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In Memory of
STEPHEN SPAULDING
1907 - 1925
CLASS of 1927
UNIVERSITY OF MICHIGAN

March 27 1927

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MAWAIIAN ANNUAL

FOR

1923

The Reference Book of Information
and Statistics Relating to the
Territory of Hawaii

THOS. G. THRUM
Compiler and Publisher

FORTY-NINTH YEAR

HONOLULU H. T.

PRICE \$1.00

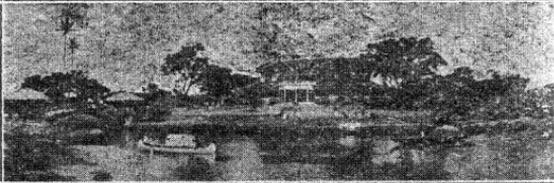
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TRAINS run regularly to Kahuku, 70 miles from Honolulu. The equipment of the road is first-class in every particular. EXCURSION RATES are maintained from Saturday till Monday of each week. A delightful ride through varied and unsurpassed scenery makes excursions of the OAHU RAILWAY one of the most attractive features of the Islands, not only to the tourist, but residents of Honolulu as well. The opportunity to visit a large sugar estate should not be missed by those visiting these Islands, and among others on the line of the Railway is the Ewa plantation, one of the largest in the Islands, or by the branch line to Wahiawa, eleven miles from Waipahu, inspect the extensive pineapple industry in that section, or to Lellehua on the same branch, and visit Schofield Barracks, the principal post of the U. S. Army.



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On Line of Oahu Railway

HALEIWA HOTEL—At Waialua, is a beautiful Hotel, of the most modern construction and equipment, in which guests will find all possible comfort and entertainment, combined with elegance of furnishing, tropical surroundings and healthful atmosphere. The view from the Hotel embraces Sea, Mountain, and Valley in a combination not to be enjoyed elsewhere.

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G. P. DENISON - - - General Manager

HAWAIIAN ALMANAC AND ANNUAL

FOR

 1923 

THE REFERENCE BOOK OF INFORMATION AND STATISTICS

Relating to the Territory of Hawaii, of Value to
Merchants, Tourists and Others

THOS. G. THRUM

Compiler and Publisher

Forty-Ninth Year of Publication

Copyright 1922 by Thos. G. Thrum

HONOLULU

December, 1922

Counting House

1923 Calendar 1923

	Sunday.....	Monday.....	Tuesday.....	Wednesday.....	Thursday.....	Friday.....	Saturday.....		Sunday.....	Monday.....	Tuesday.....	Wednesday.....	Thursday.....	Friday.....	Saturday.....
JAN.	.. 1	2	3	4	5	6	JULY	1	2	3	4	5	6	7	
	7 8	9	10	11	12	13		8 9	10	11	12	13	14		
	14 15	16	17	18	19	20		15 16	17	18	19	20	21		
	21 22	23	24	25	26	27		22 23	24	25	26	27	28		
	28 29	30	31	..	..	..		29 30	31	..	..	..	..
FEB.	.. ..	..	..	..	1	2	AUG.	.. ..	..	1	2	3	4		
	4 5	6	7	8	9	10		5 6	7	8	9	10	11		
	11 12	13	14	15	16	17		12 13	14	15	16	17	18		
	18 19	20	21	22	23	24		19 20	21	22	23	24	25		
	25 26	27	28	..	..	..		26 27	28	29	30	31	..		
MAR.	.. ..	..	..	..	1	2	SEPT.	.. ..	..	..	..	..	..	1	
	4 5	6	7	8	9	10		2 3	4	5	6	7	8		
	11 12	13	14	15	16	17		9 10	11	12	13	14	15		
	18 19	20	21	22	23	24		16 17	18	19	20	21	22		
	25 26	27	28	29	30	31		23 24	25	26	27	28	29		
								30 ..	..	..	..	..	..
APR.	1 2	3	4	5	6	7	OCT.	.. 1	2	3	4	5	6		
	8 9	10	11	12	13	14		7 8	9	10	11	12	13		
	15 16	17	18	19	20	21		14 15	16	17	18	19	20		
	22 23	24	25	26	27	28		21 22	23	24	25	26	27		
	29 30	..	..	..	..	..		28 29	30	31	..	..	..
MAY	.. ..	1	2	3	4	5	NOV.	.. ..	..	1	2	3			
	6 7	8	9	10	11	12		4 5	6	7	8	9	10		
	13 14	15	16	17	18	19		11 12	13	14	15	16	17		
	20 21	22	23	24	25	26		18 19	20	21	22	23	24		
	27 28	29	31	31	..	..		25 26	27	28	29	30	..		
JUNE	.. ..	..	..	..	1	2	DEC.	.. ..	..	..	..	..	..	1	
	3 4	5	6	7	8	9		2 3	4	5	6	7	8		
	10 11	12	13	14	15	16		9 10	11	12	13	14	15		
	17 18	19	20	21	22	23		16 17	18	19	20	21	22		
	24 25	26	27	28	29	30		23 24	25	26	27	28	29		
	.. ..	..	..	..	..	..		30 31	..	..	..	..	..

Thos. G. Thrum
 RESEARCHER AND PUBLISHER
 The Hawaiian Annual
 HONOLULU, HAWAII

Maj. Thomas M. Spaulding
26-1923

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HAWAIIAN ANNUAL CALENDAR FOR 1923.

Second half of the twenty-fifth year and first half of the twenty-sixth year since annexation of Hawaii with the United States.

Twenty-eighth year since the downfall of the Monarchy.

The 145th year since the discovery of the Hawaiian Islands by Captain Cook.

One hundred and third year since the arrival of the American Mission.

Holidays Observed at the Hawaiian Islands.

*New Year.....Jan. 1	Labor Day (1st Monday).....Sept. 3
Lincoln's Birthday.....Feb. 12	*Regatta Day (3rd Saturday).....
*Washington's Birthday...Feb. 22	.....Sept. 15
*Decoration Day.....May 30	*Victory Day.....Nov. 11
Kamehameha Day.....June 11	Thanksgiving Day.....Nov. 29
*Birthday Hawn. Republic.....July 4	*Christmas Day.....Dec. 25
*American Anniversary...July 4	

*Those distinguished by the asterisk have been established by law.

Church Days.

Epiphany .....Jan. 6	Ascension Day.....May 10
Ash Wednesday.....Feb. 14	Whit Sunday.....May 20
First Sunday in Lent.....Feb. 18	Trinity Sunday.....May 27
Palm Sunday.....March 25	Corpus Christi.....May 31
Good Friday.....March 30	Advent Sunday.....Dec. 2
Easter Sunday.....April 1	Christmas.....Dec. 25

Eclipses in 1923.

Courtesy of J. S. Donaghho, University of Hawaii.

There will be four eclipses, as follows:

I. A partial eclipse of the moon, March 2, which ends as the moon rises in Honolulu.

II. An annular eclipse of the sun, March 16, invisible in Hawaii.

III. A partial eclipse of the moon, August 25-6, beginning 11:22 p. m., ending 12:57 a. m., Honolulu mean time.

IV. A total eclipse of the sun, September 10, visible in Honolulu as a partial eclipse, beginning 8:19 a. m., ending 10:03 a. m., Honolulu mean time.

PHENOMENA.

Mercury is likely to be visible in the evening for several days before and after the following dates: January 12, May 5, September 2, December 27; in the morning about the following dates: February 22, June 22, October 14.

Venus will be morning star until September 9, then evening star for the rest of the year. It will pass very near the moon on January 12, May 12, September 9; near Mars August 22, near Saturn October 8, near Jupiter November 3.

FIRST QUARTER, 1923.

JANUARY				FEBRUARY				MARCH			
D		H. M.		D		H. M.		D		H. M.	
2	Full Moon	4:03	4 p.m.	1	Full Moon	5:23	2 a.m.	2	Full Moon	4:53	6 p.m.
9	Last Quar.	2:24	5 p.m.	7	Last Quar.	10:45	9 a.m.	9	Last Quar.	8:01	0 a.m.
16	New Moon	4:11	0 p.m.	15	New Moon	8:37	2 a.m.	17	New Moon	2:21	3 a.m.
24	First Quar.	5:29	3 p.m.	23	First Quar.	1:36	2 p.m.	25	First Quar.	6:11	5 a.m.
Day of Mon..	Day of Wk...	Sun Rises.....	Sun Sets.....	Day of Mon..	Day of Wk...	Sun Rises.....	Sun Sets.....	Day of Mon..	Day of Wk...	Sun Rises.....	Sun Sets.....
		H. M.	H. M.			H. M.	H. M.			H. M.	H. M.
1	Mon.	6 38 1	5 30 0	1	Thurs.	6 37 4	5 50 5	1	Thurs.	6 20 5	6 4 5
2	Tues.	6 38 4	5 30 6	2	Fri.	6 37 1	5 51 1	2	Fri.	6 19 7	6 4 9
3	Wed...	6 38 6	5 31 3	3	Sat..	6 36 7	5 51 7	3	Sat..	6 18 9	6 5 3
4	Thurs.	6 38 9	5 31 9	4	SUN.	6 36 3	5 52 3	4	SUN.	6 18 1	6 5 7
5	Fri.	6 39 1	5 32 6	5	Mon.	6 35 9	5 52 9	5	Mon.	6 17 3	6 6 1
6	Sat..	6 39 3	5 33 3	6	Tues.	6 35 4	5 53 5	6	Tues.	6 16 4	6 6 5
7	SUN.	6 39 5	5 33 9	7	Wed.	6 34 9	5 54 1	7	Wed.	6 15 6	6 6 8
8	Mon.	6 39 7	5 34 6	8	Thurs.	6 34 4	5 54 7	8	Thurs.	6 14 8	6 7 2
9	Tues..	6 39 9	5 35 3	9	Fri.	6 33 9	5 55 2	9	Fri.	6 13 9	6 7 6
10	Wed.	6 40 1	5 36 0	10	Sat..	6 33 4	5 55 7	10	Sat..	6 13 0	6 7 9
11	Thurs.	6 40 2	5 36 7	11	SUN.	6 32 9	5 56 2	11	SUN.	6 12 1	6 8 3
12	Fri.	6 40 3	5 37 3	12	Mon.	6 32 3	5 56 7	12	Mon.	6 11 3	6 8 6
13	Sat..	6 40 4	5 38 0	13	Tues.	6 31 7	5 57 2	13	Tues.	6 10 4	6 8 9
14	SUN.	6 40 4	5 38 7	14	Wed.	6 31 1	5 57 7	14	Wed.	6 9 5	6 9 3
15	Mon.	6 40 4	5 39 4	15	Thurs.	6 30 5	5 58 2	15	Thurs.	6 8 6	6 9 6
16	Tues.	6 40 4	5 40 1	16	Fri.	6 29 9	5 58 7	16	Fri.	6 7 7	6 9 9
17	Wed.	6 40 4	5 40 8	17	Sat..	6 29 2	5 59 2	17	Sat..	6 6 8	6 10 2
18	Thurs.	6 40 3	5 41 4	18	SUN.	6 28 6	5 59 7	18	SUN.	6 5 9	6 10 5
19	Fri.	6 40 3	5 42 1	19	Mon.	6 28 0	6 0 2	19	Mon.	6 4 9	6 10 8
20	Sat..	6 40 2	5 42 8	20	Tues.	6 27 3	6 0 7	20	Tues.	6 4 0	6 11 2
21	SUN.	6 40 1	5 43 4	21	Wed.	6 26 6	6 1 2	21	Wed.	6 3 1	6 11 5
22	Mon.	6 39 9	5 44 1	22	Thurs.	6 26 0	6 1 6	22	Thurs.	6 2 2	6 11 8
23	Tues.	6 39 8	5 44 8	23	Fri.	6 25 2	6 2 1	23	Fri.	6 1 3	6 12 1
24	Wed.	6 39 6	5 45 4	24	Sat..	6 24 5	6 2 5	24	Sat..	6 0 4	6 12 4
25	Thurs.	6 39 5	5 46 1	25	SUN.	6 23 7	6 2 9	25	SUN.	5 59 5	6 12 8
26	Fri.	6 39 3	5 46 7	26	Mon.	6 22 9	6 3 3	26	Mon.	5 58 5	6 13 1
27	Sat..	6 39 0	5 47 4	27	Tues.	6 22 1	6 3 7	27	Tues.	5 57 6	6 13 4
28	SUN.	6 38 8	5 48 0	28	Wed.	6 21 3	6 4 1	28	Wed.	5 56 7	6 13 7
29	Mon.	6 38 5	5 48 6					29	Thurs.	5 55 7	6 14 0
30	Tues.	6 38 1	5 49 2					30	Fri.	5 54 8	6 14 3
31	Wed.	6 37 8	5 49 9					31	Sat..	5 53 9	6 14 6

“We have all had a glorious time, a simply glorious time. We can't say too many good things about your people and the reception they have given us. The welcome that we have received today was no surprise, for the reputation of these islands for hospitality is known everywhere. It has been my good fortune to pass through here three times, and each time I regretted I could not stay longer.”—William Howard Taft.

SECOND QUARTER, 1923.

APRIL				MAY				JUNE			
D		H. M.		D		H. M.		D		H. M.	
1	Full Moon	2:39	8 a.m.	7	Last Quar.	7:38	2 a.m.	5	Last Quar.	10:49	1 p.m.
7	Last Quar.	6:52	5 p.m.	15	New Moon	0:08	4 p.m.	14	New Moon	2:12	1 a.m.
15	New Moon	7:58	4 p.m.	23	First Quar.	3:55	0 a.m.	21	First Quar.	10:15	9 a.m.
23	First Quar.	6:50	3 p.m.	29	Full Moon	6:37	2 p.m.	28	Full Moon	2:34	2 a.m.
30	Full Moon	11:00	3 a.m.								
Day of Mon..	Day of Wk...	Sun Rises.....	Sun Sets.....	Day of Mon..	Day of Wk...	Sun Rises.....	Sun Sets.....	Day of Mon..	Day of Wk...	Sun Rises.....	Sun Sets.....
		H. M.	H. M.			H. M.	H. M.			H. M.	H. M.
1	SUN.	5 53 0	6 14 6	1	Tues.	5 29 0	6 25 1	1	Fri.	5 17 2	6 38 1
2	Mon.	5 52 1	6 15 2	2	Wed.	5 28 4	6 25 5	2	Sat.	5 17 1	6 38 5
3	Tues.	5 51 2	6 15 3	3	Thurs	5 27 8	6 25 9	3	SUN.	5 17 1	6 38 9
4	Wed.	5 50 3	6 15 9	4	Fri.	5 27 1	6 26 3	4	Mon.	5 17 0	6 39 3
5	Thurs	5 49 5	6 16 2	5	Sat.	5 26 5	6 26 7	5	Tues.	5 17 0	6 39 6
6	Fri.	5 48 6	6 16 5	6	SUN.	5 26 0	6 27 1	6	Wed.	5 17 0	6 40 0
7	Sat.	5 47 7	6 16 8	7	Mon.	5 25 4	6 27 5	7	Thurs.	5 17 0	6 40 4
8	SUN.	5 46 8	6 17 1	8	Tues.	5 24 9	6 27 9	8	Fri.	5 17 0	6 40 8
9	Mon.	5 45 9	6 17 4	9	Wed.	5 24 4	6 28 4	9	Sat.	5 17 0	6 41 1
10	Tues.	5 45 0	6 17 7	10	Thurs.	5 23 9	6 28 8	10	SUN.	5 17 0	6 41 5
11	Wed.	5 44 2	6 18 0	11	Fri.	5 23 5	6 29 2	11	Mon.	5 17 0	6 41 8
12	Thurs	5 43 4	6 18 3	12	Sat.	5 23 0	6 29 6	12	Tues.	5 17 1	6 42 1
13	Fri.	5 42 6	6 18 7	13	SUN.	5 22 6	6 30 1	13	Wed.	5 17 2	6 42 4
14	Sat.	5 41 7	6 19 0	14	Mon.	5 22 1	6 30 5	14	Thurs.	5 17 4	6 42 7
15	SUN.	5 40 9	6 19 3	15	Tues.	5 21 7	6 30 9	15	Fri.	5 17 5	6 43 0
16	Mon.	5 40 1	6 19 6	16	Wed.	5 21 3	6 31 3	16	Sat.	5 17 7	6 43 3
17	Tues.	5 39 3	6 20 0	17	Thurs.	5 21 0	6 31 8	17	SUN.	5 17 9	6 43 5
18	Wed.	5 38 5	6 20 3	18	Fri.	5 20 6	6 32 2	18	Mon.	5 18 0	6 43 8
19	Thurs	5 37 6	6 20 7	19	Sat.	5 20 2	6 32 6	19	Tues.	5 18 2	6 44 1
20	Fri.	5 36 8	6 21 1	20	SUN.	5 19 9	6 33 0	20	Wed.	5 18 3	6 44 3
21	Sat.	5 36 0	6 21 4	21	Mon.	5 19 6	6 33 5	21	Thurs.	5 18 5	6 44 5
22	SUN.	5 35 2	6 21 8	22	Tues.	5 19 3	6 33 9	22	Fri.	5 18 7	6 44 7
23	Mon.	5 34 5	6 22 1	23	Wed.	5 19 0	6 34 4	23	Sat.	5 19 0	6 44 9
24	Tues.	5 33 8	6 22 5	24	Thurs	5 18 7	6 34 8	24	SUN.	5 19 2	6 45 1
25	Wed.	5 33 1	6 22 9	25	Fri.	5 18 4	6 35 3	25	Mon.	5 19 5	6 45 2
26	Thurs	5 32 4	6 23 2	26	Sat.	5 18 1	6 35 7	26	Tues.	5 19 8	6 45 3
27	Fri.	5 31 7	6 23 6	27	SUN.	5 17 9	6 36 1	27	Wed.	5 20 1	6 45 4
28	Sat.	5 31 0	6 24 0	28	Mon.	5 17 8	6 36 5	28	Thurs.	5 20 4	6 45 5
29	SUN.	5 30 3	6 24 4	29	Tues.	5 17 6	6 36 9	29	Fri.	5 20 7	6 45 7
30	Mon.	5 29 7	6 24 7	30	Wed.	5 17 4	6 37 3	30	Sat.	5 21 0	6 45 8
				31	Thurs	5 17 3	6 37 7				

“Honolulu has many attractions, my Lord Mayor, and I feel sure that as soon as you have laid down your present high and arduous office you could take no better holiday than in Hawaii or enjoy nothing better than surf riding and their famous music.”—Prince of Wales.

“I am a lover of nature and I have been simply captivated with the beauties of your incomparable Hawaiian Islands.”—Commander Evangeline Booth.

THIRD QUARTER, 1923.

JULY				AUGUST				SEPTEMBER			
D		H. M.		D		H. M.		D		H. M.	
5	Last Quar.	3:26	4 p.m.	4	Last Quar.	8:52	3 a.m.	3	Last Quar.	2:17	3 a.m.
13	New Moon	2:14	8 p.m.	11	New Moon	0:46	6 p.m.	10	New Moon	10:22	6 a.m.
20	First Quar.	3:01	9 p.m.	18	First Quar.	7:36	9 p.m.	17	First Quar.	1:34	0 a.m.
27	Full Moon	0:02	6 p.m.	25	Full Moon	11:59	4 p.m.	24	Full Moon	2:45	8 p.m.
Day of Mon...	Day of Wk...	Sun Rises.....	Sun Sets.....	Day of Mon...	Day of Wk...	Sun Rises.....	Sun Sets.....	Day of Mon...	Day of Wk...	Sun Rises.....	Sun Sets.....
		H. M.	H. M.			H. M.	H. M.			H. M.	H. M.
1	SUN.	5 21 3	6 45 8	1	Wed.	5 33 2	6 38 7	1	Sat. . .	5 43 4	6 15 9
2	Mon.	5 21 6	6 45 9	2	Thurs.	5 33 6	6 38 1	2	SUN.	5 43 6	6 15 0
3	Tues.	5 22 0	6 45 9	3	Fri. . .	5 34 0	6 37 6	3	Mon.	5 43 9	6 14 1
4	Wed.	5 22 3	6 45 9	4	Sat. . .	5 34 3	6 37 0	4	Tues.	5 44 1	6 13 2
5	Thurs.	5 22 7	6 45 8	5	SUN.	5 34 7	6 36 4	5	Wed.	5 44 4	6 12 3
6	Fri. . .	5 23 0	6 45 8	6	Mon.	5 35 1	6 35 9	6	Thurs.	5 44 6	6 11 4
7	Sat. . .	5 23 4	6 45 8	7	Tues..	5 35 5	6 35 3	7	Fri. . .	5 44 9	6 10 4
8	SUN.	5 23 7	6 45 7	8	Wed.	5 35 8	6 34 6	8	Sat. . .	5 45 2	6 9 5
9	Mon.	5 24 1	6 45 6	9	Thurs.	5 36 2	6 34 0	9	SUN.	5 45 4	6 8 5
10	Tues.	5 24 4	6 45 6	10	Fri. . .	5 36 6	6 33 3	10	Mon.	5 45 7	6 7 6
11	Wed.	5 24 8	6 45 5	11	Sat. . .	5 36 9	6 32 7	11	Tues..	5 46 0	6 6 6
12	Thurs	5 25 2	6 45 3	12	SUN.	5 37 2	6 32 0	12	Wed.	5 46 2	6 5 7
13	Fri. . .	5 25 6	6 45 2	13	Mon.	5 37 6	6 31 3	13	Thurs.	5 46 5	6 4 7
14	Sat. . .	5 26 1	6 45 0	14	Tues.	5 37 9	6 30 6	14	Fri. . .	5 46 7	6 3 7
15	SUN.	5 26 5	6 44 8	15	Wed.	5 38 3	6 29 9	15	Sat. . .	5 46 9	6 2 8
16	Mon.	5 26 9	6 44 6	16	Thurs	5 38 6	6 29 2	16	SUN.	5 47 2	6 1 8
17	Tues.	5 27 3	6 44 4	17	Fri. . .	5 38 9	6 28 5	17	Mon.	5 47 4	6 0 9
18	Wed.	5 27 7	6 44 1	18	Sat. . .	5 39 2	6 27 7	18	Tues.	5 47 7	5 59 9
19	Thurs	5 28 1	6 43 9	19	SUN.	5 39 5	6 26 9	19	Wed.	5 47 9	5 59 0
20	Fri. . .	5 28 5	6 43 6	20	Mon.	5 39 9	6 26 1	20	Thurs.	5 48 2	5 58 0
21	Sat. . .	5 28 9	6 43 3	21	Tues..	5 40 2	6 25 3	21	Fri. . .	5 48 5	5 57 1
22	SUN.	5 29 3	6 42 9	22	Wed.	5 40 5	6 24 5	22	Sat. . .	5 48 7	5 56 1
23	Mon.	5 29 7	6 42 6	23	Thurs.	5 40 8	6 23 7	23	SUN.	5 49 0	5 55 1
24	Tues.	5 30 1	6 42 2	24	Fri. . .	5 41 1	6 22 9	24	Mon.	5 49 2	5 54 2
25	Wed.	5 30 5	6 41 8	25	Sat. . .	5 41 4	6 22 0	25	Tues..	5 49 5	5 53 2
26	Thurs	5 30 9	6 41 4	26	SUN.	5 41 7	6 21 2	26	Wed.	5 49 8	5 52 3
27	Fri. . .	5 31 3	6 41 0	27	Mon.	5 41 9	6 20 3	27	Thurs.	5 50 0	5 51 4
28	Sat. . .	5 31 7	6 40 6	28	Tues..	5 42 2	6 19 4	28	Fri. . .	5 50 3	5 50 4
29	SUN.	5 32 1	6 40 1	29	Wed.	5 42 5	6 18 6	29	Sat. . .	5 50 6	5 49 5
30	Mon.	5 32 4	6 39 7	30	Thurs.	5 42 8	6 17 7	30	SUN.	5 50 9	5 48 6
31	Tues.	5 32 8	6 39 2	31	Fri. . .	5 43 1	6 16 8				

“I have fallen in love with the climate and people here and next to the home I have in California, which is home, there is no place on earth I would rather live than in these islands.”—Jack London.

“You may take the world’s wonders, one by one, and put them down in Hawaii, and Hawaii will match every one of them and surpass most.”
—H. V. Kaltenborn, Brooklyn Eagle.

FOURTH QUARTER, 1923.

OCTOBER				NOVEMBER				DECEMBER			
D	H. M.			D	H. M.			D	H. M.		
2	Last Quar.	6:59	2 p.m.	1	Last Quar.	10:18	9 a.m.	7	New Moon	3:00	4 p.m.
9	New Moon	7:35	5 p.m.	8	New Moon	4:57	0 a.m.	14	First Quar.	4:07	9 p.m.
16	First Quar.	10:23	6 a.m.	14	First Quar.	11:11	1 p.m.	22	Full Moon	9:03	0 p.m.
24	Full Moon	7:56	2 a.m.	23	Full Moon	2:27	9 a.m.	30	Last Quar.	10:37	1 a.m.
30	Last Quar.			30	Last Quar.	11:39	2 p.m.				
Day of Mon...	Day of Wk...	Sun Rises.....	Sun Sets.....	Day of Mon...	Day of Wk...	Sun Rises.....	Sun Sets.....	Day of Mon...	Day of Wk...	Sun Rises.....	Sun Sets.....
		H. M.	H. M.			H. M.	H. M.			H. M.	H. M.
1	Mon.	5 51 2	5 47 7	1	Thurs.	6 3 2	5 24 0	1	Sat.	6 21 4	5 17 3
2	Tues.	5 51 5	5 46 7	2	Fri.	6 3 7	5 23 5	2	SUN.	6 22 0	5 17 4
3	Wed.	5 51 8	5 45 8	3	Sat.	6 4 2	5 23 0	3	Mon.	6 22 7	5 17 5
4	Thurs.	5 52 1	5 44 9	4	SUN.	6 4 7	5 22 5	4	Tues.	6 23 3	5 17 7
5	Fri.	5 52 4	5 44 0	5	Mon.	6 5 3	5 22 0	5	Wed.	6 24 0	5 17 8
6	Sat.	5 52 7	5 43 1	6	Tues.	6 5 8	5 21 6	6	Thurs.	6 24 6	5 18 0
7	SUN.	5 53 0	5 42 2	7	Wed.	6 6 4	5 21 1	7	Fri.	6 25 3	5 18 3
8	Mon.	5 53 3	5 41 3	8	Thurs.	6 6 9	5 20 7	8	Sat.	6 25 9	5 18 6
9	Tues.	5 53 7	5 40 5	9	Fri.	6 7 5	5 20 3	9	SUN.	6 26 5	5 18 9
10	Wed.	5 54 0	5 39 6	10	Sat.	6 8 1	5 20 0	10	Mon.	6 27 1	5 19 2
11	Thurs.	5 54 4	5 38 8	11	SUN.	6 8 7	5 19 6	11	Tues.	6 27 7	5 19 5
12	Fri.	5 54 7	5 38 0	12	Mon.	6 9 3	5 19 3	12	Wed.	6 28 3	5 19 9
13	Sat.	5 55 1	5 37 1	13	Tues.	6 9 9	5 19 0	13	Thurs.	6 28 9	5 20 2
14	SUN.	5 55 4	5 36 3	14	Wed.	6 10 5	5 18 6	14	Fri.	6 29 5	5 20 6
15	Mon.	5 55 8	5 35 5	15	Thurs.	6 11 2	5 18 4	15	Sat.	6 30 1	5 20 9
16	Tues.	5 56 1	5 34 7	16	Fri.	6 11 8	5 18 1	16	SUN.	6 30 7	5 21 3
17	Wed.	5 56 5	5 33 9	17	Sat.	6 12 4	5 17 9	17	Mon.	6 31 2	5 21 8
18	Thurs.	5 56 9	5 33 2	18	SUN.	6 13 0	5 17 6	18	Tues.	6 31 8	5 22 2
19	Fri.	5 57 3	5 32 4	19	Mon.	6 13 6	5 17 4	19	Wed.	6 32 3	5 22 7
20	Sat.	5 57 6	5 31 6	20	Tues.	6 14 2	5 17 3	20	Thurs.	6 32 8	5 23 1
21	SUN.	5 58 1	5 30 9	21	Wed.	6 14 9	5 17 2	21	Fri.	6 33 3	5 23 6
22	Mon.	5 58 5	5 30 2	22	Thurs.	6 15 5	5 17 1	22	Sat.	6 33 8	5 24 1
23	Tues.	5 58 9	5 29 5	23	Fri.	6 16 2	5 17 0	23	SUN.	6 34 4	5 24 7
24	Wed.	5 59 4	5 28 8	24	Sat.	6 16 8	5 17 0	24	Mon.	6 34 9	5 25 2
25	Thurs.	5 59 8	5 28 2	25	SUN.	6 17 4	5 17 0	25	Tues.	6 35 3	5 25 7
26	Fri.	6 0 3	5 27 5	26	Mon.	6 18 1	5 17 0	26	Wed.	6 35 8	5 26 3
27	Sat.	6 0 8	5 26 9	27	Tues.	6 18 7	5 17 0	27	Thurs.	6 36 3	5 26 9
28	SUN.	6 1 3	5 26 3	28	Wed.	6 19 4	5 17 0	28	Fri.	6 36 6	5 27 5
29	Mon.	6 1 7	5 25 7	29	Thurs.	6 20 0	5 17 1	29	Sat.	6 36 9	5 28 1
30	Tues.	6 2 2	5 25 1	30	Fri.	6 20 7	5 17 2	30	SUN.	6 37 3	5 28 7
31	Wed.	6 2 7	5 24 5					31	Mon.	6 37 5	5 29 3

“A many hued jewel set in a sapphire sea. Where the winds and the waters caress and coax the soul to gladness. Where goodfellowship reigns supreme and June abides always. Where earth, with artless charm, plays at being heaven. Where I have left a throb of my heart and where I shall return some day to find it in the gentle custody of the Hawaiian muse of rhythm and sweet melody. Aloha nui!”—Maud Powell.

Total Population by Districts and Islands—1910 and 1920, Comparative.

Hawaii	1920	1910	Oahu	1920	1910
North Hilo.....	5,644	4,077	Honolulu	83,327	52,183
South Hilo.....	23,828	18,468	Ewa	17,899	14,627
Puna	7,282	6,834	Waianae	1,802	1,846
Kau	4,028	4,078	Waialua	7,641	6,083
North Kona.....	3,709	3,377	Wahiawa	4,302	799
South Kona.....	3,703	3,191	Koolauloa	4,490	3,204
North Kohala....	6,275	5,398	Koolaupoko	4,035	3,251
South Kohala....	1,304	922			
Hamakua	9,122	9,037	Midway	123,496	81,993
				31	35
	64,895	55,382	Kauai		
Maui			Waimea	8,672	7,987
Lahaina	7,142	4,787	Niihau	191	208
Wailuku	14,941	11,742	Koloa	7,270	5,769
Hana	3,100	3,241	Kawaihau	4,533	2,580
Makawao	10,900	8,855	Hanalei	2,549	2,457
			Lihue	6,223	4,951
	36,083	28,625			
Molokai	1,784	1,791		29,438	23,952
Lanai	185	131	Total whole group	255,912	191,909

Comparative Table of Population, Hawaiian Islands—Census Period 1866-1920.

Islands	1866	1872	1878	1884	1890	1900	1910	1920
Hawaii.....	19,808	16,001	17,034	24,994	26,754	46,843	55,382	64,895
Maui.....	14,035	12,334	12,109	15,970	17,357	24,797	28,623	36,080
Oahu.....	19,799	20,671	29,236	28,068	31,194	58,504	81,993	123,496
Kauai..	6,299	4,961	5,634	*8,935	11,643	20,562	23,744	29,247
Molokai..	2,299	2,349	2,581	} 2614	2,652	2,504	1,791	1,784
Lanai.....	394	348	214		174	619	131	185
Niihau.....	325	233	177		216	172	208	191
Kahoolawe.....							2	3
Midway.....							35	31
Total.....	62,959	56,897	57,985	80,578	89,900	154,001	191,909	255,912
All Foreigners	4,194	5,366	10,477	36,346	49,368	116,366	153,362	214,162
Hawaiians.....	58,765	51,531	47,508	44,288	40,622	37,636	38,547	41,750

Population of Islands, and of Honolulu and Hilo by Race and Sex, 1920.

From Tables of the Bureau of Census.

Races	All Islands		Honolulu		Hilo	
	Males	Females	Males	Females	Males	Females
Hawaiian	11,990	11,733	4,190	4,269	395	394
Caucasian-Hawaiian	5,528	5,544	2,891	3,079	239	249
Asiatic-Hawaiian	3,524	3,431	1,579	1,523	166	176
Portuguese	13,737	13,265	4,941	5,037	916	920
Porto Rican	3,133	2,469	430	411	62	60
Spanish	1,326	1,104	333	303	26	30
Other Caucasian	12,309	7,399	7,591	5,079	386	305
Chinese	16,197	7,310	8,428	4,955	456	206
Japanese	62,644	46,630	13,490	11,032	2,728	2,121
Korean	3,498	1,452	843	476	56	37
Filipino	16,851	4,180	1,660	453	372	113
All other	409	249	201	135	9	9
Total	151,146	104,766	46,577	36,750	5,811	4,620

Birth, by Countries, of Population, Territory of Hawaii, Census of 1920.

Race	Number	Race	Number
Hawaii	136,349	Italy	60
Philippine Islands	18,728	Japan	60,690
Porto Rico	2,581	Korea	3,498
U. S., exclusive of above	10,816	Norway	141
Atlantic Islands	121	Pacific Islands	170
Australia	159	Poland	58
Austria	124	Portugal	5,794
Canada	472	Russia	342
China	11,164	Scotland	667
Denmark	83	Spain	1,396
England	747	Sweden	108
France	112	Switzerland	50
Ireland	204	All other countries	438
		Total	255,912

Hawaii's Annual Federal Taxation.

Sources	1920	1921	1922
Internal Revenue Office	\$11,927,545	\$20,676,778	\$15,520,853
Custom House Receipts	1,172,394	1,426,716	1,076,163
Post Office Receipts	219,649	303,227	315,116
District Court Receipts	56,534	33,967*	61,591

*Half Year only.

Population in 1920 by Age Groups, Sex and Race.

Races	Under 20		20 to 39 Years		40 Years or over	
	Males	Females	Males	Females	Males	Females
Hawaiian	4,698	4,814	3,699	3,856	3,589	3,057
Caucasian-Hawaiian	3,461	3,421	1,354	1,518	712	604
Asiatic-Hawaiian	2,556	2,428	676	781	289	218
Portuguese	7,851	7,703	3,559	3,095	2,322	1,860
Porto Rican	1,580	1,544	800	575	749	349
Spanish	791	683	245	267	290	154
Other Caucasian	3,244	2,131	5,765	3,105	3,286	2,156
Chinese	4,785	4,490	2,685	1,969	8,717	850
Japanese	25,309	23,483	18,266	16,409	19,053	6,732
Korean	808	765	1,112	495	1,568	192
Filipino	2,550	2,040	12,929	1,922	1,360	217
All other	149	166	123	50	137	33
Total	57,782	53,668	51,213	34,642	42,072	16,422

Comparative Race Population of Hawaii, 1920-1910.

Courtesy Census Bureau, Washington, D. C.

Race	1920	1910	Increase since 1910
The Territory	255,912	191,909	64,003
Hawaiian	23,723	26,041	*2,318
Asiatic-Hawaiian	6,955	3,734	3,221
Caucasian-Hawaiian	11,072	8,772	2,300
Portuguese	27,002	22,301	4,701
Porto Rican	5,602	4,890	712
Spanish	2,430	1,990	440
Other Caucasian	19,708	14,867	4,841
Chinese	23,507	21,674	1,833
Japanese	109,274	79,675	29,599
Filipino	21,031	2,361	18,670
Korean	4,950	4,533	417
Negro	348	695	*347
All other	310	376	*66

*Decrease.

Of the total increase since 1910 in the population of the Territory as a whole (64,003), as shown by the above statement, the Japanese and Filipinos contributed fully three-fourths,—29,599 and 18,670, respectively. The figures show a considerable decrease since 1910 in the number of pure-blood Hawaiians—from 26,041 in 1910 to 23,723 in 1920—but a large gain in part-Hawaiians.

Of the total population of Hawaii in 1920, the males numbered 151,146, or 59.1 per cent, and the females 104,766, or 40.9 per cent. In 1910 the corresponding figures were: males, 123,099, or 64.1 per cent; females, 68,810, or 35.9 per cent. The ratio of males to females was 144.3 to 100 in 1920, as against 178.9 to 100 in 1910.

Births and Deaths by Nationalities, 1922.

For Fiscal Year ending June, compiled from Board of Health Report.

Nationality	Births	Deaths
American, British, German, Russian.....	450	251
Chinese	762	335
Filipino	748	497
Hawaiian	611	780
Part-Hawaiian	1,321	300
Japanese	5,590	1,398
Korean	218	75
Portuguese	1,154	320
Porto Rican	289	113
Spanish	86	16
Other	20	28
Total	11,249	4,113

Vital Statistics by Counties, 1922.

Islands, etc.	Est. Popultn.	Births	Mrrgs.	Deaths
Honolulu City	90,100	4,098	1,438	1,557
Outer Oahu	53,440	1,658	111	614
Hilo City	11,600	716	189	259
Hawaii County (other).....	57,200	1,914	193	685
Maui County	40,170	1,672	252	594
Kalawao County	518	8	5	47
Kauai County	31,510	1,183	174	357
Totals	284,538	11,249	2,362	4,113

Nationality of Plantation Labor, June 30, 1921-1922.

Courtesy Bureau of Labor and Statistics, Hawaiian Sugar Planters' Association.

	1921	1922		1921	1922
Americans	878	944	Japanese	17,446	17,833
Spanish	170	193	Chinese	1,586	1,430
Portuguese	2,500	2,719	Koreans	1,150	1,159
Russians	17	85	Filipinos	12,271	18,600
Hawaiians	1,027	1,098	Others	383	401
Porto Ricans.....	1,279	1,811	Total	38,707	46,273

School Statistics, Territory of Hawaii, 1922.

From Report of the Superintendent of Public Instruction.

NUMBER OF SCHOOLS, TEACHERS AND PUPILS.

Class	Schools	Teachers			Pupils		
		M.	F.	Total	M.	F.	Total
Public Schools..	173	185	1,246	1,431	23,027	21,366	44,393
Private Schools..	63	108	328	436	4,423	3,645	8,068
	236	293	1,574	1,867	27,450	25,011	52,461

AGES ALL PUPILS, ALL SCHOOLS.

Public	Under 6	6—9	10—15	Over 15	Total
Hawaii	83	5,173	5,619	711	11,586
Maui	50	2,967	3,131	244	6,392
Oahu	9	9,440	9,476	2,018	20,943
Kauai	40	2,368	2,897	167	5,472
Total	182	19,948	21,123	3,140	44,397
Private					
Hawaii	161	271	402	101	935
Maui	380	330	425	80	1,215
Oahu	1,043	1,416	2,223	1,232	5,914
Kauai	1	3	....	....	4
Total	1,585	2,020	3,050	1,413	8,068

NATIONALITY ALL PUPILS.

Race	Public	Private	Race	Public	Private
Hawaiian	3,465	655	Chinese	4,116	1,005
Part Hawaiian..	4,796	1,607	Japanese	21,348	1,598
Anglo-Saxon . . .	1,230	1,452	Korean	675	182
Spanish	372	53	Filipino	1,270	107
Portuguese	5,601	1,237	Others	404	105
Porto Rican....	1,134	67	Total	44,393	8,068

Races of Tax Payers of Collections for the Year Ending June 30, 1922.

Anglo Saxons	\$7,868,859.47
Hawaiians	672,093.33
Japanese	512,645.55
Portuguese and Spanish.....	286,707.24
Chinese	335,067.96
. Total	\$9,675,373.55

Import Values from United States, Comparative, for Fiscal Years Ending June, 1921 and 1922.

Compiled from Monthly Summary of Foreign Commerce, Bureau of Statistics.

