/JL33209.pdf?sequence=1>, p. 204.

³²⁶ Malo 1951, p. 191.

³²⁷ Karpel 1999, p. 204-205.

Chapter 5 – Hiki Mai Ka Lā (Here Comes The Sun)

'Ike au i kona mau po 'opo 'o.
I know of all his (her) nooks.

I know all about him, including his family connections, faults, and virtues.³²⁸

5.1. Summary

Uhiūhi [*Mezoneuron kavaiense* (H. Mann) Hillebr.], a critically endangered, endemic tree of Hawaiian dry and mesic forests, permeated a great number of Hawaiian cultural traditions. The wood, bark, leaves, and flowers of these exquisite trees were an invaluable source of raw materials for farming and fishing implements, house construction, musical instruments, adornment, sports, ritual, weaponry, and medicine, and used extensively by Hawaiian of old. Its dark, durable wood was prized for the 'ō'ō, the principal digging tool; hooks and spears for fishing; a musical bow for courting and hula; kapa beaters and scrapers for clothing; hōlua sled runners; gaming darts; house posts; and daggers and clubs for hand-to-hand combat. Its bark and leaves were key ingredients in healing recipes. In contrast to our forefathers, contemporary Kānaka 'Ōiwi as a whole know little of the cultural importance of this unique forest treasure.

Uhiūhi is embedded in the Hawaiian culture. One chant records the goddess, Hi'iaka-i-ka-poli-o-Pele, the youngest sister of the volcano goddess, Pele, speaking of this tree as she rebukes Mo'olau, the mo'o chief, and his forces during their battle on Hawai'i Island. The blossoms, leaves, and seedpods of the uhiūhi are so striking and awe-inspiring that the chiefess Nae-kapulani of Kaua'i was compared to its beauty. From the gods to the chiefly

³²⁸ Pukui 1983, p. 131 (#1204).

class, and extending to the people who worked the land and fished the ocean – Hawaiians knew of uhiūhi.

Uhiūhi trees were not only useful and beautiful to Kānaka ‘Ōiwi of the past – uhiūhi were considered kin. They are ‘ohana and kūpuna to the Native Hawaiian people. This relationship and Hawaiian identity and worldview are embodied in the *Kumulipo*. Perhaps the most well known Hawaiian cosmogonic and genealogical chant, the Kumulipo gives insight to the duality of life and lists pairings of counterparts and contemporaries in a continuum of births identifying the kindred relationships between gods, islands, all entities of the heavenly, earthly, and oceanic bodies, and humankind.

Through many generations, the nurturing of the familial relationship between uhiūhi and Kānaka ‘Ōiwi, the caring of one for the other, coupled with uhiūhi’s profuse ethnobotanical applications, gave rise to a collection of traditions, attitudes, practices, and stories tying one to the other – leading to a deep and profound cultural attachment of Hawaiians to uhiūhi. In this thesis, a few adjustments were made to the definition of *cultural attachment* developed by JKA Associates, and a definition of uhiūhi cultural attachment was formed:

Uhiūhi Cultural Attachment is the cumulative effect over time of a collection of traditions, attitudes, practices, and stories that tie Kānaka ‘Ōiwi to Uhiūhi, the Hawaiian Islands, and their collective kinship patterns.

During the 1800s, three events fueled the detachment of Kānaka ‘Ōiwi from their land, religion, traditions, and cultural traditions including those connected to uhiūhi: 1) the 1819 abolishment of the kapu system in by Hawaiian society; 2) the arrival of Christian missionaries in 1820; and, 3) Ka Māhele in 1848 with its introduction of the foreign

concept of landownership. These three events have had everlasting negative effects on Kānaka ‘Ōiwi religion, politics, and society. In the Hawaiian worldview, there is a perpetual responsibility for Kānaka ‘Ōiwi to strive for harmony and balance between the gods, man, and nature, and maintaining the well-being of one’s spirit, mind, and body. This harmony and well-being were collectively obliterated by these events.

Along with these events and their aftermath, the advent of foreign diseases killed tens of thousands of Kānaka ‘Ōiwi, many taking with them knowledge and attachment to useful and storied flora, including uhiūhi. As Hawaiians were becoming reduced in numbers, so were native Hawaiian plants and trees, who were being threatened by introduced ungulates who were ravaging Hawaiian landscapes, including home ranges to uhiūhi. This uhiūhi-kānaka relationship had been attacked on all fronts, resulting in the cultural detachment of Kānaka ‘Ōiwi from uhiūhi and an all-encompassing loss of cultural knowledge.

In contemporary times, many Hawaiians maintain strong connections and knowledge of culture and traditions as they reversed over 200 years of cultural decline. This renewed Hawaiian consciousness, reassertions of Hawaiian identity, and growing pride in being Hawaiian blossomed in what has been called “the Hawaiian Renaissance” of the 1970s.

The research conducted for this thesis has found that a considerable amount of traditional Hawaiian cultural knowledge of uhiūhi has been lost. However, a substantial amount remains making it possible for contemporary Kānaka ‘Ōiwi to restore their familial connections to uhiūhi and reattach to their ancestor tree. Utilizing methods and concepts from traditional Hawaiian science, as well as, conventional science, several modern day Kānaka ‘Ōiwi have taken steps towards reconnecting with uhiūhi and intimately knowing

this irreplaceable tree species. It is critical that extinction of this uniquely Hawaiian tree species is prevented.

5.2. Conclusion

Kānaka ‘Ōiwi did have an intense cultural attachment to uhiūhi. Uhiūhi is kin – family to Native Hawaiians. This relationship of uhiūhi and Hawaiians, and other natural entities and phenomena, is a reciprocal one rooted in the Hawaiian worldview and identity revealed in the genealogical chant, the Kumulipo.

Through time, effort, and persistence it is possible for contemporary Kānaka ‘Ōiwi to once again become culturally attached to uhiūhi. By learning and knowing the Hawaiian worldview and history, reestablishing relationships with the gods and nature, working through and finding ways to heal cultural wounds, and experiencing uhiūhi with all of one’s senses, including the na‘au, the bowels, the Hawaiian nerve center of emotion and intelligence – this primal kindred relationship can be rekindled.

Knowing that Kānaka ‘Ōiwi can come to know uhiūhi today, we also can confidently deduce that reattachment is possible with other plants, animals, or other beings depending on one’s interest, intention, or individual kuleana. The decision to embark on such a journey is a dual one in itself – as the cultural attachment journey is one of life, joy, laughter, and love, but also has its challenges, disappointments, obstacles, pain, heartbreak, and death.

Attachment is painful as it is glorious. Cultural attachment is no different from the love and respect for a human. Like other relationships, cultural attachments develop over time with persistence and hard work. Cultural attachment transcends the form of the object of its

affection and engulfs one's na'au, heart, mind, and body with love that is so deep that one may share joyous conversation with or shed tears for another entity of creation, of our gods, of our 'āina, of our family, of our blood, mo'olelo, bones, and skin.

