

Prepared for:

National Oceanic and Atmospheric Administration
National Marine Fisheries Service

Programmatic Environmental Impact Statement

Appendix J: Historical & Contemporary Significance of the Endangered Hawaiian Monk Seal in Native Hawaiian Culture

**Final PEIS for Hawaiian Monk Seal
Recovery Actions**

March 2014



- Page Intentionally Left Blank -

Historical and Contemporary Significance of the Endangered Hawaiian Monk Seal in Native Hawaiian Culture



Monk seals hauled out on the beach at Nu‘alolo Kai, Nā Pali, Kaua‘i (photo: J. Kittinger)

Prepared for:

Protected Species Division (PSD), Pacific Islands Regional Office (PIRO) of the National Oceanic and Atmospheric Administration’s (NOAA) National Marine Fisheries Service

By

Impact Assessment, Inc.
Pacific Islands Office
367-C Kapaloala Place
Honolulu, HI 96813
impactassessment@hawaii.rr.com

Title: Historical and Contemporary Significance of the Endangered Hawaiian Monk Seal in Native Hawaiian Culture

Authors: John N. Kittinger^{1,*}; Trisann Māhealani Bambico¹; Trisha Kehaulani Watson²; Edward W. Glazier¹

Affiliations:

¹ Impact Assessment, Inc., Pacific Islands Office, 367-C Kapaloala Place, Honolulu, HI 96813, USA

² Honua Consulting, P.O. Box 61395, Honolulu, HI 96839, USA

* corresponding author: Email: jkittinger@gmail.com; Ph: +1 808-397-9077

About this Report

The following report is based on research activities supported by a grant from the Pacific Islands Regional Office (PIRO) of the National Oceanic and Atmospheric Administration's (NOAA) National Marine Fisheries Service (Solicitation #: PIRO-10-0558). The research findings presented herein may be used to support the Protected Species Division's longstanding goals to protect and recover endangered and threatened species of sea turtles, monk seals, and cetaceans in the Pacific Islands region as mandated by the Endangered Species Act (ESA) and Marine Mammal Protection Act (MMPA).

This proposal was prepared by the Pacific Islands Office of Impact Assessment, Inc. (IAI). IAI has specialized in socioeconomic and sociocultural dimensions of marine fisheries and related coastal zone management issues since 1980, with a specific focus on assessment and monitoring of social and economic changes associated with management of public trust resources.

Suggested citation:

Kittinger JN, Bambico TM, Watson TK, and Glazier EW (2011). Historical and contemporary significance of the endangered Hawaiian monk seal in Native Hawaiian culture. A report prepared for the NOAA Pacific Islands Regional Office. Impact Assessment, Inc., Honolulu.

For further information direct inquiries to:

John N. (Jack) Kittinger, PhD
Lead Scientist & Assistant Director
Impact Assessment Inc., Pacific Islands Office
367-C Kapaloala Place
Honolulu, HI 96813 USA

Phone: +1 808-397-9077
Email: jkittinger@gmail.com

Acknowledgements

We thank first and foremost the Native Hawaiian cultural practitioners and community members who have shared their mana‘o with us. *The knowledge, perceptions and information about monk seals and Native Hawaiian culture described herein belong to these respondents and their communities.* To protect respondents’ identities, all information presented herein is kept anonymous. We also thank Bill Gilmartin, Bud Antonelis, Puakea Nogelmeier, Loren E. McClenachan, Bob Rechtman, and Craig Severance who have shared their knowledge about monk seals and Hawaiian communities with us. This research was supported by competitive grants from the Protected Species Division, Pacific Islands Regional Office, National Marine Fisheries Service, and we thank Jeffrey Walters for their support. Any errors or omissions belong to the authors alone.

Abstract

The Hawaiian monk seal is highly endangered but relatively little is known about the socio-cultural significance of the species in Native Hawaiian communities. Accurate assessment of historical and modern socio-cultural values and perspectives is needed to inform conservation and recovery planning for the species, particularly since the species is not universally well-regarded by ocean users. We conducted extensive archival research and oral history interviews to characterize past and current human-monk seal relationships in the Hawaiian archipelago. Though the prehistoric period remains poorly understood, our findings suggest that monk seals were likely rare but not unknown to Hawaiians in the late 19th and early 20th centuries. References are made to monk seals in Hawaiian-language newspapers, traditional knowledge forms, and in familial histories. Our findings also suggest that the species is not uniformly known in contemporary Native Hawaiian communities and that perspectives about the nature and significance of the monk seal appear to be related to place-specific histories and specific groups of knowledgeable persons. We introduce the concept of ‘cultural endemism’ to characterize this pattern of socio-cultural heterogeneity. This information may prove useful in crafting culturally appropriate management plans for the species and for developing effective outreach activities to engage coastal communities and ocean users.

Key Words: endangered species; wildlife conflict; cultural endemism; historical ecology; human-environment interactions

Introduction

The successful management and recovery of endangered species is dependent on a diverse set of social factors and conditions that shape human interactions with those species and the environments they occupy (Kellert, 1986, Kellert, 1985). In many cases, economic, technological, demographic, institutional, perceptual and political forces will determine the prospects for successful species recovery and stewardship (Bath, 1998, Jacobson and Duff, 1998). Despite this, most endangered species programs focus primarily on the biological aspect of endangered species, and in comparison relatively little research is directed toward human dimensions of endangered species (Jacobson and Duff, 1998, Kellert, 1985).

Social and perceptual factors are especially important in understanding how human societies interact with endangered species and their habitats in places characterized by human-wildlife conflict (Bentrupperbaumer et al., 2006, Tarrant et al., 1997, Clark et al., 1994). Conflict can develop through a myriad of different pathways but commonly stem from the social values, norms and perceptions that structure human-environmental interactions. Kellert (1985:529), identifies the full range of values that society derives from endangered wildlife, and categorizes seven discrete types, including: 1) naturalist/outdoor recreational; 2) economic; 3) moral or existence; 4) scientific; 5) utilitarian; and 6) cultural, symbolic and historical values. These values, like other social phenomena, are not static but evolve through time as societies change.

Social science research can be used to characterize the full range of social values, meanings and perceptions of endangered species and can also provide important baseline information that can be used to assess changes in these values and perceptions over time. Social assessments can be applied to determine the likelihood of success of different proposed conservation actions or to aid in the development of more effective public education and outreach programs. Such data are potentially valuable for resource managers and management programs seeking to engage more effectively with communities in species recovery and conservation efforts.

Human values and perceptions are strongly influenced by the socio-cultural setting and knowledge systems that develop in a place-based manner. This is particularly true in the Pacific Islands and similar settings where indigenous cultures developed in-depth traditional ecological knowledge systems and close relationships with the physical environments that provided goods, values and services upon which they depended. In Polynesian communities, the values and perceptions of species and the ecosystems in which they are embedded are strongly influenced by traditional socio-cultural practices, uses, and knowledge systems. Ecosystem constituents are primarily viewed not as independent units, but as part of an interconnected system in which human are embedded as natural constituents and stewards of environmental conditions (Glazier, 2011, Jokiel et al., 2011, Handy and Pūkui, 1972).

Certain marine and terrestrial species can, however, take on unique meanings and significance, which in turn mediate the way human societies interact with those species and its associated habitats. For example, many Pacific Islander cultures developed customary restrictions on use of sea turtles which served to limit harvest and conserve the species (Rudrud, 2010, Allen, 2007). Socio-cultural values and perceptions have evolved as island communities have been subjected to changing socio-economic, political and institutional conditions, and as a result there is a need

to understand how past relationships with endangered species affect current and future conservation efforts. This is particularly important for endangered species, many of which are threatened with extinction due to human activities.

The purpose of this article is to characterize the historical and contemporary significance of monk seals in Native Hawaiian culture. Monk seals are highly endangered and since they gained protection under the Endangered Species Act their populations have been increasing in the main Hawaiian Islands. This has led to increased conflicts with ocean users – particularly fishers – which have resulted in some cases in intentional killings of monk seals. Below, we provide a background context for the study and describe the social-ecological parameters of human-monk seal interactions in Hawai‘i. Next, we describe our mixed methodology and present the detailed results of our research. Finally, we discuss the significance of our findings and how the socio-cultural significance of endangered species can be applied to current challenges in conservation and species recovery planning. We introduce the concept of ‘cultural endemism’ to characterize the place-specific context and socio-cultural factors that influence indigenous societies relationships with natural resources. It is hoped that the research findings can help inform culturally-appropriate conservation planning for endangered species and enhance understanding of the human dimensions of wildlife and ecosystems.

Background

The Hawaiian Islands were among the last places on Earth to be colonized by humans. Voyaging Polynesians arrived in Hawai‘i centuries ago (Wilmshurst et al., 2011) and thereafter they established complex societies and resource production systems that supported a dense human population with complex sociopolitical systems (Kirch, 1985, Vitousek et al., 2004). Polynesians introduced exotic species and utilized both terrestrial and marine ecosystems for basic subsistence, altering endemic populations of fauna and flora and transforming natural ecosystems into cultural land- and seascapes in the process (Burney et al., 2001, Athens, 2009, Maly, 2001, Kaneshiro et al., 2005, Kittinger et al., *In review*).

Hawaiian monk seals are estimated to have inhabited the Hawaiian archipelago for approximately 14 million years and thus the species has adapted to long-term geologic changes in the archipelago (Kenyon and Rice, 1959). Monk seal habitats include shallow water reef habitat for pupping, weaning and foraging, sandy beach areas for hauling out, and deeper reef areas for foraging (Kenyon and Rice, 1959, NMFS, 2007). Hawaiian monk seals are apex predators in coral reef environments, but exhibit extreme sensitivity and vulnerability to human stressors, which renders the species vulnerable to local extirpation and extinction (Ragen and Lavigne, 1999, Ragen, 1999, Kenyon, 1972, Kenyon, 1980, Gilmartin, 2002). The Hawaiian monk seal population is currently comprised of approximately 1,200 individuals and is declining at a rate of approximately 4% per year (Antonelis et al., 2006, NMFS, 2007).

Currently, the majority of Hawaiian monk seals are found in the remote and primarily uninhabited Northwestern Hawaiian Islands (NWHI), but a smaller population is growing in the Main Hawaiian Islands (MHI) (Baker and Johanos, 2004) (Figure 1). Monk seals in the MHI are increasing in number and this region is where the majority of human-monk seal conflicts have

occurred. Monk seal recovery is not universally supported in Hawaiian communities, and some ocean users view the species as a nuisance or threat to traditional activities such as subsistence fishing. For example, three monk seals were recently killed by apparent intentional shooting, and foul play cannot be ruled out in the recent deaths of at least three other seals. These conflicts are a major concern for long-term conservation and recovery planning for the species, particularly considering the continuing decline in NWHI populations and increase in the populated MHI.

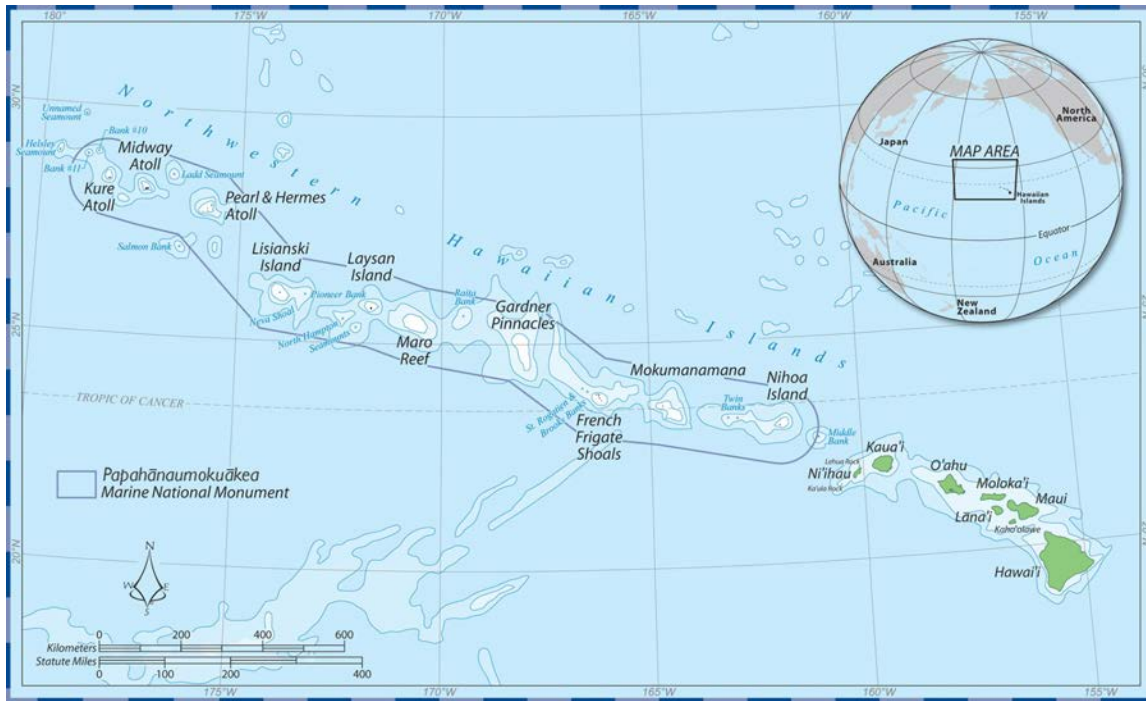


Figure 1: Map showing the Hawaiian Archipelago, comprised of the inhabited high islands of the main Hawaiian Islands (in green) and the uninhabited reefs, banks, and atolls of the Northwestern Hawaiian Islands, which are protected as part of the Papahānaumokuākea Marine National Monument. Map courtesy of the NOAA Papahānaumokuākea Marine National Monument Office.

Methods

To characterize the historical and contemporary significance of the endangered Hawaiian monk seal, we employed two primary methods, including: 1) archival research and document analysis and, 2) ethnographic and oral history interviews with Native Hawaiian community members, elders (*kūpuna*) and cultural practitioners. Archival research efforts targeted a broad range of historical and contemporary information about human-monk seal interactions and cultural significance of the species in documents retrieved from various institutional and online repositories. The research targeted both English-language and Hawaiian-language sources, including the extensive collection of archived Hawaiian-language newspapers and sources in existing compilations of historical documents (Hiruki and Ragen, 1992, Balazs and Whittow, 1979). English-language archival sources also included:

- a. Published archaeological reports, containing zooarchaeological faunal assemblages and midden contents;
- b. Archival and historical documents containing anecdotal or descriptive data (e.g. reports from naturalists, missionaries and explorers; whaler's logbooks; historical newspapers);
- c. Published ethnographic information (e.g. recorded oral histories; interviews with elders); and,
- d. Contemporary ecological data (e.g. population studies; genetic studies).

Our research also involved an exhaustive search in Native Hawaiian language newspapers for references to the Hawaiian monk seal. Newspaper searches were conducted in online databases of published and searchable newspapers (Ulukau, 2003, Alu Like Inc. et al., 2006). The Hawaiian-language newspapers are an unparalleled resource in terms of the volume of material and richness of description provided by Native Hawaiian contributors (Nogelmeier, 2010a), and only ~10% of published newspapers have been electronically scanned and made searchable (Nogelmeier, 2010b). As part of the search process, a list of Hawaiian language terms for the monk seal was developed and the etymology of these terms was investigated. All references were translated into English, categorized in terms of the type of account (e.g. fishing story, legend, chant, prayers, etc.) and then analyzed, resulting in an interpretation of each account and its meaning or significance in Native Hawaiian culture.

