

The Agricultural History of Hakipu'u

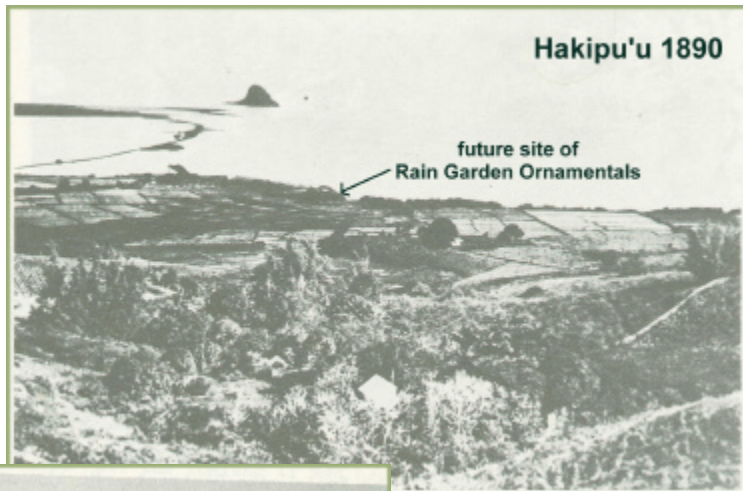
The agricultural history of the Rain Garden Ornamentals site prior to 1955 can only be considered as part of the history of the surrounding area of Hakipu'u. Hakipu'u had several important cultural features including two heiau (temples). A dominant feature is the Moli'i fish pond, which was built by Menehune. Menehunes were a race of small, ingenious people who occupied the Islands prior to, and were displaced by, the arrival of the voyaging Polynesians. The Moli'i fish pond covers an area of 124 acres and from end to end the wall measured 4000 feet in length. It was originally a single pond but was divided in the early 1900's. Moli'i fish pond represents one of the earliest examples of aquaculture and is still in use today.

Based on the estimated rates of population decline due to the introduction of European disease, Hakipu'u would have had a population of about 300 at the time of first encounter in 1778, decreasing to about 225 by 1800. In the first formal census in 1832 the population of Hakipu'u had declined to 180. There was a particularly severe series of epidemics in 1848-1849 and another precipitous decline in population to about 100. Since that time, there have been dramatic population increases over most of the Islands. However, there are still only about 125 people living in Hakipu'u in 2005; less than half of the pre-European population. There is evidence to suggest that at the time of first contact, the native Hawai'ian population was struggling with over-population issues.

The Hakipu'u area has a rich and varied agricultural tradition. In 1789, Portlock described the Kaneohe Bay area saying, "*The bay all around has a very beautiful appearance, the low land and valleys being in a high state of cultivation, and crowned with plantations of taro, sweet potatoes, sugar-cane, etc. interspersed with a great number of coconut trees.*" Lo'i (taro patch) areas once covered the flat coastal band of Hakipu'u, including the Rain Garden Ornamentals site. This area originally ran for more than a half mile southward from Moli'i Fishpond. The Hakipu'u area was noted for using a mounding method to grow taro. Hawaiians told the early missionaries that, "*an acre of kalo (taro) land would furnish food for from twenty to thirty persons, if properly taken care of. It will produce crops for a great many years in succession without lying fallow any time.*" Taro cultivation in the area probably peaked prior to the first European contact when the population of native Hawaiians was at its zenith. Some of these taro lo'i are listed in the State Historic Preservation Division's, Hawaii and National Registers of Historic Places. By 1880, much of the land formerly devoted to taro was planted in rice, but as late as 1935 about a dozen lo'i were still cultivated in Hakipu'u. Beginning about 1940, introduced freshwater crayfish caused considerable damage to taro patches on the windward side and the Territory of Hawaii initiated a program of control for this animal. A few taro lo'i are still being cultivated in Hakipu'u, the closest one only about hundred yards to the north of the Rain Garden Ornamentals site.