Do we risk the extinction of uhiūhi and its richness in Kānaka 'Ōiwi culture? Do we risk the extinction of uhiūhi as an endemic species? Questions arise in conservation circles about the methods and costs of protecting and perpetuating endangered species, the reasons decided upon for their continued management of declining populations, and the daunting tasks and work necessary to bring them back from the brink of extinction. Often the goal is to stabilize and maintain as many components of an ecosystem to keep ecological balance. Choices need to be made whether or not to protect this species or that species, by what means, and who will fund the expense. Uhiūhi's biological preservation and preservation of its traditional cultural knowledge is the desired goal. One cannot be accomplished without the other.

Culturally, Kānaka 'Ōiwi have no choice, uhiūhi is our 'ohana – our family. We must embrace this relationship, and help ensure their survival. People don't usually abandon their loved ones because they are terminally ill. Rather, it is the time when they are truly needed. No matter how laborious or sorrowful, it is our responsibility to keep trying and to do our best to honor our ancestors and Hawaiian heritage in whatever way that suits us or chooses us. Our kuleana can call us to duty, but only we can decide if and how we fulfill our responsibilities.

Kānaka 'Ōiwi cannot give up, we have to fight, to learn, and re-learn – if we don't reconnect and rekindle our kindred relationships with uhiūhi and all the other native plants and animals, who will? It is up to us to see what kind of road we will take, how long or

short of a journey will be embarked upon, and to what realms we want to explore. Like anything else, we cannot take for granted that a journey of this nature is for everyone.

If one does choose to try to reattach, it must be whole-heartedly, engaging all of your being as you would in a cherished human-human relationship. Re-establishing and strengthening cultural relationships and reviving cultural attachments to things Hawaiian is just that, a process. It must start with learning, knowing, and understanding the spiritual, physical, and intellectual connections to gods, land, sea, plants, and animals of the Hawaiian universe in order for cultural attachment to be successful.

5.3. Recommendations

If you are attempting to reattach culturally with an entity, such as uhiūhi or even another plant or animal of another country of origin, you should first look to the indigenous knowledge of that particular culture. In this case, as a Kānaka ‘Ōiwi living in Hawai‘i trying to connect and reconnect with uhiūhi – the traditional Hawaiian teaching and learning tenet to observe, listen, practice, and ask questions is the method that worked best for this journey.

More work is needed in the uhiūhi and cultural attachment realms, such as researching documented oral histories and accessing the priceless information yet to be uncovered in the Hawaiian language newspapers. What may be most important is to consult your family or other Hawaiian and non-Hawaiian cultural experts who are still alive to see if they have cultural knowledge that may have been preserved and shielded

through family occupations and kuleana passed down through generations. If you don't ask or investigate you may never know.

Nothing can take the place of the hands-on, “face to face” experiences – they were spiritual, exciting, fun, exhausting, rewarding, challenging, and daunting at times. But even challenging or negative experiences are opportunities of learning, if you can decipher the benefit and lesson of the experience.



Figure 30. Uhiuhi blossoms greet with a smile

[North Kona, Hawai‘i Island – Photo: M. La Pierre, January 2008]

I have felt the rough bark of the uhiuhi, tasted its sap, and witnessed its minute bundles of DNA strands with my own eyes. I have freely given of blood and sweat while ducking under limbs and branches and climbing over rocks to experience uhiuhi in its domain. I have heard the talus rocks and lava crinkling and crunching under my feet. I have felt the heat of steep terrain and shady forests on O’ahu. I have worked its dense wood, smelled its aroma and tasted its dust upon my lips. I have ridden hōlua, played

pahe'e and the 'ūkēkē, fashioned and practiced with kapa beaters and spears, used 'ō'ō and pālau in farming and processing of kalo and 'uala, and set posts of uhiūhi touched by Kānaka 'Ōiwi kūpuna. Many of these experiences were shared with treasured and loved family and old friends, as well as new friends, which made these experiences even more special, heart-felt, rewarding, and unforgettable.

Even with our Hawaiian "shades" removed from our eyes, we know this thesis has increased the mana of uhiūhi. May all who are connected to perpetuating and ensuring uhiūhi's future as a species, sharing its knowledge, its conservation, and its cultural connections be honored and blessed for their execution of their kuleana for theirs is a pure and genuine love for this 'āina that uhiūhi and other residents of Hawai'i call home.

Mahalo for taking the time to holoholo with us on this journey of learning of uhiūhi and its traditional significance, its cultural attachment to Kānaka 'Ōiwi, its fall into obscurity, and the contemporary restoration of Hawaiian kindred connections. For now, we shall bid you a fond farewell. On your personal travels of discovery to come, may a multitude of blessings shower upon you like the gentle Tuahine rain of Mānoa, and may you always feel cherished and welcomed like the waters of the bay, Pōka'i.

Table 1. Hawaiian names for uhiuhi and related words

All words in boldface and meanings are as they appear in their corresponding publications. List is not exhaustive.

WORD	MEANING
hoouhi Andrews 1865, p. 117	to veil; to cover with a veil, as the face
hoouhiuhi (ho'o-ū'-hi-ū'-hi) Parker 1922, p. 200	to cover up; to conceal in various ways; to cover over; to withhold from knowledge of; to equivocate; to use ambiguous language with a view to mislead
ho'ouhiuhi Pukui and Elbert 1986, p. 364	to prepare uhiuhi wood for house posts
kalamona Pukui and Elbert 1971, p. 113	same as kolomona
kāwa'u Pukui and Elbert 1971, p. 129	same as uhiuhi, a tree (Maui); same as wa'u, to scrape; to detain, delay, keep back
kea Pukui and Elbert 1971, p. 130	white, clear; fair-complexioned person, often favorites at court; shiny, white mother-of-pearl shell; name listed by Hillebrand for <i>kalamona</i> , shrubs
ke'a (1) Thrum 1890, p. 90	or kalamona, <i>Mezoneuron Kauaiense</i> , Hbd.; a very hard dark wood, not unlike ebony, scarce
ke'a (2) Pukui and Elbert 1971, p. 130	cross, crucifix, any crossed piece; main house purlin; sticks connecting canoes of a double canoe; to hinder, obstruct, intercept, block; bow, dart; to shoot with bow and arrow; male animal reserved for breeding, virile male; pleurisy
kolomona (1) Pukui and Elbert 1971, p. 151	a native shrub (<i>Cassia gaudichaudii</i>) with greenish-yellow flowers and thin, flat pods. <i>Lit.</i> , Solomon. <i>Eng.</i>
kolomona (2)	a native shrub (<i>Cassia gaudichaudii</i>) with greenish-yellow flowers