We also conducted unstructured ethnographic and oral history interviews with 30 Native Hawaiian community members, cultural practitioners and elders (*kūpuna*). Respondents involved in the research were known to possess extensive knowledge of endemic Hawaiian species, marine and coastal environments, and historic and contemporary cultural practices or knowledge that may have some association with monk seals. Interviews focused on historical and contemporary cultural connections with the monk seal among Native Hawaiian communities, as determined through respondents' oral testimonies or reported statements about past and current relationships with the species. These oral traditions consist of a rich pool of collective memories among that encompass an inherited culture in Native Hawaiian communities (Kikiloi, 2010). Respondents were identified through a social network sampling process (Hanneman, 2001), which allowed us to identify and characterize interviewees who are particularly knowledgeable of or experienced with monk seals or Native Hawaiian cultural knowledge systems (cf. Romney et al., 1986).

Interviewees were comprised of respondents who exhibited a broad and sometimes conflicting range of views on the monk seal. This purposive sampling of respondents allowed us to characterize a multiplicity of perspectives among community members, which can reveal different values and information that exist in different social groups and knowledge systems (Shackeroff et al., 2011). The interview methods used by the researchers followed existing standards in social science research (Bernard, 2006, Kvale, 1996, Seidman, 1998). Interviews were conducted in a manner that was culturally appropriate and which respected the traditional ecological knowledge systems of the respondents (Shackeroff and Campbell, 2007).

Interview data were analyzed using an iterative approach to describe, categorize and interpret our qualitative interview data. Most interviews were audio- or video-recorded and, together with

notes taken during the interviews, responses were coded into topical categories. We adopted an iterative methodology that is utilized commonly in grounded theory approach, a method that allows the researcher to develop theory on the research topics addressed while simultaneously grounding the results in empirical observations or data (Glaser and Strauss, 1967, Schatzman, 1991, Thomas and James, 2006). Our methods, however, focused more on an inductive analysis to systematically determine patterns in our respondents' narratives rather than on theory generation. The iterative methodology employed was designed to establish rigor in the analysis of our qualitative information (Baxter and Eyles, 1997, Barbour, 2001).

In addition to interviews, we also sought other evidence of monk seals in Native Hawaiian cultural knowledge, including Hawaiian historical accounts, chants (*oli*) songs (*mele*), prayers (*pule*), existing oral histories, place names, and other traditional and customary knowledge forms. We also engaged in other ethnographic research methods including site visits and participant observation in Hawaiian communities and places with names potentially referencing monk seals.

Results

Our research uncovered a diversity of information about historical and contemporary relationships between Hawaiian communities and the monk seal. Below, we discuss our findings discovered through different sources and research efforts. Additional material referenced in these sections is included in the Appendix. It should be noted that although our research included a comprehensive search of sources of cultural knowledge, additional information may still be waiting to be discovered in extant Hawaiian literature and traditional knowledge forms. In addition to this, several respondents also noted that much of the information we sought about monk seals was deliberately kept *hūnā*, or secret, in keeping with tradition and because such knowledge had been improperly used in the past.

English-Language Archival Sources

The results of archival research in English language sources have been published elsewhere (Watson et al., 2011), but a brief overview of these findings and additional description is provided here for context and comparison with other research results. Our research in this diverse set of sources suggests that seal populations were probably locally extirpated in the MHI within the first century after Polynesian settlement (~AD 1250-1350). Pre-human seal populations probably never exceeded 15,000 individuals, which constitutes a small and vulnerable population for a large mammal (Watson et al., 2011). Remains of monk seals in archaeological deposits are limited to just a few sites that primarily date to the historic period (Rechtman, 2011, Office of Hawaiian Affairs, 2010, Rosendahl, 1994), but this evidence suggests that monk seals were opportunistically taken by prehistoric Polynesian hunters. Though several theories still exist, the most likely explanation based on the available evidence is that seal populations were probably rapidly diminished in Hawaiian prehistory by human hunters and harassment by their commensal mammals (particularly dogs [*Canis familiaris*]).

One of the periods that is the least well understood are the first decades after western contact before the Hawaiian language was translated into a written form (AD 1778-1830). During this period, whaling, sealing and other trading vessels increasingly frequented the archipelago and trade between Hawaiian communities and foreigners intensified (Ii, 1993, Kamakau, 1992). Hawaiians became involved in the seal trade as early as 1811 (Ii, 1993), and were conscripted as sailors on whaling and sealing vessels by Hawaiian monarchs (Naughton, 1983, Beechert, 1991, Kuykendall, 1938, Kuykendall, 1957). This period also witnessed major changes in the relationship between commoners and the land, including the abolishment of the traditional Hawaiian religious system (Ralston, 1984, Seaton, 1974), which included restrictions on some marine species (Titcomb, 1972, Beckley, 1883).

Despite several detailed English-language accounts of the Hawaiian Islands that date to this period, no descriptions of seals were recorded in the main Hawaiian Islands (Appendix). This strongly suggests rarity, particularly given many early descriptions come from whalers and sealers that would have been interested in harvesting seals for their oil, or from explorers and naturalists who described other social and environmental contexts in great detail. Of these early descriptions, however, it remains difficult to disentangle which sealing cargoes were derived from ventures outside of Hawaiian waters (e.g. Alaska, the Pacific Northwest, and the California coast) and those which may have been comprised of monk seal populations from Hawaiian waters (Kuykendall, 1929). When seals were discovered several decades later in the remote and uninhabited northwestern Hawaiian Islands, several sealing voyages were undertaken (Cobb, 1905). Seals were also taken opportunistically in the NWHI during this period by visiting ships, including ones bearing Hawaiian monarchs (e.g. Anonymous, 1857). Few monk seals survived the sealing ventures of the 19th century, resulting in near-extinction and extreme rarity throughout the archipelago in the early 20th century (Hiruki and Ragen, 1992).

Hawaiian-Language Newspapers

The Hawaiian-language newspapers are an unparalleled resource in terms of the volume of material and richness of description (Nogelmeier, 2010a). Our search consisted of identifying Hawaiian terms for monk seals and the etymology of these terms. Next, we located articles containing these terms in online databases of digitized Hawaiian-language newspapers (Ulukau, 2003, Alu Like Inc. et al., 2006) and translated these accounts (Appendix).

We discovered many terms for monk seals in our search in Hawaiian-language dictionaries, archives and newspapers, including: *ʻīlioholoikauaua*, *ʻioleholoikauaua*, *ʻīlioholoikauaua-a-Lono*, *ʻīlioheleikauaua*, *ʻīlioholoikekai*, *ʻaukai*, *holoikauaua*, *hulu*, *silā*, and *kila* (Table 1). The most commonly used term, *ʻīlioholoikauaua*, roughly translates to “dog running in the rough [seas]” (Pūkui and Elbert, 1986). Two other commonly referenced terms, “*silā*” and “*kila*,” are Hawaiian versions of the word ‘seal,’ and probably date to the post-contact era. Several previously unknown terms were also discovered, including “*hulu*,” which is defined in an earlier dictionary as “seal, named for its valuable fur” (Pūkui and Elbert, 1971). This term was also used by some respondents in interviews to reference monk seals (Watson, 2010). Another term “*ohulu*,” is defined as a seal hunter (Parker, 1922). The term “*palaoa*” commonly references whales, but in a traditional chant, it may also apply to other marine mammals including monk seals (Nerveza 2010). Some respondents knew of other names for the monk seal, but declined to

provide the names because of worries about how the names would be used. A full list of Native Hawaiian terms for monk seals and their meanings is provided in Table 1.

Most references to monk seals in Hawaiian-language newspapers use the term *‘īlioholoikauaua* and date to the mid to late 19th century (Appendix). References to monk seals are primarily used in a neutral tone with little description. For example, writers used the term *‘īlioholo-ikauaua* to reference seals in translations of English works. Other descriptions use the same term to describe seals on sealing voyages to Alaska and the US Pacific northwest on which Native Hawaiians served as crew members. One writer describes a trip to the arctic where the crew were kept warm by “the pelt of the *‘īlio-holo-i-ka-uaua* and the other slippery, furry animals,” while another writer describes the Arctic as “Just snow is what is seen there, no plants; the polar bear is still important, with the *‘īlioholoikauaua*, and the sea elephants.” Other writers used the term *‘īliokai* or *‘īlio o kai* (seadog) and *sila* (seal) in descriptions of sealing expeditions. “These accounts provide little information about the cultural relationship with monk seals but do provide evidence that the name was known to Hawaiian writers during a time in which seals were rare in the Hawaiian Islands. Other references are more telling of cultural relationships, and several contain negative connotations. For example, one writer implores fellow Hawaiians not to “slacken in their moral resolve like the *‘īlioholoikauaua*,” and another writer uses the term loosely as an insult (Appendix). These references provide some evidence that the monk seal was not always viewed in a positive manner, though the context does not provide enough description in order to determine why these views were held.

The Hawaiian language newspapers also provide some evidence that monk seals were harvested and consumed as part of customary practice. For example, one writer writes in a story “what are the things you think we eat here? Turtle liver, shark fin, and the broiled meat of the *‘īlioholoikauaua*.” Another writer suggests that monk seal furs were collected as part of customary tribute to the land managers (*Konohiki*), writing, “and then, they lay down these things the *Konohiki* (land manager) requested: pig, dog, cloth, fiber, fur (*‘o ka hulu*), fishing net, everything. These are the goods that we exhibited in ancient days” (Appendix). These descriptions, though limited, suggest that monk seals were harvested for their meat and fur.

Table 1

Term	Definition	Reference / Notes
ʻĪlioholoikauaua	Seal, dog running in the roughness [rough seas]	Pūkui and Elbert, 1986 / entry does not appear in the online dictionary (Ulukau, 2003)
ʻiolehoholoikauaua*	A rat running beside the wave	Beckwith, 1951
ʻĪlioholoikauaua-a-Lono	The dog running at the voice of Lono	Fornander, 1916-1920 (Vol. IV, pg. 273) / Only known reference
ʻĪlioheleikauaua	The dog running in the waves	Andrade, 2008
ʻĪlioholoikekai	The dog running in the sea	Moʻolelo (oral traditions) from kūpuna and kumu (elders & teachers)
ʻaukai	Seafaring	Moʻolelo (oral traditions) from kūpuna (elders)
hoholoikauaua	"iʻoia Pearl and Hermes Reef [NWHI]. Lit., [Hawaiian monk seal that] swims in the rough."	Kōmike Huaʻōlelo (2003)
hulu	seal, named for its valuable fur	Pūkui and Elbert, 1971
sila / kila	Hawaiian versions of the English word 'seal.'	Kōmike Huaʻōlelo (2003) / It is probable that use of this term did not begin until after foreign contact
ohulu (ō-hū-lu)	"O, to spear; and hulu, fur or feathers. A seal hunter."	Parker, 1922 / Entry does not appear in the online dictionary (Ulukau, 2003)
he ilio o ke kai	Seal	Andrews, 1865
sila pūhuluhulu	Fur seal	Kōmike Huaʻōlelo (2003)
sila Hawaiʻi	Hawaiian monk seal	Kōmike Huaʻōlelo (2003)
ʻĪliopiʻi	"Dog running up and down"; Place name: cape & bay, Kalaupapa peninsula	Hawaiian language newspapers; maps

Table 1: Native Hawaiian terms for the monk seal. Definitions and references are provided, including information derived from other archival and interview research efforts on these terms.

* There have been several changes in the definitions of some terms in Hawaiian language dictionaries over time (Elbert, 1954). For the term *ʻiole*, one edition of the Hawaiian dictionary defines the term as, "**ʻiole**. 1. Hawaiian rat (*Rattus exulans*); introduced rat, mouse (Oink. 11.29); rodent (see *ʻiole-lāpaki*, *ʻiole-manakuke*, *ʻiole-puaʻa*); mole (Isa. 2.20). **hōʻiole**. To behave like a rat. *Fig.*, to steal, cheat, lie in wait in order to assail. 2. Name for a sinker of a squid lure." (Pūkui and Elbert, 1971). A later edition of the same dictionary contains the following definition, "**ʻiole** n. 1. Hawaiian rat (*Rattus exulans*); introduced rat, mouse (Oihk. 11.29); rodent (see *ʻiole lāpaki*, *ʻiole manakuke*, *ʻiole puaʻa*); mole (Isa. 2.20); considered by some an ʻaumakua. Cf. *piko pau ʻiole*, *haumakaʻiole*, *paʻipaʻiʻiole*, *papaʻiole*, *ʻuwīʻuwī* 3. **hō.ʻiole** To behave like a rat; ratlike. *Fig.*, to steal, cheat, lie in wait in order to assail. (PNP kiōle)" (Pūkui and Elbert, 1971, emphasis added). The reason for the change in definition is unknown, but

noteworthy in that the later definition specifies that the animal is known to be an *'aumakua*. *'Aumakua* are “family or personal gods, deified ancestors who might assume the shape of...[various animals]” (Pūkui and Elbert, 1986).

Traditional Cultural Sources

In addition to archival and interview research, other sources of cultural knowledge were accessed and reviewed to ascertain information about Hawaiian monk seals. These sources included *mele* (songs), *oli* (chants), *mo'olelo* (oral traditions), and other traditional knowledge forms. One such source is the Kumulipo, a detailed chant that chronicles the creation story, genealogy and mythology of ancient Hawai'i (Beckwith, 1951). Previously it was not believed that any references to the monk seal were found in the Kumulipo, but the term “*ioleholoikauaua*” in one section may reference the Hawaiian monk seal (Appendix). The description of the *ioleholoikauaua* as “a rat running beside the wave,” is reminiscent of monk seals and the description of the monk seal in this section of the Kumulipo is also consistent with other descriptions and perceptions of monk seal behavior found in Hawaiian language sources.

The monk seal is also mentioned in the *mo'olelo* (oral tradition) about the Legend of Hawaii-loa. In this story, the monk seal is described as *'Iioholoikauaua-a-Lono*, and is associated with the Hawaiian god Lono:

After Light had been created or brought forth from the *Po* (the darkness or chaos) the gods looked upon the empty space (*ka lewa*) and there was no place to dwell in. They then created the heavens for themselves. Three heavens did they create or call into existence by their word of command. The uppermost heaven was called “*Lani-Makua*,” the one next below was called “*he Lani o Ku*,” and the lowest was called “*he Lani o Lono*.”

* * *

The first man, generally called Kumu Honua, had a number of names – already mentioned; he was a tall, handsome, majestic looking person, and so was his wife. He was along upon the land for about one century (*kipaelui* or *kihipea*) before his wife Lalo Honua was created.

Among the animals enumerated in the legend as dwelling in peace and comfort with Kumu Honua in Kalani i Hauola were:

Ka puua nui Hihimanu a Kane (the large Hihimanu hog of Kane); ka ilio nui niho oi a Kane (the large sharp-toothed dog of Kane); ka ilio holo i ka uaua a Lono (the dog running at the voice of Lono); ka puua maoli (the common hog); ka ilio alii a Kane (the royal dog of Kane); na moo (lizards)... (Fornander, 1916-1920), emphasis added).

This reference is the only known description of the linkage between the god Lono and the monk seal and the only known account of the term “*ka-ilio-holo-i-ka-uaua-a-Lono*.” The association with Lono is also interesting because dogs are typically associated with the god Kane and many other ocean animals are associated with the god Kanaloa.