Articles	Domestic Merchandise	
	1921	1922
Agricultural Implements	\$ 388,214	\$ 181,604
Animals	492,570	206,593
Automobiles and parts of	4,288,290	2,198,848
Books, Maps, Engravings, etc.	850,080	706,696
Boots and Shoes	966,507	626,698
Brass, and manufactures of	311,212	130,909
Breadstuffs	3,883,755	2,502,065
Brooms and Brushes	98,180	58,975
Carriages, Cars, etc., and parts of	408,035	121,898
Cement	659,263	530,222
Chemicals, Drugs, Dyes, etc.	1,088,069	950,939
Clocks, Watches, and parts of	242,008	116,690
Coal	76,821	20,424
Cocoa and Chocolate	119,451	111,895
Coffee	18,105	14,861
Confectionery	465,028	334,276
Copper, and manufactures of	339,676	139,429
Cotton, manufactures of, and clothing	4,737,957	3,427,875
Earthen, Stone and Chinaware	665,861	334,329
Eggs	528,506	497,677
Electrical Machinery and Instruments	2,063,121	1,418,060
Explosives	109,627	73,793
Fertilizers	2,524,606	753,500
Fibers, Textile Grasses, manufactures of	759,499	289,075
Fish	1,049,257	813,238
Fruits and Nuts	1,160,158	987,403
Furniture of Metal	224,517	187,410
Glass and Glassware	506,140	306,283
Hay	211,407	136,239
Household and Personal Effects	156,075	147,533
India Rubber, manufactures of	1,710,641	1,422,756
Instruments, etc., for scientific purposes	132,294	69,443
Iron and Steel, and manufactures of	939,143	415,463
Sheets and Plates, etc.	622,842	179,331
Builders' Hardware, etc.	197,141	209,299
Machinery, Machines, parts of	3,119,220	1,846,406
Nails, Spikes, Pipes, etc.	5,690,307	2,910,807
Jewelry and manufactures, Gold and Silver	336,039	181,071
Lamps, Chandeliers, etc.	57,883	35,324
Lead and manufactures of	99,428	88,786
Leather and manufactures of	394,792	237,294
Musical Instruments	254,341	142,060

Import Values From United States for 1921-1922—Continued

Articles	Domestic Merchandise	
	1921	1922
Naval Stores	\$ 35,544	\$ 29,566
Oil Cloth	52,318	34,327
Oils: Mineral, Crude.....	1,336,651	1,296,073
Refined, and Residuum, etc.....	8,288,461	6,034,729
Vegetable	150,237	122,746
Paints, Pigments and Colors.....	619,044	572,742
Paper and manufactures of.....	1,287,547	984,539
Perfumery, etc.....	287,385	176,756
Phonographs, etc.....	207,574	116,822
Photographic Goods	264,382	218,312
Provisions, etc., Beef Products.....	439,526	161,128
Hogs and other Meat Products.....	1,565,278	1,335,736
Dairy Products	1,730,782	1,252,130
Rice	1,176,424	1,780,129
Roofing Felt, etc.....	102,623	115,097
Salt	31,125	33,816
Silk and manufactures of.....	536,012	403,306
Soap: Toilet and other.....	501,209	442,017
Starch	12,246	10,431
Straw and Palm Leaf, manufactures of.....	223,381	125,116
Sugar, Molasses and Syrup.....	555,148	657,522
Tea	20,022	16,629
Tin and manufactures of.....	3,743,980	1,463,181
Tobacco, manufactures of.....	2,108,912	1,957,651
Toys	163,708	138,288
Vegetables	967,548	863,878
Wood and Mftrs.:		
Lumber, Shingles, etc.....	2,215,810	1,592,895
Shooks, box	924,754	474,398
Doors, Sash, Blinds.....	205,019	189,399
Furniture	557,572	413,289
Trimnings, Molding and other manfrs....	774,168	435,727
Wool and manufactures of.....	1,144,634	647,137
All other articles.....	2,149,024	1,440,636
Total value merchandise shipments.....	\$77,324,114	\$51,581,621

Coin Shipments, Year Ending June 30, 1922.

	Gold	Silver
Ore and base bullion, import.....	\$ 1,890	\$
Bullion, refined, import.....	61,329	439
Coin, domestic, import.....	50,765	1,000
	\$113,984	\$ 1,439
Coin, domestic export.....		103,600

Value Domestic Mdse. Shipments to the United States from Hawaii for Fiscal Years Ending June 30, 1921 and 1922.

Compiled from Monthly Summary of Foreign Commerce and Finance,
Bureau of Statistics.

Articles	1921	1922
Animals	\$ 6,800	\$ 7,999
Bones, hoofs, etc.	728	799
Beeswax	8,196	2,288
Breadstuffs	19,047	8,623
Chemicals, drugs, etc.	39,391	44,197
Coffee	529,769	570,476
Fibers, unmanufactured—Sisal	16,620	3,197
Fish, canned	116,996	26,498
Fruits and nuts:		
Bananas	166,526	181,933
Pineapples	26,098	31,086
Canned Pines	29,745,818	19,737,405
Prepared or preserved.	19,929	11,624
Nuts	23,576	4,831
Hides and skins.	170,598	145,372
Honey	71,767	63,565
Household and personal effects.	700	.....
Meat products, tallow.	17,437	18,394
Molasses	618,874	204,129
Musical Instruments	15,415	10,072
Paper and manufactures of.	5,214	2,065
Pineapple juice	69,517	81,562
Rice	59,923	54,999
Straw and palm leaf, manufactures of.	4,017	2,172
Sugar, brown	91,048,269	43,906,777
Sugar, refined	2,583,396	1,202,108
Tobacco leaf, unmanufactured.	1,438	3,097
Vegetables	37,381	36,096
Wool, raw	101,756	15,726
Wood and manufactures of.	35,065	15,089
All other articles.	101,294	23,359
Total value shipments Hawaiian products.	\$125,661,585	\$66,415,538
Returned shipments merchandise.	1,967,125	1,836,515
Total foreign merchandise.	64,169	83,020
Total shipments merchandise.	\$127,692,879	\$68,335,073

Value Foreign Imports to March 31, 1922.

Bags	\$ 355,588	Food Supplies	\$3,128,107
Chemicals	1,152,829	Spirits	1,508
Coal	419,502	Other	2,250,285
Cottons	411,708		
Fertilizers	100,146	Total	\$7,819,673

Quantity and Value of Principal Articles of Domestic Produce Shipped for the Fiscal Year Ending June 30, 1922.

Compiled from Monthly Summary of Foreign Commerce, and Customs Tables.

Articles	Quantity	Value
Sugar, raw	pounds... 1,170,814,194	\$43,907,150
Sugar, refined	pounds... 20,817,906	1,202,108
Coffee	pounds... 4,507,511	692,498
Rice	pounds... 1,096,924	55,367
Fibers, sisal	tons 23	3,197
Fish, canned .....	.....	26,498
Fruits: Bananas	bunches.. 186,143	181,933
Fresh Pineapples .....	.....	31,086
Canned Pineapples .....	.....	19,737,405
All other .....	.....	11,624
Nuts . . . . .	.....	4,831
Fruits and Nuts* .....	.....	234,674
Pineapple Juice .....	.....	81,562
Beeswax	pounds.. 10,380	2,288
Honey	pounds.. 1,353,087	63,565
Molasses	gallons.. 3,686,131	204,129
Hides and Skins	pounds.. 1,524,802	145,372
Tallow	pounds.. 360,689	18,394
Wool, raw	pounds.. 88,075	15,726
Tobacco, unmanufactured leaf.....	pounds.. 3,719	3,097

*Shipments Foreign.

Hawaiian Imports and Exports for Year Ending March 31, 1922.

Courtesy of Collector of Customs.

Countries	Imports	Exports
Australia	\$ 360,391	\$ 18,378
Br. Oceania	915	54,982
Br. India	703,418	4,374
Canada	78,012	226,170
Chili	739,033	.....
England	266,071	46
France	12,959	18,848
Germany	15,932	.....
Hongkong	681,439	15,861
Japan	3,843,972	62,114
Scotland	5,171	.....
Other	1,112,360	731,665
	\$ 7,819,673	\$ 1,132,438
United States, year ending June 30.....	51,581,621	68,335,073
Totals	\$59,401,294	\$69,457,511

Arrivals and Departures of Shipping for Fiscal Year Ending June, 1922.

Compiled from Board of Harbor Commissioners Report.

Months	Honolulu				Hilo	
	Steam		Sail		No.	Tons
	No.	Tons	No.	Tons		
1921 { July	46	346,181	6	4,920	24	81,623
August	51	374,905	5	4,431	20	75,143
September	50	385,388	4	4,202	17	52,979
October	51	388,991	4	3,203	21	77,461
November	51	346,289	4	2,695	7	39,742
December	58	433,033	2	1,735	9	50,869
1922 { January	58	414,400	2	1,241	7	48,078
February	44	346,446	2	1,286	6	55,890
March	62	462,186	3	2,438	12	61,662
April	55	397,225	5	8,018	9	63,852
May	55	404,778	5	3,771	14	51,782
June	45	359,019	3	2,307	8	54,060
Total	626	4,658,841	45	40,247	154	713,141

Kahului reports 68 vessels, of 463,782 tons.

Port Allen reports 39 vessels, of 214,134 tons.

Passengers To and From Hawaii, Fiscal Year, 1922.

Courtesy R. L. Halsey, Immigration Service.

	Aliens		Citizens	
	Arrivals	Departures	Arrivals	Departures
Foreign	5,464	5,725	6,851	3,830
Mainland	799	841	10,489	8,854
Insular Possession	9	8	4,263	1,894
Total	6,272	6,574	21,603	14,578

Export Value Pineapple Products to Mainland.

	1919	1920	1921	1922
Fresh Pineapples	\$ 16,057	\$ 32,949	\$ 26,098	\$ 31,086
Canned Pineapples	11,989,611	18,869,449	29,745,818	19,737,405
Pineapple Juice	2,420	58,169	69,517	81,562
Total	\$12,008,088	\$18,960,567	\$29,841,433	\$19,850,053

Hawaiian Sugar Export Statistics.

For earlier years see Annuals 1896-1915.

Year	Sugar		Molasses		Total Export Value
	Pounds	Value	Gallons	Value	
1915	1,280,917,435	\$ 52,953,009	5,202,913	\$ 195,485	\$ 53,148,594
1916	1,137,164,228	54,418,300	8,399,014	327,284	54,745,584
1917	1,162,805,056	62,741,164	10,979,383	392,110	63,133,274
1918	1,080,908,797	64,108,540	14,671,477	634,671	64,743,211
1919	1,215,594,766	75,511,738	11,065,996	591,490	76,103,228
1920	1,056,413,393	118,998,848	9,605,486	491,815	119,490,663
1921	978,082,427	93,686,138	10,963,327	618,874	94,305,012
1922	1,191,632,100	45,109,258	3,686,131	204,129	45,313,387

Hawaii's Annual Trade Balance.

Year	Imports	Exports	Excess Export Values	Custom House Receipts
1915	\$26,416,031	\$ 62,464,759	\$36,048,728	\$ 1,019,534
1916	34,098,210	64,670,852	30,572,642	1,161,051
1917	46,358,341	75,115,983	28,757,642	1,169,085
1918	51,801,204	80,545,606	28,744,402	1,009,243
1919	51,895,113	98,859,311	46,964,198	858,258
1920	68,876,094	145,831,074	76,954,980	1,172,394
1921	89,885,993	131,239,887	41,353,894	1,426,716
1922	59,401,294	69,457,511	10,056,217	1,076,163

Receipts, Expenditures, and Public Debt of Hawaii.

(From Official Reports.)

Years	Revenue	Expenditures	Cash Balance In Treasury	Public Debt
1915	\$ 4,539,241.04	\$ 4,446,415.65	\$ 464,040.43	\$ 7,873,500.00
1916	5,626,905.33	5,553,700.66	539,388.71	8,024,000.00
1917	5,944,352.95	5,638,429.13	889,508.42	7,874,000.00
1918	7,208,047.73	7,441,043.45	711,517.21	8,749,000.00
1919	7,921,671.90	8,140,768.79	442,609.95	9,194,000.00
1920	10,925,406.97	10,849,601.12	506,334.53	10,894,000.00
1921	13,776,308.00	13,243,048.93	1,064,827.26	12,603,000.00
1922	13,539,016.48	13,157,124.09	1,400,567.19	14,649,000.00

Growth of Bank Deposits, Territory of Hawaii.

Fiscal Year	No. Banks	Commercial Deposits	Savings Deposits	Total
1915	19	\$12,378,041.53	\$ 7,736,569.32	\$20,114,610.85
1916	19	17,317,339.40	9,061,910.28	26,379,249.68
1917	22	22,486,524.31	10,205,496.70	32,692,021.01
1918	23	24,620,004.80	9,892,708.08	34,512,712.88
1919	26	24,898,287.81	10,450,846.55	35,349,134.36
1920	26	36,975,335.93	15,807,778.11	52,783,114.04
1921	31	32,545,538.38	18,635,866.41	51,181,404.79
1922	28	28,379,489.19	17,863,992.17	46,243,481.36

Hawaiian Corporations, 1922.

Tables Courtesy of Treasury Department.

Class	Total No.	Number and Capital Incorporated before and after August 12, 1898				Total
		No.	Before	No.	After	
Agriculture ..	110	37	\$45,703,000	73	\$ 41,026,815	\$ 86,729,815
Mercantile...	613	35	15,608,285	578	70,627,588	86,235,873
Railroad.....	9	4	7,350,000	5	7,759,960	15,109,960
Street Car...	2	..	.....	2	2,950,000	2,950,000
Steamship...	3	1	3,000,000	2	206,000	3,206,000
Bank.....	11	1	600,000	10	3,250,000	3,850,000
Sav. & Loan.	24	..	.....	24	1,942,000	1,942,000
Trust.....	10	1	500,000	9	2,250,000	2,750,000
Insurance....	2	..	.....	2	250,000	250,000
Total.....	989	113	\$72,761,285	876	\$130,262,363	\$203,023,648

Assessed Values Real and Personal Property (by races) for 1922.

Taxpayers	Real Property		Personal Property		Total Assd. Value
	No.	Assd. Value	No.	Assd. Value	
Corporations, firms	911	\$ 92,470,631	1,169	\$ 95,623,077	\$188,093,708
Anglo-Saxon	3,634	31,063,182	2,824	4,943,623	36,006,805
Hawaiians	6,625	17,007,229	2,237	1,893,164	18,900,393
Port. & Spanish..	2,955	8,454,322	1,870	1,081,690	9,536,012
Chinese	1,527	5,932,233	1,877	2,408,044	8,340,277
Japanese	1,750	3,768,158	4,630	7,017,101	10,785,289
Totals	17,402	\$158,695,755	14,607	\$112,966,729	\$271,662,484

Domestic Produce to Foreign Countries, Year Ending March 31, 1922.

	Pounds	Value
Sugar	7,480	\$ 373
Coffee, raw	794,190	122,022
Fruits and Nuts.....	.....	284,674
Rice	6,400	368
Other . . . . .	.....	693,099
		\$1,100,536

Resources of Hawaii, 1922.

Population, Territory, census of 1920.....	255,912
Assessed valuation, Territory.....	\$271,662,484
Assessed value of real estate.....	158,695,755
Assessed value of personal property.....	112,966,729
Assessed value, Honolulu and Oahu.....	155,561,687
Assessed value, Honolulu realty.....	92,800,002
Assessed value, Honolulu personality.....	62,761,685
Corporate-owned property in Territory.....	188,093,708
Individually-owned property in Territory.....	83,568,776
Amount Insurance carried.....	189,412,087
Banks have credits.....	46,243,481
Banks have commercial accounts.....	28,379,489
Banks have savings accounts.....	17,863,992
Corporations (989) are capitalized at.....	203,023,648
Sugar exports for 1922, tons.....	595,816
Value sugar exports, 1922.....	45,109,258
Estimated pineapple pack, 1922 (cases).....	5,250,000
Total value all exports.....	69,457,511
Total value of imports.....	59,401,294
Excess value exports over imports.....	10,056,217
Amount of Public Debt.....	14,649,000
Total amount year's Revenue.....	13,539,016

Summary of Insurance Business, Territory of Hawaii, for 1921.

Class	Amount Written	Amount Premiums	Losses and Claims Paid
Fire	\$ 65,743,987.03	\$1,247,152.60	\$ 187,640.45
Marine	115,199,774.06	298,293.43	60,276.87
Life	8,468,326.00	*2,060,776.20	596,293.61
Accident and Health.....		103,576.80	52,950.12
Auto		231,625.23	105,682.10
Burglary		7,558.73	2,993.45
Employers' Liability		7,905.00	640.41
Surety and Fidelity.....		102,389.57	3,159.93
Plate Glass		8,178.06	2,416.93
Workmen's Compensation...		294,161.63	99,562.77
Other		19,001.61	7,134.85
Total	\$189,412,087.09	\$4,380,618.86	\$1,118,751.49

* Of this amount \$1,702,141.84 are renewals.

Hawaii's Bonded Debt, June 30, 1921.

Public Improvement 3½% Bonds.....	\$ 494,000
Public Improvement 4% Bonds.....	7,680,000
Public Improvement 4½% Bonds.....	6,050,000
Public Improvement 5% Bonds.....	425,000
Total Bonds outstanding.....	\$14,649,000

PACK OF HAWAIIAN CANNED PINEAPPLE

Compiled from the Records of the Association of Hawaiian Pineapple Canners

Companies		1919	1920	1921
California Packing Corporation.....		1,503,006	2,054,238	1,776,160
Hawaiian Pineapple Co., Ltd.....		1,620,223	1,774,649	1,543,883
Libby, McNeill & Libby of Honolulu, Ltd.....		1,211,103	1,022,241	638,100
Pearl City Fruit Co., Ltd.....		60,042	144,228	212,965
Hawaii Fruit Packers, Ltd.....		.....	7,453	20,644
Hawaiian Canneries Co., Ltd.....		59,195	46,172	74,481
Kauai Fruit & Land Co., Ltd.....		136,581	164,991	96,746
Baldwin Packers.....		83,223	93,089	100,375
Haiku Fruit & Packing Co., Ltd.....		398,603	633,392	667,268
Pauwela Pineapple Company.....		.....	37,729	108,340
Hawaiian Fruit Canning Co. (now out of business).....		.....	.....	9,092
Hawaii Fruit Products Co., Ltd. (now out of business).....		.....	.....	3,560
Kohala Pineapple Co., Ltd.....		.....	.....	10,889
Total Pack		5,071,976	5,978,182	5,262,503

PINEAPPLE COMPANIES OPERATING IN THE HAWAIIAN ISLA NDS

Company:	Office Location:	Manager:	Representatives:
Cal. Packing Corporation.....	Honolulu, Oahu.....	H. A. White.....	Cal. Packing Corporation, San Francisco
Hawaiian Pineapple Co., Ltd.....	Honolulu, Oahu.....	James D. Dole.....	Hawn. Pineapple Co., Ltd., San Francisco
Libby, McNeill & Libby of Hon., Ltd. Honolulu, Oahu.....	L. E. Arnold.....	Libby, McNeill & Libby, S. F. & Chicago	
Pearl City Fruit Co., Ltd.....	Waiaawa, Oahu.....	L. M. Judd.....	T. H. Davies & Co., Honolulu
Hawaii Fruit Packers, Ltd.....	Honolulu, Oahu.....	L. Smith Hiorth.....	Warmington-Duff Co., San Francisco
Hawaiian Canneries Co., Ltd.....	Kapaa, Kauai.....	Albert Horner.....	American Factors, Ltd., Honolulu
Kauai Fruit & Land Co., Ltd.....	Lawai, Kauai.....	W. D. McBryde.....	Alexander & Baldwin, Ltd., Honolulu
Baldwin Packers.....	Lahaina, Maui.....	D. T. Fleming.....	Alexander & Baldwin, Ltd., Honolulu
Haiku Fruit & Packing Co., Ltd.....	Haiku, Maui.....	A. F. Tavares.....	Haiku Fruit & Packing Co., Ltd., San Fran.
Pauwela Pineapple Co.....	Haiku, Maui.....	W. O. Aiken.....	Pauwela Pineapple Co., San Francisco
Kohala Pineapple Co., Ltd.....	Kohala, Hawaii.....	A. E. Lister.....	Prat, Low Preserving Co., Santa Clara, Cal.
Honolulu Fruit Co., Ltd.....	Honolulu, Oahu.....	Chock Hoon.....	None

Taxes by Division and Counties for the Fiscal Year Ended June 30, 1922.

Courtesy of Auditing Department

DIVISION OF TAXES	OAHU	MAUI	HAWAII	KAUAI	TOTALS
Special territorial.....	\$ 100,858.55	\$	\$	\$	\$ 100,858.55
Real estate taxes.....	2,180,049.82	705,070.31	936,572.31	329,438.85	4,151,131.29
Personal property taxes.....	1,592,010.05	542,562.50	694,185.30	362,286.80	3,191,044.65
10% penalty.....	5,642.07	585.00	1,857.13	227.80	8,312.00
Court costs and interest.....	10,247.31	610.13	2,699.74	1,577.80	15,134.98
Bicycles.....	2,093.40	910.80	666.80	666.60	4,337.60
Automobiles.....	7,272.25	836.05	3,833.20	2,673.00	14,614.50
Carriages, carts, etc.....	8,560.00	1,715.00	3,180.00	2,400.00	15,855.00
Brakes and sulkies.....	184.00	32.00	74.00	138.00	428.00
Road tax.....	75,831.47	21,808.95	33,902.86	19,520.30	151,163.58
Poll tax.....	37,317.01	10,881.20	16,819.73	9,738.35	74,756.29
Dog and dog tags.....	2,008.00	779.46	1,850.85	1,115.40	5,753.71
School tax.....	74,670.82	21,762.36	33,616.26	19,479.95	149,529.39
Income tax.....	931,623.86	131,128.03	61,854.65	23,921.80	1,148,528.34
Special income tax.....	546,968.02	69,997.49	18,489.16	8,471.00	643,925.67
Total.....	\$5,575,336.63	\$1,508,679.28	\$1,809,601.99	\$ 781,655.65	\$9,675,373.55

TABLE OF RAINFALL, Principal Stations.

Compiled from Weather Bureau Reports.

	Observer	1921					
		July	Aug.	Sept.	Oct.	Nov.	Dec.
Hawaii							
Hakalau	Hak. Sug. Co....	8.72	12.54	6.39	10.51	22.65	19.95
Hilo (town).....	C. E. Martin....	7.54	10.54	7.40	13.90	27.20	15.84
Holualoa	Kona Dev. Co....	8.30	7.14	4.59	5.54	1.61	11.65
Honokaa	Hon. Sug. Co....	4.61	3.14	1.62	4.70	24.79	14.13
Kapoho	H. J. Lyman....	6.66	5.10	6.63	6.92	6.34	8.27
Kealakekua	Robt. Wallace....	6.19	4.95	1.85	4.96	3.85	9.54
Kohala	Dr. B. D. Bond...	5.22	4.70	3.07	2.85	12.61	11.88
Kukaiua Mill....	A. R. Phillip....	6.89	4.13	3.84	8.03	28.57	17.13
Laupahoehoe ...	A. L. Moses....	9.55	9.79	6.07	10.94	28.38	15.51
Naalehu	Hutch. Pln. Co....	0.92	2.97	2.11	1.68	1.08	2.54
Olaa (17 miles)..	Olaa Sug. Co....	16.71	14.11	11.98	14.99	31.38	13.34
Ookala	Kaiwiki Sug. Co..	10.51	10.14	5.85	9.39	25.18	14.38
Paauihu	Paauihu Sug. Co.	4.52	3.10	1.37	4.99	21.51	14.02
Pahala	Haw. Agrl. Co....	0.59	1.17	0.54	7.34	1.38	2.46
Pepeekeo	Pepeekeo S. Co..	8.64	9.28	5.89	12.59	20.80	16.52
Ponahawai	J. E. Gamalielson.	12.50	12.74	7.96	15.84	32.44	15.31
Volcano Obs.....	T. A. Jaggar, Jr..	4.25	5.10	5.16	11.37	10.80	6.47
Waiakea Mill....	Waiakea Mill....	7.85	8.60	7.24	14.49	27.03	13.98
Waimea	Frank Pinho....	4.07	2.44	2.60	1.68	12.98	5.14
Maui							
Haiku Exp. Sta..	W. A. Baldwin..	7.42	4.69	4.05	5.06	9.80	12.65
Haleakala Ranch.	Hal. Ranch Co...	1.18	0.73	0.50	1.20	22.76	15.03
Hana	Kaeleku Sug. Co..	6.31	3.70	4.09	3.07	9.86	10.33
Kanae Valley ...	W. F. Pogue....	17.82	13.24	12.00	14.87	37.55	44.71
Kula (Erehwon)..	A. von Tempsky..	0.00	1.46	1.60	0.52	2.44	5.02
Makawao	J. E. Tavares....	2.56	0.81	1.24	2.41	18.52	14.28
Puunomalei	A. McKibbin....	6.66	2.65	1.93	4.55	19.10	14.14
Wailuku	Bro. Robert.....	0.17	0.15	0.12	1.13	4.80	9.01
Oahu							
Electric Light Sta.	Alex. Walker....	10.22	7.15	3.15	10.12	8.24	19.93
Ewa Plantation ..	J. A. Hattie.....	0.21	0.25	0.40	3.16	0.20	5.65
Honolulu W. B.,..	Weather Bureau..	0.79	0.94	1.09	4.34	0.37	6.12
Kahuku	R. T. Chrstfrsn..	1.67	1.10	1.34	2.16	0.65	3.40
Kinaiu Street....	W. R. Castle....	1.16	1.09	1.21	4.83	0.23	6.72
Luakaha (lower).	L. A. Moore.....	9.10	11.41	9.09	9.79	10.00	19.41
Manoa Valley ...	Miss C. Hall....	4.90	3.84	3.87	6.19	2.94	13.07
Maunawili Ranch.	John Herd.....	5.22	3.13	2.42	9.54	5.41	16.35
Schofield Barracks	Med. Corps, U.S.A.	1.75	1.35	0.88	3.00	0.85	5.85
Waihua Mill.....	Waihua Agr. Co..	0.54	0.72	0.28	2.69	0.57	4.17
Waiawa	Pearl City F. Co..	4.18	2.17	0.90	2.16	1.37	9.68
Waimalu	Hon. Pln. Co....	2.00	0.66	0.79	3.51	1.13	7.12
Waimanalo	Edwd. Todd.....	0.85	0.84	0.75	4.84	2.48	9.28
Kauai							
Eleele	McBryde Sug. Co..	0.79	1.06	0.98	4.40	0.25	6.79
Grove Farm.....	G. N. Wilcox....	1.95	2.30	1.76	6.13	1.84	13.44
Kealia	Makee Sug. Co...	1.29	1.01	1.40	4.34	1.10	8.17
Kilauea	Kilauea Sug. Co..	2.58	2.23	3.05	4.36	3.75	8.98
Kukuilua	F. S. Christian...	1.92	1.20	1.25	3.40	1.70	10.95
Waiawa	E. A. Knudsen...	0.00	0.25	0.00	0.82	0.09	6.18

RAINFALL TABLE.

27

Throughout the Hawaiian Islands, 1921-1922.

By L. H. Daingerfield, Meteorologist. Continued from last Annual.

	Feet Elv.	1922						Year
		Jan.	Feb.	Mch.	Apr.	May	June	
Hawaii								
Hakalau	200	24.19	20.44	43.87	15.02	6.68	1.77	192.73
Hilo	40	21.65	18.95	66.96	13.11	7.69	2.32	213.10
Holualoa	1450	4.96	0.74	3.30	6.96	4.50	6.38	65.17
Honokaa	461	10.35	8.24	15.54	2.14	1.42	0.43	91.11
Kapoho	110	16.47	10.40	29.22	.....	3.78	2.29	.....
Kealakekua	1450	6.12	1.93	0.58	8.60	2.54	5.52	56.63
Kohala	537	8.82	5.45	12.13	4.70	3.19	1.04	75.66
Kukaiau	260	14.98	6.85	22.15	5.25	1.99	1.89	121.70
Laupahoe	110	17.01	24.11	28.37	10.11	7.19	2.25	169.28
Naalehu	650	6.98	10.43	2.57	1.49	0.67	0.61	34.05
Olaa, Puna	1530	29.52	23.59	51.64	19.35	13.68	3.96	244.25
Ookala	400	17.35	12.48	19.80	8.58	5.31	1.69	140.66
Paaui Mill	400	10.59	6.82	16.09	1.99	1.46	0.37	86.83
Pahala	850	6.73	5.93	3.57	1.77	0.44	0.84	32.76
Pepeekeo	100	23.37	17.65	34.87	12.70	7.38	2.31	172.00
Ponahawai	500	23.03	21.81	57.53	18.92	9.50	3.24	230.82
Kilauea Crater	3984	16.93	15.78	28.13	9.38	3.45	1.28	118.10
Waiakea	50	27.48	12.43	52.97	12.61	7.06	2.46	194.20
Waimea	2700	6.61	8.91	9.06	3.05	1.47	2.37	60.38
Maui								
Haiku Exp. Sta.	700	21.70	9.42	9.25	3.67	4.60	0.81	93.12
Haleakala Ranch	2000	16.10	11.45	9.54	3.01	0.21	0.00	81.71
Hana	200	27.65	5.16	5.43	2.00	2.79	2.86	83.25
Keanae	1000	47.24	23.25	39.14	19.92	10.95	3.43	284.12
Erehwon	4000	5.45	3.14	2.73	3.64	0.75	0.18	26.93
Makawao	1700	17.04	11.00	11.25	1.98	0.48	0.03	81.60
Puuomalei	1300	.....	13.92	14.52	2.15	0.93	0.23	.....
Wailuku	200	7.87	1.59	3.45	3.06	0.12	0.01	31.48
Oahu								
Nuuanu Elec. Sta.	405	21.13	7.87	13.07	5.17	8.57	2.28	121.90
Ewa	50	3.06	0.32	1.82	0.08	0.40	0.05	15.60
U.S. Weather Bu.	111	6.39	0.77	3.54	0.37	0.90	0.42	26.04
Kahuku	25	5.02	4.37	3.04	3.72	1.25	1.04	28.76
Honolulu	50	7.30	1.40	.....	0.42	0.97	0.76	.....
Nuuanu W. Wks.	881	17.86	7.35	8.01	7.76	9.98	4.92	124.68
Oahu Ave.	210	13.42	3.60	8.16	2.07	4.86	1.68	68.60
Maunawili	250	7.85	5.66	3.57	5.98	4.58	3.89	73.60
Leilehua	990	5.49	1.48	4.53	0.84	1.70	0.70	28.42
Waialua	30	4.00	2.87	2.08	1.38	0.80	0.34	20.44
Ewa	675	8.81	1.35	5.31	0.91	2.48	2.33	41.65
Ewa	200	3.78	1.69	3.40	0.59	0.48	1.15	26.30
Waimanalo	25	5.18	1.55	1.26	3.46	.....	1.50	.....
Kauai								
Eleele	150	4.69	2.76	1.99	1.41	2.55	0.45	28.12
Lihue	200	6.02	4.35	2.69	2.85	4.38	0.37	48.08
Kealia	15	5.94	1.71	1.29	4.80	3.16	0.30	34.51
Kilauea	342	5.97	5.92	4.87	7.59	4.92	0.34	54.56
Koloa	100	5.10	5.70	2.50	1.60	3.25	0.90	39.47
Waimea	35	1.30	0.00	0.55	1.00	0.59	1.27	12.05

Summary of Meteorological Observations, Honolulu, 1921-1922.

Compiled from U. S. Weather Bureau Records, by L. H. Daingerfield, Meteorologist.

(Continued from preceding Annuals.)

MONTH	BAROMETER		RAIN-FALL	REL. HUM.		EXTREME TEMPERATURE		MEAN TEMPERATURE			Cloud Am't.	Wind Velocity
	8 a.m.	8 p.m.		8 a.m.	8 p.m.	Max.	Min.	Mean Maximum.	Mean Minimum.	Mean of Max. & Min.		
July	30.04	30.02	0.79	68	68	85	71	82.9	73.6	78.2	5.1	9.0
August	30.02	30.00	0.94	65	68	87	70	83.1	73.8	78.4	4.1	7.9
September	30.01	30.00	1.09	65	68	84	70	82.5	73.4	78.0	5.9	9.3
October	30.02	30.01	4.34	70	71	85	68	81.5	71.5	76.5	5.4	7.1
November	30.02	30.01	0.37	71	71	81	67	78.6	70.3	74.4	6.1	8.8
December	30.02	30.01	6.12	72	75	83	64	76.5	68.7	72.6	5.6	8.5
January	30.03	30.01	6.39	73	72	80	62	75.8	66.0	70.9	6.5	9.2
February	30.04	30.04	0.77	69	71	78	63	75.6	66.6	71.1	7.4	9.4
March	30.08	30.06	3.54	68	71	81	63	76.9	66.8	71.8	5.6	8.5
April	30.07	30.05	0.37	66	69	82	66	79.1	69.2	74.2	5.3	8.8
May	30.08	30.06	0.90	66	66	81	67	78.8	69.8	74.3	5.7	10.3
June	30.04	30.02	0.42	68	69	83	69	80.3	71.9	76.1	6.1	8.1
Year	30.04	30.02	26.04	68.4	69.9	82.5	66.7	79.3	70.1	74.7	5.7	8.7

Rulers of Hawaii: Their Birth, Accession, Length of Reign, Etc.

(Compiled for the Annual, from the best recognized authorities.)

Name	Time and Place of Birth	Began to Reign	Age on Acc'n.	Date and Place of Death.	Age	Length of Reign
Kamehameha I.	Nov. 1737, in Kohala.	1782	45 yrs.	May 8, 1819, in Kailua.	81 yrs. 6 mos.	37 yrs.
Kamehameha II.	1797, in Hilo.	May 8, 1819	22 "	July 13, 1824, in London.	27 yrs.	5 yrs. 3 mos.
Kamehameha III.	Mar. 17, 1818, in Keauhou.	1Mar. 17, 1833	19 "	Dec. 15, 1854, in Honolulu.	40 yrs. 9 mos.	21 yrs. 9 mos.
Kamehameha IV.	Feb. 9, 1834, in Honolulu.	Dec. 15, 1863	20 "	Nov. 30, 1863, in Honolulu.	29 yrs. 9 mos.	8 yrs. 11 1/2 mos.
Kamehameha V.	Dec. 11, 1830, in Honolulu.	Nov. 30, 1863	33 "	Dec. 11, 1872, in Honolulu.	42 yrs.	9 yrs. 11 days
Lunalilo	Jan. 31, 1835, in Honolulu.	2Jan. 9, 1873	38 "	Feb. 3, 1874, in Honolulu.	39 yrs.	1 yr. 25 days
Kalaka'ua	Nov. 16, 1836, in Honolulu.	3Feb. 12, 1874	37 "	Jan. 20, 1891, San Francisco	54 yrs. 2 mos.	16 yrs. 11 1/4 mos.
Liliuokalani	Sept. 2, 1838, in Honolulu.	Jan. 29, 1891	52 "	Deposed Jan. 17, 1893. Nov. 11, 1917, in Honolulu	79 yrs. 2 mos.	2 yrs. nearly

1 Following a period of regency, from June 6, 1825, under Kaahumanu and Kalamoku, during his minority.

2 3 Elected by vote of Nobles and Representatives.

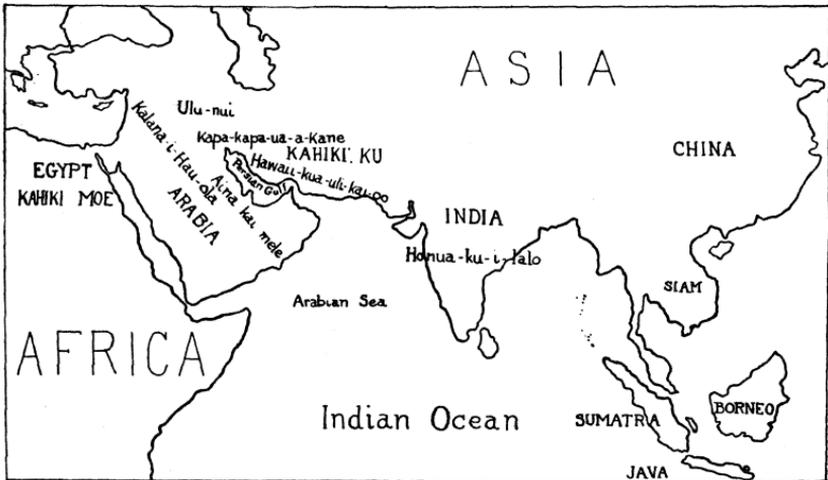
Hawaiian Government Changes Since the Monarchy.

Form	Date Effectuated	Ruler	Office	Remarks
Provisional Government	Jan. 17, 1893	Sanford B. Dole	President	Till changed to a Republic, July 4, 1894.
Republic of Hawaii	July 4, 1894	Sanford B. Dole	President	Till Annexation with U. S., June 14, 1900.
Territory of Hawaii	June 14, 1900	Sanford B. Dole	Governor	Resigned November 23, 1903.
	Nov. 23, 1903	Geo. R. Carter	Governor	Resigned August 15, 1907.
	Aug. 15, 1907	Walter F. Frear	Governor	Resigned November 29, 1913.
	Nov. 29, 1913	Lucius E. Pinkham	Governor	Term expired.
	June 22, 1918	Chas. J. McCarthy	Governor	Resigned July 5, 1921.
	July 5, 1921	W. R. Farrington	Governor	Incumbent.

HAWAII-LOA

Traditional Discoverer and First Settler of Hawaii.

AMONG the various Hawaiian traditions touching the origin of these islands and the source and migration of their first inhabitants, less mysticism and evident manipulation by rival priestly or political factions for supremacy of ancestry is found in that of Hawaii-Loa than any other, and the special effort that has been put forth in recent years—and is now in progress—to solve the question of the origin and migrations of



Traditional Ancestral Home of Hawaii-Loa

the Polynesian Race, naturally awakens interest in the subject as to Hawaii's share in the movement which peopled the islands of the Pacific to warrant this reproduction of their early traditional account.

Hawaii-Loa, known also as "*Ke Kowa i Hawaii*," was one of four children of Aniani ka Lani, all of whom were born on the east coast of a country called "*Ka aina kai melemele a Kane*" (Kane's land of the handsome sea).

Fornander in his research work of many years (1850 to 1877) on this subject places this original home-land of Hawaii-Loa as in ancient Chaldea, at the head of the Persian Gulf, and his

advent, according to the legend, as being in the seventeenth generation after the flood. This and other legends refer to a far western habitat as the birthplace of their ancestors; a land known under many names, but the most frequently occurring is "*Kapa-kapa-ua-a-Kane.*" It is also called "*Hawaii-kua-ulikai-o'o*" (Evergreen Hawaii of dotted sea). It is said to have been situated in *Kahiki-ku*, or the large continent to the east of *Kalana-i-Hau-ola*, or the place where the first of mankind were created, while *Kahiki-moe* was the name of the large land or continent to the west of this same "*Kalana-i-Hau-ola.*"

A condensed account of the tradition of this intrepid voyager and discoverer (to be found in "Bishop Museum Memoirs," vol. VI., pp. 278-281), presents the following:

"Aniani ka Lani is quoted by both Tahitian and Hawaiian legends as a progenitor of their nations. In his time this race got far from the original homeland. Hawaii-Loa was one of the four children of Aniani ka Lani. The other three were Ki, who settled in Tahiti, Kana-Loa and Laa-Kapu. Hawaii-Loa was a distinguished man and noted for his fishing excursions which would occupy sometimes months, and sometimes the whole year, during which time he would roam about the ocean in his big vessel (*waa*), called also a ship (*moku*), with his people, his crew and his officers and navigators.

"One time when they had thus been long out on the ocean, Makalii, the principal navigator, said to Hawaii-Loa: "Let us steer the vessel in the direction of Iao, the Eastern Star, the discoverer of land (*Hoku hikina kiu o na aina*). There is land to the eastward, and here is a red star '*hoku ula*' (Aldebaran) to guide us, and the land is there in the direction of those big stars which resemble a bird." And the red star, situated in the lap of the goats (*i ka poli o na kao*) was called Makalii after the navigator's name; other red stars in the circle of the Pleiades were called the cluster of Makalii.

"So they steered straight onward and arrived at the easternmost island. They went ashore and found the country fertile and pleasant, filled with *awa*, coconut trees, etc., and Hawaii-Loa, the chief, called that land after his own name. In his time the ocean he called *Kai holo o ka Ia* (Sea where the fish do run). At the time of his discovery there existed only the two islands

of Hawaii and of Maui, the first of which was called after himself, and the second was named after his eldest son. The other islands of this group are said to have been hove up from the sea by volcanoes during and subsequent to the time of Hawaii-Loa. These two large islands were then uninhabited. Hawaii-Loa and his followers were the first inhabitants.

“Here they dwelt a long time and when their vessel was filled with food and with fish, they returned to their native country with the firm intention to come back to Hawaii-*nei* which they preferred to their own country. They had left their wives and children at home; therefore they returned to fetch them.

“And when they arrived at their own country and among their relations, they were detained a long time before they set out again for Hawaii.

“At last Hawaii-Loa started again, accompanied by his wife and his children and dwelt in Hawaii, and gave up all thought of ever returning to his native land. He was accompanied also in this voyage by a great multitude of people; steersmen, navigators, shipbuilders, and this and that sort of people. Hawaii-Loa was chief of all this people, and he alone brought his wife and children. All the others came singly without women. Hence he is called the special progenitor of this nation.

“On their voyage hither the Morning Star (*Hoku Loa*) was the special star that they steered by. Hawaii-Loa called the islands after the names of his children, and the stars after his navigators and steersmen.

“After Hawaii-Loa had been sometime in this country (Hawaii *nei*), he made another voyage to find his brothers, and to see if they had any children who might become husbands or wives for his own. On this voyage he fell in with his younger brother Ki, on the island of Tahiti, where Ki had settled and called it after one of his own names. Hawaii-Loa and Ki then sailed together to the southward (*i ka mole o ka honua*), where they found an uninhabited island which Hawaii-Loa called after his own name, and another smaller island which he called after his daughter, ‘Oahu’.