Pukui and Elbert 1986, p. 164	and thin, flat pods; name listed by Hillebrand for <i>Mezoneuron kavaiense</i> . See <i>uhiuhi</i> . Also Solomona. Solomon. <i>Eng.</i>
uhi Pukui and Elbert 1971, p. 336	covering, cover, veil, film, lid, solid tattooing, tent; to cover, spread over, engulf, conceal, overwhelm; to don, as a feather cloak; to deceive, hide the truth; <i>kākau uhi</i> ; to tattoo solidly; large, bluish-brown birthmark; Mother-of-pearl bivalve, mother-of-pearl shank; turtle shell piece used for scraping <i>olonā</i> ; mark made by the gall of raw <i>pūpū ʻawa</i> (a shellfish) on <i>tapa</i> or on the skin as an ornament
uhiuhi (1) Andrews 1865, p. 117	to thatch a house poorly with banana leaves
uhiuhi (2) Andrews 1865, p. 117	name of a timber tree on Kauai; wood a dark red color, very durable, very hard
uhiuhi (3) Thrum 1890, p. 89	a very hard redish black wood, used for spears and agricultural implements
uhiuhi (4) (u'-hi-ū'-hi) Parker 1922, p. 593	tall timber tree (<i>Mezoneurum kauaiense</i>); the wood is hard grained and dark, and very durable
uhiuhi (5) (u'-hi-u'-hi) Parker 1922, p. 593	to cover in a temporary manner; to thatch or cover as a makeshift; to withhold knowledge of in the use of language; to cover or hide the truth by prevaricating
uhiuhi (6) Pukui and Elbert 1971, p. 337	redup. of <i>uhi</i> ; an endemic legume (<i>Mezoneuron kauaiense</i>), a tree with pink or red flowers and thin, broad, winged pods; the wood is hard and heavy and formerly was used for <i>hōlua</i> (sleds), spears, digging sticks, and house construction
ʻuhīuhī Pukui and Elbert 1971, p. 337	whine, as of a child; to whine
ulueo (1) Andrews 1865, p. 121	name of a tree; timber very durable, even more so than <i>uhiuhi</i>
ulueo (2) Parker 1922, p. 600	same as <i>uhiuhi</i>

Table 2. Uhiūhi ethnobotanical sources and original excerpts

Categories from Buck (1957) and Krauss (1993). Item descriptions in boldface and text are as they appear in their corresponding publications. This is a partial list, intended to demonstrate the breadth of which uhiūhi spans Hawaiian culture and traditions.

Category	Source	Item	Text
FOOD (FARMING)	Fornander 1918-1919, p. 500	oo (wooden spade)	“Iron spades, <i>oo hao</i> , were unknown in the robber days of Hawaii. This iron implement was an introduction of civilization to take the place of their wooden spade of <i>kauila</i> , <i>uhiuhi</i> , <i>koaie</i> and such like hard, close-grained woods.”
FOOD (FARMING)	Buck 1957, p.12	o‘o (digging stick)	“Digging sticks (<i>o‘o</i>) were made of hard woods such as <i>alahe‘e</i> (<i>Canthium odoratum</i>), <i>‘ulei</i> (<i>Osteomeles anthyllidifolia</i>), <i>kauila</i> (<i>Alphitonia ponderosa</i> and <i>Colubrina oppositifolia</i>), and <i>uhiuhi</i> (<i>Mezoneuron kauaiense</i>).”
FOOD (FARMING)	Krauss 1993, pp. 25, 26	farming tools ō‘ō (digging tool) pālau [taro (kalo) leaf and corm cutter] lou (breadfruit picker) ‘auamo, ‘auamo ki‘i (carrying poles)	“Native wild trees, found here by the Polynesians on their arrival, furnished the hard tough woods used to make farming tools. These trees were <i>alahe‘e</i> , <i>‘ulei</i> , <i>kauila</i> , and <i>uhiuhi</i> .” - Krauss lists farming tools but does not mention specific woods for each tool
FOOD (FARMING)	Buck 1957, p. 13	palau [taro (kalo) cutter]	“Wooden implements (palau)... were used... for cutting off the upper end of the taro corm... One (1179), made of hard-grained, dark-colored <i>uhiuhi</i> wood, is 9.6 inches long...” - specimen (1178) also of uhiūhi wood
FISHING	Rock 1913, p. 185	laau melo- melo, laau	“The wood of the <i>Uhiuhi</i> is extremely hard... The natives made their spears

		makaalei (bait sticks)	from it, as well as the <i>laau melo-melo</i> or <i>laau makaalei</i> , a peculiar implement for fishing.”
FISHING	Kamakau 1976, p. 86	‘o i‘a (spearing fish)	“The spear fisherman searched for a piece of hard wood, kauila perhaps, or o‘a, koai‘e, uhiuhi, or other hard wood an <i>anana</i> and an <i>iwilei</i> [six to seven feet] long. Some spears were longer, and some shorter and were three, four, five, or six inches in circumference, made very straight, and tapered to a sharp point. They had iron points or bone points made from dog or human bone, lashed on with coconut fiber.”
FISHING	Buck 1957, p. 288	‘oi‘a (fish spears)	“Fish spears (‘oi‘a) were made of straight sticks of kauila, o‘a, koai‘e, uhiuhi, or other hard wood.”
FISHING	Krauss 1993, p. 34	kao, ‘ō (fish spears)	“Fish spears (<i>kao</i> or ‘ō) were straight sticks made (entirely or their tips) from such woods as <i>kauila</i> , <i>uhiuhi</i> , or similar hard woods.”
FISHING	Kamakau 1976, p. 77	kiholo (large wooden one and two-piece hooks for catching a several species of sharks and large fish of the open ocean)	“the large, wood hook, <i>kiholo</i> , made of <i>uhiuhi</i> , <i>walahe‘e</i> , <i>koai‘e</i> , <i>‘aweoweo</i> , or other hard wood... used for catching <i>mano</i> , <i>niuhi</i> , <i>luhia</i> , <i>a‘ulepe</i> , and other large fishes of the ocean.”
FISHING	Buck 1957, p. 338	makau mano (shark hooks)	“Hawaiian shark hooks (<i>makau mano</i>) are the largest of the local fishhooks. According to Kamakau, shark hooks were made of hard wood such as <i>uhiuhi</i> , <i>walahe‘e</i> , <i>koai‘e</i> , and <i>‘aweoweo</i> .”
FISHING	Krauss 2003, p. 43	makau manō (shark hooks)	“ <i>Makau manō</i> (shark hooks) are examples of the prime use of wood in composite fishhooks. These were made from such woods as <i>uhiuhi</i> , <i>alahe‘e</i> , <i>koai‘a</i> , and <i>‘āheahea</i> (<i>‘āweoweo</i>) and were fitted with

