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THE BICENTENNIAL

OF THE DISCOVERY OF THE HAWAIIAN ISLANDS

BY CAPTAIN JAMES COOK

1778-1978

PART I

This second issue of 1977 marks the first in a series of issues commemorating the two-hundred year anniversary of the discovery of the Hawaiian Islands by Captain James Cook. It is appropriate that the Bicentennial celebrations start on the Island of Kaua'i*, as this was the first island with which Cook came into direct contact when he landed at Waimea* on 19 January 1778. That event was to channel the Hawaiian Islands into the mainstream of world activities, bringing profound economic, political and religious change to the native population.

* Hawaiian place names which have been verified as being correct appear with an asterisk preceding them the first time they appear in each issue.

One contribution of the Anthropology Club of Kaua'i Community College to the Bicentennial celebrations on this island will be a study and description of Waimea. In the issues to follow in 1978 (Vol. 7), the theme of Archaeology on Kaua'i will be the history of Waimea: our legacy to the future generations of Kaua'i and of the Hawaiian Islands.

Geography

In order to understand the history of Waimea, one should be aware of its broader geographical and prehistorical environment. Waimea is situated on the southwest coast of Kaua'i (Fig. 1). Roughly circular in shape, the island extends 32 miles (51.49 kilometers) along its east-west orientation and 22 miles (35.40 kilometers) along the north-south axis. Wai'ale'ale*, its highest peak, stands 5170 feet (1551 meters) above sea level and is also its wettest spot with over 476 inches (12.09 meters) of rainfall per year (Hinds 1930:8, 12). This deeply eroded island is significantly affected by an orographic rainfall pattern. The prevailing northeast trade winds establish the wet windward and the deeply eroded pali (cliff) areas. The opposite side of the island, the leeward, has little rainfall and is arid and warm. Erosional forces are not as dramatic in effect as those on the windward faces.

Climate

Because of its leeward location, the area fronting Waimea averages only 25-30 inches (.63-.76 meters) of rainfall per year (Atlas of Hawai'i* 1973:56). Three-quarters of a mile (1.20 kilometers) inland from the town, the rainfall increases to an average of 40 inches (101.6 centimeters) per year, and one and a quarter miles (2 kilometers) above the town the rainfall still averages only 60 inches (152.4 centimeters) per year.

The coldest month is January, and the warmest, July. The mean annual temperature range is 71.0 to 78.3 degrees Fahrenheit (22.0 to 25.75 degrees Centigrade), and the mean annual temperature for the area is 74.9 degrees Fahrenheit (23.84 degrees Centigrade) (Hinds 1930:17).

Geomorphology

The erosional and tectonic processes since the formation of Kaua'i in the Pliocene (14-6 million years ago) to the late Pleistocene (8 million to 20,000 years ago) formed the Waimea, Olokeke* and Makaweli* canyons and valleys (Fig. 2). Their rivers and streams drained into the ocean at the present location of the town of Waimea. Alluvium from both