“When they had finished their business here they returned to Hawaii, and the *Hoku-Iwa* stars and *Hoku Poho ka Aina*, were those that they steered by. On his outward voyage from Hawaii

the star called *Ke Alii o Kona-i-ka-Lewa* and the stars of the *Hoku-kea o ka Mole Honua* (Southern Cross) were those by which he shaped his course for Tahiti and those other islands. They left from Kalae point in Kau (south cape of Hawaii), and thither they returned.

“When Hawaii-Loa thus returned he brought with him Tu-nui-ai-a-te-Atua the first-born son of his brother Ki, and he became the husband of his favorite daughter Oahu. These two had afterwards a child called Ku Nui Akea, who was born at Keauhou, in Puna, Hawaii. Puna was then a fertile and fine country and it was called Puna by Ku-nui-ai-a-ke-Akua after his own birth-place, Puna-Auia, in Tahiti.

“Ku Nui Akea, on both father’s and mother’s side became a chief of the very highest rank (*kapu loa*). From him sprang the race of chiefs here in Hawaii (*welo alii*), and from Makalii sprang the race of the common people (*welo kanaka*). The first has been kept separate from the most ancient times, and the second has been kept separate from the time of chaos (*mai ka Po mai*). But the priestly race (*welo kahuna*) was one and the same with the race of chiefs from the beginning.

“When Hawaii-Loa arrived here, as before observed, there were only the two islands of Hawaii-Loa and of Maui-ai-Alii; but during his time and close afterwards the volcanoes on Hawaii and on Maui began their eruptions; and earthquakes and convulsions produced or brought forth the other islands.

“Ku Nui Akea’s son Ke Lii Alia, and his grandson Kemilia, were born at Tahiti along with the Aoa, the royal tree; but his great grandson, Ke Lii Ku (Eleleualani), was born on Hawaii.

“Eleleualani was the grandfather of Papa-Nui-Hanau-Moku (w). His wife was called *Ka Oupe Alii* and was a daughter of Kupu-kupu-nuu from Ololo-i-mehani (supposed to be either a name for the island of Nuuhiwa, or of a place on that island). They had a son called Ku-kalani-ehu, whose wife was Ka-Haka-ua-Koko, the sixth descendant from Makalii, and they too were the parents of Papa-Nui (w).

* * * * *

“One of Hawaii-Loa’s grandchildren was called Keaka-i-Lalo (w), whom he married to Te Arii Aria, one of his brother

Ki's grandchildren, and he placed them at Sawaii, where they became ancestors of that people, Sawaii being then called Hawaii-ku-lalo. Afterwards Hawaii-Loa revisited Tahiti and found that his brother Ki had forsaken the religion in which they were brought up, that of Kane, Ku and Lono, and adopted Ku-wa-hilo, the man-eating God (*Ke Akua ai kanaka*), as his God. After quarrelling with his brother on this account, Hawaii-Loa left Tahiti and brought with him Te Arii Apa as a husband for Eleeleualani, his grandchild. From these two were born Kohala (w), a girl, from whom the Kohala people sprang.

"Afterwards Hawaii-Loa went again to Tahiti and Hawaii-ku-lalo (Sawaii), and held a meeting with those peoples at Tarawao, but finding that they persisted in following after the God Ku-waha-ilo and that they had become addicted to man-eating, he reproved and repudiated them, and passed a law called *he Papa Enacna*, forbidding anyone from Hawaii-Luna (this present Hawaii), from ever going to the southern islands, lest they should go astray in their religion and become man-eaters. When Hawaii-Loa returned from this trip he brought with him Te Arii Tino Rua (w) to be a wife to Ku-Nui-Akea, and they begat Ke Alii Maewa Lani, a son, who was born at Holio, in North Kona, Hawaii, and became the Kona progenitor.

"After this Hawaii-Loa made a voyage to the westward, and Mulehu (Hoku Loa) was his guiding star. He landed on the eastern shore of the land of the Lahui-maka-lilio (people with oblique turned up eyes). He traveled over it to the northward and to the westward to the land of Kua-hewa-hewa-a-Kane, one of the continents that God created, and thence he returned by the way he had come, to Hawaii nei, bringing with him some white men (*poe haole kane*) and married them to native women. On this return voyage the star Iao was his guiding star to Hawaii.

"Afterwards he made another voyage to the southern and eastern shore of Kapa-kapa-ua-a-Kane, and took with him his grandchild Ku-Nui-Akea in order to teach him navigation, etc. When they had stayed there long enough they returned and Ku-Nui-Akea brought with him '*he mau haa elua*' (two stewards) one called Lehua and the other Nihoa, and they were settled on the two islands which bear their names, as land stewards (kono-

hiki) and put under the charge of Kauai, the youngest son of Hawaii-Loa.

“When Hawaii-Loa returned from the conference with his brother Ki and his descendants, his wife Hualalai bore him a son who was called Hamakua, and who probably was a bad boy (*keiki inoino*), for so the name would indicate. Ten years after this (*ke Au puni*) Hualalai died and was buried on the mountain of Hawaii that has been called after her name ever since.

“After Hawaii-Loa was dead and gone, in the time of Kū-Nui-Akea, came Tahiti-nui from Tahiti and landed at Ka-lae-i-Kahiki, the southern point of Kahoolawe, a cape often made by people coming from or going to Tahiti. Tahiti-nui was a grandchild of Ki, Hawaii-Loa’s brother, and he settled on East Maui and died there.

“The descendants of Hawaii-Loa and also of Ki (which are one, for they were brothers) peopled nearly all the Polynesian islands. From Ki came the Tahiti, Borabora, Huahine, Tahaa, Raiatea and Moorea [people].

“From Kana-loa were peopled Kukuhiwa, Uapou, Tahuata, Hiwaoa and those other islands. Kana-loa married a woman from the man-eating people, Taēōhae, from whom spring those cannibals who live on Nuuhiwa, Fiji, Tarapara, Paumoto, and the islands in western Polynesia—so it is reported in the Hawaiian legends and prayers—but the Hawaiian islands and the Tahiti islands (properly speaking) did never addict themselves to cannibalism.

“The island of Maui was called after Hawaii-Loa’s first born son.

“The island of Oahu was called after Hawaii-Loa’s daughter, and her foster parent was Lua, and hence the name Oahu-a-Lua.

“Kauai was called after Hawaii-Loa’s younger son; his wife’s name was Waialeale, and they lived on Kauai, and the mountain was called after her, because there she was buried.

“And thus other islands and districts were called after the first settlers.

Fornander in his comparative study of the foregoing with other Hawaiian and kindred Polynesian race traditions, and their

possible connection with ancient historic events of record, traces the source and migrations of Hawaii's first colonizing party somewhat as follows, condensed in form from his "Polynesian Race," vol. I.

"Whatever changes have been made upon the primordial tradition, enough remains thereof to show that the earliest reminiscences of the Hawaiian branch of the Polynesian family refer to a far western habitat on some very large island or islands, or perhaps continent, as the birthplace of their ancestors, a land of many names, as already mentioned. Marquesan tradition carries the same feature, as does also Samoa and Tonga."

(It will be well to bear in mind the various names used in reference to this ancestral land.)

"*Kapa-kapa-ua-a-Kane*, '*Ka Aina Kai Mele-mele-a-Kane*' (the land or coast of the handsome sea), as also '*Hawaii-kua-ulikai-o'o*' (Hawaii with verdant hills and dotted sea), were names given the home land, said to have been situated in *Kahiki-ku*, the large continent to the east of '*Kalana-i-Hau-ola*' (Kalana of life-giving dew), the place where the first of mankind were created, while *Kahiki-moe* was the name of the large land or continent to the west of it. *Hawaii-Loa* and his ancestors lived on the east coast of a country situated in, or belonging to, this many named land.

"From analogy and the general idiomacy of the Polynesian language, it becomes highly probable that *Kapa-kapa-ua* is an old intensive, duplicated form of the Cushite *Zaba*, and this derivation would harmonize the old Arabian traditions which place Paradise in the south-west part of Arabia with the Hawaiian tradition, which states that after the expulsion from *Kalana-i-Hau-ola*, the descendants of the first man went eastward and occupied the coasts of *Kapa-kapa-ua*. Now, from numerous parts of this and other legends, we learn that *Kapa-kapa-ua* was a subdivision of the large continent generally called *Kahiki-ku*, or Eastern Kahiki, and from other references we infer that it was situated in the western part of that continent, and that to the south of it was a large land or continent called *Ku-i-lalo* or *Honua-ku-i-lalo*, the 'southern land,' renowned for its warlike and savage people, while to the west was another large con-

tinant called *Kahiki-moe*, the 'Western Kahiki.' Referring to some of the ancient and obsolete Hawaiian names for the north, there are two that arrest our attention, *Ulu-nui* and *Mele-mele*, that were originally names of lands situated to the northward of some former habitat of the Polynesian family, or of those from whom they received their culture, their myths, and a goodly portion of their legends. Now the land of *Mele-mele* forcibly connects itself with 'the Sea of Mele-mele' above referred to, and indicates another land or country or kingdom situated on the shores of the same sea, but to the north of the birthplace of Hawaii-Loa. Viewed under that light and assuming the south-eastern coast of Arabia to be the *Kapa-kapa-ua* of the legend, the name of the other northern land, *Ulu-nui*, cannot possibly have any other explanation than that of *Ur*, the city and kingdom of *Urich* in ancient Chaldea, at the head of the Persian Gulf.

"From this coast Hawaii-Loa set sail, and steered to the eastward, crossing the ocean called *Moana-kai-maokioki*, or 'the spotted, many colored sea,' and also *Moana-kai-popolo*, 'the blue or dark-green sea.' Considering his point of departure, that ocean must have been the Indian Ocean, and the two large islands which he discovered can be no other than Sumatra and Java, calling one after his own name, *Hawaii*, and the other after that of his son, *Maui*. I have shown* that the Polynesian *Harwa-ii*, *Sawa-ii*, *Habai*, and the Malaysian *Jawa*, *Djawa*, *Ciawa* and *Zapa-ge* are all referable for their protonom to the Arabian *Zaba*. With these premises it is difficult to conceive that these two islands could have been any of the Polynesian groups, or that whatever might have been the western site of that original *Kapa-kapa-ua*, the navigator of those days could have crossed the Pacific Ocean in an easterly direction within the belt of the trade-winds, and not have encountered any of its numerous islands and Atol groups before reaching either of the three groups bearing the name of Hawaii. And if this, by singular fortuitous circumstances could have been done once, it is hardly credible that it could have been repeated often. Yet the legend makes no mention of any such landfall, and Hawaii-Loa is represented as having made several voyages afterwards between *Kapa-kapa-ua*

* See Polynesian Race, vol. 1, pp. 6, 22.

and *Hawaii*, as well as other voyages 'to the extreme south,' and to some western land not *Kapa-kapa-ua*, where dwelt a 'people with turned-up eyes,' and traveling over this land to the northward and westward, he came to the country called *Kua-hewa-hewa*; a very large country or continent. Returning home from this country, he is said to have brought with him two white men, *poe keokeo kane*, whom he married to Hawaiian women.

"It would be interesting to know who these people with turned-up eyes, living to the west of the Sunda Isles may have been. At first view the legend would seem to give strength to the opinion that Hawaii-Loa actually had discovered and settled on the Hawaiian group; for, knowing no other oblique-eyed people than the Chinese and their varieties, they could not have been reached by a westerly voyage unless the point of departure had been somewhere in the Pacific. But it is fair to question whether the Chinese and their varieties were the only oblique-eyed people in the world. With the Sunda Isles as a point of departure, and a westerly course, the coast of Africa is the natural landfall. And careful search reveals ample evidence by early and recent writers, and testimony of the ancient Egyptians themselves, that turned-up eyes was a common characteristic of their people—the women at least. Thus the Hawaiian legend becomes consistent with itself, and with historical facts independent of it.

"Historically considered, I am inclined to think that the legend of Hawaii-Loa represents the adventures and achievements of several persons, partly pure Cushites, partly Cushite-Polynesians, which, as ages elapsed, and the individuality of the actor retreated in the background, while the echo of his deeds was caught up by successive generations, were finally ascribed to some central figure who thus became the traditional hero not only of his own time, but also of times anterior as well as posterior to his actual existence. While one set of legends shows the voyages and intercourse of the early Cushites with the countries and archipels about the Indian Ocean, the other set of legends shows the intercourse and voyages of the earlier Polynesians between the groups of the Pacific. But to find the former set of legends in the possession of the latter race of people argues a connection, political and social, if not ethnic, and to some extent probably both.

so intimate, yet so far antecedent, that the latter had really come to identify themselves with the former, and appropriate to their own proper heroes the legends brought them by the others. In much later times the same process was repeated, when the Hawaiian group was overrun by princely adventurers from the South Polynesian groups who incorporated their own version of common legends on the Hawaiian folklore, and interpolated their own heroes on the Hawaiian genealogies. * * *

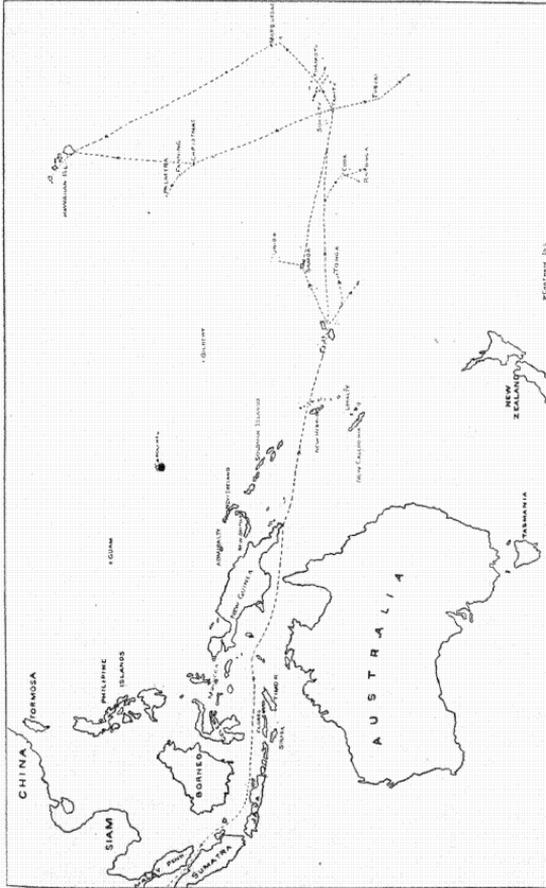
“In estimating the time of arrival of the Polynesian family in the Pacific, I have been guided almost wholly by their own genealogies and traditions. No other history throws any light on their departure, their passage, or their arrival. The Polynesian legends and genealogies themselves, bearing upon this point, are extremely obscure, confused, and contradictory, and consequently difficult to bring into chronological order. The generally-received genealogies of most of the leading Polynesian groups lead up to *Wakea*, *Atea*, or *Makea*, and his wife *Papa*, as the earliest progenitors, the first chiefs of their respective groups. Other genealogies, like that of ‘Kumuhonua,’ bring the line of Hawaiian chiefs on Hawaiian soil up to *Hawaii-Loa* [as shown]. Another, a Tahitian legend, goes also back of *Wakea* to *Tii*, whom it makes the first settler or discoverer of their group, and whom some Hawaiian legends claim as a brother of *Hawaii-Loa*. But I have shown that the *Hawaii-Loa* legend is probably the concentration of several originally distinct legends upon one person, and that if he of whom the legend speaks was the first discoverer and settler of the Hawaiian group, his place on the genealogy is a fatal and irreconcilable anachronism.

* * * The *Wakea* period is almost equally unsatisfactory and difficult a starting point in computing the age of the Polynesian race in the Pacific. Between the Hawaiian genealogies alone, which lead back to *Wakea* from the present time, there is a difference between fifty-seven generations on the shortest, and seventy on the longest, a difference representing a period of about 400 years. Yet admitting the high antiquity of the *Wakea* and *Papa* legends, it is obvious from the legends themselves that the islands now held by the Polynesian race were already peopled in the time of *Wakea*, and that too by people

of his own race and kindred. When or how that people arrived is now an absolute blank. * * *

“Among the Hawaiian genealogies now extant, I am disposed to consider the *Haloa-Nanaulu-Maweke* line as the most reliable. It numbers fifty-six generations from *Wakea* to the present time; twenty-nine from *Wakea* to and including *Maweke*, and twenty-seven from *Maweke* until now. Fifty-six generations, at the recognised term of thirty years to a generation, make 1680 years from now (1870) up to *Wakea*, the recognised progenitor and head of most of the Southern and Eastern Polynesian branches, and brings his era at about A. D. 190, which would in a measure correspond with the invasion and spread of the Hindu-Malay family in the Asiatic Archipelago. But the first thirteen names on the *Haloa* line are not allowed to have been shared, partially if not wholly, with the Marquesan and Tahitian branches of the Polynesian family, possibly also by the Samoan. These, then, must have existed elsewhere, and been introduced by the pre-Maweke occupants of the Hawaiian group, which would leave sixteen generations, or about five hundred years, in which to discover and people this group previous to the era of *Maweke* and his contemporaries. * * *

“The first thirteen generations just referred to, from *Wakea* to *Nanaulu*, would thus represent the period of arrival and sojourn on the Fiji group, for it is otherwise inconceivable how so much of Polynesian language and Polynesian folklore could have been incorporated on the Fijian. And when the expulsion from there took place, several streams of migration issued simultaneously, or nearly so, to the Samoan, Tonga, Tahiti, and other eastward and northwest groups. The Marquesas group could be reached from Tahiti in a straight direction, through the trade winds, and the Hawaiian from the Marquesas, as well as from the Samoan, by taking advantage of the south-east and north-east trade-winds. Whether the expulsion from Fiji covered one year or fifty years, it does not necessarily follow that the Polynesians departed *en masse* either to Tonga or the Samoa group; and after an indefinite period of residence there, and when population had become redundant, portions of it again moved eastward to Tahiti; and after another indefinite period moved northward to the Marquesas, and so on, lastly, to the Hawaiian group. It



Traditional Route of Polynesian Migrations

is natural, and hence more probable, that the Polynesian settlements scattered over the Fiji group were attacked separately and successively, and that each chieftain, as necessity compelled, fled with his family and followers in this or that direction, according as the state of the winds and the season of the year made it most favorable to go. Many such parties, doubtless, made for the same group, and, finding the land occupied by previous refugees, continued their course to the eastward and northward, until they found some convenient locality, where they finally established themselves permanently. The Polynesian legends would seem to support this latter proposition. While it may be questioned whether the Tahitians came by way of Samoa, or direct from Fiji, Tahitian legends claim that one *Tii* was the first ancestral chief on Tahitian soil. But Hawaiian legends claim this same *Tii* or *Kii*—who was the last of the thirteen from *Wakca* that lived elsewhere than on the Hawaiian group—as the father of *Nanaulu*, with whom Hawaiian aristocracy on Hawaiian soil commences; while his brother *Ulu* remained at the south, and became the ancestor of that enterprising race of chiefs who six hundred years later overran the Pacific, from the Tonga group to the Hawaiian, and who gave rise to an era of commotion and unrest among the Polynesian tribes, the memory whereof is vividly retained in the Hawaiian folklore.

“With due reservation, therefore, regarding any light that may hereafter be shed on pre-Wakean voyages and settlements by Polynesians in the Pacific, we arrive at the following leading propositions as chronological signposts—approximately, at least—of Polynesian migrations to and in the Pacific:

“1st. At the close of the first and during the second century of the present era the Polynesians left the Asiatic Archipelago and entered the Pacific, establishing themselves on the Fiji group, and thence spreading to the Samoan, Tonga, and other groups eastward and northward.

“2d. During the fifth century A. D., Polynesians settled on the Hawaiian Islands, and remained there, comparatively unknown until—

“3d. The eleventh century A. D., when several parties of fresh emigrants from the Marquesas, Society, and Samoan groups arrived at the Hawaiian islands, and, for the space of five or

six generations, revived and maintained an active intercourse with the first-named groups; and

"4th. From the close of the above migratory era, which may be roughly fixed at the time of *Laa-mai-kahiki* and his children, about twenty-one generations ago, Hawaiian history runs isolated from the other Polynesian groups, until their re-discovery by Captain Cook in 1778.

"I have thus attempted to clear the path by which men of more varied knowledge and greater acquirements than myself may travel with increased facility, and restore the Polynesian race to its proper place in the world's history. The ancient folklore at this end of the road unmistakably points to its former connection with those grand old-world peoples, the Aryans and Cushites, of whom until the last century we hardly knew anything more than the names."

THE PASSING OF KUHIO, PRINCE-DELEGATE

HAWAII has been called upon again to mourn the loss of its highest alii, and in the sudden death of Prince Jonah Kuhio Kalaniana'ole, which occurred in the early morning of January 7th, 1922, the last of all who were in line for supremacy under the late monarchy of Hawaii passed away. This added depth to the poignancy of sorrow that was widespread as the sad event became known, for Prince Kuhio was universally beloved and respected throughout the islands, and as delegate to congress for the past twenty years he had endeared himself to a wide circle of officials and public men in and out of congress.

Someone has termed Kuhio the "Citizen-Prince," for he was most democratic and unostentatious in his demeanor; dignified yet affable, and holding no resentment at the political changes which blasted his royal outlook and landed him for awhile in prison for his acts toward restoring the old order. Quickly accepting the inevitable, he became an exemplary loyal American

citizen; a pronounced Republican, and threw himself into the work of advancing the interest of Hawaii and its people as he saw it, though at times out of harmony with his party in his independence. His latest work to which he had given great service, locally and in congress, the Rehabilitation Act, may prove a monument to him in its benefit, as he hoped and planned, to his race.

Kuhio was not an heir-born but a created prince by royal proclamation at the coronation ceremonies of King Kalakaua and Queen Kapiolani in February, 1883, as was also his brother, the late David Kawanakoa. They were nephews of Kapiolani, the queen consort; sons of David Kahalepouli Piikoi, a high chief of Kauai, and Kinoiki Kekaulike. Kuhio Kalaniana'ole was born at Kapaa, Kauai, March 26th, 1871, a lineal descendant of the last king of the islands of Kauai and Niihau. He married Elizabeth Kahanu K. Kaauwai, a chiefess of the old regime, October 9th, 1896, who survives him.

Contrary to his expressed desire for a modest obsequies, various circumstances led finally to a state funeral with age-old customs in the symbolic display, solemn pomp and ceremony attending the demise of Hawaii's aliis, influenced largely and carried out officially and in detail by the various native societies to which he belonged, or was in sympathy.

Hence, the body was borne in the dead of night from Pualeilani, his Waikiki residence, where he died, to historic Kawaiaha'o church, to lie-in-state as had Hawaiian royalty since the days of Kamehameha III. The removal was attended by a procession of kahili and kukui-torch bearers of the various societies and Kamehameha cadets, the long distance of streets being lined with reverent spectators of the wierd, solemn cortege.

As Prince Kalaniana'ole lay in state, first at the home and then at the church, and in the throne room, delegations of kahili-waving attendants from the Hawaiian societies, fraternal orders and civic bodies, followed one another in hourly watches, each member during the service being decorated in the colorful ahuula. Many large feather kahilis of varied or plain color form and royal significance were grouped about the bier, conforming to those that had gone before; the gilded tabu stick of the Kalakaua regime being placed at the foot. The church was tastefully

decorated for the solemn occasion, the floral tributes throughout the week increasing apparently with each fresh change. Hawaiian singing of low plaintive melodies was again a feature, more particularly in the evening watches, with occasional old-time wailing or an oli chant by venerable subjects, as has been the custom attending royal obsequies for years past. Naturally the church was packed with a sympathetic and interested throng throughout, and toward the end of the week many were unable to even gain admittance to the church.

At 10 o'clock Saturday night, memorial services were held, conducted by Rev. Akaiko Akana, pastor of Kawaiahao church, following which was the preparation for the midnight removal of the remains to the throne room of the former palace (now the executive building), for the funeral services the following day. This change was effected amid scenes similar to those of other night removals, the casket being attended by kahili bearers on each side with a corps of kukui torch bearers in solemn march to the steps of the executive building, between a lane of soldiery and massed throng of people that observed deep silence.

The remains were received at the entrance of the throne room by Governor and Mrs. Farrington, Secretary of the Territory Raymond C. Brown and wife, and Col. W. D. Potter and aids. Bishop John D. La Mothe accompanied the body into the brilliantly lighted room and read the Episcopal service befitting the occasion, following which the coffin was placed in a casket of koa trimmed with kou (Hawaii's handsomest furniture woods), in keeping with those of royal caskets for years past. This task over, the Princess took her place at the head of the bier, the watchers resumed their stations of solemn service, the royal plume kahikis were massed about the room, and the many floral tributes were tastefully arranged for the remaining hours.

At an early hour (8 a. m.), all persons were excluded from the building save those privileged to be there, and those having received official invitation for attendance upon the closing services, which was set for 10 o'clock.

The city was astir at an early hour. By 9 o'clock the streets of the procession route were thronged by an expectant multitude, and five airplanes in formation appeared over the grounds. The federal government, through its army and navy paid distinct

honor to Hawaii's prince-delegate, akin to those paid in death to a general of the army and an admiral of the navy. The gathering of their various divisions, and bands, to lead the procession, with the different local participating bodies, came gradually to assigned places for the respective units to fall in line at the given time. The several native societies gathered in the executive grounds, and the building became taxed with the mourners, attendants, and invited quota.

Shortly after 10 o'clock Princess Kalaniana'ole arrived, as also the Rt. Rev. John D. La Mothe, bishop of Honolulu, with the clergy and choir of St. Andrew's cathedral. Rev. Canon Ault led in the impressive Episcopal service, Bishop La Mothe offering prayer, and the choir singing "Lead, Kindly Light," and "Peace, Perfect Peace," this latter closing the service. Then came the removal of the stately kahilis for processional use with other alii insignia, followed by the casket borne through a line of honorary pall-bearers to the catafalque in waiting at the steps, with its long line of some 300 poolas to haul the same. The units to precede these took their places, among which the Hawaiian societies of both sexes were prominent in their colorful regalia, and shared in bearing the large kahilis in the procession, which accounted for the lesser massing on each side of the catafalque than on former like occasions, yet on the whole it presented a pageant of rare regal splendor as the cortege took up its line of march along King street to Nuuanu, thence to the mausoleum.

Immediately following the catafalque rode the princess and near relatives, then Governor and Mrs. Farrington, high officials of the army and navy, and a long line of autos bearing federal, territorial and municipal officials, consular corps, judges, legislators, supervisors, etc., and the general public. The procession was an hour and a half in reaching the mausoleum. Minute guns, first from the executive grounds and later from Punchbowl, boomed forth from the start to the placing of the casket in the crypt.

As the procession reached the mausoleum grounds, floral pieces and fragrant maile was seen to have been arranged in tasteful decoration about the Kalakaua column, marking the crypt. Here, with some difficulty, the casket was raised from the catafalque

by the pall-bearers to the top step of the entrance, where an inclined sled conveyed it to place.

Flanked by tabu sticks and kahilis the casket descended into the crypt. The widow and other mourners followed for the concluding service, conducted by Bishop La Mothe. Rev. Stephen Desha—an intimate life-long friend of the late prince—giving the closing prayer in Hawaiian, whereupon the band played "Aloha Oe," with soft, deep feeling that touched many hearts.

Thus was done all that was left for mortals, to show honor, affection and loyalty to him who held the last claim to the late Hawaiian monarchy, with respectful sympathy for the bereaved widow, relatives and race.

HONOLULU WATER WORKS.

Courtesy W. A. Wall, Superintendent Water Works.

IN compiling this brief history of the Honolulu Water Works, it has been found far more difficult than was anticipated, and the research work thereon has failed to discover many desirable points in the origin and development of the system. The earliest mention of the subject is found in the "Hawaiian Annual" for 1889, which is briefly as follows:

"During a visit of Mr. P. A. Brinsmade to Boston, in 1838, Messrs. Proctor & Felt were induced to consign to Ladd & Co. of Honolulu, fourteen reels of lead pipe of 8,248 pounds weight, of inch and one-half size, per ship *Fama*, October 17, 1838. This venture, however, did not meet with the success anticipated, as in 1845 ten reels still remained on hand. An effort was made to close out the consignment to Dr. Judd for the government, but during the celebrated suit of Ladd & Co. the matter was suspended, but renewed again in the summer of 1847, resulting in its disposal in September of that year, for temporary use till iron piping could be obtained, and was laid to convey water from a taro patch back of the French consul's (at that time) to the Harbor Master's office at the foot of Nuuanu street."

This indicates that the pioneer movement by the government toward a water supply was for the benefit and convenience of shipping visiting the port, rather than for residents.

The exact location of the intake of the lead pipe was at Pele-kane, back of what is now known as the Dickson premises, occupied by the Coyne Furniture Co. as a warehouse, situated on Beretania street, between Fort and Emma streets.

There is no record of its installation, but it is presumed the pipe was laid during the year 1848 to a tank under the harbor master's office at the foot of Nuuanu street. The first expense of the water works department shows an entry of \$542.89, known as "tank expense."

In the *Polynesian* of May 18, 1850, is a local which reads: "Mr. W. H. Brandon, recently arrived from Boston, was engaged by the Minister of the Interior to superintend the construction of the reservoir and laying down of the pipes to convey the water from the king's spring in Nuuanu to the water front."

This spring is located on the east side of Nuuanu stream, a little below Judd street and east of Nuuanu street. From the description given it is presumed a 6" cast iron pipe was used. In the process of the above work Nuuanu street was widened fifteen feet on the eastern side from Beretania to Judd street, a distance of approximately 5100 feet. The water was put through the newly laid pipes on September 5th, 1850.

The next mention of additions to the water system is found in the Minister of Interior Report for 1852, of five hydrants having been placed in Nuuanu street, and several cisterns in course of construction at various street intersections. An appropriation of \$5,403 was asked for the work.

In 1855 Mr. Wm. Webster, C. E., was engaged to investigate and report on the water situation of the city of Honolulu, which report, in part, is as follows:

"The present supply for the reservoir is from a spring two hundred yards above. The discharge is about 141 gallons per minute, of which about fifty-five gallons per minute is taken by private parties for irrigation purpose before it reaches the reservoir, and recommends increasing the supply from other springs at approximately the same elevation, and estimated the new sources would procure an additional 185,760 gallons per twenty-four hours."

To further increase the supply he proposed laying a pipe from the Kapena spring, near the falls, which would increase the

supply 171 gallons per minute, the whole being seventy-two gallons per head during the wet season, and forty-eight gallons per head during the dry season for a population of 6000. The present reservoir he deemed too near Nuuanu street, where it forms a receptacle for dust and dirt, and was leaky and too small. He proposed a new reservoir one hundred feet square at the top and eighty feet at the bottom, and ten feet deep, lined with brick, of a capacity of 511,250 gallons, located nearer the springs. A 12" main from the reservoir to Queen street with distributing mains from 5 to 3 inches in diameter was required. The total estimated cost was \$68,187.00. This work was carried out in part if not in full, for under the "Act to provide a further supply of water for the city of Honolulu," approved April 21, 1859, the Minister of the Interior borrowed \$20,000 from James Robinson & Co., the loan being for ten years at 12 per cent per annum. The water receipts were pledged to be paid by the Minister of Finance until both principal and interest be satisfied. The instrument is dated January 23, 1860, and was released September 1, 1862. The report of the Minister of the Interior that year showed the receipt of pipes and the whole work completed at a cost of \$44,940.92, exclusive of interest on the borrowed sum. During the past two years the sum of \$10,363.84 had been paid on the principal, and \$4,010.17 for interest out of the receipts from water, leaving a balance of \$9,636.16 to be paid during the next period.

The purchase of the Paki auwai, in upper Nuuanu, occurred February 16, 1869, the amount paid being \$1,000, and the water rights were reserved to all those entitled thereto at the date of the awards for lands by the Board of Land Commissioners, also the lands belonging to Bernice P. and Chas. R. Bishop that had been accustomed to receive water, and all rights that had been leased until the expiration of such as was then in force.

From 1868 to 1880, \$61,625.58 was expended in improvements which consisted of new mains and extensions, and the construction of the Makiki reservoir; also, what was then known as the upper Nuuanu reservoir, which was located in what is now known as Queen Emma Park (long since abandoned).

During the period ending March 31, 1882, the repairs to the water works system amounted to \$44,788.08, and much activity

appears to have been given toward its extension and improvement. Filters for the upper reservoir were built on a quarter acre of land purchased from John H. Wood for this purpose, at a cost of \$3,104, including \$200 paid for the land. A small reservoir was also built near the head of Liliha street, and the pipe line extended down said street and beyond the (then) Reformatory school, at Kapalama, to Nuhelewai bridge on King street. The pipe was also extended later from upper Nuuanu reservoir running from Judd street across Nuuanu stream, thence by Pauoa road and Punchbowl street, terminating beyond Emma street back of the Royal school, as recommended by Major Bender.

Artesian well boring commenced during this period, two having been sunk at a cost of \$8,901.98, one each at Mililani, and in the palace grounds.

For the period 1882-1884 expenditures for the system amounted to \$84,423.60, which included the purchase of an artesian well at Pualeilani, Waikiki, for \$5,500, and the boring of three others at a cost of \$13,270, located at Thomas Square, Pawaa, and Makiki. \$57,277.23 was paid for 15" pipe for a line from the Luakaha weir to a power station at or near what is now known as Reservoir No. 1.

The administration received scathing rebuke at the hand of the finance committee of the legislature at the 1884 session, for the evident unwise and reckless expenditure of public funds, and lack of care in the ordering and distribution of material for the proposed extension of the water works.

Owing to the incompleteness in the condemnation of rights and settlement of damages for land taken for the Makiki scheme, during 1878-1880, a number of claims were presented at the Interior office in the latter part of 1884 which were adjusted in the manner provided for by statute. The appraisers filed their report January 24, 1885. The total cost was \$79,206.45. Add to this the pipe system leading from the Makiki reservoir, approximately \$21,000, and there is shown an outlay of over \$100,000 to the debit of this enterprise, and there were only sixty-three privileges supplied therefrom, at an annual revenue of \$1,140.

Among the more definite steps taken at this time toward an increased water supply and extended service for Honolulu's

needs, was the engagement of the survey department in a special survey of the city to indicate all pipe lines, water gates, fire plugs, hydrants and cisterns, their size and position, and all existing and proposed reservoirs, artesian wells, as also all available springs in Nuuanu valley, and Major A. S. Bender, of San Francisco, was engaged as consulting engineer to examine and report on the most eligible sites for storage reservoirs and improvement of the system. A preliminary report thereon was rendered April 12, 1884, which called for \$20,000 to make the necessary investigations.

The report of the Minister of the Interior for 1886 states: that "the subject of a suitable supply of wholesome water for the city of Honolulu has engaged the attention of succeeding administrations for a number of years past, but no well-digested system with that object in view has ever been adopted." Reference was made to the survey, and to the engagement of Major Bender, as shown above, and to the latter's final report in July, 1885, with recommendations for the construction of a storage reservoir, the most advantageous site being Luakaha, to connect with the filtering reservoir below. A distributing reservoir 200x50 feet for a water depth of fifteen feet was also proposed on the slope of Punchbowl, near the head of Emma street for the better protection of the city in case of fire, and the growing needs in the Waikiki section of the city. For various reasons these projects were held in abeyance. The Makiki reservoir with its artesian well work was commended, and though a large sum had been expended thereon, means should be taken to secure the full flow of the stream.

Honolulu was estimated to have a population of 20,000 souls at this time.

There were five artesian wells connected with the city system in 1886, but their full benefit was impaired through lack of proper sized connections with the mains, otherwise the water situation was represented at this period as in a very satisfactory condition on the completion of the pipe line from Luakaha, the sources being (1) the Makiki stream; (2) Kapena springs and stream; (3) Nuuanu stream at Luakaha, and (4) five artesian wells, located at Thomas Square, the Palace, Aliiolani, Pawaa and Waikiki. Two new reservoirs, of a capacity of 3,159,200 gallons,

were suggested by the Superintendent of Public Works, and a third at the Electric Light station, to receive and store the overflow from its wheel.

The next biennial period (1890), shows a return of anxiety to insure an adequate water supply to tide over periods of drought. Among other improvements suggested was the enlargement of the lower Nuuanu reservoir for early relief to a capacity of 2,100,000 gallons, at an outlay of \$27,000, as also the enlargement of the others connected with the Electric Light works, which would, together, exceed the supply of Bender's proposal. The reservoirs completed and in use by the bureau was claimed to have a total capacity of 30,081,790 gallons. Owing to a spell of drought, engines of the fire department were engaged in March, 1889, in pumping water from the artesian wells into the general pipe system.

Notwithstanding the extension of the water works system during the past few years it was admitted to be unequal to the demands made on it, owing to the rapid extension of settlement so as to have entirely outgrown the original system of mains.

The long spell of drought of 1891 showed again the necessity of increasing the water storage capacity of Nuuanu, and Wm. W. Bruner, C. E., was engaged to survey for a suitable large reservoir site in upper Nuuanu. The location selected was about a mile and a half from the Pali, in the broad swale at the headquarters of Nuuanu stream, for the construction of a reservoir to contain 341,000,000 gallons, at an elevation of 1,020 feet, with a dam of an average fill of 33.3 feet to top water level, and of a total length of 1238 feet. The Superintendent of Public Works advised the carrying out of the project, modified to an elevation of 993 feet, an average fill of 14 feet, and a total length of 325 feet, at an estimated cost of \$40,000. After some delay caused by alterations of plans, work was finally started in July, 1905, the estimated cost of same being \$170,000. In July, 1906, its additional estimated cost called for \$156,000 more. The reservoir was first used for the storage of water February 1, 1909, and completed in January of the following year, at a cost of \$298,563.86.

The desirability of the establishment of a plant for the pumping of artesian water to a storage reservoir on the slope of Punch-bowl was mooted in 1892, and led to the erection of the pumping station and sinking of two ten-inch wells of two million gallons daily capacity, at the corner of Beretania and Alapai streets. This reservoir is at an elevation of 170 feet, which is a little above the one at Makiki and connects therewith.

Our next issue it is hoped will continue this brief history of Honolulu's water works and system, to cover the increasing supply obtained through tunneling in the several adjacent valleys that has been in progress the past year.

POSSIBILITIES OF THE MANGO IN HAWAII.

By WILLIS T. POPE, *Horticulturist*,

United States Agricultural Experiment Station.

THE Mango has become the most commonly grown fruit tree in the Hawaiian Islands. On account of its unique form, rich colorings, and luscious fruit it certainly deserves a high rank among Hawaiian fruits. Although not a native fruit the mango in its period of residence, which is about one hundred years in this Territory, has adapted itself to conditions, is quite at home and appears as a part of the natural vegetation. Long ago it was received into full citizenship by authority of all of the small boys and girls of the Islands. The fruiting season of 1922 might well be proclaimed the banner mango season of many years. Conditions were about right for a large crop generally, and thousands upon thousands of trees produced mangoes in abundance. The fruiting season began as early as April and continued until as late as October. An Indian horticulturist visiting Hawaii in July was astonished to find the mango fruiting season strong in mid-summer. He asserted that the annual fruiting period of the mango in India, its native land, was from 60 to 90 days and all finished by the first of June.

Aside from the fact that the mango is an abundant fruit-producing tree there are many other reasons why it has become the most universal door-yard tree in Hawaii. In addition to its rapid and sturdy growth it is quite resistant to all adverse conditions. It well withstands the attacks of insect pests and fungus diseases; it will live through long periods of drought or on the contrary survive serious floods. For the home it is an ornamental, a splendid shade tree, and compared with other fruit trees is a most prolific bearer. Everyone may be suited for there is great variation in the size, shape, color, flavor, keeping qualities, etc., of the fruit. While it is true that there are among our Hawaiian mangoes many seedlings producing fruit of undesirable qualities as small size, fibrous flesh, and turpentine flavor, there are numerous varieties with excellent qualities which may be propagated by grafting—the sure method for retaining good qualities. Bulletin No. 12, *The Mango in Hawaii*, by Mr. J. E. Higgins, 1906, states that the writer had noted about forty different local varieties. New varieties are frequently appearing either of local origin, or introduced from other countries. The *Dictionary of Economic Products of India*, by Watt, states that there are some 500 varieties in India. By cross pollination new varieties are often obtained which have some very superior qualities. The crossing may take place naturally by the pollen being transferred by wind or insects, or it may be accomplished artificially with delicate instruments by the horticulturist.

In some instances persons who are unfamiliar with the mango have gotten an unfavorable opinion of it by trying to eat fruit of seedlings which may abound in fiber or have a strong turpentine flavor. And while considerable fruit of this kind may get into our markets, most of the finer kinds which are now propagated by graftage, and which are grown mainly in private gardens, appeal to the consumer at first acquaintance.

HISTORY AND DISTRIBUTION.