			bone points.”
FISHING	Kamakau 1976, p. 70	‘o he‘e (octopus) spearing)	“There would be many, many of them, some on canoes, and some afoot carrying spears an <i>anana</i> or two long made of <i>walahe‘e</i> , <i>‘ulei</i> , <i>‘a‘ali‘i</i> , <i>uhiuhi</i> , or other hard wood sharpened to a point.”
FISHING	Buck 1957, p. 357	squid (octopus) spears	“...light spears 1 or 2 fathoms long made from hard woods such as <i>walahe‘e</i> , <i>‘ulei</i> , <i>‘a‘ali‘i</i> , and <i>uhiuhi</i> .” - “squid” is slang for octopus in Hawai‘i
FISHING	Krauss 1993, p. 45	octopus (he‘e) spears	“Light spears were made of such hard woods as <i>alahe‘e</i> , <i>‘ūlei</i> , and <i>uhiuhi</i> .”
FISHING	Powell 1968, pp. 2-3	“opelu” hoop net	“The old Hawaiians used to make these nets from a local fibre, <i>Olona</i> (<i>Touchardia latifolia</i>), the bark was stripped from wild saplings, soaked, scraped, and the best fibres twisted into a cord, which was reported to be stronger than hemp. They made the hoop from <i>uhiuhi</i> wood (<i>Mezoneurum kauaiense</i> , Mann. Hillebrand). There is an old net still in good condition in the Bishop Museum in Honolulu which is made of these materials.”
HOUSES	Kamakau 1976, p. 96	house posts	“Hard wood trees such as the <i>uhiuhi</i> , the <i>naio</i> , the <i>‘a‘ali‘i</i> , the <i>mamane</i> , the <i>pua</i> , and other trees with hard wood were suitable for house posts.”
HOUSES	Kamakau 1976, p. 99	house posts	“In building a house it was not correct to mix different kinds of woods. If the posts were to be of <i>koai‘e</i> , then all posts should be of <i>koai‘e</i> , if of <i>naio</i> , then all of <i>naio</i> , and so of <i>uhiuhi</i> , or of <i>mamane</i> . The same was true of the rafters...”
HOUSES	Buck 1957, p. 83	pou (house post)	“The posts were made of <i>uhiuhi</i> , <i>naio</i> , <i>‘a‘ali‘i</i> , <i>mamane</i> , <i>pua</i> , and other hard woods.”
HOUSES	Krauss 1993, p. 56	pou kahi, pou hana (house posts)	“These were forest trees; the ones most frequently used for the posts were such hard woods as <i>uhiuhi</i> , <i>naio</i> , <i>‘a‘ali‘i</i> , <i>māmane</i> ,

			<i>olopua (pua).</i> ”
ORNAMENTS & PERSONAL ADORNMENTS	McDonald & Weissich 2003, pp. xv, 145	lei (garland, wreath)	“ One source states that Hawaiians “use all fragrant plants, all flowers and even colored fruits” for <i>lei</i> making. Several <i>lei</i> are referred to only minimally in written source material. Because of their long- standing place in the oral tradition, however, we have elected to include... ‘ <i>ākia, alahe‘e... pua ‘ala</i> and <i>uhiuhi.</i> ”
CLOTHING, WEARING APPAREL	Kamakau 1976, p. 109	hohoa, i‘e kuku [tapa (kapa) beaters]	“The tapa beaters were made of very hard woods, such as <i>kauila, o‘a,</i> <i>uhiuhi, koai‘e,</i> and other suitable woods.”
CLOTHING, WEARING APPAREL	Buck 1957, p. 170	hohoa, hoahoa, i‘e kuku [tapa (kapa) beaters]	“... woods were <i>nioi (Eugenia sp.),</i> <i>uhiuhi (Mezoneuron kauaiense),</i> <i>lehua, kauila (Colubrina oppositifolia</i> or <i>Alphitonia ponderosa),</i> and <i>o‘a</i> (<i>Alphitonia ponderosa</i> of Maui).”
CLOTHING, WEARING APPAREL	Krauss 1993, p. 63	hohoa, i‘e kuku ho‘ōki [tapa (kapa) beaters]	“Beaters for both stages were made from hard woods, the primary one being <i>koai‘a.</i> Other woods used were <i>uhiuhi, kauila, lehua, o‘a</i> (a form of <i>kauila</i> on Maui), and <i>nīoi.</i> ”
CLOTHING, WEARING APPAREL	Krauss 1993, p. 61	lā‘au kahi wauke (wauke scraping board)	“Scraping was done on a board, <i>lā‘au kahi wauke.</i> Woods used for this board were ‘ <i>ōhi‘a, kauila, and</i> <i>uhiuhi.</i> ” - Krauss is only source located to mention this use for <i>uhiūhi</i>
MUSICAL INSTRUMENTS	Roberts 1967, p. 21	ukeke (musical bow)	“ <i>Kauila</i> wood was almost universally agreed to be the best, if obtainable; but the root of the <i>puhala (Pandanus tectorius),</i> the wood of the <i>hau</i> tree (<i>Hibiscus tiliaceus),</i> the <i>iliahi</i> (<i>Santalum sp.),</i> the ‘ <i>ulei (Osteomeles anthyllidifolia),</i> the <i>aaka, aala,</i> and the <i>uhiuhi</i> (specimens unidentified anatomically), were also declared suitable.”
GAMES, RECREATION & SPORTS	Fornander 1918-1919, pp. 200- 201	pahee (sliding dart or spear)	“A piece of wood is made our of <i>koaie, ulei, o‘a, manae, kauila,</i> or <i>uhiuhi.</i> Some spears are a fathom and a half long, some four and one-half

			feet (<i>hailima</i>), some a yard, and so on. The tracks where the game is played are roughly formed, some being forty fathoms long, other two times forty fathoms. For a very powerful man a track five times forty fathoms long is necessary. Ten counts are required to win. Goods are all lost. The betting sometimes is continued until the girdle at the waist is lost also, and the loser stands stark naked; then the game ceases.”
GAMES, RECREATION & SPORTS	Malo 1951, p. 224	papa holua (sled) runners	“The runners of the <i>holua</i> sled were <i>mamane</i> or of <i>uhiuhi</i> wood, chamfered to a narrow edge below, with the forward end turned up so as not to dig into the ground, and connected with each other by means of cross pieces in a manner similar to the joining of a double canoe”
MEDICINE & MEDICINAL HERBS	Chun 1994, p. 166	leaves	“Me‘eau is the illness: Cut and gather a lot of Uhiuhi leaves, four boughs of Kukui flowers. They are pounded until soft and place inside of a piece of cloth. It is squeezed and the thickened liquid is scraped into a small bowl. The patient first bathes in the water and the sores and inflammation [sic] (pu‘upu‘u and mākole) are cleaned. The medicine is smeared externally on the sores and left to dry in the sun. [The patient] is smeared five times. [This is done] until the medicine is encrusted and can peel away (‘āka‘a). The very last thing to do is to: The Kalo potion is taken five times and Kowali is also taken. This is the cure.”
MEDICINE & MEDICINAL HERBS	Chun 1998, pp. 17, 51	laau (medicine)	“U-HI-U-HI <i>Mezoneurum Kauaiense</i> [<i>Caesalpinia kavaiensis</i> H. Mann] This is a tree that is like the koa. Its features are astonishing and it is only effective when used by those who

