

# SUGAR WATER

*Hawaii's Plantation  
Ditches*

CAROL WILCOX



### Hawaii's Ditches

on Hawaiian allocation practices as they were understood at the time. It was traditional Hawaiian practice to divide use by time of day and by source. It was also part of the Hawaiian tradition that maintenance was proportionate to use. But when these agreements were made between the sugar companies and small private landowners, it was the small landowners who seemed to get the night hours and second draws.

The Waihee Canal (Waihee Ditch) was started in June 1905 and completed in May 1907. The cost was \$160,000. Built under the direction of engineer James T. Taylor, this 50-mgd-capacity ditch tapped the Waihee stream at the 650 foot elevation, just below the Aliie Falls. This intake, however, was abandoned in favor of a new one slightly downstream in 1935. Its 10.62 miles included twenty-two tunnels totaling 16,539 feet; thirty-nine flumes totaling 2764 feet; 35,549 feet of open, cement-lined ditch; and a 1253-foot-long, 3-foot-diameter siphon to cross Iao Valley. Ditch grade averaged 2.5 feet per 1000. The longest tunnel (2246 feet) was especially challenging, as much of it went through hard close-grained rock and it required compressed air and percussion drills. This tunnel took eighteen months to cut. The contract price for the labor ranged from 85 cents to \$5 per foot, depending on the material cut, the location, and the length of the tunnel.<sup>1</sup>

James Townsend Taylor was one of several engineers who worked on a number of projects throughout the islands during the ditch building decades. Before coming to Hawaii, Taylor had worked for the Southern Pacific Railroad in charge of tunneling and construction. He arrived in Hawaii in 1898 and worked for Honolulu Sugar Company, Kekaha, Waialua, Wahiawa, Kona, Haiku, Paia plantations, and the Kahului Railroad Company. He was consulting engineer for the Waiuku and Kahului waterworks.

Waiuku Sugar Company ditch names, it must be noted, are particularly confusing. In recent times the newer ditch (formerly the Waihee Canal) has been referred to as the Waihee Ditch and the older one as the Spreckels Ditch (formerly the Waihee Ditch). But there is a Spreckels Ditch on East Maui, a well, which was originally known as the Haiku Ditch.

By 1913, Waiuku Sugar Company was irrigated entirely from mountain sources. Besides the major ditches discussed here, it had nine smaller ones on Waiuku stream, five on Waiuku stream in Iao Valley (the largest was the Maunania Ditch), and two on Waikapu stream (South Side and Palolo ditches). Some of these have since been abandoned or consolidated. Waiuku Sugar and Maui County cooperated in water development tunnels in the Waikapu and Waiuku valleys. The Maunania and the Iao-Waiuku ditches shared the

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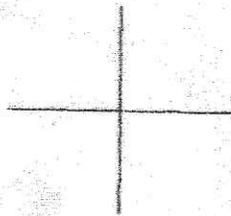
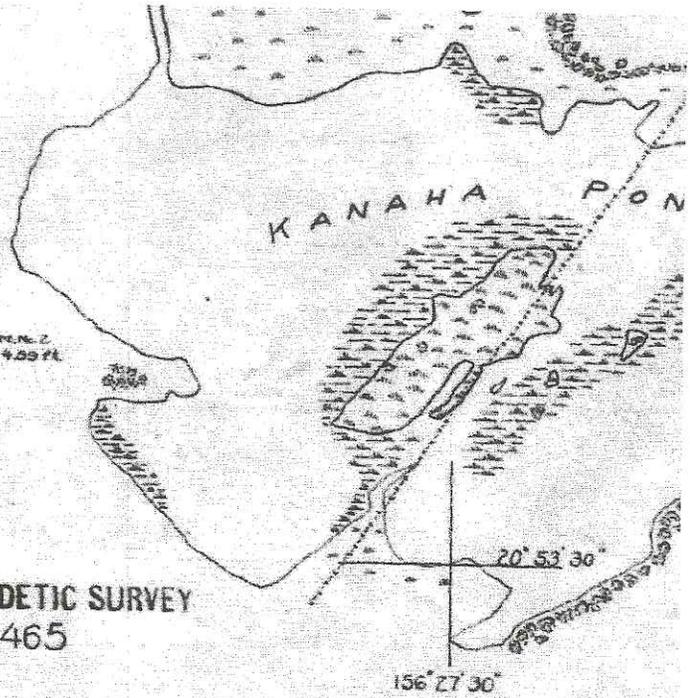


