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ANNUAL

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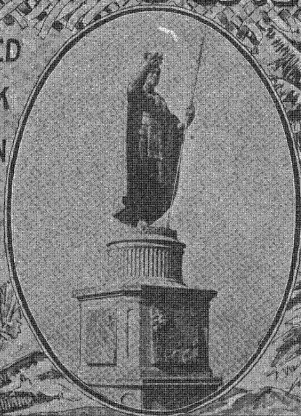
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THE HAWAIIAN ANNUAL

THE
RECOGNIZED
BOOK
OF
INFORMATION
ABOUT
HAWAII

1911



SINGLE COPIES
75 CTS.

THOS. G. THURM

COMPILER
AND
PUBLISHER

Honolulu, T. H.
THIRTY-SEVENTH YEAR

BY MAIL 85 Cts.

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Superintendent

F. C. SMITH,
General Passenger and Ticket Agent

HAWAIIAN

Almanac and Annual

FOR

1911



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.



Thirty-Seventh Year of Publication



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HONOLULU:

1910

Counting House 1911 Calendar 1911

	SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY		SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY

	1	2	3	4	5	6	7		2	3	4	5	6	7	8
	8	9	10	11	12	13	14		9	10	11	12	13	14	15
JAN.	15	16	17	18	19	20	21	JULY	16	17	18	19	20	21	22
	22	23	24	25	26	27	28		23	24	25	26	27	28	29
	29	30	31	...	...	...	...		30	31	...	...	...	...	...

	5	6	7	8	9	10	11	AUG.	13	14	15	16	17	18	19
FEB.	12	13	14	15	16	17	18		20	21	22	23	24	25	26
	19	20	21	22	23	24	25		27	28	29	30	31	...	...
	26	27	28	...	...	...	...		...	...	...	...	...	...	...

	5	6	7	8	9	10	11	SEPT.	3	4	5	6	7	8	9
MAR.	12	13	14	15	16	17	18		10	11	12	13	14	15	16
	19	20	21	22	23	24	25		17	18	19	20	21	22	23
	26	27	28	29	30	31	...		24	25	26	27	28	29	30

	2	3	4	5	6	7	8	OCT.	1	2	3	4	5	6	7
APR.	9	10	11	12	13	14	15		8	9	10	11	12	13	14
	16	17	18	19	20	21	22		15	16	17	18	19	20	21
	23	24	25	26	27	28	29		22	23	24	25	26	27	28
	30	...	...	...	...	...	...		29	30	31	...	...	...	...

	1	2	3	4	5	6	7	NOV.	5	6	7	8	9	10	11
MAY	7	8	9	10	11	12	13		12	13	14	15	16	17	18
	14	15	16	17	18	19	20		19	20	21	22	23	24	25
	21	22	23	24	25	26	27		26	27	28	29	30	...	...
	28	29	30	31	...	...	...		...	...	...	...	...	...	...

	4	5	6	7	8	9	10	DEC.	3	4	5	6	7	8	9
JUNE	11	12	13	14	15	16	17		10	11	12	13	14	15	16
	18	19	20	21	22	23	24		17	18	19	20	21	22	23
	25	26	27	28	29	30	...		24	25	26	27	28	29	30
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Thos. G. Thrum's
Stationery and Book-Store

1063 FORT ST. HONOLULU, T. H.

Thomas M. Spaulding

9-2-1923

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HAWAIIAN ANNUAL CALENDAR FOR 1911.

Second half of the thirteenth year and first half of the fourteenth year since annexation of Hawaii with the United States.

Eighteenth year since the downfall of the Monarchy.

The 133rd year since the discovery of the Hawaiian Islands by Captain Cook.

Holidays Observed at the Hawaiian Islands.

*New Year Jan. 1	*American Anniversary. . . . July 4
Chinese New Year. Jan. 29	*Labor Day (First Monday)
*Washington's Birthday. . . . Feb. 22	. . . . . Sept. 4
Good Friday. April 14	*Regatta Day (Third Saturday) Sept. 16
*Decoration Day. May 30	Thanksgiving Day. Nov. 30
*Kamehameha Day. June 11	*Christmas Day. Dec. 25
*Birthday Hawn. Republic. July 4	

Those distinguished by an Asterisk have been established by law.

Chronological Cycles.

Dominical Letter. A	Solar Cycle. 16
Epact 30	Roman Indiction. 9
Golden Number 12	Julian Period. 6624

Church Days.

Epiphany Jan. 6	Whit Sunday. June 4
Ash Wednesday. March 1	Trinity Sunday. June 11
First Sunday in Lent. March 5	Corpus Christi. June 15
Good Friday. April 14	Advent Sunday. Dec. 3
Easter Sunday. April 16	Christmas Dec. 25
Ascension Day. May 25	

Eclipses in 1911.

In the year 1911 there will be two eclipses of the sun, and none of the moon.

The solar eclipse of April 28 will be visible in Honolulu as a partial eclipse, beginning at 11h. 10m. 29s. A. M., and ending at 1h. 26m. 20s. P. M. In a narrow area extending from near Sydney, Australia, to the Isthmus of Tehuantepec, it will be total.

The annular eclipse of October 21 will be invisible in the Hawaiian Islands.

FIRST QUARTER, 1911.

JANUARY.				FEBRUARY				MARCH			
D.		H. M.		D.		H. M.		D.		H. M.	
7	First Quar.....	7 50	p.m.	6	First Quar....	6.58	a.m.	7	First Quar....	0.31	p.m.
14	Full Moon.....	11.56	a.m.	13	Full Moon....	0.07	a.m.	14	Full Moon....	1.28	p.m.
11	Last Quar.....	7.51	p.m.	20	Last Quar....	5.14	p.m.	22	Last Quar....	1.56	p.m.
29	New Moon.....	11.15	p.m.	28	New Moon....	2.01	p.m.	30	New Moon....	2.08	a.m.

Day of Mo.	Day of Wk.	Sun Rises...		Sun Sets....	
		H. M.	H.M.	H.M.	H.M.
1	SUN..	6 38	15	30	0
2	Mon..	6 38	45	30	6
3	Tues..	6 38	65	31	3
4	Wed..	6 38	95	31	9
5	Thurs..	6 39	15	32	6
6	Fri....	6 39	35	33	3
7	Sat...	6 39	55	33	9
8	SUN..	6 39	75	34	6
9	Mon..	6 39	95	35	3
10	Tues..	6 40	15	36	0
11	Wed..	6 40	25	36	7
12	Thurs..	6 40	35	37	3
13	Fri....	6 40	45	38	0
14	Sat...	6 40	45	38	7
15	SUN..	6 40	45	39	4
16	Mon..	6 40	45	40	1
17	Tues..	6 40	45	40	8
18	Wed..	6 40	35	41	4
19	Thurs..	6 40	35	42	1
20	Fri....	6 40	25	42	8
21	Sat...	6 40	15	43	4
22	SUN..	6 39	95	44	1
23	Mon..	6 39	85	44	8
24	Tues..	6 39	65	45	4
25	Wed..	6 39	55	46	1
26	Thurs..	6 39	35	46	7
27	Fri....	6 39	05	47	4
28	Sat...	6 38	85	48	0
29	SUN..	6 38	55	48	6
30	Mon..	6 38	15	49	2
31	Tues..	6 37	85	49	9

Day of Mo.	Day of Wk.	Sun Rises...		Sun Sets....	
		H. M.	H.M.	H.M.	H.M.
1	Wed..	6 37	45	50	5
2	Thurs..	6 37	15	51	1
3	Fri....	6 36	75	51	7
4	Sat...	6 36	35	52	3
5	SUN..	6 35	95	52	9
6	Mon..	6 35	45	53	5
7	Tues..	6 34	95	54	1
8	Wed..	6 34	45	54	7
9	Thurs..	6 33	95	55	2
10	Fri....	6 33	45	55	7
11	Sat...	6 32	95	56	2
12	SUN..	6 32	35	56	7
13	Mon..	6 31	75	57	2
14	Tues..	6 31	15	57	7
15	Wed..	6 30	55	58	2
16	Thurs..	6 29	95	58	7
17	Fri....	6 29	25	59	2
18	Sat...	6 28	65	59	7
19	SUN..	6 28	06	0	2
20	Mon..	6 27	36	0	7
21	Tues..	6 26	66	1	2
22	Wed..	6 26	06	1	6
23	Thurs..	6 25	26	2	1
24	Fri....	6 24	56	2	5
25	Sat...	6 23	76	2	9
26	SUN..	6 22	96	3	3
27	Mon..	6 22	16	3	7
28	Tues..	6 21	36	4	1

Day of Mo.	Day of Wk.	Sun Rises...		Sun Sets....	
		H. M.	H.M.	H.M.	H.M.
1	Wed..	6 20	56	4	5
2	Thurs..	6 19	76	4	9
3	Fri....	6 18	96	5	3
4	Sat...	6 18	16	5	7
5	SUN..	6 17	36	6	1
6	Mon..	6 16	46	6	5
7	Tues..	6 15	66	6	8
8	Wed..	6 14	86	7	2
9	Thurs..	6 13	96	7	6
10	Fri....	6 13	06	7	9
11	Sat...	6 12	16	8	3
12	SUN..	6 11	36	8	6
13	Mon..	6 10	46	8	9
14	Tues..	6 9	56	9	3
15	Wed..	6 8	66	9	6
16	Thurs..	6 7	76	9	9
17	Fri....	6 6	86	10	2
18	Sat...	6 5	96	10	5
19	SUN..	6 4	96	10	8
20	Mon..	6 4	06	11	2
21	Tues..	6 3	16	11	5
22	Wed..	6 2	26	11	8
23	Thurs..	6 1	36	12	1
24	Fri....	6 0	46	12	4
25	Sat...	5 59	56	12	8
26	SUN..	5 58	56	13	1
27	Mon..	5 57	66	13	4
28	Tues..	5 56	76	13	7
29	Wed..	5 55	76	14	0
30	Thurs..	5 54	86	14	3
31	Fri....	5 53	96	14	6

ON Honolulu harbor improvements by the Federal government, up to June 30, 1910, the sum of \$795,818.23 had been expended. The approved project for its development is reported to be about forty-nine per cent. completed. On the above date the minimum depth at the channel entrance was given at thirty-three feet, and a general depth for the harbor of thirty-five feet.

SECOND QUARTER, 1911.

APRIL				MAY				JUNE			
D.		H. M.		D.		H. M.		D.		H. M.	
5	First Quar.....	7.25	p.m.	5	First Quar.....	2.44	a.m.	3	First Quar.....	11.34	a.m.
13	Full Moon	4.07	a.m.	12	Full Moon.....	7.40	p.m.	11	Full Moon	11.21	a.m.
21	Last Quar.....	8.06	a.m.	20	Last Quar.....	10.53	p.m.	19	Last Quar	1.21	a.m.
28	New Moon.....	11.55	a.m.	27	New Moon.....	7.34	p.m.	26	New Moon.....	2.50	a.m.

Day of Mo.	Day of Wk.	Sun Rises...		Sun Sets...	
		H.M.	H.M.	H.M.	H.M.
1	Sat.	5 53	0 6	14	6
2	SUN... 5	52	1 6	15	2
3	Mon... 5	51	2 6	15	5
4	Tues... 5	50	3 6	15	9
5	Wed... 5	49	5 6	16	2
6	Thurs. 5	48	6 6	16	5
7	Fri... 5	47	7 6	16	8
8	Sat.	5 46	8 6	17	1
9	SUN... 5	45	9 6	17	4
10	Mon.	5 45	0 6	17	7
11	Tues.	5 44	2 6	18	0
12	Wed... 5	43	4 6	18	3
13	Thurs. 5	42	6 6	18	7
14	Fri... 5	41	7 6	19	0
15	Sat.	5 40	9 6	19	3
16	SUN... 5	40	1 6	19	6
17	Mon... 5	39	3 6	20	0
18	Tues... 5	38	5 6	20	3
19	Wed... 5	37	6 6	20	7
20	Thurs. 5	36	8 6	21	1
21	Fri... 5	36	0 6	21	4
22	Sat.	5 35	2 6	21	8
23	SUN... 5	34	5 6	22	1
24	Mon... 5	33	8 6	22	5
25	Tues... 5	33	1 6	22	9
26	Wed... 5	32	4 6	23	2
27	Thurs. 5	31	7 6	23	6
28	Fri... 5	31	0 6	24	0
29	Sat.	5 30	3 6	24	4
30	SUN... 5	29	7 6	24	7

Day of Mo.	Day of Wk.	Sun Rises...		Sun Sets...	
		H.M.	H.M.	H.M.	H.M.
1	Mon... 5	29	0 6	25	1
2	Tues... 5	28	4 6	25	5
3	Wed... 5	27	8 6	25	9
4	Thurs. 5	27	1 6	26	3
5	Fri... 5	26	5 6	26	7
6	Sat.	5 26	0 6	27	1
7	SUN... 5	25	4 6	27	5
8	Mon... 5	24	9 6	27	9
9	Tues... 5	24	4 6	28	4
10	Wed... 5	23	9 6	28	8
11	Thurs. 5	23	5 6	29	2
12	Fri... 5	23	0 6	29	6
13	Sat.	5 22	6 6	30	1
14	SUN... 5	22	1 6	30	5
15	Mon... 5	21	7 6	30	9
16	Tues... 5	21	3 6	31	3
17	Wed... 5	21	0 6	31	8
18	Thurs. 5	20	6 6	32	2
19	Fri... 5	20	2 6	32	6
20	Sat.	5 19	9 6	33	0
21	SUN... 5	19	6 6	33	5
22	Mon... 5	19	3 6	33	9
23	Tues... 5	19	0 6	34	4
24	Wed... 5	18	7 6	34	8
25	Thurs. 5	18	4 6	35	3
26	Fri... 5	18	1 6	35	7
27	Sat.	5 17	9 6	36	1
28	SUN... 5	17	8 6	36	5
29	Mon... 5	17	6 6	36	9
30	Tues... 5	17	4 6	37	3
31	Wed... 5	17	3 6	37	7

Day of Mo.	Day of Wk.	Sun Rises...		Sun Sets...	
		H.M.	H.M.	H.M.	H.M.
1	Thurs. 5	17	2 6	38	1
2	Fri... 5	17	1 6	38	5
3	Sat.	5 17	1 6	38	9
4	SUN... 5	17	0 6	39	3
5	Mon... 5	17	0 6	39	6
6	Tues... 5	17	0 6	40	0
7	Wed... 5	17	0 6	40	4
8	Thurs. 5	17	0 6	40	8
9	Fri... 5	17	0 6	41	1
10	Sat.	5 17	0 6	41	5
11	SUN... 5	17	0 6	41	8
12	Mon... 5	17	1 6	42	1
13	Tues... 5	17	2 6	42	4
14	Wed... 5	17	4 6	42	7
15	Thurs. 5	17	5 6	43	0
16	Fri... 5	17	7 6	43	3
17	Sat.	5 17	9 6	43	5
18	SUN... 5	18	0 6	43	8
19	Mon... 5	18	2 6	44	1
20	Tues... 5	18	3 6	44	3
21	Wed... 5	18	5 6	44	5
22	Thurs. 5	18	7 6	44	7
23	Fri... 5	19	0 6	44	9
24	Sat.	5 19	2 6	45	1
25	SUN... 5	19	5 6	45	2
26	Mon... 5	19	8 6	45	3
27	Tues... 5	20	1 6	45	4
28	Wed... 5	20	4 6	45	6
29	Thurs. 5	20	7 6	45	7
30	Fri... 5	21	0 6	45	8

AMONG the varied articles of export of Hawaiian produce in early years bananas appear in the table of shipments first in 1862 to the number of 121 bunches. The following year this reduced to sixty, but jumped in 1864 to 1,781 bunches, since which time, with occasional slips, has steadily progressed so that in 1875 there were 10,518 bunches exported, and in 1881 the number had increased to 20,776. The early tables given of this and other products are of quantity only, not of value except as

THIRD QUARTER, 1911.

JULY				AUGUST				SEPTEMBER			
D.	H. M.			D.	H. M.			D.	H. M.		
2	10.50	p.m.		1	0.59	p.m.		8	5.27	a.m.	
11	1.23	a.m.		9	3.25	p.m.		15	7.21	a.m.	
18	7.01	p.m.		17	1.41	a.m.		22	4.04	a.m.	
25	9.42	a.m.		23	5.44	p.m.		30	0.38	a.m.	
				31	5.51	a.m.					
Day of Mo.	Day of Wk.	Sun Rises.	Sun Sets.	Day of Mo.	Day of Wk.	Sun Rises.	Sun Sets.	Day of No.	Day of Wk.	Sun Rises.	Sun Sets.
		H. M.	H. M.			H. M.	H. M.			H. M.	H. M.
1	Sat.	5 21 36	45 8	1	Tues.	5 33 26	38 7	1	Fri.	5 43 46	15 9
2	SUN.	5 21 66	45 9	2	Wed.	5 33 66	38 1	2	Sat.	5 43 66	15 0
3	Mon.	5 22 06	45 9	3	Thurs.	5 34 06	37 6	3	SUN.	5 43 96	14 1
4	Tues.	5 22 36	45 9	4	Fri.	5 34 36	37 0	4	Mon.	5 44 16	13 2
5	Wed.	5 22 76	45 8	5	Sat.	5 34 76	36 4	5	Tues.	5 44 46	12 3
6	Thurs.	5 23 06	45 8	6	SUN.	5 35 16	35 9	6	Wed.	5 44 66	11 4
7	Fri.	5 23 46	45 8	7	Mon.	5 35 56	35 3	7	Thurs.	5 44 96	10 4
8	Sat.	5 23 76	45 7	8	Tues.	5 35 86	34 6	8	Fri.	5 45 26	9 5
9	SUN.	5 24 16	45 6	9	Wed.	5 36 26	34 0	9	Sat.	5 45 46	8 5
10	Mon.	5 24 46	45 6	10	Thurs.	5 36 66	33 3	10	SUN.	5 45 76	7 6
11	Tues.	5 24 86	45 5	11	Fri.	5 36 96	32 7	11	Mon.	5 46 06	6 6
12	Wed.	5 25 26	45 3	12	Sat.	5 37 36	32 0	12	Tues.	5 46 26	5 7
13	Thurs.	5 25 66	45 2	13	SUN.	5 37 66	31 3	13	Wed.	5 46 56	4 7
14	Fri.	5 26 16	45 0	14	Mon.	5 37 96	30 6	14	Thurs.	5 46 76	3 7
15	Sat.	5 26 56	44 8	15	Tues.	5 38 36	29 9	15	Fri.	5 46 96	2 8
16	SUN.	5 26 96	44 6	16	Wed.	5 38 66	29 2	16	Sat.	5 47 26	1 8
17	Mon.	5 27 36	44 4	17	Thurs.	5 38 96	28 5	17	SUN.	5 47 46	0 9
18	Tues.	5 27 76	44 1	18	Fri.	5 39 26	27 7	18	Mon.	5 47 76	5 59 9
19	Wed.	5 28 16	43 9	19	Sat.	5 39 56	26 9	19	Tues.	5 47 96	59 0
20	Thurs.	5 28 56	43 6	20	SUN.	5 39 96	26 1	20	Wed.	5 48 25	58 0
21	Fri.	5 28 96	43 3	21	Mon.	5 40 26	25 3	21	Thurs.	5 48 55	57 1
22	Sat.	5 29 36	42 9	22	Tues.	5 40 56	24 5	22	Fri.	5 48 75	56 1
23	SUN.	5 29 76	42 6	23	Wed.	5 40 86	23 7	23	Sat.	5 49 05	55 1
24	Mon.	5 30 16	42 2	24	Thurs.	5 41 16	22 9	24	SUN.	5 49 25	54 2
25	Tues.	5 30 56	41 8	25	Fri.	5 41 46	22 0	25	Mon.	5 49 55	53 2
26	Wed.	5 30 96	41 4	26	Sat.	5 41 76	21 2	26	Tues.	5 49 85	52 3
27	Thurs.	5 31 36	41 0	27	SUN.	5 41 96	20 3	27	Wed.	5 50 05	51 4
28	Fri.	5 31 76	40 6	28	Mon.	5 42 26	19 4	28	Thurs.	5 50 35	50 4
29	Sat.	5 32 16	40 1	29	Tues.	5 42 56	18 6	29	Fri.	5 50 65	49 5
30	SUN.	5 32 46	39 7	30	Wed.	5 42 86	17 7	30	Sat.	5 50 95	48 6
31	Mon.	5 32 86	39 2	31	Thurs.	5 43 16	16 8				

total. Up to 1900, when the customs tables grouped not a few of our island products under headings conformable to those at Washington whereby the individuality of several products have become lost, the banner year of banana export was in 1896 when it reached 126,413 bunches.

With the prospect of a large increase in the fruit industry of the Territory, in which bananas will share, it is hoped the official tabulations hereafter will show the development due each.

FOURTH QUARTER, 1911.

OCTOBER				NOVEMBER				DECEMBER			
D.		H.M.		D.		H.M.		D.		H.M.	
7	Full Moon...	5.41	p.m.	6	Full Moon...	5.18	a.m.	5	Full Moon...	4.22	p.m.
14	Last Quar...	1.16	p.m.	12	Last Quar...	8.49	p.m.	12	Last Quar...	7.16	a.m.
21	New Moon...	5.39	p.m.	20	New Moon...	10.19	a.m.	20	New Moon...	5.10	a.m.
29	First Quar...	8.11	p.m.	28	First Quar...	3.12	p.m.	28	First Quar...	8.17	a.m.

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

PULU, a fern moss, once an important article of export from these islands for upholstering purposes, is now almost unknown and seldom met with. It figured last in the table of domestic exports in 1884 at less than 500 pounds, though in 1860, the banner year probably of the pulu industry, some 650,000 pounds were shipped, mostly to San Francisco. This product, according to published tables of the Custom house, seems to have been first exported in 1847, when 14,327 pounds, valued at \$573.08 was shipped away.

INTER-ISLAND DISTANCES BY SEA IN SEA MILES.

AROUND OAHU FROM HONOLULU—ESPLANADE WHARF TO

	Miles.		Miles.
Bell Buoy	1¼	Pearl River Bar.....	6
Diamond Head	5	Barber's Point	15
Koko Head	12	Waianae Anchorage	26
Makapuu Point	16	Kaena Point, N. W. of Oahu....	36
Mokapu	27	Waialua Anchorage	46
Kahuku North Point.....	48	Kahuku N. Pt., Oahu, via Kaena.	58

HONOLULU TO

Lae o ka Laau, S. W. Pt. Molokai	35	Kawaihae, Hawaii.....	144
Kalaupapa, Leper Settlement....	52	Kealakekua, " (direct)	157
West Point of Lanai.....	50	" " (via Kawaihae).	186
Lahaina, Maui.....	72	S. W. Pt. Hawaii " "	233
Kahului, "	90	Punaluu, "	250
Hana, "	128	Hilo, " (direct).....	192
Maalaea, "	86	" " (windward)....	206
Makena, "	96	" " (via Kawaihae).	230
Mahukona, Hawaii	134		

HONOLULU TO

Nawiliwili, Kauai	98	Hanalei, Kauai	125
Koioa, "	102	Niihau	144
Waimea, "	120		

LAHAINA, MAUI, TO

Kaluaaha, Molokai	17	Maalaea, Maui	12
Lanai	9	Makena, Maui	18

KAWAIIHAE, HAWAII, TO

Mahukona, Hawaii	10	Hilo, Hawaii	85
Waipio, Hawaii	37	Lae o ka Mano, Hawaii.....	20
Honokaa, Hawaii	45	Kailua, Hawaii	34
Laupahoehoe, Hawaii	62	Kealakekua, Hawaii	44

HILO, HAWAII, TO

East Point of Hawaii.....	20	Punaluu, Hawaii	70
Keauhou, Kau, Hawaii.....	50	Kaalualu, Hawaii	80
North Point of Hawaii.....	62	South Point of Hawaii.....	85

WIDTH OF CHANNELS.

Oahu and Molokai.....	23	Maui and Lanai.....	7
Diamond Head to S. W. Point of Molokai	30	Maui and Kahoolawe.....	6
Molokai and Lanai.....	7	Hawaii and Maui.....	26
Molokai and Maui.....	8	Kauai and Oahu.....	63
		Niihau and Kauai.....	15

OCEAN DISTANCES.

HONOLULU TO

San Francisco	2100	Auckland	3810
San Diego	2260	Sydney	4410
Portland, Or.	2360	Hongkong	4920
Brito, Nicaragua	4200	Yokohama	3400
Panama	4720	Guam	3300
Tahiti	2440	Manila, via N. E. Cape.....	4890
Samoa	2290	Victoria, B. C.	2460
Fiji	2700	Midway Islands	1200

OVERLAND DISTANCES.

Revised for the Annual in accordance with latest Government Survey measurements.
The outer column of figures indicates the distance between points

ISLAND OF OAHU.

HONOLULU POST-OFFICE TO

	Miles.		Miles.	Inter.	
Bishop's corner (Waikiki).....	3.2	Kahana	26.4	4.5	
Waikiki Villa	3.6	Punaluu	28.4	2.0	
Diamond Head	5.9	Hauula	31.4	3.0	
Kaalawai	6.0	Laie	34.4	3.0	
	Miles. Inter.	Kahuku Mill	37.2	2.8	
Thomas Square	1.0	Kahuku Ranch	40.0	2.8	
Pawaa corners	2.0	1.0	Moanalua	3.4	
Kamoiiliili	3.3	1.3	Kalauao	7.4	4.0
Telegraph Hill	5.0	1.7	Ewa Church	10.2	2.8
Waialae	6.2	1.2	Kipapa	13.6	3.4
Niu	8.8	2.6	Kaukonahua	20.0	6.4
Koko Head	11.8	3.0	Leilehua	20.0	
Makapuu	14.8	3.0	Waialua	28.0	8.0
Waimanalo	20.8	6.0	Waimea	32.4	4.4
Waimanalo, via Pali.....	12.0		Kahuku Ranch	39.4	7.0
			Ewa Church	10.2	
Nuuanu Bridge	1.1		Waipio (Brown's)	11.2	1.0
Mausoleum	1.5	0.4	Hoaeae (Robinson's)	13.5	2.3
Electric Reservoir	2.7	1.2	Barber's Point, L. H.	21.5	8.0
Luakaha	4.3	1.6	Nanakuli	23.5	2.0
Nuuanu Dam	5.0	0.7	Waianae Plantation	29.9	6.4
Pali	6.6	1.6	Kahanahaiki	36.9	7.0
Kaneohe	11.9	5.7	Kaena Point	42.0	5.1
Waiahole	18.9	7.0	Waialua to Kaena Pt.	12.0	
Kualoa	21.9	3.0			

OAHU RAILWAY: DISTANCES FROM HONOLULU DEPOT TO

	Miles.		Miles.
Moanalua	2.76	Waipio	13.58
Puniloa	6.23	Waikele	14.57
Halawa	8.14	Hoaeae	15.23
Aiea	9.37	Ewa Plantation Mill	18.25
Kalauao	10.20	Waianae Station	33.30
Waiau	10.93	Kaena Point	44.50
Pearl City	11.76	Waialua Station	55.80
Waiawa	12.52	Kahuku Plantation	60.50
Wahiawa Station	25.20	Punaluu	80.50

ISLAND OF KAUAI.

NAWILIWILI TO

	Miles. Inter.		Miles. Inter.		
Koloa	11.0	Wailua River	7.7	4.4	
Lawai	13.8	2.8	Kealia	11.9	4.2
Hanapepe	20.0	6.2	Anahola	15.7	3.8
Waimea	27.1	7.1	Kilauea	23.6	7.0
Waiawa	31.5	4.1	Kalihiwai	26.6	3.0
Nuololo	44.8	13.3	Hanalei	31.8	5.2
			Wainiha	34.8	3.0
Hanamaulu	3.3		Nuololo (no road)	47.0	12.2

ISLAND OF MAUI.

Shortest Distances by Main Road, Corrected by Hugh Howell, County Engineer.

KAHULUI TO

	Miles.	Inter.		Miles.	Inter.
Spreckelsville	4.0	..	Paia P. O.	7.2	..
Paia P. O.	7.2	3.2	Makawao Court House.	11.6	4.4
Hamakuapoko Mill	9.2	2.0	Olinda	18.5	6.9
Haiku P. O.	11.0	1.8	Haleakala, edge Crater.	26.6	8.1
Halehaku	17.2	6.2	Haleakala Summit	28.6	2.0
Huelo School	20.2	3.0			
Keanae P. O.	35.5	15.3	Maalaea	10.3	..
Nahiku Landing	49.9	14.4	End of Mountain Road.	15.8	5.5
Ulaino School	49.2	.7	Olowalu	19.9	4.1
Hana P. O.	55.6	6.4	Lahaina Court House.	25.5	5.6
Hamoia	58.2	2.6			
Wailua	62.6	4.4	Waiehu	6.4	..
Kipahulu Mill	66.2	3.6	Waihee	7.3	0.9
Mokulau	71.8	5.6	Kahakuloa	16.3	9.0
Nuu	77.0	5.2	Honokohau	23.0	6.7
			Honolua	27.0	4.0
Wailuku	3.8	..	Napili	29.8	2.8
Waikapu	5.9	2.1	Honokawai	33.5	3.7
Maalaea	10.3	4.4	Lahaina Court House.	39.0	5.5
Kihei	12.6	2.3			
Kalepolepo	13.9	1.3	MAKENA TO		
Ulupalakua	23.6	9.7	Ulupalakua	3.5	..
Kanaio	26.8	3.2	Kamaole	7.3	3.8
Pico's	33.8	7.0	Waiakoa	13.0	5.7
Nuu	40.6	6.8	Makawao P. O.	20.8	7.8
			Makawao Court House.	23.0	2.2

ISLAND OF HAWAII.

NORTH KOHALA.—FOREIGN CHURCH, KOHALA, TO

	Miles.	Inter.		Miles.	Inter.
Hamakua boundary	4.5		Hilo, via Humuula St'n.	54.0	25.0
Kukuihaele Mill	11.0	6.5	Keamuku Sheep St'n.	14.0	
Mana	7.7		Napuu	22.0	8.0
Hanaipoe	15.0	7.3	Keawewai	8.0	
Keanakolu	24.0	9.0	Waika	11.0	3.0
Puakala	34.0	10.0	Kahuwa	13.0	2.0
Laumaia	36.5	2.5	Puuhue	17.0	4.0
Auwaiakewa	12.5		Kohala Court House	22.0	5.0
Humuulu Sheep Station.	29.0	16.5	Mahukona	22.0	
Via Laumaia	47.5		Puako	12.0	

NORTH KOHALA.—FOREIGN CHURCH, KOHALA, TO

	Miles.		Miles.
Edge of Pololu Gulch.	4.00	Union Mill	2.25
Niulii Mill	2.80	Union Mill R. R. Station.	3.25
Halawa Mill	1.65	Honomakau	2.55
Hapuu Landing	2.15	Hind's, Hawi	3.25
Kohala Mill . . . . .	.50	Hawi R. R. Station.	4.25
Kohala Mill Landing.	1.50	Honoipu	7.25
Native Church	1.00	Mahukona	10.50
		Puuhue Ranch	7.25

NORTH KOHALA.—ON MAIN ROAD, MAHUKONA TO

		Miles.	Inter.			Miles.	Inter.
Hind's Mill	.....	7.0		Wight's Corner	.....	11.5	1.1
Union Mill Corner	.....	8.0	1.0	Niulii Corner	.....	12.8	1.3
Court House	.....	9.2	1.2	Pololu Edge of Gulch	.....	14.5	1.7
Bond's Corner	.....	9.7	0.5	Puu Hue	.....	5.0	
Kohala Mill Corner	.....	10.4	0.7				

SOUTH KOHALA.—KAWAIIHAE TO

		Miles.	Inter.			Miles.	Inter.
Puu Ainako	.....	4.4		Mana, Parker's	.....	19.5	
Puuiiki	.....	7.7	3.3	Keawewai	.....	6.0	
Waiaka, Catholic Church	.....	9.5	1.8	Puuhue Ranch	.....	10.0	
Puupelu, Parker's	.....	10.8	1.3	Kohala Court House	.....	15.0	
Waimea Court House	.....	11.8	1.0	Mahukona	.....	11.0	
Waimea Church	.....	12.2	0.4	Napuu	.....	20.0	
Kukuihaele Church	.....	22.1	9.9	Puako	.....	5.0	

KONA, KEALAKEKUA TO

Keauhou	.....	6.0		Kawaihae	.....	42.0	4.6
Holualoa	.....	9.6	3.6	Honaunau	.....	4.0	
Kailua	.....	12.0	2.4	Hookena	.....	7.7	3.7
Kaloko	.....	16.0	4.0	Olelomoana	.....	15.2	7.5
Makalawena	.....	19.6	3.6	Hoopuloa	.....	21.6	6.4
Kiholo	.....	27.6	8.0	Boundary of Kau	.....	24.8	3.2
Ke Au a Lono bound'ry	.....	31.6	4.0	Flow of '87	.....	32.0	7.2
Puako	.....	37.4	5.8	Kahuku Ranch	.....	36.5	4.5

KAU.—VOLCANO HOUSE TO

Half-way House	.....	13.0		Honuapo	.....	32.6	5.0
Kapapala	.....	18.0	5.0	Naalehu	.....	35.6	3.0
Pahala	.....	23.0	5.0	Waiohinu	.....	37.1	1.5
Punaluu	.....	27.6	4.6	Kahuku Ranch	.....	43.1	6.0

PUNA.—HILO COURT HOUSE TO

(By new road.)

		Miles.			Miles.
Keaau, Forks of Road	.....	9.0	Kaimu	.....	32.0
Pahoa	.....	20.0	Kalapana	.....	33.0
Pohoiki	.....	28.0	Keauhou	.....	50.0
Kapoho (Lyman's)	.....	32.0	Panau	.....	40.0
Opihikao	.....	31.0	Volcano House via Panau	.....	56.0
Kamaili	.....	26.0	Sand Hills, Naawale, old road	.....	18.5
Kamaili Beach	.....	29.0	Kapoho, old road	.....	22.0

TO VOLCANO.—HILO TO

Shipman's	.....	1.7	Mountain View	.....	16.3
Edge of Woods	.....	4.1	Mason's	.....	17.5
Cocoonut Grove	.....	8.0	Hitchcock's	.....	23.5
Branch Road to Puna	.....	9.0	Cattle Pen	.....	24.7
Furneau's	.....	13.2	Volcano House	.....	31.0

THROUGH HILO DISTRICT TO

Honolii Bridge	.....	2.5	Honohina Church	.....	17.8
Papaikou Office	.....	4.7	Waikaumalo Bridge	.....	18.8
Onomea Church	.....	6.9	Pohakupuka Bridge	.....	21.0
Kaupakuea Cross Road	.....	10.7	Maulua Gulch	.....	22.0
Kolekole Bridge	.....	14.3	Kaiwilahilahi Bridge	.....	24.0
Hakalau, east edge gulch	.....	15.0	Lydgate's House	.....	26.1
Umauma Bridge	.....	16.0	Laupahoehoe Church	.....	26.7

THROUGH HAMAKUA.—LAUPAHOEHOE CHURCH TO

Miles.	Miles.
Bottom Kawalii Gulch..... 2.0	Kuaikalua Gulch .....22.0
Ookala, Manager's House..... 4.0	Kapulena Church .....23.9
Kealakaha Gulch 6.0	Waipanihua24.3
Kukaiiau Gulch 8.0	Stream at Kukuihaele.....26.0
Horner's 8.5	Edge Waipio .....26.5
Catholic Church, Kainehe..... 9.0	Bottom Waipio .....27.0
Notley's, Paauilo .....10.5	Waimanu (approximate) .....32.5
Kaumoalii Bridge .....12.5	Kukuihaele to Waimea (approximate)10.5
Bottom Kalopa Gulch.....14.0	Gov't. Road to Hamakua Mill.... 1.5
Wm. Horner's, Paauhau.....15.2	Gov't. Road to Paauhau Mill.... 1.0
Paauhau Church .....16.3	Gov't. Road to Pacific Sugar Mill, Kukuihaele 0.7
Holmes' Store, Honokaa.....18.0	
Honokaia Church .....20.5	

ISLAND OF MOLOKAI.

KAUNAKAKAI TO

Meyer's, Kalae 5.0	Pukoo15.0
Kalaupapa 9.0	Halawa25.0
Kamalo 9.0	Ka Lae o ka Laau.....19.0
Kaluahā13.5	

TABLE OF ELEVATIONS OF PRINCIPAL LOCALITIES THROUGHOUT THE ISLANDS.

(From Government Survey Records; Measurements from mean Sea Level.)

OAHU PEAKS.

Feet.	Feet.
Kaala, Waianae Range.....4030	Kaimuki Hill 291
Palikeya, Waianae Range.....3111	Koko Head, higher crater.....1205
Konahuanui Peak, S. of Pali...3105	Koko Head, lower crater..... 644
Lanihuli Peak, N. of Pali.....2781	Makapuu, east point of island... 665
Tantalus or Puu Ohia.....2013	Mokapu, crater off Kaneohe.... 681
Awawaloa (Olympus), Manoa...2447	Olomana, sharp peak, Kailua....1645
Round Top or Ualakaa.....1049	Maelieli, sharp peak, Heeia.... 715
Punchbowl Hill or Puowaina... 498	Ohulehule, sharp peak, Hakipuu.2263
Diamond Head or Leahi..... 761	Koolau Range, above Wahiawa.2381

LOCALITIES NEAR HONOLULU.

Nuuanu Road, cor. School St... 40	Nuuanu Road, Queen Emma's.. 358
“ “ second bridge... 77	“ “ cor. above Elec- tric Light Works..... 429
“ “ cor. Judd St.... 137	Nuuanu Road, large bridge.... 735
“ “ Cemetery gate... 162	“ “ Luakaha gate.... 848
“ “ Mau's'l'm gate... 206	“ “ Pali, old station.1214
“ “ Schaefer's gate... 238	

MOLOKAI, ETC.

Kamakou Peak .....4958	Kaolewa Pali, o'vlkng. Settlmnt.2100
Oloku Peak .....4600	Meyer's, Kalae .....1485
Kaunuoehua4535	Mauna Loa, near Kaunakakai..1382
Kalapamoa4004	Kualapuu Hill .....1018
Puu Kolekole .....3951	Kahoolawe (Moaula Hill).....1472
Kaulahuki3749	Molokini 160
Kaapahu Station .....3563	Lanai3400

HAWAII.

	Feet.		Feet.
Mauna Kea	13,825	Hiilawe Falls	1700
Mauna Loa	13,675	Parker's, Mana	3505
Hualalai	8275	Honokaa Store	1100
Kohala Mountains	5489	Kaluamakani, Hamakua	7584
Kilauea Vol. House, by leveling	3971	Lower edge forest, Hamakua ..	1700
Kulani, near Kilauea.....	5574	Lower edge forest, Hilo.....	1200
Kalaihea	6660	Laupahoehoe Pali	385
Aahuwela, near Laumaia.....	7747	Kauku Hill	1964
Hitchcock's, Puakala	6325	Puu Alala	762
Ahumo'a	7034	Halai Hill	347
Waimea Court House.....	2669	Puu o Nale, Kohala.....	1797
Waipio Pali, in Mountain.....	3000	B. D. Bond's, Kohala.....	521
Waipio Pali, on S (Road)....	900	Episcopal Church, Kainaliu...	1578
Waipio Pali, on N. side.....	1394	Puu Enuhe, Kau.....	2327
Waimanu, at sea.....	1600	Puu Hoomaha, Kau.....	6636
Waimanu, in mountain.....	4000	Puu ka Pele, Kau.....	5768
Waiuu Lake, Mauna Kea.....	13,041	Pohaku Hanalei, Kau.....	12,310
Poliahu, Mauna Kea.....	13,646	Kapoho Hill, Puna.....	432
Kalaieha, N. Hilo.....	6738	Kaliu Hill, Puna.....	1065
Pohaku Hanalei, Humuula.....	7343	Olaa Trig. Station.....	622

MAUI.

Haleakala (Red Hill).....	10,032	Puu Kapuai, Hamakua.....	1150
Mt. Kukui, West Maui.....	5790	Puu o Umi, Haiku.....	629
Piiholo, Makawao	2256	Puu Pane, Kula.....	2568
Puu Olai (Miller's Hill).....	355	Lahainaluna Seminary	600
Puu Io, near Ulupalakua.....	2841	Kauiki, Hana	392
Ulupalakua, about	1800	"Sunnyside" Makawao	930
Olinda, Makawao	4043	Paia Foreign Church, about. .	857
Puu Pane, Kahikinui.....	3988	Eka, crater in Waihee.....	4500
Puu Nianiau, Makawao.....	6850	Keakaamanu, Hana	1250

KAUAI

Hauptu	2030	Mt. Waialeale, central peak... 5170	
Kilohana, about	1100	Namolokama	4200

NOTE—A large number of approximate elevations of stations where rain records are kept may be found in the Rain Tables in this Annual.

Area, Elevation and Population of the Hawaiian Islands.

(As revised by latest Government Survey Records.)

Islands.	Area in Statute Square Miles.	Acres.	Height in Feet.	Population in 1900.
Hawaii.....	4,015	2,570,000	13,825	46,843
Maui.....	728	466,000	10,032	24,797
Oahu.....	598	384,000	4,030	58,504
Kauai.....	547	348,000	5,250	20,562
Molokai.....	261	167,000	4,958	2,504
Lanai.....	139	86,000	3,400	610
Niihau.....	97	62,000	1,300	172
Kahoolawe.....	69	44,000	1,472	.....

Total area of Hawaiian Islands, 6,449 miles.

The outlying islets on the N. W. may amount to 6 square miles.

KILAUEA, ISLAND OF HAWAII.

Corrected for Deflection of the Vertical.

Area, 4.14 square miles, or 2,650 acres.
 Circumference, 41,500 feet, or 7.85 miles.
 Extreme width, 10,300 feet, or 1.95 miles.
 Extreme Length, 15,500 feet, or 2.93 miles.
 Elevation, Volcano House, 4,000 feet.

MOKUAWEOWEO.

The Summit Crater of Mauna Loa, Island of Hawaii.

Area, 3.70 square miles, or 2,370 acres.
 Circumference, 50,000 feet, or 9.47 miles.
 Length, 19,500 feet, or 3.7 miles.
 Width, 9,200 feet, or 1.74 miles. Elevation of summit, 13,675 feet.

HALEAKALA, MAUI.

The great Crater of Maui, the largest in the world.

Area, 19 square miles, or 12,160 acres.
 Circumference, 105,600 feet, or 20 miles.
 Extreme Length, 39,500 feet, or 7.48 miles.
 Extreme width, 12,500 feet, or 2.37 miles.
 Elevation to summit, 10,032 feet.
 Elevation of principal cones in crater, 8,032 and 1,572 feet.
 Elevation of cave in floor of crater, 7,380 feet.

IAO VALLEY, MAUI.

Length (from Wailuku), about 5 miles.
 Width of Valley, 2 miles.
 Depth, near head, 4,000 feet.
 Elevation of Puu Kukui, above head of Valley, 5,700 feet.
 Elevation of Crater of Eke, above Waihee Valley, 4,500 feet.

Standard and Local Time.

The Standard Time of the Hawaiian Islands is that of Longitude $157^{\circ} 30'$ W., 10 h. 30 m. slower than Greenwich Time. The time of sunrise and sunset given in the tables is of course local time; to correct this to standard time, add or subtract a correction corresponding with the differences between $157^{\circ} 30'$ and the longitude of the station.

The corrections would be for the following stations:

Niihau	+10:8 m	Wailuku, Maui	— 4:0 m
Mana, Kauai	+ 9:0 m	Haiku, Maui	— 4:8 m
Koloa, Kauai	+ 7:9 m	Hana, Maui	— 6:0 m
Kilauea, Kauai	+ 7:3 m	Kailua, Hawaii	— 6:2 m
Waialua, Oahu	+ 2:5 m	Kohala, Hawaii	— 7:0 m
Kahuku, Oahu	+ 2:0 m	Kukuihaele, Hawaii	— 8:0 m
Honolulu, Oahu	+ 1:5 m	Punaluu, Hawaii	— 8:0 m
Kalae, Molokai	— 2:0 m	Ookala, Hawaii	— 9:0 m
Lanai	— 2:5 m	Hilo, Hawaii	— 9:8 m
Lahaina, Maui	— 3:0 m		

School Statistics, Territory of Hawaii.

From Report of the Superintendent of Public Instruction,
NUMBER OF SCHOOLS, CLASS, ETC.

ISLANDS	PUBLIC SCHOOLS June 30, 1910.					PRIVATE SCHOOLS Dec. 31, 1909.		
	No. of Schools	No. of Teachers	No. of Pupils			No. of Schools	No. of Teachers	No. of Pupils
			Boys	Girls	Total			
Hawaii	59	158	3,496	2,868	6,364	8	29	785
Oahu	35	184	4,109	3,364	7,473	30	189	3,526
Maui, Molokai....	41	87	1,817	1,479	3,296	14	43	1,195
Kauai	17	57	1,515	1,261	2,776	3	5	122
Totals	152	486	10,937	8,972	19,909	55	266	5,628

NUMBER OF SCHOOLS, TEACHERS AND PUPILS.

CLASS	Schools	TEACHERS			PUPILS		
		M.	F.	Total	M.	F.	Total
Public Schools.....	152	106	380	486	10,937	8,972	19,909
Private "	55	68	198	266	2,959	2,669	5,628
Totals	207	174	578	752	13,896	11,641	25,537

AGES OF PUPILS IN PUBLIC AND PRIVATE SCHOOLS.

SCHOOLS	Under 6	6-15	Over 15	Total
Public Schools.....	111	19,166	632	19,909
Private "	847	3,906	875	5,628
Total	958	23,072	1,507	25,537

NATIONALITY OF PUPILS.