			are knowledgeable practitioners for foreign illnesses (ma‘i pelekane) and for other faintly known things.”
WAR & WEAPONS	Rock 1913, p. 185	spears	“The wood of the <i>Uhiuhi</i> is extremely hard... The natives made their spears from it, as well as the <i>laau melo-melo</i> or <i>laau makaalei</i> , a peculiar implement for fishing.” - This excerpt is also listed under FISHING. Rock does not specify spear type (fishing implement vs. weapon)
WAR & WEAPONS	Abbott 1992, pp. 110-111	spears	“The wood most commonly reported for spears was <i>kauila</i> , whose strength and density enabled it to hold a point and whose heaviness was probably an asset in relatively brief hand-to-hand combat. Three other hardwoods – <i>māmane</i> , <i>uhiuhi</i> , and <i>koa</i> – have also been named among materials exploited for this purpose.”
WAR & WEAPONS	Summers 1999, p. 107	pāhoa (dagger) dirk	“BPBM 4804. Dagger. Made of <i>uhiuhi</i> wood. According to Draeger, this is a dirk. Length 56.4 cm.” “From the hoplological point of view this weapon is too long to be used as a dagger; it is a dirk that is approaching the length of a short sword. Its component parts are its hilt and its blade... [Draeger 1977; OP 68]”
WAR & WEAPONS	Buck 1957, p. 425	pahoa (dagger)	“Authentic daggers were made of such hard woods as <i>kauila</i> , <i>uhiuhi</i> , or <i>pua</i> .”
WAR & WEAPONS	Buck 1957, p. 439	newa (club)	“A second specimen (4768), of <i>uhiuhi</i> wood, is 12.5 inches long with the head knob 4.4 inches in diameter...”
WAR & WEAPONS	Kaeppler 2010, p. 378	pāhoa, truncheon dagger	“584, Pāhoa, <i>truncheon</i> dagger, 18 th century, <i>Uhiuhi</i> wood with ‘olonā fiber. L. 61.3 cm” “This and the following two examples appear to have been carved with stone tools. An old label sealed

			in a glass jar notes that the daggers were mentioned in a Ha‘ahakahaka battle chant by Puali Koa Lua-ole.” - two other similar daggers (#585, #586) are pictured with #584 in book
RELIGION	Ferrar 2001, p. 30.	hōlua sledding	“In Polynesian culture, it’s our way of life to bet your life. We love challenge, and the greater the risk, the greater the <i>mana</i> (spiritual power).” “Being the first to die on a battlefield, for example, was a high honor. It meant you were chosen by the gods as an offering. I believe it was the same thing with the most extreme forms of hōlua: The riders were offering themselves up on the sled as a sacrifice for the gods.” - Tom Pōhaku Stone is quoted above
DEATH & BURIAL	Peabody Museum of Salem 1920, p. 36	holua runner	“208 Holua, or sled runner of wood. Length 8 ft. (14016) Gift of Dr. Charles G. Weld. Sliding down hill on a sled over a track of dried grass was a sport much enjoyed by the nobility. From burial cave of Kanupa, Kohala, Hawaii / J. S. Emerson coll.” - source did not specify wood type
OTHER	Stagge, 1891, p. 1	edge tool	“The Uhiuhi was used for spears, war clubs, agricultural implements, tapa beaters, etc., and even as an edge tool.”

Note: Fiber craft, plaiting and twined baskets, and canoes are the only categories not listed here from Buck (2003) and Krauss (1993). Under FOOD, (FARMING) was added to clarify that uhiūhi was not eaten, but used in cultivation and gathering of food items. The category OTHER was added by Mahi, and does not appear in either publication.

Table 3. Genealogy of descendants from Pōka‘ī (w) through Mahi La Pierre (k)

The notations of “(w)” and “(k)” indicate gender. The “w” is abbreviation for *wahine* or female; and “k” is abbreviation for *kāne*, or male.

<i>Who are you? / “Name”</i>	<i>Who conceived you?</i>	<i>When were you born?</i>	<i>Who do you live with? / Where?</i>
ka‘ane (strangling cord weapon handle) / “ <i>Manu I‘o</i> ”	Mahi La Pierre (k)	May 2002	Mahi La Pierre (k) / Maunalua, O‘ahu
lei-o-manō (paddle shaped shark-toothed weapon)	“	July 20, 2002	Mahi La Pierre (k) / Maunalua, O‘ahu
niho ‘oki (shark-toothed cutting tool)	“	July 28, 2002	Joel Lau (k) / Mānoa, O‘ahu
niho ‘oki (shark-toothed cutting tool)	“	August 3, 2002	Dan Tanji (k) / Waipio, O‘ahu
newa (small club)	“	November 10, 2002	Kamilo Lara (k) / Nu‘uanu, O‘ahu
niho ‘oki (shark-toothed cutting tool)	“	November 10, 2002	Mahi La Pierre (k) / Maunalua, O‘ahu
ko‘oko‘o (fighting cane)	“	2002	Mahi La Pierre (k) / Maunalua, O‘ahu
newa (short club)	“	2002	Mahi La Pierre (k) / Maunalua, O‘ahu
walking stick, cane	“	2003	James “Maluhia” La Pierre (k) / Pālolo, O‘ahu
hair pick	“	2003	Pauline Kawamata (w) / Mililani, O‘ahu
newa (short club)	“	2004	Mahi La Pierre (k) / Maunalua, O‘ahu
pīkoi (tripping club)	“	2004	Mahi La Pierre (k) / Maunalua, O‘ahu
ka‘ane (strangling cord weapon handle)	“	2004	Mahi La Pierre (k) / Maunalua, O‘ahu
lei-o-manō (paddle shaped shark-toothed weapon)	“	2004	Scott Wagner (k) / Vienna, Virginia
pāhoa (barbed dagger)	“	2005	unknown
ink pen	“	2005	Mahi La Pierre (k) / Maunalua, O‘ahu
two hōlua sled ke‘a (cross-pieces) and bird	“	November 2006	Mahi La Pierre (k) / Maunalua, O‘ahu

inlay on sled, “ <i>He‘ulahiwanui</i> ”			
skinning knife handle	“	2007	Mahi La Pierre (k) / Maunalua, O‘ahu
kui (sewing needle)	“	April 2007	Mahi La Pierre (k) / Maunalua, O‘ahu
lūhe‘e (octopus lure)	“	2008	Mahi La Pierre (k) / Maunalua, O‘ahu
lei-o-manō (knuckle duster style shark-toothed weapon)	“	2009	Mahi La Pierre (k) / Maunalua, O‘ahu
lā‘au melomelo (bait stick)	“	June 2011	Mahi La Pierre (k) / Maunalua, O‘ahu
‘ūkēkē (musical bow) / “ <i>Hāwea</i> ”	“	March 1, 2013	Mahi La Pierre (k) / Maunalua, O‘ahu
pāhoa (barbed dagger)	“	in progress (in the womb)	Mahi La Pierre (k) / Maunalua, O‘ahu
pālau kōhi (knife for cutting kalo, or <i>Colocasia esculenta</i>)	“	in progress (in the womb)	Mahi La Pierre (k) / Maunalua, O‘ahu

Note: Pōka ‘ī’s wood has been distributed to approximately twenty individuals with cultural, educational, and artistic aspirations for her iwi (bones).

Table 4. Genealogy of descendants from Pōka‘ī (w) through Mahauwela Tolentino (k)

The notations of “(w)” and “(k)” indicate gender. The “w” is abbreviation for *wahine* or female; and “k” is abbreviation for *kāne*, or male.

<i>Who are you? / “Name”</i>	<i>Who conceived you?</i>	<i>When were you born?</i>	<i>Who do you live with? / Where?</i>
newa (small club)	Mahauwela Tolentino (k)	2002	Mahauwela Tolentino (k) / He‘eia, O‘ahu
lei-o-manō (paddle shaped shark-toothed weapon)	“	2002	“
lei-o-manō (knuckle duster style shark-toothed weapon)	“	2002	“
lei-o-manō (shark-toothed weapon)	“	2002	“

Table 5. Genealogy of descendants from Pōka‘ī (w) through Kunāne Wooton (k)

The notations of “(w)” and “(k)” indicate gender. The “w” is abbreviation for *wahine* or female; and “k” is abbreviation for *kāne*, or male.