Water is collected in this gravel trap before ditch. (Photo: J. Brinzen.)

Waiuku stream intake. The Waikapu intake in 1933, and the ditch was eventually in the field direct below. The South Waiuku Waihee Ditch, below. The North Waiuku stream intake. This ditch mostly sugar Company ended sugar primarily for cultivation

△ Kahului Bank Cupola  
1912

○ City Bench  
Elev. 4297 ft



**U. S. COAST AND GEODETIC SURVEY**  
**Register No. 4465**

STATE HAWAIIAN ISLANDS  
GENERAL LOCALITY MAUI  
LOCALITY KAHULUI HARBOR

*Surveyed by Glendon E. Boothe*  
*Chief of Party K. T. Adams*

*Date March 26 to April 14, 1929*  
*Scale 1:5000*

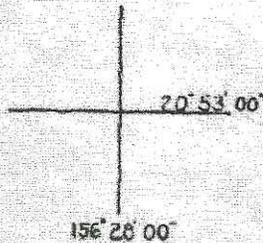
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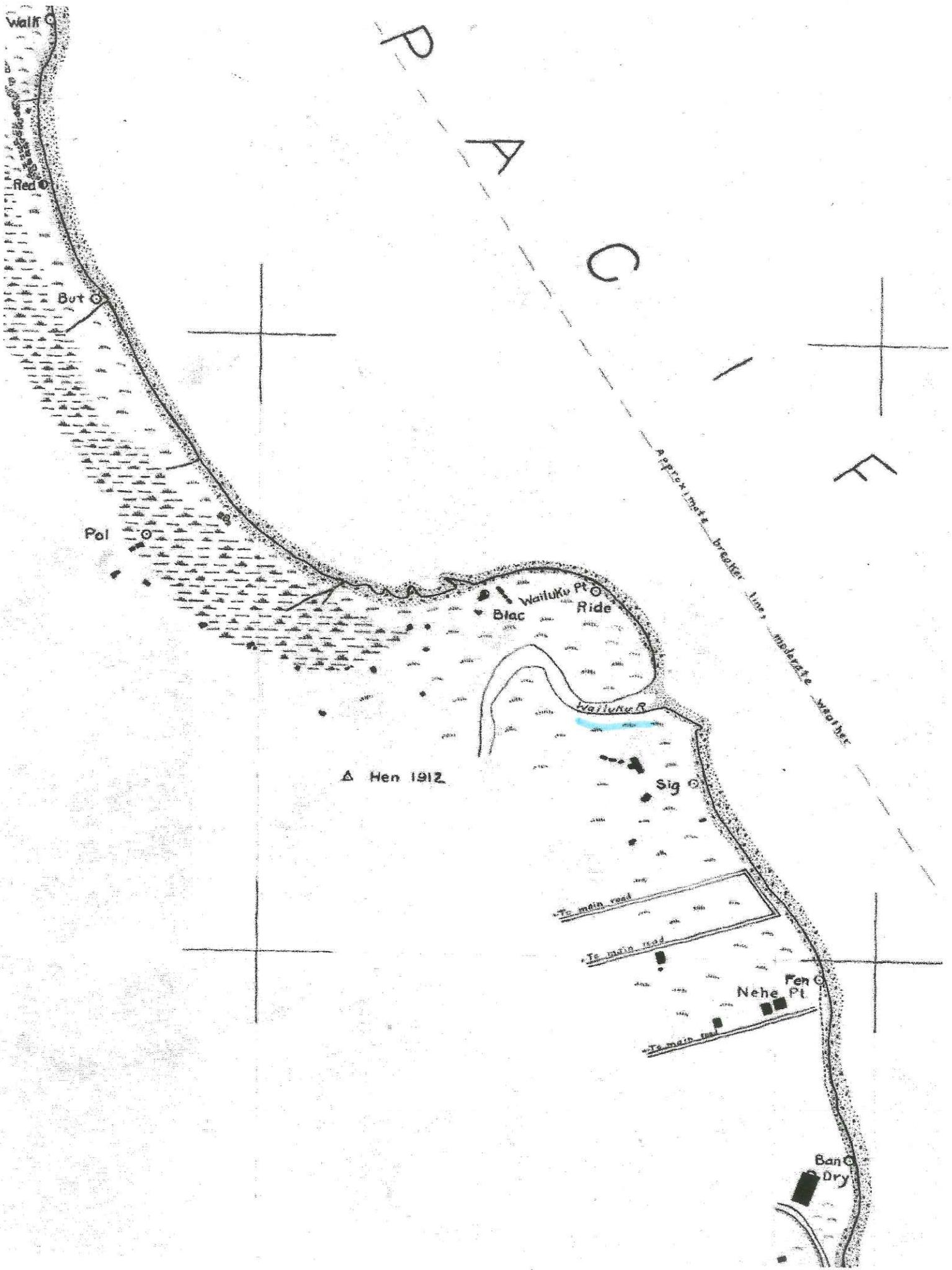
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1916