Another reference to the monk seal may exist in the *mo'olelo* (oral tradition) about the god Hi'iakaikapoliopole (Hi'iaka), whose travels through the archipelago are recorded in a lengthy and detailed chant. In a translated version of the chant, Hi'iaka describes an area on the island of O'ahu (Ka'ō'io Point): "there is a plain on the inland side and dangerous waters seaward, a place renowned in the saying, 'Lie calmly in the sea of your chief.' As we go along we will reach Makaua, land of the Ma'akua rain. That is where the 'Īlio hā of Kāne dwells, named Kauhike'imakaokalani, an uncle of ours" (Nogelmeier, 2006), *emphasis added*). In the story that follows, Hi'iaka describes, "'Īlio hā is like saying 'Īlio kāhā, an oversized, hulking dog, the same way a pig can be oversized. It means it is huge, heavy, plump, and fleshy. But this dog-uncle of ours you see there has the body of a massive dog, and the largest expanse of his fur is on his head and neck..." (Nogelmeier, 2006).

Though it is unknown if this description explicitly refers to monk seals, the description of the 'Īlio hā as "huge, heavy, plump, and fleshy" and as an "oversized" dog is reminiscent of the physical appearance of monk seals. Unlike the previous *mo'olelo*, in this story the seal-like animal is associated with the Hawaiian god Kane, who is traditionally associated with dogs.

Hawaiian Place Names

Hawaiian place names serve a variety of functions but commonly convey cultural information and associations with geographical features (Pūkui et al., 1974). Place names are often understood, interpreted, and perpetuated within traditional *mo'olelo* (oral traditions) that developed in a place-based manner. We performed a search through cartographic and archival sources to identify places in the Hawaiian Islands that potentially reference monk seals. We also undertook several site visits at places believed to be named for monk seals, and captured additional information about these place-names in interviews with local residents and through personal observations.

Several sites in the Hawaiian archipelago were found to possess names that likely reference the Hawaiian monk seal and many other sites were found with names warranting more investigation. One site is located on the remote Kalaupapa peninsula on the rugged north coast of Moloka'i, which has functioned since historical times as an isolated colony for persons with Hansen's disease. A small cape and bay in the area, named 'Īlio-pi'i, is translated literally as "climbing dog" (Pūkui et al., 1974). The historical name seems appropriate, as monk seals commonly pup on beaches in this area in modern times. Another site, Lae o Ka 'Īlio, is located in the Hā'ena community on the rural north shore of Kaua'i island. Andrade (2008) writes that Lae o Ka 'Īlio translates to "the headland of the dog," and "refers to the endangered Hawaiian monk seal known to Hawaiians as *'īlio hele i ka uaua* (dog running in the rough seas). Residents saw seals there even in the days before the federally established laws now protecting them caused a dramatic increase in their numbers in the main Hawaiian islands" (Andrade, 2008). Finally, the modern name Holoikauaua has been given to Pearl and Hermes Atoll in the NWHI (Kōmike Hua'ōlelo, 2003). The name "celebrates the Hawaiian monk seals that haul out and rest" at the atoll (USFWS et al., 2008). Each of these place names possesses significant ecological importance for the monk seals in current context, and at least two, 'Īlio-pi'i on Moloka'i and Lae o Ka 'Īlio on Kaua'i, are historical names that likely reference places where monk seals were common in historical times.

Numerous additional sites throughout the archipelago may warrant more research, including: Kane‘īlio, Kū‘īlioloa, and Pu‘uanahulu. Pūkui notes that Pu‘uanahulu was “perhaps named for a supernatural dog of that name; see Ka-lae-o-ka-‘īlio” (Pūkui et al., 1974). The reference to Ka-lae-o-ka-‘īlio reads: “points at Kona, Hawai‘i; Kau-pō, Maui; northwest Molokai (also called ‘īlio and Ka-‘īlio). Lit., the cape of the dog. (At the Kona point in a sea pool is the body of Anahulu, a supernatural dog that was changed to stone by Pele. See Pu‘u-anahulu)” (Pūkui et al., 1974). Lae o Ka ‘īlio point on the northwest tip of Moloka‘i, also known as ‘īlio point, bears similarity in name to the site in Kaua‘i. The Hawai‘i Department of Land and Natural Resources has linked the ‘īlio Point, or Kalaeokailio, to an ancient legend of a red dog, rather than a monk seal (DLNR, 2009 [citing Ne et al., 1992]), but monk seals are found in the area (Duvall II, 2009). Another place name is Kīpahulu in the Hāna district of Maui, but interviewees indicated this site was used by seabirds and did not know of any association with the monk seal. Finally, a *heiau* (ritual site) in the Wai‘anae district of O‘ahu island is named Kū‘īlioloa (“The long dog form of Kū”), and *mo‘olelo* about this site reference a dog that would bark at the ocean when enemies were coming. Respondents that identified this site said that although the name has *‘ilio* (dog) in it, it does not necessarily mean it was named after the monk seal.

Interviews in Native Hawaiian Communities

We interviewed a representative cross-section of individuals with different knowledge sets, resource use patterns, perspectives and expertise to uncover cultural information about the Hawaiian monk seal. We also reviewed existing interviews that focused on monk seals, marine environments and similar topics for context. All interviewees indicated that monk seals were relatively new to ocean users in the MHI, with the first personal observations dating to the 1940s and most respondents not indicating experiences with the monk seal until the 1960s or after. These observations were consistent with previously published ethnographic research among local fishermen and community elders (*kūpuna*) in the Hawaiian Islands suggesting perceived rarity among tenured ocean users until the past few decades (Maly and Maly, 2003a–d, 2004). Many respondents noted that their encounters with monk seals have increased in the past few decades, and these perceptions were similar to those expressed by some community members at public meetings about the monk seal (ERM – West Inc., 2011). A separate survey effort indicated that more than 80% of respondents had personally encountered monk seals in the MHI, but their knowledge of the species was relatively limited (SRGII, 2011).

Respondents exhibited a plurality of views regarding the monk seal, ranging from hostility or ambivalence to strong feelings of conservation and stewardship. This suggests lack of a consensus in the Native Hawaiian community regarding the monk seal and heterogeneity in perceptions and socio-cultural values associated with the species.

Among interviewees who expressed positive views about the monk seal, a small subset of indicated a strong socio-cultural association with the species. Some interviewees described families on Hawai‘i and O‘ahu islands that consider the species to be *‘aumakua*, the “family or personal gods, deified ancestors who might assume the shape of...[various animals]” (Pūkui and Elbert, 1986). *‘Aumakua* are traditionally protected by their associated families and various cultural protocols are followed to steward the relationships between the family and their spiritual

guardian. Notably, the monk seal is not named as a common *'aumakua* (Pūkui and Elbert, 1986), but this does not necessarily mean that the families have recently adopted this cultural association. *'Aumakua* can be associated with families for many generations, reaching far back into history, or can be recent additions based on events that carry special cultural meaning and significance. Additionally, some communities have conducted spiritual ceremonies for monk seals during which the monk seal is recognized as part of the *'ohana*, or family. Respondents have said that the details of such activities are deliberately kept *hūnā*, or secret.

Some respondents shared *mo'olelo* (oral traditions/stories) about monk seals that indicated a mythological association with the species. In one account from the island of Moloka'i, a *kupuna* (community elder) told of a monk seal who appeared in the area in 1947 and washed up without a head. The *kupuna* indicated it was the work of Kauhuhu, the famed shark god of the area who patrolled the waters from Moananui to Pelekunu. Another *mo'olelo* from Hawai'i Island tells of a pair of lovers who suffered the wrath of the jealous shark god Kua. After his affections were spurned, he curses the woman, turning her into a monk seal and her male companion into a dragonfly so the two could not be together. The pair was later reunited in their human forms by the god Kū (Appendix). These *mo'olelo* indicate a historical cultural association with the monk seal, but appear to be limited to a few places where familial traditions have preserved the stories.

For some *kūpuna*, the specific origins of the animal and its significance in Hawaiian culture are irrelevant, as the traditional Hawaiian sense of stewardship extends to all species and the environment. One respondent, for example, expressed, “whether they are *'hānai* [adopted] or *'hānau* [born of, as in a son or daughter], monk seals are part of the ocean and we, humans, have an obligation to protect them.” This perspective has also been shared by other community elders interviewed about the monk seal (Seldon and Lucas, 2010, Watson, 2010). These views indicate an modern, evolving socio-cultural significance ascribed to the species by some interviewees, who draw on traditional conceptions of environmental and resource stewardship in relation to the species.

While some Native Hawaiian community members hold positive views about the monk seal, others view the monk seal negatively and do not associate any cultural significance to the species historically or in modern times. Among these respondents, the seal is viewed as endemic to the NWHI but not to the MHI. Some respondents view the seal as an invasive species in the MHI and believe the seal should remain in the NWHI only. Respondents commonly cite the lack of Hawaiian cultural references to the seal in traditional chants, hula [dance] and other knowledge forms. Other respondents pointed to the lack of evidence that the monk seal was ever used for food, tools, weapons, fabrics, medicine, or combustible material. One respondent emphasized that, “everything in Hawai'i had a common use... since there was no [use], then it must not be native.” Other respondents pointed to the lack of monk seal bones (*'iwi*) found in archeological excavations or petroglyphs (*ki'i pōhaku*) depicting monk seals. Respondents on Maui were not aware of any place names, sacred sites (*wahi pani*) or fishing shrines (*ko'a*) named after the monk seal. They also mentioned that their *kūpuna* (elders) never mentioned the monk seal, and that they did not know of any families that regarded the monk seal as their *'aumakua* (spiritual family guardian).

The most commonly cited source of human-monk seal conflict is negative interactions with fishers (primarily men in Hawai‘i). Fishing has a long history in Hawai‘i and is embedded in the socio-cultural traditions and subsistence lifestyles of Hawaiian communities (Glazier, 2007, Titcomb, 1972). Monk seals are viewed by Native Hawaiian fishers and their families as direct competitors, in that they preferentially take fish specifically targeted by fishers. Many respondents believe that when interactions occur, they inhibit the ability of fishers to provide food for the household. Other fishers cite the aggressive behavior of monk seals as a major problem. Common interactions include seals taking fish off of lines or out of fishers’ nets, but increasingly seals are interacting with boats and fishermen directly – in some cases, fishers have been bitten by monk seals. These interactions are viewed by some as impacting cultural fishing practices, and are further compounded by existing regulations that restrict fishing and the depleted condition of fisheries resources in the MHI.

Among respondents who view the species negatively, the belief that the monk seal is not endemic is exacerbated by the prohibitions against interacting with the seal. Some respondents state the perspective that modern cultural knowledge cannot be generated because the monk seal “cannot be touched and used for anything.” Restrictions on use have precluded indigenous communities from perpetuating cultural traditions for other protected species such as sea turtles (Kinan and Dalzell, 2005, Rudrud, 2010). Ancient cultural knowledge is believed to be non-existent due to the recent arrival of the monk seal in the MHI, but respondents also suggested that modern knowledge of the seal will accrue with the current generation that is interacting with the monk seal. A key question among this group is how seals will be integrated into Hawaiian culture and what will the cultural exchange be with the species in the modern context.

In a few unique places in the archipelago monk seals are regarded as a natural part of the ecosystem and human-monk seal conflicts appear to be minimal (Figure 2). These areas tend to be rural and fairly isolated communities that are characterized by a higher degree of self-sufficiency, and where familial traditions and local decision-making processes are preserved. On Ni‘ihau Island, for example, monk seals became established nearly three decades ago. Community members discussed the social impacts associated with monk seal colonization (e.g, increased presence of sharks), and ultimately decided to act as stewards of the animals (Robinson, 2008). As a result, a sub-population has become established and residents have developed a stewardship ethic towards the species. A similar situation is occurring in the isolated Kalaupapa community on Moloka‘i Island, where another sub-population is thriving in the MHI, and where community residents largely leave seals alone. In these communities, fishers and other ocean users will move away from areas where seals are visible in order to minimize interactions.



Figure 2: ‘Īliopi‘i point, Kalaupapa peninsula, Moloka‘i, a rural community that has developed a relatively conflict-free relationship with monk seals. As a result, monk seals have flourished in this area. Photo by Patrick Doyle.

Discussion

Findings of the archival research component of this project suggests that the Hawaiian monk seal was likely extirpated in the main Hawaiian Islands soon after voyaging Polynesians settled in the archipelago. Though several other competing hypotheses remain (Watson et al., 2011), based on our review of the available information the most likely explanation is that seal populations were probably rapidly diminished by human hunters and harassment from their commensals. This theory has been advanced before in several forms (e.g. Kenyon, 1980), but to our knowledge has not been substantiated with a comprehensive review and analysis of archival sources. Monk seals remained rare in the MHI through the early historical period, and were hunted to near extinction once populations were discovered in the NWHI. In the post-sealing era of the early 20th century, various human perturbations in the NWHI kept populations relatively low until the species was protected under the Endangered Species Act in the 1970s (Kenyon, 1972, Kenyon, 1980). Starting in approximately the mid-1990s seal populations have increased in the MHI, leading to increased conflicts with ocean users (Baker and Johanos, 2004).

Cultural Endemism and the Heterogenous Production of Knowledge

Our research on the socio-cultural significance of the species suggests that the monk seal is not uniformly known among Native Hawaiian communities. There is little evidence that monk seals played a significant role in traditional Hawaiian culture in prehistoric (<AD 1778) or historical times. The cultural references to the monk seal that were found appear to be sequestered in specific knowledge systems ascribed to either a specific geographic location, familial association or oral tradition. Cultural information about the species is also inconsistent in Native Hawaiian cultural knowledge forms. For example, the reference to *ka-ʻīlio-holo-i-kauaua-a-Lono* associates monk seals with the god Lono, while other *moʻolelo* point to an association with a different god (e.g. Kū; Kane) or to a local demi-god or place name. Knowledge thus appears to be heterogenous in distribution among Native Hawaiian knowledge domains.

We advance the notion of ‘cultural endemism’ to explain how socio-cultural knowledge domains evolve and are maintained in society. We define cultural endemism as the set of socio-cultural values, norms, practices and traditions that develop in a place-specific context for a discrete or set of linked natural or anthropogenic phenomenon. The development of cultural endemism for a species appears to be a result of reciprocal interactions, whereby the most vulnerable taxa are reduced faster than the development of a cultural profile, and high-value resources that are more resistant to initial impacts become more fully integrated into traditions, values and practices (Kittinger et al., *In Review*).

Our research on the monk seal suggests that although the monk seal is biologically endemic, the species is not uniformly culturally endemic in Hawaiian communities. This heterogeneity can be explained by two processes, including: 1) Species rarity and non-uniform distribution in prehistoric and historic times, and; 2) The dispersed mode of traditional knowledge production in Hawai‘i. Historical patterns of anthropogenic impacts likely caused the monk seal to become rare ecologically in the MHI shortly after Polynesian settlement, and this pattern persisted into

the post-contact and modern eras. Ecological rarity likely precluded the uniform development of a cultural profile for monk seals and further integration into Native Hawaiian cultural practices and traditions. In some areas, monk seals have been incorporated into cultural lore and memory, but these cultural references appear to be rare and not widely known to the broader Native Hawaiian community.