<i>Who are you? / “Name”</i>	<i>Who conceived you?</i>	<i>When were you born?</i>	<i>Who do you live with? / Where?</i>
newa (small club)	Kunāne Wooton (k)	2002	Kunāne Wooton (k) / Kahalu‘u, O‘ahu
lei-o-manō (knuckle duster style shark-toothed weapon)	“	2003	Keone Nunes (k) / Nānākuli, O‘ahu
kahili (feather standard) handle	“	2005	Patricia Zell (w) / unknown
makau manō (shark hook)	“	2005	Bill Brown (k) / unknown

niho ʻoki (shark-toothed cutting tool)	“	2006	unknown
lūheʻe (octopus lure)	“	2006	Brian Kiyabu (k) / Hawaiʻi Island
lei ʻōpuʻu (pendant)	“	2010	Kamakanuionālani Wooton (w) / Kahaluʻu, Oʻahu
kā lāʻau (hula sticks)	“	2010	Kamakanuionālani Wooton (w) / Kahaluʻu, Oʻahu

Table 6. Genealogy of descendant from Pōkaʻī (w) through Māhealani Cheek (k)

The notations of “(w)” and “(k)” indicate gender. The “w” is abbreviation for *wahine* or female; and “k” is abbreviation for *kāne*, or male.

<i>Who are you? / “Name”</i>	<i>Who conceived you?</i>	<i>When were you born?</i>	<i>Who do you live with? / Where?</i>
pāhoa (barbed dagger)	Māhealani Cheek (k)	2002	Māhealani Cheek (k) / Heʻeia, Oʻahu

Table 7. Genealogy of descendants from Pōka‘ī (w) through various artisans

The notations of “(w)” and “(k)” indicate gender. The “w” is abbreviation for *wahine* or female; and “k” is abbreviation for *kāne*, or male.

<i>Who are you? / “Name”</i>	<i>Who conceived you?</i>	<i>When were you born?</i>	<i>Who do you live with? / Where?</i>
pāhoa (dagger with shark teeth)	Max ‘Ipo Muller (k)	2002	Audrey Wagner (w) / Nu‘uanu, O‘ahu
pāhoa (barbed dagger)	Max ‘Ipo Muller (k)	2002	Mitch Wagner (k) / Fort Worth, Texas
hi‘a-kā-‘upena (shuttle for making or repairing fishnets)	‘Umi Kai (k)	2004	‘Umi Kai (k) / Ka‘imukī, O‘ahu
lei (pendant, inspired by native Alaskan ulu knife)	‘Umi Kai (k)	2006	unknown
pīkoi (tripping club)	Noelle Kahanu (w)	2006	Noelle Kahanu (w) / Liliha, O‘ahu
palaoa (tongue-shaped pendant) / “ <i>Ka‘iwakīloumoku</i> ”	Kumulā‘au Sing (k)	March 14, 2013	Mahi La Pierre (k) / Maunalua, O‘ahu
two hōlua sled ke‘a (cross-pieces) and a tree and mountain silhouette inlay	Dan Tenney (k)	in progress (in the womb)	Dan Tenney (k) / Maunalua, O‘ahu
lā‘au ho‘okapu (kapu stick)	Sam ‘Ohukani-ōhi‘a Gon (k)	in progress (in the womb)	Sam ‘Ohukani-ōhi‘a Gon (k) / ‘Ālewa, O‘ahu

Table 8. Genealogy of descendants from Tuahine (w) through Mahi La Pierre (k)

The notations of “(w)” and “(k)” indicate gender. The “w” is abbreviation for *wahine* or female; and “k” is abbreviation for *kāne*, or male.

<i>Who are you? / “Name”</i>	<i>Who conceived you?</i>	<i>When were you born?</i>	<i>Who do you live with? / Where?</i>
pāhoa (dagger)	Mahi La Pierre (k)	2005	Will McClatchey (k) / Aledo, Texas
maka‘ihe (barbed spear) / “Hālonā”	“	2005	Mahi La Pierre (k) / Maunaloa, O‘ahu

Note: Tuahine’s wood has been distributed to approximately ten individuals with cultural, educational, and artistic aspirations for her iwi (bones). See kanikau written for Tuahine in Appendix D.

Appendix A. Hi'iaka chant revisited

Kaua Neumann's translation and interpretation notes, February 12, 2013.

Original text in italics from
Emerson, N. B. 1993. *Pele and Hiiaka: A Myth from Hawaii*, pp. 52-53.

1. *A Moolau, i ka pua o ka uhiuhi,*
2. *Helele'i mai ana ka pua o Ko'o-ko'o-lau*
3. *Lohi'a e na mo'o liilii –*
4. *Na mo'o liilii ke ala*
5. *E kolo i ke kula,*
6. *E iho i kai o Kawaihae, la.*
7. *Hea a'e la ka mo'o liilii:*
8. *E hakaka kaua; paio olua auane'i.*
9. *He 'kau Mo'o-lau, o Mo'o-lau akua, e!*

1. Uhi means to cover up or deceive; Moo - lizards; lau - many. Moolau many lizards could be one thought for that name.
3. Could mean Hiiaka is stressed and irritated by the small mo'o she is fighting with.
6. Hae in the word Kawaihae can mean fierce or to snarl with teeth like a dog. She could be referring to the moo who are all bark and no bite.
9. Akua can also be evil spirit or ghost which is looked down upon as an outcast.

Hiiaka does this mele in during an intermission break in a fight as to sort of egg on the Mo'o.

1. *A Mo'o-lau, i ka pua o ka uhiuhi,*
2. *Pala luhi ehū iho la*
3. *Ka pua o ke kauno'a i ka la;*
4. *Na hale ohai i Kekaha, o Wa'a-kiu; —*
5. *E kiu, e kiu ia auane'i kou ahiahi;*
6. *E maka'i ia olua auane'i.*
7. *He akua Mo'o-lau, o Mo'o-lau akua, e!*

1. The pua could be Moolau's spys and uhiuhi in the same line could be deceit or in this case the deceitful ones proteges.

2. a. Pala could mean smeared as in a dab of shit; luhi is also child or protege. Ehu in waiehu could mean to disgrace or cast aside. Together it could mean a piece of cast aside excreta.
- b. Pala ehu can also mean a rotten leaf or flower (pua), luhi is drooping giving the connotation of a useless hanging branch.
3. Kaunaoa is a laau kumu ole which is a parasite. In Hawaiian thought is its pity for pitiful people with kumu ole. She says this mele after Moolau sends his people (moo liilii) to spy on Hiiaka.
4. Waawaa in the word Waa in Waakiu means stupid, and kiu is to spy.
5. ‘Ahi‘ahi means to defame or tattle against or slander. She could be saying that the only thing that will be seen or observed is Moolau’s slander and tattle tale irritating attitude.