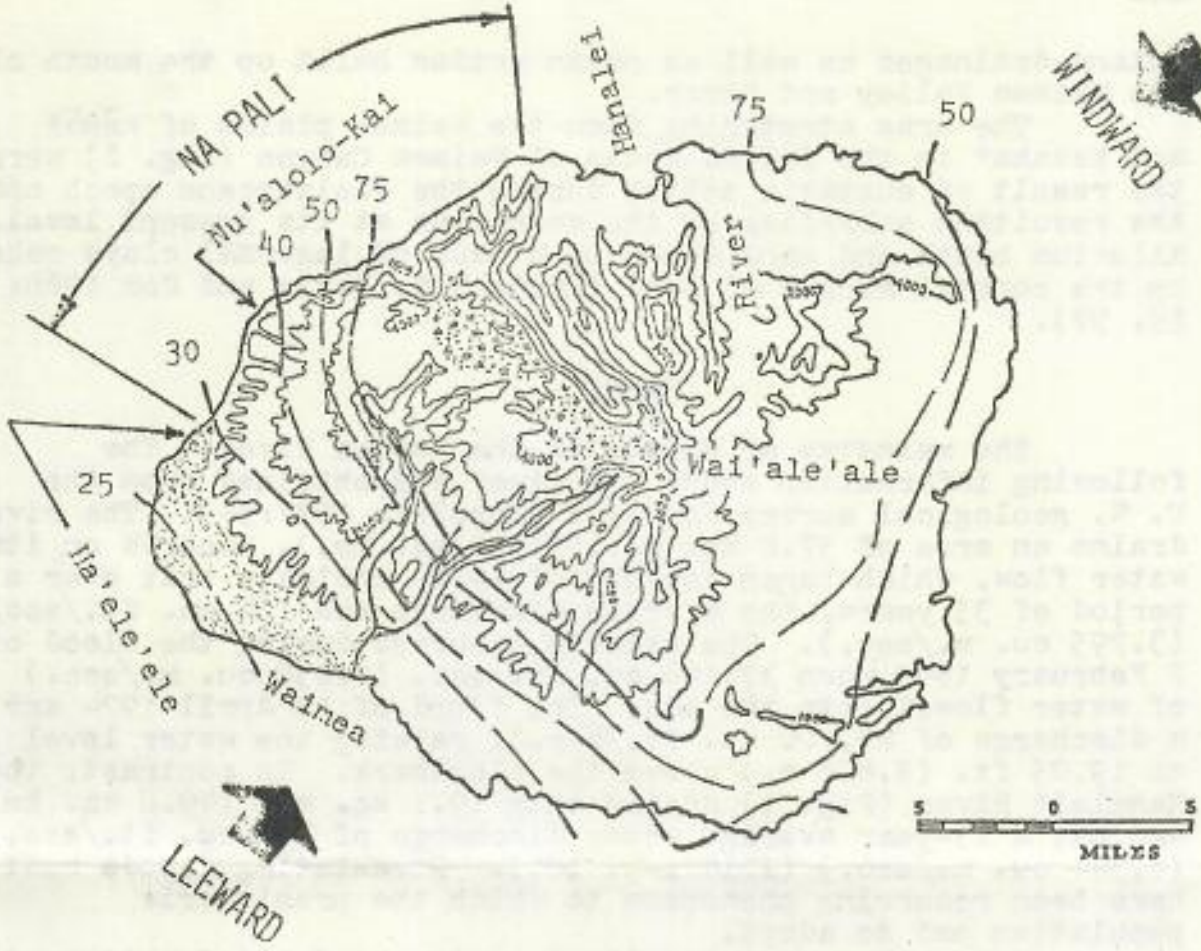


Fig. 1. Island of Kauai.

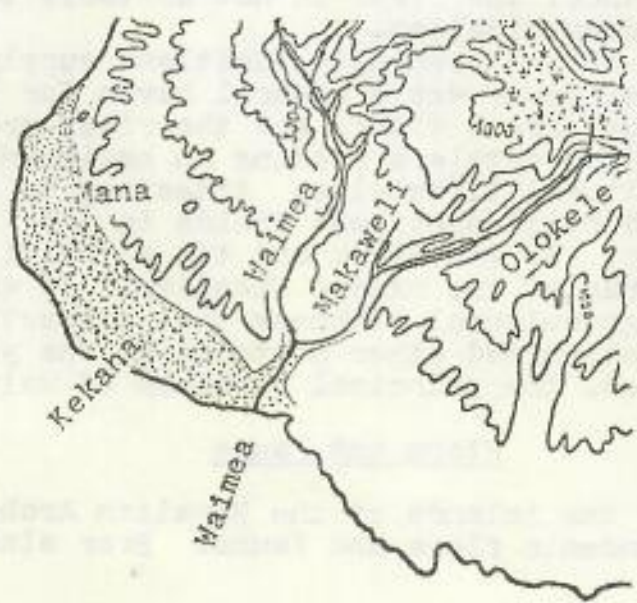


Fig. 2. Inland Areas of Waimea.

inland drainages as well as ocean action built up the mouth of the Waimea Valley and River.