Diversity and lack of consistency in cultural sources and contexts is also likely contributed to the dispersed manner in which knowledge is generated, maintained and built upon in Native Hawaiian communities. Traditionally, cultural knowledge systems accumulate at the local level through kinship networks and familial ties rooted in traditionally circumscribed communities, defined as mountain-to-sea systems based in single watersheds (*ahupua'a*). The local development of situated knowledge may have aggregated at higher levels through the indigenous governance systems that linked individual communities (*ahupua'a*) into regional districts (*moku*) and through the dispersal of cultural traditions. Because knowledge was preserved in non-written forms (e.g. oral, dance traditions), the production of knowledge resulted in a heterogeneous, poly-rhetoric knowledge landscape with variation due to social and environmental geography (Nogelmeier, 2010a). The dispersed knowledge production system explains spatial variation in cultural practices and traditions, and is likely responsible for the different names, cultural associations and significance ascribed to monk seals. Ecological rarity may have further contributed to the development of different patterns of cultural endemism in geographically defined communities and may explain inconsistencies in oral traditions and names.

Though historically monk seals may not have been uniformly endemic to Native Hawaiians, the species is currently developing a more substantive cultural profile in contemporary Hawaiian communities. This is due in part to the increased occurrence of monk seals in the MHI, making them more common throughout the MHI. Perceptions of the monk seal appear to be dichotomous, with one epistemic community that views monk seals as alien and another set of communities that have retained, enhanced or engendered a Native Hawaiian cultural association with monk seals. Community members adverse to the monk seal associate little or no historical cultural references to monk seals, primarily include fishers and their families. Such persons tend to associate the monk seal with increased restrictions on cultural activities and practices, particularly fishing.

Communities that are developing a more substantive cultural profile for monk seals are dispersed and tend to be rural, somewhat isolated, and less integrated in the socio-economic systems that support urban communities in the archipelago. McGregor has termed such communities as cultural *kīpuka*, where traditional livelihoods, cultural practices and lifeways have persisted relatively untouched, and which provide the seeds by which Native Hawaiian culture is regenerated, relearned and revitalized in the setting of modern Hawai'i (McGregor, 2007). Kikiloi (2010) has posited that this process of re-learning and developing new knowledge is a fundamental aspect of sustaining a Hawaiian cultural identity and spiritual connections to land and place. Notably, integration of traditional knowledge systems with western conceptions and methodologies occurred historically (Beamer and Duarte, 2006) and is increasingly becoming common in the modern context (Jokiel et al., 2011).

Waldman has described a process of “eco-social anomie,” where as species disappear, they lose both relevance to a society and the constituency to champion their revival, further hastening their decline (Waldman, 2010). In the case of the monk seal, the process appears to be the reverse. The re-colonization of the MHI by monk seals over the past few decades has enlivened user conflicts and has brought to the forefront conflicting values and perceptions of the species. The future development of a cultural profile for monk seals will depend largely upon how Hawaiian communities will interact with the species.

Applying Socio-Cultural Dimensions of Wildlife to Conservation

From a social perspective, understanding how humans interacted with protected species in the past and in contemporary communities can help inform modern management and conservation actions (Cordell et al., 1999, Tarrant et al., 1997, Watson et al., 2011). The management of endangered monk seal populations, for example, will likely depend in part on the ability of managers and their conservation programs to engage productively with island communities in stewardship and recovery efforts. Social research in these communities can provide critical information regarding the values and perceptions of local stakeholders, and archival research can help further clarify how human-monk seal relationships have changed through time.

As the monk seals have increased in the MHI, community concerns have emerged about the affect this increased population will have on valued cultural resources and subsistence activities, including fishing. Among some community members, there is a strongly held belief that the monk seal is not culturally endemic, which is a concern for species conservation efforts as interactions with ocean users are likely to increase. The MHI provide increased habitat and carrying capacity, particularly in the availability of sandy beaches (Ragen, 2002), and the establishment of small but growing rookeries in habitats in the MHI provide an important hedge against the possibilities of future major perturbations (e.g. hurricanes, oil spills). Among community members who hold adverse views about the monk seal, the limited information about historical cultural associations may help to alleviate some beliefs and misperceptions, but continued views of the monk seal as alien to Hawaiian culture are likely to persist among some community members and may have historical precedent in Hawaiian language newspapers and the Kumulipo. On the other hand, some communities have independently developed stewardship programs and have minimized human-monk seal conflicts.

This heterogeneity in values and perceptions among Hawaiian communities could help inform or pro-actively evaluate specific management actions. For example, the current practice of translocation of seals from the NWHI to the MHI is viewed as an egregious practice by many fishers, both because of the perceived threat of additional monk seals as competitors for fisheries resources, but also as evidence of the intrusion of federal government programs on local customs and practices. Translocations, and other management actions that may increase user conflicts, ideally should be evaluated within a spatial context to minimize conflicts with specific user groups and may also be aided through involvement of user groups and stakeholders in participatory decision-making processes.

In conclusion, it appears that ecological rarity may have precluded the consistent development of a cultural profile for monk seals in the Hawaiian archipelago. The species is not uniformly

culturally endemic in Hawaiian communities, but our research has revealed significant evidence of cultural associations and supports the notion that the species were not unknown to Hawaiian communities in historical times. The future of monk seal recovery will depend in part on the productive engagement of Hawaiian stakeholder groups, which can be aided by assessments of socio-cultural values, perceptions and practices associated with species and the environments in which they are embedded.

References

- Allen, M.S. (2007) Three millennia of human and sea turtle interactions in remote Oceania. *Coral Reefs* **26**, 959-970.
- Alu Like Inc., Hale Kuamo‘o, Bernice P. Bishop Museum (2006) Ho‘olaupa‘i: Hawaiian Nūpepa Collection. Online Database. [online] www.nupepa.org.
- Andrade, C. (2008) *Hā‘ena: Through the Eyes of the Ancestors*, University of Hawai‘i Press, Honolulu.
- Anonymous (1857) The French Man-o-War Eurydice...‘elepani o ke kai. *Ka Hae Hawaii* [Hawaiian Language Newspaper], Book 7, pg. 25, 14 May 1857. Honolulu.
- Antonelis, G.A., Baker, J.D., Johanos, T.C., Braun, R.C., Harting, A.L. (2006) Hawaiian monk seal (*Monachus schauinslandi*): status and conservation issues. *Atoll Research Bulletin* **543**, 75-101.
- Athens, J. (2009) *Rattus exulans* and the catastrophic disappearance of Hawai‘i’s native lowland forest. *Biological Invasions* **11**, 1489-1501.
- Baker, J.D., Johanos, T.C. (2004) Abundance of the Hawaiian monk seal in the main Hawaiian Islands. *Biological Conservation* **116**, 103-110.
- Balazs, G.H., Whittow, G.C. (1979) Revised bibliography of the Hawaiian monk seal: *Monachus schauinslandi* Matschie 1905. Sea grant Miscellaneous Report UNIHI-SEAGRANT-MR-79-03, University of Hawai‘i, Sea Grant College Program.
- Barbour, R.S. (2001) Checklists for improving rigour in qualitative research: A case of the tail wagging the dog? *British Medical Journal* **322**, 1115-1117.
- Bath, A.J. (1998) The role of human dimensions in wildlife resource research in wildlife management. *Ursus* **10**, 349-355.
- Baxter, J., Eyles, J. (1997) Evaluating qualitative research in social geography: Establishing 'rigour' in interview analysis. *Transactions of the Institute of British Geographers* **22**, 505-525.
- Beamer, B.K., Duarte, T.K.e. (2006) Mapping the Hawaiian Kingdom: a colonial venture? *Hawaiian Journal of Law and Politics* **2**, 34-52.
- Beckley, E.M. (1883) Hawaiian fisheries and methods of fishing with an account of the fishing implements used by the natives of the Hawaiian Islands. *Advertiser Steam Print*, Honolulu.
- Beckwith, M.W. (1951) *The Kumulipo: A Hawaiian Creation Chant*, University of Chicago Press, Chicago.
- Beechert, E.D. (1991) *Honolulu: Crossroads of the Pacific*, University of South Carolina Press, Columbia, SC
- Bentrupperbaumer, J.M., Day, T.J., Reser, J.P. (2006) Uses, meanings, and understandings of values in the environmental and protected area arena: A consideration of iWorld Heritage values. *Society & Natural Resources* **19**, 723-741.
- Bernard, H.R. (2006) *Research methods in anthropology: qualitative and quantitative approaches*, AltaMira Press, Oxford, U.K.
- Burney, D.A., James, H.F., Burney, L.P., et al. (2001) Fossil evidence for a diverse biota from Kaua‘i and its transformation since human arrival. *Ecological Monographs* **71**, 615-641.
- Clark, T.W., Reading, R.P., Clark, A.L. (1994) *Endangered species recovery: finding the lessons, improving the process*, Island Press, Washington, DC.

- Cobb, J.N. (1905) *The commercial fisheries of the Hawaiian Islands in 1903. Appendix to the report of the commissioner of fisheries to the secretary of commerce and labor for the year ending June 30, 1904. Pages 433-512*, Department of Commerce and Labor, U. S. Bureau of Fisheries, Government Printing Office, Washington, DC.
- Cordell, H.K., Hoover, A.P., Super, G.R., Manning, C.H. (1999) Adding human dimensions to ecosystem-based management of natural resources. In: *Integrating Social Sciences with Ecosystem Management: Human Dimensions in Assessment, Policy, and Management*. (Eds. H.K. Cordell, J.C. Bergstrom), Sagamore, Champaign, IL, pp. 1-12.
- DLNR. (2009) Draft Report for the 'Īlio Point Natural Area Reserve. State of Hawai'i, Department of Land and Natural Resources (DLNR), Honolulu. [online] <http://hawaii.gov/dlnr/dofaw/nars/reserves/molokai/ilio-point>
- Duvall II, F.P. (2009) *Management Documents: 'Īlio and Koa Special Areas: 'Īlio Point Moloka'i*. State of Hawai'i, Department of Land and Natural Resources, Honolulu. [online] <http://hawaii.gov/dlnr/dofaw/nars/reserves/molokai/ilio-point>
- ERM – West Inc. (2011) Scoping summary report: Hawaiian monk seal recovery actions programmatic EIS. National Marine Fisheries Service, Pacific Islands Regional Office. [online] http://www.nmfs.noaa.gov/pr/pdfs/permits/eis/01-31-2011_final_scoping_report.pdf
- Fornander, A. (1916-1920) *Fornander Collection of Hawaiian Antiquities and Folk-Lore*, Memoirs of the Bernice P. Bishop Museum, Vol. 4-6. Bernice P. Bishop Museum Press, Honolulu.
- Gilmartin, W.G. (2002) Responses of Hawaiian seals to human disturbance and handling. In: *Background Documents: Workshop on the Management of Hawaiian Monk Seals on Beaches in the Main Hawaiian Islands*. Marine Mammal Commission, National Marine Fisheries Service, Hawaii Division of Aquatic Resources, 29-31 October 2002, Koloa, Kauai, Part 7.
- Glaser, B., Strauss, A. (1967) *The discovery of grounded theory: strategies for qualitative research*, Aldine, New York.
- Glazier, E.W. (2007) Hawaiian fishermen. In: *Case Studies in Cultural Anthropology*. (Eds. G. Spindler, J. Stockard), Thomson/Wadsworth, pp. 1-145.
- Glazier, E.W., editor. (2011) *Ecosystem-based fisheries management in the western Pacific*, Blackwell/Wiley, Hoboken, NJ.
- Handy, E.S.C., Pūkui, M.K. (1972) *The Polynesian Family System in Ka'u Hawai'i*, C. E. Tuttle Company, Rutland, VT.
- Hanneman, R.A. (2001) Introduction to Social Network Methods. Online text for UCINET software. University of California, Riverside. Available online at <http://faculty.ucr.edu/~hanneman/SOC157/NETTEXT.PDF>
- Hiruki, L.M., Ragen, T.J. (1992) A compilation of historical monk seal, *Monachus schauinslandi*, counts. U.S. Department of Commerce, NOAA Technical Memorandum NMFS, NOAA-TM-NMFS-SWFSC-172.
- Ii, J.P. (1993) *Fragments of Hawaiian History*. Translated Hawaiian to English by Mary Kawena Pūkui, Dorothy B. Barrère, ed., Bishop Museum Press, Honolulu.
- Jacobson, S.K., Duff, M.D. (1998) Training idiot savants: the lack of human dimensions in conservation biology. *Conservation Biology* **12**, 263-267.
- Jokiel, P.L., Rodgers, K.S., Walsh, W.J., Polhemus, D.A., Wilhelm, T.A. (2011) Marine resource management in the Hawaiian Archipelago: the traditional Hawaiian system in relation to

- the western approach. *Journal of Marine Biology* **2011**, Article ID 151682, doi:151610.151155/152011/151682.
- Kamakau, S.M. (1992) *The people of old*. Translated from the newspaper Ke Au 'Oko'a by Mary Kawena Pūkui; arranged and edited by Dorothy B. Barrère; illustrated by Joseph Feher.
- Kaneshiro, K.Y., Chinn, P., Duin, K.N., Hood, A.P., Maly, K., Wilcox, B.A. (2005) Hawai'i's mountain-to-sea ecosystems: social–ecological microcosms for sustainability science and practice. *EcoHealth* **2**, 349-360.
- Kellert, S.R. (1985) Social and perceptual factors in endangered species management. *The Journal of Wildlife Management* **49**, 528-536.
- Kellert, S.R. (1986) Social and perceptual factors in the preservation of animal species. In: *The preservation of species*. (Ed. B. Norton), Princeton University Press, Princeton, NJ, pp. 50-73.
- Kenyon, K.W. (1972) Man versus the monk seal. *Journal of Mammalogy* **53**, 687-696.
- Kenyon, K.W. (1980) No man is benign: the endangered monk seal. *Oceans* **13**, 48-54.
- Kenyon, K.W., Rice, D.W. (1959) Life history of the Hawaiian monk seal. *Pacific Science* **13**, 215-252.
- Kikiloi, K. (2010) Rebirth of an archipelago: sustaining a Hawaiian cultural identity for people and homeland. *Hūlili: Multidisciplinary Research on Hawaiian Well-Being* **6**, 73-114.
- Kinan, I., Dalzell, P. (2005) Sea turtles as a flagship species: different perspectives create conflicts in the Pacific islands. *Maritime Studies* **3**, 195-212.
- Kirch, P.V. (1985) *Feathered gods and fishhooks: An introduction to Hawaiian archaeology and prehistory*, University of Hawai'i Press, Honolulu.
- Kittinger, J.N., Pandolfi, J.N., Blodgett, J.H., *et al.* (In review) Historical reconstruction reveals recovery in Hawaiian coral reefs. *PLoS ONE*.
- Kōmike Hua'ōlelo. (2003) *Māmaka kaiao: a modern Hawaiian vocabulary: a compilation of Hawaiian words that have been created, collected, and approved by the Hawaiian Lexicon Committee from 1987 through 2000*. University of Hawaii at Hilo. Hale Kuamo'o. University of Hawaii Press, Honolulu.
- Kuykendall, R.S. (1929) Some early commercial adventures of Hawaii. Thirty-Seventh Annual Report of the Hawaiian Historical Society, pp. 15-33. Honolulu.
- Kuykendall, R.S. (1938) *The Hawaiian Kingdom, Vol. I: 1778-1854 foundation and transformation*, University of Hawaii Press, Honolulu, Hawaii, USA.
- Kuykendall, R.S. (1957) *The Hawaiian Kingdom, Vol. II: 1854-1874, Twenty Critical Years*, University of Hawaii Press, Honolulu, Hawaii, USA.
- Kvale, S. (1996) *Interviews: An Introduction to Qualitative Research Interviewing*, Sage, London.
- Maly, K. (2001) *Mālama Pono I Ka 'Āina – An Overview of the Hawaiian Cultural Landscape*. Kumu Pono Associates LLC, Lana'i City, Hawai'i.
- Maly, K., Maly, O. (2003a) "Hana ka lima, 'ai ka waha": a collection of historical accounts and oral history interviews with kama'aina residents and fisher-people of lands in the Halele'a-Napali region on the island of Kaua'i. Kumu Pono Associates LLC, Hilo.
- Maly, K., Maly, O. (2003b) *He wahi mo'olelo no na lawai'a ma Kapalilua, Kona hema, Hawai'i: a collection of historical accounts and oral history interviews with elder kama'aina fisher-people from the Kapalilua region of south Kona, island of Hawai'i*. Kumu Pono Associates LLC, Hilo.