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### The Mid-Pacific Magazine

Volume 10

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Waiuku River Maui

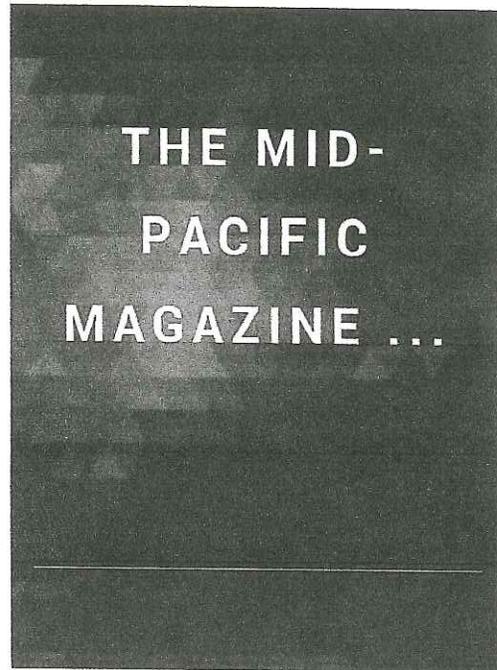
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eucalypti, sweet-scented and tall as be- comes their ancestry.

To the right is a royal palm. A very royal thing to have, seeing that we do not indulge in any other princely possession.

We sit and watch it grow, often by moonlight, which is strangely luminous here, believing that in the long, down-curling frond we discover visible motion just as other dreamers have thought they heard "the music of the spheres."

The old branch grows daily more brown and ragged, finally falls, disclosing at its insertion a monstrous bud.

How are birth and death involved in the development of life!

I have often realized that we "draw from nature the lesson of an intimate Divinity."

We pull the leaf away—an officious kindness like that of breaking the "piped" shell—and the sheath points to the ground.

In a day the covering is loose, and we have a blossom; a feathery tassel adorning the throat of the tree.

Week in and week out the change goes on. There were four dried-up spaces on the tree when we came.

The Doctor has thrown down a challenge that with him I climb this palm, and I have accepted. It was hard work getting up the smooth trunk, but we did it like boys, and like a boy I skinned my leg coming down! It is not every householder who can boast of climbing to glory on such a royal way.

December 11, 1897.

I understand that although Wakuku was harder to reach from anywhere than it is now, it once had more people in it.

