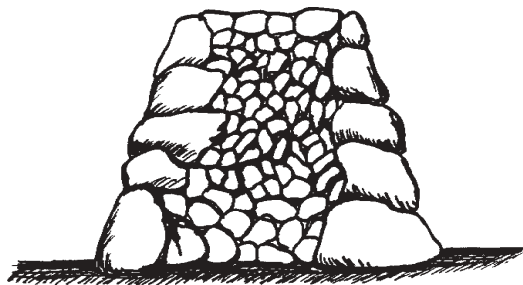


Huilua Fishpond probably began as a sand bar formed by the cross-currents from the ocean and stream mouth. This sand bar was stabilized with the construction of a rock wall along the exterior face. Over time, the rock wall was built up on both sides.

BUILDING A FISHPOND

Huilua was a *kuapā* type of fishpond. The 500-foot long rock wall is attached to the shoreline and encircles the ocean waters of Kahana Bay. The wall is built of rocks carried to the shoreline from the streambeds and valley slopes of Kahana. No mortar was used, but with the careful locking of the stones, the rock wall could withstand the daily wave action. The loose cobble and sand fill of the wall allowed the movement of water through the wall and into the pond. The width at the base of wall and the sloping sides provided stability. The walls were 3-4 feet wide and about 4 feet above the high tide.



The two *mākāhā* were built through the wall and sand bar to connect with the stream mouth. A third *mākāhā* was built in the 1950s along the wall facing the ocean, but it never worked properly.

PRESERVATION & CONSERVATION

Fishponds are a unique Hawaiian development for raising fish and maintaining a sustainable food supply for a growing population.

Huilua Fishpond was declared a National Historic Landmark in 1962. Recognized as an important historic site, the fishpond also illustrates the management practices of the Hawaiians prior to Western contact. While the fishpond functioned for hundreds of years, it has suffered from several tsunamis in the 20th Century and remains susceptible to the impacts of high surf.

A restoration of the fishpond wall was initiated by State Parks with archaeological research in 1993 and construction of a model section of wall. The Friends of Kahana, an organization of Kahana residents, has taken the lead with the restoration project in recent years.

Please show respect when visiting the fishpond. Walking on the fishpond wall is not recommended. There is no fishing allowed in the pond.

OTHER FISH-RELATED SITES

Schools of fish can be spotted in Kahana Bay from *kilo* (lookout) on the ridges along the bay. From these *kilo*, the *kilo i'a* (fish watcher) would look for sun reflecting off the fish like a mirror. Fishermen also made offerings at a nearby *ko'a* or shrine to ensure bountiful harvests. To learn more about this fishing technique, take the 1.2-mile hike along the Kapa'ele'ele Ko'a and Keaniani Kilo Trail along the western side of Kahana Bay.

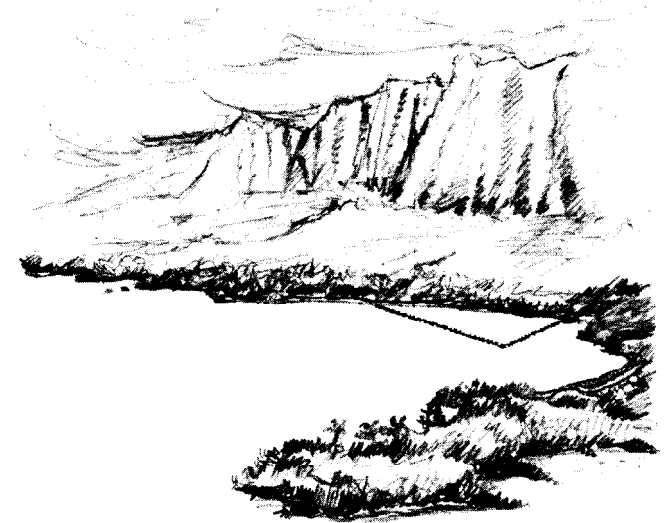


State of Hawai'i
Department of Land & Natural Resources
DIVISION OF STATE PARKS

Ahupua'a 'O Kahana State Park
(808) 237-7766

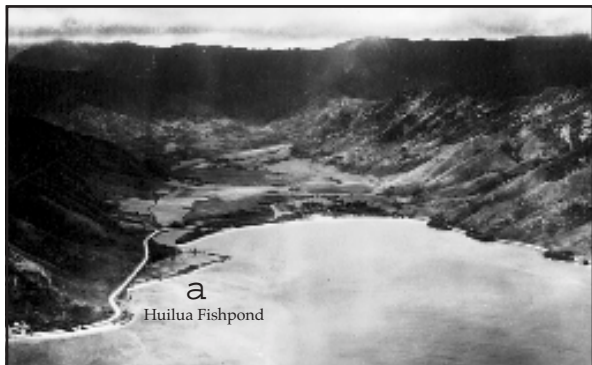
STATE OF HAWAII

HUILUA FISHPOND



AHUPUA'A 'O KAHANA
STATE PARK
Kahana, O'ahu

The *ahupua'a* (traditional land division) of Kahana runs *mauka* from the crest of the Ko'olau mountains to *makai* at the waters of Kahana Bay. Central to the *ahupua'a* is Kahana Stream that flows the length of the *ahupua'a* to the ocean. Along the lower reaches of the stream were 3 fishponds - 2 were inland ponds (*pu'one*) and Huilua is still present at the mouth of Kahana Stream.