	Public	Private		Public	Private
Hawaiians.....	3,569	812	Chinese.....	2,148	707
Part Hawaiians....	2,615	1,227	Japanese	6,363	715
Americans	424	649	Porto Ricans.....	309	63
English.....	84	79	Korean.....	160	100
Germans	155	111	Other Foreigners..	508	74
Portuguese	3,571	1,091	Total.....	19,909	5,628

The nationality of teachers in all schools of the Islands, 1909-10, was as follows: Hawaiian, 90; Part Hawaiian, 158; American, 354; English, 49; Germans, 12; Portuguese, 42; Chinese, 22; Japanese, 5; Korean, 3; other Foreigners, 17; Total, 752.

Census Returns, Hawaiian Islands, 1910.

Preliminary report, compared with 1900.

Race.	1900	1910	Increase	Decrease
Hawaiians.....	29,787	26,090	.....	3,688
Part-Hawaiians.....	7,848	12,485	4,637	.....
Portuguese.....	15,675	22,294	6,619	.....
Spanish.....	202	1,962	1,760	.....
Porto Ricans.....	.....	4,828	4,828	.....
Other Caucasians.....	10,577	14,684	4,107	.....
Chinese.....	25,762	21,698	.....	4,064
Japanese.....	61,115	79,663	18,548	.....
All others.....	3,035	8,196	4,161	.....
Total.....	154,001	191,909	44,660	7,752
Net Increase.....			36,908	.....

Vital Statistics. Territory of Hawaii, 1910.

For Fiscal Year ending June, compiled from Board of Health Report.
Table of Births, Marriages and Deaths by Counties.

ISLANDS, ETC.	Births	Marriages	Deaths
Honolulu.....	1,116	1,273	1,030
Other Districts of Oahu County.....	651	80	298
Hawaii County.....	1,221	329	865
Mauï County.....	698	149	392
Kalawao County.....	16	17	93
Kauai County.....	600	111	263
Total, 1909-10.....	4,302	1,959	2,941
“ 1908-09.....	4,941	1,648	2,851
“ 1907-08.....	4,593	2,214	2,760
“ 1906-07.....	2,848	1,680	3,022

Table of Births and Deaths by Nationalities and Counties.

NATIONALITY	Honolulu		Other dist. Oahu		Hawaii		Mauï		Kalawao		Kauai		TOTAL	
	Births	Deaths	Births	Deaths	Births	Deaths	Births	Deaths	Births	Deaths	Births	Deaths	Births	Deaths
American....	87	58	6	3	25	8	17	4	1	7	1	142	75	
British.....	17	14	2	.....	6	7	3	2	.....	1	1	29	24	
Chinese.....	233	129	42	25	79	29	65	20	1	6	36	26	456	235
German.....	13	10	3	2	3	4	3	1	.....	1	7	5	29	23
Hawaiian....	210	404	57	83	145	236	158	151	13	79	56	52	639	1,005
Part Haw'n	95	73	26	13	31	34	33	21	2	3	8	1	195	145
Japanese....	345	201	385	128	509	351	236	144	.....	.....	309	121	1,784	945
Portuguese	84	85	86	28	267	104	146	34	.....	2	98	21	681	274
Porto Rican	7	6	27	6	99	57	25	5	.....	.....	43	12	201	86
Spanish.....	8	5	12	2	40	14	4	1	.....	.....	19	6	83	28
Others.....	17	45	5	8	17	21	8	9	.....	1	16	17	63	101
Total.....	1,116	1,030	651	298	1,221	865	698	392	16	93	600	263	4,302	2,941

Import Values from United States for fiscal year ending June, 1910.

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

Articles.	Domestic Mdse.	Foreign Dutiable	Mdse. Free
Agricultural Implements.....	\$ 30,816		
Aluminum.....	8,341		
Animals.....	190,502		
Art Works.....	15,534		
Automobiles, and parts of.....	745,498	\$ 44	
Books, Maps, Engravings, etc.....	251,856		
Brass, and manufactures of.....	68,125		
Breadstuffs	1,904,793	357	\$ 34
Bricks	15,850		
Brooms and Brushes.....	29,185		
Candles	9,919		
Carriages, Cars, etc., and parts of....	193,075		
Cement	200,337	2,063	
Chemicals, Drugs, Dyes, etc.....	332,198	56,139	53,793
Clocks, Watches, and parts of.....	21,817	107	
Coal and Coke.....	168,569		
Cocoa and Chocolate.....	19,271	232	
Coffee, prepared.....	18,553		1,242
Copper, and manufactures of.....	89,973		
Cork, manufactures of.....	3,274	52	
Cotton, manufactures of.....	1,766,363	16,664	
Earthen, Stone and Chinaware.....	49,997	5,776	
Eggs	25,170		
Explosives	259,229	20	
Fertilizers	958,930		26,543
Fibers, Textile Grasses, man. of....	95,866	2,059	1,245
Fish	349,901	4,544	3,999
Fruits and Nuts.....	240,861	1,081	
Furniture and Metal.....	28,575		
Glass and Glassware.....	175,430	413	
Grease and Soap Stock.....	11,743		
Hair and manufactures of.....	5,821		
Hay	191,118		
India Rubber, manufactures of.....	227,795	14	
Instruments, etc., for scientific pur... Phonographs, etc.....	269,342 45,783		
Iron and Steel and manufactures of... Sheets and Plates, etc..... Builders' Hardware, etc..... Machinery, Machines, parts of... Nails, Spikes, Pipes, etc.....	323,614 441,770 205,396 994,699 1,264,490	982	
Jewelry & man'ftrs., Gold and Silver... Lamps, Chandeliers, etc.....	56,555 34,803	4	
Lead and manufactures of.....	35,681		
Leather and manufactures of.....	467,525		
Malt.....	13,988		
Marble, Stone and manufactures of..	9,503	413	

Import Values from United States for 1910—Continued.

Articles.	Domestic Mdse.	Foreign Mdse.	
		Dutiable	Free
Motor Boats.....	\$ 8,250		
Musical Instruments.....	50,020	\$ 62	
Naval Stores.....	16,823		
Nursery Stock.....	2,190		
Oil Cloth.....	17,335		
Oils; Animal, etc.....	1,945		
Mineral, Crude.....	1,022,945		
Refined, etc.....	524,234		
Vegetable.....	48,927	1,056	\$ 9,644
Paints, Pigments and Colors.....	187,990	31	
Paper and manufactures of.....	259,973	277	
Perfumery, etc.....	19,597		
Photographic Goods.....	190,823		
Plated Ware.....	39,499		
Provisions, etc., Beef Products.....	70,143		
Hog and other Meat Products...	374,642	374	
Dairy Products.....	403,833	491	
Rice.....	2,600	38	
Salt.....	7,873		
Seeds.....	9,784	510	
Silk and manufactures of.....	78,023	381	
Soap; Toilet and other.....	137,695		
Spices.....		10	66
Spirits, etc., Malt Liquors.....	110,667	1,191	
Spirits, distilled.....	122,484	21,458	
Wines.....	331,887	17,860	
Starch.....	15,712		
Straw and Palm Leaf, man. of.....	30,994	337	
Sugar, Molasses and Syrup.....	40,658	337	
Confectionery.....	55,514		
Tea.....			15,698
Tin and manufactures of.....	24,342		
Tobacco, manufactures of.....	659,661	4,316	593
Toys.....	36,789	60	
Trunks, Valises, etc.....	46,142		
Varnish.....	10,396		
Vegetables.....	233,506	1,814	
Wood and manufactures of.....		243	
Logs and round timber.....	15,688		
Lumber, Shingles, etc.....	1,083,154		
Doors, Sash, Blinds and all other..	144,886		
Furniture, n. e. s.....	174,900		
Wool, manufactures of.....	265,279	4,686	
Zinc and manufactures of.....	4,230		
All other articles.....	533,550	9,560	
Total.....	\$20,289,017	\$ 158,227	\$ 112,857

**Value Domestic Mdse. shipments to the United States from
Hawaii for fiscal years ending June 30, 1909, and 1910.**

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

Articles.	1909	1910
Animals.....	\$ 1,572	\$ 1,530
Art Works, Paintings, etc.....	11,520	6,737
Books and printed matter.....	10,717	13,727
Brass and manufactures of.....	2,991	8,091
Breadstuffs.....	7,144	4,558
Carriages, etc., and parts of.....	53,860	116,774
Chemicals, drugs, etc.....	2,748	6,254
Coffee.....	211,668	288,507
Copper and manufactures of.....	2,241	2,416
Cotton and manufactures of.....	15,087	13,718
Earthenware, etc.....	3,149	1,570
Fibers and textiles.....	7,695	11,790
Fish.....	2,129	1,257
Fruits and nuts.....	1,446,792	1,775,050
Glass and glasware.....	7,116	8,242
Hides and skins.....	144,837	139,105
Honey.....	50,412	.....
India Rubber, manufactures of.....	3,746	7,938
Instruments for science purposes, etc.....	6,341	9,906
Iron, steel and manufactures of—Scrap and old..	8,307	16,498
Machinery and parts of.....	17,614	19,734
All other manufactures of iron, etc.....	82,473	159,274
Jewelry.....	29,695	38,466
Leather and manufactures of.....	17,782	11,021
Marble and stone.....	256	357
Meat and dairy products.....	7,382	5,276
Molasses and syrup.....	79	7
Musical instruments and parts.....	2,871	3,367
Oils, paints, varnish, etc.....	763	6,548
Paper and manufactures of.....	1,142	2,462
Photographic goods.....	.....	105,985
Rice.....	255,312	269,157
Silk, manufactures of.....	6,599	6,515
Spirits, Wines, etc.....	753	3,078
Straw and palm leaf, manufactures of.....	1,208	6,798
Sugar, brown.....	35,487,912	40,579,141
Sugar, refined.....	2,144,830	2,045,921
Tobacco leaf and manufactures of.....	478	6,939
Unmanufactured.....	4,241	15,644
Toys.....	342	813
Vegetables.....	10,071	9,207
Wood and manufactures of.....	102,435	203,649
Wool, raw.....	52,448	56,425
Wool, manufactures of.....	7,734	10,084
All other articles.....	164,548	161,722
Total shipments domestic merchandise.....	\$40,399,040	\$46,161,288
Total shipments foreign merchandise.....	37,905	21,977
Total to United States.....	\$40,436,945	\$46,183,265

Hawaii's Commerce with U. S. and Foreign Countries.

Total Import and Export Values for 1909 and 1910.

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

Countries.	Imports.		Exports.	
	1909	1910	1909	1910
Austria-Hungary.....	\$ 18	\$ 14	.....	.....
Belgium.....	7,142	22,588	.....	.....
Canada.....	17,467	18,675	\$ 35,383	\$ 19,136
Great Britain.....	303,089	455,730	2,583	1,355
Germany.....	272,243	312,740	3,794	19,093
France.....	14,392	23,029	25	80
Italy.....	3,530	2,907	.....	.....
Netherlands.....	9,658	36,364	.....	.....
Norway.....	443	386	.....	.....
Portugal.....	152	1,229	.....	.....
Spain.....	886	.....	.....	.....
Sweden.....	2,377	2,903	.....	.....
Peru.....	.....	.....	5,135	2,001
Chile.....	385,104	569,139	.....	.....
China.....	14,619	17,315	.....	59
East Indies.....	605,542	525,026	.....	48
Hong Kong.....	279,749	281,231	2,934	4,769
Japan.....	1,722,796	1,856,376	15,011	220,119
Australasia.....	327,043	279,129	7,194	16,434
Oceania.....	63,514	110,627	5,861	4,996
Korea.....	.....	631	.....	.....
Philippines.....	2,737	89,238	4,332	18,648
United States*.....	17,713,118	20,560,101	40,436,945	46,183,265
All other.....	1,073	1,057	1,900	5
Total.....	\$21,746,692	\$25,166,435	\$40,521,097	\$46,490,028

* Not including coin shipments.

Exports and Imports for fiscal year ending June 30, 1910.

Exports—Domestic produce to United States.....	\$46,161,288
Foreign produce to United States.....	21,977
Coin shipments to United States.....	539,603
Domestic produce to Foreign Countries.....	300,032
Foreign produce to Foreign Countries.....	6,731
Total export value.....	\$47,029,631
Imports—Domestic produce from United States.....	\$20,289,917
Foreign produce from United States.....	271,084
Coin shipments from United States.....	986,000
Produce from Foreign Countries.....	4,606,334
Total import value.....	\$26,152,435

Comparative Table Principal Domestic Exports. Quantity and Value for Fiscal Years 1909 and 1910.

Products.	1909		1910	
	Quantity, lbs.	Value	Quantity, lbs.	Value
Sugar—Raw to U. S.....	983,090,128	\$35,487,912	1,073,352,175	\$40,579,141
" Foreign....	400	16	6,180	234
Refined to U. S....	39,773,800	2,144,830	37,242,300	2,045,921
" Foreign.....	.....	.....	4,200	178
Coffee to U. S.....	1,753,907	211,668	2,350,786	288,423
" Foreign.....	209,316	26,589	250,660	41,805
Rice to U. S.....	834,085	255,312	5,859,331	269,157
" Foreign.....	2,400	108	4,200	133
Fruits and Nuts to U. S.....	.....	1,446,792	.....	1,775,050
" Foreign.....	.....	10,812	.....	18,951
Honey to U. S.....	.....	50,412	.....	32,703
" Foreign.....	.....	3,441	.....	6,162
Hides to U. S.....	1,444,120	144,837	1,334,921	139,105
Wool to U. S.....	336,936	52,448	342,757	56,425
All other to U. S.....	.....	589,863	.....	975,747
" Foreign.....	.....	41,125	.....	228,569
Foreign products transhipped to U. S.....	.....	37,905	.....	21,977
" Foreign.....	.....	5,122	.....	6,731
Total.....	.....	\$40,479,192	.....	\$46,486,412

Comparative Table Importations from Japan, 1906-1910.

Courtesy of Dr. A. Marques.

	1906-7.	1907-8.	1908-9.	1909-10
Saki and wines.....	\$ 212,872	\$ 228,344	\$ 135,647	\$ 137,677
Rice and flour.....	541,686	744,898	717,064	709,673
Vegetables.....	103,137	111,589	99,315	129,111
Sauces (soy).....	130,065	145,339	141,497	116,605
Cotton wares.....	68,509	83,629	76,382	98,519
Fish.....	106,957	128,174	123,029	145,040
Breadstuffs.....	25,263	32,892	22,089	39,622
Woodwork.....	37,255	44,985	38,173	46,502
Silks.....	55,244	71,859	57,037	72,460
Tea.....	18,158	21,524	25,363	18,702
Coal.....	38,275	49,907	59,400	56,069
All others.....	220,020	211,530	227,800	286,384
Total.....	\$1,557,441	\$1,874,670	\$1,722,796	\$1,856,376

Quantity and Value of Principal Articles of Domestic Produce Shipped to U. S. for the fiscal year ending June 30, 1910.

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

Articles		Quantity	Value
Sugar, raw	pounds.....	1,073,352,166	\$ 40,579,141
Sugar, refined	"	37,242,300	2,045,921
Coffee, raw	"	2,350,586	288,423
Rice	"	5,859,331	269,157
Fibers .....	.....	.....	2,709
Fruits, green .....	.....	.....	215,696
canned .....	.....	.....	1,548,950
all other .....	.....	.....	8,283
Tobacco, unmnfrd.....	pounds.....	18,402	15,644
Hides and skins.....	"	1,334,921	139,105
Wool, raw	"	342,757	56,425
Timber, lumber & unmnfrd wood..	.....	.....	143,097

United States Points of Hawaiian Supplies and Value.

Fiscal Years 1909-1910, Compared.

Customs Districts.	1909	1910
Baltimore.....	12,748	24,583
Newport News.....	33,849	88,098
New York.....	3,069,082	3,523,720
Norfolk and Portsmouth.....	.....	46,712
Humboldt.....	55,865	67,798
Los Angeles.....	338,268	309,166
Puget Sound.....	2,436,371	2,494,834
San Diego.....	250	1,552
San Francisco.....	11,235,433	13,708,998
Willamette.....	6,500	23,545
Southern Oregon.....	4,708	.....
Other.....	145	11

Public Improvement Expenditures, 1900 to 1909.

Since April, 1900, the following sums have been expended under this head.

Public Buildings	\$ 260,546.70
School Buildings	568,835.98
Water Works	781,261.13
Sewers	454,756.96
Roads and Bridges.....	613,416.64
Wharves and Landings.....	647,764.69
Dredging	49,631.91
Total ..	\$3,376,214.01

Table Showing Percentage of Sugar in Cane as Extracted in Various Countries.

Compiled by Dr. A. Marques.

Countries.	Percentage of sugar in the cane.	Purity %	Percentage of sugar extracted.	Pounds of sugar from the ton of cane.
<i>Hawaii—</i>				
Average of seven plantations.....	14.79	84.88	12.88	257.60
Exceptional maxima.....	15.73	90.35	14.01	280.20
<i>Cuba</i>				
Average of 14 plantations.....	13.94	84.16	10.86	217.20
Exceptional maxima.....	16.28	91.25	12.45	249.00
<i>Java—</i>				
According to years. { from.....	12.30	83.04	9.78	199.60
{ to.....	13.11	84.69	10.77	215.40
<i>Mauritius</i>				
Average of 12 plantations { from..	13.10	....	10.04	....
{ to.....	14.03	....	11.58	....
<i>Antigoa</i> (1908).....	14.31	....	10.90	218.00
<i>Queensland</i> .....	....	....	10.50	210.00

The figures for Hawaii are those used by the Congressional Committee during the discussion of the new Tariff.

Exports of Sugar Bags (Jute) from India, 1908.

To United States.....	45,031,000	To Great Britain	37,810,000
“ Hawaii	8,451,000	“ Australia	36,258,000
“ Natal	26,887,000	“ Malaysia	20,420,000
“ Saigon	15,949,000	“ Philippines	10,700,000
“ Mauritius	2,779,000	“ Various other.....	82,048,510
“ Java	6,696,000		
		Total Number.....	293,029,510

Arrivals and Departures of Aliens, Honolulu and Foreign Ports, for Fiscal Year Ending June 30, 1910.

Nationality.	Arrivals.	Departures.
Japanese.....	1,526	2,355
Chinese.....	311	791
Korean.....	7	117
Spanish.....	3	1
Portuguese.....	870	2
English.....	189	131
East Indian.....	228	1
Irish.....	36	7
Scotch.....	71	28
German.....	76	19
Greek.....	3	..
Russian.....	1,728	16
All other.....	57	27
Total.....	5,105	3,495

Hawaiian Sugar Plantation Statistics.

Year	Sugar.		Molasses.		Total export Value.
	Pounds	Value.	Gallons.	Value.	
1875.....	25,080,182	\$ 1,216,388.82	93,722	\$ 12,183.85	\$ 1,228,572.68
1876.....	26,072,429	1,272,334.53	130,073	19,510.95	1,291,845.48
1877.....	25,575,965	1,777,529.57	151,462	22,719.30	1,800,248.87
1878.....	38,431,458	2,701,731.50	93,136	12,107.68	2,713,839.18
1879.....	49,020,972	3,109,566.65	87,475	9,622.52	3,119,185.91
1880.....	63,584,871	4,322,711.48	198,355	29,753.52	4,352,464.73
1881.....	93,789,483	5,395,399.54	263,587	31,630.44	5,427,020.98
1882.....	114,177,938	6,320,890.55	221,293	33,193.95	6,354,084.60
1883.....	114,107,155	7,112,981.12	193,997	34,819.46	7,147,800.58
1884.....	142,654,923	7,328,896.67	110,530	16,579.57	7,345,476.17
1885.....	171,350,314	8,356,061.94	57,941	7,050.00	8,363,111.94
1886.....	216,223,615	9,775,132.12	113,137	14,501.76	9,789,633.88
1887.....	212,763,647	8,694,964.07	71,222	10,522.76	8,705,486.83
1888.....	235,888,346	10,818,883.09	47,965	5,900.40	10,824,783.49
1889.....	242,165,835	13,089,302.10	54,612	6,185.10	13,095,487.20
1890.....	259,789,462	12,159,585.01	74,926	7,663.23	12,167,188.30
1891.....	274,983,580	9,550,537.80	55,845	4,721.40	6,555,258.20
1892.....	263,636,715	7,276,549.24	47,988	5,061.07	7,281,610.34
1893.....	330,822,879	10,200,958.37	67,282	5,928.96	10,206,887.33
1894.....	306,684,993	8,473,009.10	72,979	6,050.11	8,479,059.21
1895.....	294,784,819	7,975,590.41	44,970	3,037.83	7,978,628.24
1896.....	443,569,282	14,932,172.82	15,885	1,209.72	14,933,382.54
1897.....	520,158,232	15,390,422.13	33,770	2,892.72	15,393,314.85
1898.....	444,963,036	16,614,622.53	14,537	919.18	16,615,541.71
1899.....	545,370,537	21,898,190.97	11,455	358.55	21,898,549.52
1900*.....	344,531,173	13,919,400.21	120	10.00	13,919,410.21
1901.....	690,882,132	27,094,155.00	93,820	4,615.00	27,098,770.00
1902.....	720,553,357	23,920,113.00	48,036	2,187.00	23,922,300.00
1903.....	774,825,420	25,310,684.00	10	1.00	25,310,685.00
1904.....	736,491,992	24,359,385.00	11,187	712.00	24,360,097.00
1905.....	832,721,937	35,112,148.00	26,777	1,282.00	35,113,430.00
1906.....	746,602,637	24,495,427.00	3,180	177.00	24,495,604.00
1907.....	822,014,811	27,692,997.00	6,917	355.00	27,693,352.00
1908.....	1,077,570,637	39,816,062.00	23	20.00	39,816,082.00
1909.....	1,022,863,927	37,632,742.00	728	79.00	37,632,821.00
1910.....	1,111,594,466	42,625,062.00	100	7.00	42,625,069.00

* Five and one-half months to June 14. Fiscal year thereafter ending June 30.

Nationality of Plantation Labor, December 31, 1908 and 1909.

[Courtesy Bureau of Labor and Statistics, Hawaiian Sugar Planters' Ass'n.]

	1908	1909	1908	1909
Americans	570	604	Japanese	31,207
Spanish	685	535	Chinese	2,942
Portuguese	3,620	3,663	Koreans	1,743
Other Europeans....	370	380	Others	214
Hawaiians	1,080	1,153		
Porto Ricans.....	1,917	1,953	Total	44,348
				41,748

Hawaii's Annual Trade Balance, etc., from 1880.

Year.	Imports.	Exports.	Excess export Values.	Custom house Receipts.
1880.....	\$ 3,673,268.41	\$ 4,968,444.87	\$ 1,295,176.46	\$ 402,181.63
1881.....	4,547,978.64	6,885,436.56	2,337,457.92	523,192.01
1882.....	4,974,510.01	8,299,019.70	3,324,506.69	505,390.98
1883.....	5,624,240.09	8,133,343.88	2,509,103.79	577,332.87
1884.....	4,637,514.22	8,856,610.30	4,219,096.08	551,736.59
1885.....	3,830,544.58	9,158,818.01	5,328,273.43	502,337.38
1886.....	4,877,738.73	10,565,885.58	5,688,146.85	580,444.04
1887.....	4,943,840.72	9,707,047.33	4,763,206.61	595,002.64
1888.....	4,540,887.46	17,707,598.76	7,166,711.30	546,142.63
1889.....	5,438,790.63	13,874,341.40	8,435,560.77	550,010.16
1890.....	6,962,201.13	13,142,820.48	6,180,628.35	695,956.91
1891.....	7,439,482.65	10,258,788.27	2,819,305.62	732,594.93
1892.....	4,028,295.31	8,060,087.21	4,031,791.90	494,385.10
1893.....	4,363,177.58	10,818,158.09	6,454,980.51	545,754.16
1894.....	5,104,481.43	9,140,794.56	4,036,313.13	522,855.41
1895.....	5,339,785.04	8,474,138.15	3,134,353.11	547,149.04
1896.....	6,063,652.41	15,515,230.13	9,451,577.72	656,895.82
1897.....	7,682,628.09	16,021,775.19	8,339,147.10	708,493.05
1898.....	10,368,815.09	17,346,744.79	6,977,929.70	896,675.70
1899.....	16,069,576.96	22,628,741.82	6,559,164.86	1,295,628.95
1900*.....	10,231,197.58	14,404,496.16	4,173,298.58	597,897.14
1901**.....	24,964,693.43	29,342,697.00	4,378,003.57	1,264,862.78
1902.....	22,036,583.00	24,793,735.00	2,757,152.00	1,327,518.23
1903.....	13,982,485.00	26,275,438.00	12,292,953.00	1,193,677.83
1904.....	15,784,691.00	25,204,875.00	9,420,184.00	1,229,338.15
1905.....	14,718,483.00	36,174,526.00	21,456,043.00	1,043,340.38
1906.....	15,639,874.00	26,994,824.00	11,354,950.00	1,218,764.13
1907.....	18,662,434.00	29,303,695.00	10,641,261.00	1,458,843.48
1908.....	19,757,270.00	42,241,921.00	22,484,651.00	1,550,157.32
1909.....	22,241,041.00	42,281,777.00	20,040,736.00	1,396,379.01
1910.....	26,152,435.00	47,029,631.00	20,877,196.00	1,450,324.63

* Five and one-half months to June 14th. ** Twelve and one-half months to June 30, 1901. Imports from U. S. ports for 1901 estimated at \$22,000,000, and for 1902 at \$19,000,000.

Summary of Insurance Business, Territory of Hawaii, for the year 1909.

From Report of Insurance Commissioner,

Class.	Amount Written	Amount Premiums	Losses and Claims paid
Fire.....	\$25,239,095.86	\$ 489,361.49	\$ 10,259.71
Marine.....	55,824,399.17	283,080.30	8,258.04
Life.....	1,240,055.00	* 498,052.12	464,883.36
Accident, etc.....	.....	19,000.31	2,251.70
Automobile.....	.....	4,563.35	303.59
Surety and Fidelity.....	.....	18,218.54	.....
Liability.....	.....	7,227.24	622.10
Plate Glass.....	.....	1,841.65	154.44
Burglary.....	.....	124.00	.....
Total.....	\$82,103,550.03	\$1,321,469.00	\$486,733.00

* Of this amount \$48,292.84 is new business and \$448,759.28 renewals.

Table of Receipts, Expenditures, and Public Debt of Hawaii, for Biennial Periods up to 1894, then Annually.

(From Official Reports.)

Years.	Revenue.	Expenditures.	Cash Balance in Treasury.	Public Debt.
1856.....	\$ 419,288.16	\$ 424,778.25	\$ 28,096.84	\$ 22,000.00
1858.....	537,223.86	599,879.61	349.24	60,679.15
1860.....	571,041.71	612,410.55	13,127.52	128,777.32
1862.....	528,039.92	606,893.33	507.40	188,671.86
1864.....	538,445.34	511,511.10	22,583.29	166,649.09
1866.....	721,104.30	566,241.02	169,059.34	182,974.60
1868.....	825,498.98	786,617.55	163,576.84	120,815.23
1870.....	834,112.65	930,550.29	61,580.20	126,568.68
1872.....	912,130.74	969,784.14	56,752.41	177,971.29
1874.....	1,136,523.95	1,192,511.79	746.57	355,050.76
1876.....	1,008,956.42	919,356.93	89,599.49	459,187.59
1878.....	1,151,713.45	1,110,471.90	130,841.04	444,800.00
1880.....	1,703,736.88	1,495,697.48	338,880.44	388,900.00
1882.....	2,070,259.94	2,282,599.33	126,541.05	299,200.00
1884.....	3,092,085.42	3,216,406.05	2,220.42	898,800.00
1886.....	3,010,654.61	3,003,700.18	9,174.85	1,065,600.00
1888.....	4,812,575.96	4,712,285.20	109,465.60	1,936,500.00
1890.....	3,632,196.85	3,250,510.35	491,152.10	2,599,502.94
1892.....	3,916,880.72	4,095,891.44	312,141.38	3,217,161.13
1894.....	3,587,204.98	3,715,232.83	184,113.53	3,417,459.87
1894.....	1,972,135.43	1,854,053.08	69,225.76	3,574,030.16
1895.....	2,050,729.41	2,284,179.92	302,676.27	3,764,335.03
1896.....	2,383,070.78	2,137,103.38	315,193.16	3,914,608.35
1897.....	2,659,434.16	2,617,822.89	456,804.43	4,390,146.65
1898.....	2,709,489.12	2,299,937.57	740,280.21	4,457,605.85
1899.....	3,854,231.50	3,038,638.38	1,531,784.29	4,890,351.49
1900.....	2,772,871.87	3,727,926.28	624,471.25	4,226,374.61
1901.....	2,140,297.36	2,576,685.53	287,131.30	939,970.31
1902.....	2,473,172.81	2,382,968.90	77,914.36	1,093,970.31
1903.....	2,387,715.88	2,603,194.20	56,613.29	2,185,000.00
1904.....	2,415,356.33	2,844,054.81	68,592.03	3,317,000.00
1905.....	2,354,783.37	2,240,731.55	59,408.49	3,861,000.00
1906.....	3,320,998.90	2,512,675.89	335,331.37	3,818,000.00
1907.....	2,716,624.00	2,665,845.74	348,216.51	3,718,000.00
1908.....	2,551,522.21	2,508,001.51	391,737.19	3,979,000.00
1909.....	3,051,526.81	2,508,001.51	453,106.76	3,959,000.00
1910.....	3,494,412.57	3,077,829.70	845,218.51	4,079,000.00

Hawaii's Bonded Debt, June 30, 1910.

Fire Claims Bonds issued.....	\$ 235,000
Public Improvement 4½% Bonds, 1903-04.....	1,000,000
Public Improvement 4¼% Bonds, 1904-05.....	1,000,000
Refund Bonds, 1905, 4%.....	600,000
Public Improvement 3½% Bonds.....	1,244,000
Total Bonds Outstanding.....	\$4,079,000

Taxes by Divisions and Counties for Fiscal Year Ending June 30, 1910.

Courtesy of J. H. Fisher, from Auditing Department Report.

Division of Taxes.	Oahu (1st)	Maui (2nd)	Hawaii (3rd)	Kauai (4th)	Total.
Real Estate.....	\$ 328,276.47	\$ 155,844.17	\$ 159,250.48	\$ 66,572.23	\$ 709,943.35
Personal Property.....	395,603.14	103,855.51	136,024.25	84,769.78	720,252.68
Bicycles and Tags.....	1,611.40	95.70	390.50	99.00	2,196.60
Automobiles.....	4,993.35	1,017.00	805.30	1,236.45	8,052.10
Carriages, Carts, Etc.*	12,599.00	4,515.00	8,640.00	4,572.00	30,326.00
Dog and Dog Tags.....	2,769.00	705.00	1,800.70	705.10	5,979.80
Poll.....	17,247.00	8,910.00	15,052.00	8,441.00	49,650.00
Road.....	34,907.00	17,820.00	30,104.00	16,882.00	99,713.00
School.....	34,494.00	17,820.00	30,104.00	16,882.00	99,300.00
Costs † and Penalty.....	9,185.29	2,939.29	3,148.48	940.28	16,213.34
Income.....	360,038.22	46,109.25	18,470.17	12,416.28	437,033.92
Special Income.....	315,304.95	42,647.42	12,532.38	7,209.52	377,694.27
Totals.....	\$1,517,028.82	\$ 402,278.34	\$ 416,322.26	\$ 220,725.64	\$2,556,355.06
Less Road Tax.....	53,962.35	23,439.00	39,904.30	22,780.45	140,086.10
Less Special Income Tax.....	\$1,463,066.47	\$ 378,839.34	\$ 376,417.96	\$ 197,945.19	\$2,416,268.96
Income Tax collected by Oahu for other Counties.	315,304.95	42,647.42	12,532.38	7,209.52	377,694.27
Net Amount Divided.....	\$1,147,761.52	\$ 336,191.92	\$ 363,885.58	\$ 190,735.67	\$2,038,574.69
Share for Counties.....	143,122.40	44,440.95	67,032.60	31,648.85	
Share for Counties.....	\$1,004,639.12	\$ 380,632.87	\$ 430,918.18	\$ 222,384.52	\$2,038,574.69
Share for Counties.....	\$ 502,319.56	\$ 190,316.43	\$ 215,459.09	\$ 111,192.26	\$1,019,287.34

* Including Brakes and Sulkies. † Embracing Penalty, Advertising and Court Costs and Interest.

Comparative Table Collected Taxes for Calendar Years.

From Auditing Department Report.

Division.	1906	1907	1908	1909
Real Estate.....	651,838.30	\$ 639,346.05	\$ 655,861.42	\$ 673,302.36
Personal Property....	617,240.58	628,903.97	640,162.05	714,417.54
Bicycles and Tags....	1,798.00	1,961.20	1,875.20	1,984.50
Automobiles.....	1,240.00	2,220.00	3,720.00	4,920.00
Carriages, Carts, Etc.*	27,865.00	28,867.00	29,714.00	29,780.00
Dog and Dog Tags....	5,381.70	6,245.40	6,370.30	5,920.70
Poll.....	50,069.00	46,818.00	47,733.00	47,882.00
Road.....	100,154.00	93,646.00	95,020.00	96,177.00
School.....	100,138.00	93,636.00	95,024.00	95,764.00
10% Penalty.....	12,105.68	9,266.87	7,102.00	7,886.86
Costs † and Interest..	6,770.64	7,618.03	7,483.45	7,758.63
Income.....	146,755.77	227,727.02	307,620.20	474,415.26
Special Income Tax..	.....	.....	.....	196,277.24
Total.....	\$1,721,356.67	\$1,786,256.54	\$1,897,685.64	\$2,356,486.09

* Including Brakes and Sulkies. † Advertising and Court Costs.

Registered Voters, by Races, at General Elections, 1904-10.

Race.	1904.	1906.	1908.	1910.
Hawaiian.....	9,260	9,635	8,967	9,619
American.....	1,872	1,674	1,715	1,763
Portuguese.....	728	939	1,230	1,530
British.....	542	563	567	554
German.....	301	301	322	333
Other whites.....	373	246	195	234
Chinese.....	175	220	272	396
Japanese.....	2	....	6	234
Total.....	13,253	13,578	13,274	14,442

Votes Cast for Delegate to Congress at Above General Elections.

Party.	1904.	1906.	1908.	1910.
Republican.....	6,833	7,364	5,698	8,049
Democratic.....	2,868	2,884	3,824	4,503
Home Rule.....	2,289	2,182	2,794	989
Total.....	11,990	12,430	12,316	13,541

TABLE OF RAINFALL, Principal Stations.

Compiled from Weather Bureau Reports,

Stations	Observer	1909					
		July	Aug.	Sept.	Oct.	Nov.	Dec.
HAWAII							
Waiakea	C. C. Kennedy	13.18	5.18	8.03	8.29	3.77	11.49
Hilo (Town)	L. C. Lyman...	14.17	5.08	7.80	8.65	4.09	17.09
Ponahawai	J. E. Gamallison..	15.29	5.55	13.22	10.00	4.31	20.81
Pepeseeke	A. Silva.....	12.07	5.84	9.07	5.90	3.03	19.07
Hakalau	J. M. Ross.....	17.33	5.77	8.71	8.33	4.33	21.24
Laupahoehoe ...	E. W. Barnard..	11.46	2.99	5.03	3.98	5.77	11.99
Ookala	W. G. Lawson..	10.18	2.29	4.93	5.59	5.29	10.64
Kukaiau	E. Madden....	4.17	0.90	1.85	2.75	2.47	6.53
Paauhau	L. Wilson.....	4.17	0.90	1.90	1.87	2.61	7.00
Honokaa	K. L. Andrews	4.76	1.02	2.13	2.24	2.57	6.62
Waimea	F. Pinho	3.83	1.86	2.05	2.25	1.48	8.22
Kohala	Dr. B. D. Bond	7.71	0.68	3.13	2.23	3.51	6.25
Holualoa	L. S. Aungst...	2.79	8.59	8.79	2.31	0.73	6.93
Kealakekua	Rev. S.H. Davis	4.71	9.82	6.77	3.40	0.75	11.19
Naalehu	C. Wolters.....	1.27	0.11	1.23	5.27	0.41	13.44
Pahala	Haw. Agr. Co.	0.64	0.00	3.50	6.88	0.79	12.38
Volcano House..	Geo. Lycurgus..	7.73	2.40	5.60	7.50	3.40	13.09
Olaa (17 miles) ..	Olaa Sugar Co.	13.45	5.49	8.12	9.05	3.18	19.38
Kapoho	H. J. Lyman...	5.04	4.01	4.93	5.53	2.59	14.60
MAUI							
Haleakala Ranch	L. von Tempsey..	1.11	0.59	0.00	0.94	0.24	7.94
Puuomalei	A. McKibbin..	8.06	2.13	3.10	3.18	2.71	10.29
Makawao	F. W. Hardy...	9.01	0.23	1.89	3.19	1.64	10.56
Kula	Mrs. D. von Tempsey	1.67	0.26	1.97	1.43	0.25	6.37
Haiku	D. D. Baldwin	11.18	2.81	4.09	4.43	4.00	8.12
Keanae Valley ..	W. F. Pogue...	30.46	11.07	15.97	13.21	9.00	22.82
Nahiku	C. O. Jacobs....	15.33	7.12	9.24	9.39	6.58	16.35
Wailuku	Bro. Frank.....	1.01	0.26	0.33	1.77	0.71	5.73
OAHU							
Honolulu	U. S. Weather Bureau	1.47	0.58	0.75	0.52	0.43	6.53
U. S. Exp. Stn.	Dr. E. V. Wilcox...	4.28	1.90	2.62	1.80	0.98	9.08
Kinaiu Street....	W. R. Castle....	1.56	0.43	1.07	0.68	0.52	7.05
Manoa	C. S. Desky....	7.60	4.43	5.33	5.25	1.11	9.65
Nuanu Ave.....	W. W. Hall's...	4.05	1.84	2.15	1.20	0.71	8.15
Electric Lt. St.	A. Walker	14.88	7.83	7.31	10.72	4.79	21.95
Luakaha	L. A. Moore....	15.34	8.62	5.99	12.10	5.36	23.33
Waimanalo.....	A. Irvine.....	1.65	0.60	0.68	3.38	1.01	7.53
Maunawili.....	Jno. Herd.....	6.12	2.26	2.05	6.72	2.44	10.94
Ahuimanu.....	M. A. Robinson	4.27	1.49	3.11	5.24	.....	10.53
Kahuku.....	R. T. Christophersen.	1.99	1.01	1.02	2.31	0.91	8.37
Ewa Plantation..	R. Muller.....	0.16	0.09	0.25	0.56	0.07	4.55
Wahiawa.....	H. C. Brown....	3.79	1.65	1.59	1.46	0.61	10.85
Waiawa.....	A. Lister.....	6.11	2.50	2.09	2.73	0.82	9.91
Waimalu.....	Hon. Plan. Co.	2.30	0.32	1.53	0.91	0.20	8.07
KAUAI							
Grove Farm.....	G. N. Wilcox...	2.56	1.62	1.97	3.43	1.49	10.95
Kealia	Makee Sugar Co....	2.29	1.78	1.81	2.36	0.57	8.90
Kilauea.....	L. B. Boreiko..	5.10	2.32	2.78	7.84	2.21	10.44
Eleele	McBryde Sugar Co.	0.84	0.90	0.51	2.00	0.03	5.83
Kukuiula.....	F. L. Zoller....	1.91	0.48	1.09	3.00	0.00	8.72
Waiawa	A. F. Knudsen.	0.06	0.05	0.20	1.59	0.00	10.01

Throughout the Hawaiian Islands, 1909-10.

By Wm. B. Stockman, Section Director. Continued from last Annual.

Locality	Feet Elev.	1910						Annual
		Jan.	Feb.	Mar.	April	May	June	
HAWAII								
Waiakea..	50	16.10	2.48	13.17	9.35	12.20	11.55	114.79
Hilo.....	100	15.89	2.87	17.73	10.40	13.02	12.21	129.00
Ponahawai.....	500	20.93	3.83	23.33	16.15	16.80	19.16	169.38
Pepeekeo.....	100	19.78	4.87	13.91	6.55	9.29	11.10	120.48
Hakalau.....	200	17.53	5.57	16.36	9.79	9.35	12.72	137.03
Laupahoehoe.....	100	16.75	6.07	15.15	8.03	10.88	15.19	113.29
Ookala.....	400	16.82	6.70	10.80	7.66	11.47	10.90	103.27
Kukaiau.....	250	14.34	5.16	6.89	4.91	9.34	7.33	66.64
Paauhau Mill.....	300	10.24	6.28	5.04	6.38	7.11	6.97	60.47
Honokaa.....	470	10.30	6.88	5.73	6.23	7.85	6.12	62.45
Waimea.....	2720	9.41	4.39	3.03	4.01	2.34	4.27	47.14
Kohala Mission..	521	6.27	2.44	6.49	4.95	4.56	5.48	53.70
Holualoa.....	1350	3.15	2.45	3.68	1.87	2.76	7.55	51.60
Kealakekua.....	1580	6.43	0.79	1.94	2.62	1.96	6.98	57.36
Naalehu.....	650	7.01	1.31	2.74	1.39	0.70	1.49	36.37
Pahala.....	850	5.02	3.98	0.51	0.29	0.62	0.63	35.24
Kilauea Crater...	4000	12.92	1.66	9.50	7.18	8.34	6.50	85.82
Olapa, Puna.....	1530	26.45	5.47	22.80	20.18	19.75	21.49	174.81
Kapoho.....	110	21.42	4.19	5.25	3.89	6.21	5.90	83.56
MAUI								
Haleakala Ranch..	2000	10.18	3.22	1.50	6.27	3.93	2.28	38.20
Puuomalei.....	1400	13.71	5.71	8.28	9.21	6.79	5.88	79.05
Makawao.....	1700	32.02	10.33	6.12	6.93	4.75	3.57	99.24
Erehwon.....	4000	4.96	2.46	1.03	0.10	2.08	2.04	24.62
Haiku.....	700	13.87	3.33	9.11	5.48	7.24	7.40	81.06
Keanae.....	1000	2.83	17.36	22.53	18.37	22.33	29.28	215.23
Nahiku.....	700	20.23	9.79	9.18	11.30	11.53	12.92	138.96
Wailuku.....	250	9.35	1.34	1.19	1.03	1.28	0.84	24.84
OAHU								
U. S. W'th'r B're'u	108	4.79	1.22	1.52	1.48	0.86	0.76	20.91
Kewalo-uka.....	350	6.60	2.71	3.34	2.76	0.92	.....	.....
Kinaiu Street.....	50	8.90	3.28	8.80	2.84	1.41	1.26	37.80
Woodlawn Dairy..	285	7.75	5.35	8.67	8.20	7.98	10.73	82.05
Nuuanu Avenue....	50	6.60	1.79	3.62	2.68	.....	2.63	.....
Nuuanu Elec. St'n	405	10.36	9.56	5.25	4.55	6.53	5.71	109.44
Nuuanu Wat'r Wk's	850	10.53	11.49	12.51	11.89	22.00	17.36	156.52
Waimanalo.....	25	2.90	2.27	1.45	1.53	2.05	2.01	27.06
Maunawili.....	250	4.58	5.98	4.62	4.20	6.51	5.50	61.92
Ahuimanu.....	350	3.94	6.06	2.97	3.51	2.96	5.40	.....
Kahuku.....	25	4.20	1.72	1.14	1.53	1.87	1.97	28.04
Ewa.....	50	1.18	0.51	0.39	0.41	0.12	0.59	8.88
Wahiawa.....	870	2.94	2.48	4.06	1.65	2.19	2.96	36.23
Waiawa.....	675	5.30	1.96	4.59	6.11	2.73	4.14	49.99
Ewa.....	200	5.18	1.66	2.23	0.97	0.16	0.44	23.97
KAUAI								
Lihue.....	200	4.38	2.33	2.29	3.07	2.83	2.60	39.52
Kealia.....	15	6.14	2.19	1.17	1.38	2.33	1.05	31.97
Kilauea.....	342	7.20	2.52	2.76	3.06	3.38	4.17	53.78
Eleele.....	150	1.86	0.48	1.05	1.74	0.76	1.44	17.44
Koloa.....	100	1.66	0.10	0.98	2.36	1.31	1.81	23.42
Waimea.....	30	1.15	0.25	0.03	0.60	0.80	1.51	16.25

SUMMARY OF METEOROLOGICAL OBSERVATIONS, 1909-1910.

Compiled from U. S. Weather Bureau Records, by Wm. B. Stockman, Section Director.

(Continued from preceding Annals.)

MONTH	BAROMETER		RAIN-FALL	REL. HUM.		MEAN TEMPERATURE				Mean of Max. and Min.	ABSO. HUM. Cu. ft.	Cloud Amt.	Wind Force	
	8 a.m.	8 p.m.		8 a.m.	8 p.m.	Min.	Max.	6 a.m.	2 p.m.					9 p.m.
July	30.08	30.06	1.47	66	73	70.9	80.5	73	79	74	75.7	6.662	6.2	9.2
August	30.06	30.04	0.58	65	73	71.5	81.6	73	80	75	76.6	6.873	4.4	8.8
September	30.05	30.04	0.75	65	74	71.6	81.9	73	80	75	76.8	6.973	5.2	8.3
October	30.04	30.02	0.52	67	76	70.9	80.6	73	79	74	75.8	6.951	5.6	8.1
November	30.05	30.04	0.43	67	73	69.2	79.6	70	78	73	74.4	6.346	4.3	6.8
December	29.96	29.95	6.53	73	76	67.3	77.0	70	74	71	72.2	6.381	5.9	8.2
January	30.09	30.08	4.79	68	72	64.6	74.5	68	72	69	69.6	5.586	6.1	9.8
February	30.06	30.05	1.22	70	73	64.2	75.8	66	73	69	70.0	5.666	4.6	7.1
March	30.11	30.09	1.52	69	71	66.2	77.2	68	76	70	71.7	5.746	4.6	8.5
April	30.10	30.08	1.48	64	72	67.5	76.7	69	75	71	72.1	5.786	6.4	9.3
May	30.10	30.09	0.86	65	72	68.0	78.1	70	77	72	73.0	6.059	4.8	8.6
June	30.08	30.06	0.76	66	70	70.0	79.9	72	79	73	75.0	6.362	4.9	8.9
Year	30.06	30.05	20.91	67	73	69.3	78.6	70	77	72	73.6	6.283	5.2	8.5

TABLE OF ANNUAL LICENSE FEES.