The area stretching from the Waimea plains of Mānā* and Kekaha* to the inland areas of Waimea Canyon (Fig. 2) were the result of eustatic action during the Pleistocene epoch and the resultant stranding of the shoreline at its present level. Alluvium beach and sand dunes on a base of lagoonal clays make up the coastal margin of land (Macdonald, Davis and Cox 1960: 19, 97).

River

The mainstay of Waimea is the Waimea River. The following information about the river was obtained from the U. S. geological survey for 1976 (Honolulu 1977:54). The river drains an area of 57.8 sq. mi. (149.7 sq. km.). Records on its water flow, which began in July of 1910, indicate that over a period of 35 years, the average discharge was 134 cu. ft./sec. (3.795 cu. m./sec.). The extreme occurred during the flood of 7 February 1949 when 37,100 cu. ft./sec. (1,050 cu. m./sec.) of water flowed into the sea. The flood of 19 April 1974 saw a discharge of 29,100 cu. ft./sec., raising the water level to 19.05 ft. (5.806 m.) above the floodmark. In contrast, the Hanalei* River (Fig. 1) drains only 19.1 sq. mi. (49.8 sq. km.) and has a 13-year average water discharge of 224 cu. ft./sec. (6.344 cu. m./sec.) (Ibid., p. 106). Devastating floods must have been recurring phenomena to which the prehistoric population had to adapt.

Sea action periodically deposits sand and detritus at the mouth of Waimea River. The resultant ponding and backing up of the river provides the valley with ample supplies of potable water and enriched silt, and periodically with a swamp-estuary rich in riverine aquatic life. Navigable for only a very short distance, the river is not suitable to extensive use for inland communication.

Because of its seemingly limitless supply of fresh water, the Waimea River was a natural haven for life forms. Polynesians valued fresh water, and the river probably attracted the first settlers seeking an environment conducive to their agricultural lifestyles. Attesting to this are the many remains and still-used pond fields in the Waimea and Makaweli valleys. It was water and the alluvial plains of Waimea that attracted the native Hawaiian. It was the same water and the agricultural richness that attracted Cook in 1778 and which attracted other captains in the years to follow. Water was, indeed, the principal richness of Waimea.

Flora and Fauna

Each of the islands of the Hawaiian Archipelago is unique in its endemic flora and fauna. Ever since their

geological creation, these islands have experienced a veritable rain of insects, seeds, spores, birds and other forms of plant and animal life as they were colonized by these waifs and strays over a period of 17 million years (Zimmerman 1948: 97). More than 5,000 native species of insects have been recorded, 90 percent of which have Pacific affinities (Zimmerman 1948:63, 95). Zimmerman calculated that one successful insect colonizer every 20,000 years would account for all of the endemic insect species found in Hawai'i. Seventy percent of native land snails have Pacific Island origins, while 30 percent have the Arctic as their source. Ninety percent of all endemic plants are Indo-Pacific derivatives, whereas only 8 percent are of American and Boreal (North American) sources. Prior to man's arrival, the flora and fauna of each of the Hawaiian Islands must have stabilized and adapted well to their ecological niches. Fossil evidence seems to indicate that native forests once covered nearly all of the islands from the seashore to the high timberline. Only occasionally was this pristine environment dramatically altered by natural disasters such as floods, land slides, lightning-induced fires or volcanic activity.

Alteration of the Environment

This was the nature of the physical environment in which the native Hawaiian found himself upon initial colonization and settlement of the Islands. He soon began to alter this landscape and environment, however, with his agricultural exploits, so that by the time of Cook's arrival, the effects of human alteration were quite visible. The native forests had retreated, and insects, snails and birds had followed their host plants. Today, only a few endemic insects, snails, trees and other plants can be found in the zone extending from the shore to an elevation of 2,000 feet (609.6 meters). With Western discovery and the introduction of aggressive flora and fauna, native Hawaiian biological and botanical species rapidly became rare.