India is designated as the home of the mango. De Candolle in his authentic book, "*Origin of Cultivated Plants*," expresses the belief that the mango is indigenous to a large tropical area of foot-hill country in India to the south of the Himalayan moun-

tains. He also believed that it may be included among the fruits which have been cultivated by mankind for over 4,000 years. Its prominence in Hindu mythology and religious observance is said to leave no doubt as to its antiquity. Other authors have thought that the nativity of the mango also extends through Ceylon, Burma, and Malay. In all of these countries there is evidence of it having been in cultivation from remote times. There are few other fruits which have the historic background of the mango, and few others that seem to have been so closely associated with the folk-lore and religious ceremonies of a great population.

From Southern Asia the species has spread to practically all of the tropical world. The tree is truly a plant wonder on account of its adaptability to the great variety of conditions which it has met in its progress of a wide dispersal. Mr. Wilson Popenoe, Plant Explorer of the United States Department of Agriculture, asserts that at the present time the mango is a fruit of greater importance to millions of people through the tropics than is the apple to the people of all North America. It is interesting to note that a Chinese traveler, Hewen T'sang, who visited Hindustan about 640 A. D., is said to be the first person, so far as is known, to bring the mango to the attention of the people who lived outside of its native land. Early Spanish and Portuguese explorers and traders did much toward carrying the mango to other parts of the tropical world. There is evidence that the Spanish traders carried the mango from the Philippine Islands to the western coast of Mexico long before the discovery of the Hawaiian Islands by Englishmen. The Portuguese are also known to have brought this valuable fruit to the Western world, it having been planted at Bahia, Brazil, by them at an uncertain date but probably not earlier than the year 1700. Through its good fruit it evidently met with much favor with the people and in the climate and fertile soil of the New World grew in great profusion. In fifty years it was growing in abundance in a number of places and particularly in the vicinity of Rio de Janeiro. From that locality it was carried to the West Indies, first reaching Barbadoes, from where it spread to most all of the other islands of that great archipelago. In thirty-two

years after the first mango tree reached the island of Jamaica it is reported that it had become one of the most common fruit trees in that verdant island.

Introductions into Hawaii.—To us in the central Pacific who are interested in the origin of our fruits, the introduction of the mango into the Hawaiian Islands is particularly interesting. The mango first reached Hawaii some time in the early part of the Nineteenth Century. It is believed to have been between the years 1800 and 1820, having been introduced from the west coast of Mexico, presumably the port of Acapulco. The introducer, Don Francisco de Paul Marin, was a Spanish horticulturist of no small consequence in the islands in those days. He came to Hawaii as early as 1791 and spent the remainder of his life here, dying in 1837. During his life in Hawaii he served the king in many capacities, and is given credit of having introduced many valuable plants which have since added much to the happiness and wealth of the people of the islands. He conducted experimental gardens in several localities which have since become a part of the City of Honolulu. Aside from his introductions and experiments with plants he seems to have manufactured castor oil, soap, molasses, lime, pickels, syrup of lemon, and sugar, thus combining both agriculture and manufacture. Don Marin was known by the Hawaiians of his time as "Manini," and his first mango was known as the "Manini Mango," and no doubt it is the parent tree of many of the so-called Hawaiian mangoes of today. The original tree still stands among the house lots on the site which was once Don Marin's vineyard known in olden times as "ka pa Waina," which is located waikiki of Nuuanu stream and makai of Vineyard street, (southeast of Nuuanu stream and southwest of Vineyard street). Although this historical spot is now well filled with many residences, the venerable tree reaches over them to a height of about 80 feet, has a spread of top 100 feet across, and a trunk measurement of 15 feet in circumference. Although a prolific bearer, its fruits, which are borne in large clusters, are small, with thick skins and with much fiber, generally inferior when compared with the many improved varieties of the present time. In addition to the Manini mango there were no doubt other introductions which were later added and which aided in making up the varied

lot now termed Hawaiian mangoes, and which, on account of the lack of selection and improved methods of propagation, are not generally considered of high class, although a selected strain known as the Hawaiian Sweet Mango has met with considerable favor. This fruit has not received the encouragement in the way of selections and improved methods of propagation that it should have received.

Another introduction of mangoes which produced a marked improvement on the mangoes of Hawaii was that made from Jamaica by Mr. Joseph Marsden about the year 1885. Mr. Marsden being well informed in reference to the importance of the fruit situation in these Islands, and a Government official whose duties were closely associated with the experimentation of new introductions brought, on his return from the island of Jamaica, a number of small mango trees, presumably seedlings, which are supposed to have been identified in Jamaica by the varietal numbers 5, 7, 9, and 11. This supposition of their having been varietal numbers is substantiated to a considerable extent in that the fruit of the seedlings of each, though subject to common variation, have continuously reproduced certain general characters which may be identified as a parental relation belonging to one or another of the group. This same habit of reproducing group characters is also common in other kinds of mangoes grown from seeds. It is evident in the "Manini" or Sweet Hawaiian mangoes, in the so-called group of Manila mangoes, and in the Indian mangoes. It is in certain varietal hybrids and in bud sports that the new productions of widely different characters are obtained in mango improvements.

The original trees of the Marsden collection from Jamaica, numbers 5, 7, 9, and 11, were planted in the Government Nursery, King street, Honolulu. Numbers 5 and 9 are still living and have been the source of many good mango trees, particularly the No. 9, which is doubtless the most widely known variety in the Territory at the present time.

In recent years the standard of good mangoes has been greatly raised by the introduction of a number of the best Indian varieties. Mr. S. M. Damon of Honolulu, who has for many years been greatly interested in Hawaii's horticulture, introduced at no small expense, a number of inarched trees which

have since come into bearing. Also Mr. G. P. Wilder and others have introduced good Indian varieties. The Hawaii Agricultural Experiment Station through the United States Department of Agriculture, has from time to time made introductions which have been the basis in experimentation in methods of propagation and culture.

BOTANICAL NAME AND DESCRIPTION.

Name and Relation.—The technical name of all cultivated mangoes is generally accepted as *Mangifera indica*. Among the large number of horticultural varieties there are several distinct groups or races. In the genus *Mangifera*, however, there are about forty other species, none of which have ever become of any importance in this country. Some other plants that are a little more distantly related are of consequence in Hawaii, namely: Pepper tree (*Schinus molle*); Christmas berry (*S. terebinthifolius*); Wi fruit (*Spondia dulace*); Hog plum (*S. lutea*); Pistacia nut (*Pistacia vera*), and the Cashew nut (*Anacardium occidentale*).

Description.—The mango tree is an evergreen. It reaches a height of 80 feet or more when grown on good rich soil of the lowlands where there is an abundance of rain. The shape of the top is round or more upright in form. The growth takes place irregularly in frequent recurring periods each of which is followed by a period of inactivity. The young leaves are usually of a reddish copper color but become a full deep green in a few days. The blossom season is irregular also but generally at its height about January. The small whitish flowers are borne in large panicle-like clusters at the ends of branches. The flower clusters are polygamous, that is, there are two kinds of flowers; perfect ones having both stamens and pistils and others which are unisexual, the staminate flowers usually outnumbering the perfect ones. The perfect flowers are distinguished by the presence of a greenish ovary. Some trees set but one or two fruits to the cluster while others have the habit of producing many fruits to the cluster. The fruit varies greatly in size and quality according to the nature of the growth. A tree of good variety usually continues to develop fruit attractive in color and rich and luscious when ripe.

MANGO CULTURE.

Climate:—The mango tree is most productive in a climate where it has the stimulus of a dry season each year. It is in reality better suited to an irrigated region than to one of quite uniform rainfall. Considerable rainfall in blossom season often prevents the satisfactory pollination and setting of fruit. A warm, moist locality very generally produces a larger tree and a more dense growth of foliage and with lighter crops of fruit than should be normally produced.

Soil:—The most satisfactory soil for mango growing is a deep loose loam which has a good underdrainage and a high percentage of humus. Good drainage is without doubt the most important factor. With good drainage the mango will thrive in either light or heavy soil. A very sandy soil has proved satisfactory in Florida, while in Hawaii the mango has given good results on heavy soil where there was good underdrainage. It is said that the best results in mango culture in India are obtained on a plain of deep rich alluvial loam.

Propagation:—Like most other fruit trees of the tropics, the mango is propagated to a considerable extent by seeds but new trees of choice varieties are propagated by methods of grafting. In many instances seedling trees have produced good fruits but propagation by seeds is nature's most common way of giving variation. Other methods as those of some form of graftage or layering must be practiced if good characters of an established variety are to be retained. In graftage the buds or grafts of a choice variety are taken and carefully united with the cambium tissue of rootstocks of growing plants of the same species, or in some cases the same genus, thereby growth of scions continued, extending into trees carrying the characters of the desired varieties. The detailed description of the process of grafting the mango is given in Hawaii Experiment Station Bulletin No. 12, or in a book, "Manual of Tropical and Sub-tropical Fruits," by Mr. Wilson Popenoe, Plant Explorer of the U. S. Department of Agriculture.

Grafted or inarched trees have to be used where the mango tree is being taken any considerable distance as the viability of

the seed is rather uncertain if not planted within a few days after being taken from the mature fruit.

Orchard Setting.—Budded or grafted mango trees may be set into regular orchard form at one year old from time of making the union, or earlier if the union and growth is well formed. The distance apart at which it is best to set mango trees depends upon the soil, climate, and varieties. Grafted, inarched or budded trees are usually smaller in habit than seedlings. About 30 feet each way in rows is a good distance. Seedlings should have more room but for orchard culture seedlings are not generally recommended.

Thorough tillage of the soil, keeping it free from weeds and loose on the surface is as important for the mango as for most other fruit trees. Thorough deep preparation of the soil should begin before the trees are planted and from that time onward the field should be kept clear of grass and weeds and the surface should be loose. If irrigation is practical, liberal moisture should be supplied to the roots, and in case of bearing trees the heaviest irrigation should be given from the time when the flower buds are about to open until several weeks after the fruiting is over, withholding large amounts of water during two or three months preceding the flowering season. This will encourage the formation of the flower buds whereas continued watering would tend to keep the tree growing. Barnyard manure is recommended as a good fertilizer for young trees, but as soon as they come into bearing this kind of fertilizer should be discontinued and a standard commercial fertilizer especially prepared and consisting of:

Ammonia	5 to 6 per cent
Phosphoric acid	7 to 9 per cent
Potash	9 to 11 per cent

These elements are derived from ground bone, nitrate of soda, dried blood, dissolved bone black, and high grade potash salts.

Pruning.—The mango requires but little pruning after the first two or three years of its growth. If the head has been properly formed the tree will naturally assume a desirable shape with the central part rather hollow. When the tree gets older about the only pruning that is to be done consists of removing dead branches or interfering limbs.

Handling the Crop:—For home use the mangoes are generally picked when ripe, but for marketing purposes it is preferred to pick the fruit while it is still hard. Such fruit ripens better in the dark and if full grown retains its excellent flavor. Care must be taken in picking the fruit not to bruise it, and if properly wrapped in paper before packing will increase the keeping qualities. The packing should be in small boxes as peaches are packed so that the pressure will not be great on any of the fruit.

Fancy mangoes have been shipped successfully from India to London, from Jamaica to London, from French West Indies to Paris, and from Florida to New York. Previous to the quarantine against Hawaii fruit to prevent fruitfly from entering ports of the Mainland, mangoes were frequently sent to California. Experiments show that some varieties keep well for a month in cold storage.

USES OF THE MANGO.

The most important use of the mango is in the form of fresh fruit. In this as well as in other forms it has considerable food value. Besides being eaten as fresh fruit, numerous preparations are made of it. The seed is removed and the ripe fruit canned as peaches are canned. They are made into pickles, sauces, chutneys, preserves, and jellies. Both ripe and green the fruit is used in salads. The juice may be extracted and used in various ways and mango pie is not uncommon in Hawaii.

FUTURE POSSIBILITIES.

The development of a Hawaiian mango industry of no small proportions seems possible. There is a growing local market for the fresh fruit for home consumption. Canneries could pack all of the ripe fruit that could be grown. High grade canned mangoes ought to find a ready sale in any market much the same as do California peaches or Hawaiian pineapples. Large quantities of mangoes are now being canned in India and there are well equipped mango canneries in the Philippines which pack a fine product. Experiments conducted in canning Hawaiian mangoes have proved very satisfactory.

A number of local varieties of excellent mangoes have been developed which are so firm in skin as to prevent the attacks of the fruit fly. These varieties are being propagated by budding and grafting and could be increased to any desired number and brought into bearing in five or six years. The culture of the mango is simple and the attacks of insect pests and plant diseases are rarely serious.

The following brief descriptions of a number of these varieties is herewith given:

VICTORIA MANGO—NO. 9.

The original tree of Victoria No. 9 is a seedling of Marsden's No. 9, but is very different in many characters. The seedling tree now known as Victoria No. 9 was set about the year 1897 on the house-lot 1508 Thurston Avenue, Honolulu, which is now the residence property of Mr. Thomas G. Thrum. This variety has proved to be very prolific and the fruits generally hang singly, that is but one or few to a flower panicle. From the time the fruits set they are red, becoming a brilliant vermilion on maturity.

Description of the Fruit:—Size medium; weight about 9 ounces; shape oblong, slightly S-shaped and necked somewhat at stem end; apex broadly rounded with curve ending in a small blunt beak which sometimes contains a small hole-like depression; color when ripe brilliant vermilion shaded over yellow ground color; yellow ground color most evident at apex. Surface marked with small yellow dots which become overcast where red is deepest. Shoulder of fruit has delicate powdery bloom. Skin is of medium thickness, tough so as to peel well. Odor a pleasing fragrance. Ripe flesh of deep rich yellow color, good texture; juice sweet acid and of flavor of the Pirie mango. Seed small, weight $\frac{3}{4}$ ounce. Marketing qualities ranking among best varieties in Hawaii.

WOOTEN MANGO.

The original tree was a seedling which developed in the residence property of Mr. Harry Wootten, Makiki street, Honolulu, some years ago. The tree is vigorous and prolific, and the fruit rarely ruined by attacks of fruit fly.

In size it is medium to large; shape roundish, slightly flattened on the sides; no apex point evident; weight about 10 ounces; color when ripe a shade between orange yellow and yellow orange, with tinges of pink and red at the stem end and pale yellow dots all over surface; skin medium thin, tough, peeling qualities fair, very pleasing fragrance; flesh rich apricot yellow, very good texture, flavor excellent, juicy sweet acid; seed medium to small for size of fruit.

An important characteristic of this variety is that while still sofid it has a very beautiful color as if ripe, making it a very desirable marketing form.

KALIHI CHUTNEY MANGO.

Original tree supposed to be a hybrid from West Indian No. 5 and some other mango. It grows near the Kalihi stream, makai of King street, Honolulu. The tree is vigorous and prolific and the fruit is large, handsome and of excellent quality.

Description of the Fruit:—In size it is medium to large; shape roundish; almost round with blunt double apex; weight varying from 8 to 12 ounces; weight of seed about $\frac{3}{4}$ ounces; color, a beautiful golden apricot, splashed with a few irregular dashes of bright red about the shoulder, yellow dots visible all over the surface of the fruit. Flesh yellow to orange yellow in color; firm, with little fiber and of a most rich delicious flavor. This fruit is an excellent keeper.

WHITNEY MANGO.

Original tree a seedling of the sweet Hawaiian Mango, growing in the yard of Dr. J. M. Whitney, 1325 Punahou street, Honolulu. The tree of this variety grows large and vigorous and is a prolific bearer.

Description of Fruit:—Size, medium. Shape, oblong, broader than thick, with a rather extended, pointed apex; weight, 8 to 10 ounces, color when ripe light greenish yellow surface with pale light dots; skin rather tough; peeling qualities fair. Flesh light yellow color, without fiber, melting and of excellent sweet flavor. It is claimed that the fruit of this variety has never shown signs

of having been stung by fruit fly. A good fruit for the fresh fruit market.

NO. 9, OR WEST INDIAN NO. 9.

“No. 9.” This variety, now quite common in Hawaii, was introduced about 1885, under this name by Mr. Joseph Marsden, who at the same time added several other forms to the local collection.

Description of Fruit:—Form resembling the letter S; stem prominent; size from $3\frac{1}{2}$ to $4\frac{1}{2}$ inches long, from $2\frac{3}{8}$ to $2\frac{7}{8}$ inches broad and from 2 to $2\frac{1}{2}$ inches thick; color before fruit is mature green, turning to a pale yellow when ripe, with a slight blush of pink on the upper end of the exposed side; peeling qualities very good; texture variable but most specimens rather fibrous; flavor sweet but watery; flesh light yellow; seed small; tree an abundant bearer. The fruit appears to be quite resistant to the attacks of the mango blight.

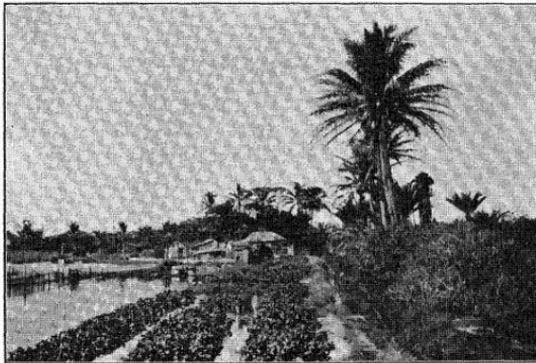
There are published descriptions of many varieties of mangoes growing in Hawaii, a number of which have proved of excellent quality and well adapted to conditions of the Territory. See Bulletin No. 12 United States Agricultural Experiment Station, Honolulu, T. H.

AN APPRECIATION: “You can have no idea of what your beautiful Aloha meant to us two wayfarers who, two weeks before, had entered your city perfect strangers. Let me assure you of our deep appreciation in decking us with our very first leis. Others came bearing wreaths and we were garlanded to the ears, and so delighted. I wonder if anywhere in this world there is a custom so touching as yours in greeting the coming, and farewell to the departing.”

THE WAIKIKI RECLAMATION PROJECT

By F. W. THRUM, *Engineer in Charge.*

THE City of Honolulu is to be congratulated upon the standing of the Waikiki Reclamation Project and at this time, just as the late Governor Pinkham passes to his long rest, would it not be well to pause and consider his words in connection therewith as given in his report to the Legislature of



Low Land near Beach Walk

1906? He said: "No city can take advantage of the opportunities nature and art presents, to become distinguished as a healthful, sanitary and beautiful city, if it depends on the caprice of individual owners in establishing the character of and streets of a district." Though the present project does not follow the plan as outlined by him, yet in the main it can be said to be based thereon.

This great undertaking, calling for the expenditure of millions in improvement projects of one class or another, was begun in

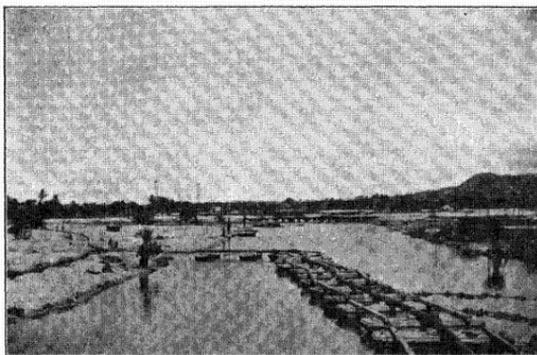
earnest last January by the Hawaiian Dredging Company. The Territory of Hawaii advertised for bids upon plans and specifications that will eventually call for a canal 150 feet wide, 25 feet deep and about two miles in length. Where the canal crosses the Ala Moana road, Kalakaua Avenue and McCully street, temporary bridges were to be erected to be taken down as the dredge returned. A hydraulic dredge is being used and the material excavated pumped upon adjacent property as the work proceeds. The sidewalls will be of reinforced concrete set on piles where the character of the base is such as to necessitate that type of construction. The floor of the canal will probably not require cementing as a firm strata of coral is met with at a depth of from 20 to 25 feet.

Before any canal could be dug it was necessary to secure the right of way, and while so doing it was thought advisable to have an additional area for boulevards and park purposes parallel and adjacent thereto. A width of 800 feet was therefore secured from McCully street to Kapiolani Park. Ere this is thrown open to the public it will probably extend on down to the Ala Moana and thence to town. The weight of public opinion has greatly aided the successful conclusion of all legal obstacles put in the way of this project.

The area to be drained and filled comprises 1400 acres and will, when completed, not only add greatly to the health of this section of Honolulu but will make available a new tract for residential purposes.

In order not to interfere with any of the public utilities it was necessary to take up the cable lines and relay them around the dredge at the crossing of the Ala Moana road. Before crossing Kalakaua Avenue a detour was constructed for auto traffic, and at McCully street the Rapid Transit tracks were similarly taken care of. Temporary bridges were erected as it is planned to have the dredge return via the Ala Moana entrance. Seventy-foot towers were erected on the lower side of Kalakaua Avenue to carry the gas mains and electric light wires, while on the upper side poles of similar height carry the power wires. It is planned to construct ornate concrete bridges where the temporary ones were erected.

To date about 500,000 cubic yards have been excavated and deposited upon the adjacent lands, the canal being now 6,000 feet from its starting point at the sea. Before starting inland a channel was cut out toward the reef for some 625 feet, 150 feet wide and 25 feet deep, this material being pumped to the site of the new High School on King street, a distance of over a mile.



Waikiki Reclamation Canal, Looking West

It is hoped to reach the end of Unit No. 1, near Ainalau, by Christmas, and then proceed on with Unit No. 3, to Kapiolani Park, and thence out to sea.

It is not possible at this date to give an estimate of the length of time necessary to complete this undertaking, as so much depends upon the active cooperation of the City and County government in the installation of the sewers, storm drains, etc., and the readiness with which the Legislature will make further appropriation with which to proceed.

The picturesque as well as odoriferous duck ponds are fast becoming but a memory. The tourists who saw only the artistic side of the duck ponds will be equally satisfied with the beauty of the canal, boulevards and park strip that is fast taking the place of the too-long neglected menace that the duck ponds were to the health of Honolulu.

SHRINER VISIT, 1922.

By ED. TOWSE.

THERE are half a million Shriners in the United States and Canada. This body is organized from those who have become 32nd degree masons of the Scottish Rite or Knights Templar of the York rite. On the continent there are upwards of four million members of the fraternity.

For years the Shrine was called the Playground of Masonry. Recently it has embarked upon a really serious mission or policy. This project is for the reclamation of the four hundred thousand crippled children in the states and Canada. Five hospitals are already provided on the mainland and others are planned. In Hawaii the one hundred and fifty crippled children located are to be treated in the Kauikeolani Children's Hospital at Honolulu. A staff is to be brought over to conduct a unit of twenty cots. This great work is financed by the simple method of assessing each Shriner two dollars a year—insuring an annual income of not less than one million dollars with no expense for collection.

About nine hundred Shriners from thirty-seven states and Canada spent a week of last June in the Islands as guests of Aloha Temple of Honolulu. They came on three steamers from San Francisco. Of course their reception was spectacular and their entertainment unique. The motif for the affair was the fact that James S. McCandless, for nearly forty years a resident of the Islands, had been chosen at the San Francisco national gathering, the Imperial Potentate—head of the Shrine.

Upon the arrival of the three steamers a parade was formed at the waterfront. There was a Bedoin Patrol of fifty mounted men. There were a dozen bands and half a dozen foot Patrols. Dignitaries, including eleven members of the Imperial Divan, were mounted on camels, an elephant, or seated in vehicles drawn by water buffalo—the beast of the rice fields.

The procession moved through streets colorfully decorated with arches, palms, flowers and flags to the Executive building, where Governor Farrington received the visitors, extending welcome on behalf of all citizens, especially the principal officers of

Aloha Temple of Honolulu, notably Potentate H. N. Denison and Chief Rabban Arthur F. Wall.

During the stay of the visitors daily programs were carried out by the home committeemen. This was a typical day:

8:30 a. m. to 9:30 a. m.—Public School Exhibition.

9 a. m.—Sugar Mill and Pearl Harbor Trip.

10 a. m. to 5 p. m.—Aquarium.

10 a. m. to 4 p. m.—Bishop Museum.

1 p. m.—Luau (Hawaiian Village).

1 p. m.—Patrol Drill (Palace Square).

2 to 5 p. m.—Surfing (Moana Hotel Beach).

2 to 3 p. m.—Band Concert at Headquarter.

2 p. m.—Horse Racing (Kapiolani Park).

6 p. m.—Luau (Hawaiian Village).

8 p. m.—Swimming Meet (Pier 6).

9 p. m.—Dance (Moana Hotel).

Variations included Hibiscus Show—2000 different blossoms of the favorite Island flower; military review—10,000 men of all branches of the service at Schofield Barracks; trip to historic Pali or precipice; air squadron display—thirty planes in action; visit to Pineapple cannery—largest canning establishment in the world; golfing at the Country Club; inspection of submarines and destroyers at Naval Base.

The Shriners had a busy and interesting week and expressed themselves as delighted with Hawaii. This event gave the Islands tremendous advertising, as it was quite fully reported in every newspaper on the mainland. Letters and publications and souvenirs by the thousands were sent from Honolulu by the visitors. Nearly all of those who made the voyage were able to see the Volcano of Kilauea, on the Island of Hawaii.

Splendid co-operation was given the local Shriners in their work; but there was no use of outside funds for the expense account. Aloha Temple "paid the bills," which totalled about fifty thousand dollars.

The executive committee consisted of George F. Angus, W. G. Ashley, Arthur F. Wall, Charles G. Heiser, Lester Petrie, S. S. Paxson, Kirk B. Porter, Julius Unger, Alford C. Wall, C. B. Wood, George F. Nellist, Harry N. Denison, Frank O. Boyer, H. E. Murray, Guy Buttolph, Thos. E. Wall, Ed Towse.

These were the heads of sub-committees: N. B. Young, Stanley McKenzie, Ferd. H. Hons, J. A. M. Johnson, Dr. Hubert Wood, J. T. Phillips, Mrs. A. F. Wall, Jas. Henderson, Chas. Ingvorsen, Charles E. King, Ul. F. Lemon, Thos. F. Abel, A. H. Turner, S. A. Walker, C. A. Scott, Dr. C. B. High.

SANDWICH vs. HAWAIIAN ISLANDS.

THE above caption doubtless comes to many minds and the question naturally arises as to when the change occurred from Cook's given name at their discovery in honor of his patron, Earl Sandwich, Lord of the Admiralty, of Great Britain, under whose direction Cook sailed, and by what, or whose, authority this was done.

All early voyagers, as also all early historians of these islands, refer to them under the English discovery name, and this appears to have carried down half a century, despite Kamehameha's protest to Vancouver as to the name, in 1793, referred to in Captain Golovin's "Tour Around the World in the Russian Sloop of war *Kamschatka*, 1817-19," published in 1822.*

It may be safely said that the term "Sandwich Islands" was never accepted by local authority, or had official use, and hence called for no legal act, or by authority notice, for the adoption of what was their own. That confusion for a time may have prevailed as Hawaii gradually developed in the scale of civilization to demand recognition in the brotherhood of independent nations is not strange, but gradually the legitimate native name gained supremacy and the English given name died from disuse.

Research on this subject reveals a few points of historic interest as follows:

The first official application of the name Hawaiian Islands is a letter by Captain Finch of the U. S. S. *Vincennes*, Nov. 21, 1829, addressed to Kamehameha as "King of the Hawaiian Islands," though the dispatch which he brought from the Secretary of the Navy, bearing the President's message is to the "King of the Sandwich Islands."

* See *The Friend*, July, 1894.

P. A. Brinsmade, U. S. Consul, as late as 1839, terms them as Hawaiian Islands. At the provisional cession of the islands to Great Britain in February, 1843, Lord George Paulet in his proclamation terms them "Hawaiian or Sandwich Islands."

In the official notice of R. C. Wyllie, July, 1844, his letter of credence from Wm. Miller, H. B. M.'s Consul General for the "Sandwich or other Islands in the Pacific," is acknowledged as Pro-Consul for the "Hawaiian Islands," though in the treaty with Great Britain in March, 1846, the English given name is still used.

On the "Polynesian" becoming the government organ in July, 1844, it was announced as the "official journal of the Hawaiian Government," yet a petition from Hilo, the month following, is addressed to "Kamehameha, King of Sandwich Islands."

From this time forward the English appellation gradually became obsolete.

LEAF USES OF THE HAWAIIANS.

THE KI or TI leaf (*Cordyline terminalis*), was an essential article of Hawaiian household economy. Its broad lanceolate leaves were the sole wrappers of the people, especially for food, whether for conveyance or in cooking. It served as plates; it covered the food placed in the underground ovens; bound around the head it relieved headaches and cooled the brow of the feverish; it had uses also in net fishing, and worn around the neck was said to have the charm of warding off evil spirits. Some maintain that it also had certain medicinal properties.

KUKUI (*Aleurites Moluccana*). The dry leaves of the kukui or candle-nut tree were used to wrap around bananas to hasten their ripening, effecting in three days what would usually take a week's time. They were also used to wrap fish in as a protection in cooking rather than for flavor, as was claimed for the

ki leaf. Dry leaves also served for polishing woodwork, and decayed leaves were used for fertilizing.

PAPAIA (*Carica Papaya*). Meat is said to be rendered tender by being wrapped over night in the deeply lobed leaves of this plant.

LAUHALA or Pandanus. The long linear leaves of the hala had special value with Hawaiians, as through all Polynesia, for the various uses to which it was put, principal of which was the mats of every house need, as also for baskets, hats, fans, etc., and in some cases for house thatching.

COCONUT (*Cocos nucifera*). Like the hala, the long pinate leaves of the coconut served for making mats, screens and baskets, and had use in certain house construction, more particularly the sheltering halaus. The midrib of its leaf furnished material for durable yard and house brooms.

SUGAR-CANE. The center of sugar-cane leaves (*ha ko*) were scraped and used for hat making, and mature leaves for thatching. Burned, the ash furnished a black dye for kapa.

TARO (*Colocasia antiquorum*). The principal use of the taro leaf was as a sort of spinach, cooked, for which the two or three younger leaf-stalks would be selected. Mature leaves at times were used as water cups, if folded up, known as *apu wai*. There is a tradition of a spring having been removed by the water being bundled away in taro leaves (*wai puolo*).

BREADFRUIT (*Artocarpus incisa*) leaves are said to have been used for polishing off canoes, wooden calabashes or other wood-work.

BANANA leaves had use in the protection of food in the underground oven cooking, similar to the *ki* leaf.

SWEET-POTATO leaves of certain age, cooked with hot stones, furnished the *palula* of a native table. Potato leaves were also sometimes used for poultices.

KAMANI (*Cordia subcordata*). The leaves of this tree were used for wrapping fish in cooking, more perhaps for protection than anything else, as their size would not insure preservation of flavor.

MAILE (*Alyxia olivæformis*), a modest fragrant vine, the finer stems of which furnish the ever popular ever-green wreath and

garland, without which no Hawaiian feast (*luau*) or social gathering is complete.

This but briefly presents some of the leaf uses of Hawaiians in former times, exclusive of the medicinal herbs and plants, of which the medical kahunas claimed knowledge of a large list possessing rare virtues. Some attempt has of late been made, under the auspices of the Board of Health, to compile this alleged knowledge.

HAWAII NOT A GRASS-SKIRT COUNTRY.

SOME months ago righteous indignation was freely voiced in support of the *Advertiser's* protest against the too prevalent reference to Hawaii as the land of the grass-skirt and hula, that garb, which belongs to the South Seas (or more correctly Micronesia), having no place as an ancient Hawaiian costume.

But this is simply a case of "chickens coming home to roost," wherein we are reaping the reward of seeds sown in poster and cartoon of Dame or Miss Hawaii, grass-skirted; pictured also in postal card and photo as such hula dancer, and now further libeled in the curio-store trade as typical Hawaiian dolls in like fringe skirt. The law that aims to protect the public by honesty in advertising should also put a stop to this imposition on strangers.

It is time to call a halt and protest. The money-greed in pandering to a certain element—be it tourist or resident—that clamors for, or abets the commercialized hula has brought this shame upon us, and disgracing us abroad. The Hawaiian societies are strong enough unitedly to exert an influence in protest of this growing libel of Hawaii's daughters. The Hawaii Civic club should not be the only organization to frown upon the slander. On principle they should all take an active part in measures aiming at community benefit, and this is a subject of no small matter in that category.

The Annual of 1918, in its article "Must we countenance the hula?" is therefore supported in no mistakable tone.

WHEN THE POET COMES TO HAWAII.

Editorial in Post Herald, Hilo, Hawaii, by Charles Eugene Banks.

THE Honolulu Ad Club has offered \$10,000 for the best book written on Hawaii. It must be written in competition. All authors or others who would be authors may enter the lists. A committee who may or may not know a real book in manuscript, (for a book in manuscript is not the same as a book in print and binding) will decide whose book is to be printed.

Even with all these things to overcome, an aspiring author, or an unknown might take chances. To stand a chance of getting \$10,000 is something, if one loves money at all, or needs it badly. But the Ad Club puts the pole up a notch higher for the helping authors to scale. The \$10,000 will be paid if the book sells 100,000 copies.

How beautiful. Book royalties run all the way from ten per cent to twenty-five per cent. A book that would sell 100,000 copies could not fail to net the author as much as the Ad Club offers and it might net him much more. After that he would still have the royalties coming in. A book that has a sale of 100,000 copies ought to go on to double that circulation.

There is a desire among the people of Hawaii for books on Hawaii. But books with an Hawaiian background must be like the poets that make them, born, not made. Hawaii, fundamentally, constructively, atmospherically and historically is poetic. Hawaiians were at the stage of nature worship when they were discovered, and so far as their history was concerned, stopped. Their story ended with the mounting of Kamehameha I to the dictatorship of all the islands. White men came to prick the beautiful bubble of Hawaiian life, philosophy, religion. Their gods fled their Olympus, their fairies and wood nymphs, their sea folks and cave folk were dissipated into thin air. Against the solid beliefs and policies of Anglo-Saxon civilization their lovely superstitions were blown down the winds.

Nothing saddens the poet's heart so much as such destruction of the marvelous poetry of a natural people. It has been the business of poets of all time to try and save the fragments of such structures from oblivion by reconstructing them in their Iliads. Homer saved the Greeks from being engulfed in the sophistication of more modern forms of life. The Sagas performed the same office for the rugged and heroic people of the North. What we know of the real American Indian is embodied in the writings of a few and venturesome Americans like Schoolcraft, and the earlier French Jesuits. The Aztecs lost their opportunity for immortality from being discovered by gold-hunting Spaniards. The same with the Incas.

There is enough of the ancient Hawaiian life remaining to form the substance of poems in which the noble and ingenuous people of these islands could find a second life. Yet none but poets should attempt the task. And that task should be approached with reverence for their gods. The sculptor who should make a statue group representing the Hawaiians of old should be actuated by admiration, not pity, or by a supercilious feeling of superiority. In the best sense the civilization of our day is not superior. It is grasping, cold and biting. It is ambitious for externals. The deeper love of nature has lost its glow. Pan is no longer a creator of beauty. He is a creature of hoof and horns, only a trifle less horrible than the devil himself.

Hawaiian books, by all means. But seek first the kingdom of poetry. Find the rhythm of the life that once flowed here, rich and full as the rivers of ancient India. Go down deep into the Heart of Things. Walk by the surf fringed shores of the islands when the world sleeps and the ghosts of departed warriors come forth to chant their songs of mourning and desolation. Catch in the deer-sad eyes of an Hawaiian maiden of today the radiance of a long gone love, of joy and freedom.

Some one will surely write the books of Hawaii. But it will not be a hired man brought to the Territory under contract to turn out the "best seller" of the year. Nor is an Ad Club prize likely to inspire such work. Some day the poet will come to lie along these green hillsides in the mellow sunlight, or dream mystic dreams by the big voiced sea when the moon is a sickle

in the sky and all the stars are out. Such a poet will perhaps rebuild the old Hawaii. If you want books of Hawaii pray for the birth of such a soul. You cannot make him with your money. The singer may come in rags and shame. But if the song is in his heart and there is a god of Hawaii at his elbow he will give you the books you seek. Or if not the books you seek, the books that the people whose ear you would arouse to the loveliness and glory of these isles will accept and hold to their hearts and treasure for the truth and beauty of them.

CAPITALIZING HAWAII'S CLIMATE.

By GEORGE T. ARMITAGE, Executive Secretary Hawaii Tourist Bureau.

[Editor's Note:—The following article by Mr. Armitage gives a brief resume of the formation of the Hawaii Tourist Bureau, formerly the Hawaii Promotion Committee, and a short synopsis of its activities, and their results.]

HAWAII has been favored with the finest climate in the world, a temperature which varies only a few degrees the year 'round. Excepting her natural wonders such as Kilauea, the largest continuously active volcano in the world, her whole popularity has been and must be built very largely on this, for after all it is her climate that keeps her mountains forever green, and makes for the fullest and most continuous enjoyment of outdoor life; it is her climate that tempers her hottest nights with brisk trade winds, and warms her cooler days with soft sunshine, that provides an exceptionally delightful environment in which to establish a home; it is her climate that has made possible the great sugar and pineapple plantations, the delicious tropical fruits and shady winding avenues of blossoming bush and flowering tree; it is her climate that produces day time and moonlight rainbows, liquid sunshine, soft-toned singers, winsome women and stalwart men; it is her climate that has won for Hawaiians an enviable reputation for hospitality.

Twenty years ago representative business men of Hawaii, fully appreciative of this and recognizing the great commercial possi-

bilities to be derived from visitors, sightseers, and health-and-recreation-seekers in this territory, took the first steps to organize and perpetuate a plan to attract visitors to the islands.

For some years visitors had been rather common in Honolulu but only desultory individual efforts to promote Hawaii had been made. To insure a steady flow of tourists it was necessary to spread broadcast the witchery of Hawaii's native life, the spell of her natural wonders, and the charm of her scenery and climate—in other words, to advertise.

During 1898 hordes of American soldiers were streaming through this port, with the local government through annexation finally placed on a firm foundation. Business boomed and tourists swarmed to Honolulu. In 1899 and 1900 the Royal Hawaiian hotel (now the Army and Navy Y. M. C. A.) turned away guests. In the spring of 1901 the original Moana hotel, less than half the size of the present modern Moana, which was completed in 1918, sprung up to house the overflow, and in the summer of that same year the Honolulu Rapid Transit & Land Company commenced operating trolley cars. Passenger steamer accommodations were increasing apace, and in 1903 opening of the Young hotel, perfection of everyday communication with the rest of the world through cable services of the Commercial Pacific Cable Company, and organization of the Hawaii Promotion Committee, gave development of tourist traffic to Hawaii such a running start that it has been increasing rapidly ever since.

Advent of the Hawaii Promotion Committee (now the Hawaii Tourist Bureau), which constituted the first popular and concerted publicity effort by residents of this territory, was the result of the progressive spirit of the Merchants' Association. Upon formation in 1901 of that body (now the retail board of the Chamber of Commerce of Honolulu) discussion was started on ways and means of exploiting Hawaii as an objective for visitors. Illustrating the association's far-sightedness, one of its primary aims at that time was establishment of direct passenger service from Los Angeles, a dream that materialized only last year (1922). In June, 1902, President F. W. Macfarlane of the association appointed a committee consisting of J. G. Rothwell, J. F. Humburg and William Lishman, to consider advertising

for visitors. This committee made a comprehensive report endorsing publicity and advocating a tax on imports and exports to obtain the necessary funds. The general community becoming more interested, a joint committee consisting of C. L. Wight, G. P. Wilder and F. J. Lowrey from the Chamber of Commerce, and P. R. Helm, F. L. Waldron and W. W. Hall from the Merchants' Association adopted a report recommending that a central information office be procured for service to visitors, that Hawaiian publicity be disseminated from this office, and that a permanent committee of two members from each commercial body and one from the community at large, with the power of naming a paid secretary, be selected.

Vice-President C. M. Cooke of the Chamber of Commerce appointed James A. Kennedy, of the Inter-Island Steam Navigation Co., and C. L. Wight, of Wilder's Steamship Co. (now combined with the Inter-Island company), and President W. W. Dimond of the Merchants' Association named W. W. Hall, of E. O. Hall & Son, and J. A. Gilman, of Castle & Cooke. This committee in turn selected F. C. Smith, of the Oahu Railway & Land Co., as representative at large, and chairman. Hon. Sanford B. Dole, then governor of the territory, who was heartily in accord with the aims and aspirations of the newly-formed promotion committee, recommended to the legislature the appropriating of \$15,000.00 for promotion work, and after considerable effort this sum was set aside.

Mr. E. M. Boyd, the first secretary of the Hawaii Promotion Committee, was appointed in 1903, quarters were rented in the Alexander Young building, a New York agency was retained to place Hawaiian advertisements in the leading mainland periodicals and an initial booklet entitled "Beauty Spots of Hawaii, Business Hawaii," was prepared and printed. A general folder in an edition of 250,000, combined with other pamphlets, gave the promotion committee about 500,000 pieces of printed matter for distribution, largely through the assistance of steamship and railway agencies. Thus the Hawaii Promotion Committee was launched with flying colors.