Territory of Hawaii.

<i>Alcohol</i>	\$ 50.00	<i>Insurance Agent</i>	2.00
<i>Awa</i> —Honolulu	500.00	<i>Kerosene Storage</i>	200.00
Hilo, Wailuku or Lahaina	100.00	<i>Lodging and Tenement House</i>	2.00
All other	50.00	<i>Laundry</i>	25.00
<i>Auction</i> —Honolulu	600.00	<i>Livery Stable</i> —Honolulu	50.00
All other	15.00	All other	25.00
<i>Banking</i> —Honolulu	750.00	<i>Liquor</i> —1st class, wholesale..	1000.00
Hilo	500.00	2nd class, retail saloon or hotel	750.00
All other	250.00	Restaurant	500.00
<i>Billiard</i> —each table.....	25.00	For premises outside 5 mile radius from 1st to 3d class postoffice..	250.00
<i>Bowling Alley</i> —each alley..	25.00	3rd class, not over 3 days, per day	15.00
<i>Beef Butcher</i> —“Slaughter and Sell,” Honolulu.....	100.00	4th class—wine	5.00
All other	20.00	5th class—manufacturing.	5.00
<i>Beef Butcher</i> —“Sell”.....	10.00	<i>Milk</i>	2.50
<i>Boat</i> —With 4 or more oars..	8.00	<i>Merchandise</i>	25.00
With less than 4 oars....	4.00	— Broker	100.00
<i>Boatman</i>	1.00	— Peddler	50.00
<i>Barber</i>	10.00	<i>Notary Public</i> —Honolulu ..	10.00
<i>Brewery</i>	250.00	All other	5.00
<i>Certificate of Authority</i>	10.00	<i>Pork Butcher</i> —“Sell”.....	10.00
<i>Car License Tax</i> —per car....	10.00	— “Slaughter and Sell,” Honolulu	40.00
<i>Custom House Broker</i>	50.00	All other	20.00
<i>Collection Agency</i>	25.00	<i>Peddling Cake</i>	25.00
<i>Dray, Wagon, etc.</i>	2.50	<i>Pawnbroker</i>	50.00
<i>Driver</i>	1.00	<i>Plumbers</i>	10.00
<i>Dyeing or Cleaning, etc.</i>	25.00	<i>Public Show</i> —per show.....	1.00
<i>Emigrant Agent</i>	500.00	<i>Poisonous Drug</i>	50.00
<i>Employment Agency</i>	25.00	<i>Second Hand Dealer, etc.</i>	25.00
<i>Foreign Corporation</i>	100.00	<i>Stock and Share</i>	100.00
<i>Farrier and Horse-shoer</i>	5.00	<i>Steam Laundry</i>	50.00
<i>Fishing Boat</i>	5.00	<i>Social Club Tax</i>	200.00
<i>Garage</i> —Honolulu	50.00	<i>Tobacco, Cigars, &c.</i>	10.00
All other	25.00	<i>Trust Company</i>	250.00
<i>Hack and Passenger Vehicle</i> —per passenger	1.00		
<i>Hotel and Restaurant</i>	50.00		

Seating capacity of principal Churches, Halls and Places of Amusement—Honolulu.

Roman Catholic Cathedral, Fort street.....	1,500
Hawaiian Opera House, King street.....	1,000
Kawaiahaeo Church (Native), King street.....	1,000
The New Orpheum, Hotel street.....	850
Empire Theatre (moving pictures).....	930
Central Union Church, Beretania street.....	850
St. Andrew’s Cathedral (Episcopal), Emma street.....	800
Chas. R. Bishop Hall, Punahou Preparatory Building.....	600

CUSTOMS TABLE REVIEW, 1910.

ANOTHER year of exceptional commercial prosperity for Hawaii may be seen in the Customs tables of imports and exports for the last fiscal period ending June 30, 1910, as shown on pages 20 to 23, inclusive, an improvement even on the banner year of the preceding period, the aggregate value of merchandise passing in and out of the Territory, including specie, being \$72,632,463, a gain of \$8,109,439. Divided as to outward and inward proportion of the above sum we find exports credited with \$46,490,028 and imports charged against us of \$26,142,435, leaving us \$20,347,593 to the good for the year, and an increase, respectively, of \$5,972,936 of the former and \$2,567,403 of the latter over those of 1909. This is making commendable commercial progress. Of the total exports mentioned, but \$306,763 represents our direct trade with foreign countries, a beggarly proportion, yet a gain over the previous year of \$222,611, which was largely with Japan, thus showing the comparatively complete absorption by the mainland of all territorial products. Our gain over the preceding year's benefit of trade was but \$307,063.

The imports for 1910, valued at \$26,142,435, represents \$20,289,017 domestic, and \$271,084 foreign merchandise, with \$986,000 in coin from the mainland, and \$4,606,334 from foreign countries. Compared with the previous year, this is a decline of \$774,680 in specie shipments, as also \$316,475 in foreign goods from the mainland, but a gain of \$3,095,798 in domestic produce and manufactures. The direct foreign importations show an increase of \$572,760, distributed very generally among our sources of foreign supply.

The following comparative analysis of the tables of export and import as shown in the "Summary of Commerce and Finance" for the fiscal year ending June 30, 1910, revised from several issues of the "Hawaiian Star," shows its valiant service in support of our effort in like manner the past

few years to have these Customs tables prove of educational value by this treatment of its various important features.

Some little analysis of the shipments of domestic produce from Hawaii to the mainland for the fiscal year ending June 30, 1910, as compared with the two previous years will be interesting. While sugar, the chief staple, more than regained the ground lost in 1909, a gratifying advance is also shown in other products. This, although the gain of \$5,766,248 over 1909, in all shipments, is but \$774,000 more than the gain in sugar shipments. As already shown, the total shipments of domestic products to the mainland for the past year were valued at \$46,825,412.

Coffee, raw, to the value of \$288,423, was shipped, being \$76,888 more than in 1909 and \$131,286 more than in 1908. As a considerable proportion of Hawaiian coffee is consumed at home, these figures would indicate that the coffee industry is in a promising condition.

But little progress appears to be making in the fiber industry. Shipments of fibers and manufactures thereof for 1910 were \$11,790, an increase of \$4095 over 1909, and \$1963 over 1908. As \$9081 represents bags and twine, there is \$2709 left for the value of fiber shipped the past year.

Fruits and nuts reveal a substantial gain, the total value of shipments being \$1,775,050. This goes above 1909 by \$328,258, and 1908 by \$977,864. The main item is canned fruits, the value of which was \$1,548,950, an increase of \$319,303 over 1909 and of \$916,673 over 1908. Under the term "All other," wherein our bananas are concealed, the item has grown to \$215,696.

Hides and skins fell off in value \$5732 as compared with 1909, the shipments for 1910 having been \$139,105.

Meat and dairy products were shipped to the value of \$5276, being a decrease of \$2106. Any export in this schedule is a curiosity in view of the great demand and high prices of such articles at home.

Rice, of which there is a very large home consumption and heavy imports, shows up well for 1910. The shipments to the mainland were \$269,157, being \$13,947 more than in 1909 and \$128,389 more than in 1908. As large efforts are in

progress, at the Hawaii Experiment Station, to improve rice cultivation here, the export figures enhance the prospect of rice one day resuming its oldtime importance among Hawaiian industries.

Straw and palm leaf manufactures show up promisingly, and should become an industry in these Islands, where aided nature will produce abundantly and cheaply the raw materials. The present nucleus of the industry is in girls' seminaries and the homes of native Hawaiians. Last year the mainland took \$6798 of these products, being gains of \$5590 and \$5379, respectively, as compared with 1909 and 1908.

Sugar and molasses, the latter item being insignificant, were shipped to the value of \$42,625,069. This is an increase of \$4,992,248 over 1909 and \$2,808,987 over 1908.

Of brown sugar there was shipped \$40,579,151 worth, an increase of \$5,091,229 as compared with 1909 and \$1,976,003 with 1908. The quantity for 1910 was 1,073,352,166 pounds, being 90,262,038 more than in 1909 and 18,956,179 more than in 1908.

Refined sugar, made by only one local sugar factory, represents \$2,045,921 of the total, being \$98,909 less than for 1909 and \$832,997 more than for 1908. The quantity of refined sugar was 37,242,300 pounds, a decline of 2,531,500 from 1909 and an excess of 14,067,650 over 1908.

Tobacco culture is a new industry here, so far as scientific methods and the export trade are concerned. Until 1909 it never figured in exports. The value of tobacco leaf shipped to the mainland the past year was \$15,644, an increase of \$11,403 over the year ended June 30, 1909. In quantity the export was 18,402 pounds, against 6697 pounds in 1909, a gain of 11,705 pounds. This item of export may be expected to grow fast in future trade returns.

Vegetables were shipped to the value of \$9207, or \$864 less than in 1909 and \$1309 more than in 1908.

Wood and manufactures thereof rendered increases of \$101,214 and \$142,886 over 1909 and 1908, respectively, the total shipments for the year just past being \$203,649.

Wool declined \$1708 as compared with 1908, but showed

better than in the year 1909 by \$3977. The value of wool shipments was \$56,426.

Domestic merchandise shipped from the States to Hawaii in the year 1910 amounted to \$20,289,017, which was \$3,-095,798 more than in 1909 and \$5,650,300 more than in 1908, the years considered respectively ending on June 30. A glance at some of the items making up the twenty and odd millions of Hawaii's purchases of domestic products of the mainland is worth while for two purposes—first, to show leading staples of kinds that are produced in Hawaii, the importations of which may be reduced by the development of the resources of the Islands, and, second, items whose increased imports indicate progress and prosperity in this Territory.

Agricultural implements for the three years past have varied but slightly, having been \$31,286 for 1908, \$35,106 for 1909, and \$30,816 for 1910.

Animals to the value of \$190,502 were imported the past year, being \$2181 more than in 1908 and \$124,056 less than in 1909. Under this head cattle were good for \$16,980, which is \$8820 less than in 1908, but \$8430 more than in 1909. Fowls make \$5413, or slightly less than in either of the two previous years. Hogs at \$4637 were \$926 in excess of 1908, but fell below 1909 by \$13,250. Horses show a decline for two years, the \$28,760 for 1910 being \$96,131 less than for 1909 and \$9452 less than for 1908. Mules, \$133,995, represent a decrease of \$22,715 from 1909, but an increase of \$25,848 over 1908. Hawaii appears to raise practically all its own sheep, the imports having been \$510 in 1910, \$424 in 1909, and \$410 in 1908. Of all other animals the imports the past year were \$207, as compared with 245 in 1909 and \$3527 in 1908.

Art works show a decided increase, the imports of such having been \$15,534 against \$1870 in 1909 and \$4405 in 1908.

Breadstuffs, etc., indicate no great change for two years. The figure for the past year was \$1,904,793, which is \$56,644 less than for 1909, but \$229,606 more than for 1908. Under the same general head animal feed shows a decided reduction for two years. This item was \$476,921, being \$156,065 less than in 1909 and \$85,165 less than the year before.

Cars, carriages, etc., were enormously increased, their value having more than doubled since 1908. For 1910 the amount was \$938,573, which is \$231,033 more than in 1909 and \$486,527 in excess of the 1908 imports. The items of automobiles and parts thereof under the general head just mentioned make up \$745,498, being \$243,066 and \$486,798 in excess of 1909 and 1908, respectively. Nearly three-quarters of a million dollars sent to the mainland for automobiles in one year is indicative of prosperous conditions.

Coffee imports to a coffee country should not show an increase, yet it does so progressively for two years. The value of this article imported in 1908 was \$8959; in 1909, \$14,980, and in 1910, \$18,553.

Fertilizers keep evenly at nearly a round million a year, the amount for the past year being 957,480, an increase of \$159,271 over 1909 and \$44,501 over 1908.

Fish was imported to the tune of \$349,901—large for a country swimming in piscatorial pastures. This item was \$290,695 in 1908, and \$321,233 the year after.

Fruits and nuts show a considerable increase, the value being \$240,861. This is \$49,574 over 1909 and \$58,503 over 1908.

Iron and steel and their manufactures—forming a fairly trustworthy criterion of prosperous industries—show an increase of more than a million over 1908 and more than half a million over 1909. The figures are \$3,229,969 for 1910, \$2,644,315 for 1909, and \$2,112,933 for 1908.

Meat and dairy produce—a category that should in time be reduced—was imported to the value of \$848,618, being \$83,663 over 1909 and \$212,082 over 1908. Butter, \$179,791, is about \$6000 increase for the year. Condensed milk increased \$49,885.

Mineral oil, an item going into local industries, transportation and road making, was imported to the value of \$1,547,179, a year's increase of about \$300,000.

Rice, a home staple, shows a decline, the figure being \$2600, a little more than half the amount for either of the two previous years.

Soap was imported to the amount of \$137,695, an increase

of \$21,491. Of the total, \$19,745 represents toilet or fancy soap, being but little less than the previous year.

Spirits, wines and malt liquors from the mainland show a slight increase, the amount for 1910 being \$565,038, or \$3989 above 1909 and \$52,311 above the year before.

Tobacco and its manufactures increased by \$52,831, the amount for 1910 being \$659,661, though of this \$6939 was returned.

Vegetables slightly increased over 1909 and considerably over the year before. For 1910 the item was \$233,506, which is \$904 over 1909 and \$11,494 over 1908.

Wood and its manufactures were \$1,418,628 against \$1,096,390 in 1909 and \$855,389 in 1908. Lumber, under this head, increased last year over \$300,000.

Other lines of importations present like instructive features, nor are the important items of export which represent return merchandise to be ignored in a proper analysis of the tables.

Against imports of automobiles and parts must be deducted \$116,774 for returned goods in 1910, an increase of \$66,914 over like returns in 1909.

Cement, largely for construction work in progress, reached 94,661 barrels in 1910, valued at \$200,310; that for 1909 being 36,851 barrels, at \$76,314.

Copper and its manufactures jumped from \$28,661 in 1909 to \$89,973 in 1910.

Cottons, and manufactures of, indicate steady increase in value from \$1,245,585 in 1908 to \$1,694,814 in 1909, and \$1,766,363 in 1910.

Explosives, another item in construction work, leaped last year to \$259,229, a gain of \$161,569 over its imports for 1909.

Electrical goods figures indicate the improvements in progress under this head, import values the past three years being \$42,973, \$76,678, and \$269,342, respectively.

Fibers, under which head is included bags, cordage, twine, etc., which in 1909 reached \$147,108, a gain of \$19,436 over the preceding year, fell off in 1910 to \$95,866.

Glass and glassware shows quite a gain in value, being \$95,935 in 1908, \$113,209 in 1909, and \$175,430 in 1910.

Hay this past year at \$191,118 shows a decline of \$42,992 from the previous year, yet still better than 1908 by \$8482. This may mean that we are reducing our stock as we are increasing the number of autos, but we are inclined to look upon it as indicating the entry of our new stock feed of algaroba bean meal.

The increased rubber goods imports being \$126,001 in 1908, \$157,455 in 1909, and \$227,795 in 1910 is as much chargeable to the enhanced price as to the larger consumption.

Jewelry, etc., which showed \$22,484 in 1908, but dropped to \$5215 in 1909, rose in 1910 to \$56,555. This item has offsets of \$29,695 in 1909 and \$38,466 in 1910, doubtless for goods returned, as local jewelers are not manufacturers for export to this extent as yet.

Paper and manufactures of, including books, maps, engravings, etc., showed values of \$251,856; \$392,069 and \$511,829, respectively, for the years 1908, '09, and '10. Returned goods of this line in 1910 was \$16,189, and in 1909 \$11,859, of which books and printed matter showed, respectively, \$13,727 and \$10,717.

Photo goods show a close net importation the past two years of practically \$84,800 each period, imports for 1909 being \$106,624 to be offset by returns of \$16,774, and last year imports of \$190,823, offset by returns to the amount of \$105,985.

Sugar, refined, now that we are producing the same, properly shows a steady decline in import values, which are \$103,258, \$56,240, and \$40,658 for the years 1908, 1909, and 1910.

The Territory is to be congratulated on the above healthy condition. With the strides now being made toward the development of new industries, the outlook certainly looks promising for continued prosperity.

THE PORTUGUESE IN HAWAII.

Few persons, even among the best informed in this Territory, realize the real status and economic importance attained by the Portuguese element, in the mixed population of these Islands. A few details therefore, will probably prove interesting, which we are allowed, by courtesy of the Russian Consul, Dr. A. Marques, to cull from a report prepared by him, with the view of showing to his government what immigrants of the earnest working class, could accomplish in this Territory.—Editor.

ASIDE from a limited number of Portuguese—about 400—left here by whalers, in the early days when whaling was an important and flourishing industry, who settled here and soon proved themselves useful and desirable citizens to such an extent even as to suggest the advantage of having more of the same race brought over,—the bulk of the people of Portuguese descent now living in this Territory, is due to the immigration operations conducted between 1878 and 1899. During those twenty years 12780 persons were introduced, principally from the Portuguese Islands of Madeira and Azores, as shows in the following table:

Date	Ships	Men	Women	Children	Total
1878	Priscilla	63	16	35	114
1879	Ravensraig	144	96	170	419
1881	High Flyer	189	64	98	351
1881	High Flyer	189	64	97	351
....	Suffolk	266	83	126	475
1882	Monarch	299	154	406	859
....	Hanra	306	225	546	1,167
....	Earl Dalhousie	153	58	111	322
1883	Abergeldie	264	195	473	932
....	Hankow	294	206	449	949
....	Hankow	277	115	231	623
....	Bell Rock	721	257	606	1,584
1884	Bordeaux	708	192	260	1,250
....	City of Paris	184	83	105	372
....	City of Paris	205	137	203	545
1885	Docca	95	83	161	319
1886	Sterlingshire	175	90	193	458
....	Amano	169	128	194	491
1888	Thomas Bell	144	66	181	394
1895	Brauenfels	342	176	202	720
1899	Victoria	57	18	34	109
		5364	2486	4930	12,780

Some more came later, 1326 on the "Sumeric," in 1906; 1129 on the "Kuceric," in 1907, and 868 on the "Swanley" in 1909, in all 3403, to be added to the above 12,780. But, for the purposes of this article they shall not be taken into account, as they are too late arrivals to have yet given any economical results, apart from the fact that many of them left immediately for California.

Now, out of the 13,000 oldest settlers, only a fraction have in reality been the builders of our prosperous Portuguese colony, because many—fully one-half—are known to have left this country at different times, the bulk attracted to California by the illusion of better wages, a few to return to their old homes; over two thousand men had thus already left the Territory with their families, even before annexation. Of the remainder, many have naturally died since their introduction, leaving only their offspring, and their children's children to represent them; but, fortunately, of these there are many, the Portuguese being a prolific race, to whom Malthus' theories are unknown. According to the late census, the total number of persons—men, women and children—of Portuguese nationality or descent, now on these Islands, amounts to 22,294, or 11.6% of the whole population. Out of these, 1,239 are registered voters (already nearly as numerous as the full-fledged Americans), but they are mostly the younger ones, as many of the older men do not care to become American citizens, preferring to keep their allegiance to their national flag, or being debarred from registering through inability to read and write; 4,696 are children attending school, and constituting 18.27 per cent. of the school attendance, a proportion which is bound to increase rapidly; but this number presupposes about twice as many children below and above the school age, making in all about 12,000 below twenty years of age. On the other hand, if we make allowance, in the above census total, for the later arrivals in 1907-1909, we may reckon that about 20,000 represent the original permanent element, which, on the basis of six to a family (man, wife and four children, a very moderate estimate for Portuguese, some having from 10 to 15 children), leaves only between four and five thousand male wage-earners.

The early comers all began their work on plantations, as field laborers, at the monthly rate of \$10, with rations for the men, and \$6 for the women; but these wages have been gradually raised to a minimum of \$18, \$22 and \$24 being now the highest wages paid to common or unskilled laborers. In later years, many of these immigrants succeeded in reaching better positions on the plantations, as "lunas," teamsters, mechanics, a few, in some cases obtaining as much as \$125 a month; and it is only proper to note here that it was the few expert stone-cutters and builders among the early Portuguese immigrants who gave the first impulse in this Territory to the building of substantial houses with hewn lava rock, now a common occurrence.

For years past, the average number of Portuguese, men, women and children, employed on the plantations of these Islands, has been a little over 3,500, 3,620 in 1908, and 3,732 in 1909; now, according to figures for which I am indebted to the courtesy of the staff of the Planters' Association, the figures for the month of August last were as follows: Skilled laborers, 277; unskilled, 2,500; women, 172; boys, 803; girls, 191; working on contract, 122; planters on shares, 38; total, 4,103, out of which, in reality, there are only 2,937 men, the unusual large number of children, this month, being due to the fact of their taking advantage of the school vacation to add to the family earnings.

But a goodly proportion have also gradually branched out in different ways, many as independent storekeepers, quite a number as typographers, while an important percentage are found in Honolulu, in responsible positions, in banks and large trading or business houses. Thus, at the great firm, "Honolulu Iron Works," we find 117 Portuguese employed, seven in the pattern shop, with wages from \$6.50 down to \$3 a day; one in the boiler shop, at \$5 a day, and the others in various other departments, earning from \$4.50 a day down to \$60 per month; the "Honolulu Planing Mill" employs an average of 75 Portuguese, with daily wages ranging from \$5 down to \$1.50; the dry goods firm of Ehlers

& Co., among others, employs twelve Portuguese at a monthly cost of \$678, the highest salaries being \$125 and \$100, with the others grading down to the young errand boy, who gets \$20 a month. The Oahu Railroad Co. and the Rapid Transit Co. give employment to a large number of Portuguese laborers. Forty-four Portuguese, men and women, are employed in public and private schools, and quite a number of young Portuguese women are steadily employed as stenographers, cashiers and saleswomen. Other members of this colony occupy high positions of trust and responsibility on the bench, in the legislature, and in the County Boards, or as lawyers and notaries public, etc.

Thus, by steady attention to their humble duties, and by strict economy within the harmonious family, the small group of bread-winners of our Portuguese colony have not only bettered their original conditions and lived comfortably while bringing up creditably their large families, and enabling their children to mount to higher positions in society, but, moreover, we find at present a number of them—through their parents' thriftiness and their own economies, not only owning their independent cozy homes, but constituting quite an important element in the possession of real estate. In effect, according to the following official tables for the fiscal year 1908-9 of the real and personal properties owned by Portuguese on these Islands, we find 1,531 of them—this not including numbers living on leased lands — entered for \$2,048,126 of real estate, and \$438,548 of personal property; in all \$2,486,674, an average ownership of \$1,634 a head; and, for the year just closed, 1909-10, these figures reach \$2,289,912 for real property and \$515,410 for personal property; in all \$2,805,322, and this in spite of the many individuals who are known to have recently disposed of their properties to go to California. These figures are also interesting as showing the distribution of these settlers on the various Islands:

Island	Number		Value Real Estate & Personal Property				Total Value	
	1908	1909	1908	1909	1908	1909	1908	1909
Oahu.....	{ 639	.....	1,331,950	.....	316,255	.....	1,648,205	.....
	{	634	.....	1,350,595	.....	304,245	.....	1,654,840
Maui.....	{ 267	.....	320,969	.....	65,393	.....	386,362	.....
	{	289	.....	346,163	.....	65,883	.....	412,046
Hawaii..	{ 478	.....	345,040	.....	53,215	.....	398,255	.....
	{	464	.....	321,305	.....	63,030	.....	384,335
Kauai ...	{ 43	.....	8,175	.....	5,661	.....	13,835	.....
	{	38	.....	9,018	.....	5,390	.....	14,408
Homesteads on Kauai, Kalaheo...	{ 69	.....	18,645	.....	.....	.....	18,645	.....
	{	106	.....	21,045	.....	.....	.....	21,045
Total..	1,496	1,531	2,924,779	2,048,126	440,524	438,548	2,465,303	2,486,674

These totals show a steady increase in these two years, both in the number of proprietors and in the value of their property. Yet the following figures will also show the mischief caused by the exodus of Portuguese, which took place between 1904 and 1908, the value of 1902 not having yet been regained:

		Real Property	Personal Property	Total
1904	Oahu	\$1,491,915	\$496,650	\$1,898,565
	Maui	247,369	78,780	326,149
	Hawaii	375,160	65,276	440,436
	Kauai	9,613	4,957	13,670
	Total	\$2,124,057	\$554,763	\$2,678,820

In comparing this last total with the corresponding one of 1909, we notice a surplus of \$192,146 in favor of 1904, which represents the actual loss caused by emigration to California, the properties being sold to other nationalities; at the same time, it can be remarked that while Oahu loses most heavily (\$243,725), and Hawaii a little (\$5,610), yet Maui gains in real estate values (\$98,794), while losing in personal (\$5,610), and Kauai keeps growing, from \$13,679 to \$35,453; but this also shows a tendency of some of these people to sell out from Oahu, to go and establish themselves

on some of the other Islands, where better opportunities are offered them. But, whatever they may be, these figures present a splendid showing on the part of those people, who came here with nothing—a fact that must not be lost sight of, their passage being paid by the Board of Immigration and planters—and who have had no other means of bettering themselves but through saving on their wages.

Apart from lands privately purchased, 514 Portuguese, since the land laws of 1895, have taken up 18,098 acres of homestead lands, these holdings being estimated worth \$156,995, at the very low rate of \$8.67 per acre, but in reality worth very much more, and the average size of those homestead lots is 35.41 acres. Fifteen more have recently taken up on lease 108 acres of public lands. Many, as seen above, are working, on contract or on shares, lands furnished by the plantations, and all these details point to a prospective large increase of Portuguese real estates in the near future.

But, again, notwithstanding the above splendid showing in real and personal property, our Portuguese colonists also demonstrate their thrift by their deposits in the various Savings Banks, which, last April, amounted as follows:

Honolulu,	Bishop & Co.....	771	depositors,	\$313,797.40
“	Bank of Hawaii.....	627	“	218,121.15
“	First National Bank.....	206	“	88,539.30
Maui,	Baldwin National.....	68	“	29,516.04
“	First National Wailuku.....	121	“	42,488.27
“	Lahaina Bank.....	13	“	5,274.50
Hawaii,	First National of Hilo.....	186	“	64,254.55
Kauai,	Lihue Branch.....	85	“	35,924.99
		2072		\$797,916.20

This represents an average of \$340.21 for each depositor, which is flatteringly near to the normal rate of the best depositors, since, in the last Governor's report, we find that the average for Caucasian depositors was reckoned at \$359.17, that of the Chinese at \$214.96, of the Japanese at \$124.64, and of the Hawaiians at \$99.26 only. Moreover, as the total in Savings Banks of this Territory amounts to \$4,290,919.57, pertaining to 12,404 depositors, we see, in respect to Portuguese, that while they constitute 16% of the depositors, they own 18% of the amount deposited.

The remarkable financial results achieved by our Portuguese immigrants grow more apparent still in their Benevolent Societies, of which there are four in Honolulu—the Lusitana (1,900 members), the San Antonio (2,100 m.), the Patria (125 m.) and the San Martino (200 m.), to which must be added the Camoes Court of Foresters, with two societies in Hilo.

Of all these, the “Lusitana” is the only one which possesses a complete financial statement from its incipency; it was created in 1882, especially to help the newly-arrived plantation laborers, and has been, for the greater part of its existence, sustained nearly exclusively by such laborers from savings out of their meager wages, and this is what it has accomplished in disbursements, aside from its moral influence:

	Sick Benefits.	Death Benefits.	Invalid Pensions.	Orphans.
Dec. 1882 to Dec. 1902....	\$115,000.00	\$ 70,000.00	\$14,000.00	\$1,608.00
1903	12,189.30	7,723.70	2,154.95	742.50
1904	13,521.30	11,569.95	2,649.25	910.00
1905	12,676.55	14,669.20	2,405.00	592.50
1906	13,919.85	17,423.25	3,597.50	547.50
1907	15,215.05	17,202.75	4,535.38	1,077.00
1908	14,581.55	20,937.00	5,277.04	675.50
1909	19,468.22	27,252.75	4,396.05	730.00
1910 (9 months).....	17,058.45	24,753.50	4,126.40	526.00
	<u>\$233,630.27</u>	<u>\$211,532.10</u>	<u>\$43,181.57</u>	<u>\$7,409.00</u>

This means that a total amount of \$495,752.94—from the start of this Society up to September 1910—drawn from the fees and the assessments of less than 2,000 members, has gone out to help the poorest, the invalids among them, their widows and orphans. Moreover, the “Lusitana” owns its own premises, has \$53,000 safely invested, thereby helping members in mortgages, and it keeps an emergency fund of about \$9,000. This shows on the part of the members of this Association a very laudable spirit of providing for the future, as well as a pride to prevent themselves from becoming helpless objects of charity during sickness or accidents, which might well be imitated by other nationalities in this Territory.

The "San Antonio" Society was founded in 1877, before the subsequent Portuguese immigration was even thought of, in view of providing for the earlier settlers originating from whalers, as said above. During the first six years of its existence, aside from the help given to its regular members, this Society dispensed charities to Portuguese outside of its membership, the amounts of which, in consequence of careless administration, were not recorded, so that the disbursements were really more than the figures which have been accounted for, and which are as follows:

	Subsidies.	Pensions.	Donations.
1877 to 1895.....	\$ 59,052.00	\$.....	\$ 10,664.00
1896 to 1901.....	17,072.00	1,088.00	10,446.50
1902 to 1905.....	35,189.30	8,259.00	25,655.00
1906	12,410.25	2,372.00	13,986.25
1907	15,030.50	2,786.40	18,383.40
1908	16,713.75	3,350.80	25,608.35
1909	18,069.50	3,675.20	23,558.90
1910 (9 months).....	15,548.15	3,169.80	21,414.85
	<u>\$189,085.45</u>	<u>\$24,701.20</u>	<u>\$149,807.25</u>

To this item, \$3660 must be added for funeral expenses of poor members, making a total, of disbursements in help to members, of \$367,253.90.

The "San Martino" is the youngest of the Portuguese Societies, of a purely benevolent character. It was created in 1903, and has already 200 members, who have enabled it to spend in subsidies, pensions and donations, over \$6000 so far.

The "Patria" Society was founded in 1905, but principally for the object of starting schools for teaching the Portuguese language, the helping of members being only an accessory. Its membership is now about 125, and the total disbursements in salaries to teachers, books for its schools, and subsidies to members have already reached \$4197.

It must be noted here that many of the Portuguese push their desire to provide for the future to the extent of joining several of the Benevolent Societies at the same time.

Thus, altogether, the known disbursements made by all these societies in favor of their members reach very nearly one million dollars; but, of course, it is impossible to even try to estimate the total value of the savings taken away by

the numbers who have left the Territory, though the individual amounts are known to vary between \$400 and \$1200 to a family, some even more; neither is it possible to make a guess at the sums sent to relatives in the country of origin; but these two sources of drain have probably reached another million of dollars, so that the general total of savings, by the 13,000 primitive immigrants who started with nothing, must have amounted to about five million dollars, mostly earned by working for the sugar industry.

The Portuguese of Hawaii are patriotic; we find them constituting one-sixth of the Territory's National Guard, wherein they make most efficient officers and soldiers, ready to shed their blood for their adopted country. They are also notably honest, virtuous and law-abiding, as shown by the Judiciary Statistics. Thus, in 1909-1910, out of 7216 convictions in the Territory, for various offences, only 375 were Portuguese, or about 5 per cent., and such a proportion has been maintained ever since the arrival of these colonists here; similarly, in the Juvenile Court, there are only 84 Portuguese children.

All the above details show that it is not without reason that the Portuguese of Hawaii have been repeatedly qualified, by impartial observers, as "good, steady, conscientious workers, and industrious, thrifty and law-abiding people." The best among them have prospered wonderfully in Hawaii, as we have seen, and Hawaii has certainly prospered through them. Their introduction has been the very best thing ever done for this Territory, and they are the kind of people who ought to be considered and preferred, in order to accomplish that high-sounding hobby of politicians, the "Americanization of Hawaii." But, while we have twenty-two thousand of them at present, we could have had twice as many again if the proper things had always been done to keep with us those who have emigrated from here to California; even now families are constantly leaving who could be retained with little effort, since some come back of their own accord. But the plantations, with an indifference hard to qualify, let those trusted workers go, when a small and just increase in salaries would keep them here while, at the

same time, the same planters are willing to spend hundreds of thousands of dollars to introduce new and untried immigrants, the majority of whom only make a cat's-paw of them and come here at their expense merely as a stepping-stone to the promised land of liberty and gold, California. Of course, the wages have been increased some; but it must be remembered that at the same time the price of living, the prices of all staples brought from America, have increased more still, so that the apparent generosity of the plantations does not keep pace with the necessities of the laborer. Is it not surprising that, when so fortunate in having found such good helpers and such desirable citizens as the Portuguese are, the planters do not seem to realize that it ought to be to their interest, as well as to the advantage of the Territory, to make every effort to keep those who get dissatisfied and want to leave country, by satisfying their just requests?

At this point, it seems only proper, before concluding, to render justice to whom it fully and truly belongs, in stating that a great share in the past success, stability and prosperity of our Portuguese colony, is undoubtedly due to the influence and untiring work of their representative, Mr. A. de S. Canavarro, who, for thirty years, ever cordially accessible to the most humble amongst them, has been their constant guide, protector and defender; in fact, a father to them all, while, with true diplomatic tact, he has accomplished the difficult task of winning the respect and good will of both the planters and of their Portuguese helpers. This statement is not merely a personal tribute of friendship; a public acknowledgment paid spontaneously to this worthy official—whose only fault is his extreme modesty—in one of the daily local papers, last June, on the occasion of the visit of the Portuguese cruiser, was so very proper and truthful, that no better conclusion could be penned here, than by reproducing the *Star's* commentary: "Portuguese Consul-General Canavarro has reason to be proud of his country's people in Hawaii * * * the prosperity of which for more than a quarter of a century has been greatly due to this nationality. Although a large proportion of

them are really no longer under his consular jurisdiction, having become American citizens, by either naturalization or Hawaiian birth, yet he has brought the colony up, so to speak; he has been their counsellor, philosopher and friend; their welfare has ever been upon his mind; their contentment has been largely of his making. * * *

And let me add here, if his advice had always been listened to by the powers that be, most of the families who have been lost to this Territory would still be here to increase the number of truly good American citizens, who are an honor alike to the country they sprung from and to the country of their adoption.

A. MARQUES.

THE ENDEMIC CHARACTER OF THE HAWAIIAN FLORA.

BY REV. JOHN M. LYDGATE.

HILLEBRAND, in the introduction to his "Hawaiian Flora," calls attention to the fact that the Hawaiian Islands are more remote from any continent, or high land of any considerable extent, than any similar land in the world. To the east the American Continent is 2000 miles away; to the south the Marquesas and Society Islands are practically the same distance, while to the north and west the distances are much greater. And, though these vast distances are broken here and there by a few coral islands, they are mere reefs, so inconsiderable in size and character that they scarcely modify the isolation.

Nor does this vast oceanic isolation seem to have been bridged, for organic life, by means of friendly currents or migratory birds. The Japan current, to be sure, feebly laps the Island shores with its spent vitality, depositing, now and then, a water-worn log from the Northwest coast, but seldom, or never, a living seed or plant. From the south, during long-prevailing Kona storms, the warm currents may have drifted up, bearing some hardy forms of plant life, but such

contributions must have been small and precarious. The migratory birds which visit us are so few, and the distances through which they reach us are so great, that they may be considered almost a negligible quantity, so far as flora is concerned.

So extreme an isolation could scarcely fail to leave its story written in large characters on the flora of the Islands. This a priori expectation is abundantly realized in fact.

The influence of the ocean currents may be traced in a comparatively few maritime forms common throughout the islands of the Pacific, such as the *Naupaka*, shore *Heliotrope*, *Vitex*, shore *Convolvulus*, *Vigna lutea*, *Mucuna*, *Wiliwili*, *Caper*, etc., all maritime or sub-maritime plants.

To the advent of migratory birds may perhaps be traced the Strawberry, *Nertera depressa*, *Dodonea viscosa*, some of the *Compositae* and a few other plants, including perhaps some of the ferns whose fine spores might easily have been transported long distances by the birds.

To the advent, however, of the early Hawaiian voyagers, from Tahiti or elsewhere, is to be ascribed a larger and much more important accession to the Hawaiian flora. And that the wanderings of these daring navigators must have extended over wide areas, and long periods of time, is attested by the range and variety of introductions.

Among the species which we owe to them, presumably, are the *Kamani*, *Hau*, *Milo*, *Kou*, *Ohia ai*, *Gourd*, *Sweet potato*, *Olona*, *Breadfruit*, *Kukui*, *Awa*, *Cocoanut*, *Taro*, *Yam*, *Sugar cane*, etc. Some 24 or 25 species.

That conscious explorers, setting out to discover and subdue new lands, should take with them, and successfully establish, in one invasion, so varied a list of plants, is highly improbable. That storm-driven castaways should be supplied with all these valuable plants, constituting for them the complete cycle of commercial products, is simply incredible. The successful introduction, perhaps acclimatization even, must have meant repeated voyages, extending over generations, or even centuries. And not time alone, but patience, and skill, must have been required for the successful introduction of a seedless tree like the breadfruit. Under favorable conditions, it is not easy to propagate: exposed

to the trying vicissitudes of a long canoe voyage; weeks of wind and weather and open sea; lack of water, burning sun and blighting spray, huddled into the bottom of the shallow canoe, how many, many failures there must have been.

Surely there is no more eloquent tribute to the intelligence, the skill, the patience, the executive and the courage, too, of these early navigators, than the successful introduction of so many delicate plants across such vast stretches of sea, under conditions so adverse.

Nor is it surely a gratuitous assumption, that these species were thus introduced by the early Hawaiian voyagers. The identity of the forms indicates beyond peradventure that they were introduced in some way. That any one of them, originating endemically, should have assumed identically the same form as at a dozen other points in Polynesia, is manifestly improbable. That two dozen such plants should have thus repeated themselves endemically, is next to impossible. And then, finally, that these particular plants, useful or even indispensable to human life should have originated themselves and been ranged up on the shore, waiting to welcome the advent of the human castaways, this is surely too impossible to suggest even by way of hypothesis.

Of course, within historic times, since the discovery by Cook, there have been large importations, from various countries, which have found a genial soil and climate, and have so filled the land with their aggressive presence that the indigenous Hawaiian plants have retreated to the mountain fastness or the depths of the forest. Comparatively few people, probably, realize to what a very limited extent the wayside plants of daily experience are indigenous, and how universally the Hawaiian plants have been driven out by their more aggressive foreign brethren. These modern introductions I do not take into account.

Deducting now the few species which we may reasonably ascribe to the action of the ocean currents, or the activity of birds, and the 25 or so species presumably introduced by the Hawaiians in prehistoric times, we have remaining some 725 species of flowering plants, of which say 600 are endemic, or peculiar to the Islands or nearly 83 per cent., a proportion which, I confidently believe, is not to be found elsewhere in the world.

Many of these endemic forms are confined to very small areas, as though they had not had time to propagate themselves more widely. And this shyness and extreme isolation are at once the hope and the despair of the collector. He may search a certain region with a fine-tooth comb, and fail to capture his prize, and yet any day he may stumble upon it in some limited, secluded spot.

In my boyhood, 40 years ago, on one of the ridges back of Honolulu I found the fern *Schizostege Lydgatei*. During all these years it has not been found again, and there have been only two specimens in existence, until within a few months it has been found at the other end of the same range of mountains.

In a certain limited area on Kauai, with which I have been intimately familiar for years, and which has also been carefully searched by others, as well as myself, I have recently found a new violet, limited, so far as I have been able to find, to a single patch no larger than a small dining table. Such experiences, and they might easily be multiplied, would seem to indicate that we have not by any means come to the end of our endemic species, especially on the older islands of Kauai, Oahu and West Maui.

A flora so isolated must naturally be original, so to speak, and such the Hawaiian flora is, both in its wealth and in its poverty.

To the ordinary person the name *Lobelia* carries no suggestion of importance or significance. If he knows them at all, it is as a small and unimportant order of plants, with perhaps some slight medicinal value. Yet we have some 65 species of this order with every assurance of more to come when they are thoroughly worked up. Confined mainly to the depths of the forests they are comparatively unfamiliar, yet they are strikingly tropical, suggestive of small palm trees, and some of them are decidedly showy. They are worthy of being better known.

Other families, exceptionally represented, are the *Cyrtandras* with 30 species, the *Pelleas* with 20 species, the *Kaduas*, 16 species, the Mint family with two large genera of 16 species each, the Sunflower family with a very large proportion of endemic species and with important original characteristics. It is interesting to note that out of some 350 species of *Begonias*, all tropical, Hawaii furnishes the only representative in Polynesia and that is so peculiar that it constitutes a distinct genus, *Hillebrandia*.

Now it is significant that these lines of wealth in the Hawaiian

flora, are endemic lines of wealth, so original and distinct that they constitute genera or classes by themselves, as though Nature had struck these fertile original leads, and was endeavoring to work them out to the fullest possible extent. That instead of repeating familiar forms wrought out on a large scale elsewhere she was experimenting, in this isolated field, in a somewhat free-handed way on new and original forms. Or is it perhaps possible that this endemic flora is the original one of hoary antiquity onto which the epidemic flora has been grafted, and thus through long ages has had the time to develop its peculiarities and multiply its forms.

The Hawaiian flora is also peculiar in its poverty.

The Palm is the trade-mark of the tropics. A tropical landscape without palms, to the ordinary mind, is a palpable untruth, yet the palm was conspicuous by its absence from the original Hawaiian landscape. We have to be sure the ubiquitous Coconut palm, presumably introduced by the early Hawaiians. Other than this we have only two species of fan palms, not striking by any means, nor at all important as a factor of our forest growth. In a few places, at a considerable elevation, they may be frequently met with, but mostly they are isolated and lonesome aristocrats overlooking the surrounding vegetation.

Orchids are also expected in tropical forests and visitors to our shores have mental visions of flaming racemes of pendant orchids swaying from our forest trees. We have as a matter of fact three species, poor, little, inconspicuous, washed out affairs. Conscious of their meanness they hide themselves away under the undergrowth, and never dare to climb up into trees or make themselves conspicuous. No one would ever take them for orchids.

The Hawaiian forest has neither the dignity of the temperate forest, nor the wealth of the tropical jungle. Large, stately, impressive trees are the exception. The trees are more or less stunted and gnarled and twisted in the struggle with the untoward conditions of rocky ridge and fierce trade wind. There is a rank undergrowth of ferns and shrubs which makes a Hawaiian forest difficult of access, but there are comparatively few of the trailing vines and lianas which give character to the ordi-

nary tropical forest. One, the ie-ie, to be sure is very prevalent, and adds very much to the tropical beauty as well as the impenetrability of the Hawaiian forest, but this is only a suggestion of what the Hawaiian jungle might be if there were many more of the same kind.

COTTON CULTURE IN HAWAII.

BY F. G. KRAUSE,

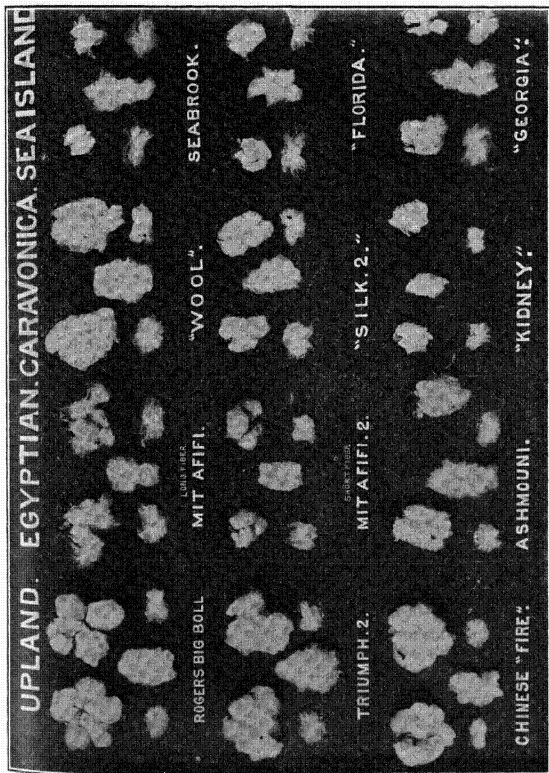
Agronomist Hawaiian Agricultural Experiment Station.

THE cultivation of cotton in Hawaii dates from the earlier part of the last century, when Don Francisco de Paulo Marin, to whom is accredited the introduction of many valuable plants to these Islands, is reported to have planted the first cotton seed. It is said that for many years thereafter every native kuleana contained within its enclosure one or more cotton trees, which were prized for both ornament and economical uses. Doubtless many, if not all, of the old gnarled "kidney" cotton trees now scattered over the Islands are the direct descendants from these early plantings.

In 1835 or '40, a cotton-mill was erected at Kailua, on the Island of Hawaii. Cloth is said to have been manufactured for the use of the natives, but, beyond a crude beginning, the industry does not appear to have been extended.

A new impetus was given to the industry during the Civil War in the United States, when the cost of cotton rose to an almost fabulous price. At this time a quantity of Sea Island cotton seed was sent to the late H. M. Whitney, who distributed the seed widely, at the same time agreeing to purchase all of the seed cotton produced at a good price. For a time the industry flourished.

The late Hon. J. O. Carter told the writer that he well remembered watching the scores of Hawaiians from all over the island as they delivered their crops of seed-cotton at the old Honolulu Hale on Merchant street. Here Mr. Whitney



FOUR TYPES OF COTTON SHOWING THREE PRINCIPAL VARIETIES UNDER EACH TYPE. GROWN EXPERIMENTALLY BY THE HAWAII EXPERIMENT STATION.

had set up a number of foot-power gins for removing the seed preparatory to shipping the lint to Boston.