The dry leeward areas of Waimea probably supported a considerable dryland forest with its associated fauna, and the lagoonal plains were most likely covered with grasses and shrubs. Sixty percent of all indigenous trees observed in 1913 by Rock (Rock 1913) were found in the leeward dryland areas of each of the Hawaiian Islands. These dryland areas have since been altered by cattle grazing and agricultural industry. At the time of Cook's visit in 1778, Waimea had already become wasted, for the tree cover had long since vanished. Cook (Cook 1784) describes Waimea as land that rose in a gentle slope but was destitute of any kind of wood except what was seen in the interior of the island. Along the coast only a few trees could be seen about the village. The lower margins of Waimea were completely void of trees:

" . . . not even a shrub grows naturally on this extensive plain." In contrast to Tahiti and Tongatapu, the island of Kaua'i was barren except for a tuft-like grass cover which stood about 2 feet (.609 meter) high. Had the natives destroyed the native forest, or was it a combination of man and nature in action? Probably the lush forest was restricted to the interior and the higher uplands, while the coastal and lowland areas were, via agricultural alteration, the preferred areas for human occupation and, therefore, the most dramatically altered.

Colonization

In-depth knowledge of the prehistory of the Hawaiian Islands is still lacking, although a considerable number of field surveys and excavations have been carried out since Hawaiian archaeology had its beginnings in 1950. The past 27 years have yielded only a nebulous picture of the processes and directions of native cultural development.

The Hawaiian Islands, it is hypothesized (Shutler 1971:23), were colonized from two sources: the first, the Marquesas Islands around A. D. 750; and the second, the Society Islands around A. D. 1300. Archaeologists at the Bernice P. Bishop Museum generally believe that the Islands were populated by at least A. D. 500, with Kaua'i being inhabited a few decades later than the other islands. State of Hawai'i archaeologists claim (Honolulu 1975:18) that the settlement period lasted from A. D. 580 to A. D. 1000 with the majority of the colonizers having landed on O'ahu* and Kaua'i. Basis for this statement is the association of these two islands with the Nana'ulu genealogy, in contrast to the 'Ulu genealogy of Hawai'i and Maui*, a genealogy junior to the line of Nana'ulu. At any rate, all of the Islands were well inhabited by A. D. 100 (Emory 1959b:240-241). From that time until 1778, the native population remained physically isolated from any outside Polynesian contact. Based on linguistic evidence and using glotto-chronological analysis, the difference between Hawaiian and Tahitian can be explained by the separation of the two languages for nearly 1,000 years (Emory 1959a:29-35).

The island society of Kaua'i is considered by archaeologists to have retained many conservative cultural practices, perhaps due to its physical isolation from the other, southerly islands. For example, an archaic word used on Kaua'i for house was ha'i, or ha'e (Pukui and Elbert 1957: 44); the Hawaiian word was hale, while the Marquesan word was ha'e. Both men and women pounded or mashed the kalo (Colocasia esculenta) corm into poi. Large stone slabs used as pounding bases were utilized in the mashing, a practice common in the Marquesas. The poi pounders and mashers were of three types: the conical, the stirrup and the ring

(Fig. 3). The conical was found throughout the Hawaiian Islands, while the stirrup and ring were found almost exclusively on Kaua'i. Of the two, the earlier type is the stirrup. Its antecedent is found in the Marquesas Islands and dates around A. D. 600 to 1300. A similar tool was found in the Tuamotu Archipelago and was used to crack and crush the pandanus (Pandanus odoratissimus) key to extract their small kernels. Perhaps this was the original function of both the Marquesan and Kaua'i forms. The ring pounder developed out of the stirrup form, and its shape remained typical of Kaua'i.