During the last twenty years the promotion committee has taken an increasingly important part in the commercial growth

and activity of the territory. Besides the direct publicity which it has handled, committees in charge of such indirect publicity features as the successful Floral Parades and spring Carnivals of the past have worked very closely with the promotion committee, usually utilizing its office, staff, and advertising media. From the days of Secretary Boyd until the present a large number of representative business men of Hawaii have in turn served faithfully as members of the committee, giving considerable time and thought to the development of an infant industry in which they had explicit faith but concerning which they often became the butt of jokes and jibes from less optimistic townsmen. During these twenty years the committee has distributed millions of pieces of publicity and information matter about Hawaii throughout the world, to say nothing of the display advertising it has used, the national events such as the world's fair at San Francisco in which it has participated, the publicity trips on which it has sent its secretaries throughout the mainland and the hundreds of other means it has employed to give good publicity to such a progressive and interesting community as Hawaii.

The secretaries and their terms of service with the committee were as follows:

E. M. Boyd.....	1903-1905
H. P. Wood.....	1905-1915
A. P. Taylor.....	1915-1917
Fred J. Halton.....	1917-1919
Lucile Hoogs, acting.....	May 1, 1919-July 1, 1919
John Hodges.....	July 1, 1919-July 1, 1920
Geo. T. Armitage.....	July 1, 1920-....

When the Chamber of Commerce of Honolulu and the Merchants' Association were consolidated in 1913 the Hawaii Promotion Committee became one of the regular standing committees of the chamber. The committee now consists of nine members, five from the Chamber of Commerce of Honolulu, appointed each January by the newly-elected president of that body and including one of the directors of the chamber whom the president designates as chairman, and four others, one each from the four principal islands of Kauai, Oahu, Maui and Hawaii, who are appointed by the governor of the territory upon recommendation of the board of supervisors and the commercial organization

of the respective islands and who hold office for one year or until a successor is appointed. In 1917 this representation of the other islands on the promotion committee was written into the territorial appropriation. Prior to that time representatives of the other islands had been members of the committee through invitation.

In July, 1919, the Hawaii Promotion Committee changed its name to the Hawaii Tourist Bureau. The former had sometimes caused the work of the committee to be confused on the mainland with other activities in which the committee was in no wise interested, such as promotion and sale of stocks, and the latter seemed to describe more nearly its activities and efforts.

The promotion committee's first appropriation of \$15,000 a year seems a meager sum when compared with the cost of the bureau's operations during 1922 with a budget of \$100,000.00, approximately \$60,000.00 of which was apportioned to general activities, and \$40,000.00 to special display advertising, most of the latter to appear, however, during 1923.

Regular funds of the bureau for 1922 came from four principal sources in round numbers as follows: territorial appropriation, \$22,500.00 (\$45,000.00 for the biennial period); voluntary tonnage tax, through the Chamber of Commerce of Honolulu, \$20,000.00 (proceeds of one-half of 10-cent per ton voluntary tax on all incoming freight excepting government, the other half going to Palama Settlement); city and county of Honolulu, \$3000.00; public subscriptions \$14,500.00.

Funds for the 1922-23 special display advertising were subscribed in a special way to meet a special situation.

General activities of the Hawaii Tourist Bureau, for which between \$50,000.00 and \$60,000.00 will be expended during 1922, includes maintenance of headquarters in Honolulu with an executive secretary and staff, and mainland branch office in San Francisco, with assistant secretary and stenographer; regular display advertising of the territory in various parts of the world; printing booklets and distributing them; purchasing motion picture films and slides to lend for lecture purposes; and photographs and cuts for newspaper and magazine publicity; maintenance of information service for all visitors in Honolulu; printing maps and guides, posters, labels, bulletins, form letters

and stationery; in fact most activities that go to make up well-rounded publicity and information work; and finally mainland trips of bureau representatives in calling personally on the various railway, steamship, tourist and travel agencies in whose hands the success or failure of the tourist business to Hawaii or any place depends.

The bureau continually declines hundreds of publicity propositions, some good, some bad, but all beyond the limits of its budget and resources, and now operates chiefly on the simple plan of confining its own activities to fields not already covered by others. The duty of the Hawaii Tourist Bureau to the community is to decide how the money appropriated for its uses may be best expended, and then to follow out that plan as consistently and energetically as possible.

That the bureau has succeeded fairly well in its mission of making these islands the "Crossroads of the Pacific" is attested, first by the general confidence the community manifests in its work, a confidence which becomes particularly apparent as the bureau's funds are constantly increased, and, second, by constant growth in the number of visitors.

There is absolutely no doubt that the tourist business to Hawaii has grown phenominally. Hotels have been built and added to; new stores have sprung up and prospered, public utilities, an exact barometer of the growth of a city, have enlarged their plants; curio shops and local transportation systems have thrived; cottages and bungalows have sprouted like mushrooms throughout the city; new wharves have been built; more steamships have been added to the Hawaiian service; and most noteworthy of all, one of the pillars of Hawaiian industry has admitted recently that in spite of the fact that this territory's commercial prosperity is very largely contingent on success of the sugar and pineapple industry, that if it had not been for the tourist business, Hawaii, which has suffered scarcely a glance of the hard times blow following the war, would have been very severely hit.

Figures are more conclusive than generalities and in conclusion the growth of the tourist business will be sketched in these. The following show the number of cabin passengers arriving in

and departing from Hawaii, for the years indicated, according to Custom House and Bureau of Immigration figures:

Years	Arrivals	Departures
1911	7471	6276
1912	7036	6636
1913	8082	7217
1914	8002	7109

The arrivals for 1913 and 1914 show a material growth over those of 1911 and 1912, but it is more interesting to note in these figures that every year shows a smaller number of departures than arrivals, thus indicating very prominently a material increase in the islands' population through newcomers.

Another set of interesting figures are those compiled by the bureau of all local arrivals in Hawaii from 1915 to the present as follows:

1915	1916	1917	1918	1919	1920	1921
11,205	12,811	10,494	4,773	5,292	11,073	11,236

The above figures do not include any passengers going beyond Honolulu, but rather cabin passengers whose destination was Hawaii. The figures are especially interesting in that they show how travel to Hawaii declined during the war when passenger ships on the Hawaiian run were sent to the Atlantic for transport duty and Hawaiian advertising was cut to the bone; then how travel to Hawaii immediately increased as ships returned and strenuous publicity efforts were resumed. From this data it may be seen that the number of first class passengers arriving in Hawaii during 1921 almost attained the heights of travel as established in 1916 which was the record tourist year, and while at this writing figures are not available for the past year, from all indications the number of tourists arriving in Hawaii during 1922 will surpass even this high mark.

It is therefore not difficult to visualize the time when the climate of Hawaii and all the resultant factors of that glorious weather, combined with two other essentials, namely, adequate accommodations on passenger steamers to and from Hawaii, and consistent, intelligent and ever-increasing publicity, will make her the most frequented and longest remembered recreation, vacation, and home-making center in the world.

NEW HAWAIIANA.

“OUR Hawaii,” by Charmian Kittredge London, revised and enlarged, issued from the press of the Macmillan Co., N. Y., early in 1922; an ill. 12 mo. of 427 pages. The elimination of much of the Jack London personalities of the former work, issued in 1917 (reserved for other use), and substituting much of Territorial data, as also adding materially to those appreciative Aloha tributes to Hawaii—its climate, scenery and people, to the tune of eighty-two pages, which characterized the earlier “Hawaii,” is an all-round improvement. Its value is further enhanced by its testimonial to the spirit of harmony and good-will which pervades the land through the absence of race prejudice.

Orville Elder, in “A Trip to the Hawaiian Islands,” published by the Evening Journal, Washington, Iowa, presents the impressions in the form of letters to the “stay at homes” of that observing delegate to the Press Congress of the World, that convened here in 1921. The book is a 12 mo. of 274 pages, freely illustrated, and presents in a happy vein his three strenuous weeks in Aloha land.

Of local issue is “Under Hawaiian Skies,” by Albert P. Taylor, an 8 vo. of 400 pages, freely illustrated, from the press of the Advertiser Publishing Co., a comprehensive work, presenting in narrative form a traditional account of the yesterdays of Hawaii with its romance and realities; its development (other than commercial), through various historic changes to the progress of today. In the author’s quarter of a century residence in this his adopted home, he has absorbed its atmosphere, which, with his press experience in all that time, has qualified him to treat of events and personages in an interestingly familiar manner, in telling “what Hawaii was and what Hawaii is.”

Wm. F. Wilson presents a valuable contribution to Hawaii’s early history in his pamphlet entitled: “With Lord Byron at the Sandwich Islands in 1825,” being extracts from the diary of James Macrae, Scottish Botanist, unearthed from the archives of the Royal Horticultural Society of London. Printed in Honolulu for the author, 75 pages, ill. 8 vo., paper.

A holiday booklet of Verse entitled "Dear Hawaii," from the press of the Paradise of the Pacific, is a collection of some 37 poetic tributes by (Mrs.) May L. Restarick to the varied charms of Hawaii that is well borne out in the title, including a number devotional in tone. A sm. ill. qto. of 57 pages.

"Legends & Lyrics of Hawaii," is a 31 page sm. qto. booklet of short rhyme expressions, and legends told in verse, by Margaret Kirby Morgan, 61 in number, published by the Advertiser Publishing Co.

The publications of the Bishop Museum for the year are: in the "Occasional Papers" series: No. 14 of vol. VII, "Dermaptera and Orthoptera of Hawaii," by Morgan Hebard. Of vol. VIII, No. 2, "Hawaiian Dromiidae," by Chas. Howard Edmonson; No. 3, "Proverbial Sayings of the Tongans," by E. E. V. Collocott and John Havea; No. 5, "Report of the Director for 1921;" No. 6, "The Secondary Xylem of Hawaiian Trees," by Forest B. H. Brown. Of the "Memoirs" series there have been issued No. 3, of vol. VIII, "Grasses of Hawaii," by A. S. Hitchcock, of 131 pages, 5 plates, 110 figures, and No. 4, "A contribution to Tongan somatology," by Louis Sullivan, 30 pages, 4 plates, 1 figure.

HILO TIDAL WAVES:—A heavy tidal wave swept into Hilo bay at 1 p. m. of December 16, 1921, causing damage estimated at several thousand dollars in which the Railway and the Dredging company were the principal sufferers. Coconut island felt its force as it swept on to Hilo front through Mooheau Park as far as Kamehameha Avenue, for a temporary inundation.

Nine tidal waves were also experienced this year, on November 11th, but without serious damage, beginning at about half past eight and ending a little after eleven o'clock, probably in connection with the earthquake and tidal disturbances of Coquimbo and other parts of Chile, of same date, that caused the loss of many lives and much property.

A NEW CROP IN HAWAII.

THE PIGEON PEA

By F. G. KRAUSS.

IF THE agricultural wealth of a country may be measured by the diversity and utilization of its land resources, then the introduction of each useful new crop marks an epoch in its history. The Hawaii of the past was a one crop country, and we prospered. The Hawaii of tomorrow will be characterized by the diversity of its agriculture and we will prosper more than ever before. Today, with two great staple crops vying in wholesome rivalry our financial and social economy is made more secure. We shall now welcome and support more readily the advent of new comers, which may court our favor, both in crops and institutions. Not the least of these is that of education and organization for the masses to inspire their cooperation, as well as their independence. Neither is more important than the other; both are indispensable and neither alone will be efficient for the common weal. We need here in Hawaii as elsewhere a well planned and fairly definite agricultural program. It should have for its object the fullest possible development of our agricultural resources as interpreted by real farmers as well as real statesmen. We need to engender creative thought among our youth that they may pioneer in our agricultural possibilities.

They were young men whose imagination had been fired who have made fruitful our raw, unoccupied uplands by creating the great pineapple industry. But there are still other vast tracts of waste land to conquer. And ere long we may have to rehabilitate and rejuvenate our present fertile lands, though they have thrived even under our irrational system of intensive cropping without adequate representation.

THE PIGEON PEA (*Cajanus indicus*).

Cajanus indicus, the humble Porto Rican pea, is perhaps the latest candidate to enter a plea for this new era of greater diversification and prosperity, not alone of our crops, from the

direct sale of which we may fill our coffers still more, but rather, on the one hand, to insure the perpetuation of the prosperity we already have, we must maintain the high state of fertility of our already cultivated soils, and on the one hand it would enable us to establish a live-stock industry, which may become a powerful second ally to our present great staples, sugar and pineapples. We believe that there can be maintained permanently no well-balanced, progressive and highly civilized state, especially in an insular position such as Hawaii, without an independent diversified agriculture, which includes live-stock production, including dairy and beef cattle, sheep, swine, poultry and work animals. All of these thrive and flourish, as does man himself, upon this wonderful new crop, which has proved its adaptability to our most adverse agricultural conditions, large areas over which no other useful plants would grow.

The pigeon pea was introduced into Hawaii from Porto Rico. It is also one of the most extensively grown crops in India, where it is often termed "the staff of life." It has been grown in a limited way in Hawaii for at least 20 years and is now commonly cultivated as a back-yard shrub. It does not appear, however, to have been thought of as a field crop until comparatively recently. Between the years 1906 and 1908, the Hawaii Experiment Station grew several varieties or types of pigeon pea as an experiment; and in a comparative test with leguminous field crops that had been given extensive trials the pigeon pea was found to attract especial attention on account of its vigorous growth and heavy seeding qualities. In the experiment just referred to, three test rows, each 100 feet long, were spaced 10 feet apart. The middle row yielded 102 pounds of prime seed within eight months from the time of planting. This was at the rate of 1.02 pounds per running foot of row; and if calculated to acre yields, the product would amount to nearly $2\frac{1}{4}$ tons of shelled seed per acre. The plant, being a perennial, yielded two subsequent crops which were harvested within the succeeding 12 months, the combined yield of seed approximating that of the initial crop. The seed was well distributed and undoubtedly is now to be found growing in widely scattered sections of the islands.

As early as 1910, reports from Fred S. Lyman, of Pupukea, Oahu, and others stated that the stems of the pigeon pea and the accompanying seed in pod, when harvested and fed fresh from the plant, were proving an excellent feed for work horses, mules, dairy cows, and poultry; and that all kinds of stock browse freely upon the growing plants.

It was Byron O. Clark, the pioneer homesteader, of Wahiawa, who first suggested to the writer the feasibility of curing the crop as hay and milling it as feed.

Of the pigeon pea as a green manuring and cover crop, C. G. White, of Haiku, Maui, wrote in 1910:

It is the hardiest legume of all I have tried at Haiku. It maintains itself for years, and no insects have seriously bothered it so far. It does not start well when planted in winter, but November plantings loiter along and grow vigorously at the coming of warm weather. Its chief drawback is its size. With special care and arrangements, plowing one-half acre a day, I have turned it under fairly well when four years old, using a disk plow and four large mules. * * * In three months' time the plants had rotted so that it gave no trouble in reploting and fitting the land in good shape. * * * The best corn I ever grew followed these peas.

James Munro makes the following statements regarding the use of pigeon peas:

Pigeon peas have been used on this ranch (Molokai) since 1910, first as a windbreak and later as a soil renovator in worn-out corn fields. The crop was found to be a good soil renovator, but expensive when bringing the land back into cultivation on account of the rank growth, which left very heavy stumps to be disposed of. The pigeon peas are planted at 800-foot elevations in rows 4 feet apart in clean cultivation, either in the fall or spring, giving preference to the fall because there is more time available then. Rainfall averages about 32 inches yearly and the fields are favored with the trade rains in March and April, during which months there is an average rainfall of 5 to 6 inches. Under these conditions pigeon peas make a rank growth and so long as the soil does not get too hard they will last through a dry summer with stocking after the grasses have failed.

The fenced, 60-acre lot used for the soil renovation test was used at the same time for fattening steers for market. Not more than 60 head were allowed on the lot at one time. These got very fat and the field could have carried more. Pigeon peas should not be pastured until the plants have flowered and the

pods are beginning to set, because it is on the pea pods that the cattle graze. They will eat the leaves when hard up for feed, but in this case they will break down and destroy the plant.

The freckled variety has proved an excellent chicken feed. The chickens were turned out in the peas, and the bushes beaten in dry weather to thrash out the peas. Two varieties have been grown together here without seeming to cross.

The great thing about pigeon peas is, like corn, to get it through its early stages without its being destroyed by caterpillars.

Although the Hawaii Experiment Station had advocated the possible value of the pigeon pea as a field crop as early as 1907, and had been instrumental in getting under way the field plantings above noted, little or no progress was made in Hawaii with it as a field crop, so far as can be determined, until the establishment of the Haiku demonstration and experiment farm on the island of Maui in 1914. Land on that island that failed to produce 25 bushels of corn per acre after receiving the best cultivation produced a very fine crop when it was planted to pigeon peas under the same conditions. In the succeeding three years 20 acres was planted to pigeon peas, which were regularly harvested as a seed and forage crop. Five tons of seed has been distributed for planting, 100 tons of hay cured, and half the above-mentioned amounts of hay and grain have been milled and fed, either alone or in combination with other feeds to all kinds of live stock. In 1918 and 1919 fully 500 acres was planted to the crop on the island of Maui, and by the end of 1920 more than 1,000 acres was growing in the Haiku district alone. During 1919 one Haiku ranch harvested more than 10 tons daily from 350 acres planted to this crop. This was cured and milled in an up-to-date milling plant, and formed the basic constituent of hundreds of tons of mixed feed turned out during the past year. The managers of the Lanai ranch have become so favorably impressed with the possibilities of this new crop for pasturage for cattle and sheep that they have under way plantings covering an aggregate of 2,000 acres.

A Molokai ranch has marketed some of its best conditioned steers from pigeon-pea pasture. At the Haiku demonstration and experiment farm, work mules, horses, milk cows, swine, and poultry were fed pigeon peas as a large part of their ration

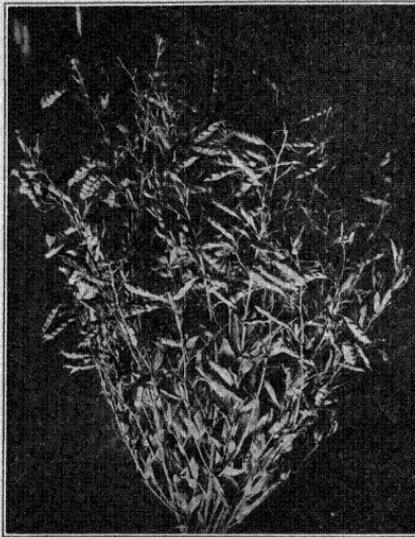
covering a period of four years. Corn, in 100-bushel crops, and pineapples, in 20-ton crops, were grown on lands that were renovated by the culture and turning under of pigeon peas after the peas had served well their purpose first as a harvested crop, then as a pasture, and finally as green manure. At the present writing, fully 10,000 acres are planted in the Territory largely on old pineapple and sugar cane fields to renovate the worn out soil.

BOTANY AND AGRICULTURAL HISTORY.

The pigeon pea is an erect leguminous shrub, attaining a height of 3 to 10 feet under ordinary culture in Hawaii. The leaves are 3-foliolate, the racemed flowers either yellow, or red and yellow, and the ovary is sessile and has few ovules. The pods vary greatly in size and shape in the different varieties, but are usually 3, 4, or 5 seeded and constricted between the seeds by oblique linear depressions. When not crowded, the plants branch freely well to the base. The stems are slender but heavily foliated in most varieties, and especially so after the plant has been cut back in the first harvest.

The generic name *Cajanus* is derived from the Malayan name, Katjang, and the only species is *C. indicus* or *C. cajan*. Some doubt exists as to whether this species was originally a native of India or of tropical Africa. It is extensively cultivated throughout India, even up to an altitude of 6,000 feet. In Porto Rico, whence the first seeds planted in Hawaii came some 20 or more years ago, two principal varieties are recognized. The variety *Cajanus indicus flavus* has yellow flowers and produces rather small seed similar to that of the Iron or Clay cowpea. It is a heavy seed bearer and very much liked by Porto Ricans as food, either as green peas, or as dry-shelled peas, which are prepared very much the same as cowpeas are in the Southern States. *Cajanus bicolor* has yellow flowers tinged with red and the pods are streaked or blotched with red on a green background. The seeds are light gray and faintly speckled. They are also somewhat larger and more spherical than the solid red seeds of the former variety. The main economic agricultural distinction, however, as now recognized, is that the dwarf, yellow flowering variety is early maturing and very heavy seedling, yield-

ing a heavy crop of seeds within seven or eight months from the time of planting, but attaining in the second year a height of only 3 or 7 feet. On the other hand, the tall bicolored flowered



A Bouquet of Pipeon Peas (*Cajanus indicus*) in Pod, Hawaii's New Field Crop, which promises to maintain and make more fertile for all time Hawaii's profitable acres.

(Grown by New Era Homestead, Haiku, Maui.)

F. G. K.

variety does not begin to yield its maximum crop of seed until the second year, but since it is heavily foliated and attains a height of from 6 to 10 feet, it is valuable as a temporary windbreak as well as for forage and green manuring.

Special reference should be made to the root system of the pigeon pea. The plant is furnished with a long taproot and many branching lateral roots that are abundantly supplied with large clusters of nitrogen-storing nodules. These nodules in some instances exceed the number found on any other of the many legumes studied at this station. No case has come under observation where the seed of pigeon peas required artificial inoculation. The root nodules seem to be present naturally and without exception.

The pigeon pea shows some tendency to cross-pollination when several varieties are grown together. This results in the formation of numerous crosses showing a greater or less variation in characters. Comparatively few of these appear to be constant, although several superior types have been established and are now being propagated with a view to wider distribution. While only slightly variable within the old-established varieties, careful selective breeding has established a superior and very uniform strain of an early maturing, heavy seeding type which the station has designated "New Era." A field of 5 acres of this strain is constantly maintained at the New Era Homestead Farm at Haiku, Maui, for breeding purposes.

Alonzo Gartley, of Honolulu, called attention to four well-established varieties of pigeon pea, which he designated as (1) the Oahu type; (2) the Maui type; (3) the Hawaii type (apparently the small-seeded India variety which was first introduced by the experiment station of the Sugar Planters' Association, and the seed given some years ago to the writer by H. L. Lyon); and (4) the Kauai type (which is similar to the Maui type, excepting that the seed is larger and lighter colored than the Maui type).

CLIMATIC AND SOIL ADAPTATIONS.

The pigeon pea is primarily a dry-land crop, especially when it is considered mainly for seed production. The heaviest yields of seed have been produced at Haiku during warm, dry seasons. Where the soil is of reasonable depth and fertility and in fair tilth the plants thrive remarkably well even during protracted droughts such as prevailed in that district during 1918 and 1919. A fine crop planted March 15, 1919, developed to perfect maturity

on a total of less than 20 inches of rainfall. Only one cultivation was given the crop after the intercrop of corn was harvested in July. No other crop is known that would prove successful under like conditions. Doubtless many people will recall having seen neglected pigeon pea plants thriving as well in dry, stony places as though they were being cultivated in a garden. Although suited to dry conditions, the pigeon pea adapts itself to many and varied conditions. Adequate moisture merely adds to the luxuriance of its growth and if, in addition, the soil is rich, the seeding period will merely be delayed to a time when the plant is unable to bear more foliage. Excessively wet districts, for example, Glenwood, on the island of Hawaii, and Nahiku, on the island of Maui, are, however, not adapted to the profitable culture of the pigeon pea, nor is the crop adapted to irrigation farming. As stated, before, its great value rests upon its ability to produce abundantly and most economically a nutritious herbage under semiarid conditions. Such conditions at best would be adverse to most other forage crops.

Its range of adaptability to the seasons, to varying altitudes, and to an almost unlimited variety of soil conditions is one of the striking characteristics of this unique field crop. At the Haiku demonstration and experiment farm spring and fall plantings have been equally successful. When planted in February, March, or April the plant begins to bear its first crop of seeds from August to October and continues to flower and fruit well into midwinter, provided the pods are kept picked. No treatment other than that of keeping the maturing pods continually picked will cause heavy fruiting and large yields of seed. Spring is considered the most favorable time for planting pigeon peas, because the plants then start growth rapidly and branch rather freely. Furthermore, at this season of the year a wide selection of crops is available for intercropping with the pigeon pea.

Planting in August, September, or October, to follow the corn or other summer harvest, is practicable when the ground contains sufficient moisture to germinate the seed. However, no intercropping should be attempted with fall planting of the pigeon pea. If the fall planting is followed by either an excessively dry or wet fall and winter, the crop will, as C. G. White has stated, "loiter along" for a while and then start off vigorously at the

coming of warm weather. Such plantings often produce the strongest legumes. They may begin to flower as early as May and yield seed abundantly by early July, especially in the more protected lowlands where the soil is light and well drained. Under such conditions the fruiting season may continue for a period of six months, from July to December. The following year, both from spring and fall plantings, two distinct fruiting seasons, the spring and summer crop and the fall and winter crop, will have established themselves. Under unusual conditions the plants may continue to flower and bear seed throughout the year.

In its adaptation to a wide variety of soils, the pigeon pea is equalled by few other crops. A deep, well-drained, medium rich loam is conducive to the best development and longest life of this crop; however, it thrives in light, loose, sandy soils having scant moisture from the gravelly and stony type to heavy clay loams of close texture and considerable moisture content, provided there is not standing water on the ground. Furthermore, the crop seems to be tolerant of salty soil conditions, plants having been noted to thrive in soils containing fully 0.0005 gram of sodium chlorid per gram of soil. In soils containing twice this amount of salt they were dwarfed and failed to seed freely, while a content of 0.005 gram of sodium chlorid per gram of soil seemed to be wholly destructive to growth. It is thought that many of the extensive barren sandy wastes bordering the seashore might be reclaimed and made of great use by planting them to pigeon peas. Seed stocks are being widely distributed at present with a view to testing further the adaptability of the crop to these conditions.

It has already been shown that the crop finds a natural habitat in the lowlands, but it is by no means confined to low elevations. It is stated that in the Himalayas, the pigeon pea plant thrives at an altitude of 6,000 feet. In Hawaii thriving plants have been found at an elevation of 3,000 feet.

PLANTING.

It is advisable to prepare the land thoroughly before planting it to pigeon peas. After the crop is established, little or no cultiva-

tion is required to get good results from it, but the young plants start off slowly and make only a spindling growth for the first month or two.

When pigeon peas are grown for seed purposes it is recommended that the rows be spaced 3, 4, or 5 feet apart, depending upon the fertility and moisture conditions of the soil. Naturally the more favorable the growing conditions are, the larger the plants will be and the more space they will require for best development. At Haiku the seed is planted in rows 5 feet apart and intercropped with some quick-maturing crop such as corn, beans, potatoes, peanuts, and the like. By the time these are harvested, the pigeon peas begin to occupy the intervening space. If the crop is wanted for green manuring, it is advisable to space the rows only half as wide as when the crop is to be grown primarily for seed; that is, they should be 24 to 30 inches apart.

The best and most economical method for planting the seed found so far is the use of a one or two-horse corn planter adjusted to drop the seed approximately 6 inches apart. This is considered the most favorable distance in the row for seed production. With this equipment a skilled workman should readily plant from 4 to 5 acres per day. From 8 to 10 pounds of seed will plant an acre. The seed may also be broadcasted, but such a practice is not recommended. Weeds are likely to smother the young seedlings, and if the plants are overcrowded, seed production will be seriously curtailed. Furthermore, light seeding is essential to make the scant available moisture adequate for even so drought resistant a crop as the pigeon pea.

THE HAY CROP HARVESTING.

The best time to harvest the pigeon pea crop for hay is when a large percentage of the pods is mature because a large part of the nutritive value of the plant is contained in the seed. So heavily do some strains seed that fully one-fourth of the forage is made up of grain. One great advantage of the pigeon pea over many other leguminous seed crops is that its pods do not scatter their seeds even when they are roughly handled.

Since the pigeon pea produces a stiff, woody stem, it has been found desirable to harvest not more than the upper third, or, at

most, the upper half of the plant, unless the plants are very spindling and sparse, as they sometimes are on poor thin soils during a dry season. It has been the practice at Haiku to cut back about one-third in the first harvest and a third to a fourth in subsequent harvests, depending upon the growth made by the plants. The stems in such cases do not exceed the thickness of a lead pencil, and they bear practically all the pods on the plant at that time.

Dr. William D. Baldwin on his farm has adapted an ordinary mowing machine to harvesting the crop by setting the cutting bar high. The crop is as readily cured as alfalfa. For seed purposes the pods are best harvested by hand.

PIGEON PEA AS FEED.

The majority of feeders have found that all classes of live stock readily learn to eat it without the admixture of other feeds. This seems to be the case especially when live stock has access to the growing crop as pasturage. At the Haiku substation no animal has yet been found which does not browse freely upon the growing plant. At the Haiku ranch, on the Island of Maui, the dairy herd of 50 cows has been maintained in excellent condition on pigeon-pea "tops" constituting the upper third of the plant, which is the heavily podded portion. The tips and pods are usually eaten first and then the more woody parts, only the thick stems remaining uneaten. Work mules will chew up even a large part of the woody stem. Poultry will jump as high as 3 feet to get at the pods, and they are very fond of the blossoms. Bees apparently gather nectar from the flowers. It has already been remarked that the Molokai ranch has marketed some of its best carcasses of beef direct from pigeon pea pasture. The Haleakala ranch, on the Island of Maui, has likewise pastured a 100-acre field of growing pigeon pea, maintaining with very satisfactory results, 250 head for a period of 100 days, the plants being stripped to mere stiff basal stems.

The greatest value of the pigeon pea as a feed seemingly lies in its possibilities for replacing a large portion of the imported grains, millstuffs, and hay. These are still brought into Hawaii from the Mainland at great expense and heavy consumption of carrying space on the already congested steamship lines.

It is believed that the milling of pigeon peas bids fair to do away entirely with imported feeds in the not distant future. The combined stems, pods, and seeds cured as hay can be milled into a meal similar to the extensively used alfalfa meal; the ground pods and seeds can be used in the same way as corn-and-cob meal; or the grain alone, either whole, cracked, or finely ground, can be mixed with other Hawaiian-grown feeds and supplemented with refuse molasses. As a matter of fact, the Haiku substation has, during the past four years, grown, milled and fed to half a dozen head of live stock the entire amount of feed consumed, fully 50% of which was pigeon pea product. This feed has been fed in comparison with the best imported feeds, with a distinct advantage, both in cost and general well-being of the animals, in favor of the home-grown feeds. A mill has been established at Haiku which grinds and mixes 10 to 25 tons of feed each working day of the year. From 10 to 50% of this feed is made up of milled products of the pigeon pea.

Good farming means, or should mean, both permanent and profitable agriculture. No agriculture can be either permanent or profitable where the outgo of fertility from the land is greater than the return. For the maintenance of soil fertility, no agricultural practices have longer or better stood the test of time than green manuring and the systematic rotation of crops. In Hawaii no other crop is known that will lend itself more readily to a large variety of conditions than the pigeon pea. On account of its ready adaptability to soil and climate, its drought-resistant properties, deep-rooting habit, heavy production of rich nitrogenous vegetation, perennial nature and thrift under neglect, the pigeon pea is peculiarly well suited to follow the pineapple and sugar-cane crops after these have spent themselves. Resting the land is said to restore fertility, but a more effective means of restoring fertility is to change the use of the land by practice of rotation of crops. The cropping cycle of sugar cane, pineapples, and pigeon peas in terms of time is quite similar. On an average, the two great staple crops of Hawaii have a cropping cycle consisting of a plant crop and two ratoon crops, covering approximately five years. This is likewise true of pigeon peas. Not only is it good theory but actual experimental practice has demonstrated that worn-out pineapple lands may be restored to their

original, or to improved, fertility by allowing a crop of pigeon peas to occupy the land for a period equal to the time such lands were cropped to pineapples, the pigeon peas then being turned under as green manure.

We bespeak great things from this new crop, not alone for Hawaii, but for all the vast tropical and semi-tropical lands where it can be grown. May Hawaii speed the day!

KILAUEA VOLCANO DURING 1922.

By L. W. DE VIS-NORTON,

Hawaiian Volcano Research Association.

THE comparison of the following report with the brief history of the spectacular events which occurred at Kilauea in 1921 will be of great interest to students of the great volcano. It will be remembered that 1921 opened with brilliant overflows of the lava lake of Halemaumau, followed by a brief subsidence to a depth of some 60 feet below the pit rim. The month of February was signalized by the monumental rising which culminated in the great eruption of March 23rd. Having spent its force the lava again subsided, reaching a depth of nearly 400 feet below the rim of the pit by the end of June and becoming extremely stagnant. The beginning of July, however, produced renewed activity leading to another great rise of the lava column, continuing to the end of September when it had attained an elevation only 75 feet beneath the rim of the pit. October witnessed a rapid subsidence to the level of July and the year closed with a rising lava column.

January, 1922, witnessed a continuation of this rising movement and at the end of the month the lava was 310 feet below the rim of the pit. The movement continued throughout February, upon the 21st day of which month there was a heavy earthquake felt throughout the island of Hawaii. At the close of the month the lava was 275 feet below the rim of the pit and owing to the absence of smoke and fume spectators were favored

with exceptionally clear seeing. The approach of the March equinox accelerated the rate of rising, several high crags almost in the center of the pit appearing to rise at an even more rapid rate than the surrounding lavà, and commencing the backward tilt, so characteristic a feature at Kilauea during the past few years. By the 26th of the month the lava was only 189 feet below the spectators and the whole interior had become most spectacular, bearing a remarkable resemblance to the conditions existing in September of the previous year.

The resemblance was strengthened during the month of April for the great rise continued and, whereas in the previous September the lava had risen to within 75 feet of the rim of the pit, by the end of April, 1922, it was only 60 feet down, while the great crags were in full view from the hotel, towering more than 40 feet above the pit rim and brilliantly illuminated at night by the glare from the surface of the lakes below.

The month of May will ever be memorable in the history of Kilauea. Those who followed the events of the long cycle of Mauna Loa and Kilauea eruptions that began in 1914 were justified in anticipating a sudden collapse of the Kilauea lava column. The month opened with lava still rising, although at a lessened speed, but during the week ending May 21st the entire lava column dropped to a depth of 350 feet below the rim of the pit, an amount equal to its entire rise during the preceding five and one-half months. But it was the period from 21st to 28th of the month that produced such a spectacle as will never be forgotten. For, accompanied by swarms of earthquakes, many of them reported from Hilo, Honomu and Waiohinu, and very many of them felt at the Volcano, the lava column disappeared entirely, leaving a tremendous void more than 800 feet in depth. The whole of the trig stations and danger signs around the rim of the pit were carried in and the incessant roar of avalanches was heard for many miles. This spectacular month closed with outbreaks at Makaopuhi and Napau craters eight and ten miles, respectively, east of Kilauea. A heavy swaying earthquake on the night of 28th of May heralded the appearance of a bright glow from Makaopuhi, while on the following day noisy explosive lava cones were in action at Napau. Both of these outbreaks, however, were very short-lived and June opened with Halemaumau

as a dormant pit showing nothing but a few steaming fissures at a depth of 800 feet. Avalanches, however, continued throughout the month, notably between the 19th and 25th, considerably enlarging the area of the pit which now in its two diameters measured some 2,000 by 1,500 feet. The great glowing caverns above the rift tunnels to the southwest of Halemaumau were included in the avalanches and tumbled into the vast void beneath.

At the beginning of July many wiseacres were saying that Kilauea as a volcano had finished its work and was dead for all time to come. This, however, was not the opinion of those who had studied the conditions and a speedy return of activity was predicted by them. This was borne out on July 17th by the appearance of live lava in a wall crack at the top of the southeast debris heap and the rapid formation of a glowing cone from which a rivulet of lava ran down onto the pit floor several hundred feet below. It was, however, only a premonitory sign, and by the end of the month the flow had become quiet and only a smoking cone, whose summit showed a glow at night, gave evidence of activity. These conditions continued throughout August but on September 2nd flowing lava again appeared at the wall cone which very shortly afterwards built itself up to a height of about 15 feet with a summit opening six feet in diameter.

Thereafter lava poured steadily from this source, the surface crusting over and allowing the melt to flow through tunnels underneath. At the same time there was every evidence that the lake which had now formed at the bottom of the pit was rising rapidly and measurements taken on September 19th showed it to possess a length of 650 feet at a depth of 735 feet below the rim of the pit, proving that the lava had actually risen 126 feet since early July.

Conditions were once again becoming spectacular for visitors, and although on the 20th of the month several heavy avalanches fell into the lake and restricted its area, it rose 45 feet during the next eight days and at the end of the month was only 650 feet below the rim of the pit. The steady rising continued during the month of October, the lake now being contained within ramparts of its own building and discharging brilliant overflows down the outside of its banks to spread out upon the surrounding floor. The entire absence of smoke and fume added to the beauty

of the night spectacle and a very large number of persons visited the scene. There was a temporary lull towards the end of October but it was of slight duration and the end of the month found the lake rising strongly with several fountains playing through its surface.

The same steady rising continued throughout November and December, becoming accelerated in progress as the winter solstice approached. The same mechanism of rising, namely: alternate rising of crags and lake surface, was observed as in previous years, the lava constantly overflowing the lake banks and spreading out in snaky flows which gradually buried the greater portion of the talus slopes, remnants of the heavy avalanches of the preceding May.

The year closes with quiet conditions at Kilauea, while apart from the month of May, when 589 earthquakes were registered owing to the great collapse of the lava column, there were no sensational seismic disturbances during the year.

HUGE BANANAS:—A bunch of the largest bananas ever produced in Hawaii, according to the report of the government experiment station, was taken to the mainland this past summer by Dr. W. E. Slater, grown by him at his home on Dole street, and destined for Minneapolis.

The individual bananas averaged eight inches in length and three inches in width, and the entire bunch weighed seventy-three pounds. There have been heavier bunches of more hands of the ordinary sized fruit, though this may be the record, as stated, for individual bananas. Unfortunately the kind or variety was not given.

BUILDING ACTIVITY:—The cost figures of business structures and dwellings for the city and county of Honolulu for the year 1921, including repairs, for which 2040 permits were issued, as shown by records of the Building Inspector, gives a total valuation of \$5,080,543, of which \$2,072,684 was for business improvements, and \$3,007,859 for dwellings. \$508,275 represented the amount for Oahu's outer districts. The central business district led in magnitude, and of the residential sections, the 1-2-3 order stood Kaimuki, Makiki, Waikiki.

HILO FIFTY YEARS AGO.

By J. M. LYDGATE.

WE landed in Hilo—the Lidgate family and the Alexander Young family, about mid-summer of 1865, after a rather rough trip of three days from Honolulu on the little brig *Nahi-ena-ena*. The brig, of course, anchored out in the bay and we were taken ashore in what was known as a whale boat, and landed on the sand beach at the foot of Waianuenue street. The boat was carried up by the waves till the keel touched the sand, when the sailors jumped out, seized the gunwale and held the boat fast while the passengers were quickly seized by the rest of the crew, bundled ashore bodily and set down on the beach to recover from the surprise. Our traps were landed in the same way and the boat immediately returned to the brig. This was to us a very novel and adventurous experience, the like of which we had never known before.

When we recovered from our surprise we climbed up the low bank which is now the makai edge of Front street and filed along that street, grown ups and children, six or seven of the latter, up Church street to Pleasant, and then along that to the recently vacated but fully furnished home of J. B. Pitman. This my father had secured for our accommodation in advance.

It was Sunday afternoon, and I distinctly remember that as we passed the little Seamen's Chapel opposite the Haili Church, just mauka of the present W. H. Smith home on Church street, I noticed that they were having service, just a little handful of them.

It was, as I say, about the middle of the afternoon, or rather later, when we got established, and naturally the one thing uppermost in our minds was supper. My father had also arranged for this in advance and we filed back and then across to the home of Captain Thomas Spencer which stood where the Hilo Hotel now stands. The bay was full of whalers and we found that Tom Spencer's place was alive with jolly uproarious sea captains, among which genial Tom Spencer easily took the lead. With a stentorian voice he called for the cook, and ushering us

into the dining room turned us over to him for supper, which, as I remember it, was very good. Among other things, I recall that we had creamed salt salmon, which was then very much used and was very tasty.

Before going any further with these reminiscences, it may be well, to describe in brief the town of Hilo.

Practically the whole of the little town was included between Front street along the shore, makai, Church street on the west, School street at the back and Waianuenue street on the north. And there were large blank spaces of open meadow land within these narrow confines. Of course, there were straggling houses along certain lines outside of this area, notably to the south, where Volcano street ran out to Ku-ku-au and thence to Waiakea, and, of course, there were some residences, and the Union school mauka of School street.

The section between Waianuenue street and the river Wailuku was mostly open, unoccupied, meadow. From the sea up to the Kipi premises, now the Cook place, there were no buildings at all, and from that again to the Reed place it was open meadow and from that again to the Rexford Hitchcock house was an inclosed pasture.

Beyond Wailuku river, which was spanned by a chain cable bridge, lay the scattered Hawaiian homes of Puueo. On one occasion shortly before our arrival one of the chain cables had pulled loose from the anchorage on the bank of the river and precipitated a riding party then crossing, into the river below. Fortunately no one was hurt, and the Hawaiians nearby soon fished them out. Richard Dana of "Two years before the Mast" fame was one of the party.