The quality of the fiber was considered very fine, and realized upwards of \$1.00 in currency per pound. Mr. Jas. W. Robinson of Brewer & Co. has still in his possession a fine collection of assorted spooled thread manufactured in Boston during war times from Hawaiian-grown cotton. The customs records show that the largest shipments of cotton made in a single year amounted to a little over 22,000 pounds; this was in 1866. With the decline in prices, the production fell off gradually, until in 1874, the last shipment, amounting to about 2000 pounds, was made.

Much has been written about the possibilities of developing cotton into one of Hawaii's important industries, but for a few spasmodic attempts no systematic effort, such as has marked the development of the sugar, coffee and pineapple industries, has been made to revive the cotton industry. However, three years ago several parties became interested in a new tree-cotton from Queensland. This was the Caravonica cotton, which has since become widely known. This is still the principal variety grown in Hawaii.

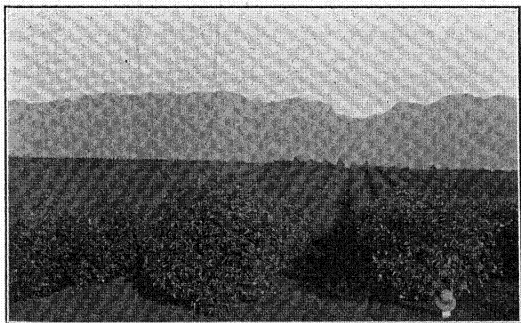
In 1905, the Hawaii Experiment Station tested a half dozen varieties of American cottons. These were very favorably reported upon. In 1907, Mr. Wm. M. Langton of the "Paradise of the Pacific" handed over to the station the first Caravonica cotton seed planted in Hawaii. This had been sent to him by the originator for trial, and the original plants grown from this seed are still thriving at the station grounds. The year following (1908), at the request of several interested parties, the station imported 100 pounds each of the two best strains of Sea Island cotton seed obtainable in the South. This seed was widely distributed, and at the same time experimental plots were laid out at the station. Since 1909 the Federal Station has had thirty varieties under test. These extensive trials made in several different locations were on the whole very encouraging.

Without exception the quality of the lint produced was of fine quality, and a high authority in the South has given it as his opinion that no finer Sea Island cotton could be

found anywhere in the South that year. Since then quotations have been received from a number of reliable sources, ranging in price from 14 cents to 29 cents per pound for the Caravonica cotton, to 20 to 35 cents per pound for the Sea Island cotton.

The cottons thus far grown in Hawaii are of four more or less distinct types:

I. The southern upland cottons, which are characterized by their fuzzy seed and short, but strong, lint. The plant



PART OF 25 ACRE FIELD CARAVONICA "WOOL" COTTON ENTERING SECOND YEAR OF GROWTH, KUNIA, OAHU.

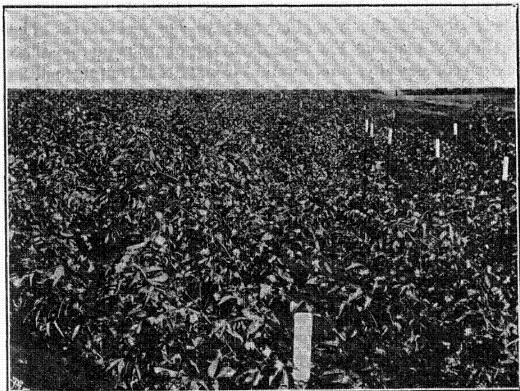
is compact, bears heavily, of large, well-opening bolls, which mature early, the cotton being ready to pick within about six months of sowing the seed. The price ordinarily ranges from 8 to 12½ cents per pound, but during the present high price of cotton attained the unusual price of 20 cents per pound. Samples submitted by the Experiment Station readily brought a 15-cent quotation before the high-water mark in prices had been reached. While grown wholly as an annual in the Southern States, three-year-old plants at the station are as thrifty as ever, one single plant yielding during the present season approximately 1000 sound bolls,

which is equivalent to about ten pounds of seed cotton. In ordinary culture the upland cotton is planted 12 to 30 inches apart in rows $3\frac{1}{2}$ to 5 feet apart. Under Hawaiian conditions the greater distances—i. e., $2\frac{1}{2}\times 5$ apart, giving 3400 plants per acre, has been found the most desirable. Under favorable conditions, 1500 to 3000 pounds of seed-cotton, running 35 per cent. of lint, has been produced experimentally on a small scale. The large, open bolls, running about 85 to the pound, pick easily, and in general are found to be freer from the destructive boll-worm than other sorts. Notwithstanding its low price compared with other sorts, this type of cotton may yet prove profitable in some localities.

II. The Egyptian type of cottons, which constitute a number of well-established varieties, is closely related to the Sea Island type. The seed is smooth and black, entirely without the fuzz which characterizes the upland cotton. The general growth of the plant is also similar to the Sea Island. The lint, however, is of a brownish tint, and the fiber is less silken and shorter than the Sea Island. In several tests made of three varieties of Egyptian cottons they have proved exceptionally vigorous growers and heavy bearing; individual plants having produced over 300 bolls, equivalent to about three pounds of seed cotton, when planted in regular rows. The usual distance of planting this variety is $2\frac{1}{2}\times 5$ feet apart. Samples of station-grown lint have been submitted to experts who pronounced the product first-class, and quoted its value at from 20 to 29 cents per pound. The great bulk imported into the United States from Egypt brings about 20 cents per pound. The one drawback to this variety lies in the inclination of its brittle wood to splinter in windy weather, or when heavily laden with bolls. This type of cotton deserves further trial, but is not recommended for excessively moist or windy locations.

III. The Caravonica cottons, as has already been stated, are of an entirely new type. They are said to have originated some ten years ago in Queensland from an artificial cross between an Indian or Peruvian tree-cotton and the well-known Sea Island. The originator, Dr. Tomatis, developed three strains from this cross, which he named Cara-

vonica "Wool," "Silk," and "Kidney." The former type is the only one being considered by the Hawaiian grower. It is characterized by its large, compact, three-locked bolls, which bear a very strong medium-coarse fiber of good length, a high grade averaging one and one-half inches or over in length. Select specimens have borne as high as 44 per cent. of lint, but the average is about 38 or even as low as 35 per cent., which is considerably higher than that of most other



EXPERIMENTAL FIELD OF FIRST YEAR SEA ISLAND COTTON YIELDING AT THE RATE OF 500 POUNDS LINT. PER ACRE.—HAWAII EXPERIMENT STATION.

cottons. The "Wool" strain of Caravonica cotton in its present development is a typical tree-cotton. It is of unusual strong, upright growth, but sends out branches freely along its main stem. These laterals may in time subordinate the main stem as the plant develops. The plant is easily pruned to assume almost any shape that can be found in a well-shaped deciduous fruit tree, and is best pruned in a similar manner, since the objects sought are alike in both cases. The tree does not attain its full development until

the second or possibly the third year, when its maximum yields are produced. Trees rarely produce a pound of seed-cotton within the first year, but during the second year may yield several pounds. Authentic cases are on record showing individual trees to have yielded over five pounds the second year, and more than seven pounds the third year. Owing to the large size attained by this variety the plants should be set at least 5x10 feet apart. On rich soil with a moderate amount of moisture, 10x10 feet apart is not too great a distance. More recently several planters have planted their trees on the triangular system, 7x8 feet apart. This method of planting has the advantage of utilizing the space most economically, and permits of equal cultivation in three instead of two directions. The rate of planting ranges from 435 to 870 plants per acre. From the data given it will be easy to calculate acre yields and profits—theoretically.

The following example is based on experimental data and indicates possibilities when all conditions are favorable: With distance between plants 8x7 feet, the number of plants per acre is 777; placing the average number of bolls per plant at 100, which would yield one pound seed-cotton, containing about 40 per cent. lint, would be an equivalent of 310 pounds of lint per acre the first year. This should bring 25 cents per pound, or \$77.50 per acre gross income.

The yield should be doubled the second year and tripled the third year, when the plants have probably attained their maximum yielding power. The cost of producing the crop outside of rentals and interest on money invested will depend largely on location and management. Several growers have told the writer that the cost of preparing the ground, cost of seed, planting and subsequent cultivation ranges from \$25.00 to \$40.00 per acre for the first year. The cost of picking would amount to from 1 to 2 cents per pound of seed-cotton additional. The cost of production the second year should not exceed the first, and would in many cases be considerably less, although the cost of pruning and working over inferior trees by budding, which has proven eminently practicable on a small scale, may prove a considerable item of expense the second year. Caravonica cotton has

many qualities to commend it to the Hawaiian grower. It appears to thrive in almost any well-drained soil, from the sandy beaches at sea level to an elevation of 1600 feet. It has proved the most drought resistant variety thus far tested, and will stand a moderate amount of moisture, although the wood becomes very brittle from excessive moisture. And in that condition shatters badly, when exposed to high winds.

Caravonica cotton produces medium to large bolls, which are easily picked, and appears to be the variety least subject to attacks of the boll-worm. Being perennial, it does not require replanting for a number of years. Two of its main drawbacks are, the lack of uniformity of the strain now available, and the fact that it yields so lightly the first year. However, both these shortcomings are in a fair way to be remedied by careful breeding. The experiment station has now growing an acre of pedigreed stock, the product of a single plant in the third year of selection. The general growth of the plants as well as the fiber is proving very uniform. Furthermore, there is every promise that the plants will yield over a pound of seed-cotton per tree within the first twelve months after planting. Twenty-nine cents per pound has recently been quoted for this action.

IV. The Sea Island cotton is the highest type of cotton now on the market, and commands as high as 50 cents or more per pound for the best quality. Its culture in the past has been rather limited, the finest staple being grown on the Sea Islands along the South Carolina coast. As has already been mentioned, this is the type of cotton which was grown almost exclusively in Hawaii during the Civil War. Then, as well as now, the quality grown here has been classed as "fine" or "Extra fine Island," and recently has been quoted as high as 35 cents per pound. Sea Island cotton appears to be more exacting in its requirements than are the other types mentioned. The low and moderately moist lands are apparently best suited to its culture here, and this is not to be wondered at when it is remembered that in the South the best Sea Island is grown near the sea coast in low-lying lands. The salt and humid atmosphere is also supposed to exert a beneficial influence on the quality of the fiber, and it

may largely be for this reason that the best samples and largest yields grown in Hawaii thus far have come from the beach lands at Hauula, Oahu. Other lots grown at Waialua and Kaneohe gave similar results. On the other hand, a fine quality of Sea Island has been produced on the semi-arid uplands at Kunia and Waipahu, but there the yields have thus far proved too small to be profitable.

Experimental yields on one-tenth acre plots at the Experiment Station have yielded as high as 700 pounds of lint per acre the first year from seeding. Other yields have been reported exceeding 500 pounds lint per acre. But as yet no extensive planting of this variety has been reported, excepting a fourteen-acre plot now being harvested by the Pearl City Fruit Company. Now that a fine strain of seed has been developed in Hawaii, a number of enterprising growers contemplate extensive plantings of this variety. The Experiment Station recommends planting this variety $2\frac{1}{2} \times 5$ feet apart. This is somewhat wider planting than is practical in the Sea Islands, but has generally given good results locally. Early planting is recommended for all localities not too wet and cold. January and February plantings have invariably greatly outyielded later plantings. This appears to apply to all varieties. The utmost care should be taken to secure a pure strain of seed in any case, but this is especially important with Sea Island cotton, since upon its fineness, length, and uniformity depends the price. Furthermore, a select strain of seed means greater quantity as well as quality. And with Hawaii's greater cost of production, every possible advantage will be required to make the industry the success it is entitled to be. Aside from the problem of labor, which is always with us, the writer can see at present only one drawback to the rapid development of the industry. This is the problem of insect pests which affect every agricultural crop here, as elsewhere. But as they have been successfully combated in the past, he sees no reason why the grower of this crop cannot likewise overcome this difficulty.

At least 500 acres, in patches varying from 100 plants to almost 100 acres, are scattered over the Islands at this writ-

ing. Plans have been perfected to at least double this acreage next year. After that it is but reasonable to expect a rapid increase should these experiments prove at all promising.

While still in the experimental stage, the writer has full faith in the future success of the cotton industry in Hawaii, and perhaps ere any one realizes the fact there will have happened the glowing success so enthusiastically prophesied by Mr. Timmons, who has written so interestingly in former issues of the Hawaiian Annual.

EARLY ATTEMPT AT SILK CULTURE ON KAUALI.

THE following account of the early attempt to establish the silk industry in these Islands and the difficulties met with in the effort, written at the time, will refute the oft-repeated story attributing the cause of failure to the Sabbath restrictions imposed upon the people which prevented the collecting of fresh leaves for the regular feeding of the silkworms.

“Considerable interest has been felt among those who are interested in the prosperity of these Islands, in the experiment which was made at Koloa, on an extensive scale, in the raising of raw silk as one which, if successful, would not only afford a valuable export, but prove an important branch of domestic industry, giving suitable and profitable employment to women and children. Some years since, several gentlemen, attracted by the even temperature of the climate and the rapidity and vigor with which the mulberry plants grew, conceived the idea of establishing a silk plantation. Further experiments having confirmed their design, a spot of land embracing about three hundred acres, was selected and leased for that purpose. It is most delightfully situated, about three miles from the beach, on gently undulating ground, bounded on the southern and western sides by a fine brook, affording valuable mill privileges, and on the opposite by an

abrupt range of well-wooded hills, attaining an elevation of two thousand feet. * * * *

“After the land was secured, a large portion of it was immediately planted with the native or black mulberry, which bears but a small leaf, and was the only variety on the Islands (excepting the *morus papyfera* and a few of the *morus alba*) at that time. It flourished beautifully and bore a great quantity of leaves. One, taken from the field at random, of eight months’ growth, afforded three and a half pounds of leaves, and in six weeks after it was wholly stripped, it leaved out again, so as not to be distinguished from the rest. So much were the proprietors encouraged thus far that they imported another variety of the mulberry from China, known as the Canton, which thrived well, and afforded much more food in proportion to its size, some of the leaves measuring eight and ten inches broad by twelve inches long. They were all planted in hedge-rows, from six to ten feet apart in the rows, and were allowed to attain a height of from six to eight feet. The ground was kept entirely free from weeds. The Chinese worm was also imported at this time, but fed only in sufficient quantities to preserve a sufficient number of eggs for stock. One of the proprietors embarked for the United States, where he spent eight months in acquiring information in regard to the business, purchasing machinery for the reeling, which was intended to be done by steam, and in securing the best varieties of trees and eggs, with a family of three persons to superintend cocooneries and to teach the natives to reel. So highly was this enterprise thought of then (1838), in the United States, that the proprietors could have realized an advance of 200 per cent. on their investment thus far. Even the most skeptical, in regard to the business there, could see no obstacle to its success in a climate where the trees gave heavy crops the year round, and the temperature was such as to require but little artificial protection for the worms. Labor and buildings were also exceedingly cheap, it being found that common, thatched buildings, such as could be erected at the expense of a few dollars each, would serve both to feed and reel in, thus obviating the heavy expense re-

quired for cocooneries and reeling houses in less favored climates. The agent arrived from the United States in the spring of 1839, and found the plantation in a flourishing condition, and well stocked with trees. He brought with him the best varieties of the American worms, including the mammoth white, and yellow, and the peanut, also a fine lot of the *morus multicaulis*. These were planted immediately, thrived well, and were so highly esteemed that cuttings of but two buds each were sold to others about engaging in the same enterprise for from one to two dollars the slip. The leaf grew beautifully, thick and heavy, and to a great length, sometimes measuring fourteen inches. Its only advantage, by way of food, appeared to be its size and rapidity of growth. The worms fed with equal avidity upon all the other varieties. It was then concluded to let the black mulberry run out, and to plant the latter in its place. After the first year it was discovered that if the mulberry was allowed to grow beyond a certain size it withered and became valueless as food. This was remedied by cutting it down yearly (the month of January, when vegetation had mostly ceased growing, being the best time). Young and vigorous shoots then shot up, in two or three months, suitable for food. A sufficient quantity of trees being now planted and doing well, it was determined to commence feeding the worms in numbers. The Canton white and yellow varieties were first tried, but they formed but small cocoons, of exceedingly fine fibre, which made a beautiful silk, but a large proportion of it was wasted in floss; so much so, that it required many thousands more to form a pound of silk than the American variety, and it was found impossible to make them profitable. The American eggs were then exposed. No one had doubted but that they would hatch with the greatest readiness; though in good order, they hatched but a few at a time, from four or five to as many hundred a day, and none on some days. It was thought that the eggs from these would become acclimated, and this irregularity cease; but it proved worse than before. Some of the eggs hatched in ten days from the time they were laid, while others would not in as many months. Every experiment, by way of artificial heat, freezing, wear-

ing them next to the person, and other methods were tried, but all in vain. It was discovered that they needed a winter, and many were packed up in bottles and sent upon the neighboring mountains to remain several months. Their height being but four or five thousand feet, did not produce the requisite temperature, and from their being but imperfectly packed most of them decayed. Those that hatched formed beautiful, fine cocoons, with but little floss, averaging about four thousand to the pound of raw silk. The experiment was now tried of crossing the American breed with the Chinese, and with the greatest success. Two varieties of cocoons were produced, inclining more to the American than the Chinese, one of a deep orange color, the other of a delicate straw color. These answered admirably, requiring from five to seven thousand to the pound of raw silk. They reeled with the greatest ease, so much so that native women, with but a few days' instruction, could turn off from one-half to three-fourths of a pound daily. Their eggs hatched again in from fifteen to twenty days, and came to maturity in twenty-four, and continued to do so for upwards of a year, without degenerating in quality. It was attempted to cross this breed again with the pure American, but the worms resulting therefrom were found to have so many characteristics of the American as to be of little use.

"It was now thought (the spring of 1840) that every difficulty was overcome, and a profitable business would soon make amends for previous delays and losses. But the proprietors, after expending most of their funds in thus getting under way, were doomed to disappointment. A drought set in, such as had not been known before since the missionaries first resided upon the Islands, twenty years since. The trees which had been so flourishing withered under its influence, and, at the same time, a species of aphides, or wood louse, much like the chiton shell in appearance, attached itself to them, speedily covering every limb and leaf upon them. What juices were left by the drought were soon exhausted by those parasites, and the trees became lifeless and leafless. The crops of worms which had commenced feeding, by hundreds of thousands, were obliged to be thrown

away, and thus a season's labor was lost, while a heavy expense was incurred. In addition to this, a species of spider, of a plump, many-colored body, of the size of a chestnut, added their ravages to the other destroyers, by attaching themselves, by millions, to the young trees, by means of a firm, hard web, through which it was quite difficult to make one's way. How far these latter are the result of the drought, it is impossible to say, but it is not at all improbable, if a favorable season should set in, that they will be destroyed. The strong trade-winds also did damage by whipping the leaves, and, during the winter season, when a 'kona' or southerly gale blew, the fields and vegetation generally were as much affected as if they had been touched with frost. Leaves, flowers, and blossoms wilted and fell from their parent stalks, crusted, apparently, with a coating of salt. * * * *

"In 1840, the proprietors, unable to bear any further expenses in prosecuting a business against so many obstacles, relinquished the undertaking."

ORNAMENTAL PLANT-LIFE OF HONOLULU.

BY WILLIS T. POPE,

Superintendent Public Instruction.

FROM the slopes of the extinct crater of Punchbowl may be seen the verdant landscape of the City of Honolulu, reaching from Diamond Head to Moanalu. This island metropolis is unique for its great variety of ornamental vegetation. People who were living here about three-quarters of a century ago tell us that they have seen these same lowlands almost destitute of trees and shrubs, and Honolulu a mere village of frail structures. In the olden days there were groves of cocoanut trees in various places along the seashore, with an occasional clump of *hau* and *milo* trees. The streams, to some extent, were lined with the native cassia that bursts out in a profusion of yellow flowers several times per year. Now we can proudly pro-

claim this region one vast botanical garden, with representatives of most every climate and country on earth. Side by side we find these specimens of the great plant kingdom thriving in the gentle sub-tropical climate. In most every respect the tropical plants seem to predominate.

In considering the ornamental plants of Honolulu one can but little more than enumerate the most important species. Of these the flowering trees seem to be of greatest importance. Visitors from the mainland express surprise on seeing so many flowering shrubs and trees, and it is not uncommon to hear them mention the scarcity of flower beds. The absence of flower beds is no doubt largely due to conditions very agreeable to the easy culture of a great many foliage plants. These foliage plants retain their beauty the year around and naturally displace the flower bed annuals which can be attractive but a portion of the year.

The great majority of our trees may well be classed as evergreens—that is, they retain their foliage from year to year. A careful study of any species will generally reveal something of an annual rest period even in the most prolific conditions. This can be detected by the shabby appearance of the foliage and the failure of new growth to develop. However, there are a number of our trees that are deciduous—that is, they shed their leaves annually. The habitat of these, of course, naturally being temperate or sub-temperate regions. Only a few have a distinct fall of leaves as though killed by autumn frosts. They tend to give the appearance of winter, a condition foreign to Honolulu.

With the exception of the business portion of the city, the entire place abounds in vegetation; the streets and roads, the public parks, the private grounds; in fact, the entire landscape from the mountain tops to the sea is a great diversity of plant life. The more one investigates them the more interesting they become. As to just how these many different members of the plant kingdom got into this little isolated locality is quite a problem. The writer at one time attempted to make a list of various plants that came under his observation, dividing them into several groups based on their period of introduction. Accurate information as to their past his-

tory is difficult to get. Much of it must come from old records, and from kamaainas (old-timers) who happen to know. Very often such information is incorrect and statements from different sources contradict.

Although only a few years have gone by since the beginning of the introduction of our Honolulu plants, people in a general way are ignorant as to how, from whence, and by whom, the larger part of them were introduced. Most of us know the story of the introduction of the *algaroba*, or the *royal palm*, or some other familiar species, but many of our charming plants stand in luxuriant silence without being accounted for.

There must have been a time when the Hawaiian Islands were absolutely destitute of any forms of plant life. All have at some time migrated from somewhere. The introductions consistent with nature fall on either one side or the other of the historical date of the discovery of the Hawaiian Islands by Captain Cook in 1778. Definite information as to plant introduction before this date of the coming of white men is very vague, and many plants of that period are now merely considered as indigenous to the country. It is believed that a great many of these early plants were growing in the islands when the ancient Hawaiians first came here, estimated at about 1400 years ago. Very few of the species now conspicuous in the locality of Honolulu would fall into a class belonging to that period.

The koa no doubt was here long before the Hawaiian, and it is very likely that the cocoanut was growing here then. Its method of migration by seed dispersal is evident. A good authority writes that the Hawaiians must have found forests of sandalwood, naio, wiliwili, ahakea, kauila, hala, ohia and tree ferns when they came here. These were, of course, most all trees of particular importance on account of their wood value.

There is no doubt but what the Hawaiian brought more than a score of plants, all of which are still to be found throughout Polynesia and Malaysia. All have some particular value, and have accompanied the race in all their migrations, yielding them food, intoxicating beverages, materials

for cloth, rope and other domestic purposes. Dr. Hillebrand, in his "Flora of Hawaii," says that the seedless breadfruit, the sugar cane, banana and the taro could not possibly have reached these islands by any other than human agencies. There is abundance of evidence to show that frequent visits were made to southern island groups in remote times, and the number of plants introduced by them may be many more than generally supposed.

Although there are very few attempts to grow the sandalwood tree in Honolulu, the species is Hawaiian and deserves mention. These islands once abounded in this valuable forest tree, but the great demand for the strongly scented wood by the Chinese, who used it as incense and for the manufacture of fancy articles, caused an extensive exportation between the years 1810 and 1825, which almost completely devastated the Hawaiian forests of the species. It is interesting to note that the Chinese characters on oriental charts have from those early days indicated this group as the "Islands of fragrant sandalwood."

Some one in writing of Hawaii says that the islands have undergone *three* distinct commercial periods since they have been known by white men. The first of these was the *sandalwood period*, and, although vigorous, was of short duration, the entire period lasted for but fifteen or twenty years, and practically ended with the extermination of the product. Following this was the well-known whaling period, which passed in about fifty years, owing to the scarcity of whales and the replacing of whale oil by the use of petroleum. The whaling time was succeeded by the present sugar period.

KOA

Specimens of the koa, (*Acacia koa*), are occasionally noticed in cultivation about the city, but being of slow growth and more naturally adapted to an altitude varying from 1500 to 7000 feet, large koas are scarce. In some portions of the islands, where the climatic and soil conditions are most suitable for these excellent trees, they grow to enormous sizes. Long ago the natives selected large trees from the koa for-

ests and carved from their trunks huge war canoes many feet in length. Such canoes were often durable enough, when finished, to last almost a century. They were much used as conveyances between the islands, and not uncommonly for long voyages across the ocean to islands of the South Pacific. Some of these old-time dug-outs are still to be found about the islands.

The koa has long been recognized as one of the choicest cabinet woods on account of its texture and beautiful colored grain susceptible of a high polish. Although there are great forests of these valuable species, the price of the lumber ranges from fifteen to fifty cents per board foot, much difficulty being encountered in lumbering and transportation.

Botanically, the koa is very interesting. It stands as a tall tree, often attaining a height of sixty or eighty feet, with far-spreading branches that seldom bear what the botanist would call true leaves. The flat, leathery blades are falcate in shape—that is, they are curved like a scythe blade. They are in reality flattened expanded leaf-stalks. The true compound leaves are composed of many small leaflets contained on small branches springing from adventitious buds near the base of the trunk, or may normally exist as foliage of the young seedlings. The koa flowers are soft white heads composed mainly of stamens. Seeds are dark brown in color, about a dozen to a pod.

PALMS

The great palm family is well represented with numerous species, all of which seem to delight in their surroundings. While the term *palm* is a general name for plants that the botanist has classified as belonging to the natural order Palmaceae, it is often popularly applied to some other plants. In a short trip through a portion of our residence section there may be seen palms of many kinds, palms with slender stems, and palms with stocky trunks, some with giant fronds, fan palms and feather palms. A great variation also exists in their many kinds of seeds, which range from small hard and almost useless seeds to the much valued cocoanut, the largest of known seeds.

The most stately of this group of trees is the royal palm, *Oreodoxa regia*, always rigid and erect, the trunk gracefully tapering and shaped cylindrical as to give the impression of having been turned in a machinist's giant lathe. The tops consist of beautiful pinnate fronds. Less striking but just as interesting is the date palm, *Phoenix dactylifera*. The trunk is huge and shaggy, and crowned with a great mass of long graceful leaves, often intermingled with bunches of yellow fruit. The ornamental specimens indicate that a date industry might be made a success in Hawaii.

The wine, or toddy palm (*caryota urens*), native of Southern Asia, grows with considerable vigor. It reaches its normal height of thirty or forty feet in about fifteen years. When mature, the wine palm begins fruiting near the top and continues to develop long clusters of flowers and fruit from the nodes down along the trunk until the vitality of the entire plant is exhausted. Each cluster contains hundreds of grape-like fruits, making up a great mass several feet in length and in weight as much as a man can carry. Although these wine-colored clusters of fruit are very attractive, they are not suitable to eat. Young wine palms are excellent ornaments for the home grounds until after fruiting; from that time it remains shabby until it dies of old age.

About the city are a few huge specimens of the well-known California palm, *Washingtonia*. They are easily distinguished by the great mass of fan-shaped leaves, many of which become brown and dry each year but are retained about the top of the trunk in a great mass. The long frond, Attaleas, are also curiosities of which there seem to be species with distinct trunks, while others exist as mere bunches of fronds, rising thirty or forty feet from the ground. Another rare and interesting tree is the bottle palm, *Hyophorbe americana*, extraordinary on account of the peculiar bottle-shaped trunk.

There are a number of species of pandanus, all of which thrive in various parts of the Territory. The hala, *Pandanus odoratissimus*, is a very general ornamental plant. Naturally it is found in the lower dry regions up to an elevation of two thousand feet. The individual tree grows to a height of about twenty-five feet with a top that is rather spreading.

The long, blade-like leaves are in clusters at the ends of the branches. They have long been used by Hawaiians for thatch, mats and other necessities. The hala supports itself in almost inaccessible rocky places by its numerous prop-like aerial roots, which support it against severe winds. The pandanus has the reputation of being one of the first forms of vegetation that appears on newly-formed Pacific islands.

The queen of all the palms is the cocoanut, (*Cocos nucifera*), which is beyond doubt the most universal palm. It is found throughout the tropical world. The original habitat is not definitely known, but it is placed by the botanist as native of the tropical region of America. Its extensive distribution can easily be explained for the large buoyant, impervious, boat-shaped husk or seed, covering enables it to be carried across the ocean by the waves without losing its germinating powers; a fine example of one of nature's methods of seed dispersal by means of water. Cocoanuts can be found in the drift on most any shore, and are found floating in mid-ocean, thus making it possible for these valuable trees to fringe the shores of every tropical atoll or rock that raises its head above the sea level. It is natural for them to grow near the shore, and they do not bear nuts well when at a great distance from the salt water. They prefer the coarse sand and broken shells and the litter of the sea. Often it is found thriving on the lava or the coral rock where it is so hot and unfertile that but little else will grow. Their peculiar roots usually extend seaward in search of brackish water, and their long, curved trunks rise to a height of from sixty to one hundred feet; no branches; just a plummy tuft of leaves each fifteen or twenty feet in length, intermingled with clusters of yellowish brown nuts in various stages of development. Though the trunks are long and slender, they are quite durable, and can withstand most any force of wind or earthquake. Like most any plant, they appreciate culture, and are improved by it. We are told that formerly there existed but one variety in these Islands, a variety with a very long, slim trunk, but very large nuts, specimens of which can be easily recognized from several other varieties that are of recent introduction and now to be found about Honolulu.

There are few trees the products of which are more extensively or variously used. In these days, the nuts are used in many ways, and the tree gives a particularly tropical effect as an ornamental plant.

ROYAL POINCIANA.

The Royal Poinciana, or *Poinciana regia*, is a fine tree of medium size, varying in height from twenty to forty feet and with a reputation of being one of the most impressive of tropical trees. The comparatively smooth bark clothes what is naturally a straight trunk, which expands into many branches, forming an umbrella-like top. The foliage is of a beautiful green color composed of large, graceful bipinnate leaves made up of numerous small leaflets.

The Royal Poinciana was named in honor of M. de Poinci, Governor of the West Indies in the seventeenth century. Like a great many other beautiful trees, the Poincianas belong to the great order of plants, Leguminosae, distinguished by their peculiarly-shaped flower and seed vessels in the form of pods.

During the summer season the Poinciana adds a brilliant cast of color to the landscape with its dazzling glow of crimson flowers. As an ornament, this tree has no peer for beauty among the shade trees. The beautiful flowers are followed by large, flat pods twelve to sixteen inches long by one and a half inches wide. The seeds are rather long and slim, mottled gray in color, with cream and brown stripes, suitable in every way for making handsome ornaments. They are peculiar from most other seeds in that they lie crosswise in the pod.

The Poinciana is propagated from seeds and is of easy culture and rapid growth. The wood is of mottled gray color, rather light in weight, and of little use in cabinet work. In Honolulu it is a favorite tree and can be found in most every yard. Travelers know it as a popular tree in Southern Florida, Bermuda, and the West Indies. In fact, it is said to be in cultivation for its ornamental effect in most all frostless countries of the world.

BANANA.

The banana is supposed to have been introduced into the Hawaiian Islands by the ancient inhabitants. It was found growing in abundance when the Islands were discovered by white men. Many of the Hawaiians still call it by its native name, *Maia*. It can still be found growing wild in the mountain gorges. About the city the banana is grown in great abundance, and the numerous varieties vary greatly in size of plant from the Chinese variety of a few feet in height to taller varieties of twenty-five or thirty feet. This large herbaceous plant is much prized for its fruit, textile fiber, and decorative effect in landscape gardening.

The species most in demand for fruiting seldom or never produce seeds, but naturally increase by suckers around the bases of the older plants. These suckers can be removed from the parent plant with a spade, and are ready for further planting.

The Chinese banana is the most commonly grown for its large bunches of delicious fruit. The plant being small, makes it more easy of culture, the fruit easier to gather, and in a general way less apt to be injured by the winds.

The fruit of the different varieties varies greatly in size, shape, color and flavor. In Hawaii, as in most tropical countries, the banana is one of the most important articles of food. Most commonly it is eaten raw, but cooked in various ways is not uncommon.

There is a very beautiful variegated variety that is becoming a popular ornament. *Musa Textales*, the Manila hemp, may be found in our city, and to the ordinary person can only be detected by the abundance of matured seeds that fill the entire fruits. This plant is not grown commercially in Hawaii for its fiber.

HIBISCUS.

A very earnest admirer of flowers and one who is experienced as a traveler, says that Hawaii has a climate that excels most any other in the world for the growing of Hibiscus. There are some private gardens in Honolulu pos-

sessing collections of these plants that are most wonderful studies of plant-life. The variations are so great, and the results so bountiful, through cultivation, processes of pollination, budding, grafting, etc. New types are constantly being produced. The growing of rare and beautiful collections has, with many, become a "fad." One enthusiast says: "It is the flower that I take off my hat to."

There seems to be little accessible record of the introduction of these most gorgeous, everblooming ornamental plants, several species of which are said to be indigenous to the islands.

There is a small tree in the mountain forests of all of the islands that frequently attracts the trumper by its beautiful display of pink flowers. Another, *Hibiscus Breckenridgei*, occasionally found growing in the scrub vegetation of the lee-side of the islands, by cultivation, can be developed into one of the most beautiful of our yellow-flowered plants.

The name Hibiscus is said to be Virgil's name for the Marsh-mallow plants, all of which bear showy flowers. The group now comprises over 150 species, with innumerable varieties and strains. They are found widely distributed in temperate and tropical climates. Among them are both annuals and perennials, and they may be divided, horticulturally, into herbs, shrubs and trees. In a general way we usually think of the hibiscus as a perennial shrub that reaches the height of a small tree, and while most of the species are strictly ornamental plants, there are members of the group that have other uses. Very common in Europe and the Eastern States is to be found both wild and in cultivation the species that is commonly known as the Marsh-mallow, the roots of which are the source of the mucilaginous substance utilized in the preparation of the well-known confection marsh-mallow. This same substance, to some degree, is to be found in most of the members of the Hibiscus family.

The common garden vegetable okra (*Hibiscus esculentus*) is much used for food in Central America and the West Indies, where it is known by the name of Gumbo. Its beautiful yellow flower is a very creditable ornament in any collection of hibiscus.

Of late years the cultivation of Roselle, or Jamaica sorrel, has been encouraged. It is scientifically known as *Hibiscus sab-dariffa*. There are both white and red varieties. The capsular leaves are made use of for making tarts and jellies. They are also used in a number of medicinal preparations. There is also a Chinese species from which is produced a valuable black dye.

MONKEY-POD.

Among the numerous exotic shade trees that meets with general favor is the samang or monkey-pod, known botanically as *Pithecolobium samang*. It is a legume of rapid growth, attaining a large size and dense foliage. I have been unable to ascertain as to how it got its unbecoming name, monkey-pod. In its native land, tropical America, it is sometimes called the rain tree, which is probably due to its bursting into dense foliage shortly after the beginning of the rainy season. Good authority informs us that the tree was introduced into Hawaii by Dr. Hillebrand about 1866. It seems to have been introduced into almost the entire tropical world on account of its dense shade and rapid growth.

It is propagated from seed, and is of easy culture. The wood is very useful and will take a high polish. The heart-wood is of a beautiful dark color with a handsome grain. It has an excellent quality in the fact that it is immune from the attacks of wood-borers. Not only in Honolulu, but on all the islands, it stands in high favor. Its spreading top rises to about seventy feet and shades an area a hundred feet in diameter. The trunks often measure 10 or 12 feet in circumference. In landscape effect it adds much charm to the tropical scenery.

FICUS.

To the great genus *Ficus* belongs one of Hawaii's most interesting groups of ornamental trees. All of the different species that have been introduced thrive in our soil and climate. Although we probably have less than a dozen distinct species of *Ficus*, there are said to be over six hundred, including trees, shrubs and climbers, scattered throughout

the warm regions of the world, some of which are among the tallest and most magnificent trees of the tropics. Dr. Hillebrand states in his Flora that there seems to be no indigenous members of the *Ficus* in Hawaii, but that several species of banyan, the fig and the India rubber tree were introduced among the early importation of plants.

The banyan, *Ficus Benghalensis*, is probably the most interesting of all our trees to travelers. This tree, with its great expanded top, numerous trunks, each having been an aerial root, penetrating the ground from some outstretched branch, reaches a height of from 30 to 70 feet. By means of these aerial roots, the new trunks gradually take the places of the older ones like so many generations, supporting the massive top through countless ages. In African forests, this tree often oversteps and outlives the other trees, which may be seen in every stage of decay, gradually disappearing and leaving the giant banyan the undisputed possessor of the situation. A single banyan will produce a great forest, in which it is impossible to determine the original trunk. A specimen of this tree in the Botanical Gardens at Calcutta sprang from a little seed probably dropped by a passing bird into the crown of a date palm more than a century ago. The main trunk is now about fifty feet in circumference, with 232 additional trunks, and the great top extends over an area 850 feet in circumference, forming a dense evergreen canopy through which sunlight never penetrates.

The famous banyan under which Alexander's army of 7000 men camped now measures 2000 feet in circumference and has 3000 trunks.

The banyans in Hawaii are subject to the attacks of the mealy bug in dry weather, which causes them to look badly and appear somewhat deciduous. *Ficus retusa*, sometimes known as the Chinese banyan, is also an interesting ornamental shade tree. It is often confused with the true banyan, but can easily be distinguished from *Ficus Benghalensis*, as it does not develop additional trunks through the aerial roots extending downward from the branches; the leaves are also much smaller, very shiny and leathery in texture. Fine specimens may be seen at Thomas Square, Lunalilo Home.

and one or two of the most magnificent are in private grounds on School street, near Nuuanu avenue.

In Emma Square there is an excellent India rubber tree, *Ficus Elastica*, which shows its relation to the banyan in the evidence of a few aerial roots that dangle from its lofty branches, as well as in its peculiar little fig-like fruits. *Ficus Elastica* is the well-known India rubber tree of commerce, indigenous to the damp forests of tropical Asia, where it often reaches 100 feet in height. This tree was for a long time the principal source of rubber, and takes its specific name *Elastica* from the elastic nature of the sap after it has been exposed to the air. Of this species there are several variegated varieties, one with leaves spotted with white, and a rare variety in which the leaves are edged with gilt, forming narrow bands about an inch in width along the margins, giving a contrastingly beautiful effect with the glossy green centers of the leaves.

Though rubber plants are not uncommon about the homes in Honolulu, they are not as numerous as in most homes in American cities where it is considered the most popular and satisfactory house plant that has ever been cultivated. This is probably due to its easy culture, hardiness and beautiful foliage. It is estimated that over 80,000 rubber plants are sold annually in the United States for ornamental purposes.

In recent years, the demand for rubber has become so great that it has been found more profitable to obtain the article from other plants that are of more rapid growth.

Ficus Parcelli is probably the most beautiful of the banyan's relatives for the ornamentation of small home grounds. There are several beautiful specimens of this tree in our city. They grow to a height of about 30 feet, having spreading tops, drooping branches and a dense foliage of thin, light green serrated leaves mottled with irregular blotches of dark green and ivory white. During our winter months, these trees bear abundance of beautiful tri-colored fruits, each about an inch and a half in diameter, which add greatly to the beauty of the tree. These beautiful trees can probably be traced to their original introduction by James Veitch, a nurseryman of Chelsea, London, who introduced the original

stock into Europe along with many other plants from the New Hebrides and Fiji Islands about 1874.

Ficus Parcelli has been cultivated in Florida and Southern California, and is occasionally found in greenhouses in New York City and Philadelphia. It is propagated by cuttings of half-ripened wood placed in boxes of sand about three inches in depth and kept quite moist. Though this species has been in Honolulu since 1883, and is of easy culture, few have used this excellent tree for ornamenting their home grounds.

The common name of a plant is usually some local term by which it may be known, while the scientific name is given by some good authority who has first made a careful study of the individual. This name generally stands as correct and the same the world over. The educated person of most any nationality knows something of the old foundation languages, Latin and Greek, and no doubt it is largely for this reason that the scientific names are in most cases Latinized.

The scientific name of a plant is the name of its *genus* followed by that of the species. The name of the genus answers to the surname or family name as of a person; that of the species to the given name. In plant-life a *genus* may be defined as a family of plants agreeing in their flowers and fruits. Most genera consist of groups of species possessing certain characters in common by which they are distinguished from all others. The *species* may comprise all the individual plants which resemble each other sufficiently to cause us to conclude that they are all, or may have been all, descended from a common parent. These species may vary in some particulars as color of flower, or in flavor of fruit, etc., thus giving place for *varieties*.

In a brief discussion of the plant-life of Honolulu, all the representatives cannot be taken up individually. A list is herewith arranged, giving both the common names and the scientific names of many of the attractive plants most commonly seen.

ORNAMENTAL SHRUBS.

Klu	Foliage plant
<i>Cassia occidentalis</i>	<i>Eranthemum tricolor</i>
.....
Castor oil plant	<i>Camellia Japonica</i>
<i>Ricinus communis</i>	Coffee
Jimson weed	<i>Coffea Arabica</i> and several
<i>Datura stramonium</i>	other species
Cotton	Poinsettia
<i>Gossypium</i> , (many species)	<i>Poinsettia pulcherrima</i>
Tree of fire	Hibiscus
<i>Ixoracoccinaea</i> , several varieties	Many species and a great many
Malva or Mallow	varieties.
Several species	Lantana
Panax (Variegated ornamental	Lantana camara
plant)	Myrtle
Several species	<i>Myrtus communis</i> and several
Plumieria	other species
<i>Plumieria acutifolia</i>	Chili Pepper
Brunfelsia	<i>Capsicum baccatum</i> and other
<i>Brunfelsia calycina</i>	species
Foliage tree, red tree, etc.	Leadwort or Plumbago
<i>Acalypha tricolor</i>	<i>Plumbago Capensis</i> and other
Pink leaf fence tree	species
<i>Phyllanthus roseo-pictus</i>	Bauhinia (cream colored flowers)
Pride of the Barbadoes	Bauhinia
<i>Caesalpinia pulcherrima</i>	Croton (many colors)
Pomegranate	Croton—many species
<i>Punica granatum</i>	Oleander
	<i>Nerium Oleander</i> —many varie-
	ties
	Caricature Plant
	<i>Graptophyllum pictum</i> and
	other species

VINES.

Black-eyed Susan	Climbing fig
<i>Abrus precatorius</i>	<i>Ficus ripens</i>
Mexican Creeper	Wax flower
<i>Antigonon leptopus</i>	<i>Hoya Carnosa</i>
Allamanda (two varieties, yellow	Jasmine
and pink)	<i>Jasminus Jasmine</i> (several
Allamanda Schotti	varieties)
Dutchman's pipe	Honeysuckle
<i>Aristolochia sippo</i>	<i>Lonicera</i> (several varieties)
Maloo Climber of India	.....
<i>Bauhinia Vahlii</i>	<i>Monstera deliciosa</i>
.....	<i>Passion flower</i> (several species)
<i>Baumontia grandiflora</i>	<i>Passiflora</i>
Orange trumpet creeper	.....
<i>Bignonia Venusta</i>	<i>Philodendron</i> (several varieties)
Bougainvillea (many varieties)	Purple wreath
<i>Bougainvillea spectabilis</i>	<i>Petrea valubilis</i>
Madeira Vine	African climber
<i>Boussingaultia baselloides</i>	<i>Quisqualis Indica</i> and other
	species

Chance Vine	.....
Clerodendron Thompsonae	Solanum Jasminoides
Morning Glories	.....
Convolvulac, many species	Vanilla planifolia
(Rubber producing vine)	
Cryptostegia grandiflora	
	TREES.
Algaroba	Wi
Prosopis juliflora	Spondias dulcis
Ahakea	Red seed tree
Bohea of several species	Adenantha pavonina
Kukui or Candlenut tree	Siris tree
Aleurites Molluccana	Albizia Lebbek
Banana	Avocado or Alligator Pear
Musa of several species and	Persea gratissima
many varieties	
Breadfruit	Bamboo
Artocarpus incisa	Bambusa of several species
Star apple	Bombax silk cotton tree
Chrysophyllum	Bombax several species
Cashew nut	Jack fruit
Anacardium	Artocarpus integrifolia
Cestrum	Camphor tree
Cestrum diurnum and others	Camphora officinalis
Orange	Cassia
Citrus of many species	Cassia of many species
Duranta	Guava (common wild)
Duranta Plumieri	Psidium
Eucalyptus, (Gum tree, etc.)	Lime
Eucalyptus of several species	Lemon, etc. Citrus
Banyan	Eugenia Rose apple; also mountain
Ficus of many species	apple, etc.
India rubber tree	Many species, several of which
Ficus elastica	are native
Hau	Fig
Paritium tilaceum	Ficus of several species
Kou	Koa
Cordia subcordata	Acacia koa
Loquat	Logwood
Eriobotrya japonica	Hoematoxylon
Pride of India or Bead tree	Mango
Metia Azedarach	Mangifera indica
Macadamia Nut	Monkey pod or Samang
Macadamia ternifolia	Pithecolobium saman
Papaya	Indian Mulberry
Carica papaya	Morinda citrifolia
Pepper tree	Peach
Schinus molle	Prunus Persica
Rose apple	African Locust
Eugenia Jambos	Parkis africana
Naeo or Bastard Sandalwood	Sandalwood
Myoporum Sandwicense	Santalum freycinetianum
Mountain Apple or Ohia Ai	Teak tree
Eugenia malaccensis	Tectonia grandis
Brazilian Plum	White Water apple
Eugenia brasiliensis	Eugenia alba

Portuguese Plum
 Eugenia Jambolana
 Kamani
 Calophyllum Inophyllum
 Thevetia of two varieties
 Thevetia nerifolia
 Tamarind
 Tamarindus Indica
 Silk Oak
 Grevillea robusta
 Wiliwili
 Erythrina monosperma
 Lignum Vitae
 Guaiacum officinale
 Jacaranda
 Jacaranda ovalifolia
 Cypress
 Many species introduced
 Arbor Vitae or Thuya
 Thuya occidentalis
 Litchi Nut
 Nephelium litchi
 Mangosteen
 Garcinia Mangostana

French Cherry
 Eugenia uniflora
 Mexican Almond
 Terminalia catappa
 Cinnamon
 Cinquanomum Zeylanicum
 Tecoma
 Tecoma stans
 Coral-tree or Tiger's-claw
 Erythrina sp.
 Calabash tree
 Crescentia Cujete
 Poinciana
 Poinciana regia
 Norfolk Island Pine
 Araucaria excelsa
 Ironwood
 Casuarina equisetifolia
 Aralia
 Aralia trigyna
 Averrhoa
 Averrhoa carambola
 Olive
 Olea—Europeoea

HERBS.