- Maly, K., Maly, O. (2003c) Volume 1: Ka hana lawai‘a a me na ko‘a o na kai ‘ewalu: a history of fishing practices and marine fisheries of the Hawaiian Islands, compiled from Native Hawaiian traditions, historical accounts, government communications, kama'aina testimony and ethnography. Kumu Pono Associates LLC, Hilo.
- Maly, K., Maly, O. (2003d) Volume 2: Oral History Interviews. Ka hana lawai‘a a me na ko‘a o na kai ‘ewalu: a history of fishing practices and marine fisheries of the Hawaiian Islands, compiled from oral history interviews with kupuna and kama‘aina. Kumu Pono Associates LLC, Hilo.
- Maly, K., Maly, O. (2004) Ka hana lawai‘a a me na ko‘a o na kai ‘ewalu: Summary of detailed findings from research on the history of fishing practices and marine fisheries of the Hawaiian Islands, compiled from Native Hawaiian traditions, historical accounts, government communications, kama‘aina testimony and ethnography. Kumu Pono Associates LLC, Hilo.
- McGregor, D. (2007) *Na Kua‘aina: Living Hawaiian Culture*, Bishop Museum Press, Honolulu.
- Naughton, E.M. (1983) *Hawaiians in the Fur Trade: Cultural Influence on the Northwest Coast, 1811-1875*. MA Thesis, Western Washington University.
- Nerveza, T.L. (2010) *Cultural significance of the Hawaiian Monk Seal*. University of Hawai‘i at Hilo, Pacific Aquaculture and Coastal Resources Center, Hilo.
- NMFS (2007) *Recovery Plan for the Hawaiian Monk Seal (Monachus schauinslandi)*. Second Revision. National Marine Fisheries Service (NMFS). Silver Spring, MD. [online] www.nmfs.noaa.gov/pr/species/mammals/pinnipeds/hawaiianmonkseal.htm
- Nogelmeier, M.P. (2006) *Ka Mo‘olelo O Hi‘iakaikapoliopole (The Epic Tale of Hi‘iakaikapoliopole) (M. Puakea Nogelmeier, translator)*, Awaiaulu Press, Honolulu.
- Nogelmeier, M.P. (2010a) *Mai Pa‘a I Ka Leo: Historical Voice in Hawaiian Primary Materials, Looking Forward and Listening Back*, Bishop Museum Press, Honolulu.
- Nogelmeier, M.P. (2010b) Personal communication to J. N. Kittinger, 2 Sept. 2010.
- Office of Hawaiian Affairs (2010) *Papakilo Database*. Office of Hawaiian Affairs. [online] <http://www.papakilodatabase.com>
- Parker, H.H. (1922) *A Dictionary of the Hawaiian Language* (by Lorrin Andrews, revised by Henry H. Parker). Board of Commissioners of Public Archives, Honolulu.
- Pūkui, M. K., Elbert, S.H. (1971) *Hawaiian dictionary: Hawaiian–English and English–Hawaiian, 4th Edition*. University of Hawai‘i Press, Honolulu.
- Pūkui, M.K., Elbert, S.H. (1986) *Hawaiian dictionary: Hawaiian–English and English–Hawaiian*, University of Hawai‘i Press, Honolulu.
- Pūkui, M.K., Elbert, S.H., Mo‘okini, E.T. (1974) *Place names of Hawai‘i*, University of Hawai‘i Press, Honolulu.
- Ragen, T.J. (2002) The role of the main Hawaiian Islands in the recovery of the Hawaiian monk seal. In: *Background Documents: Workshop on the Management of Hawaiian Monk Seals on Beaches in the Main Hawaiian Islands*. Marine Mammal Commission, National Marine Fisheries Service, Hawaii Division of Aquatic Resources, 29-31 October 2002, Koloa, Kauai, Part 5.
- Ragen, T.J., Lavigne, D.M. (1999) The Hawaiian monk seal: biology of an endangered species. In: *Conservation and management of marine mammals*. (Eds. J.R. Twiss Jr., R.R. Reeves), Smithsonian Institution Press, Washington, DC, pp. 224–245.
- Ragen, T.R. (1999) Human activities affecting the population trends of the Hawaiian monk seal. In: *Life in the slow lane: ecology and conservation of long-lived marine animals*. (Ed.

- J.A. Musick), Proceedings of the Symposium: Conservation of Long-Lived Marine Animals, Monterey, CA, USA, 24 Aug 1997. American Fisheries Society Symposium 23, Bethesda, Maryland, pp. 183-194.
- Ralston, C. (1984) Hawaii 1778-1854: some aspects of maka‘ainana response to rapid cultural change. *The Journal of Pacific History* **19**, 21-40.
- Rechtman, R. (2011) Personal communication on monk seal remains recovered on Kohala coast, to J. N. Kittinger
- Robinson, K. (2008) Letter from Keith Robinson, Ni‘ihau Ranch, to P. Dalzell, Western Pacific Regional Fishery Management Council, dated 8 July 2008.
- Romney, A.K., Weller, S.C., Batchelder, W.H. (1986) Culture as consensus: a theory of culture and informant accuracy. *American Anthropologist* **88**, 313-338.
- Rosendahl, P.H. (1994) Aboriginal Hawaiian structural remains and settlement patterns in the upland archeological zone at Lapakahi, Island of Hawaii. *Hawaiian Archaeology* **3**, 14-70.
- Rudrud, R. (2010) Forbidden sea turtles: Traditional laws pertaining to sea turtle consumption in Polynesia (Including the Polynesian Outliers). *Conservation and Society* **8**, 84-97.
- Schatzman, L. (1991) Dimensional analysis: notes on an alternative approach to the grounding of theory on qualitative research. In: *Social organization and social process: essays in honor of Anselm Strauss*. (Ed. D.R. Maines), Aldine, New York, pp. 303-314.
- Seaton, S. (1974) The Hawaiian “kapu” abolition of 1819. *American Ethnologist* **1**, 193-206.
- Seidman, I. (1998) *Interviewing as Qualitative Research: A Guide for Researchers in Education and the Social Sciences*, Teachers College Press, New York.
- Seldon, R., Lucas, J.B. (2010) Na Mea Hulu: "A Privilege to See". [www.youtube.com](http://www.youtube.com/watch?v=jJsuqUAU_to) [online] http://www.youtube.com/watch?v=jJsuqUAU_to
- Shackeroff, J.M., Campbell, L.M. (2007) Traditional ecological knowledge in conservation research: problems and prospects for their constructive engagement. *Conservation and Society* **5**, e343-360.
- Shackeroff, J.M., Campbell, L.M., Crowder, L.B. (2011) Social-ecological guilds: putting people into marine historical ecology. *Ecology and Society* **16**, 52 [online] URL: <http://www.ecologyandsociety.org/vol16/iss51/art52/>.
- SRGII (2011) Public perception and attitudes about the Hawaiian monk seal: survey results report. A report submitted to Protected Resources Division, NOAA Fisheries by Sustainable Resources Group Intn'l, Inc. (SRGII), Kailua.
- Tarrant, M.A., Bright, A.D., Cordell, H.K. (1997) Attitudes toward wildlife species protection: assessing moderating and mediating effects in the value-attitude relationship. *Human Dimensions of Wildlife* **2**, 1-20.
- Thomas, G., James, D. (2006) Reinventing grounded theory: Some questions about theory, ground and discovery. *British Educational Research Journal* **32**, 767-795.
- Titcomb, M. (1972) *Native use of fish in Hawaii*, The University Press of Hawaii, Honolulu.
- Ulukau (2003) Ulukau: Hawaiian electronic library. Online Database [online] www.wehewehe.org
- USFWS, NOAA, State of Hawai‘i (2008) Papahānaumokuākea Marine National Monument. Monument Management Plan. U.S. Fish and Wildlife Service (USFWS), National Oceanic and Atmospheric Administration (NOAA), State of Hawai‘i, Department of Land and Natural Resources, Honolulu.

- Vitousek, P.M., Ladefoged, T.N., Kirch, P.V., *et al.* (2004) Soils, agriculture, and society in precontact Hawaii. *Science* **304**, 1665-1669.
- Waldman, J. (2010) The natural world vanishes: how species cease to matter. *Yale Environment* *360*, 8 April 2010. [online] <http://e360.yale.edu/content/feature.msp?id=2258>
- Watson, T.K. (2010) Ho‘ailona and the Coming of the Seals, Ho‘oulu Lahui Aloha 159 (Video). Office of Hawaiian Affairs, Honolulu. [online] <http://www.oha.org/hla/HLA159/>
- Watson, T.K., Kittinger, J.N., Walters, J.S., Schofield, T.D. (2011) Culture, conservation and conflict: assessing the human dimensions of Hawaiian monk seal recovery. *Aquatic Mammals* **in press**.
- Wilmshurst, J., Hunt, T.L., Lipo, C.P., Anderson, A.J. (2011) High-precision radiocarbon dating shows recent and rapid initial human colonization of East Polynesia. *Proceedings of the National Academy of Science USA* **108**, 1815-1820.

Appendix

Table of Contents

- 1.0 Kumulipo
- 2.0 Mo'olelo of Hi'iakaikapoliopole (Hi'iaka)
- 3.0 Mo'olelo of Pinao and Kamālama at Ka Lae o ka 'Īlio, Hawai'i Island
- 4.0 Historical English Language and Translated Hawaiian Language Sources
- 5.0 Hawaiian-Language Newspapers
- 6.0 Reference Cited

1.0 Kumulipo

Kumulipo (Beckwith, 1951)

Ka Wa Eone / Chant Six

- 0539. O kupukupu kahili o Kua-ka-mano
Many new fines of chiefs spring up
- 0540. O kuku ka mahimahi, o ka pihapiha kapu
Cultivation arises, full of taboos
- 0541. O ka holo [a]na kuwaluwalu ka linalina
[They go about scratching at the wet lands
- 0542. Holi [a]na, hoomaka, hoomakamaka ka ai
It sprouts, the first blades appear, the food is ready] [?]
- 0543. Ka ai ana ka piipii wai
Food grown by the water courses
- 0544. Ka ai ana ka piipii kai
Food grown by the sea
- 0545. Ka henehene a lualua
Plentiful and heaped up
- 0546. Noho poopoo ka iole makua
The parent rats dwell in holes
- 0547. Noho pupii ka iole lili
The little rats huddle together
- 0548. O ka hulu ai malama
Those who mark the seasons
- 0549. Uku lii o ka aina
Little tolls from the land
- 0550. Uku lii o ka wai
Little tolls from the water courses
- 0551. O mehe[u] ka akiaki a nei[a] haula
Trace of the nibblings of these brown-coated ones
- 0552. O lihilihi kuku
With whiskers upstanding
- 0553. O peepee a uma

- They hide here and there
0554. He iole ko uka, he iole ko kai
A rat in the upland, a rat by the sea
0555. He 'iole holo i ka uaua
A rat running beside the wave
0556. Hanau laua a ka Pohiolo
Born to the two, child of the Night-falling-away
0557. Hanau laua a ka Poneeaku
Born to the two, child of the Night-creeping-away
0558. He nenee ka holo a ka iole uku
The little child creeps as it moves
0559. He mahimahi ka lele a ka iole uku
The little child moves with a spring
0560. He lalama i ka iliili
Pilfering at the rind
0561. Ka iliili hua ohia, hua ole o ka uka
Rind of the 'ohi'a fruit, not a fruit of the upland
0562. He pepe kama a ka po, hiolo i hanau
A tiny child born as the darkness falls away
0563. He lele kama a laua o ka po nee aku
A springing child born as the darkness creeps away
0564. O kama a uli a kama i ka po, nei la
Child of the dark and child in the night now here
0565. Po--no
Still it is night

2.0 Mo'olelo of Hi'iakaikapoliopole (Hi'iaka)

Translation by M. Puakea Nogelmeier (Nogelmeier, 2006:161-162)

As Hi'iaka travels through O'ahu on her way to Kaua'i, she describes an area near Ka'ō'io Point: "there is a plain on the inland side and dangerous waters seaward, a place renowned in the saying, 'Lie calmly in the sea of your chief.' As we go along we will reach Makaua, land of the Ma'akua rain. That is where the 'īlio hā of Kāne dwells, named Kauhike'īmakaokalani, an uncle of ours"

The translation continues:

"Hey, dear friend!"

Wahine'ōma'o responded, "Yes?"

Then Hi'iaka asked, as her hand indicated a ridge of steep cliffs descending sharply to the read, "Do you see that line of cliffs overgrown with ti leaves?"

Wahine'ōma'o agreed that she did, and her friend asked again, "Do you see that stone lying there, shaped like an 'īlio, a dog, with the head, the body, and all the features of a dog?"

Looking carefully at the stone her friend pointed out, Wahine'ōma'o could make out a great strong that looked just like a dog lying down with its head up, facing inland of the cliff. When Wahine'ōma'o had spotted the stone, she said, "Oh Hi'i, I do see the stone you are talking about; it is like a great dog. But our dogs are tiny, and that one is huge. That is amazing. Was that rock craft like that by the people of this place? What is the nature of that stone, my friend?"

"That is no stone carved by man, but rather the rock form of one of our uncles, one I mentioned to you. That is Kauhike'imakaolani. He is the 'īlio hā that Kane brought from Kahiki, and he is always seen yonder, at Ka'ō'io Point, that high spot before one reaches the flatlands on the way to Kāne'ōhe. The third place where he's often seen is at the mouth of Nu'uānu Valley, where one enters Kahaukomo.

As I told you, this 'īlio hā belongs to Kāne, and his lineage is recited, for he is from Kumuhonua and his wife Polohina. His lineage chant is a prayer memorized by our ancestors. Just so you will understand, I shall show you a bit of that prayer, and here it is."

And then Hi'iaka recited the prayer below, shown here by the writer as a hay in this version of the Story of Hi'iaka.

[CHANT SIXTY-TWO]

The supernatural 'īlio hā rules the island
Born of the royal ones, Kūhonua
Polohaina as his wife
Royal ones made scared by Kāne

"And what is an 'īlio hā?" Wahine'ōma'o asked her friend.

"Yes, replied Hi'iaka, going on to say, "There is much confusion among people about this thing, an 'īlio hā. Some thought it was a form of mo'o [lizard], but that is not true. 'īlio hā is like saying 'īlio kāhā, an oversized, hulking dog, the same way a pig can be oversized. It means it is huge, heavy, plump, and fleshy. But this dog-uncle of ours you see there has the body of a massive dog, and the largest expanse of his fur is on his head and neck ..."