The sea at that time came right up to the bank edge of Front street, so that in heavy weather the spray blew more or less up into the street. Along Front street tall coconut trees of great age towered up over the street. From the foot of Church street extending along the beach it was all open country, with the exception of one Hawaiian home, one canoe-builder's workshop—or halau, as it is called by the Hawaiians—and a tumbled down little blacksmith shop some distance farther on. About halfway between Hilo proper and Waiakea lay the intermittent river called

Waiolama which at times was blocked up with sand thrown up by the sea, and at times was an outlet for the banked up waters of the considerable extent of marsh land behind the sand beach, which was fed by some large springs.

Beyond the Waiolama on what was known as Piopio was the residence of Governess Ke-eli-ko-lani. Hers was a typical grass-house of commodious size, but with board floor, surrounded by magnificent clumps of stately bamboos and large kamani trees. From this to Waiakea there were no habitations. Waiakea itself was mainly a fishing village with valuable fish ponds and with easy access to the sea. There was no bridge across it in those days. In this connection it may be well to say that while Waiakea was the smoothest corner of the bay it was considered too far away from town to be suitable for landing and shipping freight. One of the first undertakings carried through by the new firm of the Lidgate and Young Iron Works was the building of an iron pile wharf at the point below the foot of Waianuenue. This served its purpose for many years until Hilo had grown so much that it seemed advisable to take advantage of the stiller waters of Waiakea for landing and shipping purposes.

THE LEADING PEOPLE OF HILO.

Naturally by virtue of education, culture, refinement and moral dignity, the missionaries were looked upon as the leading people in all matters of social and intellectual activities. These missionaries were: Rev. Titus Coan, Rev. D. B. Lyman and Dr. C. H. Wetmore, to which may be added the Hitchcock brothers, who were missionary descendants of the first generation, and who ranked with the missionaries themselves.

Rev. Titus Coan was a man of very considerable ability, a leader and fluent speaker—almost an orator; a man of much intellectual and physical figure for a dominating moral purpose. He was the pastor, or practically bishop in control of all the churches throughout the wide extent of country, reaching from Ookala, the boundary of Hilo (north), to Keauhou on the south, the boundary of Puna. A distance along the coastline ran some seventy-five miles and extended back into the wilderness as far as there were any people. Of course, mostly the

people were scattered along the seashore or near to it, but there were thriving villages at Oloa far inland. And there were large pulu packing camps at times near the volcano at Kahaualea. This aggregated the large area of perhaps, six or seven square miles. Roads, as we understood them, there were none. Instead, there were narrow and treacherous bridle-paths, and the cliffs on the gulches were exceedingly steep and slippery so that it was rather an arduous undertaking to go, for instance, from Hilo to Lapaohoe. Bridges were almost entirely wanting and often the poor missionary was detained for hours at some ravine by a roaring torrent of swollen water, sweeping all before it to the sea. Mr. Coan generally took with him a native helper with a pack-horse on which their effects were carried, while he and the helper rode alongside, of course, single file. This helper was valuable in rounding up the scattered congregations, making preliminaries for the services, attending to the commissariat and that of the horses.

Mr. Coan was a man of considerable scientific attainments and his visits to the lava flows and reports on them are of great value. He was interested, not only in the Hawaiian congregations, but also in the large number of seamen who came to Hilo as the whalers returned each year to refit and provision, and in their behalf he secured the construction of the Seamen's Chapel, of which I have spoken, where those so inclined might gather for services Sunday afternoon, which services he conducted very effectively for the benefit of those who cared at all for these better things. Unfortunately, by far the greater majority cared for none of these things and steered clear of them, spending the time in the pursuit of far less worthy, not to say immoral, instead. In fact, Hilo during the stay of the whalers was a pretty "open town," and the influence of these dissipated men did very much to undo the beneficial work of the missionaries.

The first Mrs. Coan was a very modest, gentle, refined lady, beloved by all and in an unassuming way a very delightful hostess and a very salutary influence in the community. Unfortunately she died about 1868, much mourned by the family and the community. The Coan children at this time were already grown up or had gone away to school so that I never knew much

of them, save that Miss Hattie Coan returned some years later and conducted the little school for white children.

But the original primitive foreign school of those days was that conducted by Mrs. J. S. Shipman. Mrs. Shipman was the widow of the vocational missionary located at Kau, Hawaii. His premature death left his widow without means of subsistence, so she moved to Hilo with her children and opened a boarding school for foreign children which became very popular and successful. Perhaps about half of the children were white, the rest being half white and Hawaiian. As I remember there were thirty or thirty-five pupils, a goodly proportion of whom were boarders. Mrs. Shipman sometime after gave up the school and married W. H. Reed.

These resident missionaries were very valuable assets to the community in more ways than one. Connected with their homes were thriving gardens in which were to be found many useful and interesting plants, shrubs and trees. Meeting as they did every year in Honolulu, they had special facilities for securing new and rare introductions in the way of fruit and ornamental trees. These they brought home with them and took pains to distribute among their friends and also among the Hawaiians so that it was not long before quite rare trees could be found in distant parts of the island.

When we landed in Hilo there were stately large mango trees of the common variety which they had introduced years before. Unfortunately, they did not bear much fruit and various means were taken to make them do so. The most common and perhaps the most successful was to bore a hole in the trunk of the tree, fill it up with powder and drive in a good stout plug. This perhaps was only superstition however. The chutney mango, of more recent introduction fruited much more readily and was of very excellent quality, so that the "Hilo sour mango" was much prized and much in demand. The alligator pear tree, of later introduction, was just beginning to bear and the fruit was of excellent quality. Dr. Wetmore had a number of fine young trees, the fruit from which he distributed generously. The missionary homes were considered to be of palatial construction, a misconception which only years of knowledge of the world served

to correct in my mind. The Coan and Lyman homes were two-story buildings, set in the vegetable gardens and seemed then very imposing. The rooms, however, were small, ceilings low, verandas narrow, stairways cramped, and altogether, being built after the New England styles were scarcely suited to the tropics.

A few of the leading men of the community outside the mission may be briefly noted.

W. H. Reed in conjunction with C. E. Richardson conducted a ranch and dairy business with a large estate at Kapapala, some fifty miles away, in Kau, whence they brought beef and butter at regular intervals. Mr. Reed was married originally to a Hawaiian, but on her death he married Mrs. Shipman as I have already noted. Living originally in a grasshouse, after his marriage to Mrs. Shipman he built a two-story frame house overlooking on School street. This also was considered a very remarkable house, and very well built by J. L. Torbert—generally known to the Hawaiians as “Huli Pahu,” which was the Hawaiian name for mate of a ship—he having served in that capacity. He also built the courthouse, now police headquarters, and the Hilo Foreign church, now superseded by a new church on the same site. These were regarded as exceptionally fine, well constructed, buildings—justly so, as two of them still remain in an excellent state of repair.

Tom Spencer was an ex-sea captain of adventurous experience, who a few years before, abandoned the sea and started a ship chandlery business in Honolulu, and then moved to Hilo on purchasing the interests of Benjamin Pitman, where he conducted the same line of business. He was “hale fellow well met” among all sea-faring men, generous, convivial and a most enthusiastic patriot. In addition to his ship chandlery business he conducted a general store and billiard room, an oil storage warehouse and some sort of open house for the whaleship captains while they were in port. Later he went into the sugar business and conducted a small plantation called Amaulu, just back of Hilo.

J. H. Coney, the father of the Kauai representative, was sheriff of Hawaii, which position he filled very efficiently, notwithstanding the wide territory covered by his office. The Hawaiians, the island over, had a very wholesome respect for his advice.

He married a Miss Ena, part Hawaiian and part Chinese, a sister of John Ena of long service in the Inter-Island company. Mrs. Coney was an exceptionally fine woman of high character, gracious manner, generous instincts and kind disposition. During her long life she made many friends among all races and was very much beloved by all who knew her. Another sister married Haalelea, a high chief of those times, who died early, leaving her a widow.

The Coneys lived in a long grass house on the mauka side of the courthouse lot, and later built quite a pretentious residence which is now the County building. This was built by my father and is a standing evidence of good construction, in that it is still a thoroughly sound structure.

Captain John Worth was another retired sea captain who was for some years American consul in Hilo. He lived a quiet life conducting a small store on Front street where the Hilo Mercantile Company is located.

G. S. Kenway was circuit judge and lived with a family on the outskirts of the town toward Puna. He was a man of superior education and ability and was generally respected.

At this time there were four small plantations extending from Hilo northward for about a dozen miles. These were Amaulu, owned by Chinese; Kaiwiki, two or three miles farther on, owned by two Germans; Paukaa, adjoining, owned by Chinese; Onomea, owned by S. L. Austin, and Kaupakuea, a little beyond, where Pepeekeo is today. This was owned by Waller and Tucker.

These mills were all run by overshot water wheels and consisted of what is known as the "open train system" of boiling-house. They were large open pots, five or six feet in diameter, set over brick furnaces using trash and wood as fuel. All the sugar was packed in kegs and shipped to Honolulu in small schooners. These plantations produced some two to four or five hundred tons of sugar, each year.

The roads through the Hilo district were just about as bad as they possibly could be. The gulches followed one another in quick succession, the sides were steep, the grades were very heavy and in addition to these things, it rained almost unceasingly. There were no wheeled vehicles, not even in the town of Hilo.

The cane was transported to the mills, sometimes by means of pack mules, sometimes by rude wooden railways and finally by means of flumes. The fluming system was just being introduced when we went to Hilo, a modification of the monster flumes used in the Oregon northwest. A stream was picked up above the head of the cane lands and conveyed through the fields in by what was known as "box flumes," the cane was then carried to these flumes, dumped in in bundles which went sailing away down to the mill. It was the ideal system for Hilo, because the harder it rained the more water there was and the better the fluming went.

CAPTAIN THOMAS SPENCER.

THE reference made in the preceding paper by the late Mr. Lydgate to Captain "Tom" Spencer as a noted character of his time, brings to mind the tragic account of his narrow escape from execution, and the capture of his ship, the *Triton*¹ by the natives of Sydenham² Island, in 1848, which led to his arrival here, and subsequently establishing in the ship-chandlery business.

The following particulars, from the *Polynesian* of March 25, 1848, are gathered from Captain Spencer's private journal:

"On the 8th of January [1848] about 4 p. m. Captain Spencer and boat's crew went on shore for the purpose of procuring some articles which a Portuguese by the name of Manuel had for sale, the ship laying off and on. Having landed, the Captain went to look at the articles, made the bargain for them and returned to the boat just before dark. The natives in the mean time had taken the oars out of the boat and on being called upon to produce them refused to give them up. The Portuguese told the Captain that the chiefs wanted him to stay on shore that night and that consequently he could not have his oars. They

¹ Whaleship *Triton*, of New Bedford, Spencer, master, sailing from Lahaina for a line cruise, touched at this port October 28, 1847.

² Sydenham, or Nonuti Island, is of the Gilbert Group, and is in Lat. 0° 46' 05" S., and Long. 174° 31' 30" W.

succeeded however in getting them and by fighting their way through the crowd of natives, which now numbered about 200, got into the boat, but it being dark and the tide low, they were compelled to land again, when the oars were again taken, the boat seized, and the Captain and crew put under guard. About 7 o'clock the following morning, Manuel, accompanied by ten or twelve natives, embarked in the boat for the purpose of taking the ship. The boat went alongside, was hoisted up and the ship continued to stand off and on during the day. The next morning, January 10th, the ship was still in sight. About 6 p. m. two boats and a canoe came on shore, bringing with them a large quantity of articles belonging to the ship. They reported to Captain Spencer that all hands were killed, the ship taken possession of, and that now it was their turn. The crew were marched off and the Captain making some resistance was picked up and carried to a small island about 900 feet from the shore, where the natives arraigned themselves in a circle with knives, lances, spears and clubs. One more desperate than the rest, to whom the office of executioner was assigned, was about to strike the fatal blow, when a chief woman, a veritable Pocahontas, sprang forward to rescue the victim. Having repeated some magic incantations, Captain S. was christened *Cogio* and declared taboo. This heroine guarded well her protegee, and he would be indeed ungrateful did he not duly acknowledge his obligations to his fair protector. After the conclusion of the discussion upon the subject of execution, the natives adjourned en masse to divide the spoils which had been brought away from the ship. A general row now occurred in dividing the plunder, and many a black eye testified to the eagerness of the parties in obtaining their share.

"About 10 o'clock that evening, William, a native of these islands who belonged to the *Triton*, and who had escaped by swimming, found Captain Spencer, and told him that the natives under Manuel had possession of the ship when he left her.

"The position of the Captain and the boat's crew on shore was anything but comfortable. Of the fate of the ship they were all the time in ignorance. On the morning of the 11th, a sail appeared and the Captain having procured a canoe by the promise of tobacco and pipes, started with the intention of boarding the ship which was supposed to be the *Triton*. After a long

and fruitless chase of two days without food or water, they gave up and returned again on shore. On the morning of the 13th, Captain S. was invited to join the throng who were going to visit the metropolis. He found most of the inhabitants of the island assembled there. The capitol is a large building 300 feet long and 150 feet wide, the floor covered with mats. The people are uncouth in their manners and passionately fond of ornaments. The dresses of the men—such as do dress—are made of palm-leaf, with head-dresses and ornaments, such as shells and human teeth, their faces painted in a manner to resemble the evil one rather than a human being. The women's dresses consist of a narrow strip of same material, bound around their loins, and they wear strings of shells with coral beads wound round their legs below the knee. The present being some national jubilee, the natives in all about 400, formed themselves into a ring, when they commenced singing, making all manner of jestures, and keeping perfect time with their hands and feet. After the performance was ended, they all sat down and several of the natives proceeded to deliver speeches, which was received with rapturous applause. The next thing in course was the feast to which all adjourned with a hearty good will. These feasts happen six times a year, and last three days. During this period universal license and riot prevails.

"The ceremonies were interrupted on the afternoon of the 14th by the cry of 'Sail ho!' On the following morning Captain S. started in one of the boats which had been taken from the *Triton*, intending to board the ship, but after two days was again obliged to return. The 19th was passed in rambling around the island, in which rambles Captain S. recovered his chronometer and some other articles belonging to the ship. On the 20th two ships were discovered in the offing, and about 10 a. m. our Crusoe wanderers were taken aboard the *Alabama* of Nantucket, Captain Coggshall. The other ship proved to be the *United States* of Nantucket, Captain Worth. Both ships on learning what had happened, stood in for the purpose of recovering what property they could.

"On the 22d several boats from the two ships were sent in shore. In attempting to get the boat belonging to the *Triton*, an affray occurred in which three or four of the natives were

killed. It was decided that Captain S. and crew should go aboard the *United States* which was to proceed to Guam. On the 29th of January, the *United States* falling in with the *Japan* bound for Honolulu put them on board her, in which vessel they have arrived. The *Japan* had previously—only two days after the massacre—spoken the *Triton*, supplied her with instruments, and advised her officers to work her to this port.

“It appears from Captain S.’s account that Manuel went on board and informed the mate that the Captain wished him to send some empty casks ashore for the purpose of bringing off the articles purchased. Manuel and his body of natives were permitted to remain on board over night, there not being time to get casks ready that day. At 10 o’clock that night, they rose on the ship’s company, shot the cooper and the man at the wheel, and badly wounded the mate and several others. Manuel appears to have been a perfect fiend. He had shot the cooper and the man at the wheel previous to the mate’s coming on deck when he attacked him and succeeded in wounding and disarming him. The mate having nothing to defend himself with ran forward and jumped into the forehold. The cooper laying upon the deck badly wounded, Manuel again attacked him and was cutting him up in a bad manner, when the third mate pinned the wretch to the deck with a lance. Notwithstanding the death of their leader the natives fought valiantly and finally succeeded in getting the entire possession of the ship, when a universal plunder was commenced.

“They put a native of the group who belonged to the ship at the wheel intending to run her on shore, but the honest chap, not relishing the summary way of proceeding, and feeling that in obeying such orders he would be breaking owners, contrived by stratagem to run the ship off land. Another row occurred and the faithful helmsman was obliged to fly into the rigging to save his life. He then resorted to another stratagem, singing out ‘Sail ho!’ at the top of his voice, when the natives becoming frightened, jumped overboard and started for the shore. Previous to this the second and third mates and most of the crew had lowered the bow boat and left the ship. Being left in full possession of the ship, our hero descended and taking the helm run her down to the boats and took the men on board. Thus the

ship was saved and perhaps many lives, by the sagacity of one half-civilized native. Such conduct is worthy of admiration, and we hope the honest fellow will be well rewarded."

The subject of the above narrative was one of four brothers, all of whom became identified with the commercial interests of Hawaii, and affords ample reminiscent material which may be availed of for our next issue.

THE PAN-PACIFIC COMMERCIAL CONFERENCE

By DR. FRANK F. BUNKER,

Executive Secretary of the Pan-Pacific Union.

THE First Pan-Pacific Commercial Conference, called by the Pan-Pacific Union, convened in Honolulu, T. H., on October 26, 1922. Every country of the Pacific was represented, with the exception of some of the Latin American States. More than a hundred leaders in the general field of finance and commerce in Pacific lands assembled at the call of the Union.

The First Pan-Pacific Commercial Conference was the fourth in the series of conferences held under the auspices of the Pan-Pacific Union with the object of bringing together in friendly cooperation the leaders in all lines of thought and action in Pacific lands. The first in this series was a conference of scientists from about the Pacific who convened in Honolulu in August, 1920. The second was a conference of educators who met in August, 1921. The third was a conference of journalists who discussed the problems of journalism of the Pacific region on a day set apart for the purpose by the Press Congress of the World, which convened in Honolulu in October, 1921. It is the intention of the Pan-Pacific Union to follow the Commercial Conference with a fifth in 1924 which will bring together the men of the Pacific region who are prominent in the conservation movement.

PREPARATION FOR THE CONFERENCE.

While the preparations for the Commercial Conference were begun more than two years ago, under the chairmanship of the late Franklin K. Lane, yet the actual work has been done for the most part within the year. Mr. Alexander Hume Ford, the director of the Pan-Pacific Union, early in 1922 toured the United States and Canada, visiting the principal business, civic, and commercial bodies in the interest of the conference. He also spent a considerable time in Washington, D. C., in conference with government officials. Upon returning to Honolulu he made a quick trip to the principal ports of the Orient likewise for the purpose of stimulating the interest of the governments of these countries in the conference.

In addition to these field activities of the director, the office force of the Pan-Pacific Union gave over practically its entire time during the year to the carrying forward of a voluminous correspondence with individuals and organizations about the Pacific for the purpose of bringing to their attention the plans of the conference.

INVITATIONS TO THE CONFERENCE.

The invitations to the conference which were issued were of two kinds—first, those to the governments of the Pacific inviting them to send representatives to the conference. Such invitations, following the precedent established at the Pan-Pacific Educational Conference, were transmitted to the respective governments by the Secretary of State of the United States government. The second class of invitations were sent direct from the Pan-Pacific Union to the representative business, trade, and civic organizations of the Pacific as well as to those institutions of learning having departments of commerce. The response to this work was encouraging and there assembled in Honolulu, upon the date of the opening of the session, more than one hundred persons prominent in commercial activities representing some seventeen countries and self-governing countries bordering the Pacific.

The countries and self-governing colonies represented at the conference were the following:

Australia	Korea	Peru
British Columbia	Malay States	Philippines
China	Mexico	Salvador
Fiji	Netherlands East	Siam
Indo-China	Indies	Siberia
Japan	New Zealand	United States

THE AGENDA.

Recognizing that it was highly important to outline a program for discussion which would go to the heart of the commercial problems of the Pacific and which would therefore appeal to the commercial leaders, much thought was given to the preparation of the agenda. A committee of men prominent in the commercial life of Hawaii was called together for the purpose of blocking out a tentative program. After this program was approved by the local committee, the director of the Pan-Pacific Union submitted it to the critical examination of experts of the Department of Commerce of the United States government and also to representatives of the United States Chamber of Commerce and to representatives of Pacific lands at the Limitation of Armament Conference in Washington. A committee was appointed by these and an agenda was drawn up using the program submitted by the Hawaiian committee as a basis.

The fact however that the discussions followed closely the adopted program shows that the committee was successful in suggesting topics which were considered vital by the leaders in the commercial activities of the Pacific.

DETAILED PROGRAM.

Obviously it was impossible in advance to formulate a daily detailed program. The names of the individuals who were to attend the conference, in many instances, was not known much before the date of their arrival. It was therefore impossible to outline in advance of actual arrival the daily program.

A week prior to the convening of the conference, Robert Newton Lynch, vice-president and general manager of the San Fran-

cisco Chamber of Commerce, and Mr. E. O. McCormick, vice-president Southern Pacific Railroad Co., arrived in Honolulu to assist in the preliminary organization of the conference, in which activities they rendered most valuable service.

CONFERENCE ORGANIZATION.

The organization of the conference comprised a permanent chairman, Mr. E. O. McCormick; vice-chairmen representing each delegation in attendance; a secretary, Mr. Eliot G. Mears; and three standing committees, a committee on program (Mr. Robert Newton Lynch of the United States delegation, chairman), a committee on rules (Dr. T. Harada of the Japanese delegation, chairman), and a committee on resolutions (Mr. Samuel U. Zau of the Chinese delegation, chairman). Immediately upon its appointment, the program committee organized and at successive meetings outlined a day or two in advance the detailed program which, as has already been said, followed very closely the topics included in the agenda. By proceeding in this manner the program committee was able to keep to the authorized agenda and yet at the same time to follow the lines of interest which spontaneously developed in the course of discussion.

FIRST DAY'S PROGRAM.

The day opened with a Pan-Pacific flag pageant given under the direction of Mr. Alexander Hume Ford, director of the Pan-Pacific Union. This was held in honor of the Japanese flag sent to the Union by Prince Tokugawa; the Chinese flag sent by the president of China for his country; the Siamese flag sent by the king of Siam; and the Canadian flag presented by Mr. F. C. T. O'Hara, deputy minister of trade and commerce of Canada. Groups of children, resident in Honolulu, representing all the nations from about the Pacific, marched in costume behind the flag of their country through the grounds of the Executive Building while their respective national songs were sung by a group of students from the Territorial Normal School. This was a beautiful spectacle and was looked upon by all of the delegates as a fitting preliminary to the formal sessions of the conference.

Upon the conclusion of the pageant, the conference was called to order by the Hon. Wallace R. Farrington, Governor of Hawaii, and president of the Pan-Pacific Union. A message of greeting from President Harding was read by Director Ford, which was followed by an address of welcome by the Governor. Upon the conclusion of this address the permanent officers and committees were selected and Mr. E. O. McCormick assumed his duties as presiding officer.

Then followed, as the chief feature of the day's deliberations, a discussion of the following topic: "*Significant Pan-Pacific Commercial Problems of My Country.*" One representative from each delegation presented the case for each country.

SECOND DAY'S PROGRAM.

The second day saw the completion of the chief topic begun the day before, the reading of greetings from Hon. Herbert Hoover, Hon. Harry C. Wallace, Hon. Theodore Roosevelt, all of the United States; Prince Traidos of Siam, Viscount Shibusawa of Japan, Hawking Yen, of China, and others.

The general theme for the discussion of the day was "*Communication and Transportation.*" The discussion of that aspect of this question having to do with news communication was lead by Admiral Ziegemeier, Director of Naval Communications, Washington, D. C.; by V. S. McClatchy, proprietor of the *Sacramento Bee* of California, and by Baron Yasushi Togo, member of the House of Peers of Japan. This topic of news communication was followed by a discussion of the "*Trade Routes of the Pacific.*" The opening paper was prepared by Hon. A. D. Lasker, chairman of the United States Shipping Board, and read by Robert Newton Lynch. Captain I. N. Hibberd, of San Francisco, contributed a very instructive discussion of the "*Problems of Ocean Trade Routes.*"

Then came the discussion of the third phase of this question, namely, "*Free Zones and Free Ports,*" read by Dr. Bunshiro Hattori of Japan and participated in by Frank Atherton of Hawaii, Henry Blackwood of the United States, F. C. T. O'Hara of Canada, and by William McMurray and Robert Newton Lynch of the United States.

THIRD DAY'S PROGRAM.

The third day's session dealt with the general theme of "*The Development and Conservation of Natural Resources.*" Valuable papers on this theme were presented by Dr. Barton W. Evermann, Director of the Museum of the California Academy of Science, San Francisco; by John Peas Babcock of Canada, and by Prof. Bungo Ishikawa of Japan. The presentation of this subject was followed by an interesting discussion participated in from the floor by a number of the delegates.

FOURTH DAY'S PROGRAM.

The fourth day's program dealt with the general topic of the "*Development and Conservation of Natural Resources.*" A number of papers contributed to the conference by government officials who were unable to be present were summarized and presented by Dr. Frank F. Bunker, executive secretary of the Pan-Pacific Union. This resume was followed by an interesting characterization of the "*Rubber Situation in the Far East,*" made by Major H. Gooding Field, representing the Malay States.

Then followed interesting discussions on cotton, coal and sugar by various delegates. Mr. George A. Fitch of Shanghai, China, addressed the conference upon the general theme of the "*Prevention of World Crisis in Rice.*" Mr. Julean Arnold, the U. S. Commercial Attache in China, discussed China's internal transportation system, while Mr. S. N. Castle of New York presented a paper in which he gave an analysis of the scientific methods of handling Pacific resources.

The general topic of "*Finance and Investments*" was then introduced by Mr. L. Tenney Peck, president of the First National Bank of Hawaii. His talk was followed by a discussion of banking methods and banking problems of a number of the countries represented at the conference.

FIFTH DAY'S PROGRAM.

The discussion of the fifth day dealt with inter-nation relations in the Pacific area and covered such subjects as "*Navigation between the United States and Korea,*" by Chung Bum Yee of

Korea; "*Engineering Relations*," by Louis S. Cain of Hawaii; "*Commercial Relations With China*," by Samuel U. Zau of China; "*Commercial Arbitration*," by Dr. Frank F. Bunker of Hawaii, Dr. Bunshiro Hattori of Japan, and H. Y. Moh of China; "*Cooperation Among Various Agencies in the Pacific Area*," by Dr. Julius Klein of the U. S. Department of Commerce; "*The Conservation of the Tea Resources of China*," by Theodore Chen of China, and the "*Need For Cooperation Under the Agencies Interested in Pan-Pacific Problems*," by H. A. van C. Torchiana, Consul General for Netherlands stationed at San Francisco.

SIXTH DAY'S PROGRAM.

The session comprised a half day only and was given over to a discussion of the "*Functions of Schools of Commerce*." The papers and discussions were contributed by Professor Eliot G. Mears of Stanford University, H. Y. Moh of China, Julean Arnold of China, Professor Leebrick, Professor Van Winkle, and Professor Crawford of Hawaii, Consul General H. A. van C. Torchiana, Consul General for Netherlands, and Professor Tolmanchoff of Siberia.

The Commercial Conference closed its session at noon on Monday, November 6th. Mr. Daniel Douty of Shanghai discussed recent developments in the silk culture of China as an example of international cooperation. Mr. H. W. Heegstra of the United States spoke on "*Crystallizing the Pan-Pacific Spirit*," and Mr. Jiro Sakabe of Japan spoke on "*Japanese Trade and Commerce*." Then followed closing messages by representatives of all of the delegations in attendance, by the executive officers of the Pan-Pacific Union, by Mr. E. O. McCormick, chairman of the conference, and by Hon. Wallace R. Farrington, president of the Pan-Pacific Union.

RESULTS OF THE CONFERENCE.

It is, of course, impossible to evaluate the results of a conference as notable as was the first Pan-Pacific Commercial Conference. Nevertheless it was obvious that much was accomplished in several directions.

In the first place, the leaders of commerce and trade from the countries of the Pacific were brought together in a natural way

through their mutual interest in the field of commerce. The outstanding problems, which to a greater or lesser degree are common to those engaged in commercial activity in every country of the Pacific region, were discussed as fully and as freely as it was possible for a body of men in a short period of time to do. The result was that each left the conference with a better and clearer view of the commercial problems of the Pacific region as a whole than he had before.

The discussion lead to the beginning, at least, of practical efforts to formulate constructive plans for the solution of Pacific problems relating to commerce, which are already being followed up energetically and actively, may be far-reaching in the practical good that will be achieved.

But perhaps the most valuable result of all was the opportunity which this conference, and the other Pan-Pacific conferences which have been held, afforded for the forming of inter-racial friendships which may be enduring and which may have a vital bearing upon the relations of the peoples themselves.

The program of entertainment provided by the citizens of the Territory was a generous one and one which provided numerous opportunities for the delegates' not only to meet one another on terms of friendship and good will but to meet the prominent residents of the Territory as well. The three-day's trip to the volcano on the island of Hawaii, for example, gave an unusual opportunity for the group of delegates who went to form friendly attachments of a personal nature, which opportunity was duplicated many times over through the generosity of the local citizens who cooperated with the Pan-Pacific Union in a spirit of the utmost enthusiasm and helpfulness.

THE VALUE OF SUCH CONFERENCE TO HAWAII.

The cost of the 1922 activities of the Pan-Pacific Union, including the cost of the Commercial Conference, was raised very largely among the citizens of Hawaii. The question properly arises as to what benefit Hawaii will derive from this investment.

It is conservative to say that in the campaign which the Pan-Pacific Union organized for the purpose of bringing the Commercial Conference to the attention of respective Pacific coun-

tries, at least five thousand different contacts were established. That is to say, the thought of Hawaii as the natural meeting place for leaders among Pacific countries entered the minds of many thousands of people about the Pacific through information received by the national and international organizations of which they were members and with whom the Pan-Pacific Union was in correspondence.

Through the Associated Press, digests of all of the advance papers received for presentation at the conference were sent to some thirteen hundred newspapers, which constitutes the clientele of the Associated Press. Digests were sent out in time to appear in the respective periodicals during the conference week. Through this medium alone Hawaii, as a natural conference place for deliberations having to do with Pacific matters, was brought to the attention of a wide circle of intelligent persons.

Again, the important persons of the Pacific in attendance upon the conference have learned what Hawaiian scenery and Hawaiian hospitality are like. It is believed that without exception all of the delegates in attendance upon each of the Pan-Pacific conferences have left with a genuine enthusiasm for Hawaii which will mean that many friends of these delegates will visit the Territory. While the Pan-Pacific Union was not organized for the purpose of stimulating tourist travel, nevertheless these gatherings undoubtedly serve in a very effective way to bring the islands to the interested attention of travelers and pleasure seekers.

The local citizens of Hawaii, too, through the medium of these conferences, have the opportunity of meeting and hearing eminent men and women from all Pacific regions. Without question, this tends to give our citizens a world view and a world sympathy more effectively perhaps than through any other agency.

It must also be a matter of satisfaction to the citizens of Hawaii to know that, through the medium of these Pan-Pacific conferences, Hawaii is taking leadership in this great movement which has for its object the development of a friendly understanding among Pacific peoples.

SHARK BELIEFS.

AMONG the many supernatural beliefs of the Hawaiian people of by-gone-days, probably their fear, reverence and regard for the shark was the most prominent and universal, and, as a divinity, was held in a class with Pele, goddess of the volcano. The fact that no one of the Hawaiian race has arisen to shatter the faith of the people in sharks, as did queen Kapiolani in her defiance of Pele's alleged power, indicates this, and may account for the lingering regard and superstition still met with. It lends color to its fundamental character, though worship, practice of sacrifice, and tender rearings of the young shark for its protective influence, has passed away.

While shark-gods and goddesses were numerous throughout the coasts of the islands, there were the king or queen shark of each island to which all the Hawaiian people paid deference. These supreme sharks were credited with coming from abroad, and were held to be the original of their species (*mano kumuʻāa*). Prominent among these were Kamohoalii, Kuhaimoana, Kauhuhu, Kaneikokala, Kanakaokai and others. The two first-named were king sharks of the broad ocean. Kuhaimoana, whose habitat was at the islet of Kaula, the westernmost of the Hawaiian group, is referred to as husband of Kaahupahau, the famous queen shark of Oahu, whose cave-home was at the entrance to Pearl Harbor (Puuloa), who proclaimed a law that the waters of Oahu were forever tabu to man-eating sharks.

The following selections, translated from various accounts by Hawaiian writers, present the foregoing facts as their own testimony of shark beliefs and practices of ancient times:

SHARK DEITIES.*

Most sharks that became deities were worshiped through the original ancestral sharks. These were not deified by man, but from the god came their assumption of the shark body with ministering power. This power does not rest in the shark at all

* Translated from **Au Okoa**, Apl. 7-14, 1870.

times, though the spirit and the semblance of the shark-form may be manifest, for not all sharks possess it. It is only on those that have been given the sure sign, and which acknowledge the authority of their god-guardians and devotees, and recognize their living followers. Thus they, as also other sharks that knew the sign, on meeting with times of difficulty or threatened death on the ocean, who call on this and that guardian shark, thereupon will come their several protective sharks to deliver them.

The Hawaiian people are familiar with the deliverance by sharks through their guardian shark and devotees. The rescue applied not to one person only, it applied to a multitude, whether ten or forty, nor to the single occasion of persons delivered by the shark, according to the testimony of our sea-going grandparents, Laniakahoowaha, Kaiahua, as also Kaukapuaa and Luia folks. They led hundreds on the ocean without fear of its dangers; the south or north winds; the tempestuous and all other winds of the ocean; they suffered no ocean distress, nor feared death, though they took beloved children far off shore.

One shark would lead a school of its kind in the ocean who would be their guide. One named Kalahiki was a shark that foresaw the wind and ocean perils. On the approach of great dangers, or ocean difficulties, there at the bow of the canoe would appear his company of sharks, and if out of sight of land then they would accompany the canoe to the shore; or if becalmed on the ocean out of sight of land, there the land would be ahead of the fish.

Sometimes on making a fire on the canoe, on chewing the *arwa* and taking its accompanying drink, this party of canoe-guiding sharks would appear and follow it. Then the liquid *arwa* would be poured out, and on opening its mouth the *arwa* root would be put in, and at the completion of the offerings in the drink and feeding of it, the change the head of the shark takes would be the direction for the course of the canoe.

If a man's canoe changes about, or is becalmed, he will soon secure a very favorable wind which will carry him to the sight of land. The case is well known of a man who chewed *arwa* for, and gave drink to, the shark. He had sailed with Luia's party on the ocean, from Kauai to Hawaii, without sight of a single fringe of land the whole distance, by the ocean only. Even

the landing was hid in a fog. They were a well known company of ocean sailors whose knowledge and skill was from the shark. Through Luia came the method of net-catching of flying-fish, and the covering of voyaging-canoes as is practiced to this day. Many people are witnesses to the truth of Luia's many works led by the shark.

Ancestral shark origins comprise Kanehunamoku, Kamohoalii, Kuhaimoana, Kuahuhu, Kaneikokala, Kanakaokai and a number of others, and it is said that most of these came from foreign seas. They were not originally worshiped by man, though their spirits appeared in numerous forms, sometimes as sharks, sometimes as birds, or in other forms, as also in ministering spirits of human form. As such, they met with men and conversed together, speaking also with people of ancient times, and in that manner communed with the people of the god, whereby some persons became prophets, and some were chosen as god-guardians, and some chosen as priests of these gods, and therefore it was made manifest in trances and in visions the kind of body selected, whether of shark-form, or owl, or *hilu* (fish), or lizard, and so on to the many kinds of bodies that may have been chosen.

But the fish-form of these original ancestral spirits such as Kamohoalii, Kanehunamoku and others from the time of chaos, they do not interdict their devotees at the present time, though those consecrated to observe the daily offerings to these originals, they were the ones punished. If they were lenient at the first offense and protected the offender from punishment for the distress, on them would be the transgression, while those who carefully observe the edicts are the fortunate ones.

All sharks have many bodies, such as crabs, *pa-uu* (young ulua), *limukala* (seaweed), or other. Residents are the ones that give heed, and tell of the sign of these fish of the deep, on sight, for they quickly leave. On indication by their presence that a strange fish is near, the party had better return home, thus have Hawaiians escaped distress of the ocean. Ancient people possessed this knowledge; few of the young generation of today listen to their parents in this matter.

Before certain Hawaiian people went into the sea, they would procure *limukala*, or *awa*, or other offering and would call upon

their shark deity, saying: "Here is the offering to you, shield us from harm; go you forth to victory."

Beside the several renowned sharks here mentioned were others less universal, yet known as the special protecting deity of each of the several islands, as also others of their principal districts, some of which furnish legendary exploits of undue length and much popularity. One of this character fellows, chosen for such selections as supply several points of interest in support of the foregoing.

STORY OF KA-EHU-IKI-MANO-O-PUU-LOA.¹

(The small blonde shark of Puuloa).

KAPU-KAPU was the father and Ho-lei was the mother of Ka-ehu-iki-mano-o-Puu-loa, who was born a complete shark at Panau, Puna, Hawaii. It was so named after the blonde hair of Ka-ahu-pa-hau, the queen-shark of Oahu, residing at Puuloa. It was nourished on *awa* grown by the father, diluted with the mother's milk for ten days, when it was put in the sea and there fed and cared for by its parents by placing its bunch and cup of *awa* at its cliff-cave for ten days, whereupon they returned home *mauka* (upland), at which time the young shark was four and a half feet in length, first telling it of their move, and cautioning it as to behavior. It gave approval of the advice with evidence of ability to care for itself.

After several days it appeared in spirit one night to Kapukapu in a dream, to advise its parents of its desire to tour around the coast of Hawaii, and asked their consent. The mother was solicitous until assured by the father that no ill could befall their offspring on so goodly a mission as would lead to meeting its namesake. He would anoint it that it would become strong and skilled; that none should be found to excel it in strength, or in cunning speech. The father then went for choice *awa* root and leaf, coconut, fowl and red fish with which to anoint their off-

¹ Condensed translation from **Aū Okoa**, Dec. 29, 1870.

spring, and when all was ready they repaired to the shore, where Kapukapu raised his voice in chant as follows:

“O Kaehuikimanoopuuloa!
My shark-child below here,
Residing till familiar
With the sea-cliff of Panau,
Here is food, food that you may eat,
Then go forth on your pleasure tour.”

At once the young shark swam to him and rested on his bosom. The father placed it in the mother's lap, and in answer to her question of its pleasure-jaunt, it cuddled up under her arm. The father then took the bowl of consecrated water and anointed it from head to tail, back and front, then in a long chant consecrated it for a successful journey till it should meet with Kamohoalii, who would guide it further.

Kaehuiki² gave demonstrations of pleasure and strength in wonderful feats, to the mother's great surprise. It then left for its cave.

At the close of the day it appeared in a dream to the father and said it was ready to set forth, and would start on the night of Nana,³ but desired to know the several names of the king-sharks of the various districts of Hawaii, that he might call and pay his respects to them.

His father replied: “These shark-guards of Hawaii are:

“Kepanila, king-shark of Hilo,
Kaneilehia, king-shark of Kau,
Kua, king-shark of Kona,
Manokini, king-shark of Kohala,
Kapulena, king-shark of Hamakua.”

Kaehuiki said: “These will be my traveling companions.”

The father asked, “What benefit would be derived thereby?”

“One advantage would be the visit to all places of residents on the way, and the good of their friendly greetings,” was the reply.

² Shortened from Kaehuikimanoopuuloa. ³ Beginning of fourth month.

On the night of Nana, Kaehuiki began his journey, calling first on Kepanila, the king-shark of Hilo. He entered the pit of the resident guard to find him absent, but on his return he scented man's breath outside the path, caused by the young shark of Puna, at which Kepanila angrily said: "Huh! Rank odor of man pervades my place."

"Yes," said the visitor, "I, Kaehuiki am such, an offspring of Kapukapu and Holei, watcher at the cliff of Panau, Puna."

Kepanila asked: "Is the stranger on pleasure?"

The stranger replied: "My journey is not pleasure only, but for observation and friendship do I enter your precinct, my lord chief."

This kindly reply soothed Kepanila's anger so that he entered and gave him welcome. Thus they dwelt contentedly and partook of food together. At the close of the day the resident shark asked the visitor his journey plans, to which he replied:

"In setting forth, consent my lord that you also join in the tour," which was agreeable. "It is gracious of you, O King, to consent, tomorrow we will start, first stopping at my place, Panau, thence to Kau, at Kaneilehia's place, their king-shark; it may be he will accompany us."

Accordingly the next day they went to Kaehuiki's place, and the Hilo shark was entertained at the cliff of Panau by Kapukapu, the father, with *awa* and the food of the land, after which they went on to Kau. And here the reception, first angrily, then in friendly welcome and participation in the tour, as at Hilo, was duplicated.

This was the experience also in the visits to each of the king-sharks of Kona, Kohala, and Hamakua. Kaehuiki introduced them to each other as they met, and asserting his leadership, he won the friendship of all the guardian sharks of the whole island, and thereby made a striking company for the friendly, sight-seeing tour contemplated.