Air plant
 Bryophyllum calycinum
 Taro
 Colocasia antiquorum
 Caladiums
 Several species, many varieties
 Coleus
 Coleus Blumei
 Cassava
 Manihot utilisima
 Nasturtium
 Nasturtium officinale
 Crocus or Saffron plant
 Crocus of several species
 Easter lily
 Lillium Harrisii
 Wandering Jew
 Tradescantia of several species
 Common Verbena
 Verbena of several species
 Dumb cane
 Dieffenbachia Seguine picta
 Calla Lily or Water Arum
 Calla palustris
 Indian Shot
 Canna Indica and several other
 species
 Sisal
 Agave sisalana
 Ti
 Cordyline terminalis
 Water holders
 Billbergia (several species)

Poha or Cape Gooseberry
 Physalis Peruviana
 Geranium
 Several species, many varieties
 Indigo
 Indigofera Anil
 Chinese Lotus
 Nelumbium speciosum
 Okra
 Hibiscus esculentus
 Bird of Paradise
 Strelitzia Reginae
 Tobacco
 Nicotiana of several species
 Blue Vervain
 Verbena hastata
 Periwinkle
 Vinca rosea and alba
 Night Blooming Cereus
 Cereus triangularis
 Duckweed
 Lemna of several species
 Century Plant
 Agave Americana
 Sugar cane
 Saccharum officinarum
 Job's Tears
 Coix lacrymosa
 Pampas grass

PALMS.

Royal Palm	Wine palm
<i>Oreodora regia</i>	<i>Caryota urens</i>
Cocoanut	Attalea
<i>Cocos nucifera</i>	Attalea excelsa
Bottle palm	Travelers' palm
<i>Hyophorbe americana</i>	<i>Ravenala Madagascarensis</i>
Date palm	Banana
<i>Phoenix dactylifera</i>	Musa
California palm	Beadle nut palm
<i>Washingtonia filifera</i>	.....
Monkey nut palm	Sycas
<i>Cocos sp.</i>	<i>Sycas revoluta</i>
Sycas	Hawaiian palm
<i>Sycas media</i>	.....
Hala	Also many species of ferns
<i>Pandanus odoratissimus</i>	

AN HISTORICAL SIDE-LIGHT.

BY ARTHUR JOHNSTONE.

THOUGH it be of the briefest, readers love to indulge now and then in sidelong glances at the personalities which haunt vaguely, but surely, all subjects of literary and historic interest. In a delightful and wonderful essay on dreaming, more wonderful, indeed, than his strange and memorable confessions as an opium-eater, which it supplements and somewhat explains, Thomas de Quincey has proposed that we should view the human brain as a palimpsest, whereon may be recorded successively the airy types of thoughts and things, which, under the proper psychical conditions shall become at once the nexus and explicative of our dreams and reveries.

It was through the accident of one of these sidelong glances into the past while endeavoring to revive on the mental palimpsest some of the half-forgotten details of the misfortunate last-voyaging of an Island King and Queen, that the following side-light on Hawaiian history was forwarded to me by a London correspondent. It is true that it was not what I had asked for (which at the time could not be found), but it proved to be of as much interest, although

before republication here it seems, in justice to their Island Majesties now forgot by the general public, to need a prefatory word.

Jarves and Alexander have briefly stated the facts of that voyage to England in 1824, and of the unexpected death there of their Majesties in the following July within a few days of each other, the former historian adding some details of the voyage of the *Blonde* which returned to Hawaii with the remains of the Sovereigns. It needs not to repeat here the vexatious events of that untoward and fatal voyage, but at this distance it is easily read between lines how the clinking of that chested gold caused Captain Starbuck of the whaler *L'Aigle* to betray the interests of his royal guests, either to his own designs or to those of others as unscrupulous. On their arrival in England, however, the royal ones were suitable cared for and—entertained, perhaps to their undoing.

Miss Berry, from whose diary the side-light which follows has been taken, had entree at the English Court of that time. Since then the whole of her gossip record has been published, but is now out of print and somewhat scarce; at the time, however, it was known as a graphic entertaining journal descriptive of the doings and sayings of people in high places—otherwise, like King Liholiho and Queen Kamamalu, it is mostly forgotten of men. The word of warning comes best here. On reading Miss Berry's description of their first official reception in England, it will be easy for the initiated to see that she was, like others present, without that sympathetic feeling, that imaginative mood, both of which were so necessary to the appreciation of those two Island Sovereigns, reset as it were among the gauds of civilization—quite out of time and place, yet still warm from nature's heart, human to the core, but truly unfit for human laughter, even though it came from "all the best society," or from any individual thereof. The trouble seems to have been—although Miss Berry failed to notice it—that those who had difficulty in retaining a "proper gravity for the occasion," had not paused to reflect that their propensity to levity was not due to their guests, but rather to the foolish leaders of

the foolish who had bedecked our Island Sovereigns in fashion's flams to fetch them presentable to society, forsooth! Truly it seems a case where those too highly civilized had too little imagination, and hence too little or no appreciation of savage grace in tropical undress. No wonder these poor Royalties were awkward and ill at ease. It was such incongruities between the civilized and outlandish—or rather *barbarian* in the old Latin sense of being “not Roman”—that caused Robert Louis Stevenson in his letters to friends in England, to demand of them imagination and sympathy for his Samoan children, as he loved to call his savage wards. In this view Stevenson was quite right, even though the case of his Samoans was become most pathetic, much nearer to pity *then*, than to the pittance of justice they finally got. Bearing these thoughts in mind, the following from Miss Berry's record will not be read, I trust, to the detriment of their unfortunate Majesties, and that to the prudential reader it may cease to be materially invidious:

“At half-past ten o'clock, I went with the Prince and Princess Lowenstein, their son, and my sister, to Mr. Canning's, the Secretary of State, who received for the first time the King and Queen of the Sandwich Islands. They arrived in the midst of a numerous assembly, all of the best society, and all *en grande toilette* for a large assembly given at Northumberland House. Mr. Canning entered, giving his hand to a large black woman more than six feet high, and broad in proportion, muffled up in striped gauze dress with short sleeves, leaving uncovered enormous black arms, half covered again with white gloves; an enormous gauze turban upon her head; black hair; not curled, but very short; a small bag in her hand, and I do not know what upon her neck, where there was no gauze. It was with difficulty that the Minister and his company could preserve a proper gravity for the occasion.”

“The Queen was followed by a lady in waiting as tall as herself, and with a gayer and more intelligent countenance. Then came the King, accompanied by three of his subjects, all dressed, like him, in European costume; and a fourth.

whose office I did not know, but he wore over his ordinary coat a scarlet and yellow feather cloak, and a helmet with [of] the same material on his head. The King was shorter than his four courtiers, but they all looked very strong, and, except the King, all taller than the majority of those who surrounded them. The two ladies were seated before the fire in the gallery for some time. Mrs. Canning was presented first to them, and then the Duke and Duchess of Gloucester and the Prince Leopold. The Queen took the Duchess of Gloucester by the arm and shook it. One should have pitied them for the way in which all eyes were turned upon them, and for all the observations they occasioned; but it seemed to me that their minds were not sufficiently opened, and that they were not civilized enough either to notice or to suffer from it."

"From the gallery, Mr. Canning, still holding the Queen's hand, conducted them through the apartment and under the verandah of the garden, where the band of the Guards Regiment, in their full uniform, was playing military airs. Her savage Majesty appeared much more occupied by the red-plumed hats of the musicians than by the music. She ought to have been pleased to see that the officer's helmet of her Court surpassed them as to colour. From there they were conducted into the dining-room, where there was a fine collocation. The two ladies were seated alone at a table placed across the room, and ate some cake and drank some wine. They appeared awkward in all their movements, and particularly embarrassed in their walk; there was nothing of the free step of the savage, being probably embarrassed by the folds of the European dress."

After reading this side-light on our local history, which reaches us through a rift in the last century, one might almost conclude that an unsympathetic observer of outré people and bizarre customs may be unjust without intention, quite unconscious, in fact, of their mental lacking. Otherwise how shall the seeming color-blindness of Miss Berry be excused, who in good faith would have made oath no doubt to the assertion that the Hawaiian Queen—who was somewhat noted in her time, I am informed, for having

regular features of the national brown or olive color—was a “large black woman” and had “enormous black arms.” The statement, too, that the Queen was much more taken with the red hats of the Guards’ bandsmen than the music, I think, should be taken with the usual pinch of salt by those who know the widespread love of the native race for music, and their almost habitual practice thereof; on another hand it will be admitted that there have been instances where custom, or fashion, or some cognate frivolity of the time being, has so bedizened official musicians that even a Queen lately from savage-land might easily become absorbed in the civilized oddity to the exclusion for the time of her natural love of melody. This, however, is merely a hint thrown for explanation. There remains withal a much graver injustice which was done their Majesties while in England—or at least between the times of their forthcoming and sad home-returning. During this period they were charged with all sorts of dissipations, either in London or on the way thither, including gluttony, drunkenness, and, I believe, gambling. It was, in fact, for evidence on this point that I was in quest when Miss Berry’s eyewitness came to me. Since that time I have found in the pages of a well-known author, Mr. John Timbs, who has written among others a volume on “English Eccentrics,” the following direct testimony, which seems to be conclusive against that idle slander. In a passing notice of this charge, Mr. Timbs says:

“The King and Queen and their suit were wantonly charged with gluttony and drunkenness by persons who ought to have known better. ‘It is true,’ observes Lord Byron, in his ‘Voyage to the Sandwich Islands,’ ‘that, unaccustomed to our habits, they little regarded regular hours for meals, and that they liked to eat frequently, though not to excess. Their greatest luxury was oysters, of which they were particularly fond; and one day, some of the chiefs having been out to walk, and seeing a grey mullet, instantly seized it and carried it home, to the great delight of the whole party; who, on recognizing the native fish of their own seas, could scarcely believe that it had not swum hither on purpose for them, or be persuaded to wait till it was

cooked before they ate it.' The best proof of their moderation is, however, that the charge at Osborne's Hotel, in the Adelphi, during their residence there, amounted to no greater an average than seventeen shillings a head per day for their table: as they ate little or no butcher's meat, but lived chiefly on fish, poultry, and fruit, by no means the cheapest articles in London, their gluttony could not have been great. So far from their always preferring the strongest liquors, their favourite beverage was some cider, with which they had been presented by Mr. Canning."

To this brief notice Mr. Timbs adds, what may not be generally known, that the then popular comic song of "The King of the Cannibal Islands," was written during that royal visit.

JOHN YOUNG: COMPANION OF KAMEHAMEHA.

A Brief Sketch of His Life in Hawaii.

SOME years ago a series of letters were received here from persons in the Eastern States claiming relationship to John Young, who landed on the shores of Hawaii, in 1790, looking for properties that may have been left by him to which they would be entitled as heirs, with the assertion of his American citizenship. If we remember rightly, his birthplace and residence was given as an interior town of an Eastern State. We know not if an ancestral tree accompanied these letters to show the connection of the applicants and their legal right to their portion in the distribution of the great wealth supposed to have been left by this friend and companion of Kamehameha the Great.

Interest is revived again in the subject by letters to hand recently from persons in Boston for such particulars as may be had relative to John Young; the impression still prevailing that he was an American citizen.

It would be extremely difficult after all this lapse of time to identify Young with American citizenship or even Amer-

ican residence. The fact that he arrived here on the notorious American snow "Eleanor," of bloody Olowalu fame, of which vessel he was boatswain, carries little weight, for, while it may indicate his having shipped in New York under Captain Metcalf at the outset of the voyage, there is also the possibility that he may have joined her at Canton, where she made quite a stay, or at some other of the trading ports touched at en route.

But it is rather damaging to these endeavors to establish such claims when it can be so readily shown as a case of mistaken identity, for John Young was known as an Englishman to all early residents, to voyagers touching here, and, as may be inferred, from the witnesses to and executors of his will; all Englishmen.

Ellis, in his call upon him at Kawaihae, in 1823, terms him "an Englishman who had resided thirty-six years on the Islands." The historian Jarves refers to him as a "rude and ignorant seaman," which accounts for so little being found of his own writings relating to himself or the transactions of his time, in many of which he must have been an important witness or a deeply-interested party. His MS. journal, 1801-1809, in the government archives—more in the nature of a seaman's log—is devoted mainly to irregular jottings of his tax gatherings, presumably for the king.

Of the unfortunately few documents on file in the Archives under the head of "John Young," Vancouver favors us with interesting testimony supplemental to the account furnished in his Voyages relative to him and his companion Davis and their advent in Hawaii, the cause of which marked an important event in Hawaiian History.

Early in the year 1790 the two trading vessels of Captain Metcalf arrived at these Islands, one from China direct, and the other via the Northwest. After a trading intimacy of several weeks at Hawaii the "Eleanor" (mounting ten guns and a crew of ten whites and forty-five Chinese), under command of the elder Metcalf, visited Maui, while its tender, the "Fair American,"* in charge of his son, arrived at Ka-

* NOTE.—The vessel had been a pleasure boat and was lengthened at China: her gunwale was not a foot higher than that of the double canoes of this country, and being navigated and protected by five persons only under the command of an inexperienced young man.—Vancouver Voyages, Vol. III., p. 234.

waihae from the Sound, in March. For the theft of a boat and murder of a seaman belonging to the "Eleanor," at Maui, the elder Metcalf took revenge by the massacre of some hundred or more natives off Olowalu, then sailed for Hawaii to renew his trading at Kealakekua and await the arrival of his son.

For the flogging of a treacherous chief by Captain Metcalf, which transpired on his first Hawaii cruise, revenge was taken by the insulted chief and his clan on the first chance vessel that came their way, which happened to be the small unprotected tender of Metcalf's, whose son they threw overboard, and killed the entire crew except Isaac Davis. These two tragedies transpired about two weeks apart, but Captain Metcalf of the "Eleanor" was kept in ignorance of the swift retribution that had followed his deed.

March 17th, John Young of the "Eleanor" appears to have been invited ashore while the vessel was at Kealakekua, but was restrained from rejoining his vessel by direction of Kamehameha for politic reasons and fearing consequences of the captured craft. The following letter demanding his return is on file in the Archives:

"Eleanor, Off Owhyhe, 22 March, 1790.

Sirs:—As my boatswain landed by your invitation, if he is not returned to the vessel consequences of an unpleasant nature must follow (to distress a vessel in these seas is an affair of no small magnitude). If your word be the law of Owhyhe, as you have repeatedly told me, there can be no difficulty in doing me justice in the business; otherwise I am possessed of sufficient powers to take ample revenge, which it is your duty to make the head Chief acquainted with.

Yours, &c., &c.,

To Mess: S. I. Thomas, (Signed) SIMON METCALF.
I. Ridler,
Jos. Mackey,
John Young."

History informs us that after waiting in vain for some time for his boatswain's return, in compliance with this de-

mand, Metcalf continued his voyage without executing the threatened "ample revenge."

Vancouver, on his first visit, in 1792, makes no mention of meeting with Young or Davis, and it is quite likely they were kept out of the way and he was unaware of their presence; this watchfulness over them being due to their attempt the year before to leave the Islands with Captain Colnett in the Argonaut, particulars of which Vancouver learns on his second visit, in 1793, which he narrates as follows:

"John Young, who was about forty-four years of age, born at Liverpool, and Isaac Davis, then thirty-six years old, born at Milford, have from this period (1790) resided entirely with Tamaahmaah; are in his most perfect confidence, attend him in all his excursions of business or pleasure, or expeditions of war or enterprise; and are in the habit of daily experiencing from him the greatest respect, and the highest degree of esteem and regard. Near the bay of Whyeatea the king has given them three very fine estates; and Kahowmotoo, who is the firm friend of Tamaahmaah * * * and second chief of the island, has presented each with a very fine estate near the east point. Kavaheero and Commanowa, who are considered the next chiefs in power and authority to the two former, have also treated them both in the most friendly manner; but neither of them could speak of Tianna in the same favorable terms. This chief eyes them with great jealousy, and has made some attempts on their lives; particularly on the return of Captain Colnett from San Blas. On this occasion, Captain Colnett, understanding that there were two men on the island, very humanely desired, by letter, that they would repair on board his vessel, and that he would afford them all the protection and service in his power. Young and Davis being extremely averse to their present way of life, concerted a plan for escaping to Captain Colnett's vessel; a measure very contrary to the wishes and inclinations of Tamaahmaah and the chiefs of the island, lest revenge for the capture of the schooner should follow their departure, to prevent which they were always very narrowly watched and strongly guarded whenever any vessel was in sight.

“In reply to Captain Colnett’s letter, Young wrote to him, stating how he and Davis came to be on the island, what had happened with respect to the schooner, and the means that were used to prevent their escaping. This letter was sent off by one of their attendants, who, meeting with Tianna, shewed him the letter. This Tianna immediately took to the king, and, in consequence of his voyage to China, and having lived so long in the society of Englishmen, persuaded the king that he could read its contents. He pretended that Young and Davis had desired Captain Colnett to get the king into his possession, and to keep him until the schooner and they were delivered up to him; and that he then should kill the king and many more of the islanders. To prevent this calamity he earnestly advised the king to kill Young and Davis; after which, he said, no one would know anything about it but themselves.

“Captain Colnett, concluding the two men were prevented by the natives from getting off to him, wrote them another letter, and said, that if they were so circumstanced, he begged they would send for anything they wanted, and if he had it, it should be sent on shore to them. To this very kind letter Young wrote an answer, and told the man who undertook to carry it on board that the Captain would make him a handsome present for so doing. The next day the man returned, and said he was afraid to deliver the letter, as the king had given orders that every man should be punished with death who should carry anything from either Young or Davis to Captain Colnett. This disappointment determined them, if possible, to effect their escape.

“They had in their possession two muskets, with some powder and shot; they loaded their pieces and sat out, but before they had got near to the water side opposite the vessel, they were followed by a great number of the inhabitants, who, being fearful of their guns, did not molest them. Some of the natives, however, endeavored to prevent their reaching a point that was nearly surrounded by water, from whence, being near to the ship, they were in hopes of effecting their purpose. In accomplishing this, Young was obliged to strike one man with the butt of his piece (for

they did not like to fire), and, unfortunately, broke its stock. They had not long been here before the king arrived in his canoe, attended by many others. Tamaahmaah very dispassionately advised them to return from whence they had come; and said, that he would do anything they could wish to render their lives more comfortable, but that he could not consent they should leave the island; assuring them that his people would rebel and put him to death the instant they took their departure. Tianna, who was present, seemed to be of a different opinion; and offered to take Young and Davis on board Captain Colnett's vessel in his own canoe. But the king, well knowing that Tianna only wanted to accomplish their destruction, immediately interposed; and in the kindest manner requested they would on no account accept Tianna's offer, but that they would return in his canoe with him. The confidence they reposed in Tamaahmaah, that they should be subject to no inconvenience in consequence of their attempt to escape, and the earnestness with which he solicited them to go back with him at length had the desired effect, and they both embarked on board his canoe. Davis was in the fore part, and Young in the after part of the canoe, when they were boarded by many others; and Tamaahmaah, observing some violence was likely to be offered Davis, went forward to rescue him, and to prevent any accident took Davis' musket away from him; in the mean time many of the natives fell upon Young, who received several wounds before the king could return to his assistance, who was obliged to strike several of them with his paddle before they would desist.

"After this project was defeated, Young and Davis were never suffered to be both afloat at the same time until our arrival, and they were given to understand that the escape of the one would be fatal to the other. This seemed to be a very politic measure, as the interest they had in each other's happiness and welfare, and sincere friendship and regard that subsisted between them, could not escape the observation of Tamaahmaah, who would readily suggest the expediency of such an interdiction. Thus have Young and Davis since remained, observing that fidelity toward each

other which the true principles of honor dictate under such circumstances."

In a "Sketch of the Character of the Different Leading Chiefs of Hawaii," which Vancouver prepared under date of March 9th, 1793, Kawaihae Bay, Kamehameha is exonerated on the authority of Isaac Davis from all blame for the capture of the "Fair American" and the murder of its captain and crew, being assured of the deed having been executed without his slightest knowledge by a chief named Tamaahmotoo. In closing the testimonial, Vancouver pays Young and Davis the following tribute:

"Residing with Tamaahmaah are three seamen named John Young, Isaac Davis, and John Smith; these I have every reason to believe are subjects of Great Britain, particularly the two former, at least as such they have acknowledged themselves under my authority; and for divers good and essential reasons I have given them my permission still to remain on this island. I therefore, in the name of the king, my master, recommend them to be treated with civility, kindness and hospitality, not only by the subjects of Great Britain, but also those of all other Powers or States who may meet with them; and have in consequence of such recommendation strictly enjoined them to render every service in their power to the subjects of the different European Powers and States, as likewise those of America, &c., that may visit this island during their residence on it.

"Should this representation prove serviceable to those who may meet with it, it will be highly satisfactory to their most obedient servant.

(Signed) GEO. VANCOUVER."

On his final visit, under date of March 2nd, 1794, he leaves the following additional tribute to their beneficent influence:

* * * * "I likewise beg leave to recommend Messrs. John Young and Isaac Davis, to whose services not only the persons, &c., under my command have been highly indebted for their good offices, but am convinced that through the uniformity of their conduct and unremitting good advice to Tamaahmaah and the different chiefs, that they have been

materially instrumental in causing the honest, civil and attentive behavior lately experienced by all visitors from the inhabitants of this island."

The incident of Young's attempted escape evidently cemented the bond of friendship between him and Kamehameha, and the king proved true to his promise of doing all in his power for his comfort. And while he kept Young and Davis for a time under close surveillance, it was in no sense as prisoners. They were made honored companions and trusted warriors in important engagements, notably the contest in Hilo against the forces of Keoua; the naval encounter off Waipio under Keeaumoku; the conquest of Maui that terminated with the battle of Iao, and that of Oahu in the celebrated battle of Nuuanu, in all of which the army of Kamehameha was victorious, whereby he became conqueror of the whole group. Young is said to have had charge of the cannon in these engagements, and at the battle of Nuuanu¹ is credited with firing the shot that put an end to Kaiana, who had seceded from the invading army en route, and joined fortunes with Kalanikupule, king of Oahu.

At the close of this contest, when Kamehameha was called back to Hawaii to suppress the rebellion of Namakaeha, Young was left on Oahu to adjust the new regime affairs, then with a number of foreigners joined Kamehameha at Hawaii. For some years, beginning about 1800, he was appointed to succeed Mokuhia, according to native tradition,² as governor of Hawaii. This must rather have been his superintendency of tax gatherings for the king, when Kawaihae became his place of residence.

Another evidence of royal favor is that of his marriage to Kaonaeha, daughter of Keliimaikai, younger and favorite brother of Kamehameha, who directed that she be brought over from Kohala to become the wife of John Young. This was his second marriage. His first wife (said to be not of rank), was named Namokuelua, by whom there were two sons, Robert, and James, known also as Kanehoa. Both of

¹ The native historian Kamakau says: "The battle between the two forces began at Puaiwa, thence to Laimii, Nuuanu, where the army of Kalanikupule was put to flight and where Kaiana met his death."

² Nupepa Kuokoa, 1867.

these boys went abroad, the elder for an education— as is shown later—and the younger with the Liholiho party to England. Namokuelua died at Kawaihae and the body was taken to Waimea for burial. How early in Young's residence on Hawaii this union took place is not determined, but a letter in the Archives, dated in 1804, referring to Robert having been left at school in America, would indicate the event to have been an early politic step. This letter has not before been referred to, we believe, and gives material that might have connection with the inquiries mentioned at the opening of this paper, were it not known that the lad died before reaching his teens. It is dated at Canton, February 10, 1804, directed to John Young, and is as follows:

"I have sent you by Mr. Davis 20 pieces of Blue Nankeens and two boxes of tea. I left your son Robert well in America about six months since; he is at school and behaves very well. I shall do everything for him that I promised you, you may depend on it. I am very fond of him, and shall take great care to make him a good man. Remember me to Stewart, Davis, and Holmes when you see them, and believe me,

Your friend,

JAMES MAGEE."

It would be interesting to know the boy's age at this time, where and in whose care he was left for schooling, and what became of him. It is said that he died early in his school career and was buried in the States, but no particulars can be gathered.

All references to John Young point to his good influences upon those with whom he had to do. Kamehameha recognized this in sending him to Honolulu when the people felt alarmed at the presence of the Russians. To all Hawaiians he was known at "Olohana," from his boatswain's call of "All Hands" to any duty. That he was religiously inclined is attested by the St. Chrysostom form prayer he wrote in his journal, evidently from memory, and his timely counsel to Liholiho during the several days' debate as to permitting the landing of the pioneer band of missionaries, by the Thaddeus, in 1820, which led to the favorable decision. At least he has been generally credited with lending his influence as stated, but a letter of James Hunnewell's* (first officer of the

* *The Friend*, Jan., 1864.

Thaddeus, on which the missionaries arrived,) would seem to qualify this statement, for, referring to the delay in granting permission for them to land he attributes it to John Young who, while professing to be glad they had come, objected in the councils of the chiefs, saying 'that King George would be displeased if they did so, and was disposed to delay their landing until they could obtain his permission. This was compromised by granting permission to land for one year.'

The bond of friendship referred to between Young and Kamehameha continued with his successors, and he was held in highest esteem by kings and chiefs with no mark of jealousy, or revenge, as in the case of his companion and friend Davis, who is said to have met his death as the result of thwarting the designs of plotters against the life of Kaulaiali.

Young's third son and namesake, better distinguished as "Keoni Ana," grew up as the favorite companion of Kaulaiali, and on the latter's coming to the throne as Kamehameha III., was appointed to and shared in various offices of trust up to his death, which occurred in 1857, in the reign of Kamehameha IV. The second son, Kanehoa, held at times the governorship of Maui and Kauai.

In the latter part of John Young's life he became a resident of Honolulu, the time of removal being probably about 1825. He is shown to have been twice married. The time of the death of his first wife, Namokuelua, and marriage to his second, Kaonaeha, termed in his will Mary Kuamoo, is nowhere given, but it is known that at his death, which took place at the residence of his son-in-law, Dr. T. C. B. Rooke, in Honolulu, December 17, 1835, at the advanced age of 93 years, she and her several children survived him, as did also James Kanehoa, by his first wife. His solicitude for the children of his companion Davis is shown in his will, where he makes them equal heirs with his own, and entrusts the king to see that its provisions are properly administered. This interesting document is as follows:

LAST WILL AND TESTAMENT OF JOHN YOUNG.

In the name of God, Amen! Whereas, I, John Young, being of sound and perfect mind, thanks be to God for the same, but of infirm health, do make and ordain this my last Will and Testament in manner and form following, namely:

First, I hereby bequeath and confirm my dear wife Mary, otherwise called Kuamoo, in possession of all those lands which she antecedent to the date herself has received in free gift from me, To Wit: One land situated in the District of Puna and called Kamomoa; also one land situated in the District of Hamakua and called Koloakiu; also four lands situated in the District of Kohala, namely: Opuowao, Hoomaliohalaoa, Kealahewa, and Kaupo, all on the Island of Hawaii; further, all the rest and residue of the lands which I hold possession of under the King and Chiefs of the Sandwich Islands, To Wit: Twenty-three lands on the Island of Hawaii, namely: Kukuihala, Waikahekahe-nui, Waikahekahe-iki, in the District of Puna; Kukuwau-nui and Kukuwau-iki, in the District of Hilo; Waikoloa, Waiaka-nui, Waiaka-iki, Ouli, Kapaa, Waika, Kiiokalani, and Kawaihae, in the District of Kohala; Hianaloli, Kahului, Pahoehoe-nui, Pahoehoe-iki, Pahoa, Kaopapa, Kalama, Kiilae, and two small Ilis at Kailua, in the District of Kona. Five lands on the Island of Maui, namely: Ulaino in the District of Hana, Halehaku in the District of Hamakualoa, Honokahua in the District of Kaanapali, Kapaloakua and Halea in the District of Lahaina. One land on the Island of Lanai called Maunalei. One land on the Island of Molokai called Kupeke, and two lands on the Island of Oahu, namely: Halawa in the District of Ewa, and Pahoa in the District of Waikiki. I give and bequeath to be equally divided between my surviving children and the surviving children of my departed friend, the late Isaac Davis, of Milford in England, in such manner as it may please His Majesty the King and his Chiefs; Provided always that each and all of the said children receive a just and equal portion. Further, all the rest and residue of my estate, goods and chattels, I give and bequeath to be equally divided among my surviving children, such division to be superintended by His Britanick Majesty's Consul residing at the time of my decease at the Sandwich Islands, or such person or persons as he, the said Consul, may appoint. Further, I nominate, constitute and appoint Alexander Adams and Thomas Charles Byde Rooke Joint Executors of this my last Will and Testament, hereby revoking all other and former Wills by me at any time heretofore made.

In witness whereof, I have hereunto set my hand and seal this twenty-six day of June in the year of Our Lord One thousand eight hundred and thirty-four.

(Sgd.) JOHN YOUNG. [Seal.]

Witnessed (in due form) by
 Dan. T. Aboon,
 Chas. Titcomb.

(Endorsed on back):

“Ua ae au i ka olelo o keia palapala no ka olelo ana e nana wau i ka aina o kana mau keiki e hoohalikelike lakou ika aina aole ehemo iki ko lakou mau aina he aina kauoha a hiki aku i ka lakou mau keiki mau hope e nana kolakou noho ana ike au nei.

(Sgd.) KAUIKEAOULI.

Witnessed by RICHARD CHARLETON,
H. B. M's. Consul for the Sandwich,
Society and Friendly Islands.

Reference to documents on file in the probate court show the following persons to have been left as heirs:

John Young [known as Keoni Ana, son of second wife].

James Young [known also as Kanehoa, son of first wife].

Fanny Naea, Grace Rooke and Jane Kaeo [daughters by second wife].

George Davis, Sarah Davis, and Betty Silva [son and daughters of Isaac Davis], and Mary Kuamoo [known also as Kaonaeha, widow of John Young].

Upon the death of John Young his remains were interred in the royal tomb, as has been the case with most of his descendants. At the erection of the royal mausoleum in Nuuanu valley and removal of the royal dead thereto, in 1865, Young's resting place was assigned in the grounds beside the roadway to the right as one faces the chapel. The tomb is distinguished by a large, heavy slab of Chinese granite, on which is the following inscription, to tell its pathetic story:

Beneath this stone are deposited
the remains of
John Young
(of Lancastershire, England)
The friend and companion-in-war of
Kamehameha,
who departed this life
December 17th, 1835,
in the 93rd year of his age
and the 46th of his residence
on the
Sandwich Islands.

NEW KALAKAUA DYNASTY TOMB.

IN accordance with legislative provision, a new vault has been constructed in the Royal Mausoleum grounds in Nuuanu as the repository for the remains of the Kalakaua dynasty. It reached completion in June last (1910) to the approval of Queen Liliuokalani, and was accepted from the contractors by Marston Campbell, Superintendent of Public Works, on behalf of the Territory. To meet the expense of its construction, the sum of \$25,000 was appropriated, a large portion of which was required for its internal marble fittings and finishings, and the granite monumental shaft surmounted by the Hawaiian crown, to a height of twenty-two feet.

Much difficulty was experienced in excavating its site owing to the solid rock obstruction met with, which greatly delayed the work.

In its ground plan the vault is in the form of a Greek cross, its equidistant arms extending east, west, north and south from a central room twelve feet square, the west section or arm being occupied by the flight of steps, the others containing the crypts. The north and south sections have each nine alcoves, in three rows of three each, while the head or east section has but two, devoted to the caskets of King Kalakaua and his consort, Kapiolani.

The new vault is constructed below the surface of the ground some fifty feet distant from the mausoleum, in the grass plot fronting the Nuuanu avenue gateway, from which the monument will appear the central object.

The ceremony of removal of the royal dead was understood to be absolutely private, in deference to the Queen's wishes, only those directly concerned being permitted to be present, with the guards provided by the Queen.

From *The Advertiser* of June 25th the following descriptive account is taken, revised in part and extended in historic features for future reference.

"Weird, yet interesting, were the ceremonies attending the

removal of the bodies of the members of the Kalakaua dynasty on the evening of June 24, 1910, from the royal mausoleum in Nuuanu Valley to the vault nearby, chiefs and retainers wearing the ancient feather *ahuulas* of their rank, while participating in one of the most solemn ceremonies that has taken place of late years. In the presence of a throng of Hawaiians who represent today the remnants of a once powerful sovereignty, with the eye of their deposed Queen watching the transfer of each casket, the dead of the last reigning dynasty were consigned to their last resting places in an underground vault, where, sealed in with cement and marble, no other eyes are expected ever to behold them again.

“Amid the peculiar oliing of oldtime chanters, the ever tuneful voices of Hawaiian women singing the pathetic melodies composed in former days for members of the royal family, and at the last with *kukui* and cocoanut fiber torches illuminating the brilliant feather capes of the bearers and the rich palls covering the caskets, the dead were given their last burial. There was deep feeling shown by both men and women, for most of the mourners had followed each casket from palace to mausoleum during the period marking the accession of the Kalakaua dynasty to the throne.

“Contrary to anticipation the removal of all the caskets was accomplished in about two and a half hours. The arrangements were complete at both the mausoleum and to and in the vault, and with strong men, all volunteers among the Hawaiians, the heavy caskets were handled without mishap. The general arrangements were in the hands of John F. Colburn, representing Prince Kuhio and the Kapiolani Estate; Col. Curtis Iaukea, acting for and on behalf of Queen Liliuokalani; ex-Governor Cleghorn and Superintendent of Public Works Campbell, for the Territory of Hawaii. The Queen had taken a deep personal interest in all arrangements, and the manner in which the bodies were to be placed in the crypts was left largely to her selection. The method of arrangement was completed some time previous, subject to one or two changes at the last.

“At eight o'clock the mausoleum, brightly lighted, pre-

sented a strange interior. The caskets, lying upon platforms, were arranged in open view, the magnificent silk and plush palls, with festoons of ilima leis, and the tall feather kahilis, lending a strange aspect to the scene. Seated in the center of the main hall were Queen Liliuokalani, Princess Kawanakoia, ex-Governor A. S. Cleghorn and daughters, Mrs. James Boyd and Mrs. James W. Robertson; Acting Governor and Mrs. Mott-Smith, Hon. W. O. Smith, president of the senate; Superintendent of Public Works and Mrs. Marston Campbell; Col. Samuel Parker; Mrs. C. S. Holloway; Mrs. John F. Colburn; Mrs. Walter Macfarlane, Mrs. Robert Shingle, Miss Beatrice Campbell, Mrs. Frank Woods, and Mrs. Mana, attending upon the Queen.

"At the hour mentioned the first casket, that of Kapaakea, father of King Kalakaua, was placed upon the draped truck and wheeled out of the mausoleum, while Paaloka, the chanter, oiled, and members of the Lei Mamo Club sang a plaintive Hawaiian melody. The truck was run down an inclined platform to the roadway and then wheeled to another inclined way to the top of the steps which led to the vault below, runways having been placed over the steps and platforms erected in the vault. John Wise superintended the transfer of the caskets from the top to the vault, where he was assisted by a dozen stalwart Hawaiians. The caskets were each slid down and elevated to their niche in the following order:

Kapaakea, father of King Kalakaua, died November 13, 1866, aged 51 years.

Keohokalole, mother of the King, died April 6, 1869, aged 53 years.

Kaiminiaauao, sister of King Kalakaua and Queen Liliuokalani, died November 10, 1848, aged 3 years.

Governor John O. Dominis, husband of Queen Liliuokalani, died August 27, 1891, aged 60 years.

Leleiohoku (Wm. Pitt), brother of the King, died April 9, 1877, aged 22 years.

Likeli, sister of the King and Queen Liliuokalani, and wife of ex-Governor A. S. Cleghorn, and mother of Princess Kaiulani, died February 2, 1887, aged 36 years.

Kaiulani, niece of King Kalakaua and Queen Liliuokalani, died March 6, 1899, aged 23 years.

Naihe et al., casket containing remains of Kalakaua's grandfather and great grandfather and Kailimaikai, brother of Kamehameha.

Poomaikalani, sister of Kapiolani, consort of King Kalakaua, died October 22, 1895, aged 57 years.

Kekaulike, sister of Kapiolani and mother of Princes David Kawananakoa and Kuhio Kalaniana'ole, died January 8, 1884, aged 41 years.

Kawananakoa (David), nephew of King Kalakaua and Queen Liliuokalani, and husband of Princess Abigail Kawananakoa, died June 2, 1908, aged 40 years.

Keliiahonui (Edward), brother of Princes David and Kuhio, died September 21, 1887, aged 28 years.

Kapiolani, consort of King Kalakaua, died June 24, 1899, aged 64 years.

His Majesty King Kalakaua, died January 20, 1891, aged 54 years.

"The weather which has often appealed to the superstitions of the Hawaiian race at the burial of a member of the royal family prevailed to the extent of slight rain.

"When the casket of Governor Dominis was brought out, the widow did not follow, as she was too feeble to walk out and back again, as it was her duty to remain until the last casket was removed.

"Behind the casket of Princess Likelike walked ex-Governor Cleghorn, Mrs. and Mrs. Boyd, and Mr. and Mrs. Robertson. Previous to its removal a part of the top covering was removed that the plate might be seen by relatives, and was then covered. There was oling as the casket was lowered to the vault, but when that of Princess Kaiulani, whose death was one of the most pathetic of the Kalakaua dynasty, was brought out, the music of the women singers seemed more tender and heartfelt.

"Then came the beautiful casket bearing the remains of Prince David Kawananakoa. Behind it walked Princess Kawananakoa and her sisters. After the casket was placed upon

the vault runway it rested there for some time while the singers sang a song composed for the Prince, a beautiful, sad melody, called Helemakahiki. As the last strains were sung the casket was lowered.

“During all this time the grounds were illuminated by incandescent lights. These were suddenly turned out, and from among the trees appeared torchlights composed of kukui nuts and cocoanut fiber, copied after the ancient methods. Eight lined the steps of the mausoleum as the remains of Queen Kapiolani were brought out. The bearers this time wore ahualas, and the scene reminded all of the funerals in the old days.

“At this juncture the Queen left the mausoleum supported by Colonel Iaukea and John Aea and entered an automobile, which was moved to a position where she could closely watch the transfer.

“Last of all came the transfer of the casket of King Kalakaua with its magnificent palls and decorations. The same ceremony with the torches and darkened grounds prevailed, although the moon then pierced the bank of clouds and added to the picturesqueness and solemnity of the scene. Queen Liliuokalani, who was attended by Princess Kawanakoa, leaned forward in the auto, her eyes strained to catch every change in the scene, for to her it meant the last glimpse of all that were dear to her in the past. What thoughts must have crossed her mind as she gazed upon this the second funeral of her royal brother. What memories it must have brought to her of the first funeral ceremony when she was the reigning monarch of the Hawaiian Islands, just then in the first flush of her supreme rule. What memories it must have brought when she compared those days to her present. She presented a pathetic figure, for the glory of the old days has long since departed from her life.

“But one casket remained in the mausoleum, not honored by interment in the tomb. This is the casket containing remains which were once accredited by royal favor with being those of Kamehameha the Great. The casket, however, bears another name.”

Upon the caskets being placed, the alcoves were cemented

in, and the entire interior finished with a facing of marble slabs, fastened with bronze rosette nuts. The vestibule is guarded by handsome heavy bronze extension gates, through which is seen a vault interior, finished with glistening marble. Over each slab is the name-plate, giving the name and title, and the birth and death dates of those entombed.

Three of the panels on the base of the monumental shaft have inscriptions as follows, viz.: At the base opposite the entrance to the vault, the makai side, "Na Alii Ai-Moku o Hawaii." Facing the Nuuanu gateway is inscribed, "In Memory of the Sovereigns and High Chiefs of Hawaii," and on the mauka panel, "Erected by the Territory of Hawaii, A. D. 1907."

HAWAIIAN HOLIDAYS.

Observed and Otherwise.

AMONG the papers in the Hawaiian Annual for 1898 was one on "the days we celebrate," which dealt with the observance in Honolulu of the holidays of our calendar at that time, but with the changed conditions, political and otherwise, in the thirteen years that have elapsed it may not be inappropriate to treat the subject from the present-day standpoint for its reference benefit alike to malihini and kamaaina and information to the rising generation.

As then, the subject will be considered in its natural order of sequence rather than in their importance, though of the total number but seven of them are legal holidays at the present time.

January 1, New Year's.—Little need be said upon this universal day of happy greeting and well-wishing among kinsfolk, neighbor and acquaintance to a remote degree, as "Father Time" sets up another milestone upon which we may wreath a new set of good resolutions. So general is this

recognized among all races in the community that business of all kinds gives way to the spirit of the season and the day is wholly given up to out-of-door freedom and social good-fellowship. This is legal holiday number one.

January 17, Downfall of the Monarchy.—Legislative enactment of 1896 sought to recognize this historic event which took place in 1892, by designating it a legal holiday. Its anniversary was commemorated for several years, but so little interest was manifest in its observance that it has been dropped from the calendar since 1903, and is now obsolete.

Chinese New Year's.—This "day of days" to our Chinese population is not a fixed one as ours, but changeable as the moon. Last year it occurred with the new moon of February, which fell on the 9th. This year it falls on January 29. It is not a legal holiday, though it has had recognition here for a three days' observance since 1865, by the abandon with which they enter into its celebration. Their New Year's is ushered in with all the fire crackers and noisy bombs police regulation will permit, while large decorative lanterns illuminate their buildings, and every householder, however lowly his station, keeps open house during "Konohi" to all visitors. For a number of years past it has been the custom to hold an official reception with an elaborate luncheon at the United Chinese Society's building from noon till 2 p. m. The second and third days are largely given up to driving about in autos and carriages in companies of young men and also in families with which the mothers and elder daughters participate freely without the national restraint hitherto observed respecting their sex.

February 22, Washington's Birthday.—This is now gazetted as a legal holiday, and from its general observance in a quiet way, as was our custom for half a century or so, it has become one of the most demonstrative on the calendar since the addition of the annual floral parade has become an established feature therewith, since its transfer from a Thanksgiving Day event (which originated in 1904), and changed

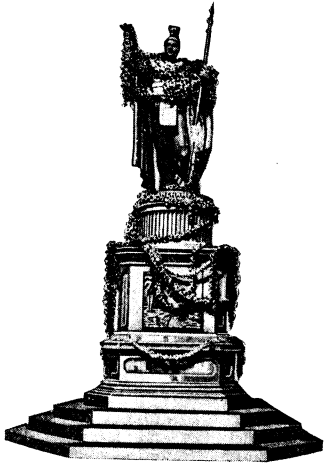
the following year to the spring month with its more settled weather and floral possibilities. To the annual auto floral parade was added, in 1906, that of the pa-u riders, an association of Hawaiian women on horseback, astride, in their ancient style of flowing (pa-u) skirt, with selected daughters of the land to represent each island princess with their appointed pages and attendants. What began as a floral-decked auto parade has thus taken on new and additional features, the procession the past two years including a number of historic and national floats. An innovation was made last year in the parade, and again in the evening, of "Pilikia," an ogre representing trouble, which upon (mock) trial was condemned and cast into a constructed furnace as the abode of "Pele."

March 17, Kamehameha III.'s Birthday.—This is not now one of the legally observed anniversaries, though the country is reaping the benefit of his generous division of lands throughout the group, for which and other considerations he was held in grateful remembrance as "Kauikeaouli the good."

May 30, Memorial Day.—This national day of remembrance of the departed was first observed in Honolulu in 1883, with the organization of the Geo. W. De Long Post of the G. A. R., since which time it has taken a firm hold on the sympathies and affection of the people irrespective of race. The past two years the procession of the G. A. R. Post and military bodies, for the customary memorial services and decoration of the graves, has been changed to early forenoon instead of afternoon. As in other parts of the Union, this is one of the legal holidays of the calendar.

June 11, Kamehameha Day.—This is the only one of the monarchy anniversaries kept in remembrance as a legal holiday. It was brought into existence by Kamehameha V., and first observed in 1872 to commemorate Kamehameha the Conqueror, head of the dynasty. The sporting fraternity immediately availed themselves of the new holiday for a full day of horse races at Kapiolani Park, and in time it became the annual "Derby day," until a cruel legislature, to offset

the Jockey Club's methods and greed, not only refused to grant it aid, but directed that the fence enclosing its track be removed. As a counter attraction for the younger generation



the day was settled upon by various churches for their annual Sunday-school picnics, and this is largely its feature today in outdoor picnics at available places in the city and suburbs. Two Hawaiian Societies, the Kamehameha Chapter, and the Ahahui Kaahumanu, have assumed the duty of annually decorating the bronze statue of Kamehameha on this anniversary with floral and maile wreaths, thus keeping his memory green. A like ceremony takes place with the statue of Kamehameha that stands in Kohala.