Post-contact, the Judd family has had a significant impact on Hakipu'u. Dr. Gerrit Parmele Judd came to Hawaii 1828. He purchased property in Kualoa, Ka'a'awa and Hakipu'u from King Kamehameha III in 1850. This was shortly after the Hawaiians were pressured to adopt the Kuleana Act which imposed western-style private property land tenure and terminated the traditional undivided land use rights. For a short time, the Rain Garden Ornamentals site was part of the S.G. Wilder Plantation before being reunited with other Judd holdings about 1860. The Hakipu'u, Kualoa and Ka'a'awa areas were converted to sugar production in 1863 and the first sugar mill in Hawaii was built nearby. This was the beginning of large-scale monoculture of this crop in Hawaii. Although sugarcane was present in the Hawaiian Islands prior to European contact, it was previously only grown in small amounts, often as a wind break for taro. As large-scale sugar cane production began, it was noted that in Hakipu'u, "*fields were fenced and plowed for the cane, small flumes were put up, and Chinese imported for laborers*". Sugar production began to rapidly expand throughout the islands, due in part to a reciprocity treaty with the United States which gave Hawaiian sugar a thirty to forty-five percent tariff advantage. However, in 1871 Dr. Judd and his son-in-law abandoned the sugar mill and cane land in the Kualoa and Hakipu'u area due to "*poor soil, poor irrigation, poor laborers, and poor cane*".

Rice farming began in the area in the 1860's, primarily as a food for the growing number of Oriental workers being bought to the Islands. As rice farming expanded, export markets in the United States were developed. Like taro, rice is a semi-aquatic crop requiring level land and readily available water supplies. In the Kaneohe Bay area, rice culture eventually occupied most of the land which had formerly been used for taro,



including the present Rain Garden Ornamentals site (see 1890 photo). Rice farming had a noticeable impact on land-use patterns as small taro patches were converted to large rice fields. It is believed that the elevated path running east to west down the center of the Rain Garden Ornamentals site may have been a levee and access road for rice culture. Rice farming also expanded its boundaries outside of the

traditional taro growing land through construction of additional networks of irrigation ditches. Rice culture continued into the early 1920's. Its demise was a result of several factors, including the increase in rice production in California which destroyed the major export market. The rice bird, or Java finch, which is still common at Rain Garden Ornamentals today, became a major pest and many were shot in the fields by the Chinese planters. A rice borer insect appeared about 1927 and struck the final blow to this failing industry.

Traditional Hawaiian agriculture utilized crops which were both indigenous and "canoe introductions" by the early Polynesians. During the rice period, there was a second wave of introduced crops and farm animals. Fruits and vegetables grown by the Chinese farmers included litchi, mango, langan, pomelo, banana, cabbage, radishes, onions, turnips, beans and lotus root. Commercial fertilizers, with guano being the most widely used, were applied at rates of two hundred to four hundred pounds per acre. Chinese rice farmers raised pigs and poultry and used draft horses. Water buffalo were introduced in the mid-1890's and one animal was still being kept on a nearby Hakipu'u taro farm into the 1970's.

Pineapple production began in earnest about the turn of the century. At its peak, about 2,500 acres were under pineapple cultivation on Windward Oahu and most of this was in the Kaneohe Bay region. Mainland corporations like Libby managed most of the canning and production on large tracts of land. However, it was noted that at the northern end of Kaneohe Bay, "...much of the pineapple production was carried out by individual growers on small areas of five to ten acres. A man, a mule, a huli plow and a hoe provided most of the power and the equipment for these smaller operations." The Judd family planted pineapple on the hillside immediately behind Rain Garden Ornamentals as evidenced by a photo from 1900 (see 1900 photo). It appears that the

lowland areas were still being used for rice culture as the upper elevations were being planted in pineapple. But, by 1923 it was becoming evident that pineapple farming on the Windward Oahu could not compete with more productive areas on the other side of the Koolau Mountains.