Being about eight miles from Malaea Bay, to which one steamer comes each

Trudged from this pretty bay to Wakuku a few years ago, a lad in search of work. He found it on the plantation of which he is now the manager—a millionaire, those who may know, say.

To one coming from the railroad station, Wakuku looks very picturesque, its spires rising out of the foliage that adumbrates several acres of these Maun mountains, back of which rise higher ones, and where to one side is the Iao gash.

As it acts as a sut of auric vein for many waters, it is not likely ever to heal.

A part of the village goes down into the valley, crossing the Wakuku River over a good bridge. River street leads by several native houses and Mahalani Hospital, past the sugar mill, the Brothers' School, to a hill where once stood the old mill.

Opposite, a large papaya tree has grown between the spokes of an immense wheel, holding it up to ridicule for its out-of-dateness. Odd enough is the papaya anyway, with its unarchitectural branching and goitrous fruit-bunches.

Odd enough to be a remnant of ages when reptiles flew and dragons invaded sea, land, and air—in the days of megatherium and elephantopus.

Hard by is the house in which Mark Twain used to take his meals, years and years ago, when he was a young man.

Main street begins in a long line of Chinese and Japanese stores, barber shops, pui pounderies, and coffee saloons. A jeweler has his sign out: "Kan Hang."

At the turn of Iao Street (the nomenclature is my own) is the place where an old carpenter shop stood, and to this shop Mark Twain often came to loaf and gossip with the owner, who long ago disappeared with all the appurtenances of his industry.

The street crosses the hill, and

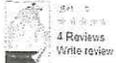


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57th Congress,  
2d Session.

HOUSE OF REPRESENTATIVES.

DOCUMENT  
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# BULLETIN

OF THE

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VOL. XXII,

FOR

1902.

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...RY, KAUAI, LAHAINA, MAUI.

**MALACANTHIDÆ.**

**207. *Malacanthus parvipinnis* Vaillant & Sauvage.** Honolulu; Lahaina, Maui.

**GOBIIDÆ.**

**208. *Eleotris sandwichensis* Vaillant & Sauvage.** Honolulu; Waimea River, Hanalei River, Huleia River, Hanapepe River, Kauai; Anahulu River, Oahu.

**209. *Asterropteryx cyanostigma* (Bleeker).** Honolulu.

**210. *Quisquilius eugenius* Jordan & Evermann.** Laysan Island.

**211. *Gobius albopunctatus* Cuvier & Valenciennes.** Honolulu; Waialua Bay, Oahu; Puako Bay; Kealakekua Bay, Hawaii; Hilo.

**212. *Awaous genivittatus* (Cuvier & Valenciennes).** Honolulu; Waimea River, Hanapepe River, Hanalei River, Huleia River, Kauai; Anahulu River, Oahu.

**213. *Awaous stamineus* (Eydoux & Souleyet).** Anahulu River, Oahu; Waimea River, Hanalei River, Hanapepe River, Hulei River, Kauai; Wailuku River, Maui.

**214. *Sicyopterus stimpsoni* (Gill).** Lahaina and Wailuku rivers, Maui.

**215. *Enypnias oligolepis* Jenkins.** Honolulu.

In each of 2 specimens the dorsal has 6 spines, 11 rays; the anal 8 rays.

**PTEROPSARIDÆ.**

**216. *Osurus schauinslandi* (Steindachner).** Honolulu.

**ECHENEIDIDÆ.**

**217. *Echensis ramora* Linnaeus.** Honolulu market; Hanalei Bay, Kauai; stations 3860, 3870, 3887.



## 1900 Federal Census Team Transcription

If you are interested in helping to transcribe an Enumeration District for this census, please fill-in and submit a "[Transcriber Volunteer Form](#)"