Archaeological excavations on Kaua'i involving extensive work and chronology have been carried out in only two areas: Nu'alolo* on the Napali* Coast, and Hā'ele'ele* Valley in the Waimea District (Fig. 1). Both sites were work areas located beneath cliff overhangs which provided shelter from wind and rain. From these two sites were extracted large amounts of fishing paraphernalia which subsequently were used in an in-depth study of Hawaiian fishhooks by the Bishop Museum. Yoshihiko Sinoto (Sinoto 1962:163) noted that this study indicated a uniformity of fishhook types for both the northern and southern islands of the main Hawaiian Islands.

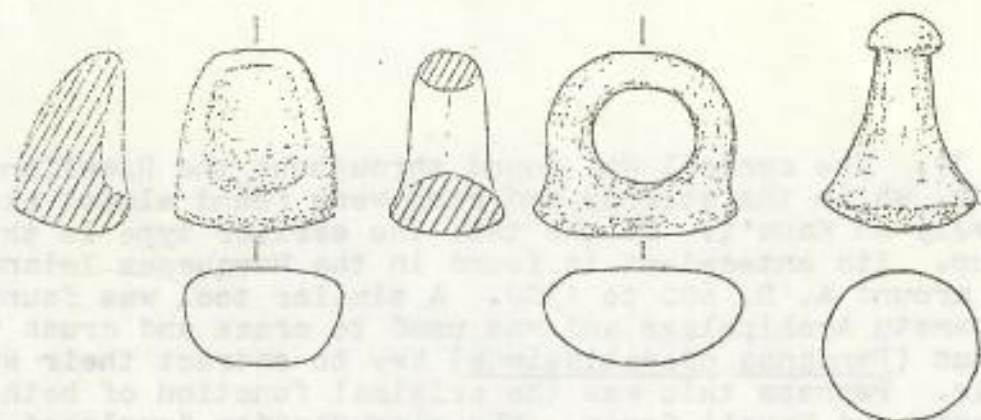
Radio-carbon dates obtained from these two sites and recorded by the Bishop Museum are given below. All dates use 1950 as the base date.

K1 Site: Hā'ele'ele
A. D. 1650 ± 200
A. D. 1230 ± 200

K2 Site: Nu'alolo-kai
A. D. 1510 ± 90
A. D. 1430 ± 80
A. D. 1380 ± 150
A. D. 1370 ± 50
A. D. 1280 ± 50
A. D. 1110 ± 70

These dates attest to population by at least A. D. 1110 for Napali and the western end of the Waimea District. It is very likely that earlier sites exist in the southern, eastern and northern coastal areas of Kaua'i because of their more favorable environs. Further archaeological work will surely reveal them.

Hawai'i was populated by Polynesians with a well-developed agricultural technology. Cordy (Cordy 1974:180-191) suggests that the most likely areas for initial settlement would have been well-watered valleys. Such valleys, on both leeward and windward sides of the islands, would be characterized by a constant and uniform water flow from their drainage areas to the ocean; nutrient rich alluvium; and fairly wide and flat alluvium plains. Apparently, most valleys and



Strip Pounder

Ring Pounder

Conical Pounder

Fig. 3. Types of Hawaiian Poi Pounders.