June 14, Admission Day.—This for awhile was observed officially as commemorating the event, in 1900, when Hawaii's annexation to the United States was consummated, and the "Stars and Stripes" took the place of Hawaii's national banner and American federal laws came into force here. Doubtless for good politic reasons it was not included with those designated as legal anniversaries by the law of 1903, though it marks an important historic event.

July 4, Anniversary of American Independence.—This was a day observed with patriotic enthusiasm long before it became a legal holiday, its first recognition here of which we have record dating back to 1814, in the time of Kamehameha I., and so, with the exception of the makahiki days of ancient time, was probably the first national holiday celebrated in Honolulu. The writer's acquaintance with this anniversary for many years recalls it as one of the most important of the year in elaborateness of preparation and fullness of events to commemorate the spirit which gave it birth. This was by no means restricted to members of the American colony, but joined in by all nationalities, and Ha-

waiians in particular. Compared with its observance the past few years the impression prevails that the oldtime spirit of enthusiasm has waned materially, and notably so that of 1910.

For a few years following the declaration of the Republic of Hawaii, in 1895, the day was celebrated in the dual independence sense, but losing our identity through annexation in 1900, this feature of the day has been rendered obsolete.

July 31, Restoration Day.—This anniversary of the restoration of the Hawaiian flag and sovereignty of the Islands to Kamehameha III. by Admiral Thomas, in 1843, used to be one of the most important days in the Hawaiian calendar, and was celebrated with luaus and festivities in all directions. During the reign of Kamehameha V., under the ministerial influence of the time, its observance was discontinued as being an unpleasant reminder of an official's act of injustice which was quickly disowned by his superior, and confirmed in turn by the friendly nation. [See Annual of 1893.] Though obsolete as a national holiday, its anniversary is nevertheless remembered among the people.

August 12, Annexation Day.—This day commemorates the event, in 1898, when Hawaii ceased to exist as an independent nation, and became a territorial part of the United States, though not admitted to the full relations of annexation until June 14, 1900, as already set forth. It was observed as a public holiday for several years, but not being included among those established by the legislature of 1903 it has been dropped from the calendar and become obsolete.

Labor Day.—The first Monday of September, as in many parts of the country, was first observed here in 1900 by members of labor unions, and through them was admitted in 1903 to place as a legal holiday, but its advocates have shown so little spirit of late therein that it has become the least observed anniversary on the calendar.

Regatta Day.—By legislative enactment, in 1896, the third Saturday of each September was set apart as a legal holiday in response to the desire of Honolulu's populace for a day for aquatic sports most likely to be weather favored. This

used to be the main feature in the celebration of Kalakaua's birthday, which fell on November 16th, when rainy weather usually prevailed, so when, through the death of the King it ceased to be observed as a national anniversary, the feature that had been fostered by it called for an appropriate day for its annual contests and entertainment for the public with the above result. That interest has developed in both boating and yachting circles in consequence is plainly manifest, of which our participation for the third time in inter-ocean races with Pacific Coast yachts from San Pedro to this port is an evidence.

Thanksgiving Day.—This peculiar American anniversary has been regularly observed in these Islands for over half a century past, though its date of recognition by proclamation as a national day was in 1897, when Hawaii as a Republic was guided by President Dole. There were many occasions during the monarchy when special thanksgiving days were proclaimed to be religiously observed throughout the group. The American day long had semi-official recognition by special services and family reunions upon its annual appointed day each November, which, since annexation, becomes our national anniversary by right and no longer of courtesy.

November 28, Anniversary of the Recognition of Hawaiian Independence.—This is another of the obsolete days of the Hawaiian monarchy through annexation, a day that was dear to the heart of the people in commemoration of the compact of England and France, in 1843, supplementing that of the United States some months earlier, "to consider the Sandwich Islands as an Independent State, etc." Inasmuch as said act of recognition and guarantee preserved Hawaii through several critical periods with foreign powers that eventually rendered our union with the United States possible and advisable, it would seem as if the day might, with justice, still have recognition.

Christmas Day.—This well-known anniversary throughout Christendom is prominent among the well-kept holidays of Hawaii, its observance being entered into with joyous

spirit by our cosmopolitan population that carries a "Merry Christmas to All!"

In addition to the religious services customary in various churches, with family and Sunday-school Christmas gatherings for the exchange of gifts of the season, and collections for the unfortunate wards of the Territory on Molokai, an innovation to the usual observance of the day was made in 1908 by a visiting party from Chicago in providing a Christmas tree entertainment with gifts for the waifs of the city, supplemental to such work as was being done by the Salvation Army and other organizations. This was termed the "Malihini Christmas Tree," and it graced Bishop Square, opposite the Young Hotel, with some 1400 gifts that carried cheer to many homes. The following year a self-appointed local committee raised the needed funds and repeated this Santa Claus' work of gladdening the hearts of all children not otherwise reached and provided with gifts of the season.

RECENT VISIT OF HALLEY'S COMET.

BY PROF. J. S. DONAGHO,
College of Hawaii.

IT IS still too early for any complete account of what has been learned from the recent return of Halley's comet, but a few facts may be noted, although it is to be feared that most of them are negative in their bearings.

The mathematicians may rest satisfied with the results of the return, so far as they affect our confidence in the law of gravitation. Computations of the path and period of the comet are based solely upon that law. Failure of predictions drawn from those calculations would indicate either that the received statement of the law is slightly inaccurate, or that the comet meets with some resistance to its motion. Prof. Max Wolf was first to detect the wanderer at a point about one-sixth of the diameter of the moon from the computed position. Considering the distance, both in time and

space, through which the calculations had traced the motions, the error was not serious. Perihelion was reached about three days after the predicted date, a closer result than has ever been obtained before. The transit of the nucleus across the face of the sun undoubtedly occurred at the predicted time, although only one set of observers report any visual evidence of it. Herr Sykora, of the observatory at Tashkent, reports that, on a projected image of the sun, he saw the image of the comet, with a diameter one-thirteenth that of the sun. All other observers, however well equipped, report nothing found.

The tail of the comet was so highly curved near the end that it is probable that it did not reach the plane of the earth's orbit for more than a day after the transit. By that time the earth had moved so far from the plane of the comet's orbit that there is very serious doubt whether we received the brush so ardently hoped for by astronomers. The length of the tail was easily sufficient to reach us, however, and rather unusual atmospheric phenomena were observed about twenty-four hours after the transit, which may, possibly, have been due to our passage through the outer edge of the tail.

Prof. Birkeland, from a magnetic observatory located at Finmarken, reported unusual magnetic disturbance on the day of transit. A careful discussion, on the other hand, of the records of the Greenwich Observatory seems to indicate that no phenomena, either magnetic or electric, were recorded there which would have been unusual enough to attract special attention at any other time; and similar reports have come from the other magnetic observatories.

It was thought that careful analyses after the transit of large volumes of air might show indications of new constituents in the atmosphere, but tests were made in France of such delicacy that the presence of one millionth part of any unusual gas would have been detected, and nothing was found.

Variations in the brilliancy of the comet from time to time indicated that it was partly self-luminous, but spectra obtained near the time of maximum brilliancy show that at that time an important part of its light was reflected sun-

light, and some observers were led to the opinion that the comet consists almost entirely of solid particles.

Sodium is one element reported as certainly present in the comet, and one observer reports that he has detected the cyanogen band in the spectrum of the head, but fails to find it in that of the tail.

Whether we have learned much as to the cause, and the method of development, of the tail, can not yet be stated with certainty. Both the nucleus and the tail displayed a good deal of activity after the transit, the former dividing on one occasion, and throwing off matter, which became a part of the tail, and moved rapidly away from the head. The velocity was roughly measured, and found to increase, finally reaching about fifty-five miles per second. This seems to be what we should expect if the position and direction of the tail are due to pressure from the sunlight, but more careful measurements, and more data, will be needed to furnish sure ground for judgments.

Prof. Ferdinand Ellerman, of the Solar Observatory at Mt. Wilson, who was sent here by the Astrophysical Society to secure photographs, obtained an excellent series, as he found the weather generally favorable at his temporary observatory on the southern slope of Diamond Head. Observers in southern latitudes seem to have obtained the most favorable views of the comet, but in addition to this fact, Prof. Ellerman's observatory filled a great gap in the chain of observatories around the world, and prevented a long break each day in the records of the changes in the comet.

Prof. H. C. Lord, and Prof. E. C. Coddington, of Ohio State University, who were sent here to make spectroscopic observations on the day of the transit, set up their instruments at Haleiwa, Waialua, but, although the weather was clear in Honolulu, it was cloudy at the northern end of the island, and while the transit was in progress no sight of the sun was obtained at Haleiwa.

Prof. Ellerman watched the sun with his six-inch telescope during the whole time of the transit, but saw no trace of the comet, and several watchers at the Observatory of the College of Hawaii kept the sun under close scrutiny with a three-inch glass, as well as with the six-inch, with the same result.

THE LEGENDS OF KAWELO.

W. D. WESTERVELT.

MANY Kawelos are named in the legends of the Islands of Oahu and Kauai, but one only was the strong, the mighty warrior who destroyed a gigantic enemy who used trees for spears. He was known as Kawelo-lei-Makua when mentioned in the genealogies.

Kawelo's great uncle, Kawelo-mahamahaia, was the King of Kauai. The land prospered and was quiet under him. When he died, the people worshiped him as a god. They said he had become a divine shark, watching over the sea coasts of his island. At last they thought it had become a stone god—one point the head and one the tail, one side red and the other black. His grandson, Kawelo-aikanaka, who became King of Kauai, was born the same day that brought Kawelo-lei-makua into the world. They were always known as Aikanaka and Kawelo. There was also born that same day Kauahoa, who became the giant of Kauai, and the personal enemy of Kawelo. In their infancy the three boys were taken by their grandparents to Wailua and brought up near each other under different caretakers.

Some of the legends say that Kawelo's oldest brother, Kawelo-mai-huna, was born an eepa—a child poorly formed but having miraculous powers. When born, the servants wrapped this child in a tapa sheet and thought to bury it, but a fierce storm arose. There were sharp lightning and loud thunder. Strong winds swept around the house. So they put the bundle in a small calabash, covered it with a feather cloak, and hung it in the top of the house. The grandparents came and prophesied a marvelous future for this child. The father started to take down the calabash, but saw only a cloud of red feathers whirling and concealing all the upper corner. The old people, with heads bowed down, were uttering incantations. There came a sound of rain drops falling on the leaves of the forest trees, and a rain-

bow stood over the door. The voices of beautiful green birds (the Elepaio) were heard all around, and rats ran over the thatch of the roof. Then the old people said: "This child has become an eepa. He will appear as man or bird or fish or rat."

Other children were born, then Kawelo, and last of all his faithful younger brother, Kamalama. The old people who took care of Kawelo were his grandparents. They taught the signs and incantations and magic of Hawaiian thought. They frequently went inland to the place where their best food was growing. They always prepared large calabashes full of poi and other food, thinking to have plenty when they returned; but each time all the food was eaten. They decided that it was better to provide sports for Kawelo than to leave him idle while they were away, so they went to the forest with their servants and made a canoe. After many days their work was done, and they returned to prepare food. Poi was made, and all kinds of food were placed in the ovens for cooking. Then they heard a sound like that of a strong wind tearing through the forest. They heard the squeaking voices of many rats. Soon they went to see the canoe in the forest, but it was gone. They returned home to eat the poi and cooked food, but they were all gone—only the leaves in which the food had been wrapped lay in the oven. Kawelo told his grandparents that little people with rat whiskers had carried the boat down to the river and then had eaten all the food. One, larger than the others, had called to him, "E Kawelo, here is your plaything, the canoe."

Kawelo went down to the river. All day long he paddled up and down the river, and all day long his strength grew with each paddle stroke. Thus day by day he paddled from morning until night, and no one in all the island had such renown for handling a canoe.

The other boys were carefully trained in all games of skill, in boxing, wrestling, spear-throwing, back-breaking, and other athletic exercises. Kauahoa was very jealous of Kawelo's plaything, and asked his caretaker to make something for him, so they made a kite (a pe-a) and gave it to their foster child. That kite rose far up in the heavens. Loud

were the shouts of the people as they saw this beautiful thing in the sky. Kawelo asked for a kite, and in a few days took one out to fly by the side of Kauahoa's kite. He let out the string and it rose higher and higher, and the people cheered loudly. Kawelo came nearer and nearer to Kauahoa and pulled his kite down slowly and then let it go quickly. His kite leaped from side to side and twisted its strings around that held by Kauahoa and broke it, and the kite was blown far over the forest, at a place called Kahoo leina a pea—"the kite falling." Kawelo said the wind was to blame, so Kauahoa, although very angry, could find no cause for fighting. Then the grandparents taught Kawelo to box and wrestle and handle the war spear. Thus the boys grew in stature and in enmity.

After a time the King of Kauai died and Aikanaka became King. The legends say the rats warned Kawelo, and he and his grandparents fled to the Island of Oahu. The boat flew over the sea like a malolo (flying fish), leaping over the waves at the strong stroke of Kawelo. The rats under their King were concealed in the canoe, and were carried over to the new home. Kawelo's elder brothers and parents had been living for some time on the beach of Waikiki near Ulukou (the Moana Hotel site), by the mouth of the stream Apuakehau. The grandparents took Kawelo and Kama-lama inland and found a beautiful place among taro patches and cultivated fields for their home. It was said that when they came to the beach, one young man went down into the water and carried the canoe inland. Kawelo called him and adopted him as one of his family. The boy's name was Kalaumeke, "a kind of ti leaf." The boy said he was not so strong as he appeared to be, for he had the aid of many little long-whiskered people; his real power lay in spear-throwing and club-fighting. There was only one other young man who was his equal—a youth from Ewa, whose name was Kaeleha. Kawelo sent for this man and took him into his family. They dwelt for some time, cultivating the place where the royal lands now lie, back of the Waikiki beach.

One day they heard great shouting and clapping of hands on the beach, and Kawelo went down to see the sport. His

brothers had been well taught all the arts of boxing and wrestling, and they were very strong; but they were not able to overthrow a very strong man from Halemano. Kawelo challenged the strong man. His elder brothers ridiculed him, but Kawelo persevered. The strong man was much larger and taller than Kawelo. He uttered his boast as Kawelo came before him. "Strong is the koa of Halemano. The Kona (wind) can not bend it." Kawelo boasted in reply: "Mauna Waialeale will try against Mauna Kaala." Then the strong man said: "When I call 'swing your hands' we will fall against each other." With this word he advanced and struck at Kawelo, bending him over, but not knocking him down. Kawelo returned the blow with such force that the mighty boxer fell dead. Kawelo gave the body to the King of Oahu to be carried as a sacrifice to the gods in the heiau or temple Lualualei in Waianae. "This is said to have been a very ancient temple belonging to the chief, Kakuihewa."

Kawelo's brothers were greatly mortified to see their younger brother accomplish what they had failed to do, so in their shame they returned to Kauai with their parents.

The King of Oahu gave Kawelo lands. His grandparents built him a house. It was well thatched except the top. He was a high tabu chief and the kahunas (priests) said he must finish it with the work of his own hands. This he thought he would do with the beautiful feathers of the red and yellow birds. He lay down and slept; when he awoke he saw his rat brother, who had miraculous power, finishing all the roof with most beautiful feathers of red and gold. The King of Oahu came to see this wonderful place, and blessed it and lifted his tabu from it, so that it would belong fully to Kawelo, although it was more beautiful than that of the King himself.

Kawelo learned the hula art (dancing) and went around the island attending all hula gatherings until the people called him "the great hula chief." At the village of Kaneohe he met the most beautiful woman of that part of the island, Kane-wahine-ike-aoha. He married her, gave up the hula, and returned home to learn the art of battle with spears and

clubs. No one was stronger or more skillful than his wife's father. Kawelo sent his wife to the other side of the island to ask her father to teach him to fight with the war club. She went to her father and persuaded him to aid Kawelo. For many days they practised together, until Kawelo was mighty in handling both spear and club.

After this Kawelo learned the prayers and incantations and offerings upon which good fishing depended. Then he took the fisherman and went out in the ocean to do battle with a great fish which had terrified the people of Oahu many years. This was a kupua or magic fish, possessing exceeding great powers. As they went out from Waikiki, with one stroke of the paddle Kawelo sent the canoe to Kou. This was the ancient name of Honolulu. With another stroke he passed to Waianae, and then began to fish from the shore to the far-out sea, using a round, deep net. This method of fishing continues to this day. A fish is caught and a weight tied to it so that it must swim slowly. Other fish come to see the stranger, and the net is drawn around them. Many good fish were caught, but the great fish did not come. Again Kawelo came to hunt this Uhumakaikai, but the Uhu sent fierce storm-waves against the canoe to drive it to land. Kawelo held the boat strongly with his paddle. Soon the Uhu appeared, trying to strike the boat and upset it. Kawelo and his fisherman carefully watched every move and balanced the boat as needed. Kawelo's net was in the water, its mouth open, and its full length dragging far behind the boat. The Uhu was swimming around the net as if despising its every motion, but Kawelo swept the net sideways and the fish found himself swimming into the net. Kawelo swiftly rushed the net forward until the Uhu was fully enclosed. Then came a marvelous fish battle. The waves swept high around the boat. Kawelo and the fisherman covered it so that the water poured off rather than into it. Then the Uhu swam swiftly out into the blue waters. The fisherman begged Kawelo to cut the cord which held the net. Far out they went—out to the most distant island—Niihau. Kawelo saw a great battle in the net which held the Uhu. There were many fish inside attacking the Uhu. They were a kind

of whiskered fish, biting like rats, digging their teeth into the flesh of the great fish. Kawelo uttered incantations and the fish became weaker and weaker, until it ceased to struggle. Kawelo paddled with strong strokes back to Oahu.

Meanwhile the brothers and parents, who had gone to Kauai, were in great trouble under the persecutions of Aikana and his strong man Kauahoa. At last the mother sent the brothers to Oahu after Kawelo. They came to Waikiki while Kawelo was away trying to kill the Uhu. The youngest brother, Kamalama, received them and sent two messengers to find Kawelo. He recited a family chant, in which the names of the visiting brothers as well as the name of Kawelo's gods were honored. He charged them to remember the brothers' names or they would have trouble. They paddled out on the ocean calling for Kawelo and repeating the names from time to time. Suddenly a high surf wave caught their canoe and overturned it, leaving them to struggle in the fierce waters. Soon they saw Kawelo coming with his great fish near his canoe. "O Kawelo!" they cried. "We had the names of your friends from Kauai—but our trouble in the water made us forget." Then Kawelo recited his chant, giving his brothers' names and also those of the tabu gods. Only the chiefs to whom the gods belonged could speak their names. When Kawelo uttered their names, the two men cried out: "Those are the men, and Kuka-lani-ehu is their god." Kawelo was very angry at the desecration of the name of his family god in the mouths of the common men. He stuck his paddle deep into the sea, tearing the coral reef to pieces, but the great fish caught on the coral and Kawelo could not row to the men. They rushed their boat to the beach and escaped. Kawelo then took a part of the captured fish and offered it for sacrifice in the temple at Waiana'e. The rest he brought to his people at Waikiki.

As he came near the shore he called for his spear throwers to meet him on the beach. Seven skilled men stood before him as he landed. They hurled their spears at one time straight at him, but he moved himself skillfully from side to side and threw the ends of his malo (loincloth) around them and caught them all together. Then he called his two adopted

boys to throw. This they did with great skill, but he caught both spears in one hand. Kamalama took two spears and Kawelo's wife stood on one side with a fishhook and line in her hand. As the spears flew by her she threw out the hook and caught each one.

The story of the Kauai trouble was soon told. The King of Oahu furnished a large double canoe. From his father-in-law Kawelo secured the historic battle sticks—war club and spear with which he had learned to fight. Food in abundance was placed on the boats, and the household went back to Kauai to wage war with Aikanaka and Kauahoa, stopping at the heiau Kamaile—afterward called Kane i ka pua lena—"Kane of the yellow flower," to offer sacrifices. "Some legends say this temple was at Makaha, and that Kane-aki was the name." This Kane was one of the gods of Kawelo. Kawelo, according to one legend, had his people tie him in a mat as if dead as they approached Wailua, the home of Aikanaka. The beach was covered with people—the warriors of Aikanaka. As the double canoe came to the beach, the people made ready to attack. They waited, however, for the newcomers to land and prepare for fight. This was a formal courtesy always demanded by the ethics of the long ago. When all was ready, Kamalama stood by the apparently dead body of Kawelo and pulled a cord which unloosed the mats. Kawelo rose up with his war club and spear in hand and rushed upon the multitude. He struck from side to side, and the people fell like the leaves of trees in a whirlwind.

Again new bodies of warriors hastened from Aikanaka. Kamalama, the seven spearmen and the two adopted boys fought this army and drove it back under a cliff where Aikanaka had his headquarters. The seven spearmen, known in the legends as "Naulu"—the seven breadfruit trees—were afraid and retreated to the boat.

Two noble chiefs asked Aikanaka for two large bodies of men (two four hundreds), but Kawelo and his handful of helpers defeated them with great slaughter. Thus several larger bodies of soldiers were destroyed, and Aikanaka became cold and afraid in his heart.

Then Kahakaloa, the best skilled in the use of war-sticks

in all the islands, rose up and went down with the two hundred warriors to fight with Kawelo and his family. The father-in-law of Kawelo knew this chief well and thought that by him Kawelo might be killed if he went to Kauai; but Kawelo had learned strokes of the club not understood on Kauai. Soon all the warriors were slain, and Kahakaloa stood alone against Kawelo. As they faced each other Kahakaloa swiftly struck Kawelo, but Kawelo while falling gave his club an upward stroke, breaking his enemy's arm. In the next struggle Kawelo's swift upward stroke killed his foe.

Then Kauahoa, the strongest, tallest and most skillful man of Kauai, arose and went down to meet Kawelo. Kauahoa took a magic koa tree, root, stem and branches, for his club with which to fight Kawelo. His heart was full of anger as he remembered the troubles between Kawelo and himself in their boyhood. As he passed the multitude of his dead people he became beside himself with rage and rushed upon Kawelo. Kawelo stationed his wife on one side with her powerful fishhooks and lines to catch the branches of the mighty tree and hold them fast. Some of the legends say that she was very skillful in the use of the pekoi. This was a straight, somewhat heavy, stick with a strong cord fastened around the middle. It was said that she was to throw this stick over the branches, whirling and twisting the cord around them, greatly entangling them, so that she could pull the tree to one side. Kawelo ordered his warriors to watch the spots of sunlight sifting through the branches. As the tree was hurled down upon them they must leap into the open places and seize the branches, holding on as best they could. When the giant struck down with his strange war club, Kawelo's friends followed his directions, while he leaped swiftly to one side and ran around back of Kauahoa while he was bending over trying to free his tree from its troubles. Kawelo struck down with awful force, his war club cutting Kauahoa in pieces, which fell by the side of the koa tree.

Somewhere in the battles waged by Kawelo along the coasts of Kauai he was fighting with his giant enemy and struck his spear against the mountain ridge at Anahola.

piercing it through and through, leaving a great hole through which the sky is always to be seen.

Aikanaka fled to the region near Hanapepe, where he dwelt in poverty. Kawelo divided the districts of Kauai among his warriors. Kaeleha received the district in which Aikanaka was sheltered. Soon this adopted son of Kawelo met the daughter of Aikanaka and married her. After a while he wanted Aikanaka to again rule the island. He proposed rebellion and told Aikanaka that they could destroy Kawelo because he had never learned the art of fighting with stones. He only understood the use of the war club and spear. They ordered the women and children to gather great piles of stones to hurl against Kawelo.

When Kawelo heard about this insurrection, he was very angry. He seized his war club Kuikaa and hastened to Hanapepe. As he came near he saw that the people had barricaded his way with canoes and that back of these canoes were many large piles of stones in the care of warriors. He raised his war club and leaped toward his enemies. A sling stone struck him. Then the stones came like heavy rain. He dodged. He struck aside, but there were so many that when he avoided one he would be struck by others. He was bruised and wounded and stunned until he sank to the ground unconscious under the fierce shower.

The people rejoiced, and to make death sure, threw off the stones and beat the body with clubs until it was cold, and they could detect no sign of breathing.

Aikanaka had built a new unu or heiau at Maulili, in the district of Koloa, but no man had been offered as a sacrifice upon its altars. He thought he would take Kawelo as the first human sacrifice. The people carried the body of Kawelo to the pa or outside enclosure of the temple, but it was dark when they arrived and they laid the body down, covering it with banana leaves, saying they would come the next morning and place the body on the altar, where it should lie until decomposition had taken place.

Two watchmen had been appointed, one of whom was a near relative to Kawelo. He soon discovered that Kawelo was not dead. He told Kawelo about the plan to place him

on the altar in the morning. He covered Kawelo again, placing his war club by his side. In the morning the chiefs and people came to the heiau with Aikanaka and Kaeleha. When all were gathered together the watchman whispered to Kawelo. The leaves were thrown off and Kawelo attacked the multitude and destroyed all those who had rebelled against him.

Some of the legends say that Aikanaka had placed Kawelo on the sacrificial platform and in the morning had begun to offer the prayer consecrating the dead body to the gods, when Kawelo struck him dead before his own altar.

When this rebellion had been overcome, Kawelo gave a large district with good lands to the watchman who had befriended him. He continued his younger brother Kamalama in the district of Hanamaulu and committed their parents to his care.

Kawelo, as was his right, ruled over all the island, passing from place to place, establishing peace and prosperity. He made his home at Hana, planting and fishing for himself, not burdening chiefs or people, but beloved by all. Thus he gained the honored name Kawelo-lei-makua, which meant "Kawelo the lei or garland of his parents."

FOR KAHUKU AND BEYOND.

Narrative of a Day's Outing by Train.

ONE summer day found a small party at the Haleiwa station, Waialua, on pleasure bent, waiting the arrival of the train for Kahuku and points beyond. Fresh northerly trade winds and an overcast sky moderated the temperature, while the heavy swell from the ocean furnished surf scenes of rare and entrancing beauty; "Ehu kai o Puaena" (sea spray of Puaena) fairly proclaiming itself and confirming the well-earned title of the district.

Boarding the train a trio of Hawaiians were intruded upon in an animated discussion, but they were by no means dis-

concerted. A slight lull by way of recognition of the presence of others but gave them opportunity for fresh breath, or further views on their points of debate, which soon gathered strength and gave the newcomers an unexpected pleasure in character study as the grace in gesticulating, or motion of body, shoulder shrug, lifting of eyebrows, eye movement and facial expression betokened the peculiar conversational powers of Hawaiians, for their whole body enters into the exercise for the time being. Nor are their communicative powers that of speech only, for who that have moved among this people any length of time but will have observed sign communications between parties to their evident great amusement with hardly a word spoken, the messages being transmitted by facial expression and gentle motion of the hand.

Of the three natives above referred to, one was a pulpit supply for one of the stations we were to pass; a well-kept veteran of the same village, and a jolly-faced free speaker with his own race; but who became reticent and professed ignorance of names of localities of his own district, replying to inquiries that the questioner was the kamaaina familiar with the noted places through which which we were passing, not he.

The veteran of the party was willing that the inquiring haole should be further enlightened, and volunteered the narration of various traditions of localities along the route.

The bend of shore on the west side of the Waimea valley was said to be the point of observation for the "kilo ia" (fish watcher) since ancient time, whose duty it was to herald the approach of schools of fish, and who from his experience and skill could announce the kind as far as the eye could see, so as to direct the fishermen in their outfitting, whether of nets or lines. The fishing fleet at a distance were further directed by the "kilo ia" as to their procedure by his arm movements that were well understood and as effective as the "flim-flam" signals of the naval service. Waimea has ever been famous as a fishing ground, and on this same western point was located the noted ko'a or place of offering to Kuula, the fisher-

men's deity, since the days of Kaneaukai. [See Annual for 1905, page 146.]

The white sand beach which now closes the mouth of the valley once permitted free course for its small stream and the outgo and income of tide to considerable distance inland, the limit of which was the scene of Oahu's first murderous assault on foreigners, the attack on the watering party of the Daedalus and murder of two officers and one seaman, in 1792. [See Annual for 1906, page 113.]

The eastern shore point of the valley, our informant said, was the stronghold of Aama, a cannibal chief of ancient time whose clan laid tribute on neighboring tribes, or passing strangers, to serve their inhuman propensities. This was a new charge that we had not heard of before, and are rather inclined to consider it a variation of the Lo-ai-kanaka tradition of Halemano, on the upland of Waialua, not far distant from Wahiawa. Aama, it is said, came to grief by his own tribe, as a party of his wood gatherers sent out to find fuel with which to fire the oven, for his victims were induced by a kupua whom they met to resist such orders and end him, which, by help of the wizard, they did.

As our train sped on toward Kahuku, we were told of the various water-holes of the district with certain of them furnishing catches of fish, but only on the nights of Kane. One called Punamano is famed for a shark-man's exploits, and another as having connection with Waipahu, in the Ewa district, which is said to have been verified in the following manner:

A kapa-beating log of peculiar sound, unlike any other known on the island, which was placed in its waters at the close of a kapa-making season to keep it smooth and free from cracks that would impart an impression to the cloth in its manufacture, was missed, and, believing it to have been stolen, search was made all through the Koolau, Waialua and other districts till at last it was found in use at Waipahu. Recognizing it by its resonant tone, it was claimed by the searching owner, and right thereto by those in possession as vigorously maintained. To test the truth of ownership as claimed, the Ewa people accompanied the claimant back to Kahuku to

visit the scene and witness a test of the underground stream theory. A bundle of ti leaves were gathered, which was wrapped together and consigned to the waters of Punahoopala. In the course of a few days they were lost to sight, whereupon the party set out for Ewa, and after careful watching, as predicted, the bundle of ti leaves came forth on the bosom of the waters of the Waipahu stream. The kapa log was thereupon recognized as the rightful property of the Kahuku claimant.

Then there is Ku's rock spring, said our narrator, a lone rock out upon the plain, distant from all hill connections, which gives forth its trickling stream of pure spring water.

Arriving at Kahuku, the train takes a curve and backs in to the station, ready for departure. Here cars are changed to take the narrow gauge for Kahana and intermediate points, including the attractions en route.

The attractions in the neighborhood of Kahuku's railway station are of the pronounced sugar industry type, the mill and boiling house with its hum of activity on one side of the track, and sundry laborers and laboring quarters, store, school, etc., on the other, with some effort at ornamental foliage around the cottages to relieve the situation.

Taking seats in our train, we had opportunity to size up our fellow passengers and witness an interesting transaction between two Chinese, in which quite a sum of money was counted out on the seat for some object or purpose unseen, without a receipt or scrap of paper passing between them. Of the motley nationality with which we set out Hawaiians predominated, among which was a mother with two bright little girls of quiet demeanor, neatly dressed, with whom it gave pleasure to one of our party to share the day's lunch. Evidently here was exemplified the benefit of Kamehameha, or Kawaihāo Girls' Seminary training.

Passing through Laie, the Mormon settlement, one is struck with the trim and cleanly appearance of the village; cottages and adjacent premises, fences and roadways evincing a supervising care in marked contrast to those of other sections. One of the sad sights met with in journeying about the islands is the lack of tidiness and care of premises too often met

with among the people left to themselves; there is so much of the "shack" character which too many Hawaiians, Chinese and other country folk occupy, the cause of which can not all be ascribed to poverty, but which they seem carelessly indifferent to. With the steady progress of the Territory that is apparent on every hand, it seems paradoxical that such evidence exists among the people of better times in days gone by. The easy-going character and improvident disposition of the Hawaiian is largely the cause of their undoing, and unfortunately there have been too many that have taken advantage of their good nature to despoil them.

Near Laie is situate "The Dunes," the summer places of three of Honolulu's prominent business men, that is good to behold and is an excellent object-lesson in favor of reclamation, for they are built near the shore, a range of sand dunes intervening whose shifting nature is now controlled by grass and lupin, while ironwood and other trees suitable to the locality adorn the premises.

At Hauula the train makes a short stay. This appears to be a station of growing importance. As at Kahuku, this depot embraces also the postoffice. The former agent made it also serve as the village inn, but the present incumbent has constructed a neat cottage directly opposite the station for the comfort and convenience of wayfarers. It stands a little distance off the road, its green sward giving it a cool and attractive appearance. Near here is the noted valley of the celebrated Kamapuaa's exploits, and residents of Hauula seldom fail to remind visitors of the fact and point with pride to Kaliuwaa gorge, where the demi-god escaped from his pursuers.

Resuming our journey, still eastward, the train rounds into the extensive rice lands of Punaluu, where for some time was the terminal station of the road. One fails to grasp the extent of agricultural effort put forth by glimpses from a passing train, but an idea may be had from the fact that in addition to rice growing, cane fields are ripening and new tracts being cleared for planting, whose product is to be ground at Kahuku, eleven miles away. Punaluu appeared to be preparing to plant again to rice large fields that for some reason

had lain idle; possibly for want of Chinese labor, a class which has been largely reduced in late years. As we viewed the patient toilers we recalled the fact that this same valley was one of the first extensive test areas of rice culture in the Islands, in 1862, when Luther Severance, for many years past a prominent official of Hilo, engaged in the enterprise and conducted it successfully for several years.

A few miles further rounded us into the romantic valley of Kahana, with its curved white beach of compact sand, and said to be the finest bathing spot in all Koolau. The valley has considerable of a grazing and agricultural area, as it has a greater depth than those we had passed. Some one has termed this the windy valley of the district, but our visit failed to verify the statement. Two very neat cottages with pleasant surroundings attract one's attention as we near the terminal station of the road, one of which is the summer resort of Mrs. M. E. Foster, who owns large land interests in this section.

Our stay at this point was brief, for the trip was on one of the two days in the week when the Koolau train makes connection with the returning Honolulu train at Kahuku, so that time did not permit other than car-window observations.

VOLCANOES OF KILAUEA AND MAUNA LOA.*

HARDLY was the ink dry on the last issue of the *Hawaiian Annual*, with its summary review of Prof. C. H. Hitchcock's "Hawaii and Its Volcanoes," when a similar work of the above title, by Dr. Wm. T. Brigham, Curator of the Bishop Museum, and prepared at the request of the Trustees, issued unheralded from the press of that institution. That it has met with a welcome reception wherever the learned and painstaking author is known, both among

* The Volcanoes of Kilauea and Mauna Loa on the Island of Hawaii, their variously recorded history to the present time by William T. Brigham, A.M., Sc. D. (Columbia). *Memoirs of the Bernice Pauahi Bishop Museum*. Vol. II., No. 4, ill., qto., pp. vii. and 222, plates LXII. Honolulu, Bishop Museum Press, 1909.

scientists and the general public, goes without saying, for his long residence here and recognized familiarity with the subject eminently qualified him to present the interesting record of the historic changes of our erratic volcanoes.

A former work by the same author, published in 1868 by the Boston Society of Natural History, entitled "Notes on the Volcanoes of the Hawaiian Islands" (long since out of print), dealt with the subject from the geological standpoint, and now, over forty years later, we have the result of the collected additional information and further studies to render a clear and consecutive record of these seats of Hawaiian volcanic activity from the earliest writers to the present time in chronological order—a feature also of Prof. Hitchcock's book—both in narrative and illustration, at the same time correcting erroneous views that appeared in his former work, as also those of others. As stated in the opening chapter, "the result is offered in a form as free as possible from tentative theorizing; it is merely a collection of material for other geologists to use at their discretion in elucidating, as far as it may serve, those deeper problems often touched but yet unsolved,—the source of volcanic heat. the cause of the rise and outflow or ejection of the matter usually classed as volcanic,—on these geology has no positive knowledge."

Dr. Brigham, in the work just issued, has aimed to present "a connected story of the activities of the Hawaiian volcanoes * * * from a long familiarity with the visible phenomena and the written record and a personal acquaintance with most of those whose testimony is quoted."

Numerous maps, as also views, showing the changes recorded by the various observers, enrich the volume and afford the reader a clearer understanding of the historic changes that have transpired since the first European visitor, in 1823, recorded his impressions.

A chapter on the geography of Hawaii is followed by a brief description of the general character of the lavas of Hawaii, with cuts illustrative of the text. We would have welcomed at this point an explanation of the difference between the a-a and pahoehoe lavas, often met with in the same

flows, examples of which are mentioned in his former work. Stalactites and stalagmites in their peculiar formation are dealt with, and two cuts elucidate the account given of the formative process in the caves of Kilauea and of the flows near Hilo.

Page 36 opens with the recorded history of the eruptions, "first of which comes from native tradition" in the loss of Keoua's army by an eruption of sand and scoria from Kilauea in the graphic account from Dibble. Authorities differ on the year of this event, Fornander placing it as in 1791.

Ellis seems to have been the earliest sketcher of volcano views, of which we have three, and he is credited with publishing the first account of its appearance. This account is quoted, as also one from Elisha Loomis' Ms. Journal of the following year, hitherto unpublished, and Rev. S. C. Stewart's observations in 1825. Malden's plan of Kilauea, in 1841, was the first survey made of the volcano, and the view by Dampier, of Byron's party, represents the conditions on the memorable visit of the Blonde.

Stewart, on a subsequent visit in 1829, gives the next account, followed by Rev. J. Goodrich's of 1832, and of David Douglas, the Scotch botanist, in 1834. Four years later, on the occasion of the visit of Captains Chase and Parker, during a period of remarkable activity, we have the first account of the "floating island" amid the sea of boiling lava in Halemaumau, and the sketch furnished shows much change from the previous record.

The observations of Count Strzelecki, in the latter part of the same year (1838), present the description of six active lakes of boiling lava, of varied height, wherein, he states, "the lava sank and rose in all simultaneously." This is considered "very improbable." The next year a Captain John Shepherd reports it "in violent ebullition," Halemaumau at times overflowing.

During the great eruption of Kilauea in 1840 "Father" Coan visited the scene of activity and has given a graphic description of the changes in progress at the crater, as also the source of the eruption and its course to the sea, and

thereafter becomes our recognized resident chronicler of volcanic phenomena. Copious extracts from his published and private letters show the value of these contributions to science, in affording us such vivid accounts of the successive changes that have taken place.

In the year 1832 is said to have occurred the first recorded eruption of Mauna Loa. It is not at all likely that this was the first to have taken place, yet for some unexplained reason no native traditional account of summit crater activity precedes it. This outbreak was observed and reported from Lahaina, one hundred miles distant, but is not known to have been visited. Douglas is credited by Dr. Brigham as being the first to ascend to Mokuaweoweo, the summit crater, in 1834, at which time it was quiescent (apparently overlooking Menzies' ascent in 1793*). Wilkes' survey of this crater in 1841 is the first plan of record. The second outbreak at the summit was in 1843. This eruption was visited by Mr. Coan, who described the flow as two streams dividing from one source, one flowing toward Waimea, the other toward Hilo, which continued several months.

The observations of the Wilkes party, 1840-41, included a visit to the 1840 flow through Puna in the latter part of the same year, when Prof. James D. Dana received his initiation in Hawaiian volcanology that became with him a study of deep interest, resulting in his "Characteristics of Volcanoes," in 1890. Rev. Mr. Coan accompanied the party in their volcano expeditions and rendered valuable aid in their investigations. The work under review treats interestingly of the "Pit craters in Puna as a part of the Kilauea system," with a map by Wilkes of the region affected by the 1840 eruption of Kilauea, already referred to, and a more elaborate one of some years later of the Kapoho section, given from a personal visit by the author for study and observation in the endeavor to show their connection with Kilauea. The "green lake" in the midst of a group of craters near Kapoho, as also the "blue pool" at the easterly base of Kukii hill, and other warm springs in the vicinity are also dealt with.

* The Annual of 1909, in noting Goodrich's ascent in 1824 as the first, makes the same error.

We are indebted to Mr. Coan for the reported activities of 1844 and 1846. To illustrate the overflowings and changes since 1840, two plans by Rev. C. S. Lyman are given, with much detail, and deductions made from his and Coan's observations. The year 1848 is shown to have been a year of volcanic inactivity, during which period for the first time in Kilauea's history the floor of the crater gradually assumed a dome, as noted by Mr. Coan, of some two or three hundred feet in height, "almost high enough to overtop the lower part of the outer wall of Kilauea," on which the author theorizes as to cause and effect.

Brief periods of brilliancy of the summit crater are shown for 1849 and 1851, followed by an account of the terrible outbreak of February 17th, 1852, which flow, though lasting but twenty days, reached within ten miles of the town of Hilo. This eruption was followed by another in 1855-56, which continued fifteen months, and again threatened Hilo. Mr. Coan's account from his seven visits of observation during its continuance is graphic, and his deductions are supported by the author on his visit to the scene some years later.

In 1855 the activity in Kilauea resumed, and among the changes in consequence is noted the falling-in of the dome over Halemaumau, but quieted again as the activity of the summit eruption progressed.

The flow of 1880 from the northern slope of Mauna Loa, "which proved to be one of the most important on record," was the expected eruption that lured the author back to Hawaii, and much space is given to the descriptive letters of Rev. and Mrs. Coan, and Judge D. H. Hitchcock thereon during the progress of the flow, and deductions by the author.

Thus in chronological order is given a succinct account of the various eruptions and periods of activity as seen and recorded by our several local authoritative observers, with those of the author from his forty visits and close study of the subject up to the interesting progressive changes of 1909, as also citations from visiting scientists and extracts from the Volcano House records.

Among the many illustrations are reproductions of the series of Furneaux' historic paintings of the volcano activity in 1880, 1881, and 1887, and Howard Hitchcock's of a later period, with numerous half-tones from photos by J. J. Williams, C. W. Baldwin, W. T. Pope, R. W. Perkins, the author and others, among which are several striking night scenes.

Surveys of the volcanoes are from J. M. Lydgate, J. M. Alexander, F. S. Dodge and the author, besides numerous plans and sketches by various parties.

HAMAKUA DITCH OPENING..

ANOTHER important irrigation project on Hawaii has been brought to a successful close, whereby extensive agricultural lands that have been handicapped hitherto for want of water becomes assured a controllable supply whereby thirsty fields may now flourish in dry seasons and yield their products in enlarged measure, while new areas will call forth further investments in farming industries.

Following the opening of the Kohala ditch in 1906, when the waters from the Honokane stream in the Kohala mountains were led out onto the cane lands along its coast, like work was entered upon for the greater need of the more extensive fields of the Hamakua district, which was planned to be done in two sections, known as the Upper and Lower ditches, at an estimated cost of \$1,000,000, the work of the Hawaiian Irrigation Company.

The upper ditch, some twenty-three miles in length, of a capacity of 30,000,000 gallons per day, was completed in 1907, in two parts, the first opening January 1, conveying water from the Kawainui stream, at an elevation of 4050 feet in the Kohala mountains, some fifteen miles through ditch and tunnels to the Honokaa Plantation and the Pacific Sugar Mill, with terminal for the time at Purdy's gulch, benefiting homesteads en route with a needed supply. March 1 following the ditch was continued eight miles farther to the Paauhau Plantation for irrigating and fluming purposes.

This lower point of delivery is at an elevation of 2300 feet.

Construction work on the lower ditch began in May, 1909, and was brought to a close with June, 1910, so that its opening, July 1, was made a memorable event when the officers of the company, promoters, distinguished guests, members of the press and others joined in the festivities of the historic occasion of turning on the hitherto waste waters to spheres of useful enterprise.

The source of supply is the Waipio stream, in Hamakua, which has its origin in the Kohala mountains, and is the confluence of four streams known as Kawainui, Alakahi, Koiawe and Waima, which, by a series of tunnels (56,932 feet), flumes (6739 feet), and open ditches (57,934 feet), is brought out and conveyed to Paauhau Plantation, eastward, a distance of twenty-four and three-fourths miles, supplying en route by flumes and open ditches the needs of Kukuihaele and Honokaa plantations. This ditch taps the (most distant) Kawainui stream at an elevation of 1037 feet, then by a series of forty-five successive tunnels nine miles in length, including seven intake tunnels, and 612 feet of fluming connecting the deep ravines, in which course the above four named streams, the water is brought out at Kukuihaele, at an elevation of 985 feet, where is located the main measuring weir, which consists of six five-foot panels, capable of measuring up to one hundred million gallons, the capacity of the ditch daily.

On the morning of July 1 the harnessed waters, conveyed through these new channels, gushed forth from the mouth of the tunnels into the receiving weir, where were gathered the officers, engineers and others of the construction company and their invited guests, to welcome its arrival to new fields of usefulness. In honor of the event many were gathered from Honolulu, and from different parts of Hawaii, and from Maui. The promoter of the project, John T. McCrosson; Saml. Parker, owner of its controlling interest; Jorgen Jorgensen, its engineer; Fred and Harry Lewis, its financiers, and Robt. Shingle, president of the H. Waterhouse Trust Co., its brokers, had reason to feel proud of the successful termination of their labors, and congratulatory speeches became, naturally, the order of the day.

Official figures of dimension of the ditch are as follows:

Tunnels: Bottom $6\frac{1}{2}$ feet, sides 5 feet, across top 8 feet, crown 7 feet.

Open ditch: Bottom 7 feet, sides 5 feet, across top 11 feet.

Flumes: Bottom 7 feet feet, sides 5 feet.

Intake tunnels: Bottom 5 feet, sides 5 feet, across top 6 feet, crown 7 feet.

Throughout the plantations there have been constructed thirty-five tunnels, $2\frac{3}{4}$ miles, $1\frac{1}{4}$ mile flumes, and $11\frac{1}{2}$ miles open ditch. The grade of tunnels and flumes is six feet per mile, and of the ditch five feet to the mile.

As before stated, the entire length of this lower ditch just opened is twenty-four and three-fourths miles, comprising tunnels aggregating 56,932 feet, or more than nine miles of underground waterways, with 57,934 feet of open ditches, and 6739 feet of flumes.