3.0 Mo'olelo of Pinao and Kamālama at Ka Lae o ka 'Īlio, Hawai'i Island

The following is an oral tradition and story (*mo'olelo*) from a kūpuna interviewed on Hawai'i Island, near Ka Lae o ka 'Īlio ("the cape of the dog"), about the monk seal. Names and some information have been withheld to protect the identity of the respondent.

Respondent:

I'm from Ka'ū [Hawai'i Island], but originally I come from Moloka'i, from the area called Kalama'ula. I relocated here [to Ka'ū] because of my husband. My husband was a cowboy by trade.

Today I'm going to share with you a little mo'olelo, a little story that comes from the opposite end called Ka Lae. A lot of people call this area South Point, but it's really Ka Lae.

Now in this area, there was this young woman and her name was Kamālama. And Kamālama had a good friend who she loved dearly and his name was Pinao.

Well Pinao and Kamālama were always happy together. They loved each other dearly.

But one day, Kua, the Shark God, he's traveling the moana, the ocean. He sees her [Kamālama] [heart fluttering motion]. Hū [oh] my goodness, he loves this young lady.

No. She don't want him at all.

Kua is very upset; and so Kua causes a pō'ino. He puts a curse on this young lady, Kamālama, and Pinao.

And, Kamālama no longer stays as a woman; but she withdraws to the ocean and she becomes an *'aukai*, a sea-god or a seal. And poor Pinao. Pinao who stands so very tall; now begin to bear wings and he begin to flutter and fly. He becomes a dragonfly. Auē! They no longer can be together.

And whenever Kamālama come up to the white sand, at this particular beach, she's not able to embrace her good friend Pinao. And Pinao, he comes and he flutters down upon her, and he is no longer able to hold her anymore.

Well, the god Kū, finally comes to realize what is happening; and he feels love and compassion for this young couple, for this young man and this young lady. And so what happens: Kū decides that this should not happen, that Kua's jealousy gets in the way. And so, the god Kū decides to make a new rule, and he says: when Nā Huihui [reference to the star cluster Nā-Huihui-a-Makali'i, otherwise known as Pleiades, whose rise & fall in the Hawaiian night skies marks the start and end of the Makahiki Season, generally from end Oct/beg Nov to end Jan/beg Feb] all the stars shine during these particular months then this young man and this young lady will be able to have the... This young man and this young lady will be able to share this time to Kū, to take on their human forms again, so that they will no longer be this dragonfly, nor will she be this *'aukai*, this seadog or this seal of the ocean.

And so from the months of October, November, December [until] part of February, they then take on this form, and they come back to who they really were; and they're able to enjoy each other's company, and to embrace each other once again.

And so this is the short story of Pinao and Kamālama. I'm not sure if that's what you was looking for.

I doubt if you're going to find it in any books, like you do [the mo'olelo of] Kauila because I heard this, again, from my father-in-law. When he was here, he was busy sharing things. And he was trying to recall things and I didn't realize what he was doing is recalling because he was going to go on his journey [pass away]. He was going to leave us. And so, um, most of the stories that I am sharing every now and then, I haven't seen it in any book. So, and, I haven't shared this, except for my own family. This is the first time I've shared it outside.

4.0 Historical English Language and Translated Hawaiian Language Sources

Early observations of the Hawaiian Islands were recorded by explorers, traders and merchants, whaling and sealing crew members and captains, missionaries and Native Hawaiians. These written accounts vary with respect to their description, but most contain information about coastal environments and social relationships with these ecosystems. Of the sources listed below (summarized in part by Marion Kelly in the forward to Freycinet, 1978), no references to the Hawaiian monk seal were found (Watson et al., 2011).

List of Sources:

Arago 1823, 1971
Bingham 1849
Broughton 1804
Byron 1826
Cook 1842; 1999; Cook and King 1784
Campbell 1825
Corney 1965
Ellis 1826
Eveleth 1829
Franchère 2007
Ii 1993
Kamakau 1961, 1976, 1992, 1993
Kotzebue 1821
Krusenstern 1821
La Pérouse 1807
Langsdorft 1817
Ledyard 1781
Lisiansky 1814
Malo 1951
Mathison 1825
Meares 1790
Mortimer 1791
Portlock & Dixon 1789
Quimper Benitez del Pino 1822

Stewart 1828
 Turnbull 1813
 Vancouver 1798, 1801

5.0 Hawaiian-Language Newspapers

Misc. Notes	'Ōlelo Hawai'i (Hawaiian)	English translation
KHH 1a before & 1a (& 1 b before & b/c)	<p>Ka Hae Hawai'i 'Okatoba 19, 1859, 115</p> <p>['Ao'ao 6, Paukū 1] Ha'awina XXIV. No ke kākau hō'ike 'ana i nā moku.</p> <p>Paukū 630. 'A'ole e pono ke kākau hō'ike iā kekahi moku ma kēia Aupuni, 'a'ole ho'i e mana'o iā kekahi moku, he moku Hawai'i i loa'a nā pōmaika'i i pili i nā moku Hawai'i, ke 'ole 'o ia ka waiwai pono'i a kekahi kanaka kupa a mau kānaka ho'okupa 'ia paha o kēia Aupuni. Akā ho'i, 'o hiki nō ke kākau hō'ike iā kekahi moku, i ho'omākaukau 'ia no ka lā...</p> <p>['Ao'ao 1, Paukū 1 (ka hopena a ka paukū 630 ma luna a'e)] ...waia 'ōkoholā, a no ka 'imi 'ana i nā īliokai, ma ka moa[na] o ka mea nona kekahi hapa o ia moku, inā he kanaka kupa ia a he kanaka kupa 'ole paha, a inā e noho pa'a a[n]a 'o ia i loko o kēia Aupuni.</p> <p>['Ao'ao 2, Paukū 3] Paukū 636. Ma ke kākau hō'ike 'ana i kekahi moku, e like me ka 'ōlelo a ka paukū ma luna a'e nei, e koi aku ka Luna Dute Nui, i ka mea nāna i noi mai a 'o ke kākau hō'ike 'ana, e hā'awi mai 'o ia i palapala ho'opa'a me nā hope kūpono i ka mana'o o ka Luna Dute Nui, no nā dālā 'a'ole 'emi mai ma lalo o nā haneri 'elua, 'a'ole ho'i 'oi [a]ku i 'elua tausani, e ho'ohālike 'ia e ka Luna Dute Nui me ka nui o nā tona o ka moku; e 'ōlelo ana ia palapala ho'opa'a, e hana 'ia ka palapala hō'ike i ke kākau 'ana no ka moku, āna i hā'awi 'ia ai wale nō, 'a'ole ho'i e kū'ai 'ia, a e</p>	<p>The Hawaiian Flag October 19, 1859, 115</p> <p>[Page 6, Paragraph 1] Article XXIV. Regarding writing bonds for vessels</p> <p>Paragraph 630. This vessels ought not be a written bond, without due consideration of this vessel, a Hawaiian vessel with all profits acquired belonging to Hawaiian vessels, when he refuses the due assets of a citizen and one who may become a citizen of this Kingdom. But also, a vessel may give written bond, prepared for the day...</p> <p>[Page 1, Paragraph 1 (end of paragraph 630 directly above)] ...disgraced whaling, and for searching for the seadog, in the ocean of the one for whom is half of the vessel, if a citizen or not a citizen, and if permanently residing in this Kingdom.</p> <p>[Page 2, Paragraph 3] Paragraph 636. In bond writing for a vessel, similar to the language of the paragraph directly above, the Chief Customs Officer requires, of the one who request the bond writing, to give him an insurance policy with equitable legal surety as is the will of the Chief Customs Officer, for a sum not less than \$200.00, and not too exceed \$2,000.00, to be matched by the Chief Customs Officer with the larger part of the tonnage of the</p>

Misc. Notes	'Ōlelo Hawai'i (Hawaiian)	English translation
	<p>hā'awi lilo 'ole 'ia, a e ho'olilo 'ia paha ma ke 'ano 'ē a'e, i kekahi kanaka; a inā e lilo ia moku a pau, a 'o kekahi hapa paha o ka moku, inā 'a'ole ia he moku 'ōkoholā a moku 'imi 'īlio o kai, no kekahi haole a mau haole paha i kupa 'ole ma kēia 'Aupuni, a inā paha e pō'ino, a i lawe pio 'ia paha e kekahi 'enemi, a i ho'opau 'ia i ke ahi, a i wāwahi 'ia ka moku paha, a laila, e ho'ihō'i 'ia mai ka palapala hō'ike i ka Luna Dute Nui, ma loko o nā Mālama 'eono, ma hope iho o ia ho'olilo 'ana o ka moku i ka ona 'ē, a 'o kona pō'ino 'ana, a lawe pio 'ana, a pau 'ana i ke ahi, a wāwahi 'ana paha; Akā ho'i, inā i lawe pio 'ia a pau i ke ahi, a pō'ino paha, a laila, e ho'oku'u 'ia nā mea i kākau inoa 'ia i ua palapala ho'opa'a la, inā e ho'omaopopo i ka Luna Dute Nui, 'a'ole e hiki, ke ho'opakele i ka palapala hō'ike.</p>	<p>vessel; this insurance policy states, the insurance policy shall be done in writing for the vessel, only for what he was awarded, not to be sold, and not to be granted absolutely, or conveyed in a different manner, to a person; and if the entire vessel is transferred, or half of the vessel, or if it is not a whaling vessel and a sea dog investigating vessel, for a foreigner or foreigners not citizens in this Kingdom, or if damaged, or if abducted by an enemy, and consumed in a fire, or ship-wrecked, then, the insurance policy shall be returned to the Chief Customs Officer, within six months, after this transference of the vessel to a different owner, for his damage, abduction, consumption due to fire, or ship-wrecked; but also, if extinguished entirely by fire, or misfortuned, then, the things signed on this insurance policy shall be relinquished, as understood by the Chief Customs Officer, [who is] unable to be released from the insurance policy.</p>

Misc. Notes	'Ōlelo Hawai'i (Hawaiian)	English translation
<p>KM 1a (& b/c)</p>	<p>4 Honolulu, O'ahu Pō'akahi, Maraki 19, 1894. Ka Maka'āinana He Nūpepe 'Ō'ili Pule W.H. Kapu Luna Nui a Lunaho'oponopono F.J. Testa (Hoke), Pu'ukū. Pō'akahi, Maraki 19, 1894.</p> <p>['Ao'ao 1, Kolamu 2, Paukū 2] Mai Pūlama Aku.</p> <p>'O ia nō kēia mākou e uwalo aku nei i nā hoa maka'āinana a pau, mai pūlama aku i nā hana a kēia po'e no ka mea pili i ka pono koho balota no nā 'elele i ka 'aha hana</p>	<p>4 Honolulu, O'ahu Monday, March 19, 1894. The Citizen A Blessed Newspaper W.H. Kapu Chief Officer and Editor F.J. Testa (Hoke), Treasurer. Monday, March 19, 1894.</p> <p>[Page 1, Column 2, Paragraph 2] Don't Bother</p> <p>This is what we declare to all of the fellow residents, don't bother with the activities of this group because they are associated with the equal</p>

	<p>kumukānāwai a lākou. Ua lohe 'ia mai aia kā nā po'e o na Kona a me Ka'ū, Hawai'i, ke pīkokoī nui lā e kākau inoa ma lalo o ka ho'ohiki a ua po'e pākaha nei, a mākou nō ho'i i hō'ai'ai aku ai ma ka helu i hala i ka waiwai 'ole o ko ka lāhui kumu hana aku pēlā, no ka mea, ke ho'okō, 'o ka 'āpono 'ana nō ia iā lākou nei, a lilo kā lākou nei 'ino i hana mai ai iā kākou i mea maika'i. 'O kā mākou ho'i e makemake nei, 'o ia nō ko kākou kū mai nō i ka wā, 'oiai, aia iā Amerika Huipū 'ia ka hana. No ka mea, ua 'oia'i'o loa nō kā mākou i ho'omahu'i aku ai inā kākou e kōkua 'ole aku, 'a'ale loa lākou e 'ike 'ia mai a huli ke ao nei. 'O ko kākou wā kēia e hō'ike ai i ko kākou lōkahi, 'a'ohe manawa e aku nō kākou; a inā nō 'o nā po'e lawelawe 'oihana Aupuni a po'e na'aua[o] paha ma lalo o lākou, 'a'ohe nō ia o ka lāhui, akā, e ho'oku'u aku nō i kēlā po'e a 'alu'alu aku i ko lākou pono e like lā me nā ʻĪlio holo i ka uaua. Aka, no ka lāhui ho'i, e unuhi mai nō a ka'awale; a laila, lawe aku nō a kai hohonu, ho'okuene pono iho 'ana i laila.</p>	<p>ballot election for the delegates in their constitutional labor convention. It was heard, there were the groups of Kona and Ka'ū, Hawai'i, largely gathering to register beneath the names of these crooks, and we also released in the list of offenses national concerns and such that are unbeneficial, because, when ratified, it will then be enforced by them, and their offenses will become worthless to our benefit. As for our needs, it's for us to rise to the time, while the United States is reasonable. Because, our impersonation was incredibly accurate, if we didn't render aid, they certainly wouldn't have been seen until the day was over. This is our time to demonstrate our unity, there is no time for us to run; else indeed the Kingdom officials and possibly the learned persons below them, truly without a nation, but, released to that group, will then slacken in their moral resolve like the dog-running-in-the-rough-seas. But, as for the nation, it will transform and separate; and then, truly be taken unto the depths of the ocean, and properly arranged there.</p>
--	---	---

Misc. Notes	'Ōlelo Hawai'i (Hawaiian)	English translation
LH a (&b)	<p>Lama Hawai'i</p> <p>['Ao'ao 1, Kolamu 3, Paukū 3] No kekahi 'ao'ao kahiko. Eia kekahi mea kupanaha a mākou: 'o ke kūkini. Inā i 'ōlelo 'ia he mau kūkini: 'apōpō, holo; a laila, hele maila kanaka he nui loa me ka waiwai, a pili a mau ihola, a laila, hele akula ua mau kanaka lā 'elua a hiki i ka pahukū. Kūkini maila ua mau kanaka lā, a hopu i ka pahu kekahi, a laila, eo a'ela nāna. 'Oli'oli ihola ka po'e i kō. Akā, 'o ka po'e i eo, mihi ihola lākou i ke eo 'ana. Inā e 'ōlelo ke Konohiki i nā maka'āinana, 'apōpō kākou ko'ele a pau, a ahiahi iho, hō'ike i ka waiwai:</p>	<p>Hawaiian Torch</p> <p>[Page 1, Column 3, Paragraph 3] Concerning an ancient way of life. Here is something wondrous for us: runners. If some runners said: tomorrow, is a race; and then a multitude of persons came with money, and continued to place bets down, and then, two of these persons then ran until they reached the goal. These people then raced, and grabbed the baton, and then, it was won for him. The people were then joyful for the triumph. But, as for the</p>