Neumann full translation of oli:

At Moolau in the flowers of the uhiuhi
 The flowers of Kookoolau falls
 Overwhelmed by the small mo‘o / sparkling from the small lizard
 The lizards fall and stumble
 crawling on the plains
 headed seaward to Kawaihae
 the small lizard calls
 We should fight, you two will battle
 it is the time of Moolau, Moolau is ghost

At Moolau in the blossoms of the uhiuhi
 Buried and cast aside
 In the blossoming of the kauno‘a in the day
 The houses of ohai in Kekaha named Waakiu
 Observe, your slander will be observed secretly
 You two will be watched
 A Moolau ghost named Moolau!

Appendix B. Uhiūhi seed propagation experiment

Conducted by Hālau Lōkahi PCS 9th-12th graders in Mahi La Pierre's Hana 'Imi Na'auao (Hawaiian Science) Spring 2008 classes in Kapālama, O'ahu.

		SC 10-1	SC 9-1	SC 9-2				
		SC 10-2	SC 10-3	SC 9-3	SC 12-1			
SO 9-1	SO 11-1	SO 11-2			CL 9-1	CL 9-2	CL 9-3	
SO 9-2	SO 9-3	SO 11-3	SO 12-1		CL 10-1	CL 10-2	CL 10-3	CL 11-1

This diagram represents the germination flat and its individual squares. The letters and numbers correspond to the treatment type, i.e., CL, the grade level that planted seed, i.e., CL 9, and the individual seed itself, i.e., CL 9-1. (See Figure 18.)

Hypothesis: The soaked and scarified (SC) uhiūhi seeds will germinate faster than the control / no treatment (CL) and soaked only (SO) seeds.

Date planted: January 28, 2008
Treatment: 21 total seeds
 7 seeds – (CL = control, no treatment)
 7 seeds – (SO = soaked in tap water for 12 hours)
 7 seeds – (SC = soaked in tap water for 12 hours + scarified seed coat approximately 1 cm from hilum)
Material: 1:1 (potting mix and perlite); filled each cell to about 1 cm below top of flat
Planting depth: Uhiūhi seed thickness, approximately 0.5 cm
Watering regiment: 30 ml once every other day, or as needed
Notes: Observations made on Mondays: 2/4, 2/11, and 2/25/2008; kept in 100% shade until first sprout, then 50% sunlight; length of study, 28 days

Results: CL = 0/7 germinated (0%); SO = 0/7 germinated (0%)
 SC = 5/7 germinated (71.42%)

SC 9-1 grew 18.5 cm
 SC 9-2 & SC 9-3 sprouted, then died
 SC 10-1 grew 20.5 cm
 SC 10-2 & SC 10-3 teeth marks on seed coat; eaten by field mouse (?)
 SC 12-1 sprouted, then died

Conclusion: Soaked and scarified uhiūhi seeds do germinate faster than control / no treatment and soaked only seeds

Appendix C. Mele ‘Ūkēkē

This mele was taught to James Ka‘upena Wong, Jr. by Mary Kawena Pukui. Ka‘upena shared this mele with Mahi including how to mouth the words and strum an ‘ūkēkē on July, 28, 2008 at home of Noelani Mahoe in Pauoa, O‘ahu.

Mele ‘Ūkēkē

Aia i luna ‘ūkēkē lā	<i>Quiver above</i>
Aia i luna ‘ūkēkē lā	<i>Quiver above</i>
Aia i lalo ‘ūkēkē lā	<i>Quiver below</i>
Aia i lalo ‘ūkēkē lā	<i>Quiver below</i>
Laua‘e o Makana ‘ūkēkē lā	<i>Quiver (my) beloved, sweet laua‘e fern of Makana</i>
Lauwa‘e o Makana ‘ūkēkē lā	<i>Quiver (my) beloved, sweet lauwa‘e fern of Makana</i>

Appendix D. A Kanikau for Tuahine o Mānoa

Composed by Mahi La Pierre, February 15 and 16, 2013. Recited, in part, February 17, 2013 before Tuahine's remaining iwi (dead branches, stump, and roots) were removed from St. John Courtyard, Botany Department, University of Hawai'i at Mānoa.

A Kanikau for Tuahine o Mānoa

Tuahine o Mānoa – Uhīuhī! Uhīuhī!

Tuahine o Mānoa – Uwē! Uwē!

was your last breath at the turning of the early hour, when the rooster crows at the first light of dawn, the beginning of the morning light, just before its reddish glow?
did you pass yesterday, last week, or the month before my beloved friend?
when did you pass from this life, releasing your spirit, and leaving your physical body for us, your family and friends to weep in grief on this side of the dark river of death?
when?

you give us hope as you pass from this life into pō, our duty is clear as it ever was
we are ashamed we were not there to comfort and protect you
oh what pity for our dear companion forever gone

Tuahine o Mānoa – Uhīuhī! Uhīuhī!

Tuahine o Mānoa – Uwē! Uwē!

was anyone there with you in the last hour o fragrant one?
your pink and reds so dazzling in the rays under konahuanui,
the wai'alele in the distance provides wealth and cools
hāloa flourishes and kanewai is abundant ma kai

was there anyone holding your hand? was there no one to rub your toes wawae lima nui
to find your spirit? – no one to call it back or was the leina's request non-negotiable
we are ashamed for the dreadful execution of our kuleana
please forgive us, we are on the path of learning and have a long way to go

was there anyone there in your last hour of breath
your fragrance will never travel across our ihu
we shall never hear your rustling and rubbing on the borders
your limbs like pahu beating on the wall...

let me out, let me out you say! i am here, see me – yes here in the corner
our ears are learning to hear; our eyes to see, our na'au is retraining us
but we need to be willing
our kūpuna of the upper realms call to us and give us messages
the corners of our eyes play tricks on us... yes you did see what thought you didn't

was there no one to see your spirit leave your tear ducts to play with the others
was there no one to stroke your hair and cool your forehead
was there no one to listen to your story for the last time, for the first time

we should have known caught up in our own lives is no excuse
you are us we are you – we are still learning our kuleana, o kupuna bear with us
we know time is short and we must be quick learners
do not give up on us... we are here now

please be patient we have failed you we are still learning
the moonlight on your face and the tuahine rain falls heavily
cleanse it all, soften the soil at your feet so we can come for your iwi
you will not be alone again

who are these people who hurt you
do they know you as we do – or just of you and your wonders they read about
what is there interest with you – e kala mai sorry for my harsh tone
the anger is deep and dark as your wood that has blessed all aspects of our culture

guilty eyes I saw today they looked and looked away
we were there talking about what's to take place sunday they saw us
i felt they knew of truths, the truth of what they did to you
not so safe are these gates and walls that surrounded you
are you locked in or are you locked out

no one can lock or conceal you – o tuahine, o great uhiūhi of mānoa
good thing your sister from lāna‘i lives at master's house near the springs of punahou
you wanted to show yourself and hō‘ike didn't you
you wanted this to happen and sacrificed so we all would know and remember you
yes yes yes