Fourteen months only were required to build these miles of tunnels and waterways, hundreds of Japanese being employed upon the work. They bored in from the upper sections, near the intakes, and bored in from the mouth. Along the trail at stated intervals crosscuts were driven into the tunnel line, and two gangs started at each crosscut, working out from each other, until at one time gangs were working on eighty different breasts. These crosscuts formed the windows, so to speak, of the underground system, openings through which the excavated material was drawn and cast over the pali, and it was through these same openings that the materials were passed after being laboriously carried on the backs of mules who trod the trails from headquarters, carrying all material and supplies. When the tunnels were of sufficient size, railroad tracks were laid in them section by section, at the top and at the lower ends, over which suitable cars were drawn carrying supplies. When an uncut face was encountered, the materials were taken out through a crosscut, loaded on mules, and carried to the next crosscut, into the tunnel, and laid again on the cars.

In the mountain system of tunnels was driven the longest tunnel in the Territory, same having been operated by machines, handled by Japanese labor under white supervision.

in thirteen months, a distance of 3312 feet through the center of the mountain, connecting the streams of Waima and Ko-iawe. The tunnels are all cement and stone lined where necessary. The open ditch and tunnels through the plantations are all cement lined with plaster reinforced by wire netting.

Along the line of ditch are sixteen weirs for the distribution of water in connection with lateral ditches made by the plantations for irrigation. These are constructed of stone masonry and strengthened by the reinforcement mentioned in the bottom of these. Each has strong iron gates for the ingress and egress of the water, also weir houses at each weir containing automatic registers for measuring the volume of water daily delivered to the plantations.

In the open ditch throughout the plantation section, about 8000 barrels of cement and 13,000 cubic yards of sand were used in lining the sides and bottom of same, together with the wire mesh netting for reinforcement purposes. About 6000 barrels of cement were used in stone lining and cement plastering the mountain system of tunnels. Stone masonry used on flume piers in all sections amounts to some 5500 cubic yards. About a million feet of northwest and redwood lumber has been required on construction work in building the various flumes, camps, and permanent buildings.

Owing to the mountain system being inaccessible to wagons for transportation purposes, thirty miles of pack trail had to be made about five feet wide and paved, for taking in supplies and materials used on the work, and also throughout the plantations pack trails run alongside the open ditch. Survey trails traverse the Waipio mountains for twenty-one miles, being built in the first instance when the survey was being run by Mr. Jorgensen. In some instances these were widened and converted into regular pack trails where it was convenient.

About one hundred draught and pack mules were used conveying supplies and materials to the various sections of the work. The materials used on construction work were: Powder, 200 tons; caps, 710,000; fuse, 1,225,000 feet, and twenty-five tons candles.

The class of labor employed has been chiefly composed of

Japanese, Hawaiians, and Koreans, with a fair sprinkling of Chinese. The average monthly payrolls show 1200 men employed, day labor averaging \$1.00 per day, while contract labor amounted to more, according to conditions. The majority of work was done on the contract basis; tunnel work being paid at so much per running foot, and increasing the price on a fixed rate for each hundred feet that the tunnel extended in length, the laborers paying for all ammunition and lighting used, this being found more satisfactory, as the men were thereby more economical in the materials required in the prosecution of the work.

This expenditure of a million dollars for Hamakua's irrigation scheme means much to the district for the increase it insures on her sugar output. Heretofore the plantations in this section have averaged but three-fifths to one-half of what irrigated cane fields elsewhere have been yielding to the same area, hence the outlook of the fertile lands of Hamakua coming to full recognition as remunerative as any to the enterprising agriculturist.

The ditches will add to the wealth of plantations in other ways than for irrigation purposes in the change that will follow by use of the flumes and ditches for conveying the cane to the mill instead of the laborious, slow and expensive mode of hauling hitherto in vogue in the district, saving both in hands and animals, as also in vehicles, etc.

Further plans of the irrigation company contemplate the construction of upper reservoirs, damming up ravines and gorges, obtaining and generating power for additional water to the upper and lower ditches for the further development of a district which is just now being brought into closer relations with Hilo through the extension of its railroad, which is planned to come within fifteen miles of Kukuihaele, to give direct transportation for sugar and other products with shipping at Hilo.

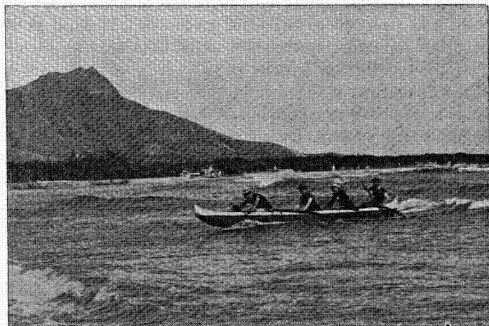
We are assured that the above "does not tell the story of what the Hamakua ditch means to Hawaii; but that there are as yet unused possibilities for the incidental development of 8000-horse power, which can be distributed as electric energy all over the Island of Hawaii, gives some conception of what the Great Ditch means."

OUT-DOOR ALLUREMENTS.

BY ALEXANDER HUME FORD.

THE OUTRIGGER CLUB.

THE HAWAIIAN OUTRIGGER CANOE CLUB was organized in the month of May, 1908. It was the thought of several malihinis, or newcomers, who recognized the picturesque charm to the tourist of surf-board riding, an art that was rapidly dying out owing to the fact that Waikiki beach was becoming closed to the small boy of limited means. Private residences and great hotels,



with the completion of the trolley line, began to occupy the entire beach, so that the native and the small white boy could no longer doff his duds and mount his board at will. It now costs money to go out into the breakers, and to become expert on the surfboard, day after day, week after week, for months at a time, must be spent in the surf.

Fortunately for the cause of surfboard riding, the trustees of the Queen Emma Estate saw their way to aid in its pres-

ervation. They leased for twenty years at a nominal sum an acre and a half of land and lagoon between the Seaside and Moana hotels at Waikiki, to trustees who guaranteed that the property should be used only for the purpose of preserving surfing on boards and in Hawaiian outrigger canoes. Hence the name adopted—"The Hawaiian Outrigger Canoe Club."

The first board of officers and directors elected was made up as follows: Alexander Hume Ford, President; H. L. Herbert, Vice-President; R. H. Trent, Treasurer; C. H. Frazier, Auditor; Kenneth Winter, Captain; H. P. O'Sullivan, Secretary; J. P. Cooke, J. R. Galt, and H. R. Macfarlane, Directors and Trustees.

The Club became active from the start. To preserve the Hawaiian atmosphere, the only two Hawaiian grass houses of the old style remaining on the Island of Oahu were purchased and removed to the Club grounds at Waikiki beach. The other buildings erected generally followed the plan of a Hawaiian village of bygone days.

The Club grew in membership to several hundred, and a woman's auxiliary was organized and now numbers about one hundred members, with a number of young girls, who stand gracefully on their boards in the largest surf that runs.

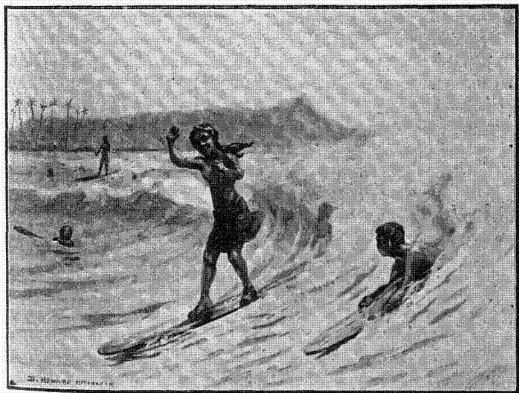
During the first year of the life of the Outrigger Club many canoes were purchased and brought to Waikiki. Crews were organized, and at the regattas, in which both whites and Hawaiians contested, the "Outrigger" boys were almost invariably victorious.

Boys who had never braved the surf now began to paddle out on their boards, and soon learned to ride in before the waves. Men of mature and even advanced years took up the sport; one tourist of 70 learned to stand on his board after a few trials. The influence and membership continued to grow. A large lanai with cocoanut columns and thatch roof was built over a part of the lagoon, and in this Hawaiian lanai, with its 80 by 56 feet of floor space, the dances and entertainments of the Club are given.

When the visiting fleets are in the harbor, Hawaiian regattas and surfing contests are held at Waikiki under the

auspices of the Outrigger Club. The Club has gradually encouraged surfing exercise and contests solely for the sake of health and sport. Today it is a thoroughly amateur organization, and one of the chief promoters of the recently formed A. A. U. in Hawaii.

In 1909, Frank C. Clark contributed four colossal cups to be contested for annually by the members of the Club for the best events in surfboard riding and in surfing in small and large canoes.



During the visit of the Cleveland round-the-world cruisers, some 700 tourists witnessed the first cup events and saw on the Club grounds how the Hawaiians (the Kalihi Club of native paddlers being guests of the Outrigger Club) prepared poi and baked their pigs in underground ovens.

Under the impetus given by the formation of a real surfing club, the art of riding the surfboard has made great advances, and once again the native Hawaiians are seeking to wrest the laurels from the white men and boys. Some of the native men now ride in before the largest rollers standing on

their boards with small boys standing and balancing on their shoulders.

The Outrigger Canoe Club is practically an organization for the haole (white person). During 1910, it was necessary to build a new bathhouse for men with lockers for one hundred, and before the year was out it became necessary to double its size, besides enlarging the one for boy members; a new and enlarged bathhouse for the women is also in course of construction.

The officers elected at the February meeting for 1910 were Sanford B. Dole, President; Alexander Hume Ford, First Vice-President; P. H. Weaver, Second Vice-President; G. H. Tuttle, Secretary; F. T. P. Waterhouse, Treasurer; Ralph Lyon, Auditor; J. P. Cooke and J. R. Galt, Directors and Trustees.

The membership dues in the Outrigger Club were fixed at five dollars a year. To this has been added, for adults, an initiation fee of three dollars. Many tourists have become members of the Club and have learned to ride the surf-board and to guide the Hawaiian outrigger canoe before the big rollers.

The Club has brought health and muscle to many small boys, and even to men of Honolulu. Usually, if the surf is good, as many as a hundred surfboards are now to be seen in the several surfs of a Saturday or Sunday afternoon.

The Outrigger Canoe Club is now known around the world, as it has promoted the securing of many instantaneous photos of this purely Hawaiian water sport, and these have found their way into *St. Nicholas*, *Collier's Weekly*, the *Illustrated London News*, and many other magazines and journals of world-wide circulation.

Hawaiian Trail and Mountain Club.

The Hawaiian Trail and Mountain Club was organized at Honolulu April 5, 1910, at the rooms of the Chamber of Commerce. The preliminary work of the organization extended over two years.

In 1907, Governor Frear appointed a Territorial Trans-

portation Committee, that sought to have a reduction made in passenger rates to the mainland, as well as between the islands. The rates to the mainland have been lowered, and a cruising rate among the islands is hoped for. A delegate from the Territorial Transportation Committee visited Australia and New Zealand and enlisted the interest of the Government Tourist Bureaus of those countries in a plan for joint work throughout the world in making Pacific lands known to the tourist and traveler. Reports were brought back of the work of the Australasian Government Tourist Bureaus, and a convention of delegates from these was held in Honolulu, and it was decided that the plan of joint educational work should be carried on, with central promotion or tourist information rooms in New York and London. Hawaii learned of the splendid work Australasia was promoting in the way of mountain trails for tourists and rest houses every few miles, where food and lodging might be secured at fixed rates, within the means of all. The idea began to take in Hawaii, and as a result the Trail and Mountain Club came into existence, patterned largely on the plan of the Australian and New Zealand Government Tourist Bureaus, so far as their work in the mountains of those countries was concerned. In fact the Government Tourist Bureaus are especially mentioned in the constitution of the Trail and Mountain Club, as will be seen in the following statement of its objects as set forth in its constitution:

"The name of this Club shall be the 'Hawaiian Trail and Mountain Club.'

The object of this Club shall be: To encourage intimate acquaintance with outdoor Hawaii:

1. By promoting knowledge of and interest in objects of natural interest in the Territory and the ways and means of getting there;
2. By the construction and maintenance of trails and roads leading to the same and of rest houses incidental thereto;
3. Through promoting interest in travel, more particularly by foot, through the mountains of Hawaii;
4. Through enlisting the coöperation of the people and

the government in preserving the forests and other natural features of the Hawaiian mountains, and generally by publication and otherwise to convey information concerning the object of the Club, both to residents of the Territory and to persons residing abroad;

5. By acting in coöperation with other Clubs or Associations having similar objects, as well as with Government and other Tourist Bureaus, and to exchange privileges therewith.

There shall be three classes of membership, Senior, Junior, and Juvenile.

A member of the Club, twenty-one years of age or over, shall pay an initiation fee of Five Dollars, and, after the first year, annual dues of the same amount, payable in advance, and shall be enrolled among the Seniors or regular Club members.

Members under twenty-one and over fifteen shall pay an initiation fee of Two Dollars and Fifty Cents, and annual dues, payable as aforesaid, of the same amount.

Members under fifteen shall pay an initiation fee and annual dues of One Dollar.

Members of the Club under twenty-one years of age shall not be entitled to vote or hold office in the Club.

Any person may become a life member upon the payment of One Hundred Dollars, at any time after his election to membership, and shall thereafter be exempt from the payment of dues.

The Board of Directors may, in its discretion, elect annually, by unanimous vote as honorary members, three persons, who shall have preëminently distinguished themselves in matters identified with the purpose for which this Club was organized, or because of some substantial material aid and assistance they may have rendered the Club.

The following officers and directors of the Hawaiian Trail and Mountain Club were elected for the year 1910: W. R. Castle, President; L. A. Thurston, Vice-President; Irwin Spalding, Recording Secretary; A. H. Ford, Corresponding Secretary; Robert Shingle, Treasurer; Doremus Scudder.

R. S. Hosmer, J. P. Cooke, Ed. Towse, Directors; G. H. Tuttle, Historian; Waterhouse Trust Co., Trustee.

The Trail and Mountain Club, as well as the Territorial Transportation Committee, of which Governor W. F. Frear is chairman, and the Promotion Committee, are each inviting delegates to attend a Pacific Conference in Honolulu in February, 1911.

ANCIENT HAWAIIAN RELIGIOUS BELIEFS AND CEREMONIES.

Translated from the Writings of S. M. Kamakau.

THE STONES OF KANE.

THE stones of Kane were places of refuge for the family, their relatives and offspring, or other persons, and might thus be termed family altars or shrines. They were not temples, but simply a single conical or upright stone, an altar, planted around with ti plant, and there the family would rest. This is the reason of the family resorting thither: The fathers and the sons who were related to one family (but none of other blood) would assemble to petition the god to punish with death or sickness, and to bring distress upon the family for being irreligious, disregarding the will of god, and also for eating sacred things, for eating with defiled persons, for drinking water together, wearing the same clothes, sleeping together at the same bed-place, and girding on the same malo, or touching the same garments, and also mingling with those who were defiled by these wicked practices, therefore, they had transgressed against God, for this nation of Hawaii was said to be a nation devoted to God, for where God was born, so was man.

When the family perceived that they were in danger from having sinned against God by being irreligious, disregarding the will of God, partaking of sacred things, and also for various defilements, the danger was revealed to them in dreams

and in visions and also through other signs as indicated by the god, and the offering and the sacrifice were also shown for the atonement and repentance for the sin of the family. And the stone of Kane was also shown as the altar where the family should render their services to God, with their sin and peace offerings. The services were as follows:

In the evening the wood is laid (in the imu), and in the early morning the family would proceed with the pig, red fish, garment, and the grass, and at dawn the imu fire for the pig would be started directly in front of the stone of Kane; the red fish and the garment—peace offerings to the god—are buried in front of the stone, and the pig and the oloa (kapa) are the sin offerings for the family.

While the pig is baking the chewing of the awa takes place with great quietness amongst the family. They must not go for water nor do other defiling work, nor walk about. When the awa was chewed and covered with the herb, then the sacredness was lifted, the pig oven uncovered, and the assembly of the feast seated. The pig was then cut up, the awa strained into the cups when the prayer for forgiveness for the family would be offered up, they at the same time repenting of their sin. Following this would be the prayer to glorify the god, after which the priest will say amen! When the prayer had finished, the awa was drunk and the sacred feast then began. Those who became first satisfied must remain seated until the end of the feast, when the kapu period ended. The rubbish covering of the imu, and its stones are then buried in the oven and the remainder of the offering was buried in front of the stone, though in some cases offerings might be taken home, but not to be given to those at the house who did not participate at the place of petition for pardon of the family.

After this cleansing service was ended no one should administer medicine to the sick, the suffering, or the distressed of the family, for the blessing for their relief had been solicited, and the increase of children and the enjoyment of remaining together assured by favorable omens. So also were they assured of productive fields and fruits and various other things without hindrance or danger. The stones of Kane

were called refuge places, and doors of heaven, and also shrines where man could converse together with God, a place where the people would repent of their defilement and sins and ask God for blessings. One, two, three or more would be able to go before their shrine of the stone of Kane and make sacrifices for their defilement and evil practice.

The stone of Kane was pointed out by God; it was not built by man but by Supreme instruction; perhaps in dreams, or by visions, and thus through the real guidance of God were they indicated. These stones of Kane are numerous from Hawaii to Kauai, in this and that land division. The heiau temples and stones of Kane are different, so also are the shrines of husbandry, and fishing, etc.

CONCERNING PLACES OF REFUGE.

The place where persons liable to death might flee to, whereby they would be freed from the death penalty, is called "Puuhonua," place of refuge. The king was also termed a puuhonua, because one doomed to death might flee to him for pardon, and so with the queen, as also the god of the king, which was deemed holy. Certain of their lands were also termed places of refuge, and some of the generals were considered refuges, though perhaps these only pertained to prisoners of war.

In the time of Kamehameha I. the ancient places of refuge were discontinued, and he established refuge lands in accordance with his own wishes. Nearly all the ancient refuge places were thus abolished excepting those on the Island of Kauai. The reason of their discontinuance was because the refuge lands became the property of the victorious chiefs, and the generals and soldiers of Kamehameha, therefore the refuge places of conquered lands ceased. On the Island of Kauai the ancient places of refuge remained because Kamehameha never reached that island, and the lands were never conquered and divided amongst his generals, so it never became a colony; their king continued to rule his people. These are some of Kauai places of refuge, viz.: Keone-kapu of Kahama-lu-ihi at Waimea, Puu o Kanaloa, Kekaha for Mana, Wailua for Puna, and also several others. On Hawaii there

were some places of refuge in Kohala, Hamakua, Hilo, Puna, and in Kau, but on account of the continuous wars between the chiefs of Hilo and Kau against the chiefs of Kona, and because the latter were victorious, therefore the lands of refuge were given to the generals of Kamehameha, except the refuge of Honaunau in Kona, probably on account of the kingdom being conquered by the chiefs of Kona and the place of refuge had no value; the ahupuaa, or land of Honaunau was different from the place of refuge.

The places of refuge of the ancient people were district divisions, as Kailua and Waikane at Koolaupoko, and Kua-loa, which was a very sacred place and a real place of refuge for condemned persons, for when they entered it they were saved. For all Oahu, Kawiwi (at Waianae) was the place of refuge during the time of war; but Honaunau was not so, it was a stone walled enclosure resembling a fort, with a kind of temple within. Perhaps only male persons were rescued by this place of refuge at South Kona. Honaunau was a celebrated puuhonua, its stone walls having the nature of a war temple with large stones placed on top of others. It had a cornered shape, two sides being built of stone which were between Honaunau and Keamoalii, and on the makai side was the rocky seashore, and a large stone called Keoua. There were two temples within the stone walls, one situated on the northeast corner adjoining the tomb called Haleokeawe, where the bones of the departed chiefs were deposited and one at the end, facing North Kona, the (women's heiau) temple of Akahipapa.

Haleokeawe was sheltered by a surrounding fence of carved wooden images, and on the north side was the bottomless pit (lua pau) where you enter the enclosure. Carved images also graced the main walls of the enclosure toward Keamoalii and Keokea.

It was said that Keawe-ku-i-ka-ai built this place of refuge during the time of the civil war of Hawaii, the chiefs of Kona fighting against the chiefs of Hilo and Kau, some four hundred years ago, therefore it was claimed for him. Others say it was built during the time of Keawe-i-ke-ka-hi-a-lii-o-ka-moku, who was the grandfather of Kalaniopuu, about a

hundred years later. They maintain that he built this place of refuge at Honaunau, but there was no war during his time; it was a time of peace, and Keawe, an independent chief, was the high ruler to whom all the chiefs of Hawaii were obedient. Keawe-ku-i-ke-ka-ai was the brother of Keaka-ka-ma-ha-na, the sacred chiefess, who was the offspring of Kelii-o-ka-la-ni and Kea-kea-la-na-ka-ne, and Keawe-ku-i-ke-ka-ai by Kea-kea-la-ni-ka-ne, and Ka-lani-ma-ka-lii was the one who built the place of refuge at Honaunau and the tomb of the chiefs, and on account of Keawe's supremacy as a chief, and he being girdled and bound like Keawe-ku-i-ke-ka-ai, and laid within the tomb in the enclosure, it was called The House of Keawe. Places of refuge originated in very early times, so the lands so designated were continuously preserved and held sacred, and were strictly forbidden. No blood of guilty persons should be shed when they had entered these lands of refuge.

At the time when Kamehameha was the ruler of the kingdom all the lands belonging to his favorite wife, Kaahumanu, were made lands of refuge, also the lands belonging to his war god, Kukailimoku. The lands of Kaahumanu which were changed to places of refuge were Puu-nau, at Lahaina; Wai-pu-kua at Waihee; Ka-ni-a-moko at Hana, and Kaluaaha at Molokai. Of Kukailimoku's, Kukuipuka at Kahakuloa; Poli-poli at Napoko; Kaili at Puuhaoa, in Hana, as also other lands transferred to Kaahumanu and the war god of Kamehameha. Thus did he assign lands to be places of refuge that the culprits might be saved and those who shed blood without cause, as also those who foolishly killed people. Sometimes Kaahumanu was considered a refuge, and those who were guilty and ran before her escaped death. Kamehameha himself was deemed a refuge, and the guilty person, and those who committed murder who ran straight before him, the pursuers could not shed his blood or have vengeance, for the king had pardoned his guilt.

ANCIENT LAWS, ETC.

The first law enacted defined the year and the sacred rest days. In the time of Wakea the days of worship were established, which were very sacred. In the time of Luhaukapawa,

and in the time of the priesthood under Lihauula and the prophets later, the law for the preservation of the sacred day was very strict, the human body was taken for a burnt sacrifice, and was burnt together with things fragrant in offerings and sacrifices. The human sacrifice was not known during the time of Wakea. Some 700 or 1000 years had passed before the human body became a subject for burnt offering; the body was cooked in a fireplace or roasted on the fire till it became oily (a kahe ka hinu), then placed on the altar. This custom was commonly practiced during the time of Umi-a-Liloa, and Moaula was the temple which had preëminence for the many human beings sacrificed on its altars.

It has been said, and was well known in the traditions of the people, that thousands of people saw with their own eyes the god descend from heaven, within the volume of clouds which floated through the air, accompanied by thunder, lightning and the shining black cloud, and the tongue of the god from heaven was seen trembling on the altar and collect together all the burning offerings which were placed thereon. But, it was said that the god was not seen for he was still above in the heaven, and his tongue was what was trembling below like lightning, and in this way the burning sacrifice was transformed into a volume of smoke and ascended in the sky and finally disappeared. But the human sacrifice as a burnt offering did not originate during the time of Umi. It was after that of Kapawa, when the chiefs kapus were separated from those of the god.

The marshals were the guardians to keep watch over the kapus of the chiefs and maintain them with dignity, and those who infringed the kapus or sacred things of the chief were burnt at the fire. And those who violated the kapu of the god would become an offering thereto as a burnt sacrifice. The marshals who thus watched the kapus of the god were the priests, and the chiefs or the people who violated these, no power or authority of chief could avert the penalty, but if the kapu of the chief and the kapu of the god were combined, then the chiefly kapu could atone for the guilty, and if the penalty was death he could be pardoned.

The god who was worshiped with a burnt offering, and

also with a human sacrifice, was Ku who was (known) also as Kunuiakea, Kukailimoku, Kukeoloewa, etc., who were the visible representatives to show whether or not the god accepted the sacrifices which were offered or placed before the altar.

These representatives were wooden gods, twisted and fastened around with small white kapas and the red ape and the haena, and directly on the top of the head was a waving feather with a helmet of fine feathers covering the head, and when the time of revealing the truth should occur, then the feather would twist and stand erect as if electrified, and when it flew from its place and landed on the head of this or that person, fluttering at the head, arm or shoulder, then these were signs indicating the acceptance of the petitions that the god would assist for good fortune, some for the god and some for the benefit of the kingdom.

Thus the custom of observing the days of sacrifice and kapu in ancient time was continued, hence the people became irreligious and ungodly.

KINDS OR OBJECTS OF PRAYER.

Many were the objects of praying to God. The great reason for praying to God is for the (welfare of the) body in order that God may preserve the life until bent over a staff; shall have become blink-eyed and bed-ridden; until he gets the last trance vision. The welfare of the spirit is not prayed for. Some people think that the spirit lives forever (immortal); and when the body dies then his spirit will join with his aumakuas, or ancestral gods, such as Kane-he-kili, Kane-wahi-lani, Kauila-nui-maka-ke-hai-ka-lani, then, it is plain, if he is an offspring of theirs, he shall be received and carried to heaven. But if Pele and Hiiaka are his aumakuas, then his dwelling place will be at the volcano. And all the other spirits are in that way set apart. Those who have no ancestral spirits take their deceased children, or parents, or brothers or sisters for worship, or anything they desire to become, whether shark, or bird, as suits their wish, and these would become spirits known as unihipili.

It is through the kind of houses put up for the god that service for its worship would be known. If ohia wood is used for the house of the god which is to be built on the ground of the heiau (temple), that is (known as) haku ohia, malu ohia, or ohiako. This is a house for the god to be prayed to for overcoming rebellion and removing rebellious conspiracy and to end wars. And that is why the chiefs raised swine for sacrifices in the ohia and lama houses; such pork was called puaa-hea.

A palm (loulou) and hale-o-papa house of god is a house to cleanse the land of impurity on account of the death of the chiefs and people; on account of pestilence or any destroying epidemic, and on account of unfruitfulness, and because of famine in the land, wherefore the god is sought in his house so designated.

The gods who are adored and worshiped within the various temples, and the gods appealed to in prayer are: Kane, Ku, Lono, and Kanaloa. And these are not gods of wood or stone idols, nor were they brought forth to public gaze for adoration. When all the congregation gather to pray in a body, then the hands are held upwards as assurance that there is a god in heaven. And thus they repeat the prayers in unison to their end, when the hands are let down. If a family prayer: on arising of the husband and sons, or parents perhaps, then they go into the mua house and take the ipu or gourd of lono, being the ipu-kuaaha. This was a hulilau gourd, netted with sinnet tightly, and some had cord handles. It contained food, fish, awa, and a small root of awa tied on the outside of the handle cord, and was placed on the outside of the doorpost. The petitioner would ask God to preserve the Aliis, the people, and the family, when that was finished the food and fish were eaten. And in like manner in the evening.

It is generally said that the Hawaiians are a religious people, a hospitable people, kind, humble, merciful, freely giving away eatables and raiment; they welcome strangers, or call the stranger to sleep in their house, and partake of the food and fish without pay, and wear apparel without compensation. These people are ashamed of giving away things

for the sake of gain. That was the state of this people before the arrival of white men and civilization, but in these times they are taught to be stingy, ungenerous, unkind, and stubborn, and are learning to be proud, and to beg and to be vain glorious. Some are practicing these things, but the majority of them are still children of those old kind people. And the stingy and unkind persons, their names are besmeared with derision. * * *

Idolatry. This people did not worship idols before the advent of foreigners. No idol was ever set up before the congregation and then the congregation meekly bow before it. Kukaiimoku, Kukeoloewa, Kuhooneenuu, and such like were not set up that the congregation might worship them, bowing their knees on the ground. These gods were very sacred. They were not visible to the congregation, nor were they always kept in the temple. It was only when a great kapu service was held in the heiau, at night, that the occasion arises when these gods are brought in; then the ceremony of the feathered god is performed by the king and the high priest. In the rear of the altar is the aha ceremony. These idols are representatives of the invisible god. The images set up and forming the pachumu enclosure were for ornamentation only around the temple. Such images were not for worship, or for a man to bow his knee to.

The prayer service. At the chief prayer service the assembly gather outside the altar at the time of prayer, the king standing at the entrance of the temple under the altar, facing toward the assembly with the high priest at his side; and the chiefs and the assembly outside of the altar all fronting toward the king and the priest, sitting firmly down, all on bended knees. When the priest shouts forth the word of prayer, then all raise up their right hands, pointing to the heavens, which is their calling upon god to help them. And for a long time the hands are held up, during which every one who knew the prayer (by heart) would repeat it in the assembly, and when it came to the most sacred part, the Kumalohia, consisting of short words of prayer, the law concerning which has a death penalty attached, then the heads of those in the assembly bow down low, without raising

their stumps; then the image signifies amama; it is finished. No image had been set up before the assembly. This is the true nature of the prayer assembly kept by the kings in old times of Hawaii nei down to the time of Kamehameha.

AN AUTO TOUR OF HAWAII.

KONA THE LAND OF FRUIT AND FLOWERS.

[Extracts, by permission, from a personal letter.]

FANCY a tour of the Island of Hawaii in sixteen hours, and this time has been recently lowered a trifle, notwithstanding the many gulches encountered en route. This account, however, is not the record of such a fly-by-night trip, but rather the narrative of impressions noted of a leisurely journey which had for its object both recreation and observation, with the incidental benefits of an educational character if nothing more.

After due preparation following a period of eager anticipation for the eventful trip a touring party of the capacity of a 60 Thomas flyer set out from Hilo by way of the volcano. Ladies predominated, for they numbered four, while the chronicler and the chauffeur represented the other sex. Setting forth by way of Olaa and Furneaux's, where the full complement of the party was made up, we left this latter artist's retreat about 10:30 a. m., stopping at the Volcano House long enough to have a lunch put up, then sped on again, the weather being ideal and the roads good. Some three miles beyond Holloway's old place on the Kau side a tempting spot beneath the shade of a grove of trees induced a halt for a picnic spread, where the provided lunch served well its purpose. Resuming our journey, Kapapala was called at en route to exchange greetings with the "lady of the ranch." Here they have a beautiful garden, the attractions of which induced the artist of the party to take away lasting impressions thereof on a dozen films.

At Pahala the shopping propensities of the ladies were indulged, so that Waiohinu was not reached until half-past three. The roads so far were splendid; just as good as Oahu's section from Moanalua to Waialua, and far better than those of the Koolau district your chronicler experienced last month. The only bad place met with was some two to four miles from the Volcano House, Kau-ward, where no road has ever been made.

Waiohinu the ladies found to be beautiful; one of the party thought it the most beautiful spot she had ever seen. It is certainly pretty, and a number of snapshots of its picturesque localities will impress the attractiveness of this village by the way, on a late October day, for years to come—unless they go bad. Found this to be a convenient place to tarry over night, and so engaged ourselves, that the journey toward Kona was not resumed till the forenoon was half past.

The road over the lava flow of 1907 was not as bad as it had been painted to be, and except for the ups and downs was all O. K. The day being overcast, but not showery, the heat did not bother anyone; in fact, cool, pleasant winds prevailed all the way around, and no rain whatever.

The roads through Kona were splendid except for the unnecessary short bends in the alignment. These curves should be straightened out similar to the Bruner road work in the northern part of the district. The surface of these South Kona highways is good, but a reduction of 80 per cent. of its crookedness by a little cutting and filling in, in places, would make a "Jim Dandy" road.

Reached the immense tobacco curing barns about two o'clock. These are tall frames made of 6x6, 4x4, 2x3 scantling and 1x3 battens, the sides being of muslin cloth, and holding tons and tons of leaf tobacco on ropes or wires to dry. They look like six-story buildings made of 1x3 stuff and muslin cloth. The tobacco industry certainly gives evidence of having come to stay; everything about the estate indicates a successful business enterprise. The coffee crop in Kona is very large this year, and for miles and miles the auto spun along between rows of red berries, some of the coffee bushes being literally covered with their brilliant product. Oranges

were pau except a tree here and there, but the writer managed to procure 75, all the tree had, at the proverbial rate of "two for a cent apiece." Kona is the district for fruit. Every little kuleana has its native bananas, oranges, coffee, pine-apples, papaia and taro, and the display of begonias ought to be seen to be appreciated. The scarlet "coral" begonia is up to the gutters in height in many of the gardens, while marigolds, red dahlias, roses, bougainvillea vines and the blue plumbago may be seen all over the place. Every garden was luxuriant in beauty.

Sunday we went to the landing and hired a canoe to take the party over to Cook's monument, across Kealakekua Bay. The canoe held eight, including the two native paddlers. Took several photos of its points of historic interest, but found the locality too hot for the enjoyment of lunch, so returned across the bay, got into the auto and rode some fifteen miles to a beautiful spot we had passed the day before. This duty being over, the Kona Tobacco Company's establishment was visited, where the party was shown over the drying houses already mentioned. Thence we set out along the upper road to Kaloko and down to Kailua, for a visit to the Kona palace of Kalakaua's time, then back to Paris' for a turkey dinner.

About nine a. m. on Monday the start was made for Honokaa, via Waimea. In about an hour's time the most interesting lava flow I had ever come across was reached and found to be a fine place for specimens. It is a rough flow all right, pahoehoe in character, but cut up by immense, deep cracks. I trust our snapshots will show the awful grandeur of it. This eruption must have come out of Hualalai rather than from Mauna Loa, yet showing a deceiving freshness for its great age. Anyway, I have never seen a grander sight, and I am familiar with about all of Mauna Kea's flows. The road across the Waimea plains was found to be quite passable owing to a wind storm a few days before, which relieved it of much of its usual dust, rendering it fine, though somewhat rough. But Waimea disappointed us all. It was dusty and hot. The grazing land on the Hamakua

side of a line drawn through the center of the town was green; the other side dry.

Honokaa was uninviting; in fact, all of Hamakua, to our fancy, could have been cut from the trip and nothing lost. Took a ride over to the edge of Waipio, but the view looking down into the valley was not as pretty as that of Moanalua from the salt lake hills, as it was too far away.

Had lunch at Laupahoehoe, then set forth on the homeward stretch, stopping at Hakalau gulch to picture features memorable to the party from personal associations, and reached home at 4 p. m., dusty and tired, and not at all disposed to bless in memory the party responsible for the abominable road from Papaikou to Hilo—here, right at our own doors, the worst bit of roadwork on Hawaii, and I feel sure there is not its like on all the islands.

RETROSPECT FOR 1910

HAWAII has again been favored with a year of exceptional prosperity. An evenly distributed rainfall throughout the Territory has refreshed and enriched the earth to gladden the hearts of planters and graziers by increased crops and products, and improved herds. With the exception of a brief storm in January, the weather has been uniformly good, so that less than usual damage or setback has been experienced, and permitting all undertakings to be pushed forward with vigor. Through watchfulness of the Health authorities epidemics have been averted and sanitary conditions improved.

Public works under federal control are showing the result of the liberal appropriations for the defense of this "Crossroads of the Pacific," nor have those of the Territory for its development lagged in prosecution so far as provided funds allowed. Commerce has been attracted to our ports to an unusual degree in the bringing in of our varied supplies and taking away the products of our soil, which, in our Cus-

toms review both show "high-water mark;" this prosperity so in turn affecting our territorial finances as to show a cash balance in the treasury at the close of the fiscal year ending June 30, 1910, of \$698,970.96, instead of a customary deficit.

Under such favorable conditions that have been Hawaii's boon for several successive years, it is but natural to find a spirit of progress planning for still greater things in the near future, not the least of which will be an improved and enlarged Honolulu. Already have a number of important contracts been entered upon which will give the city its record period of building activity and public improvement. This same spirit prevails in Hilo with its railroad extension, breakwater, and harbor works, as also Kahului in its continued expansion; in fact, the spirit of progress is abroad in the land, for even Kona is awakening to its possibilities, and Kauai is not somnolent.

MATTERS POLITICAL.

This has been our political year, and momentous have been and are the issues, yet withal it is gratifying to note the fact that agitation and discussion of serious questions for the most part were intelligently dealt with.

The campaign in favor of prohibition upon which Congress prescribed a plebiscite to take place July 26, 1910, is reported on later. Its failure to carry threatened for a time to saddle upon the fall campaign the dominance of the liquor interest, but wise counsels prevailed to "let well enough alone," and a plank in the Republican party platform pledges "against any change or modification of the present liquor law, or laxity in the enforcement of its penalties."

The conventions held by the several parties chose the same standard-bearers as before as their nominees for Delegate to Congress, viz.: J. Kalaniana'ole (R.), L. L. McCandless (D.), and Chas. K. Notley (H. R.). Tickets of the two main parties were made up for coming legislative honors and for municipal and county offices, the Home Rulers deciding upon but few in all sections of the islands. This simplified matters and centered attention upon the party representatives and the issues their party stands for. Compared with former

campaigns, attention has been devoted more to the issues involved than in the personalities of by-gone days. Election day passed off quietly, and resulted in a complete Republican victory for delegate, senators and legislators, and all but one of Oahu supervisors, but lost the mayoralty and shrievalty to the present incumbents, Democrats.

Since writing the above steps have been taken to contest the election of the City and County officials for this city for alleged flagrant irregularities in the Kakaako voting precinct on the eventful day.

ORGANIC ACT AMENDMENTS.

The Organic Act amendments passed by the special session of our legislature in November, 1909, received Congressional enactment with little change. These, among other things, enlarge the legislative powers; increase the salaries of legislators, executive and judicial officers; make general appropriations applicable to Hawaii; validate doubtful naturalizations; improve the laws relating to disqualification of judges; facilitate the sale of public bonds; amend the land laws; provide for the return of property required by the Territory or counties, and cover also sundry important acts of general legislation.

PUBLIC IMPROVEMENTS.

Work under this head both of federal and territorial direction has been prosecuted with vigor. The various lines in progress at Pearl Harbor for its improvement and efficiency, with dry-dock facilities for the important naval station planned, is being pushed forward, additional and more powerful dredgers being added for the excavations required by the larger dock basin decided upon, materials for which have already called thither several deep-sea vessels with full cargoes.*

Dredging work connected with Fort De Russy is finished and construction work is being carried on steadily so as to already show its formidable outlines. Fort Ruger at Dia-

* The pioneer of the fleet to make such entry was the three-masted schooner W. H. Marston, March 8th, followed a few days later by the schooner Ariel and bark Andrew Welch, and in April by the barkentine Amaranth, all laden with material for the dry-dock construction.

mond Head and its powerful searchlight system will soon be in a position to assert itself.

Lighthouse work throughout the Territory is receiving watchful care and attention, the importance of which is being recognized in the interest of our growing commerce.

Construction work on the Hilo breakwater is nearing the end of its first section and bids were called for, recently, for its extension, for which the sum of \$200,000 has been provided. The Lord-Young Engineering Co. secured this contract and is preparing to enter immediately upon the work. Bids at the same time were called for completing the Kahului breakwater, under federal control. Work done thereon heretofore by the Kahului Railroad Co. suffered much damage in the January storm, whereby fifty feet of the structure was washed away.

Of territorial work under this head is to be noted the completion of the Nuuanu dam in June last, and material extension and improvement of Honolulu's water system; the satisfactory progress made to serve Maui's need by the Kula pipe line; completion of the Alakea wharf and shed, which was christened to its use by the steamships Cleveland and Manchuria, January, 23, 1910, both from the Orient. Attention is now given to the extension to 500 feet of the Hackfeld wharf. The Brewer & Co. building on Queen street has been torn down in contemplation of waterfront changes in that section.

Road and bridge work under the several counties is reported as showing favorable results for the expenditures, excepting certain sections on Hawaii.

CITY WATER SUPPLY.

For the first time in the history of Honolulu since it took on the expansive spirit the city has not been shortened during the summer of its water supply, due partly to the generous rainfall, the increased water supply by two fine flowing additional wells sunk at the Beretania pumping station, and the completion at last of the Nuuanu dam. This latter undertaking has been carried through at a cost a little short of \$300,000, and was turned over by the contractors to the

government last June. The next demand will be for larger and extended water mains.

A new reservoir connecting with the city system has been constructed at Kaimuki to serve the needs of that growing residence section.

FIRES.

The islands have been greatly favored this past year in the few fires experienced and the light damages sustained considering the conditions attending each. Of the total amount of losses up to November 24th, reported at \$94,097.86, the heaviest falls upon Maui in the Paia store fire, placed at \$53,333.88. The principal fires of this city have been the Orpheum theater with loss of \$13,794.15; the Medical Institute of Dr. Straub, corner of Richards and Beretania streets, with loss of \$12,127.85; Jas. Quinn's cottage at Kaimuki, \$3,500, and sundry others placed at \$2,341.98. Hawaii's share is the recent Pepeekeo warehouse fire, with loss named at \$9,000.

NEW FIRE LIMITS.

An ordinance extending the fire limits of the City of Honolulu was passed in March last to guard against the erection of structures of inflammable material, the lines of the new area being 100 feet beyond Nuuanu stream on the northwest, 100 feet mauka of Beretania street, and 100 feet easterly of Alakea street to the waterfront.

REAL ESTATE AND BUILDING.

Marked activity has prevailed throughout the year in both real estate and building, several important business properties changing hands with the view of early improvement, notably the old "Pelly premises," corner of Adams' lane and Hotel street, and the adjoining Honolulu Library site required for the new \$132,000 Y. M. C. A. building; the Way block on King street, and the adjoining Peacock lot cornering on Bishop and Merchant streets. Other properties changing hands are the Spreckels' block to Brewer & Co., and the vacated Telephone Co.'s premises to H. E. Hendricks.

Residence lots have changed hands freely, particularly in

the College Hills and Kaimuki tracts, both of which are showing rapid growth of new dwellings, mostly of the "bungalow" type. On this subject Registrar Merriam reports having received nearly 900 more documents than during the preceding year. Eleven new tracts, having a large total acreage, have been opened up during the past year, and from recorded conveyances it appears that lots in these various tracts have met with ready sale, indicating, with allied transfers, the establishment of many new homes bearing a general range of from \$1500 to \$5000 value. The low percentage of forced sales, the high percentage of conveyances and easier rates exacted upon real estate loans give fair indication of continued substantial growth.

Little can be said in the extension of business structures within the city fire limits, though steps are in progress for a number the coming year. The outskirts, however, show a number of business-tenement class which calls for the need of a building ordinance.

The University Club's new building, Haalelea lawn, displacing the old two-story coral building, was formally opened August 5th. The new edifice of the Methodist Church, corner of Victoria and Beretania streets, on ground donated by W. R. Castle, is nearing completion. Its "ground-breaking" service took place January 10th, Governor Frear turning the first sod, and on March 20th Bishop Hughes laid its cornerstone with appropriate ceremonies. It is of the Mission style of architecture, of wood frame, finished in cement stucco, modern in its internal arrangement, and is costing about \$35,000. The new (third) Kaumakapili church, native, on King street near the Asylum road, is in progress of construction. It is a neat edifice, constructed in same manner as the above, to cost about \$25,000. The cornerstone of the new Kapahulu mission was laid by Bishop Restarick May 15th, and a new Episcopal Church is reported under construction at Wailuku, Maui. Extensive alterations are being made to the front of the Roman Catholic Cathedral on Fort street, changing its entrances to the gothic style. The Mid-Pacific Institute, at Manoa, is completed; its dedicatory services being held November 26th.

MEMORIAL ARCHES.

The ninetieth anniversary of the arrival of the first band of American missionaries in these islands was fittingly observed at the annual conference of the Hawaiian Evangelical Association, opportunely held this year at Kailua, Kona, Hawaii, their landing place, and in commemoration of the event a durable memorial arch from the lava rock of the vicinity was erected at the entrance to the Kailua church premises and dedicated with impressive services Sunday, June 26, 1910, Rev. W. B. Oleson delivering an inspiring address on the occasion upon its meaning, "the memorial rising on two pillars; one in memory of the first missionaries, the other in memory of Opukahaia and his Christian comrades who came with them."

In keeping with this memorial arch is another of similar character erected more recently at Waialua, Oahu, at the entrance to the native church premises to the memory of Rev. J. S. and Mrs. Emerson, in recognition of their long years of faithful Christian service in that section of the mission field. Its commemorative services took place October 16, 1910.

CENSUS TAKING.

The second Federal enumeration of the population of Hawaii since becoming a Territory of the United States took place as of April 15, 1910, under the direction of Dr. Victor S. Clark. As yet (November 30th) but the first preliminary figures showing totals of the predominating races have been made public (as given on page 19), which shows a total of 191,909 souls, as against 154,001 in 1900, a net increase of 37,908 in ten years after deducting the decline of Hawaiians and Chinese, the only two races showing a decrease since the last census.

It was hoped by this time to have had some of the more important of the various tables of the new census for presentation in this issue, covering sex, total by islands, etc., but the further time required to tabulate in detail the special features embodied in the Hawaiian work will render it all the more interesting and valuable for reference when completed.

BUSINESS EXTENSIONS, ETC.

Hilo is distinguished this year in the establishing of its first Trust Company, as also in the opening on July 1st of a new bank, a branch of Bishop & Co. of this city. The Bank of Hilo opens a branch bank in Kona, and another in Kohala, and more recently one also in Hamakua.

Both the Electric Light Co. and the Rapid Transit Co. are making important changes in their power plants to meet the increasing demands on their capacity; the former for light and power, and the latter for the extension of its car service. New and larger cars are already here, and the double-tracking of King street from Kawaiahao to Palama is in progress.

The Oahu Ice Co. increase their plant by new machinery at a cost of over \$40,000, doubling their daily capacity to now sixty tons. These enlarged facilities will also equip their new storage structure, fitted with all modern improvements, for cold storage purposes.

The Morgan Dredging Co. have incorporated with a capital of \$50,000, with privilege of increase to \$500,000, to share in the prospective public improvement contracts of the near future.

A new industrial enterprise to establish this year is that of the Honolulu Lava Brick Co. for the making of brick from crushed lava rock cement. Satisfactory tests have been made of this proposed new building product for durability and fireproof qualities. Its plant is being located in the Kaimuki section, at a cost of nearly \$100,000, and is of the capacity to turn out 20,000 bricks daily.