	<p>A laila, hana ihola lākou i ua mau mea nei a ke Konohiki i ‘ōlelo mai ai: ‘o ka pua‘a, ‘o ka ‘īlio, ‘o ke kapa, ‘o ke olonā, ‘o ka hulu, ‘o ka ‘upena, ‘o kēlā mea kēia mea a pau. ‘O ia ka waiwai, a mākou i hō‘ike ai i ka wā kahiko.</p>	<p>persons who lost, they apologized for losing. If the Konohiki said to the citizens, tomorrow we all walk until the evening to show the tribute: and then, they lay down these things the Konohiki requested: pig, dog, cloth, fiber, fur, fishing net, everything. These are the goods that we exhibited in ancient days.</p>
--	---	---

Misc. Notes	‘Ōlelo Hawai‘i (Hawaiian)	English translation
<p>KA 1a (b/c/d)</p>	<p>30 Ke Alaula</p> <p>[‘Ao‘ao 1, Kolamu 1, Paukū 1] ...kou holoholona i mālama loa ai. ‘Ai nō ho‘i ‘o Kauka Kaina i ka ‘īlio a me nā ‘iole i loa‘a iā lākou ma luna o ka moku. Loa‘a iā lākou ma nā ‘ae kai nā ‘īlio-holo-i-ka-uaua a me nā ‘elepani kai. He maka‘u nā kama‘āina Ekimo i kēia holoholona nui, akā make nō ia lākou i kekahi manawa. I ka ho‘i ‘ana mai o Kauka Kalina i Piledelepia, ho‘opuka ‘o ia he buke mo‘olelo o nā mea āna i ‘ike ai ma ia ‘āina anu, a ua piha ia buke i nā ki‘i nani loa. Eia mai ke ki‘i o ka ‘elepani-kai.</p>	<p>30 The Dawn</p> <p>[Page 1, Column 1, Paragraph 1] ...your animal to attend. Doctor Kaina also eats dogs and rats they found on the ship. They catch on the seashore the dogs-running-in-the-rough-seas and the sea elephants. The local Eskimo are afraid of this big animal, but they also sometimes kill it. When Doctor Kaina returned from Philadelphia, he published a story book of the things he saw in this frozen land, and this book was filled with very beautiful pictures. Here is the picture of the sea elephant.</p>
<p>KA 2a (b/c)</p>	<p>Ke Alaula Honolulu, Novemaba, 1867 Buke II, Helu 8</p> <p>[‘Ao‘ao 1, Kolamu 2, Paukū 2] Kokoke aku lākou i ka Wēlau ‘Ākau.</p> <p>I ka noho ‘ana o lākou i ka moku, holo a‘e kekahi po‘e o lākou i ka ‘ākau ha[u] aku ma luna o nā holopapa i kauō ‘ia e nā ‘īlio. Ke ‘ike lā ‘oukou ma ke ki‘i ma luna a‘e nei i ke ‘ano o ka ho‘okaulua ‘ia o nā ‘īlio, a ho‘ohui ‘ia lākou e kauō i ka holopapa. Noho iho ke kanaka ma luna o ka papa, a kauō māmā loa ‘ia ‘o ia e nā ‘īlio ma luna o ka hau pa‘a. I kekahi manawa ‘elima a ‘eono ‘īlio kā i ho‘opa‘a ‘ia i ka papa; i kekahi ho‘i he nui aku – he ‘umikūmāmāhā a ‘umikūmāmāono paha.</p>	<p>The Dawn Honolulu, November 1867 Book II, Volume 8</p> <p>[Page 1, Column 2, Paragraph 2] They are approaching the North Pole.</p> <p>When they were staying on the ship, a group of them went to the icy north on top of the sled dragged by the dogs. You see in the picture above the disposition of the harnessed dogs, and they are united to drag the sled. The people sit on top of the sled, and he is quickly sled by the dogs on top of the hard snow. One time five maybe six dogs were</p>

	<p>Holo aku kekahi po'e o lākou i ka 'ākau a hiki i ka latitu 82° 30'. I laila 'ike aku lākou i ka Moana Anu 'Ākau. 'Akahi nō a launa kokoke aku kekahi i ka wēlau 'ākau e like me kēia – 450 wale nō mile koe a loa'a aku nō. Akā, 'a'ole nō he kanaka i hiki aku i laila, no ke anu loa – make e ma'i nō i ke anu. 'A'ole i loa'a iā lākou he wahi meheu no Sir loane Feranekelina. Ma hope loa mai ua loa'a 'ia i kekahi po'e 'ē a'e. 'Elua a 'ekolu paha o kēia po'e a Kauka Kaina i loa'a i ka ma'i a make; ho'okahi i loa'a i ke anu ma kekahi wāwae a 'oki 'ia aku ka wāwae ; lilo ho'i 'elua manamana wāwae o kekahi. 'O ko lākou kapa e mehana ai, 'o ka 'ili o ka 'īlio-holo-i-ka-uaua a me nā holoholona huluhulu pahe'e 'ē a'e, e like me kā nā kākana i hō'ike'ike 'ia ma ke ki'i ma luna a'e nei.</p>	<p>secured to the sled; another time more – fourteen maybe fifteen. Some of them went to the north until the latitude 82° 30'. There they saw Arctic Ocean. It was the first time someone approached the end of the north pole like this – just 450 miles left until the end. But, there was no person that could go there, because of the extreme cold – becoming deathly ill because of the cold. They didn't find a trace of Sir John Franklin. A long time afterward, it was reached by other people. Two maybe three of these groups and Doctor Kaina got sick and died; one got frostbite on a foot and the foot was cut off; and two toes of one was lost as well. Their clothing to keep warm was the pelt of the dog-running-in-the-rough-seas and the other slippery, furry animals, like the men shown in the picture directly above.</p>
--	--	---

Misc. Notes	'Ōlelo Hawai'i (Hawaiian)	English translation
KN 1a (b/c)	<p>Ka Nonanona Buke 1, Pepa 3, 'Ao'ao 9-01 'Augate 3, 1841; 3 'Aukake 1841</p> <p>['Ao'ao 1, Kolamu 2, Paukū 4] No Ka Ulu Moku 'Imi 'Āina. I ka mālama o 'Okatoba 1841, hiki maila ka ulu moku 'imi 'āina no Amerika huipū 'ia, ma Honolulu nei. 'Ehā moku, 'o ka moku nui, ('o ka Winisani, a me ka Pīkaka) a 'elua ho'i moku nuku iho, ('o ka Nai'a, a me ka Mālolo) a 'o Kali Wilika ko lākou ali'i nui. Ua 'imi 'āina nā ulu moku nei ma ka huina loa, a ua 'ike lākou i ka 'āina nui ma laila, i ka lā 13 o Ianuari, 1840, ma ka latitu 65°30 lonitu 104°24. Pōpilikia 'ia ko lākou holo 'ana ma kēlā moana hema, no ka nui loa o ka hau; me he mau moku 'āina nui lā, e lana wale ana, a e huikau ana, ua hau pa'a nei ma kēlā wahi. Ili ka Pīkaka i ka moku hau, a</p>	<p>The Multitude Book 1, Paper 3, Page 9-01 August 3, 1841; 3 August 1841</p> <p>[Page 1, Column 2, Paragraph 4] About the Land Exploration Fleet. In the month of October 1841, the land exploration fleet arrived from the United States of America, here in Honolulu. There were four ships, the large ships, (the Winisani, and the Pīkaka) as well as two nose diving ships [submarines?], the Dolphin, and the Flying Fish and Kali Wilika was their high commander. The fleet explored land in it's entire length, and they saw great lands there, on the 13th day of January, 1840, in the latitude 65°30' longitude 104°24'. Their progression was troubled upon that</p>

	<p>mai nāhāhā loa: ua pākela nō na'e no ke akamai loa o kona kāpena 'o Hudesona. Holo kokoke i kēlā 'āina hema ka Winisani i 1700 mile a 'ike pinepine lākou i ka 'āina; he 'āina pali, paupū i ka hau, 'a'ole kanaka, he mau walerusa, a me nā silā wale nō ko laila holoholona. Pau kēia;</p>	<p>Antarctic ocean, because of the expanse of the ice; like great big islets, just floating, haphazard, ice-locked in that place. The Pitkaka was run aground on an iceberg, and very nearly wrecked: we escaped because of the good judgment of his Captain Hudson. The Winisani approached that arctic land which is 1700 miles and they frequently saw land; a precipice, filled with ice, no people, just walrus and seals were the animals that belonged there. This is done;</p>
--	--	---

Misc. Notes	'Ōlelo Hawai'i (Hawaiian)	English translation
KNK 1a	<p>Ka Nūpepa Kū'oko'a</p> <p>['Ao 'ao 1, Kolamu 1, Pauku 6]</p> <p>A i ka pō 'ana iho, hele akula ia i ka Halepule, me ke 'eke ma luna o kona kua, he pū'olo ma lalo o ka lima, a he ipu-kukui ma ka lima. He pāpa'i ko loko o ke 'eke, a he ihoiho kukui pokopoko ko loko o ka pū'olo. I kona komo 'ana aku i loko o ka pā o ka Halepule, wehe a'ela 'ia ho'okahi pāpa'i mai loko a'e o ke 'eke, a ho'opili ihola i ka ihoiho kukui ma luna o ke kua a ho'oku'u iho i lalo e kolo ai. A wehe a'ela 'ia i ka lua, i ke kolu, a pēlā aku, a hiki i ka pau 'ana o ka papa'i o loko o ke 'eke. Ma hope o ia, komo ihola ia he koloka lō'ihī 'ele'ele, he kapa like 'ia me ko ka Mōnaka (Monk) a ho'opili a'ela he 'umi'umi hina ma kona 'auwae. No ia mea, ua 'ano 'ē loa a'ela ia, a hele akula. Ia wā, kani ka pele o ka Luakini i ka hora hope, ho'omaka a'ela ka 'Aihue Akamai, e kāhea me ka leo nui, "E lohe 'oukou e nā lawehala a pau loa! E lohe, e lohe! Ua hiki mai ka hopena o ka honua, a ua kokoke ka lā nui; e lohe, e lohe! 'O ka mea e makemake ana e pi'i i ka lani me a'u, e komo mai i loko o kēia 'eke. 'O Petero au, ka mea nāna e wehe a e pani ka puka o ka lani. E nānā aku 'oukou i loko o ka pā i 'ike 'oukou i ka po'e make e hele ana i 'ō a i 'ane'i, e 'ohi ana i ko lākou mau iwi. E komo mai, e komo mai i loko i ke 'eke; no ka mea, e nalo aku ana ka honua."</p>	<p>The Independent Newspaper</p> <p>[Page 1, Column 1, Paragraph 6]</p> <p>And when night came, he went into the Church, with the sack on top of his back, a bag below his arm, and a lamp in his hand. Crabs were inside of the sack, and short kukui-nut candles were inside of the bag. When he entered the yard of the Church, one crab was loosed from inside of the sack, and a kukui nut candle affixed on top of the back and it was released below to crawl. The second was then freed, the third, and so on, until all of the crabs inside of the sack were gone. After this, he put on a black, long cloak, a cloth likened to that of a Monk's and affixed a gray beard to his chin. With this, he was made very different, and then left. At this time, the bell of the Temple rang the last hour, and then the Cunning Thief began to call out with a loud voice, "Listen all of you sinners! Listen, listen! The end of the world has come, and the day of reckoning has approached; listen, listen! Those desiring to rise to heaven with me, come inside of this sack. I am Peter, the one who opens and closes the door of heaven. All of</p>

		you look in the yard and you will see the dead, walking here and there, gathering their bones. Come, come inside of the sack; because, the world shall disappear.”
KNK 2a (b/c/d)	<p>Ka Nūpepa Kū‘oko‘a Ke Kilohana Po‘okela no ka Lāhui Hawai‘i Buke III. Helu 51. Honolulu, Dekemaba 17, 1864. Nā Helu A Pau 100.</p> <p>[‘Ao‘ao 1, Kolamu 4, Pauku 10] Ka Lā‘au Ka-umaka e pau ai ka Niniaole O Nā Maka Hū‘alu Pepe‘ekue O W.H. Kalae-O-Kaena.</p> <p>E Ka Nūpepa Kū‘oko‘a E; Aloha ‘oe: -- Ua ‘ikea iho ma kou ‘ao‘ao 3 o ke Kahua kua o ka lā 27 o ‘Okatoba, Helu 44 o ka Buke III o ke “Kilohana Po‘okela o ka Lāhui Hawai‘i.” Aia ma laila ka pehina (throwing/pelting, as of rain) mai nei a W.H. Kalaeokaena, i nā pōhaku ‘elekū pukapuka o nā hekili ku‘i-pāmalō a ua ‘Ilioholoikaua lā, ‘alu‘alu pāpa‘i niho kekē o Koholāloa; e hāhā pō‘ele lā i ua i‘a lā o ka ‘āina āna (W.H.K.) e noho lā; me he lhuana lā e mana‘o ana e hina o ‘Aiwohikupua, i ka hele wahi ‘ana a kani ka pola o ka malo; ‘ū! e olo ho‘i! hina lā ana kei! a ‘o paha e olo ka hina o ke ‘A‘ali‘ikūmakani o Ka‘ū iā ‘oe, e nā lā‘auohala kumu Pūhala ne‘ine‘i.</p>	<p>The Independent Newspaper The Foremost Champion for the Hawaiian Nation Book III, Number 51. Honolulu, December 17, 1864. The Numbers Until 100.</p> <p>[Page 1, Column 4, Paragraph 10] The Beloved Medicine that cured the waterlessness of the thick viscous membrane covering the eye of W.H. Kalae-O-Kaena (loose skin over the eyeball; slight viscous membrane covering the eye)</p> <p>Dear Independent Newspaper; Greetings to you: -- It was observed in your 3rd page of the war section on the 27th day of October, Number 44 of Book III of the “Foremost Champion for the Hawaiian Nation.” There was W.H. Kalaeokaena’s raining of the hole riddled basalt rocks [bullets] of the roaring thunder-with out rain [gun] upon this dog-running-in-the-rough seas; the misshapen crab claw of Koholāloa, ignorantly groping for this fish on the land where he (W.H.K.) lives; like the lhuana wind thinking to topple over ‘Aiwohikupua, going somewhere until the flap of the loincloth sounds; ‘ū! resounding! glorious toppling! and perhaps resounding the steady blowing of the ‘A‘ali‘ikūmakani wind of Ka‘ū to you, the hala leaves of the grove of the low-lying hala trees.</p>
KNK 3a (b/c/d)	<p>Ka Nūpepa Kū‘oko‘a Vol. 4, No. 26 29 June 1865</p> <p>[‘Ao‘ao 1, Kolamu 6, Paukū 7]</p>	<p>The Independent Newspaper Vol. 4, No. 26 29 June 1865</p> <p>[Page 1, Column 6, Paragraph 7]</p>