Island of Maui, Hawaii - - 1900 Federal Census Team Transcription				
Microfilm # T623-1835				
ED#	Enumeration Description:	Status	Transcriber	Proofreader
89	<b>Wailuku (part)</b> See E.D. 102. Ernest W. Russell, Care P.O. Honolulu, HI. Helped Moses Kauhimahu on camps 1 to 8 Spreckelsville on account of strike. (Moses Kauhimahu's original number was 70).			
90	<b>Makawao District (part) Hamakuapoko, including Kuau</b> Bounded by Miliko gulch, the Paia ditch, the Paia plantation line, and the sea.			
91	<b>Makawao District (part) Hamakualoa</b> That part of Makawao district east of Maliko gulch known as Hamakualoa.			
92	<b>Makawao District (part) Makawao</b> From Maliko gulch and the road running from Maliko gulch to the court house, taking in Kawaapae Resort, and all that portion of Mula between Makawao and the large gulch known as the Pulehunui gulch.			
93	<b>Makawao District (part) Kula</b> From the Pulehunui gulch to Honuaula line.			
94	<b>Makawao District (part) including Paia village, Grove Ranch and the camps near there</b> Comprising the Paia village and all the camps and buildings belonging to the Paia plantation therein.			
95	<b>Makawao District (part) Kehei</b> And the sea shore adjoining the Makawao district.			
96	<b>Hana District (part)</b> All that portion from Kapalipilo gulch to Oheo bridge, Kipahulu, first bridge before you reach Kapahulu Mill.			
97	<b>Hana District (part)</b> All that portion that side of Oheo bridge to Lualailua, Kahikinui.			
98	<b>Hana District (part)</b> All that portion from Oopuola gulch to Kapalipilo gulch.			
99	<b>Lahaina District (part) including Kauaula, Lahainaluna, and Kahoma gulches as well as Lahaina proper</b> Commencing at Makila bridge in Lahaina and ending at Kekaa.			
100	<b>Lahaina District (part) including Ukumehame, Olowalu, Luaanuipoko, and plantation camps at Pahoia in Lahaina proper. Also The Island of Lanai</b> Commencing at Manuwainui gulch and ending at the Makila bridge in Lahaina.			
	<b>Lahaina District (part) including the</b>			

101	<b>settlement at Kekaa, Kaanapali camp, Pukolii, Honokawai, Honolulu, Honokokau, and Kahakuloa</b> Commencing at the settlement at Kekaa, and ending at the boundary line between Kahakuloa and Waihee.			
102	<b>Wailuku District (part)</b> From Wailuku stream to Main St. Wailuku (Iao Road). See E.D. 89.			
103	<b>Wailuku District (part)</b> From Kahakuloa boundary including Waihee to Waiehu. See E.D. 89.			
104	<b>Wailuku District (part)</b> From Main St. on the east including Waikapu to Maalaea Bay. See E.D. 89.			
105(part)	<b>Wailuku District (part)</b> From Wailuku boundary on the beach including Kahului and to Camps 1 and 2 Spreckelsville. See E.D. 89.			

Please refer to the [1900 Transcriber's Help](#) web pages for more information.

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1895

**WAILUKU SUGAR COMPANY**  
**1862 NOVEMBER 1962**

**CENTENNIAL**



**A CENTURY OF PROGRESS**  
**IN SUGAR CANE CULTIVATION**

well lands in Waikapu, known as "Aikanaha Land."



**CHARLES B. WELLS:** appointed manager on April 5, 1893 and continued for 15 years when H. B. Penhallow succeeded him on Nov. 1, 1908. He died in Oakland, California at the age of 70 years in June, 1928.

## 1897

On March 20, several hundred Japanese immigrants, failing legal requirements, were denied the right to land in Hawaii.

A special session of the Hawaiian Senate was called to ratify the Treaty of Annexation which, on the 9th of September, carried unanimously.

As of December 1, the capital of Wailuku Sugar Company was increased to \$700,000. Production for the year totalled 6,461 tons of sugar.

Manchurian laborers arrived in Hawaii to work on plantations.