Tuahine o Mānoa – Uhīuhī! Uhīuhī!
Tuahine o Mānoa – Uwē! Uwē!
emerge and show you are still here
even in your earthly death you are more alive then ever
you flowered and fruited, the hua do live on
a veil you wore – so clever you are, why did we not know
our minds are cloudy we know but we don't – how would we

yes, we know now – our kūpuna's kupuna walked under yours, your ancestors' ancestors
veiled them in the shade and comforted them, gave them of their bodies for tools, for
hōlua, for nā mea of clothing, the ‘ō‘ō – so generous they are, you are
in death still giving to us

did they trim your fingers off
the fingers that helped you climb over the wall, you kept trying
i bet your flowers were beautiful and caught their eye
they did not know you, we kinda do, we hope to know more
to see as our kūpuna saw – felt, did, lived and loved, lived, died, mālama-ed and lived

was someone at the bus stop of st. keoni's, anyone see who did this to you
oh the lonomea mauka of you yeah, the naio and pūkiawe, too, ae! auwe my beloved
the wauke and the pia, the hala too auwe
yeah the hala got cut last night

it was valentines day or night, we think maybe thought they needed the bracts of hinano
perhaps, yeah, okay I hope it worked too – a'ole uhiuhi
a'ole kāwa'u, a'ole uhīuhī, a'ole ke'a....
do not whine, do not conceal, do not delay or detain, do not block or obstruct
may the child pua and come forth and know better then we do now

no ask no receive we'll see
e kala mai – we who should have been were not there to protect you
your konohiki were diligent, your caretakers knew of your dancing in the wind
they would talk to you, often you were so quiet in the corner waving to passersby
as our culture, a stranger in your own land
some say maybe the area was not the best but betta than nothing yeah, we will do better

i heard maybe a man named friend or maybe even isabella planted you
o tuahine, young girl you... i can see you blushing
we will miss caressing you seeing you smile when we came to visit
was always good to have time to visit, sorry i was away for so long at times

i had to bound your limbs one time as they were getting heavy
remember when i tied you to lonomea just to give you support – hope i did not hurt you,
it seemed to work okay for awhile

you have seen a lot in your time, some good stories too, yeah i can only imagine
your pinkish winged pods and khaki-brown seeds, damn those nibblers of the darkness
grumblers and thieves uhiuhi under cover of night... marchers
your beauty must have entangled their wits and mesmerized them
like claudy says, hey I guess they needed it more that i

Tuahine o Mānoa – Uhīuhī! Uhīuhī!
Tuahine o Mānoa – Uwē! Uwē!
generations have forgotten the wonder of you and your kin
of us, our kin – we are one in the same, we forgot, we forget, but now no more
your iwi live on, pili koko, nothing closer
help us to never be that way again, help us

help us to remember – kauwila the kāne, and uhiuhi the wahine, united as one in the lipo
chant of our beginnings in pō
stop the veil of ignorance, inaction, and blaming others
let us look within and know the truth
take kuleana for what parts we have in it all, yes, ae! all of it... good and bad

our lives, our story, the page we pen right now, today, and the chapters yet unwritten
take pride in all the parts we still have to kōkua in perpetuation, procreation,
conservation, and make us maoli truly live again, in balance of the lua

we cannot continue to just exist and be in the corner, some behind walls and bars, some
extending way over the wall just for attention sake – to be seen, some too quiet to be
heard... I know yeah you right, each got their own talents, strengths and weakness, ae!

Tuahine o Mānoa – Uhūhūhī! Uhūhūhī!

Tuahine o Mānoa – Uwē! Uwē!

we pledge, we of hui uhiūhi to be ever diligent to you, your kin, our kin
those of the misty mountains and the frozen summits
those of the kula and kekaha lands those of the lo‘i kalo and streams
those of the beaches, those of the coast and beyond
of the rolling surf and reefs to the kai ‘uli – we will never forget
we will forever love you – as we are here, you shall be too

this iwi of yours we mālama today will be shared lovingly but discreetly
when necessary and proper, may we scream and wail of your praises and honor you

cleansed with the pu‘u ikena ‘iliahi smoke, the pa‘akai of mānana, the muo kī of
kekupua, the ‘ōlena and waters of kapuna o waipao
may they cleanse you, those around you, and area where we all stand, ourselves –
remove the hewa and make anew
let the hewa of all involved go with every thud of the ‘ō‘ō – and every puff of dust
let it go up in to the waolani and forgotten

never again shall you stand in the shadow of the kukui, now you are free to roam
we will take you around to visit family
we will take care of your iwi – they will live on
we will share of your wonder to those of hawai‘inuiākea soon, and others
the haumana are our future and the chance to get this right – pono pono
ho‘omau, nalu nui – ae, hiki no

Tuahine o Mānoa – Uhūhūhī! Uhūhūhī!

Tuahine o Mānoa – Uwē! Uwē!

o powers that be – from the upper strata to the lower strata, from zenith to horizon

from the sunrise at ha‘eha‘e to sunset at ka lehua
nā akua, nā aumakua, nā kini o ke akua be with us –

those of the entire pae ‘āina o Hawai‘i
come and be with us here in mānoa, the land of ua tuahine
of punahou, of kahalapueo and majestic wa‘ahila
bless all those present, protect and veil
bless the alahe‘e and iron ‘ō‘ō, these shovels saws and diggers of modern time

we will take you from here this place you had lived
we will protect your iwi and increase your mana now and forever
my father, sisters, brothers, and friends in uhiūhi are here with me
we are here now, we shall never ways part again –

we shall wear your iwi upon us, we shall carry you in our arms
you will be on our chests, our backs, our ‘ili, our skin – and around our necks
you will always be with family now our beloved

we shall not fail you again, our lives and existence are at stake
bless and protect all who share this moment – the feathered ones, the crawlers, the-
leaved-and-flowered ones, and all entities mentioned and unmentioned

let us leave with not only all our fingers and toes today, but with a sense of pride,
accomplishment, and renewed kuleana from this day forward
any blood or sweat we shed shall nourish these grounds for future plantings

we mahalo, honor and wish all the best to your past konohiki, caretakers, hoa‘āina,
passersby, admirers, and those not be-friended
please for give us of any past transgressions and any that may occur here as we now carry
out our duty, our kuleana to you and all before you – o tuahine o mānoa
Amama ua noa lele wale!

Note: The words, “Uhiūhi” and “Uwē” are used here as a mournful cry or moan. The word, Uhiūhi, meaning to whine as a child, honors the Hawaiian tradition of the kanikau which often includes eerie wailing, scolding, and humor as one would lament over a loved one. This is an attempt at composing a kanikau. The text also contains requests for cleansing and protection not often associated with kanikau, but was included here because of the task at hand of removing Tuahine’s iwi.

Hawaiian, Hawaiian Pidgin English, or Hawaiian Creole English, and English languages are used. Composed from the na‘au, little effort was given to grammar and other rules of language. Although many words are not translated or defined, it is hoped the general feeling of this kanikau of sorts will suffice in conveying its messages.

The first two verses were modeled after an English translation of Angeline Kahananui Brown's announcement of her passing written by her father Jonah Wahinepee Iona, and other family members – Jacob Brown, Joseph Luahiwa, Miriam K. Luahiwa, George Iona, Myra Heleluhe, and Maria K. Iona of Kamō'ili'ili, O'ahu. Printed in Ka Nupepa Kuokoa, September 12, 1919. All are ancestors of Mahi La Pierre.

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