Manokini, of Kohala, was the most difficult to win over, finally consenting to join on learning the journey would take them to Kaula, thence to Tahiti and back. He said a difficulty would be met with in the Hawaii channel, which was guarded by the general of Maui's king-shark, Kauhuhu, whose headquarters was at Kipahulu, reputed to be vicious and fond of war.

Kaehuiki said, "That depends perhaps on anger being shown it."

"He shows anger even when approached friendly; he will not show compassion in his battles, and his band of ocean warriors are said to be watchful," was the reply.

"Very well," said Kaehuiki, "hereafter will be seen the brave offspring of Kapukapu and Holei, the cliff-guard of Panau, in Puna, who will draw out its inwards. Perhaps it has not been anointed with leaf-*awa*, black coconut, red fowl and red fish, like the child of the day when savagery began."

At these words of the youngster, his travel-companions glanced at and nudged each other in approval of the brave utterances of the young chief.

Hamakua was the last district of call, to pay respects to its guardian shark Kapulena and have it join the party, which it did, after assurance that a competent pilot would conduct them to Tahiti and back. This was Kua, the king-shark of Kona, originally from there and familiar with its waters, who knew its pathway, the bathing stream of Muliwaiolena, and the tabued extremity of Nuumealani.

Next day they set out in procession to cross the channel for Kahoolawe point, via Hana, but met a string of sharks protesting intrusion, under Kauhuhu's general. Kaehuiki told of the friendly object of the tour destined to the borders of Tahiti, but to no purpose, the guardian-chief said there was no road, and by order of Kauhuhu who controlled these waters, to attempt it would result in battle.

The shark-youth said: "Your words would be just if we were a warring party."

The guard replied, angrily: "No permission will be given anyone to enter Maui's borders. It is strictly forbidden. Disregard this and war will engage you chiefs of Hawaii!"

Kaehuiki immediately turned, and calling his companions each by name and district, said: "I say unto you, there is no road whereby we will reach our destination but through strength and bravery. You remain quiet, and if I am killed the road will be for your return to Hawaii."

He then turned to the guard-shark and asserted himself as the anointed one from Puna that challenged his right to sovereignty of the channel. Bantering back and forth, the guard despised

the youth and size of his antagonist and would consider the contest a pastime. The youth bade the guard come forth; they two alone to battle. As it did so, the youngster shot forward and seizing its fins held fast. The guard-shark writhed this way and that; the young brave leaped with it without losing its hold. On the contrary, it bit its way there into the stomach of its antagonist and emerged behind, so that all its inwards oozed out, and the body floated off, dead.

The party then sought the pit of Kauhuhu, Maui's king-shark, at Kipahulu. It was absent at the time, but returned on the eighth successive surf-wave; meanwhile they were entertained by Manoiki, the watcher. On Kauhuhu entering his place, he too scented human-kind. Kaehuiki owned that it referred to him, and announced himself as he had done to the others, as also the peaceful tour they had undertaken. But they were not well received, so that the youngster told him his angry name befitted him, of which his experience this day was witness.

Turning to his trembling companions he said: "I fight today with the resident of this place, as we have all heard his friendless words. You watch me, and if I am killed you will know to return to Hawaii, but if you see I am the victor, remain and celebrate my day."

Kauhuhu called him, impatient at the delay, but the young brave voiced a prayer for the occasion then went to the contest. The king-shark was ready, out in the open, with jaws extended prepared to chew up the daring intruder. But Kaehuiki darted forward and slipped bodily into the stomach of his antagonist, and chewing its vitals, ate its way out, so that the lifeless body of the resident-shark floated on the tide.

From this engagement the touring party made for the Kahoolawe point, to pay their respects to the shark-god Kamohoalii. They met its watcher at the outer division of the cave, by whom Kaehuiki sent greetings to their supreme god, with request for admission of self and fellows of Hawaii on a peaceful sight-seeing tour.

The messenger did so, and was told to receive them, and to secure the help of the guardian shark of Honuaula for their entertainment. They were conducted into a large adjoining cave and fed. Toward evening, they were told that the veteran would

call upon them, and shortly afterward Kamohoalii, overgrown with sea-moss and barnacles entered. Greeting each one, they then passed the time pleasantly together. Kaehuiki addressed the shark-god, humbly beseeching adoption as its grandchild; that it might be strong and brave, and with many bodies, aglow from anointings. This was agreeable to the supreme shark, who set the next day as the time for the ceremony.

The following day, all being ready, Kamohoalii came into their cave emanating godly fear, attended by a train of chief-sharks, their bodies adorned above and below. The Honuaula guardian entered with the calabash of anointment which he placed on the altar, to which he then led Kaehuiki, who stood forth unafraid before them all in the presence of the god. Kamohoalii imparted his glow upon the ambitious youth, and the attendant emptied the anointing vessel upon him, reciting at the same time a chant commending the youngster's courage, and said:

"Kamohoalii by this anointing sets his seal of approval, and grants you strength second to none in this broad ocean from north to south, from east to west, wherever you may go; no one shall triumph over you from one horizon to the other, even to the borders of Tahiti. Any ocean-presumptive that dare quarrel with you will be as nothing before you; quietness is their safety, contention their death. You are also granted different bodies, as many as a hundred, of whatever form or kind you may desire. Such is the power I as a god bestow upon you, and may you live to extreme old age."

This ceremony over they rested till next day, when they renewed the journeying. At parting, Kamohoalii gave his blessing, to which the youth replied: "O king of kings! god of this wide ocean, we leave our humble but hearty thanks for the good-will shown us, and will carry to the sacred cross-road of Nuumealani and back, the memory of your royal message."

Molokai point was next visited, where friendship was won by Kaehuiki's kindly words. Puuloa, Oahu, was the next objective. Reaching its entrance they visited the pit of Komoawa, where Kaahupahau's watcher lived. Here the young shark made himself known as usual; the object of the journey, and the desire to meet the famous queen-shark protector of Oahu's waters. The watcher set off to give the message to the guard-chief

then at Waiawa, and described the party of visitors as distinguished chiefs; five full-grown and one quite youthful. The queen-shark said: "That young shark can be none other than the child of Kapukapu and Holei." Welcome greetings were sent by the messenger, who was bid entertain the visitors in the outer cave, and on the morrow the party could come up the lochs to meet the queen.

Next day they were conducted to the headquarters of Kaahupahau by a circuitous course, the guard of each place, en route, joining the procession, till reaching Honouliuli, the royal residence, directed by Honuiki, the queen's body-guard. Kaahupahau was attended by her generals and staff. The strangers were all introduced to, and each made welcome by, her, and after an agreeable reception the guests were invited to join in a bathing party to the waters of Waipahu, the bathing place of the Wai-kele section, as also at Waimano, Waiiau, etc., which the strangers greatly enjoyed, and congratulated the queen on her refreshing provinces. The company then repaired to the royal cave at Honouliuli where the visitors were supplied with soft coconut and *awa*, their home food and beverage.

During their stay here the royal pastimes of *hula*, the games of *kilu*, and *puili*, with chant and song, known on Hawaii from ancient time, were introduced for the queen's nightly entertainment by Kepanila, the king-shark of Hilo.

After a ten-day's stay at this place they continued on to Kauai, Niihau and Kaula. Kaahupahau gave Kaehuiki the eye of her ivory wreath, for identification by Kuhaimoana, the ocean king-shark whose home was at Kaula. It would have recognition also by the guardian sharks of Kauai, and Niihau. And so it proved, for the bond of friendship was readily secured through its possession, and after the usual experiences the party set out for Tahiti under Kua's guidance.

This journey took them first on a tour of the Marquesan group, then through the Society Islands, and finally to New Holland, all without untoward incident. The satisfaction of sight-seeing, bathing in the famous Muliwaiolena (Yellow river) of Tahiti, and meeting with giant relatives at the crossroads, gave them entertaining topics at their return. Getting back to home waters they reached Niihau first, then visited Kauai more leisurely than

before. From there to Oahu, to report to Kaahupahau and friends, at Puuloa, was natural, and after a brief sojourn, on departing for Hawaii, the party was accompanied beyond the outer breakers by a large procession of the queen's officers and attendants.

The visitors were there dismissed by the resident-commanders with mutual farewells; the residents going to their places as the strangers of the east set out for home.

At that time Kaehuiki was the leader of his company, and reaching Waikiki they met with Pehu, a stranger shark of Honokohau, Maui, preparing to attack the people that had gathered in numbers for surfing at Kalehuawehe, whereupon Kaehuiki asked him, "What is your name?"

"My name is Pehu," said he.

"Where are you from?" was asked.

"I came from Honokohau, Maui."

"And what are you doing here?" asked the young shark.

"I am enjoying the sight of people surfing."

"What think you in witnessing their surfing?" was the next question.

"I desire but one crab (human) to satisfy my hunger."

The youth then said: "Yes, you will succeed if you follow us to the place from where the surfers start with the bursting wave, you shoreward, us seaward, and we to have the starting signal, then will be your time for seizure of a person to secure your morsel of food." Thus was this Pehu beguiled.

Kaehuiki then said secretly to Kepanila, near him: "Let us lead this shark to its death; man-eating is the object of its watchful waiting here; it is not right that it should live, so you tell those in the rear to crowd together till reaching a shallow reef-place and force it ashore that it die. Thus will Kaahupahau hear of our good deed, which will be a reward for her many hospitalities." Kepanila gave assent, and told those in the rear to be alert for action.

On that day the surf of Kalehuawehe was breaking strong, and many indeed were the surf-riders at the distant, outer surf. The shark company then went in quiet manner until very close, when Pehu said: "It is better the seizure be made now." "No," replied the youth, "wait till they take the surf, and we will all

race together. We will be in the swell of the surf, and when I cry out to you, that will be your time of seizure."

Pehu assented, and waited. Presently the surf arose when two men rode in. The shark party also swam in together with them, and when near the shallow reef the youth gave his signal to his companions for them to shield the men that were racing in. Then was the struggle with said man-eating Pehu, and on account of the many attacking it, this evil shark leaped forward and sunk his head in a coral crevice securely, with its tail standing straight up in the air. Thus died this man-eating shark of Honokohau.

When the surfing people witnessed this battle of the sharks, and the death of Pehu they were much frightened, and fled ashore. On cutting it open they found human hair and wrist bones, as evidence of its evil character, so they burned its body to ashes below Peleula, and the place has since then been called "*Kapuhina o Pehu*" (The burning of Pehu).

Upon return of the travelers to Hawaii, on reaching Kau, Kaehuiki appeared to his father in a dream to advise him of the fact, and that with, Kepanila, of Hilo, they would arrive off Panau the next day. Telling the mother of their offspring's return Kapukapu quickly gathered and prepared *awa* for them, as also bananas and chicken, for the time of their arrival, as a welcome-home feast, which was made a proud occasion as Kaehuiki conveyed to his parents the greetings of the various distinguished sharks, and told of his victories and honors.

A CASE OF SWELLED HEAD: In 1846 a spear exercise was performed before Kamehameha III and chiefs, at Mokulau, Maui, by an old bald-headed warrior, who said his baldness was the result of his head being so big he could not raise hair enough to cover it.

HAWAII SCORING AGAIN: Not only in scientific cane-culture and pineapple par excellence, is Hawaii quoted as leading the world, but is now credited with possessing ranches of the finest cattle strains in the United States.

OUR APPROACHING JUBILEE.

DEALING with the future is precarious as a rule, particularly with those long past the meridian of life, yet it becomes one to look forward and plan continuously for the attainment of hopes and ambitions. With this premise it may not be amiss to intimate the publisher's aims and hopes for the next issue of the HAWAIIAN ANNUAL in observance of its fiftieth anniversary, in appreciation of the esteem in which it is held in all circles, at home and abroad, and to meet the expressions of good-will and congratulations at the approaching event which will mark a rare attainment of continuous issue under an original promoter.

Among the good things contemplated for the occasion are special papers of historic research and reminiscent character that will prove not only of present interest but valuable also for reference in years to come. The Annual's Hawaiian folk-lore feature will be enriched by carefully translated papers of unusual merit in their presentation of the life, thought and customs of this race in ancient times, in recognition of that growing public interest in the subject that has enlisted government aid to procure a series for juveniles and the schools.

A brief record of Hawaii's changes and development in the lifetime of the Annual, more especially the transformative power thereof on Honolulu may be looked for. A fifty year historic sketch of Hawaii's commercial progress would not be inappropriate.

As a feature for convenient reference to the papers in the Annual's various issues, in the absence of a complete index for the series, it is hoped to revise and bring up to date the "List of Principal Articles," which last appeared in 1909. This will meet requests that have multiplied of late years, and will be of special value to those appreciative patrons who can rejoice in the possession of full and complete sets.

All in all we hope to have our commemorative issue worthily representative of Honolulu and Hawaii, "the Paradise" and "Cross-roads of the Pacific."

HAWAII'S REHABILITATION PROJECT.

By HOWARD D. CASE.

SINCE publication of the last edition of the ANNUAL, complete plans have been perfected for the rehabilitation of the native Hawaiian and part-Hawaiian people. With the project now barely two years old, the work that has been done to date in the placing of Hawaiians back upon the lands that were once so profitably tilled by their forebears, has demonstrated clearly that it can and will be a success. The start has been made, and comparatively smooth sailing from now on is anticipated by the members of the Hawaiian Homes Commission, which is directing this unique and tremendously important undertaking.

In assuming command of the rehabilitation project, Governor Wallace R. Farrington, chairman of the Commission, has surrounded himself with a group of unusually capable persons who, first of all, have at heart the best interests of the Hawaiians. The commissioners include the Princess Elizabeth Kalaniana'ole, widow of Prince Jonah Kuhio Kalaniana'ole, who for 20 years was Hawaii's delegate to Congress; George P. Cooke, Molokai ranch and dairy owner, who is executive secretary; the Rev. Akaiko Akana, minister of Kawaiaha'o church, and Rudolph M. Duncan, superintendent of construction for the Honolulu Rapid Transit & Land Co. L. Thornton Lyman, formerly with the Pioneer Mill Co., Maui, is agricultural expert, and Jorgen Jorgensen is engineer.

The keen interest that has been evidenced in the rehabilitation project is best illustrated, perhaps, in the fact that more than 70 Hawaiian and part-Hawaiian families have already applied for tracts of land on the island of Molokai, where areas are now being prepared for settlement in accordance with the act of Congress known as the Hawaiian Homes Act. As this is written, some 10 families have selected their tracts and have moved onto the land, and Kalaniana'ole Settlement is already taking on the earmarks of a thriving agricultural community. Other families will follow as quickly as the land is cleared and other prepared

for them. The commission has selected 20 families as the nucleus of the first settlement and it is expected that all of these will be on the land shortly after the first of the new year.

In the matter of placing families on the land, it is the policy of the Commission to make haste slowly. No half-way measures are to enter into the building-up of the project. By this it is meant that roads will be constructed, fences built, the land cleared and water for irrigation and domestic purposes developed before settlement is permitted. For the Commission must be able to show, within five years, that the rehabilitation project is successful before it can go before Congress and request the setting aside of additional lands for settlement.

To date on the island of Molokai everything possible has been done toward paving the way toward a settlement of contented people what will be a credit to the territory as well as to the unceasing labors of the Commission and the persons associated with it.

"The Hawaiian rehabilitation project," Governor Farrington once said, "will never be considered in terms of failure."

The establishment of a demonstration farm was one of Mr. Lyman's first undertakings. This is now well under way and various crops are being experimented with. Blooded chickens form the nucleus of a stock of fowl from which the settlers will draw as their farms take shape. Plans are now under way for extensive experiments in pineapple growing. Designs for homes for the settlers—attractive, conveniently arranged bungalows—have been approved by the Commission.

Extensive surveys have been made by Engineer Jorgensen with regard to developing water sources both on the lower lands of Kalamaula, where the Kalaniana'ole Settlement is situated, and on the upper lands. In this work the Commission has been materially assisted by the re-discovery on the border of the lower lands of Kalamaula of an old spring which at one time fed the pool in which King Kamehameha V swam. The spring was opened up and cleaned out, and high-pressure pump installed. The stream is now being pumped at the rate of more than 2,000,000 gallons every 24 hours. The salt content of the water is diminishing gradually, indicating that an underground stream, flowing downward from the mountains, has been tapped. From

this spring it is believed that an unlimited supply of water will be available for the initial settlers, sufficient, in all probability, to irrigate all of the lower lands of Kalamaula. The water is now being used to irrigate the demonstration plot.

During the year Dr. Elwood Mead, head of the land settlement board of California, and member of the faculty of the University of California, visited Hawaii and inspected the rehabilitation project at the invitation of the Commission. He was enthusiastic over the possibilities which lie in the Molokai lands, declaring them to be as good as any he has ever seen. Much valuable advice and many valuable suggestions were given to the Commission by him, and he is now at work upon a general report of his findings.

Doctor Mead expressed himself as being particularly impressed with the fact that the Commission has the power to select those persons who shall become settlers under the rehabilitation project. By this method, he said, the territory would be assured of obtaining settlers who would stay on the land and "make good." In connection with homesteading in Hawaii, he said it would undoubtedly be a good thing if the selective system could be applied to it, as this would eliminate speculation and tend to build up a really permanent and independent citizen farmer class, something that Hawaii desires and is in need of.

Aside from general progress, several other important matters serve to feature the work of rehabilitation during 1922. The Commission has sent to the delegate at Washington suggestions for the proposal of two amendments to the Homes Act. One of these provides for the opening up of half-acre lots which would not be used for agricultural purposes, but as home sites for Hawaiian and part-Hawaiian workmen who would be dependent upon outside work for their living. In framing this amendment, the Commission had in mind two large tracts of land near Hilo, on the island of Hawaii, which are not suitable for agriculture, but which would make excellent home sites. If the amendment is agreed to, persons taking over the lots will be assisted financially by the Commission in the building of their homes.

Another amendment provides that the returns from all projects originally financed by the Commission, revert to the Commis-

sion's revolving fund of \$1,000,000, instead of to the territorial treasury.

The rehabilitation project has two definite aims: First, to build up in Hawaii a class of independent citizen farmers, and, secondly, to place the Hawaiian and part-Hawaiian people back upon the lands. Vital statistics covering many years show that the Hawaiian race is slowly but gradually dying out, and it remained for the late Prince Kuhio and other Hawaiian leaders to take the steps which they believed were vitally necessary if complete extinction of the Hawaiian race, by far the most intelligent and enlightened branch of the Polynesians, was to be prevented. In rehabilitation they saw the solution of the problem. Today the project is in its infancy, so to speak; but it is strongly backed not only by the governor and his colleagues on the Homes Commission, but by countless others who believe that through it lies the way toward infusing new blood into the Hawaiian race, and making it thrive as it did in the days when it was in its prime.

Adequate provision is made in the Homes Act for the financing of Hawaiians who become settlers. As before stated, nothing is to be left undone toward preparing the lands for settlement before a successful applicant sets foot on his holdings. As soon as the 20 families already selected are on the land, others will be chosen, and slowly but surely there will be built up on Molokai a thriving community of self-supporting, healthy, happy families whose children and whose children's children will form the nucleus of a rejuvenated Hawaiian race.

SOME BANANA: A specimen of the moa banana (*Musa* sp.), at Kohala, Hawaii, was shown in 1849 which measured sixteen inches in circumference.

HEIAUS OF LANAI.

Courtesy of Kenneth Emory, from his recent investigations on behalf of the Bishop Museum.

Heiau of Halulu, at Kaunolu, 50x75 feet. Also a place of refuge. In operation during Kalaniopuu's raid, 1779. Of walled platform type.

Heiau at Mamaki, district of Kealiakapu, 75x75 feet. Walled platform.

Heiau at Kapoho, district of Kaohai, 100 feet square. Walled platform.

Heiau at Puu Makani, district of Kamao, 50x75 feet. Platform.

Heiau at Lopa, district of Kohai, 60 feet square. Terraced platform.

Heiau at Haleaha, Lopa, district of Kaohai, 150x60 feet. Walled platform.

Heiau of Kahea, at Kahea, district of Pawili, 100x75 feet. Walled platform.

Heiau at Lanaikaula, Palawai, E. Coast, 35x75 feet. Walled enclosure.

Heiau at Moenauli, district of Kaunolu, 30x36 feet. Enclosure.

Heiau of Kane, at Kaululaa, district of Pawili, 25x30 feet. Platform.

Heiau at Panipaa, district of Kalulu, E. Coast. Enclosure.

Heiau at Hao, Mahana, 30x35 feet. Enclosure.

Heiau of Maluhie, at Kukuikahi, Kamoku top-lands. House site.

Heiau at Kaena-iki, Kaa, 150x60 feet. Walled platform.

Heiau at Hii, Kalulu, 60 feet square. Terraced platform.

Heiau at Keahialoa, Kamoku. House site. Sorcerer's heiau.

This list completes the circuit of all the islands in the quest of heiaus or their sites, making now a total of 527 for the group.

RETROSPECT FOR 1922.

ENVIABLE CONDITIONS.

ANOTHER year is to be added to Hawaii's record of material progress and prosperity, despite the ominous clouds that appeared on her horizon last year, referred to as "in capable hands for solution." In the readjustment of business in getting back to normalcy it speaks volumes for the soundness of our little commercial world that Hawaii was admitted to be the first to recover. Notwithstanding a reduction of \$59,357,806 in the amount of our export values for 1921 from that of the preceding year, and dividends from investments largely reduced, or nil, yet the banks of the territory show a decline of but \$4,937,923 in their total of commercial and savings deposits, attributed largely to withdrawals for federal and territorial taxes.

Commercial conditions, indicated in customs tables on pages 16 to 18, showing the decline in export values above mentioned, of which sugar suffered a reduction of \$48,522,780; show also the decline in import values, with still \$16,753,752 on the right side of the ledger for the year.

That Honolulu is but on the threshold of activity and general improvement is apparent in the various building projects in hand and contemplated; the steady demand for houses; activity in real estate at advancing figures; street widening and extension; Waikiki reclamation; harbor extension to Kalihi basin; increasing steamship lines for which Hawaii must prepare; the tourist response to our promotion effort, and Pan-Pacific Union Conferences with attending benefits.

The progress made during the period under review is touched upon in the following pages:

WEATHER.

The year as a whole has been marked as favorable above the average, the extremes of moisture and dryness characterized the wet and dry seasons variably throughout the group. Excessive precipitation prevailed from November, 1921, to April, 1922,

followed by several months where the rainfall was below normal in nearly all sections. As in the preceding year, a Kona storm with much rain prevailed in December, interrupting field work for the time, but beneficial to agriculture and grazing. The first quarter of the year continued wet above normal, January being the worst on record in five years. Heavy March rains, in Hilo, did much damage to roads and bridges. From April to August reverse conditions prevailed, June being the driest on record for that month, as a whole. With September the tide turned, giving a rainfall one-third above the average of many years past. Heavy rains marked October, with a cloud-burst on Hawaii, that took the toll of one life in demolishing a dwelling in Kona.

Temperature on the whole has shown no material variation in the monthly range.

POLITICAL.

Elections have claimed the attention of voters more than usual this year, through the death of Prince Kuhio, delegate to congress, which called for a special election to fill his unexpired term, which took place March 25th, resulting as follows: Hon. H. A. Baldwin (R), 14,919; L. L. McCandless (D), 6806; Jonah Kumalae (D), 2228; Mrs. Atcherly (I), 162.

For this and the regular fall elections, qualification of voters, (of which women have now to be considered), by registration and education kept party workers busy. Delegate Baldwin declining to stand for another term, several aspirants tested their strength at the primaries, October 7th, viz: Hons. J. H. Wise, Norman Lyman and C. E. King (R), and Dr. J. H. Raymond and Wm. P. Jarrett (D), which were narrowed down for the November contest to Wise and Jarrett. The nominees of both parties for senators and representatives were largely reduced by the primaries, with strong indications of a successful Republican campaign.

Many were therefore surprised at the result of the election, November 7th, which returned Wm. P. Jarrett as delegate, by a large majority of 2679 over John H. Wise, the total votes being 14,000 and 11,321 respectively.

Elections of senators and representatives throughout the islands give returns of a Republican sweep, save one, for the coming legislature.

NOTABLE VISITORS.

Mutual pleasure has been the experience in the welcome greeting to the many distinguished visitors to Hawaii throughout the year, as also in the body of Shriners, and Pan-Pacific Union Commercial conference (dealt with elsewhere), and the chamber of commerce party opening the Los Angeles steamship line. Among these and others for a brief stay was that of Evangeline Booth, of Salvation Army fame; Dr. Mary Wooley, president Mt. Holyoke college; Secretary of the Navy Edwin Denby, en route to and from the Orient, and Mayor Geo. E. Cryer, of Los Angeles.

VISITING YACHTS.

The trim little steam yacht *Black Swan* of Oakland, with R. C. Durant, its owner, and party, arrived October 12th, and after a stay of ten days left for San Francisco by way of Hilo.

The palatial steam yacht *Casiana*, of 1227 gross tons and engine of 2500 horse power, arrived from Los Angeles, her home port, October 17th, the pleasure craft of Edwd. L. Doheny, under command of Captain J. J. Doyle. A number of delegates of the Commercial conference, and others, formed the *Casiana* party. On return to the Coast she left here October 26th, for a brief visit to Hilo and the volcano en route.

RADIO INVASION.

Radio interest invaded the city early in summer, and was fostered rapidly by premium offers of our rival daily papers. Musical and other entertainments, usually three times a week, were broadcasted from each office's well-equipped radio station and soon became a feature, delighting listening-in radio fans near and far. Many shut-in institutions are being equipped with the necessary outfits to benefit by this, and Dr. Palmer, of Central Union church, has, on occasion, connected up and broadcasted his Sunday services to listening ears on the other islands.

PUBLIC IMPROVEMENTS.

The Waikiki reclamation project, already dealt with, is the principal undertaking of the year, to which the improvement of Honolulu's water supply and construction of a new two and a half million gallon Nuuanu reservoir for the city's growing needs, costing \$61,300, is a gratifying realization of a long needed addition.

Street widening and extension plans are mostly prospective. Of the completed King street section, our civic center presents now a more spacious, clear and creditable appearance. The finished Kakaako improvement work has effected a much desired benefit in that part of the city.

Work on the shed-structures of piers 8, 9 and 10 progresses steadily, the roofing contracts being recently completed on a bid of \$120,000. The clock tower of the structure, to be erected at the foot of Fort street, awaits decision upon the competitive designs recently submitted.

Sections A and B of Kalihi sewer work reached completion in September under contracts of \$177,362.

The new Mala wharf for Lahaina was completed and opened with official ceremonies and much rejoicing April 5th, Miss Sarah Freeman christening the structure, and first used by the steamer *Mauna Kea*.

A new wharf each at Hilo and at Kahului, of concrete, are well under way. These two projects, with dredging, and shed for Kahului wharf, calls for an expenditure of \$1,087,171.

Progress is noted with the Kamehameha highway to circuit Oahu, work on the Heeia section being finished.

BUILDING NOTES.

Activity in the building line, as reported last year, has not only continued but gives indication of steady employment for skilled mechanics for some time to come, judging by work in hand and the number of important changes settled upon. Apart from the many new homes erected during the year, of which the Kaimuki section claims the greater share, the following are among the more noted structures:

Completion of the new States, Hawaii, and Princess theatres, and the Kaimuki Playhouse; the new unit to the Leahi Home, a three-story concrete building; completion of the new federal building which opened for service the latter part of April, to house custom house, post office, district court, internal revenue office, weather bureau, etc.; the post office moving in May 1st.

The Bank of Hawaii and the Kauaikeolani buildings have each added a fifth story, and the Brewer building, at Hotel and Union streets, has added a second story, all for office demands. The Moiliili two-story concrete school building is nearing completion, and two units of the new McKinley high is well advanced. A new three-story building for the Union Trust Co., on Alakea, near King, is nearing the finishing stage.

Several blocks of stores have been erected on King street, north of the Oahu Railway station, and a Chinese realty company are constructing some fifteen dwellings in their rear, to cost \$22,500. Following the completion of the Salvation Army extensions in Manoa, they have now in hand a new home for boys at Sea View, Kaimuki, consisting of eleven buildings, the gift of Mr. G. N. Wilcox. A new home is in progress on Judd hillside tract for Geo. E. Lake, to cost \$21,000. The Queen's Hospital is in the throes of enlargement.

Laying corner-stone ceremonies of the Scottish Rite cathedral (the reconstructed Christian Science church), took place November 3d, Governor W. R. Farrington officiating, and using the silver tools used by King Kalakaua at laying the corner-stone of the palace.

The Methodist Mission has erected a new church at Lahaina, which was dedicated October 8th, and Lihue rejoices in its new Memorial Parish house, in May last, the gift of Mr. and Mrs. S. W. Wilcox.

Ground is broken for the new Castle & Cooke building, corner of Merchant and Bishop streets, and like action is taken toward Central Union church's new edifice, the corner-stone laying ceremonies of which will take place Sunday, December 3d.

At the close of October there had been 2,654 building permits issued for the city, the estimated cost of which is \$5,006,869, a large gain over the same ten months of 1921, nearly equalling, in fact, the total for that year. March was the most active month

this year, with 333 permits issued for building improvements, placed at a cost of \$1,007,757.

REAL ESTATE MATTERS.

The frequency of real estate transfers and increase of dealers making this their specialty indicates continued activity. It may be safely said that all sections of the city share alike in this evidence of prosperity—business, residential and suburban—with beach properties perhaps commanding special attention. And the magnitude of several important transactions shows confidence in Honolulu's present and future progress. Among the many changes of the year the following betokens the spirit of the times:

Palama Settlement buys an eight-acre tract for \$58,000, on which to group their activities. The Pierpoint Hotel transfers to J. F. Childs for \$70,000, to become a Waikiki annex to his city hostelry. Mrs. M. E. Hustace secures a 200 feet front of Kapiolani Park beach property at \$48,000, also the Cunha property for \$22,650. The Bank of Hawaii acquires the King street corner of the Bishop Park, of 110 square feet for \$250,000. Upper Fort street property known as the New Era Hotel changes hands at \$42,500. Miner lot and buildings, corner Union and Beretania streets, transfers to R. Bukeley for \$45,000. Mrs. C. M. Brown's Pensacola street home finds a new owner at \$20,000.

The Methodist Mission closes a deal for three Fort street properties, for the proposed Harris Memorial building, for \$26,000. The government buys five acres of Wyllie street property for \$34,000. Business property of Mrs. Lais, Beretania street, brought \$14,000. Ayers property, at Beach walk, sold for \$25,000, and the Wailupe beach home of Mrs. A. N. Sinclair for \$6,350.

Mrs. P. T. Spalding secures three acres of Makiki Heights property for \$33,750, and the Cooke Estate also buys three lots in same vicinity for \$32,150. N. Watkins disposed of his Makiki street property, divided into two lots, for \$13,440. Holt Estate property on same street sold for \$19,750, and Nuuanu street business block for \$50,000. The Wilcox Diamond Head beach premises sells to Harold Dillingham for \$22,500, and the Wicht-

man residence property, on Victoria street, changes hands at near same figure.

Realty dealers of Honolulu, some fifty in number, form a Realty Board for a more systematic method in all business matters connected therewith, and to become affiliated with the mainland organization for coöperative benefit.

PLANTATION NOTES.

The American Factors, Ltd., in the purchase of 3026 shares of the capital stock of Lihue Plantation, which it did at \$150 per share, secures its control.

An area of seventeen acres of plant cane of the H 109 variety at Waipio, Oahu, was extensively cultivated and yielded 15.83 tons of sugar to the acre, last March. The ratoon in this field is being watched with interest.

Ewa Plantation harvested in May what is claimed as the record crop of cane in this or other land, which averaged 15.31 tons of sugar to the acre from a field of three sections, of 146.84 acres in area.

Maui Agricultural Co. has installed the largest high-lift pump in the islands, a steam turbine of twelve million gallon capacity which pumps the water to a height of 751 feet.

Kipahulu Sugar Plantation is reported sold to the Haiku Fruit & Packing Co. for \$175,000, to be devoted hereafter to pineapple culture.

PINEAPPLES.

Decisive moves in the pineapple industry has taken this year (1922), approximately 12,000 acres of pineapple lands controlled by Waialua Agricultural Co., Ltd., have been leased to the Hawaiian Pineapple Co., Ltd. This includes some 3,000 acres of new lands.

The Island of Lanai has been bought by the Hawaiian Pineapple Co., Ltd., and they will develop some 12,000 or 15,000 acres of new lands.

Haiku Fruit & Packing Co., Ltd., are expanding and have purchased the Kipahulu Sugar Co. lands and their leases in the Hana district. They expect to increase their annual yield to about 500,000 cases.

Molokai has entered the fields and is now producing pineapples and have very extensive areas suitable for its culture. A conservative estimate would say that within the next few years the industry will increase to about 50% from its present yield of approximately 5,000,000 cases.

BANK MATTERS.

The Liberty Bank, Ltd., a new Chinese concern, opened April 23d, at King and Maunakea street, with capital of \$200,000.

People's Bank, Ltd., Hilo, closed its doors February 18th following unusual heavy withdrawals. Subsequently the H. Waterhouse Trust Co. was appointed receiver. This is Hawaii's first bank disaster.

Hawaii Bank of Commerce, Ltd., and its subsidiary concern, the Commercial Trust Co., Ltd., which opened their doors January 2d, was closed April 27th by Treasurer A. Lewis, Jr., following an examination of their affairs. The H. Waterhouse Trust Co. was appointed by the court as receiver.

First Bank of Hilo, with its district branches, merges with the Bank of Hawaii, Ltd., making available a larger amount of capital for Hawaii's development. This change was announced October 14th.

About the same time steps were in progress for a merger of the Bank of Maui, Ltd., of Wailuku, with branches at Lahaina and Paia, and the Baldwin Bank, Ltd., of Kahului and Wailuku, to be followed by the organization of a new trust organization.

SHIPPING MISHAPS.

Stmr. *Bee*, on her trip to windward, February 2d, sustained a broken rudder off Makapuu point, and returned to port by aid of the motor sampan *Leleiona*.

Motor schmr. *Malahat*, coal laden, in making the port of Ahukini, Kauai, went ashore April 4th. By aid of the *Claudine* she was released on the 6th, with loss of keel, as shown on being dry-docked here for repairs.

S. S. *Fairfield City*, with cargo of sugar from the Philippines for New York, grounded on the reef at 3 a. m. at entrance to this port, May 5th, but with prompt aid of tugs was hauled off during the day.

Br. stmr. *Valdura*, from Iloilo, sugar laden for the east, via Panama Canal, arriving here for bunkers, grounded at dusk on the reef off Pearl Harbor, July 10th. Several steamers and tugs went to her aid, and much of her cargo lightened before her release, July 23d. Temporary repairs on dry-dock was ordered, at about \$70,000.

Schnr. *King Cyrus*, 717 tons, returning from this port to Gray's Harbor, stranded off Point Chehalis, Wash., July 18th, and was abandoned by her crew.

Stmr. *Likelike* struck on the reef off Pukoo, Molokai, for several hours, August 10th, but was released by the *Kilauea*, sent from Honolulu to her aid, and proceeded on with her usual Maui trip without damage.

S. S. *City of Honolulu*, of the new Los Angeles line, took fire October 12th, two days from her home port on her first return voyage. Passengers and crew, numbering 217, took to the boats and were picked up seven hours later by the *West Farrallon* and subsequently transferred to the transport *Thomas* and taken to Los Angeles. The steamer was fired into and sunk. All personal effects and the mail was lost.

Japanese freighter *Kurcha Maru*, lumber laden from Seattle en route for Yokohama, arrived here November 15th, badly battered by gales in which, at midnight, on November 5th, heavy seas swept the decks and carried overboard the wireless operator and one seaman, who were seen no more.

FIRES.

For the year closing a larger number of alarms have been registered than in 1921, but by prompt response of the fire department, few serious cases occurred, shown as follows:

The Alewa Heights home of Geo. Castidy was a total loss by fire, January 15th; partly insured.

Kalihi-kai school building was completely destroyed by fire, January 25th; supposed incendiaryism.

Dormitory of Kamehameha Boys school building was badly damaged by fire from unknown cause, February 10th.

Fire of unknown origin destroyed a Japanese dwelling in Kalihi, April 26th. Two of the three inmates sustained injuries which resulted in death shortly afterwards.

The Puuloa residence of A. L. C. Atkinson, with its contents, was entirely destroyed by fire, July 3d, in the absence of its occupants.

Fire on Beretania street near Alapai, July 26th, was fortunately checked through prompt action of the department.

A midnight fire, July 26th, destroyed the temporary saw mill and stock of lumber of the Aloha Building Co., engaged on the Salvation Army home work at Kaimuki; loss placed at \$1,000.

Home of S. Ferreria, Kalihi, was burned to the ground, the firemen being helpless through lack of water in that section.

The Inman home, in the McInerny tract, was badly damaged by fire August 16th; loss estimated at \$1,500.

Kumalae's Ukulele factory, on Liliha street, was badly damaged by fire October 15th, the supposed work of an incendiary; loss placed at \$25,000.

A Chinese owned tenement house, on College walk, was badly damaged by fire November 23d; loss estimated at \$1,000.

MUSICAL ENTERTAINMENTS, ETC.

Honolulu has been highly favored throughout the year with the finest of musical and creditable dramatic entertainments presented, a number of them following each other so closely, perhaps, as to modify the financial results of an otherwise successful season. For much of this delight, our music-loving community is largely indebted to Mrs. Iola Ingalls for her personal effort in inducing a number of talented stars to stop over awhile in their voyage across the Pacific. Among the more noted events are the following:

The London String Quartette opened their winter season January 6th, giving five concerts very successfully, as on a former visit. The Passmore Trio, of Punahou's musical faculty, also presented a season which carried somewhat later.

Miss May Muckle, noted 'cellist, on her return here at close of 1921, for a brief season, delighted Honolulu music-lovers, playing to capacity houses on three occasions, and surprising the Ad Club with a musical visit, for which she was voted a life member.

Tandy Mackenzie, Hawaii's lyric tenor, returned from his studies and successes abroad in June, under the auspices of the

Hawaiian Civic Club, and gave three concerts, each of which packed the Liberty theatre. Visiting the other islands he delighted audiences in several places, and on return here was importuned to appear again, before departure for further study.

Prof. Wanrell, with a large corps of local talent, gave three renditions of the oratorio *Stabat Mater*, to packed houses on each occasion. Tamaki Miura, Japanese diva, visited the city twice, and gave two successful concerts each time. Organ recitals by H. Gregson, as also R. H. Carter, varied the summer season treats. Of Hawaii's daughters, Mrs. Marion Dowsett Worthington and Mrs. A. G. M. Robertson each rendered delightful concerts on a few occasions.

Visiting artists comprised Wilson Errolle, Joseph Schwartz, baritone; Kathleen Parlow, violinist; Margarite D'Alvarez, soprano; University of California Glee club; Maier and Patterson, Duo-piano artists; Middleton and Althouse, baritone and tenor; Toscha Seidel, violinist, and others.

A number of very creditable performances have been presented by our amateur dramatic clubs from time to time, and of professionals from abroad, we were favored in February by the "Wilbur players" for a long season, and in September by the "Frawley-Blood company," to open the new Hawaii Theatre, on their way to the Orient.

HONOLULU'S NEW PLAYHOUSES.

The Kaimuki Playhouse, a new movie venture in that growing section, opposite the Liliuokalani school, of 1200 seat capacity, opened February 10th, and gave the gross receipts of its first two entertainments for the benefit of Leahi Home.

The States is a new place of entertainment this summer, located on Fort street above Beretania, for movies or vaudeville, seating some 1100.

The new Hawaii theatre, erected on the site of the old Bijou, with a seating capacity of 1760, opened September 6th, and was made a society event. It compares well with the latest in attraction and completeness of those on the mainland.

The New Princess theatre—originally planned as the People's—on Fort street above Beretania, opened November 8th. It has a

seating capacity of 1657, arranged mostly in sloping tiers, without balcony or gallery. Its innovations are striking and pleasing.

ALOHA AMUSEMENT PARK.

An amusement park for the city of Honolulu was a long contemplated project by a number of prominent citizens, and various sites convenient to the public traffic were considered, but it remained for a few men of vision this year, to take definite steps toward its establishment, though not without serious protest, in the Waikiki section, adjacent to Kalakaua avenue, to benefit by the Rapid Transit car service. The tract chosen called for a vast amount of labor for its transformation to an attractive or suitable place of entertainment for which buildings were erected, and amusement features installed. This so far progressed as to enable the American Legion to hold a three-day carnival July 2-4, which took in nearly \$24,000 from the 24,708 paid admissions. Of this number 16,395 attended on the closing day.

The formal opening of the park, with its completed varied attractions, said to represent a quarter million outlay, took place September 14th.

SPORTING EVENTS.

University of Oregon's football team visited here for last holiday season, and were welcomed by the club representing that state, and feted in our usual manner. In the opening Christmas game with the University of Hawaii team, the visitors won by a score of 47-0. In the New Year's game, on the Alexander field against a navy team, they won again in a score of 35-0.

The Waterhouse memorial swimming tank, at Punahou, was dedicated with appropriate ceremonies January 28th, and formally opened, with swimming contests February 4th.