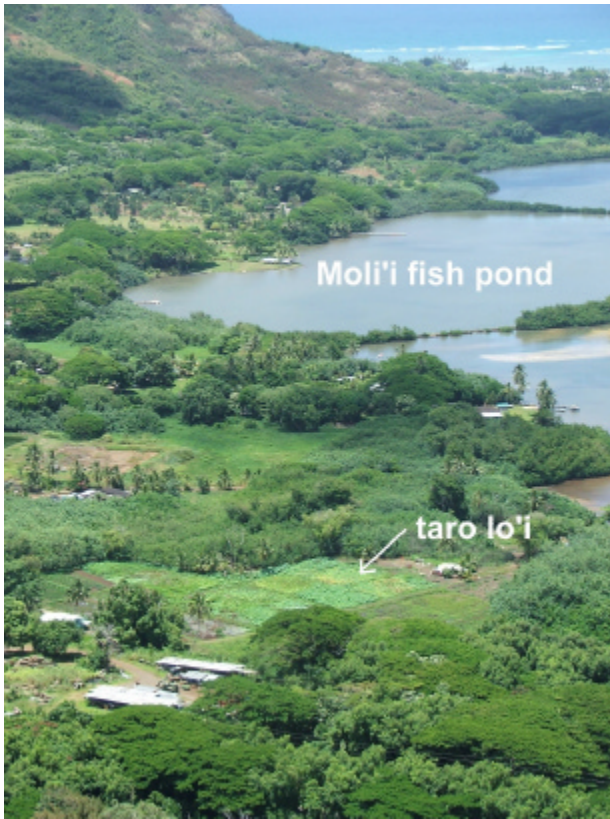


The Judd family converted much of the Judd and Wilder holdings to cattle ranching by 1873 at the end of the sugar cane period. To varying degrees, cattle ranching has been a part of Hakipu'u ever since. The amount of space devoted to cattle was reduced as the rice, and then pineapple, cultivation periods came and went. Cattle were kept on the Rain Garden Ornamentals site through the 1970's, and cattle still graze on the hillside across Kamehameha Highway from the Rain Garden Ornamentals site today. Pastureland is much more closely managed today than it was in the past. From the mid-nineteenth through the mid-twentieth century, over-grazing by livestock on Windward Oahu was considered a contributor to erosion, deforestation, loss of native habitat and deterioration of water quality in Kaneohe Bay.

Pigs, rats and jungle fowl were introduced to the Islands by Polynesian voyagers. There have been many subsequent introductions, but the feral swine and poultry (and probably the rats as well) in Hakipu'u carry the influence of the early Polynesian stock. The differentiation of feral jungle fowl and free-range chickens is blurred and subjective, but the wild chickens of Hakipu'u and Rain Garden Ornamentals are well-adapted to local conditions and carry distinctive traits which are not found on other parts of the island.

Much of the area was taken over by the military during World War II. During that time, an air strip and concrete gun emplacements were built in Kualoa to the north of the Rain Garden Ornamentals site, and artillery training was conducted in Waikane to the south. During this time, the topography and hydrology of Kaneohe Bay was also dramatically modified by dredge and fill

projects. Modification of the Kaneohe Bay shoreline by dredge and fill activity continued during the building boom following the war. Fortunately, the Hakipu'u area at the more remote northern end of the Bay was changed very little during this post-war period.



Judd descendants, operating as the Kualoa Ranch, subdivided the area where Rain Garden Ornamentals is into one to three acre parcels and began leasing them in the early 1950's. It appears that there was little or no farming activity between 1955 and 1970 when Patrick McGovern took the lease and converted the property back to a family farm and diversified agriculture. Crops included cattle, tilapia, cut flowers, orchids, bananas and other tropical fruit. He purchased the property fee-simple from Kualoa Ranch in 1995. After Patrick McGovern passed away in 1999, his wife Marilyn McGovern, Steve Hopkins, Kathleen McGovern-Hopkins and their two sons continued farming operations under the name of Rain Garden Ornamentals.

Rain Garden Ornamentals is but one of several aquaculture facilities currently in operation in the immediate area. Kualoa Ranch owns and manages the Moli'i fish pond. Between the Moli'i fish pond and the Rain Garden Ornamentals site is a taro and freshwater prawn farm and Aquatic Farms, currently raising tilapia and marine shrimp seed and broodstock.