## 1898

Sugar production for the year totalled 6,725 tons. The Hawaiian Islands were annexed to the United States (August 12).

Three hundred and sixty-five Galicians, Austrians and Spaniards arrived in Hawaii during the year. Also 101 Japanese arrived, among them 21 women.

# SUPREME COURT DECIDED IN WAILUKU WATER CASE

The Wailuku Water Case was heard by the Supreme Court on July 2, 1894. The decision, filed by Chief Justice Judd and concurred in by Justice Bickerton, was filed on May 20, 1895.

The suit was started by Mahi Lonoaea and two others against the Wailuku Sugar Company. However, on the day of the hearing 34 other persons, claiming to be interested, were made parties plaintiff and, subsequently, Mr. Claus Spreckels intervened as a party defendant.

The case was tried by A. C. M. Robertson as a special Commissioner of Private Ways and Water Rights, because S. E. Kaiue, the regular commissioner for Wailuku, was an interested person. Mr. Robertson's decision favored the claims of the plaintiffs.

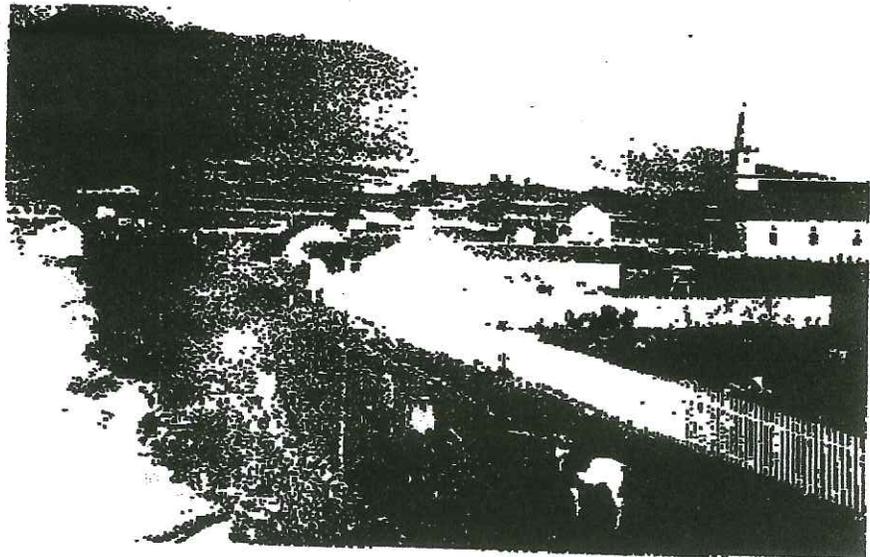
The plaintiffs complained that the company had unlawfully constructed a dam in the Wailuku river; that it enlarged and lightened the dams supplying the Kalaniauwai; that it enlarged and deepened the Kalaniauwai; that it illegally tapped said Kalaniauwai by diverting a large amount of water by means of a flume; that the company has unlawfully enlarged the Kamaauwai and has taken water beyond the amount to which it was entitled.

The Supreme Court ruled that the plaintiffs were entitled to such amounts of water as they had acquired by prescription for their various lands during the night from 4 p.m. to 4 a.m., from the large auwais (Kalaniauwai, Kamaauwai and the Wailuku mill water cours-

es) leading from Wailuku river; that the Wailuku Plantation was entitled to the water each day except Sunday, from 4 a.m. to 4 p.m., the dams to be kept as they were at the time, composed of loose stones and dirt, and that the defendant corporation carry out this order, the costs to be divided.

Justice Frear rendered a dissenting opinion. He held that the purchase by the corporation of taro lands holding prescriptive rights to water by night did not give it the power to change such night rights to day rights unless nobody was injured thereby. He said the complaint should be dismissed, but the costs should be divided.

Attorneys F. M. Hatch and V. V. Ashford represented the petitioners; W. A. Kinney, the Wailuku Sugar Company; and P. Newmann, Claus Spreckels.



Wailuku Village about the year 1895.