Misses Gwitha Shand and Pauline Hoeft, noted swimmers from New Zealand, came to test records with our mermaids, but Hawaii's daughters did not lower their colors in any test.

CARNIVAL EVENTS.

The Phoenix Mid-winter carnival, in its season of attractions at Aala Park, reported gross receipts of \$50,000 for their week's entertainment.

Elks carnival followed at same place, February 18th, and gave a week of exciting frivolity and entertainment, the estimated profits from which was placed at \$18,000.

Foresters Merry-Way opened at Aala Park, June 3d, for a season of money making hilarity, and invaded Kahului, Maui, with their Make-Merry carnival, July 1-4, which was held at the Fair grounds, and realized \$24,000 in gross receipts.

American Legion carnival held forth at the new Aloha Amusement Park, by way of celebrating July 4th, its first use, though not yet complete. The opening of this park, a quarter million dollar amusement attraction, took place September 14th.

LIBRARY MATTERS.

Mrs. Albert Wilcox has donated \$75,000 for a public library building at Lihue, on land donated for that purpose by the Lihue Plantation. The Honolulu Library trustees are realizing the need of more room, and are looking to the desirability of acquiring the adjoining property of its block for expansion. Such a step would also serve the double purpose of aiding civic center improvement, and reduction of fire risk.

LOS ANGELES S. S. LINE.

Honolulu welcomed the arrival of the *City of Los Angeles* September 20th, inaugurating the new steamship line to connect Hawaii with the enterprising city of that name of Southern California. This welcome was not only manifest in the demonstrations by the throng at the dock with greetings, and leis, with which to decorate the Los Angeles chamber of commerce delegation and fellow voyagers, but at the Ad Club luncheon, and also at the Moana Hotel banquet to them in the evening, by Honolulu's chamber of commerce, where addresses of mutual congratulation and good-fellowship suggested the Hawaii-Los Angeles "annexation" idea for coöperative effort toward commercial development.

The *City of Honolulu*, sister steamship of the line, followed in arrival October 4th, and was accorded a like demonstrative welcome. Her unfortunate loss by fire on her first return trip in no sense dampened the ardor of the line's promoters, as another ves-

sel was at once secured to continue the service without interruption. These steamers are scheduled to leave Honolulu every other Saturday.

COASTING TRIPS.

The Inter-Island S. N. Company inaugurated a series of coasting sight-seeing trips this last summer that was at once novel, interesting, instructive, and hence became popular. Beginning with an excursion circuit of Kauai, the "garden island," for a leisurely study of its shores and cliffs, the circuit of Oahu was later made in the same manner. The novelty of a trip around Molokai proved the more popular through its picturesque windward scenery, that this excursion held sufficient attractions to be repeated. A renowned Hawaiian narrator of the island's traditions accompanied the excursionists, to enhance the interest of the trip, which occupied one day. The universal verdict was: a day well spent in "seeing Hawaii first."

PRIZE WAR MEMORIAL DESIGN.

In the competitive designs for Hawaii's War Memorial to be erected at Kapiolani Park, of the seven submitted by local and mainland architects, the award of first choice and prize went to Mr. Louis P. Hobart, of San Francisco. The jury of competition comprised Governor Farrington, Mayor Wilson, B. R. Maybeck of San Francisco, E. F. Lawrence of Portland, and W. R. B. Wilcox of Seattle. Of the seven sets of designs submitted, one failed to comply with the rules assigned. Awards made were: 1st, Louis P. Hobart (San Francisco); 2d, Albert Kelsey (Philadelphia); 3d, Ripley, Davis & Fishbourne (Honolulu); \$1000 each; 4th, Weeks & Day (San Francisco); 5th, Arthur Reynolds (Honolulu), and 6th, Hart Wood (Honolulu), \$500 each.

BRIEF LAVA FLOW.

Following a spell of volcanic activity at Halemaumau, a new lava flow developed in Puna May 28th, through an underground course from Kilauea, appearing first in the extinct crater of Makaopuhi, and then in the silent crater of Napau, four miles apart. Activity of the flow ceased three days later, though steam

cracks continuing toward Kalapana was noticeable for several days.

The article on volcano changes during the year will deal with the effect of the flow at Kilauea.

TRAIN WRECK.

The worst train wreck in the history of the Oahu R. & L. Co. occurred July 16th, when the engine and twenty-eight cars of a fruit train of forty-one was derailed at the Waikakalaua gulch on the Wahiawa-Schofield line, killing the engineer, conductor and a fireman, and injuring two. Three others on the train at the time escaped injury.

NECROLOGY.

Among the early and well known residents called to their reward since the close of last record, including those dying abroad, are as follows:

Mrs. Eben Low (56), J. F. Melanphy (77), W. W. Wright Jr. (40), Prince Kuhio Kalaniana'ole (51), John Kidwell (73), Mrs. Jane Walker (74), H. G. Bertelman (52), C. B. Ripley, Cal. (73), Mrs. Ellen W. Bicknell (80), Mrs. Irene Ii Holloway (52), Mrs. M. A. Whitney (55), A. Sinclair (85), John W. Cathcart (61), Mrs. Geo. T. Kluegel (50), J. C. Glade, Germany (82), Chas. L. Butman (38), T. W. Hobron, Cal. (56), E. D. Campsie, Mrs. Frank Andrade (48), Mrs. Raymer Sharp (51), P. C. Jones (84), Mrs. J. R. Macaulay (64), M. M. Scott (78), J. D. Tucker (63), Wm. C. King (61), H. H. Webb (75), R. W. Podmore (64), A. F. Griffiths, Cal. (44), T. H. Church, N. Y. (54), Mrs. H. H. Williams, Nev. (62), Sol. Peck (79), R. T. Guard, Hilo (61), Mrs. Danl. Logan (65), Capt. W. K. Freeman (68), Mrs. S. A. Gulick (86), M. D. Monsarrat (65), Mrs. J. A. Macfarlane (78), A. W. Collins, N. Y. (38), Judge H. W. Vaughan (54), L. E. Pinkham, Cal. (72), John Schlieff (56), L. von Tempsky, Maui (64), Rev. J. M. Lydgate, Kauai (67), Thos. Hollinger (66).

MISCELLANEA.

A movie picture theatre accident, the first here, occurred at the Star theatre, Kalihi section of town, July 8th, by the falling

of its plaster ceiling during an afternoon matinee, whereby twenty persons were injured. Fortunately there were no fatalities though several required hospital care. This mishap led to improvement in several such concerns to conform to legal requirements.

St. Louis College secures a 207-acre tract at Kaimuki from the Bishop Estate on a 20-year lease, with right of purchase, for the site and erection of group buildings for their planned new home.

S. S. *Empire State* arrived in Honolulu March 31st in a record run of 7 days, 19 hours, 26 minutes from Yokohama, beating the *Golden State's* record run of 7 days, 22 hours.

IN MEMORIAM.—The ANNUAL has occasion to mourn the loss of a valued friend and contributor by the sudden death of Rev. J. M. Lydgate, at his Kauai home, Lihue, November 27th last, and joins in the wide-spread sympathy throughout the territory to the bereaved family at his untimely loss.

Among the many sterling qualities and various activities that endeared Mr. Lydgate to the people of these islands, his intimate knowledge of Hawaii and Hawaiians rendered him an authority on historic, legendary and other matters, and gifted with a facile pen he frequently shared this knowledge with others through the press.

This issue of the ANNUAL carries perhaps his latest literary effort, penned or dictated from his sick chamber as his memory recalled his advent in Hilo fifty years ago, by way of maintaining his record as a regular contributor to its pages.

List of Sugar Plantations, Mills and Cane Growers Throughout the Islands.

Those marked with an asterisk (*) are planters only; those marked with a dagger (†) are mills only; all others are plantations complete, owning their own mills. (Corrected to November 15, 1922.)

Name	Location.	Manager.	Agents.
Apokaa Sugar Co.*	Ewa, Oahu	G. F. Renton, Jr.	Castle & Cooke, Ltd.
Ewa Plantation	Ewa, Oahu	G. F. Renton, Jr.	Castle & Cooke, Ltd.
Gay & Robinson*	Makaweli, Kauai	S. Robinson	H. Waterhouse Trust Co., Ltd.
Grove Farm*	Nawiliwili, Kauai	Edwin Broadbent	American Factors, Ltd.
Hakalau Plantation Co.	Hilo, Hawaii	J. M. Ross	C. Brewer & Co., Ltd.
Halawa Sugar Co.	Kohala, Hawaii	Alexr. Black	Theo. H. Davies & Co., Ltd.
Hamakua Mill Co.	Hamakua, Hawaii	R. M. Lindsay	Theo. H. Davies & Co., Ltd.
Hawi Mill and Plantation Co.	Kohala, Hawaii	John Hind	H. Waterhouse Trust Co., Ltd.
Hawaiian Agricultural Co.	Kau, Hawaii	Jas. Campsie	C. Brewer & Co., Ltd.
Hawaiian Commercial & Sugar Co.	Puunene, Maui	F. F. Baldwin	Alexander & Baldwin, Ltd.
Hawaiian Sugar Co.	Makaweli, Kauai	B. D. Baldwin	Alexander & Baldwin, Ltd.
Hawaii Mill Co.†	Hilo, Hawaii	Jas. Henderson	C. Brewer & Co., Ltd.
Hilo Sugar Co.	Hilo, Hawaii	Alexr. Fraser	C. Brewer & Co., Ltd.
Honolulu Plantation Co.	Halawa, Oahu	Jas. Gibb	C. Brewer & Co., Ltd.
Honokaa Sugar Co.	Honokaa, Hawaii	W. P. Naquin	F. A. Schaefer & Co., Ltd.
Honomu Sugar Co.	Hilo, Hawaii	Wm. Pullar	C. Brewer & Co., Ltd.
Hutchinson Sugar Plantation Co.	Kau, Hawaii	W. Campsie	C. Brewer & Co., Ltd.
Kaeleku Sugar Co.	Hana, Maui	Geo. Gibb	Theo. H. Davies & Co., Ltd.
Kahuku Plantation	Kahuku, Oahu	Andrew Adams	Alexander & Baldwin, Ltd.
Kaiwiki Sugar Co.	Ookala, Hawaii	Jas. Johnston	Theo. H. Davies & Co., Ltd.
Kaiwiki Milling Co.†	Hilo, Hawaii	A. H. Cabrinha	Fred L. Waldron, Ltd.
Kekaha Sugar Co.	Kekaha, Kauai	H. P. Faye	American Factors, Ltd.
Kilauea Sugar Plantation Co.	Kilauea, Kauai	L. D. Larsen	C. Brewer & Co., Ltd.
Kipahulu Sugar Co.	Kipahulu, Kauai	J. Fassoth	American Factors, Ltd.
Kipu Plantation	Lihue, Kauai	C. A. Rice	American Factors, Ltd.
Kohala Sugar Co.	Kohala, Hawaii	Geo. C. Watt	Castle & Cooke, Ltd.

List of Sugar Plantations, Mills and Cane Growers Throughout the Islands.—Continued.

Name.	Location.	Manager.	Agents.
Koloa Sugar Co.	Koloa, Kauai	J. T. Moir, Jr.	American Factors, Ltd.
Kona Development Co.	Kona, Hawaii	T. Konno	H. Waterhouse Trust Co., Ltd.
Koolau Agricultural Co.*	Haunala, Oahu	J. F. Woolley	Alexander & Baldwin, Ltd.
Laie Plantation*	Laie, Oahu	A. R. Ivins	Alexander & Baldwin, Ltd.
Laupahoehoe Sugar Co.	Laupahoehoe, Hawaii	R. Hutchinson	Theo. H. Davies & Co., Ltd.
Lihue Plantation Co.	Lihue, Kauai	R. D. Moler	American Factors, Ltd.
Maakee Sugar Co.	Kealia, Kauai	H. Wolters	American Factors, Ltd.
Maui Agricultural Co., Ltd.	Paia, Maui	H. A. Baldwin	Alexander & Baldwin, Ltd.
McBryde Sugar Co., Ltd.	Wahiawa, Kauai	F. A. Alexander	Alexander & Baldwin, Ltd.
Niuhii Mill & Plantation.	Kohala, Hawaii	J. A. McLennan	Theo. H. Davies & Co., Ltd.
Oahu Sugar Co.	Waipahu, Oahu	J. B. Thompson	American Factors, Ltd.
Olaa Sugar Co.	Olaa, Hawaii	A. J. Watt	American Factors, Ltd.
Olowalu Co.	Olowalu, Maui	Alexr. Valentine	C. Brewer & Co., Ltd.
Onomea Sugar Co.	Hilo, Hawaii	John T. Moir	C. Brewer & Co., Ltd.
Paanaha Sugar Plantation Co.*	Hamakua, Hawaii	F. M. Anderson	C. Brewer & Co., Ltd.
Pacific Development Co., Ltd.*	Pahoa, Hawaii	Jas. S. Green	Fred L. Waldron, Ltd.
Pacific Sugar Mill†	Kukuihaele, Hawaii	W. P. Naquin	F. A. Schaefer & Co., Ltd.
Pepeekeo Sugar Co.	Hilo, Hawaii	Jas. Webster	C. Brewer & Co., Ltd.
Pioneer Mill Co., Ltd.	Lahaina, Maui	C. S. Burns	American Factors, Ltd.
Puakea Plantation Co.	Kohala, Hawaii	H. R. Bryant	H. Waterhouse Trust Co., Ltd.
Union Mill Co.	Kohala, Hawaii	L. W. Wishard	Theo. H. Davies & Co., Ltd.
Waiakea Mill Co.	Hilo, Hawaii	D. Forbes	Theo. H. Davies & Co., Ltd.
Waialua Agricultural Co.	Waialua, Oahu	W. W. Goodale	Castle & Cooke, Ltd.
Waianae Plantation	Waianae, Oahu	E. Brecht	J. M. Dowsett
Wailea Milling Co.†	Hilo, Hawaii	A. S. Costa	Fred L. Waldron, Ltd.
Wailuku Sugar Co.	Wailuku, Maui	H. B. Penhallow	C. Brewer & Co., Ltd.
Waimanalo Sugar Co.	Waimanalo, Oahu	Geo. Chalmers, Jr.	C. Brewer & Co., Ltd.
Waimea Sugar Mill Co.	Waimea, Kauai	L. A. Faye	American Factors, Ltd.

HAWAIIAN SUGAR CROPS, IN TONS, 1918-1922.

From Tables Prepared for Hawaiian Planters' Association by
its Bureau of Labor and Statistics.

Prior years of this table, originating in 1891, will be found in Annuals
since 1901.

Islands	1918	1919	1920	1921	1922
Production of Hawaii...	163,192	207,731	185,729	197,064	228,954
Production of Maui.....	137,786	133,991	136,176	115,599	123,847
Production of Oahu.....	162,152	152,883	129,572	125,462	153,777
Production of Kauai....	113,712	109,998	105,400	101,071	102,499
Grand Total.....	576,842	603,583	556,871	539,196	609,077
Hawaii Plantations.					
Waiakea Mill Co.....	8,259	11,642	3,089	8,371	7,247
Hawaii Mill Co.....	2,203	2,763	1,872	2,951	1,725
Hilo Sugar Co.....	12,834	14,488	16,159	17,528	18,332
Onomea Sugar Co.....	16,923	19,698	18,871	17,458	22,884
Pepeekeo Sugar Co.....	8,281	9,087	9,786	9,509	11,007
Honomu Sugar Co.....	6,685	8,046	7,233	8,830	9,560
Hakalau Plantation Co..	14,369	18,894	16,559	17,281	18,471
Laupahoe Sugar Co..	14,626	8,208	11,433	13,277	14,520
Kaiwiki Sugar Co.....	4,625	5,938	5,707	5,141	6,940
Kaiwiki Milling Co.....	.....	1,019	324	1,220	484
Hamakua Mill Co.....	5,873	11,084	5,524	8,715	11,675
Pauhau S. Plant. Co...	5,140	6,843	7,898	8,029	11,092
Honokaa Sugar Co.....	4,696	7,290	5,330	5,729	8,535
Pacific Sugar Mill.....	4,713	6,551	5,761	5,354	6,495
Niuni Mill and Plant...	2,102	3,296	1,502	1,568	2,183
Halawa Plantation	1,310	3,115	2,129	1,709	2,501
Kohala Sugar Co.....	4,349	7,335	4,374	4,964	5,701
Union Mill Co.....	1,169	2,216	1,819	1,636	3,363
Hawi Mill and Plant....	3,659	8,077	5,769	4,762	4,592
Kona Development Co..	1,762	3,205	2,412	4,219	3,137
Hutchinson S. Plant. Co.	5,645	7,898	6,648	5,737	6,709
Hawaiian Agricul. Co...	13,067	16,518	16,631	15,004	18,669
Puakea Plantation	690	1,118	1,043	537	720
Olaa Sugar Co.....	20,212	23,402	27,856	26,731	29,071
Wailea Milling Co.....	.....	.....	.....	803	3,341
	163,192	207,731	185,729	197,064	228,954

HAWAIIAN SUGAR CROPS, 1918-1922—Continued.

	1918	1919	1920	1921	1922
Maui Plantations.					
Kipahulu Sugar Co.	1,240	1,730	1,083	1,521	1,401
Kaeleku Plantation Co. . .	6,512	5,454	5,048	3,800	3,972
Maui Agricultural Co. . . .	30,627	27,908	26,346	18,365	25,326
Hawaiian Coml. & S. Co. . .	57,750	49,600	57,120	48,500	51,000
Wailuku Sugar Co.	10,271	16,754	15,218	15,513	14,167
Olowalu Co.	2,000	1,705	2,090	1,884	1,741
Pioneer Mill Co., Ltd. . . .	29,386	29,840	29,265	26,016	26,240
	137,786	132,991	136,170	115,599	123,847
Oahu Plantations.					
Waimanalo Sugar Co.	5,303	5,371	3,778	3,303	2,477
Laie Plantation	1,891	1,042	1,200	717	1,551
Kahuku Plantation Co. . . .	7,830	6,665	6,404	5,150	7,550
Waiialua Agricul. Co.	33,251	30,572	23,757	28,077	30,594
Waianae Co.	5,815	5,818	6,038	6,502	5,330
Ewa Plantation Co.	33,841	37,406	28,514	26,330	39,208
Apokaa Sugar Co.	690	695	461	962	699
Oahu Sugar Co.	50,005	43,980	40,829	39,602	47,756
Honolulu Plantation Co. . . .	22,042	20,320	17,348	13,694	17,491
Koolau Agricultural Co. . . .	1,484	994	1,243	1,125	1,121
	162,152	152,863	129,572	125,462	153,777
Kauai Plantations.					
Kilauea S. Plant. Co.	5,335	4,755	7,275	4,280	4,003
Makee Sugar Co.	11,641	15,128	12,302	13,639	14,959
Lihue Plantation Co.	18,424	17,876	13,507	12,747	14,421
Grove Farm Plantation.	3,790	3,758	4,533	4,040	4,069
Koloa Sugar Co.	9,400	9,166	6,977	8,379	5,380
McBryde Sugar Co.	15,639	17,606	13,768	14,021	14,149
Hawaiian Sugar Co.	22,673	21,104	20,143	19,915	18,741
Gay & Robinson.	5,661	4,340	4,000	5,703	4,337
Waimea Sugar Mill Co.	2,203	1,565	2,572	1,858	2,111
Kekaha Sugar Co.	17,986	14,700	18,541	14,675	18,898
Estate of V. Knudsen.	960	.....	.....	.....	.....
Kipu Plantation . . . . .	.....	.....	1,782	1,820	1,431
	113,712	109,998	105,400	101,071	102,499

TERRITORIAL REGISTER AND DIRECTORY FOR 1923.

CORRECTED TO DECEMBER 1, 1922.

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 Kalua, W. K. Clark, C. K. Farden, Jno.
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 Oahu—Geo. H. Holt, Jr., E. K. Fernan-
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 Associate Justice.....Antonio Perry
 Associate Justice...Alexander Lindsay, Jr.

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 Second Judge, First Circuit, Oahu.....
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 Third Judge, First Circuit, Oahu.....
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 Third Circuit, Hawaii.....Jas. W. Thompson
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 Fifth Circuit, Kauai.....Wm. C. Achi, Jr.

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John R. Desha.....Judge

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Miss Kate Kelly
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 Clerks, 2nd Judge.....
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R. J. Mermod Ewa and Waianae
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C. Buffett Koolauloa
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Maui.

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PUBLIC UTILITIES.

Established 1913.

Chairman..... R. E. Woolley
Members..... C. G. Bockus, A. J. Gignoux
Secretary..... J. R. Kenny

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Louis Karstaedt, in the state of Pennsylvania.
Lester Ball, in the state of California.
G. S. Grossman, in Washington, D. C.
Frederick H. Seiberth, in the state of New York.

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Maui—David T. Fleming.

HAWAII TOURIST BUREAU.

Organized 1902.

G. S. McKenzie, chairman.
Chester Doyle (Honolulu), E. H. Austin (Hawaii), William H. Rice (Kauai), Lorrin K. Smith (Maui).
Geo. T. Armitage, secretary; H. H. Yost, asst.; Representative 201 Monadnock Bldg., San Francisco, Cal.

CHAMBER OF COMMERCE OF HONOLULU.

Reorganized May 27, 1914.

C. H. Cooke..... President
F. C. Atherton..... First Vice-President
W. H. McInerney..... Second Vice-President
F. J. Lindeman..... Treasurer
E. B. Clark..... Secretary

MAUI CHAMBER OF COMMERCE.

Organized Oct. 14, 1909.

President.....
Vice-President..... J. J. Walsh
Secretary..... D. H. Case
Treasurer..... C. D. Lufkin

HILO BOARD OF TRADE.

Organized.....

President..... Dr. Milton Rice
Vice-President..... J. T. Moir
Secretary..... J. W. Bains
Treasurer..... C. H. Will

KAUAI CHAMBER OF COMMERCE.

Organized 1913.

President..... H. D. Sloggett
Vice-President..... A. Menefoglio
Secretary..... K. C. Hopper
Treasurer..... J. I. Silva

PAN-PACIFIC UNION.

Incorporated 1917.

President.....
Hon. W. R. Farrington, Gov. of Hawaii
Vice-Presidents.....
Hon. Walter F. Frear, W. R. Castle, F. C. Atherton, Chung K. Ai
Treasurer..... F. E. Blake
Secretary..... Dr. F. F. Bunker
Director..... A. Hume Ford

HONOLULU STOCK AND BOND EXCHANGE.

Organized August 8, 1898.

President..... S. A. Walker
Vice-President..... R. W. Shingle
Secretary..... H. R. Macfarlane
Treasurer..... Bishop Trust Co.

HAWAIIAN SUGAR PLANTERS' ASSOCIATION.

Re-organized Nov. 18, 1895.

President..... J. M. Dowsett
Vice-President..... A. W. T. Bottomley
Sec.-Treas..... J. K. Butler
Auditor..... J. W. Waldron

EXPERIMENT STATION OF PLANTERS' ASSOCIATION.

Station Staff.

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R. C. L. Perkins.....
..... Consulting Entomologist
Otto H. Swezey, F. Muir..... Entomologists
P. H. Timberlake, F. X. Williams, H. T. Osborn, C. E. Pemberton.....
..... Asst. Entomologists
H. L. Lyon..... Botany and Forestry
L. O. Kunkel..... Assoc. Pathologist
Dan Forbes..... Supt. Forest Nurseries
E. E. Doty..... Asst. in Pineapple Investgn.
H. L. Denison, W. A. Wendt..... Assistants
W. R. McAllep, W. L. McCleery.....
..... Sugar Technologists
Guy R. Stewart..... Chemist
W. T. McGeorge..... Associate Chemist
F. R. Werthmueller, F. Hanson, E. H. Thomas..... Asst. Chemists
J. A. Verret, W. C. Jennings, O. C. Markwell, Neil Webster, F. A. Paris, H. K. Stendler, Y. Kutsunai.....
..... Assoc. and Asst. Agriculturists
D. A. Meek..... Chief Clerk
G. A. McEldowney..... Forest Supv., Oahu
L. W. Bryan..... Forest Supv., Hilo

HAWAIIAN PINEAPPLE PACKERS' ASSOCIATION.

Organized 1917.

A. Horner..... President
P. Rodgers..... Vice-President
A. H. Tarleton..... Sec.-Treas.

HAWAIIAN SUGAR TECHNOLOGISTS.

H. P. Agee..... President
W. R. McAllep, George Duncan.....
..... Vice-Presidents
S. S. Peck..... Secretary-Treasurer
Irwin Spalding..... Auditor
H. E. Stewart, J. H. Pratt and J. L. Renton..... Executive Com.

**HONOLULU CHAPTER AMERICAN
ASSN. ENGINEERS.**

Organized April 25, 1920.

President.....John H. Wilson
 Vice-President.....Lyman H. Bigelow
 Vice-President.....Jas. T. Taylor
 Secretary.....Geo. Collins
 Treasurer.....R. E. Woolley

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AGENCIES.**

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 Philadelphia.....C. Brewer & Co.
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 Liverpool.....Theo. H. Davies & Co.
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 San Francisco.....Bishop Ins. Agency

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TERRITORY OF HAWAII.**

Jno. Waterhouse.....President
 J. M. Macconel.....Vice-President
 B. Froiseth.....Sec.-Treas.
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QUEEN'S HOSPITAL.

Erected in 1860.

President.....E. F. Bishop
 Vice-President.....Dr. C. B. Wood
 Secretary.....B. Cartwright
 Treasurer.....J. R. Galt
 Auditor.....Audit Co. of Hawaii
 Resident Physician.....Dr. N. P. Larsen
 Superintendent.....G. C. Potter
 Bookkeeper.....E. J. Rego
 Head Nurse.....Miss H. B. Delamere
 Trustees—E. F. Bishop, A. J. Campbell,
 B. Cartwright, A. A. Young, Geo. I.
 Brown, J. R. Galt, Dr. C. B. Wood

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Organized April 4, 1900.

President.....A. A. Young
 Vice-Presidents.....
Father Valentin, C. R. Hemenway
 Secretary.....P. E. Spalding
 Treasurer.....A. W. T. Bottomley
 Auditor.....G. P. Denison
 Medical Supt. A. N. Sinclair, M. B. C. M.
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 Asst. Supt.....Robt. Anderson
 Matron.....Mrs. A. B. Chamberlain
 Nurses.....
Miss Winton, Miss Searl, Miss Gray
 Clerk.....L. J. Fagg

CHILDREN'S HOSPITAL.

Opened Nov. 24, 1909.

President.....S. B. Dole
 Vice-President.....E. A. Mott-Smith
 Secretary.....Miss A. G. Dunne
 Treasurer.....W. O. Smith
 Auditor.....Audit Co. of Hawaii
 Superintendent.....Janet M. Dewar
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 berg, E. A. Mott-Smith, Mrs. C. S.
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HOSPITAL FLOWER SOCIETY.

Organized February, 1890.

President.....Mrs. A. Gartley
 Secretary.....Mrs. H. L. Dawson
 Treasurer.....Mrs. W. H. Soper

SEAMEN'S INSTITUTE.

Established 1902.

L. Tenney Peck.....Chairman
 Ed Towse.....Secretary
 H. McK. Harrison.....Treasurer
 H. W. M. Mist.....Auditor
 C. F. Mant.....Superintendent

DAUGHTERS OF HAWAII.

Organized Dec. 1, 1903.

Regent.....Mrs. F. M. Swanzy
 First Vice-Regent.....Mrs. J. P. Erdman
 Second Vice-Regent.....Mrs. A. Gartley
 Historian.....Mrs. A. C. Alexander
 Asst. Historian.....Miss Jane Winne
 Secretary.....Mrs. C. L. Pfluger
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Organized Jan. 11, 1892.

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Founded 1889. Opened June 22, 1891.

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 Associate in Hawaiian Folk-lore
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 Assistant in Ethnology
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 Assistant in Malacology
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 Zoologist
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 Research Associate in Zoology
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 Preparator
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 Librarian
 Bertha Metzger.
 Asst. to the Director
 R. W. Fowler, N. E. Hinds, Carl Skotts-
 berg.
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 Guide to Exhibits

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Organized June 28, 1899.

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 President. W. T. Rawlins
 Vice-President. C. F. Clemons
 Secretary. E. W. Sutton
 Treasurer. A. M. Cristy

HAWAIIAN SOCIETY SONS OF THE AMERICAN REVOLUTION.

Organized June 17, 1895.

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 Vice-President. Dr. C. B. Cooper
 Secretary. J. T. Taylor
 Treasurer. E. T. Winant
 Registrar. G. P. Wilder
 Board of Managers—E. P. Low, C. S.
 Carlsmith, H. B. Penhallow.

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Organized March 5, 1897.

State Regent Elect. Mrs. S. H. Douglas
 State Regent. Mrs. N. L. Scott
 Regent. Mrs. F. E. Steere
 Vice-Regent. Mrs. J. W. Caldwell
 Recording Secretary. Mrs. Howard Clark
 Treasurer. Mrs. C. H. Edmondson
 Registrar. Mrs. W. H. Cameron
 Historian. Mrs. C. E. Church
 Chaplain. Mrs. A. H. B. Judd

AMERICAN LEGION—HONOLULU BRANCH.

Organized Sept. 4, 1919.

Commander. Philip L. Rice
 Vice-Commanders
 H. P. O'Sullivan, S. W. King, S.
 P. Woods, C. W. Waller, C. Y. Banfill
 Adjutant. A. G. Motsch
 Finance Officer. Irwin Spalding
 Historian. Mrs. Dorothy B. Harper
 Chaplain. J. D. Kendall

AMERICAN LEGION, WOMEN'S AUXILIARY.

Organized Feb. 20, 1920.

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 Vice-Pres. Mrs. C. P. Summerall, Mrs.
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 Mrs. F. A. Clowes, Mrs. W. R. Farrington
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 Treasurer. Mrs. F. E. Midkiff
 Chaplain. Mrs. T. O'Dowda
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Originally Organized 1823.

Constitution revised 1863. Annual Meeting June.

President. F. J. Lowrey
 Vice-Presidents
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 Cor. Secty. Rev. H. P. Judd
 Rec. Secretary. Rev. J. L. Hopwood
 Treasurer. Th. Richards
 Auditor. David L. Crawford

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Organized 1871.

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 Treasurer. Mrs. R. G. Moore
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Organized 1851. Annual Meeting June.

President. Ethel M. Damon
 Vice-President. Geo. R. Carter
 Secretary. Mrs. R. W. Andrews
 Recorder. Agnes E. Judd
 Treasurer. L. A. Dickey
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YOUNG MEN'S CHRISTIAN ASSOCIATION.

Organized 1869.

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 Vice-President. Geo. S. Waterhouse
 Treasurer. R. A. Cooke
 Rec. Secretary. F. E. Midkiff
 General Secretary. Lloyd R. Killam
 Assistant Secretaries
 Floyd H. Emmans, G. M. Wrisley

Central Department.

Chairman. Ed Towse
 Secretary. W. H. Soper
 Executive Secty. S. B. Brainard
 Assistant Secretaries. J. L.
 Putnam, H. F. Haines, E. M. Bunnell
 Physical Director. B. H. Robbins

Nuuau Department

Chairman.....Chas. R. Frazier
 Vice-President.....Dr. I. Mori
 Treasurer.....W. A. Love
 Rec. Secty.....Yap See Young
 Executive Secty.....H. E. Becknell

ARMY & NAVY Y. M. C. A.

Executive Secretary.....J. A. Hamilton
 Assistants.....
 F. I. Ambler, James Taylor, C. G. Knight

Pearl Harbor Building.

Executive Secretary.....Bert Elston
 Asst. Secty.....C. E. Crane

YOUNG WOMEN'S CHRISTIAN ASSO-
 CIATION.

Organized 1900.

President.....Mrs. F. C. Atherton
 Secretary.....Nora Sturgeon
 Cor. Secretary.....Mrs. W. F. Frear
 Treasurer.....Mrs. I. J. Shepherd
 Gen. Secty.....Miss Grace Channon

FREE KINDERGARTEN AND CHIL-
 DREN'S AID ASSOCIATION.

Organized 1895.

President.....Mrs. F. M. Swanzy
 Vice-Presidents.....Mrs. J. P. Cooke,
 Mrs. W. F. Frear, Mrs. H. C. Coleman
 Recording Secty.....Mrs. I. M. Cox
 Financial Secretary.....Mrs. W. L. Moore
 Treasurer.....Mrs. J. M. Caldwell
 Auditor.....J. L. Cockburn

SOCIAL SERVICE BUREAU.

Organized June 7, 1899.

President.....J. R. Galt
 Vice-Presidents.....
 S. B. Dole, R. A. Cooke, Mrs.
 F. W. Macfarlane, Mrs. A. C. Alexander
 Treasurer.....Hawn. Trust Co., Ltd.
 Secty. and Manager.....Margaret Bergant
 Auditor.....Audit Co. of Hawaii

STRANGERS' FRIEND SOCIETY.

Organized 1852. Annual Meeting June.
 President.....Mrs. A. Fuller
 Vice-President.....Mrs. A. A. Young
 Secretary.....Mrs. H. F. Damon
 Treasurer.....Mrs. E. W. Jordan
 Auditor.....E. W. Jordan
 Directress.....Mrs. E. B. Waterhouse

BRITISH BENEVOLENT SOCIETY.

Organized 1869.

President (ex-officio).....H.B.M.'s Consul
 Vice-President.....Rev. Wm. Ault
 Secretary.....W. C. Shields
 Treasurer.....H. B. Sinclair

HAWAIIAN HUMANE SOCIETY.

Originated 1897. Organized Sept., 1908.
 President.....Mrs. W. W. Thayer
 Vice-Presidents.....Mrs.
 Albert Horner, Mrs. Clifford Kimball,
 Mrs. E. A. Mott-Smith, Mrs. G. R. Carter
 Secretary.....Mrs. A. W. Van Valkenburg
 Treasurer.....Miss M. F. Rawlins
 Auditor.....Herbert Dowsett
 Agent.....Miss Luev K. Ward
 Asst. Agent.....Otto Ludloff

OAHU CEMETERY ASSOCIATION.

Organized 1844.

President.....F. J. Lowrey
 Vice-President.....S. G. Wilder
 Secretary.....H. H. Walker
 Treasurer.....Hawaiian Trust Co.

THE OUTDOOR CIRCLE.

(For the beautifying of Honolulu.)

Organized May, 1912.

President.....Miss Beatrice Castle
 1st Vice-President.....Mrs. C. J. McCarthy
 2d Vice-President.....A. J. Campbell
 Secretary.....Mrs. A. J. Gigneaux
 Treasurer.....Mrs. Z. K. Myers
 Ex. Officer.....Mrs. A. H. Tarleton

PACIFIC CLUB.

Organized 1852. Premises on Alakea
 Street, two doors below Beretania.

President.....Dr. C. B. Wood
 Vice-Presidents.....
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The Honolulu Advertiser, issued by the Advertiser Pub. Co. every morning. Raymond Coll, Managing Editor.

The Honolulu Star-Bulletin, issued every evening (except Sundays), by the Honolulu Star-Bulletin, Ltd. Riley H. Allen, Editor. Semi-weekly issued on Mondays and Thursdays.

The Guide, issued every Tuesday and Friday morning by the Guide Pub. Co.

The Friend, Organ of the Hawaiian Board, issued monthly. Miss E. V. Warriner, Business Manager.

The Hawaiian Church Chronicle, issued on the first Saturday of every month. Rt. Rev. John D. La Mothe, Editor.

The Paradise of the Pacific, issued monthly. Mrs. E. A. Langton-Boyle, Editor-Publisher.

The Mid-Pacific Monthly, an illustrated descriptive magazine. Alex. Hume Ford, Editor and Publisher.

The Hawaiian Forester and Agriculturist, issued monthly under direction of Board of Com. Agr. and Forestry.

Hawaii Educational Review, issued monthly. Vaughan MacCaughy, Editor.

The Kuokoa (native), weekly, issued every Thursday morning by the Advertiser Pub. Co., Ltd. Solomon Hanohano, Editor.

O Luso (Portuguese), issued weekly on Saturdays. A. H. R. Vieira, Editor.

Chee Yow Shin Bo (The Liberty News), tri-weekly, Chinese.

Sun Chung Kwock Bo, tri-weekly. Chinese.

Hawaii Shinpo, issued daily in Japanese. M. Togawa, Editor.

Hawaii Nippo, T. Yano, Editor, issued daily by the Nippo Sha Co., Ltd.

Hilo Daily Tribune, issued by the Tribune Pub. Co. H. C. Davies, Mng. Editor.

The Post-Herald, issued daily at Hilo by the Post-Herald, Ltd. F. J. Cody, Mng. Editor; Chas. E. Banks, Editor.

The Maui News, issued Tuesday and Friday at Wailuku, Maui. Jos. H. Gray, Editor.

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Hoku o Hawaii, issued on Friday of each week at Hilo. Rev. S. L. Desha, Editor.

THE HAWAIIAN ANNUAL, issued the latter part of December for the following year. Thos. G. Thrum, Editor and Publisher.

PLACES OF WORSHIP.

Central Union Church, Congregational, cor. Beretania and Richards; Rev. A. W. Palmer, Minister; Rev. A. E. Shattuck, associate minister. Sunday services at 11 a. m. and 7:30 p. m. Sunday school at 9:40 a. m. Prayer meeting Wednesday evenings at 7:30.

- Kalihi Union Church, King street, Kalihi; Dr. A. S. Baker, pastor. Sunday school at 9:45 a. m. Gospel services at 11 a. m. and 8 p. m.
- Methodist Episcopal Church, corner Beretania and Victoria streets; Rev. M. H. Alexander, pastor. Sunday services at 11 a. m. and 7:30 p. m. Sunday school at 10 a. m. Prayer meeting Wednesdays at 7:30 p. m.
- The Christian Church, Kewalo street, Rev. Hugh V. White, pastor. Sunday services at 11 a. m. and 7:30 p. m. Sunday school at 9:45 a. m. Prayer meeting Wednesday evenings, at 7:30.
- Salvation Army, services held nightly at hall, 69 Beretania street, with Sunday services at the usual hour.
- Roman Catholic Church, Fort street, near Beretania; Rt. Rev. Libert Boeynaems, Bishop of Zeugma. Services every Sunday at 10 a. m. and 4:30 p. m. Low mass every day at 6 and 7 a. m. High mass Sundays and Saints' days at 10 a. m.
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- Chinese Congregation, Rev. Kong Yin Tet, Curate. Services on Sunday at 11 a. m. and 7:30 p. m. Evening prayer every Wednesday at 7 p. m.
- St. Clement's Chapel, Punahou. Services on Sundays. Holy Communion 7 a. m. Morning prayer, 11 a. m.; evening prayer, 7:30 p. m. Rev. John Osborne, rector.
- Epiphany Mission, Kaimuki, Rev. E. S. Freeman, priest in charge. Sunday services at 7:30 and 11 a. m. Sunday school at 10.
- First Church of Christ, Scientist, Punahou street. Sunday services at 11 a. m. Sunday school at 9:45.
- Christian Chinese Church, Fort street; Rev. Yuen To Pui, pastor. Services every Sunday at 10:30 a. m. and 7:30 p. m. Prayer meeting Wednesday at 7:30 p. m.
- Second Chinese Church (Congregational), Beretania street, Rev. Tse Kei Yuen, pastor. Services at usual hours.
- German Lutheran Church, Beretania street. Dr. A. Hoermann, pastor. Services on Sunday at 11 a. m.; Sunday school at 10 a. m.
- Portuguese (Protestant) Mission; Rev. A. V. Soares, pastor. Services every Sabbath at the usual hour. Sunday school at 3 p. m. Chapel situated corner of Punchbowl and Miller streets.
- Reorganized Church of Jesus Christ, Chapel on King street, near Thomas Square; Sunday school at 10 a. m.; preaching in Hawaiian at 11 a. m.; in English at 7:30 p. m.
- Seventh Day Adventists; Rev. L. L. Hutchinson, pastor. Chapel, Keeaumoku street. Sabbath school Saturdays at 10 a. m.; preaching at 11. Wednesday prayer meeting at 7:30 p. m.
- Japanese Union Church (connected with Hawaiian Board Missions); Rev. T. Hori, pastor. Sunday services at 10 a. m., 11 a. m. and 7:30 p. m. Prayer meeting Wednesdays at 7 p. m.
- Korean Methodist Church, Rev. W. C. Pang, pastor; Liliha street. Services at usual hours.
- Japanese Methodist Church, Rev. C. Nakamura, pastor. Hold services in chapel on River street, near St. Louis College.
- Japanese Church, corner Kinau and Pensacola streets, Rev. T. Okumura, pastor. Hold regular services at the usual hours.
- Bishop Memorial Chapel, Kamehameha Schools. Rev. E. T. Sherman, chaplain. Morning services at 11.

NATIVE CHURCHES.

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- Kaumakapili Church, King street, Palama; Rev. H. K. Poepoe, pastor; Rev. S. K. Kamaiofiki, assistant. Sunday services at the usual hours.

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