	<p>He 'Aumoku hou, e holo ana ka Wēlau 'Ākau.</p> <p>Ke ho'omākaukau nei o Kapena Osbone (Osborne) o nā Moku manu wā o Beritania e holo i ka Wēlau 'Ākau. Ua makemake 'ia i 'elua mau moku māhu li'ili'i me nā kānaka he 120, a i ka Makahiki 1866 e hiki mai ana e holo ai ia. I loko o ke kau e holo aku lākou i ke Kaikū'ono o Bafine ma ke komohana o 'Āina'ōma'oma'o, a hala loa aku i loko e like me ka lō'ihi o kahi e hiki ai ke hele aku. I loko o kēia mau makahiki aku 'elua, e holo ana lākou me nā wa'apā a me nā koa na ka 'īlio e kauō a hiki i ka Wēlau. 'O kākou o ka po'e ho'i e noho nei i ka lā pumehana o Hawai'i nei, kai 'ike 'ole i ke anu o ia wahi. Ua 'emi iho ka waidālā o ka hō'ailona māhu (thermometer) i kekahi manawa, i nā degere he 50 ma lalo o ka 'ole. He hau wale nō ka mea 'ike 'ia ma laila, 'a'ole mea kanu; 'o nā bea ke'oke'o na'e ka mea nui, me nā 'īlioholoikauaua, a me nā 'elepani o ke kai. I loko nā kānaka o nā hale hau e noho ai me nā lolo hulu, a 'o kā lākou 'ai o ka 'i'o momona me ka 'aila a me kekahi mau mea 'ē a'e. Ma laila e lilo ai ka bia a me kekahi mau wai ona 'ē a'e i mea 'o'ole'a me he pōhaka lā. I ka wā ho'oilo, he pō lō'ihi ko lākou no nā mālama he nui wale, i ahona iki i ka mahina, no ka mea, he kōnane maika'i loa ka mahina ma laila, a me kekahi mālmalama 'ano 'ē ma laila ia kapa 'ia ka Aurora Borealis (Aurora Borealis) a 'o ka Mālmalama 'Ākau. Ma ka Wēlau ma laila ka pō no nā mālama 'eono, a me ka lā no nā mālama 'eono. Inā e hiki 'i'o 'o Kapena Osebone ma ia wahi, e kaulana nō kona inoa, no ka mea, 'o ia ke kanaka mua i hiki ma laila.</p>	<p>A new fleet, sailing to the North Pole.</p> <p>Captain Osborne is preparing the British battleships to sail to the North Pole. Two small steamships were wanted with 120 men, and in the coming year 1866 he will set sail. During the summer they will sail through Baffin Bay in the west of Greenland, and stay awhile in there like the length of one who comes and goes. Within these two years, they will go with sleds and guards for the dogs to tow until they arrive at the Pole. We are to be sure the ones living here in the warmth of Hawai'i, unacquainted with the chill of this place. The mercury of the thermometer lowered once to 50 degrees below zero. Just snow is what is seen there, no plants; the polar bear is still important, with the dogs-running-in-the-rough-seas, and the sea elephants. Inside, the people stay in igloos with fur clothing, and as for their food it is rich meat and oil and other things. There, beer and alcoholic drinks become as hard as stone. In the winter, they have a long night for many months; the moon is a little better, because, the moon there has very good clear, bright moonlight; and there is a kind of strange light there named the Aurora Borealis otherwise known as the Northern Lights. At the Pole it's night there for six months, and day for six months. If Captain Osborne actually goes there, his name will be truly famous, because, he will be the first man to go there.</p>
KNK 4a (b/c/d)	<p>Nūpepa Kū'oko'a Ke Kilohana Po'okela no ka Lāhui Hawai'i, Buke XV, Helu 8, Honolulu, Pō'aono, Feberuari 19, 1876, Nā Helu a pau 742.</p> <p>['Ao'ao 1, Kolamu 4, Paukū 8] "Ba," i uilani a'e ai o Nede me nā 'ano huhū: "he aha kāu i mana'o ai no nā mea a</p>	<p>Independent Newspaper The Foremost Champion for the Hawaiian Nation, Book XV, Number 8, Honolulu, Saturday, February 19, 1876, The numbers until 742.</p> <p>[Page 1, Column 4, Paragraph 8] "Ba," queried Nede in anger:</p>

	<p>kākou e ai ai ma'anei? He ake honu, he lālā manō, a me nā 'i'o kō'ala 'ia o ka 'Īlioholoikauaua."</p>	<p>"what are the things you think we eat here? Turtle liver, shark fin, and the broiled meat of the Dog-running-in-the-rough-seas.</p>
KNK 5a (b/c/d/e)	<p>Nūpepa Kū'oko'a Ke Kilohana Po'okela no ka Lāhui Hawai'i, Buke 15, Helu 12 18 Malaki 1876</p> <p>[‘Ao’ao 1, Kolamu 2, Paukū 16]</p>	<p>Independent Newspaper The Foremost Champion for the Hawaiian Nation, Book 15, Number 12 18 March 1876</p> <p>[Page 1, Column 2, Paragraph 16] ‘Īliopi'i – cape & bay, Kalaupapa peninsula, <i>lit. climbing dog</i>.</p>
KNK 6a (b/c/d)	<p>Nūpepa Kū'oko'a Ke Kilohana Po'okela no ka Lāhui Hawai'i, Buke XV, Helu 32, Honolulu, Pō'aono, Augate 5, 1876, Ka Helu a pau 766.</p> <p>He 'Iwakālua Tausani Legue Ma Lalo O Ke Kai! --Nā Mea-- Kupanaha O Ka Moana! Ke Ala O Ka Mea Huna --A 'O Ka Mea-- Pohihihi O Ka 1866! Mahele 1 Mokuna XVI He Ululā'au Moana.</p> <p>[‘Ao’ao 1, Kolamu 2, Paukū 8]</p> <p>Aia ma kēia wahi, he mea e ka lehulehu o nā i'a li'ilii'i o kēlā me kēia 'ano, i kūpono 'ole no ke kī 'ana me nā pōkā. A no ka lelehu loa o nā i'a li'ilii'i, ua hiki pono 'ole ia'u ke 'ike aku i nā mea nui; akā, 'o Kapena Nimo, ua 'ike akula nō ia i kekahi holoholon[a] nui, he otera ka 'ino, he holohona 'ano like me ka ‘Īlio holo-ikauaua; a 'o ke kī koke akula nō ia no ia o ua Kapena Nimo, a mae ana ua holoholona nei. He 'elima kapua'i kona loa, a he mea ho'i i makemake nui ia, no ka nani o kona hulu. 'O nā kapa i hana 'ia no loko mai o ia 'ano hulu, he \$400.00 ke kumukū'ai. Ua 'ike nui ia nā kapa o kēia 'ano ma nā mākeke o Rusia a me Kina. 'O kahi noho nui o kēia 'ano holoholona, aia ma ka Moana Pakipika 'Ākau.</p>	<p>Independent Newspaper The Foremost Champion for the Hawaiian Nation, Book XV, Number 32, Honolulu, Saturday, August 5, 1876, The number until 766.</p> <p>20,000 Leagues Under The Sea! --The-- Wonders of the Ocean! The Path Of Secret --And -- Mystery of 1866! Section 1 Chapter XVI A Fleet At Sea.</p> <p>[Page 1, Column 2, Paragraph 8]</p> <p>In this place is something of a multitude, a variety of little fish, for which it is illegal to shoot with bullets. And because of the very duskiness of the little fish, I couldn't properly see the larger things; but, Captain Nimo then saw a large animal, a vicious otter, an animal somewhat like the dog-running-in-the-rough-seas (seal); and Captain Nimo then shot it, and this animal slumped over. It is five foot long, and something for which it is greatly desired, is the beauty of its coat. Blankets made from this type of fur is a costly \$400.00. Blankets of this type are largely seen in the markets of Russia and China. The place where this type of animal mainly inhabits is the</p>

		North Pacific Ocean.
KNK 7a (b/c)	<p>Nūpepa Kū'oko'a <i>Ke Kilohana Po'okela no ka Lāhui Hawai'i,</i> Buke 18, Helu 11 15 Malaki 1879</p> <p>['Ao'ao 1, Kolamu 3, Pauku 18]</p>	<p>Independent Newspaper <i>The Foremost Champion for the</i> <i>Hawaiian Nation,</i> Book 18, Number 11 15 March 1879</p> <p>[Page 1, Column 3, Paragraph 18] 'Īliopi'i – cape & bay, Kalaupapa peninsula, <i>lit. climbing dog.</i></p>

6.0 References Cited

- Arago, J. (1823) *Narrative of a voyage around the world in the Uranie and Physicienne corvettes, commanded by Captain Freycinet, during the years 1817, 1818, 1819, and 1820*, Treuttel and Wurtz, London.
- Arago, J. (1971) *Narrative of a voyage around the world*, N. Israel and Da Capo Press, Amsterdam and New York.
- Beckwith, M.W. (1951) *The Kumulipo: A Hawaiian Creation Chant*, University of Chicago Press, Chicago.
- Bingham, H. (1849) *Residence of twenty-one years in the Sandwich Islands*, Hezekiah Huntington, Hartford.
- Broughton, W.R. (1804) *A voyage of discovery to the north Pacific ocean...in the years 1795, 1796, 1797, 1798*, T. Cadell & W. Davies, London.
- Byron, L.G.A. (1826) *Voyages of H.M.S. Blonde to the Sandwich Islands... 1824-1825*, Murray, London.
- Campbell, A. (1825) *A voyage round the world from 1806 to 1812*, Allen & Watte, Roxbury, MA.
- Cook, J. (1842) *The voyages of Captain James Cook round the world*, William Smith, 113, Fleet Street, London.
- Cook, J. (1999) *The journals of Captain James Cook on his voyages of discovery / edited by J.C. Beaglehole*, Woodbridge, UK and Rochester, NY: Boydell Press; Sydney: in association with Hordern House.
- Cook, J., King, J. (1784) *A voyage to the Pacific Ocean : ... for making discoveries in the Northern Hemisphere ... in the years 1776, 1777, 1778, 1779 and 1780*. W. and A. Strahan, London.
- Corney, P. (1965) *Early voyages in the North Pacific, 1813-1818*, Ye Galleon Press, Fairfield, Wash.
- Ellis, W. (1826) *Narrative of a Tour Through Hawaii, Or Owhyhee; with Remarks on the History, Traditions, Manners, Customs, and Language of the Inhabitants of the Sandwich Island*, For the author, by H. Fiser, son, and P. Jackson.
- Eveleth, E. (1829) *History of the Sandwich Islands with an account of the American Mission established in 1820*, American Sunday School Union, Philadelphia.
- Franchère, G. (2007) *Narrative of a voyage to the northwest coast of America in the years 1811, 1812, 1813, and 1814, or, The first American settlement on the Pacific*, IndyPublish.com, Boston.
- Freycinet, L.C.D.d. (1978) *Hawaii in 1819: a narrative account by Louis Claude Desaulses de Freycinet (Ella L. Wiswell, translator; notes and comments by Marion Kelly)*, Pacific Anthropological Records No. 26, Department of Anthropology, B. P. Bishop Museum, Honolulu.
- li, J.P. (1993) *Fragments of Hawaiian History. Translated Hawaiian to English by Mary Kawena Pūkui, Dorothy B. Barrère, ed.*, Bishop Museum Press, Honolulu.
- Kamakau, S.M. (1961) *Ruling chiefs of Hawaii*, Kamehameha Schools Press, Honolulu.
- Kamakau, S.M. (1976) *The works of the people of old: Na hana a ka po'e kahiko*, Translated by Mary Kawena Pūkui, Edited by Dorothy B. Barrere. Bishop Museum Press, Honolulu.

- Kamakau, S.M. (1992) *The people of old*. Translated from the newspaper Ke Au 'Okō'a by Mary Kawena Pūku'i; arranged and edited by Dorothy B. Barrère; illustrated by Joseph Feher.
- Kamakau, S.M. (1993) *Tales and traditions of the people of old= Na Mo'olelo a Ka Po'e Kahiko / Samuel Mānaiakalani Kamakau ; translated from the newspapers Ka Nupepa Kuokoa and Ke Au Okoa by Mary Kawena Pūku'i; edited by Dorothy B. Barrère*, Bishop Museum Press, Special Publication #94, Honolulu.
- Kotzebue, O.v. (1821) *Voyage of discovery in the south seas and to Behring's Straits in search of a north-east passage; undertaken in the years 1815, 16, 17, and 18, in the ship Rurick*, Sir Richard Phillips and Co., London.
- Krusenstern, A.J.v. (1821) *Voyage autour du Monde, Fait dans les Annees 1803, 1804, 1805, et 1806... sur les Vaisseaux la Nadiejada et la Neva, Commandes par M. de Krusenstern...*, Librairie de Gide fils, Paris.
- La Pérouse, J.-F.o.d.G. (1807) *A voyage round the world, performed in the years 1785, 1786, 1787 and 1788, by the Boussole and Astrolabe*. 3rd edn. Lackington, Allen, London.
- Langsdorff, G.H.v. (1817) *Voyages and Travels in Various Parts of the World, 1803-7*, Colburn, London.
- Ledyard, J. (1781) *Journal of Captain Cook's Last Voyage to the Pacific Ocean on Discovery... 1776-9.*, Newbery, London.
- Lisiansky, U. (1814) *A voyage round the world, in the years 1803, 4, 5, 6*. S. Hamilton, Weybridge, Surrey, London.
- Malo, D. (1951) *Hawaiian Antiquities (Mo'olelo Hawaii)*, Bernice P. Bishop Museum, Honolulu.
- Mathison, G.F. (1825) *Narrative of a visit to Brazil, Chili, Peru and the Sandwich Islands, during the years 1821-22...*, Charles Knight, Pall Mall East, London.
- Meares, J. (1790) *Voyages made in the years 1788 and 1789, from China to the north west coast of America*, Lopographic Press, London.
- Mortimer, G. (1791) *Observations and remarks made during a voyage to the Islands of Teneriffe, Amsterdam, Maria's Island near Van Diemen's Land, Otaheite, Sandwich Islands, Owhyhee, the Fox Islands on the north west coast of America, Tinian, and from thence to Canton in the brig Mercury commanded by John Henry Cox*, Cadell, London.
- Nogelmeier, M.P. (2006) *Ka Mo'olelo O Hi'iakaikapoliopole (The Epic Tale of Hi'iakaikapoliopole) (M. Puakea Nogelmeier, translator)*, Awaiaulu Press, Honolulu.
- Portlock, N., Dixon, G. (1789) *A voyage around the world... in 1785-1788, in King George and Queen Charlott*, Stockdale & Goulding, London.
- Quimper Benitez del Pino, M. (1822) *Islas de Sandwich : descripcion sucinta de este archipiélago, nombre que les dió su célebre descubridor, el Capitan Cook / reconocidas por el teniente de fragata de la Armada nacional D. Manuel Quimper Benitez del Pino*, E. Aguado, Madrid.
- Stewart, C.S. (1828) *Journal of a residence in the Sandwich islands during... 1823, 1824, and 1825, with notes by W. Ellis, H. Fisher, Son, & P. Jackson*, Newgate Street, London.

- Turnbull, J. (1813) *A voyage round the world, in the years 1800, 1801, 1802, 1803, and 1804: in which the author visited Madeira, the Brazils, Cape of Good Hope, the English settlements of Botany Bay and Norfolk Island; and the principal islands in the Pacific Ocean*, A. Maxwell, London.
- Vancouver, G. (1798) Views of the Sandwich and other islands [electronic resource] / W. Alexander, delt., from sketches made on the spot ; B.T. Pouncy, sculp., J. Edwards & G. Robinson, London.
- Vancouver, G. (1801) *A voyage of discovery to the North Pacific ocean, and round the world; ... in the years 1790, 1791, 1792, 1793, 1794, and 1795, in the Discovery sloop of war, and armed tender Chatham, under the command of Captain George Vancouver. Vol I-IV*, Printed for John Stockdale, London.
- Watson, T.K., Kittinger, J.N., Walters, J.S., Schofield, T.D. (2011) Culture, conservation and conflict: assessing the human dimensions of Hawaiian monk seal recovery. *Aquatic Mammals* **in press**.