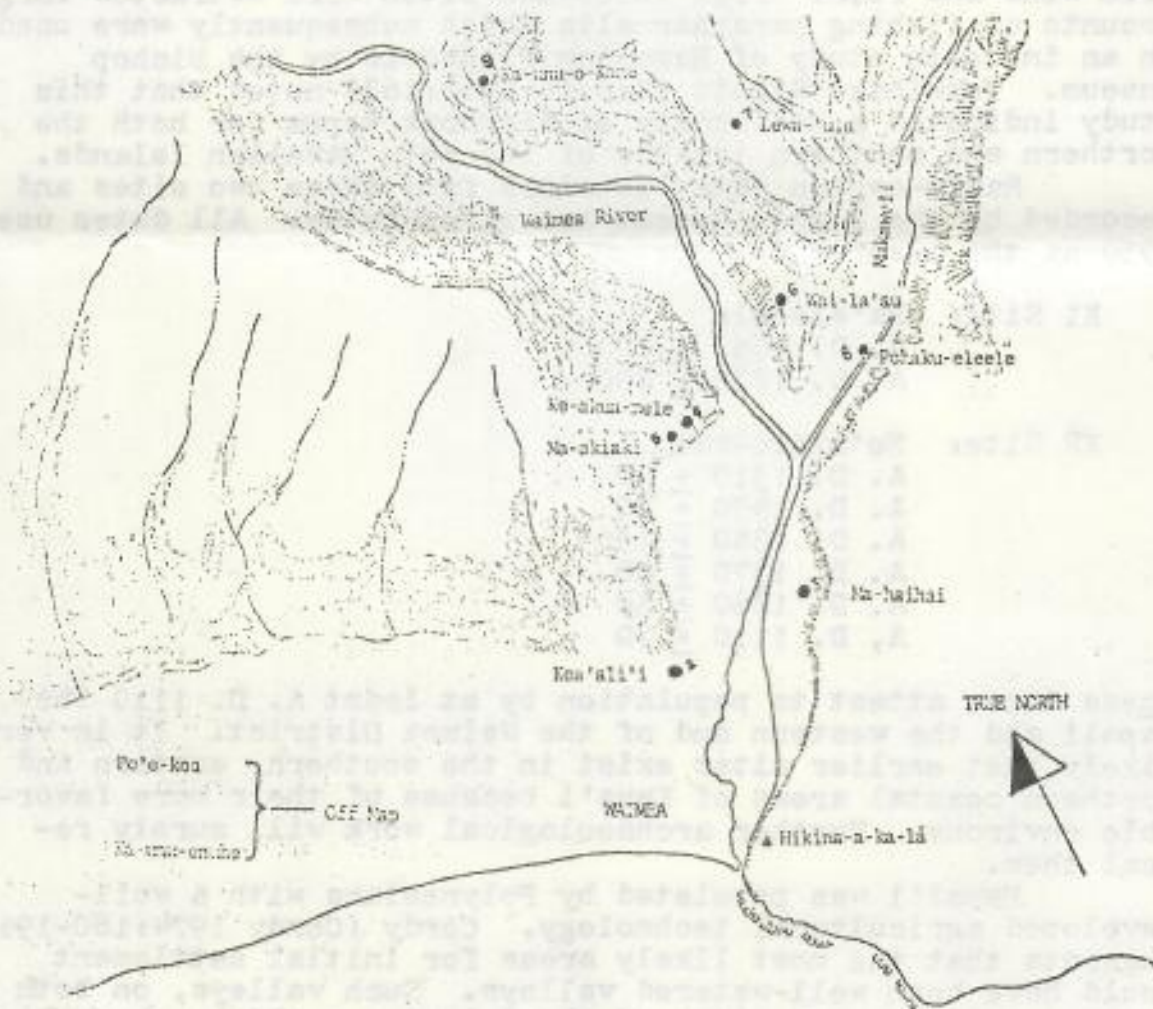


Fig. 4. Archaeological Sites Around Waimea.

gulches on Kaua'i were utilized for agriculture, whereas the tablelands above and between them were not (Handy and Handy 1972:282).

The well-watered bottom lands around Waimea and Makaweli Valleys were extensively used for irrigated pond field taro production. The upland slopes, hillsides and non-irrigated alluvial lands were planted in sweet potatoes, a product for which the entire southern shore was renowned.

Archaeological Sites

Temples. The rocky slopes of ridges, hills, and mountainous areas provided commanding and otherwise suitable locations for prehistoric temple sites. Following is a list of the temples, or heiau, that once existed in Waimea (Fig. 4). Today most, if not all, are completely destroyed. The codes A, B, C, and D refer to the following sources of information: (A) Lahaina Luna* 1885; (B) Bennett 1931; (C) Thrum 1907b; and (D) Thrum 1907a.