HUILUA FISHPOND

Fishponds represent a transition from catching fish to growing fish. At Kahana, the wall of Huilua Fishpond encircles 7 acres of ocean water adjacent to the estuary. Because of its location, the water in the fishpond is a mix of fresh water from the stream and salt water from the bay. Fishpond technology represents the Hawaiians extensive knowledge of fish and their habitat.

It is uncertain when Huilua Fishpond was built, although many of the fishponds in Hawai'i were built between A.D. 1400 to 1600. Some credit the *menhune* with its construction which would make the fishpond very old. Numerous fishponds lined the coast of O'ahu in the past. These fishponds were especially abundant in Kāne'ohe Bay and Pu'uloa (Pearl Harbor).

Huilua Fishpond, circa late 1920s.



A *kia'i loko* (pondkeeper) lived next to the pond and oversaw the repair and cleaning of the pond, as well as, the stocking and harvesting of the fish. The residents of the Kahana *ahupua'a* would assist the pondkeeper with the care of the pond and in return, the pondkeeper shared the fish. From 1924 until 1946, Sam Pua Ha'aheo was the pondkeeper, the *kilo* who watched for *akule* fish in the bay, and the fishing *konohiki* (headman) who organized *hukilau* (fishing by many people using a seine net).

Other features associated with the fishpond include a *pōhaku ku'ula* (fish god stone) and *ko'a* where offerings were left to insure an abundance of fish. There was also a *mo'o* or large, lizard-like creature that protected the fishpond. The *mo'o* of Huilua Fishpond lived at the northwest corner of the pond and dried leaves floating on top of the water in this corner of the pond were seen when the *mo'o* was present.



Huilua Fishpond in 1980 with wall damage.

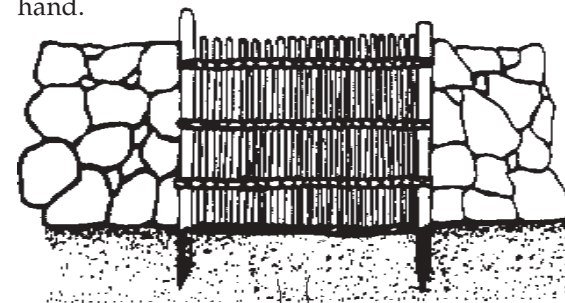
The location of Huilua Fishpond in Kahana Bay has helped protect it from large waves. But there have been several times when severe flooding and tsunami damaged the wall and filled the pond with sand and silt.

In the last 80 years, there were 4 tsunamis that caused major damage to the fishpond. The worst occurred in 1946 when waves broke the wall, filled the pond with sand, and took several lives. The pond was repaired after the tsunami of 1923, 1946, and 1957 with the use of concrete at the *mākāhā*, but there was little use of the fishpond after the 1960 tsunami. Sand has continued to fill the pond while "islands" of mangrove, *hau*, and bulrushes have become established.

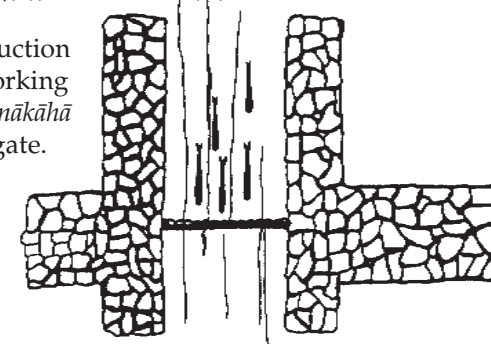
WORKINGS OF A FISHPOND

Huilua can be translated as twice joined. Perhaps this name refers to the two *mākāhā* that linked the pond to Kahana Stream. The water of the fishpond was a mix of fresh water from the stream and springs (*pūnāwai*) with the salt water of the bay. The fish chosen for the fishpond were ones that migrate between fresh and salt water.

Mākāhā were gates made of lashed poles that allowed the circulation of water and the harvesting of fish. The spaces between the poles were wide enough to let little fish and water into the pond. Once inside, the fish would grow and fatten to a point where they could not leave the pond. When water enters the pond, the fish gather at the *mākāhā* where they can be easily caught with nets or by hand.



Construction and working of the *mākāhā* sluice gate.



The *'ama'ama* (mullet) was the favorite fish in the pond. Fingerlings (*pua'ama*) were raised in the separate *pua* pond before being released into the larger pond. *'Ama'ama* can live in salt, brackish, or fresh water but need to be in the ocean to reproduce.