1. Hikina-a-ka-lā
 - (A) One of the largest temples at Waimea. Said to be on the seaward side close to the road near the spot where Isaac Kapuniai's house stood. Fenced with a high altar. Humans were sacrificed here.
 - (B) Foundations ran 272 feet (82.9 m.) along the road, 75 feet (22.86 m.) on the east end, and 81 feet (24.68 m.) on the west end. Some claimed it to have been a pu'uhonua, place of refuge.
2. Kea-'ali'i
 - (A) Close to E. L. Kauai's saloon on the land owned by Lovell. Large temple in which Captain Cook was offered a pig. Presiding priests during the reign of Kaumuali'i were Kuohu and Kapuahi.
 - (B) On the west side of Waimea River at Kea'ali'i behind the first Japanese temple. Fragments suggested temple measured 150 feet (45.72 m.) in length and 100 feet (30.48 m.) in width.
 - (C) Destroyed years ago. Its stones were used for fences. Fragments of foundation showed it to have been about 60 feet (18.28 m.) square.
3. Ma-haihai
 - (B) Completely destroyed. Location taken from an old map made by Frances Gay.
 - (C) At Makaweli on the east side of Waimea River.
4. Ka-akua-mele
 - (B) On a high point on the west side of Waimea River.

- (C) An unenclosed, small pile of rocks. A sacred place.
5. Maka-akiaki
(B) Near the Waimea ditch line on the west side of Waimea River, a little above the Menehune Ditch on an open, flat space of jutting rock. Consisted of a 50 by 50 foot (15.24 by 15.24 m.) platform roughly paved, but with evidence of small pebbles having been used as finishing. Backed by a wall one stone high and 7 feet (2.13 m.) wide. The hula was said to have been taught there.
6. Wai-la'au (Wila'au)
(B) On Mokihana* Ridge at the side of a sloping bluff on the east side of Waimea River. Consisted of three platforms. The pavement in the front platform was rough; in the others it was in a little better condition, but all was badly torn up.
(C) An open platform heiau, well preserved.
7. Lewa-'ula
(B) On Mokihana Ridge on the main trail. None of the original structure could be determined.
(C) An open temple with stone foundations. Made by Aka into a cattle pen some years prior to 1907.
8. Pohaku-eleele
(B) Pohako-eleele. Indicated in 1930 as being located by a house site and a long river wall on the east side of the Waimea River a short distance above the branch. Barely above the river level and on the flood plain.
(C) A well-preserved, paved heiau.

The following temples and shrines were located further inland from the town of Waimea:

9. Ka-unu-o-Kane
(B) On a cliff on the south side of Kunini Gulch. Consisted of a series of 8 small, terraced platforms of different sizes that rose one above the other until steep rocks were reached at the back. Some of the side walls were 20 feet (6.09 m.) high, and where the facing was preserved, the work seemed well done. Walls were really no more than facings on the natural sides of the cliff, though in some places quite a bit of work had been done to make the platforms level. Facing

was done in layers, each layer being about 2 feet (.60 m.) thick and laid outside the first one. Three layers of thickness could be determined. The walls were unique for temples on Kaua'i.

- (C) An open platform heiau in good condition.
10. Pe'e-koa
(B) On the side toward the sea from a cliff. Site overlooked a portion of Waimea Valley including Camp 4. Not more than 30 feet (9.14 m.) above the river level. Simple stone platform 30 by 20 feet (9.14 by 6.09 m.). Reported location of Pe'ekoa heiau was on the other side of the river, on the first cliff toward the sea from the Camp. The structure was not found.
(C) An open platform heiau in good condition.
11. Ka-unu-enuhe
(B) On Mokihana Ridge at an elevation of 1550 feet (472.44 m.) on the regular trail. The top of the knoll on which it stood had been flattened and was roughly 80 by 96 feet (24.38 by 29.26 m.) round and paved. Coral and a few river stones were found there.
(C) A paved heiau in good condition.

The locations of the following sites were not identified:

12. Ke-one-kapu
(B) Referred to by Kamakau as a place of refuge at the time of Kahamaluihi.
(C) Crossing of the river to Makaweli was the only pu'uhonua of this section of ancient Kaua'i.
13. Pōhaku-hā'ule (C)
14. Ka'ahu
(C) An unwallled sacred place on flat ground.
15. Kane-he'e-nalu
(C) A paved, well-preserved temple.
16. Pua-'ola
(C) An open platform heiau in good condition.
17. Ko-pahu
(C) Poki'i, a flat sacred place.

Caves. Three secret caves have been recorded for the inland areas of Waimea District (Lahaina Luna 1885). These were:

1. Haki-a-ka-mahu
Kekupua, the place, located upland on the hill of Hakiakamahu on the edge of a cliff. The personal property of Kaumuali'i was kept there. Ki'ilau was the caretaker.
2. Kalo-ko'a-o-Keahialaka
Located at Kea'ali'i on the edge of a cliff. Was the place in which the guns belonging to Kaumuali'i were stored.
3. Kiki-a-Ola*
Located in the upland of Kiki-a-ola. Another place in which to store the guns of Kaumuali'i.

Surfing Grounds. The famous surfing grounds of Waimea were called Kaus* (Lahaina Luna 1885) and were located offshore from the village lands called Po'o*. In the water were found two classes of fishing shrines: shallow and deep. Known names of shallow sites were Kaena, Ka'alea, Hoamanu, Kukui, and Papahali'i. Known names of deep water sites were Namahana, Ono-uli, Hina-ia, Hiki, and Papahali'i.

The Fame of Waimea

Skills found on Kaua'i were common throughout all the Hawaiian Islands. Namaka (Westervelt 1963:121) stated that during the 1770s the skills of Kaua'i were managing land, or kalai-'aina; oratory, kaka-'olelo; genealogies, ka'auhau; spear throwing, lono-maka-'ihe; boxing and wrestling, lua; leaping, lele; and astronomy, kilo.

Several famous sayings, proverbs, and riddles are known for Waimea:

1. Ke i'a 'ili kanaka o Waimea.
The fish of Waimea that touches the skin of man. This is in reference to the abundance of the 'o'opu (Electridae and Gobiidae families) fry in the river (Titcomb 1952:105).
2. Ho'i hou ka pa'akai i Waimea.
The salt is carried back to Waimea, which is the source of the salt (Judd 1930:51).
3. Ku'u wahi i'a, aia i kuahiwi iloko o ka wai.
My little fish there in the mountain in the water. Answer to riddle: The olali fish (species unknown)

which inhabits the mountain stream of Waimea (Judd 1930:51).

4. Ka wai 'ula'ula o Waimea.
The bright red stream of Waimea.

Within Waimea proper stood two large stones that were said to be associated with the mythical dwarfs, the Menehune (Rice 1923:35). The first was a large stone Wa'a-o-kau-meli-eli, a stone canoe that was covered with earth. The second was Papa'ena'ena, a stone hollowed out to form a house for the Menenuhe builder. Both stones can no longer be found.

There are many other prehistoric and historic sites in the Waimea area. Some of them will be described in this series, while others are slated for full-issue coverage in future issues.

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Nu'alolo is one of the rugged valleys on the Nāpali Coast of Kaus'i. A newspaper account in the Honolulu Advertiser of 16 July 1922 designated it as part of a "Kingdom of Nualolo," and romantic tales of lost peoples have developed over the years (see Archaeology on Kauai, Vol. 3, No. 4). Agricultural remains, such as terraces and auwai, ditches, are still in evidence. As recent as 1856, Hawaiians were living in Nu'alolo. Tax records for that year list the following residents over twenty years of age: Kauila, Kamakakane, Kaniho, Kealai, Nalinakakule, and Pa'akai.