BUSINESS CHANGES.

The changes under this head since last issue embrace the following:

The Yokohama Specie Bank moved to its fine new quarters and opened to the public April 14, 1910.

Spreckels & Co.'s bank incorporates with changed name to The Bank of Honolulu.

Fred. L. Waldron moved early in the year from the Spreckels' building to the Beaver block, Fort street. J. A.

Gilman also moves to a Fort street location in the Campbell block.

The Mutual Telephone Co. change to their newly-erected and equipped building, Adams lane, and inaugurated their new automatic system August 28th. Hendrick's monumental works succeeds to their old location.

The Honolulu Library upon sale of its premises took temporary quarters in the Young building.

The office and salesroom of the Honolulu Gas Co. move to the corner of Alakea and Beretania streets, their vacated store in the Young building being taken by the Brown & Lyon Co. and the Art and Craft Shop.

Wall-Nichols Co. vacate the Cummins building which, after extensive alterations, is moved into by Castle & Cooke, Ltd., from the Stangenwald building.

J. W. Bergstrom incorporates as the Honolulu Music Co., capitalized at \$10,000, and moves to the new Central building, King street.

OFFICIAL CHANGES.

The following are among the official changes for the year:

Hon. A. A. Wilder, resigning, is succeeded by Hon. J. T. DeBolt as First Associate Justice of the Supreme Court.

Hon. Geo. W. Woodruff, resigning the Second Judgeship of the Federal Court, is succeeded by Hon. A. G. M. Robertson.

Willis T. Pope is appointed Superintendent of Public Instruction, vice W. H. Babbitt, resigned.

C. R. Hemenway, resigning the office of Attorney-General, is succeeded by Hon. Alex. Lindsay. Lorrin Andrews, as deputy, is succeeded by W. B. Lymer.

Hon. Henry E. Cooper succeeds Hon. J. T. DeBolt as First Judge of the First Circuit.

Ed. B. Blanchard is appointed Food Commissioner and Analyst, vice R. A. Duncan, deceased.

Richard Ivers, resigning as Superintendent of the Board of Immigration, is succeeded by Dr. Victor S. Clark.

W. B. Lymer resigns as Deputy Attorney-General to succeed Frank Andrade as District Magistrate, Honolulu, resigned, Mr. Lymer in turn being succeeded by A. C. Smith.

RAILROAD MATTERS.

The Hilo Railroad Co. in pushing its northerly branch into the Hamakua district has been doing some heavy engineering work in bridge building across the Waiakea river and the Honolii and other gulches; the construction of culverts, tunnels and deep cuts in its roadway for track-laying, which at this writing was well toward Pepeekeo, with regular daily train service between Papaikou and Hilo. Another extension of the Hilo Railroad is being laid in Puna, to connect with the ohia lumber mill of Cant & Bolte, at Kaueleau, to enable them to market their ties, of which two ship loads for the Santa Fe lines are ready for forwardance.

Steps are in progress toward financing and inaugurating the Kona & Kau Railroad Co., whose franchise of the last legislature has had congressional approval. This road will open up the rich possibilities of districts that have long waited for capital for their development.

Rapid Transit improvements to meet the increasing demand upon its service, mentioned elsewhere, are extending many of their sidings for car accommodations, and have built a number of waiting stations along their lines. The Nuuanu line is to be extended to above the Queen Emma property.

WAIKIKI BEACH DAMAGE.

Considerable alarm has been felt for some time past at the damage done to Waikiki beach properties by the scouring effect of the ocean current and tides, which, without storm influence, have made serious inroads on nearly all the best sea frontages, washing away the desirable sand beach and in places encroaching on lawns and uprooting trees venerable with age. This has been particularly noticeable this past year, and has caused several of the property owners along the affected section heavy outlay for the construction of concrete bulkheads to prevent further damage by the sea, and running out of masonry walls to break the scouring tide effects. The Moana Hotel management expended a large sum to preserve its beach front, and the Seaside Hotel is taking like preservative measures to retain its principal asset at a cost of \$3,500.

How much of this damage is attributable to the recent dredging in the vicinity of Fort De Russy on the theory that the increased depth of this excavated area has caused a change in the tide current of Waikiki is a moot question.

Similar damages to the beach have occurred before, but in nearly all cases as the result of protracted southerly storms, which in due time recovered conditions.

ANNUAL FLORAL PARADE.

The fifth annual floral parade, under direction of Harold G. Dillingham, passed off very creditably, February 22nd. In several of its features some profit was shown through past experiences. The floral decorations of autos gave no easy task to the judges to pick the winners from the elaborate and tasteful schemes evolved. National, historic, and typical floats were more numerous, representatives of the various races forming our cosmopolitan populace participating in the day's festivities, being one of the features. The Hawaiian pa-u riders with their representative "princess" for each island of the group, attended by their pages, was the usual attraction of the pageant. Added interest with aroused curiosity centered in the procession on the advent of an elaborately constructed ogre representing "Pilikia" in chains. In the evening this figure was again paraded through the streets to Palace Square, where Pele was holding forth in fiery fury, and upon due trial Pilikia was condemned and thrown into the crater, thus ending the day's troubles.

ELKS' CARNIVAL.

The "best people on earth" represented in Honolulu elaborated a scheme for two evening extravaganzas in connection with Washington's birthday celebration, with an eye to lodge building finances. Bishop's square, opposite the Young Hotel, was enclosed and booths erected for various attractions. The whole premises, including Bishop street, was a blaze of vari-colored electric lights, and the carnival spirit quickly asserted itself. The function opened February 21st with a masked ball at the Young Hotel, at which prizes were awarded for the handsomest and most original cos-

tumes. Fun and money-making projects ruled the enclosure, and when "Pilikia" was pau, to whose execution the Elks were not innocent parties, they felt relieved. Honolulu appreciated her carnival season.

OUR GROWING INDUSTRIES.

It is gratifying to learn of the steady progress being made in the several new industries undertaken here of late years. Of the pineapple and its cannery adjunct, not only has it won its way to a world-wide recognition of superior quality that has ensured a remunerative market for all our product, but has attracted several of the leading fruit packing concerns of the mainland to an interest therein, of which Libby-McNeill & Libby have become investors, with the prospect of materially increasing our annual output to meet the growing demand. To this must now be considered its by-product, pineapple juice, referred to in our last issue as a possibility.

Success has crowned the effort of the Hawaiian Pineapple Co. of some time past, on a process whereby the fresh juice of the fruit could be bottled and preserved indefinitely for use. A subsidiary company was formed under the name of Hawaiian Pineapple Products Co., for its manufacture, and much success is being met with wherever the bottled product becomes known, securing an established market abroad, to which 36,000 bottles had been shipped before it was made public at home here. The company expects to turn out 44,000 cases of pineapple juice this first season, in various sized bottles up to a half gallon. Pinectar, another pineapple product, of the Clark Farm Co., is being well received both here and abroad. A representative of the Armour concern of Chicago, visiting the islands to look into the proposition, bespeaks for it wide popularity.

Tobacco culture may be said to have passed the experimental stage, and is giving assurance of becoming an important industry. The several plantations or growers devoted thereto are already broadening their fields, and in two cases enlarging their curing barns. The Kona Tobacco Co. last year realized \$1.04 per pound for its crop, and now increases its capital to \$100,000 for the further development of the

property. June 11th, Mr. Jared G. Smith made a shipment of 50 bales of tobacco to San Francisco; weight not shown. Between June 1st and the end of October the Kona Co. was reported having harvested 1,050,000 pounds green tobacco; 120,000 pounds cured leaf is said to be undergoing the fermenting process, practically the year's production, 85 per cent. of which is of the Sumatra type improved. The company plan to ship 1000 bales of 80 kilos each of the 1910 crop.

Smyrna tobacco growing by a party of Greeks, from home seed, is also being successfully grown in Kona, graded samples of the leaf being on exhibition in this city. Sumatra and Cuban grades are represented as doing well in the Hilo district at elevations up to 2500 feet.

Rubber prospects still look good to the investors, encouraging reports from the several plantations having been presented at the last annual convention of growers. The first commercial tapping of the Nahiku Company's trees was tried this summer, and another year will likely see others sufficiently advanced to consider it an article of export.

Cotton culture is getting a sure foothold, as may be gathered from an authoritative article on that subject elsewhere in this issue.

Sisal Co.'s prospects.—Last year 133¾ tons were marketed, realizing highest rates. In March of this year 1500 acres were reported under cultivation, 850 of which was matured, and 800 additional acres were ready for planting. A new engine and decorticating machine has been installed and an additional mill is in prospect. About 800 acres are under cultivation on the upland section, to which water for irrigation has recently been developed.

IMMIGRATION MATTERS.

The active effort in behalf of immigration set forth in our last issue has continued unabated. With the money devoted to that purpose, being 75 per cent. of the special income tax which, up to June 30, had reached the sum of \$287,171, there was expended \$238,133. The figures of the Board of Immigration for the past two fiscal years, 1909 and 1910, show arrivals of 8,476 persons of various nationality, comprising

5,131 men, 2,226 women, and 1,119 children. Heavy departures, however, appear against us in Chinese, Japanese, Koreans and one or two other nationalities, materially reducing these figures. The recruiting of labor in the Philippines by Messrs. Pinkham and Steven continues, and with evident satisfaction to all parties. The Russian immigration movement, which started in 1909 with such promise, came to a halt in March, 1910, in consequence of serious trouble which developed among a shipload of new arrivals, partly perhaps from misunderstanding, but largely the result of anarchist seed sowing by a few malcontents among them. This occurred just as the recruiting of this class was opening up well at Harbin through A. W. Perelstrous and the special agent of the Board, A. L. C. Atkinson. The Russian government sent a special agent here to investigate the trouble, and at the conclusion of his labors he reported "that the charges of mistreatment of the immigrants and of deception by those who enlisted them as emigrants to Hawaii are entirely unfounded." As a consequence of this trouble all effort among this nationality ceased, and the agent was recalled.

Disappointed in this direction, attention is again turned toward the Azores Portuguese, and Mr. A. J. Campbell has gone forward as special agent of the Board to open up recruiting stations for further introduction of these home-makers here.

PROHIBITION PLEBISCITE.

Hawaiians had the opportunity July 26th last to place themselves on record before the nation and the world as in favor of prohibition, that the curse of liquor throughout the Territory which is decimating the race might be stayed and its attendant crimes and impoverishment be far removed. But, lacking courage and foresight, they voted down the proposition with an unmistakable majority of over three to one.

The question as submitted by congress for their decision was as follows:

"Shall the legislature to be elected in November, 1910, be requested to pass at its first regular session a law prohibiting

the manufacture or sale within the Territory of intoxicating spirituous, vinous, and malt liquors, except for medicinal and scientific purposes.”

The result of the vote by islands showed:

Hawaii.....	1601	against	and	542	for	prohibition
Maui.....	1398	“	“	471	“	“
Oahu.....	4003	“	“	934	“	“
Kauai.....	509	“	“	315	“	“
Total.....	7511	“	“	2262	“	“

Friends of the race hoped for a better result, but moral suasion by a handful of self-sacrificing advocates working for and on principle was ill-matched for the defenders of the liquor interests and their expenditure of large sums of money of local and foreign assessment, reported at \$39,000, to influence press and voters to thwart the movement.

Without doubt the failure to secure the majority vote for prohibition was largely due to the Interstate Commerce law which would permit its “importation for use,” hence the Hawaiians were led to believe it was a move to discriminate against them, a point that was not neglected by the liquor interest for its political effect.

To their credit be it said, Waimea and Laupahoehoe, on Hawaii, were the only two localities throughout the islands that returned a majority in favor of prohibition.

BIRD POACHERS.

The revenue cutter *Thetis* captured twenty-three bird poachers at Laysan Island with their product of 259,000 bird wings this past summer and brought them here for trial. The value of the plumage secured was placed at \$112,000. Fifteen of the party were taken on Laysan and eight on Laysian islands, all Japanese. Upon trial, as being employes of Max Schlemmer, et al., they received but a nominal fine of one day's imprisonment. Various suits have been entered against Schlemmer, some demurrers to which have been sustained, and all trials so far have come to naught.

SHIPPING CASUALTIES.

British bark Alexr. Black, Griffiths, master, of 1391 tons, with cargo of nitrate from Chili, ran ashore January 4, 1910, during thick weather off Paia, Maui, but a few miles from Kahului, her port of destination. All hands took to the boats and abandoned the vessel. Several steamers made early effort at rescue, but to no purpose, and on the 8th the stranded ship was sold at auction as she lay for \$400. Stormy weather set in, and on the night of the 13th she went to pieces.

Four-masted ship Edward Sewall, Quick, master, coal laden from Norfolk for the naval station at this port, arrived February 22nd, with fire in the forehold that had been some three weeks in progress. The steel foremast had softened and settled two feet from the intense heat. Work for the rapid discharge of cargo and subduing the flames was at once entered upon and further damage averted.

Three-masted schooner Matthew Turner, with nitrate from Chili for Kahului, in making port April 1st, got too close in without pilot and ran ashore near where the Alexr. Black was lost, but was subsequently rescued from her perilous position with the aid of tugs, on the 6th, and towed into port without serious damage.

Ship W. F. Babcock, from Port Townsend for Cape Town, put in here for repairs, having sustained damage, including loss of rudder head in a four-days' gale shortly after leaving port.

Schooner Aloha, from Hilo with railroad ties for Redondo, put into this port March 17th, leaking.

Steamer Nippon Maru, in arriving, meets and rescues three Japanese fishermen off Barber's point, March 20th, from their capsized sampan, where they had been battling three days for existence.

The army transport Dix arrived April 20th much damaged in boats and upper works in a six-days' gale en route with Japanese coal for this port.

Bark S. C. Allen, with lumber from Fort Bragg, arrived April 29th, having lost part of her deck load during heavy weather; no damage to vessel.

German ship Renee Rickmers arrived June 15th from Bremen, having sustained considerable damage to upper works, sails and part of cargo, in heavy weather off the Horn.

U. S. cruiser Chattanooga, en voyage from the Orient in July, lost her port propeller and was towed to port by the Cleveland. The Prometheus was sent from San Francisco to tow her to Mare Island.

British barkentine Helga, Wall, master, coal laden, from Newcastle for San Francisco, touching here in distress, ran on the reef off Waikiki at night, of August 11th, nearly abreast of Fort De Russy, and had to be abandoned. Gradually she went to pieces, little of vessel or cargo being saved.

Four-masted schooner Jas. Rolph, Olsen, master, shortly after leaving San Francisco with light cargo for Hana, Maui, struck on Point San Pedro rocks on night of August 2nd, in a low fog. The lumber only was saved. Vessel and rest of cargo lost.

Schooner Ethel Zane, from Hilo for Redondo, with ties, arrived here in distress October 13th, having run into a heavy gale which opened her seams badly, necessitating throwing overboard part of her cargo and making for this port, the crew meanwhile working continuously at the pumps. A survey board advised the unloading and repair of the vessel.

Bark S. C. Allen, from Honolulu for Port Townsend, sustained heavy damage in a sudden squall off Neah Bay, November 6, 1910, in which she lost mainmast and mizzen-topmast; arriving next day with spars, sails, and rigging in a tangled condition.

Steamer Nevadan, which left San Francisco October 16th for Honolulu via Puget Sound ports, sustained a badly punctured plate by the flying off of her port propeller off Cape Blanco, causing her to take in water so rapidly as to compel her to return to port for safety and repairs.

MARITIME ITEMS.

Schooner Churchill, from Honolulu, December 28, 1909, for Port Townsend, made the passage in thirteen days.

The four-masted ship John Ena made the voyage from Honolulu to Philadelphia, in 1910, in 84 days, arriving there

July 21st, the best trip made since that of the N. B. Palmer, in 1854, of 81 days between this port and New York.

The new Matson steamer *Wilhelmina* arrived here on her maiden trip February 16th, and was given a cordial welcome.

Belgian four-masted training ship *L'Avenir*, arriving June 17th from Newcastle with coal, is said to be the first time that banner has flown in our port.

Oceanic S. S. *Sierra*, on her October trip to San Francisco in company with the S. S. *Wilhelmina*, made her record run from Honolulu in five days, ten hours, twenty-nine minutes, the latter steamer following her an hour and five minutes later.

TRANSPACIFIC YACHT RACE.

Our island yacht *Hawaii* sailed hence for San Pedro May 31st to take her part in the third transpacific race, arriving over after a passage of twenty-two days. Contrary to expectations, fewer entries were made for this contest from the several yacht clubs than had been hoped for, but two finally entering to compete with the *Hawaii* for 1910 honors. As before, the course was from San Pedro to Honolulu. The race started at noon July 10th, the contestants being the schooner *Hawaii*, captain, Chas. Wilder; schooner *Sweetheart* of the South Coast Club, owned by Commodore R. C. P. Smith, captain, Lew Harris, and yacht *Mollilou* of the Aeolian Club, owned by Francis B. Smith, captain, L. T. Ward. With the exception of a fairly fresh breeze at the start the run was noted for light winds and a close result, the three yachts arriving in the following order: *Hawaii*, July 24, at 3:23:30 p. m., time 14 days, 3 hours, 23½ minutes; *Sweetheart*, July 25, at 9:10:07 a. m., time 14 days 21 hours, 10 minutes, 7 seconds, handicap 8½ hours; and the *Mollilou* also on the 25th at 7:05:10 p. m., time 15 days, 7 hours, 5 minutes, 10 seconds; handicap 8 hours.

POLO TOURNAMENT.

The annual interisland polo tournament opened August 10th at the Moanalua grounds of Mr. S. M. Damon, a larger number of teams taking part, the contestants in the series

being Kauai, Maui, Oahu, and Fifth Cavalry. Unusual public interest was manifest throughout the series, all the games being well attended by enthusiastic audiences, giving encouragement and inspiration to the players. The Kauai team secured the championship, having won every game from their opponents, Maui taking second place by winning from Oahu and the Cavalry teams.

NOTABLE VISITORS.

Honolulu has been delighted to extend its welcome aloha to a larger number of distinguished visitors than in any previous year, most of them, naturally, for but a brief stay en voyage across the Pacific, like Beatrice Harradin's "Ships That Pass in the Night," others for a sojourn of weeks or months in the enjoyment of Hawaii's charm of scene and climate, others again on lines of duty for the possibilities that lieth in store for this "Crossroads of the Pacific."

Among those visiting and being agreeably impressed with place and people have been princes, high government officials, ambassadors and ministers, scientists, jurists, divines and educational celebrities, as also magnates of commerce and the press.

Early in the year the "Cleveland round-the-world touring party" of some 650, made a two-days' stay toward the end of their cruise, and again with some 750 a few weeks later on a like return voyage from San Francisco. The islands have been favored also with the visit of more naval vessels than usual and have the promise of others still to come.

The "tourist season" of Hawaii may be said to be all the year round, and while it has been slack the past summer is yet showing results from our Promotion Committee work by the plans in prospect of special steamers engaged for parties from the Northwest, from San Francisco, and from Los Angeles for excursions hither.

WHITE PLAGUE CAMPAIGN.

In keeping with the active measures being adopted elsewhere for the prevention and cure of consumption, steps were taken at the opening of the year for the establishment

of a tuberculosis bureau under the charge of a suitable and qualified physician approved by, and subject to, the Board of Health. The Men's League and St. Andrew's Men's Club join in the work, and with the aid of private parties have enlarged the accommodations of Leahi Home and established a day camp pavilion at Palama, which was formally opened April 7, 1910, and placed under the supervision of Mr. J. A. Rath.

NECROLOGY.

An unusual large number of well-known residents of Hawaii have passed away during the year 1910 now drawing to a close, including not a few abroad who were identified with the islands in earlier years. The list, among others, embraces the following:

Of those dying abroad we note Mr. and Mrs. Wm. H. Bailey, W. T. Lucas (52), G. W. Kirkaldy, C. E. Williams (85), Chas. W. Grey (81), J. H. Black (80), Tom May (59), Geo. C. Beckley (61), Wray Taylor (56), Mrs. J. A. Hopper (78). Among the island kamaainas were Capt. John Ross; Sister Adelia, last survivor of the first band of ten sisters arriving here May, 1859, establishing the Convent of Sacred Hearts in Honolulu, aged 85 years; Mrs. H. W. Kelley (nee Whitney), Albert Wiggins (76), L. P. Tenney (84), Thos. R. Lucas (58), David Dayton (78), Capt. J. C. Cluney (72), H. M. Alexander, at Haiku (71), Judge C. F. Hart (76), J. Emmeluth (57), W. W. Hall (69), Robt. M. Fuller (59). Capt. Jos. R. Spencer (80), Alex. Young (78), Rufus A. Lyman and Jas. P. Sisson at Hilo, Saml. Norris at Kau, Chas. W. Booth (43), Saml. N. Emerson (78), Capt. A. Fuller (70), F. N. Otremba (57), Mrs. S. A. Gilman, H. W. Schmidt (64), Ex-Gov. A. S. Cleghorn (75), Edw. H. Bailey (73) at Wailuku, Maui.

FIRST CLERGYMAN IN HAWAII.

INQUIRY was made recently as to the time of arrival and residence of Howell, an Episcopalian, referred to in an historic address not long since, as the first clergyman to visit these islands. The paragraph referring to him will be found in Vancouver's Voyages, where on his (Vancouver's) third and last visit to Hawaii, March, 1794, he makes the following mention:

"With Kavaheeroo also resided a person by the name of Howell, who had come to Owhyhee in the capacity of a clerk on board the *Washington*,* he appeared to possess a good understanding, with the advantages of an university education, and had been once a clergyman in England, but had now secluded himself from European society."

He is referred to also by Richard J. Cleveland in "A Narrative of Voyages and Commercial Enterprises" on his second visit to these islands (June, 1803), as follows:

"Among others at this early period was a Mr. Howell, commonly called Padre Howell, who soon ingratiated himself into favor with the King, and, being struck with the superiority of intellect, conceived that it would not be difficult to induce him to abandon his idolatrous worship and substitute one of rationality. Accordingly he lost no opportunity, after acquiring a sufficient knowledge of the language, to convince the Chief of the incapacity for good or evil of his gods, and of the power, wisdom and goodness of the Supreme Maker and Ruler of the Universe, whom he worshiped. The first, that of impotency of the idols, was without difficulty admitted; but the second, not being tangible, could not be comprehended. His mind, however, appeared to be dwelling on the subject with increased attention after each conversation. At length, one day, while walking together, the King unusually thoughtful, and Howell auguring

* The *Washington* was an American vessel under the command of J. Kendrick, who inaugurated the sandal wood trade of these islands.—Ed.

favorably from it, the silence was broken by the King's observing: 'You say your God is powerful, wise, good, and that He will shield from harm those who truly worship and adore him.' This being assented to, then said the King: 'Give me proof, by going and throwing yourself from yonder precipice, and, while falling, call on your God to shield you, and if you escape unharmed, I will then embrace the worship of your God.' It may be unnecessary to say that Howell failed to give the desired test, and that the King remained unconverted."

W. H. Pease, an early resident here, after quoting the above in "The Friend" for June, 1862, says: "The title 'Padre' was probably given to Howell for reason of his religious life and conversation, as it was commonly applied in those days to all priests or ministers on the coast. We have attempted to trace out the life of this person, with but little success. We learn from Greenhow's 'Historical Memoir on the N.W. Coast of America,' that he had acted as interpreter to the Spanish Government on the coast, and was or had been an Episcopal clergyman. He was also attached to the brig Margaret as supercargo."

THE NEW MID-PACIFIC MAGAZINE appears as the ANNUAL's forms close. It is a high-class publication of 160 pages, descriptive by prose and poem of attractions to travelers in the Pacific in general and Hawaii in particular, freely illustrated with half-tones and printed on coated paper to set them forth advantageously, and carries out well the promise of its enthusiastic editor and publisher to produce a magazine that would compare favorably with those of New York or elsewhere. Mr. Alexander Hume Ford in this first issue sets himself a high standard to be maintained from month to month, and a difficult task to surpass were it not that he anticipates the coöperation of ablest writers and artists here and abroad. Furthermore, it is a revelation as to the facilities of the Hawaiian Gazette Co., its printers.

HAWAIIAN SUGAR CROPS IN TONS, 1905-1910.

From Table Prepared for Hawaiian Planters' Association, by
W. O. Smith, Secretary.

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

ISLANDS.	1905	1906	1907	1908	1909	1910
Production of Hawaii	126,405	137,250	143,891	180,159	172,341	159,856
" " Maui	100,434	102,960	104,772	122,629	134,605	139,454
" " Oahu	123,095	113,750	119,273	137,013	138,423	128,648
" " Kauai	76,314	74,753	72,081	81,322	89,787	90,169
Grand Total	426,248	429,213	440,017	521,123	535,156	518,127
HAWAII PLANTATIONS.						
Waiakea Mill Co.	7,661	10,766	8,186	9,761	9,486	10,424
Hawaii Mill Co.	1,438	1,825	1,800	2,818	2,838	2,313
Hilo Sugar Co.	9,971	11,751	11,649	12,853	12,291	12,568
Onomea Sugar Co.	11,049	13,930	12,432	17,006	14,416	12,843
Pepeekeo Sugar Co.	6,167	6,477	6,677	7,590	6,873	7,012
Honomu Sugar Co.	5,909	5,852	5,502	7,511	6,041	6,541
Hakalau Plantation Co.	10,862	12,869	11,914	12,834	11,586	11,905
Laupahoehoe Sugar Co.	5,866	7,864	7,848	7,944	8,004	7,970
Kaiwiki Sugar Co.	3,712	3,223	5,352	5,195	6,646	*2,134
Kukaiiau Plantation Co.	1,415	2,154	2,103	2,141	2,225	1,037
Kukaiiau Mill Co.	1,416	1,435	1,402	1,427	1,483	1,728
Hamakua Mill Co.	5,925	6,358	6,835	12,355	8,293	5,526
Paauhau Sugar Pl'nt'tion Co.	8,006	8,795	7,857	10,448	9,315	7,493
Honokaa Sugar Co.	6,895	7,940	6,898	7,657	10,533	7,562
Pacific Sugar Mill	4,342	4,331	2,931	3,459	5,263	5,055
Niuli Mill and Plantation	1,645	2,226	2,501	2,452	2,768	2,231
Halawa Plantation	925	1,036	1,615	1,958	1,135	1,679
Kohala Sugar Co.	3,350	3,300	2,400	4,914	5,570	4,662
Union Mill Co.	2,166	2,570	2,828	3,259	3,160	1,811
Hawi Mill and Plantation	3,687	4,389	5,296	7,125	6,011	6,881
Kona Development Co. . . . .	.....	.....	.....	1,000	1,271	1,589
Hutchinson Sugar Plntn. Co.	7,107	6,940	7,063	9,628	4,712	6,580
Hawaiian Agricul. Co.	1,620	826	11,630	10,274	11,406	11,003
Puakea Plantation	262	398	400	661	992	1,474
Olaa Sugar Co.	11,361	9,405	9,431	15,795	} 19,179	19,483
Puna Sugar Co.	3,147	867	1,172	1,691		
Puako Plantation	500	223	169	403			835	352
	126,405	137,750	143,891	180,159	172,341	159,856

* Formerly Ookala Sugar Plantation Co.

HAWAIIAN SUGAR CROPS, 1905-1910 Continued.

MAUI PLANTATIONS.	1905	1906	1907	1908	1909	1910
Kipahulu Sugar Co.....	1,324	1,464	1,809	1,843	1,960	2,046
Kaeleku Plantation Co....	2,720	850	2,702	3,026	4,004	5,221
Maui Agriculture Co.....	17,820	19,861	20,220	22,627	28,808	29,295
Haw'n Coml & Sug. Co..	39,411	43,652	44,143	56,150	52,725	56,865
Wailuku Sugar Co.	7,516	7,828	7,425	10,072	17,761	16,932
Olowalu Co.....	1,652	1,635	1,448	1,765	1,829	1,796
Pioneer Mill Co., Ltd....	25,581	22,509	23,099	27,146	27,518	27,299
Kihei Plantation Co., Ltd.	4,410	5,161	3,926 †	.....	.....	.....
	100,434	102,960	104,772	122,629	134,605	139,454
OAHU PLANTATIONS.						
Waimanalo Sugar Co.....	3,428	4,148	3,186	4,242	4,404	3,845
Iaie Plantation.....	857	1,112	873	971	829	1,170
Kahuku Plantation Co....	7,431	6,689	6,500	6,519	6,487	5,566
Waialua Agricultural Co.	19,722	20,788	22,614	30,376	32,267	30,870
Waianae Co.....	5,128	5,490	6,214	5,686	6,469	6,614
Ewa Plantation Co.....	32,380	29,302	31,790	33,919	33,949	31,422
Apokaa Sugar Co.....	454	865	461	984	432	902
Oahu Sugar Co.....	33,589	26,710	28,457	35,320	34,651	29,296
Honolulu Plantation Co.	20,106	18,646	19,178	18,996	18,688	18,373
Koolau Agricultural Co..	.....	.....	.....	.....	247	590
	123,095	113,750	119,273	137,013	138,423	128,648
KAUAI PLANTATIONS.						
Kilauea Sugar Plntn Co.	2,290	2,700	3,844	3,194	4,975	4,102
Makee Sugar Co.....	8,335	7,986	6,696	7,408	4,664	5,823
Lihue Plantation Co.....	14,185	16,005	14,127	14,445	15,780	14,765
Grove Farm Plantation...	1,679	1,933	1,807	2,508	3,376	3,673
Koloa Sugar Co.....	6,172	5,570	5,553	7,361	7,303	7,709
McBryde Sugar Co.....	13,136	11,024	7,890	11,294	13,686	10,596
Hawaiian Sugar Co.....	19,062	18,616	20,140	21,633	23,788	23,422
Gay & Robinson.....	2,151	2,099	2,590	2,675	3,354	3,223
Waimea Sugar Mill Co....	1,305	1,550	1,425	1,790	1,707	1,906
Kekaha Sugar Co.....	7,318	6,626	7,329	8,283	10,385	14,124
Estate of V. Knudsen....	680	644	680	731	769	826
Total.....	76,314	74,753	72,081	81,322	89,787	90,169

†Now under the Hawaiian Commercial and Sugar Co.

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 Nov. 15, 1910.)

NAME.	LOCATION.	MANAGER.	AGENTS
Apokaa Sugar Co.*	Ewa, Oahu	G. F. Renton	Castle & Cooke
Ewa Plantation	Ewa, Oahu	G. F. Renton	Castle & Cooke
Gay & Robinson*	Makaweli Kauai	Gay & Robinson	H. Wat'h'se Tr. Co.
Grove Farm*	Nawiliwili, Kauai	Ed. Broadbent	Hackfeld & Co.
Hakalau Plant. Co.	Hilo, Hawaii	J. M. Ross	Brewer & Co.
Halawa Sugar Co.	Kohala, Hawaii	T. S. Kay	H. Wat'h'se Tr. Co.
Hamakua Mill Co.	Hamakua, Hawaii	A. Lidgate	Davies & Co.
Hawi M. & P. Co.	Kohala, Hawaii	John Hind	Hind, Rolph & Co.
Haw. Agr. Co.	Kau, Hawaii	W. G. Ogg	Brewer & Co.
Haw. Com. & S. Co.	Puunene, Maui	F. F. Baldwin	Alex. & Baldwin
Hawaiian Sugar Co.	Makaweli, Kauai	B. D. Baldwin	Alex. & Baldwin
Hawaii Mill Co.	Hilo, Hawaii	W. H. Campbell	Hackfeld & Co.
Hilo Sugar Co.	Hilo, Hawaii	John A. Scott	Brewer & Co.
Honolulu Plant. Co.	Halawa, Oahu	Jas. Gibb	Brewer & Co.
Honokaa Sugar Co.	Hamakua, Hawaii	Alex. Morrison	Schaefer & Co.
Honomu Sugar Co.	Hilo, Hawaii	Wm. Pullar	Brewer & Co.
Hutchinson S. P. Co.	Kau, Hawaii	C. Wolters	Brewer & Co.
Kaeleku Sugar Co.	Hana, Maui	J. Chalmers	Davies & Co.
Kahuku Plantation.	Kahuku, Oahu	Andrew Adams	Alex. & Baldwin
Kaiwiki Sugar Co.	Ookala, Hawaii	Geo. McCubbin	Davies & Co.
Kekaha Sugar Co.	Kekaha, Kauai	H. P. Faye	Hackfeld & Co.
Kilauea S. Plant. Co.	Kilauea, Kauai	J. R. Myers	Brewer & Co.
Kipahulu Sugar Co.	Kipahulu, Maui	Ah Ping	Hackfeld & Co.
Kohala Plantation.	Kohala, Hawaii	Geo. C. Watt	Castle & Cooke
Koloa Sugar Co.	Koloa, Kauai	C. H. Wilcox	Hackfeld & Co.
Kona Developmt Co.	Kona, Hawaii	W. M. McWayne	Hawn. D'pmt Co.
Koolau Agr. Co.	Koolau, Oahu	J. J. Darling	Hawn. D'pmt Co.
Kukaiiau Mill Co.†	Hamakua, Hawaii	E. Madden	Davies & Co.
Kukaiiau Plant. Co.	Hamakua, Hawaii	Albert Horner	Hackfeld & Co.
Laie Plantation	Laie, Oahu	S. E. Wooley	Alex. & Baldwin
Laupahoe S. Co.	Laupahoe, Ha	C. McLennan	Davies & Co.
Lihue Plantn. Co.	Lihue, Kauai	F. Weber	Hackfeld & Co.
Makee Sugar Co.	Kealia, Kauai	G. H. Fairchild	
Maui Agrl. Co.	Haiku, etc., Maui	J. A. Baldwin	Alex. & Baldwin
McBryde Sugar Co.	Wahiawa, Kauai	W. Stodart	Alex. & Baldwin
Niuhii Mill & Plant.	Kohala, Hawaii	Robert Hall	Davies & Co.
Oahu Sugar Co.	Waipahu, Oahu	E. K. Bull	Hackfeld & Co.
Olaa Sugar Co.	Olaa, Hawaii	Ino. Watt	Bishop & Co.
Olowalu Sugar Co.	Olowalu, Maui	Geo. Gibb	Brewer & Co.
Onomea Sugar Co.	Hilo, Hawaii	John T. Moir	Brewer & Co.
Paauhau S. Plant. Co.	Hamakua, Hawaii	Alex. Smith	Brewer & Co.
Pacific Mill (†)	Hamakua, Hawaii	Aug. Ahrens	Schaefer & Co.
Peppeekeo Sugar Co.	Hilo, Hawaii	Jas. Webster	Brewer & Co.

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

NAME.	LOCATION.	MANAGER.	AGENTS.
Pioneer Mill Co.,Ltd.	Lahaina, Maui...	W. Weinzheimer.	Hackfeld & Co.
Puakea Plant. Co...	Kohala, Hawaii...	H. R. Bryant....	H. Wat'h'se Tr. Co.
Puako Plant. Co....	S. Kohala, Haw...	J. C. Searle.....	Hind, Rolph & Co.
Union Mill Co.....	Kohala, Hawaii...	H. H. Renton...	Davies & Co.
Waiakea Mill Co....	Hilo, Hawaii....	C. C. Kennedy...	Davies & Co.
Waialua Agri. Co...	Waialua, Oahu...	W. W. Goodale..	Castle & Cooke
Waianae Plantation..	Waianae, Oahu...	Fred Meyer.....	J. M. Dowsett
Wailuku Sugar Co..	Wailuku, Maui...	H. B. Penhallow.	Brewer & Co.
Waimanalo S. Co....	Waimanalo, Oahu.	Geo. Chalmers...	Brewer & Co.
Waimea Sug. M. Co..	Waimea, Kauai...	Jno. Fassoth....	Hackfeld & Co.

LATEST CENSUS REPORT, 1910.

Total population of the Hawaiian Islands, 191,909; an increase since 1900 of 24 per cent. By islands the returns are as follows:

Island of Hawaii, 55,382. Islands of Kauai and Niihau, 23,952. Islands of Maui, Molokai, Lanai and Kahoolawe, 30,547. Island of Oahu, 82,028.

Population of the City of Honolulu, 52,183; an increase of 32 per cent. in the past ten years.

POST OFFICES, TERRITORY OF HAWAII.

TOTAL NUMBER, 92; PRESIDENTIAL 10; FOURTH CLASS 82. FIRST CLASS, 1 Honolulu; SECOND CLASS, 1 Hilo; THIRD CLASS, 8, viz: HAWAII COUNTY, 1 Kohala; HONOLULU COUNTY 3, Ewa, Waialua, Waipahu; MAUI COUNTY 3; Kahului, Lahaina, Wailuku; KAUAI COUNTY 1, Lihue.

HAWAII COUNTY.

Second class	1	Domestic & International M. O. B.	17
Third class	1	Domestic M. O. B. only.....	13
Fourth class.....	33	Not Money Order Offices.....	5
	<u>35</u>		<u>35</u>

HONOLULU COUNTY.

First class.....	1	Domestic & International M. O. B.	8
Third class.....	3	Domestic M. O. B. only.....	7
Fourth class.....	17	Not Money Order Offices.....	6
	<u>21</u>		<u>21</u>

MAUI COUNTY.

Third class.....	3	Domestic & International M. O. B.	6
Fourth class.....	22	Domestic M. O. B. only.....	8
		Not Money Order Offices.....	11
	<u>25</u>		<u>25</u>

KAUAI COUNTY.

Third class.....	1	Domestic & International M. O. B.	7
Fourth class	10	Domestic M. O. B. only	2
		Not Money Order Offices.....	2
	<u>11</u>		<u>11</u>

POSTAL SERVICE, TERRITORY OF HAWAII.

Corrected to December 1, 1910.

Frank J. Hare, Inspector in Charge.
 Geo. W. Carr, Asst. Sup't. Railway Mail Service.
 Jos. G. Pratt, Postmaster.
 Jos. Kubey, Asst. Postmaster; Wm. McCoy, Chief Registry Clerk;
 F. E. Colby, Chief Money Order Clerk; W. C. Kenake, Chief Mailing
 Clerk; F. T. Sullivan, Supt. of Delivery.

POSTMASTERS ON HAWAII.

Hilo.....	Geo. Desha	Holualoa.....	L. S. Aungst
Pepeekeo.....	A. P. Martin	Kailua.....	John P. Curtis
Honomu.....	Wm. Hay	Kealakekua.....	Robt. V. Woods
Kawaihae....	S. K. Kamailekane	Napoopoo.....	J. A. Luis
Mahukona.....	R. R. Elgin	Hoopuloa....	W. H. G. Arnemann
Kukuihaele.....	W. Horner	Hookena.....	L. P. Lincoln
Paauhau.....	Alex. Smith	Pahala.....	T. C. Wills
Kohala.....	A. J. Stillman	Honuapo.....	C. P. Akamu
Paauiilo.....	Anthony Lidgate	Waichinu....	Anna H. McCarthy
Laupahoehoe.....	E. W. Barnard	Naalehu.....	Carl Wolters
Ookala.....	Jas. Johnson	Hakalau.....	Wm. Ross
Honokaa.....	A. B. Lindsay	Olaa.....	John Watt
Mountain View.....	H. G. Junkin	Papaaloa.....	J. Hay Wilson
Volcano House.....	D. Lycurgus	Lalamilo.....	J. C. Searle
Keauhou....	Mrs. H. L. Kawewehi		

POSTMASTERS ON MAUI.

Lahaina.....	Arthur Waal	Kipahula.....	Mrs. J. Glenn
Wailuku.....	M. T. Lyon	Kahului.....	J. N. S. Williams
Makawao.....	A. F. Tavares	Paia.....	D. C. Lindsay
Hana.....	N. Omsted	Hamakuapoko....	W. F. Mossman
Puunene.....	H. P. Baldwin	Haiku.....	Jas. Lindsay
Kaupo.....	Jas. Keawe	Keanae.....	J. W. K. Halemano
Makena.....	D. Kapohakukimohewa	Nahiku.....	C. J. Austin
Kihei.....	Alex. McLeod	Waiakoa.....	Joaquin Vincent
Honokohau.....	R. C. Searle		

POSTMASTERS ON OAHU.

Aiea.....	Geo. J. Wond	Kahuku.....	Andrew Adams
Pearl City.....	J. P. Keppler	Laie.....	S. W. Woolley
Watertown.....	Jas. H. Boyd	Kahana.....	R. S. Polliston
Waipahu.....	J. H. Travis	Punaluu.....	D. Kaapa
Wahiawa.....	W. E. Skinner	Waikane.....	Sam'l Waiwi
Ewa.....	Geo. F. Renton	Heeia.....	Frank Pahia
Waianae.....	F. Meyer	Waimanalo.....	A. Irvine
Waialua.....	C. A. De Cew	Schofield Barracks...	M. Goldsbury
Haleiwa.....	Clifford Kimball		

POSTMASTERS ON KAUALI.

Lihue.....	Frank Crawford	Kealia.....	Jno. W. Neal
Koloa.....	A. Buchholtz	Kilauea.....	J. R. Myers
Hanapepe.....	H. H. Brodie	Kekaha.....	A. F. Knudsen
Makaweli.....	B. D. Baldwin	Waimea.....	C. B. Hofgaard
Eleele.....	Mrs. J. I. Silva	Hanalei.....	Mrs. S. B. Deverill
Homestead.....	M. R. Jardin	Wainiha.....	Wm. Smith

POSTMASTERS ON MOLOKAI AND LANAI.

Pukoo.....	D. K. Ilae	Keomoku.....	Chas. Gay
Peuekunu.....	J. Kapahu	Kalaupapa.....	J. S. Wilmington
Halawa.....	J. Nakaleka	Kaunakakai.....	Joel Kao

POST OFFICE INFORMATION.

Office hours of the General Delivery are from 6 a. m. to 12 o'clock midnight. On legal holidays the time is from 8 a. m. to 9 a. m. On Sundays, from 9 to 10 a. m.

Hours of the Stamp and Registry Department are from 8 a. m. to 6 p. m., and of the Money Order Department from 8.30 a. m. to 5 p. m.

The General Delivery is open (except Sundays and holidays) from 6 a. m. till midnight, for the delivery of mail, registering of letters and issuance of Money Orders.

Inter-island mails close forty-five minutes before the sailing of steamers, excepting steamers sailing at noon Tuesdays and Fridays, which close at 11 a. m. For foreign ports the ordinary mails close one hour prior to steamer's departure.

Registry office closes two and a half hours before steamer departure.

RATES OF POSTAGE, DOMESTIC.

First class matter (letters, etc.).....	2 cents per oz. or fraction
Second class (newspapers and periodicals).....	1 cent per 4 oz. or fraction
Third class (books, circulars).....	1 cent per 2 oz. or fraction
Fourth class (merchandise—limit of weight 4 lbs.).....	.....
.....
.....	1 cent per oz. or fraction
Registration Fee (additional postage).....	10 cents
Immediate Delivery Stamp (additional to postage).....	10 cents
Postal Cards.....	1 cent each

FOREIGN POSTAGE.

The rate to all foreign countries except Great Britain, Canada and Mexico are: Letters per ounce or fractional part, 5 cents for first ounce, and 3 cents for each additional ounce. Printed matter, 1 cent for each 2 ounces or part. Postal Cards, 2 cents each.

Parcels of Merchandise, 12 cents per pound. Limit of weight, 12 pounds.

TERRITORIAL REGISTER AND DIRECTORY FOR 1911.

Corrected to December 1, 1910.

TERRITORIAL OFFICIALS.

Walter F. Frear.....Governor
 E. A. Mott-Smith.....Secretary
 Alex. Lindsay, Jr.....Attorney General
 D. L. Conkling.....Treasurer
 Marston Campbell.....Supt. Public Works
 W. T. Pope.....Supt. Public Instruction
 J. H. Fisher.....Auditor
 Wm. Henry.....High Sheriff
 H. O'Sullivan.....Private Secy. to Governor

Jonah K. Kalaniana'ole.....
Delegate to Congress

LEGISLATIVE BODY.

SENATORS.

Hawaii—J. T. Brown, D. K. Baker, R. H. Makekau, G. C. Hewitt.
 Maui—S. E. Kalama, W. T. Robinson, Philip Pali.
 Oahu—Cecil Brown, A. F. Judd, C. F. Chillingworth, H. T. Moore, E. W. Quinn, A. S. Kaleiopu.
 Kauai—E. A. Knudsen, G. H. Fairchild.

REPRESENTATIVES.

Oahu—N. Watkins, E. A. C. Long, S. P. Correa, E. K. Fernandez, Ed. Towse, W. Williamson, A. Q. Marcellino, F. K. Archer, A. L. Castle, J. K. Kamanoula, C. Kanekoa, S. K. Mahoe.
 Maui—Jos. Cockett, G. P. Cooke, S. Keliinoi, A. P. Tavares, J. W. Kawaakoa, Ed. Waiaholo.
 Hawaii—J. W. Moanauli, H. L. Holstein, J. P. Hale, H. S. Rickard, J. R. Yates, G. F. Affonso, H. L. Kawewehi, M. K. Makekau.
 Kauai—W. J. Sheldon, C. A. Rice, J. H. Coney, G. H. Huddy.

NATIONAL GUARD OF HAWAII.

Walter F. Frear.....
Governor and Commander in Chief

GENERAL STAFF OFFICERS.

John W. Jones....Col. and Adjutant General
 Charles B. Cooper....Lt. Col. and Surg. Genl.
 John W. Short....Lt. Col. and Q. M. Genl.
 Joseph H. Fisher....Lt. Col. and P. M. Genl.
 Marston Campbell....Lt. Col. and C. E. Officer
 William L. Moore....Major Surg. Med. Dept.
 Emil C. Peters.....Captain J. A. Genl.

Elmer T. Winant.....Captain Insp. S. A. P.
 George E. Smithies.....Captain Ord. Officer
 James H. Raymond..Captain Surg. M. Dept.

FIELD OFFICERS.

Charles W. Ziegler.....Col. 1st Infy.
 Arthur Coyne.....Lieut. Col.
 William R. Riley.....Major 1st Batt.
 Gustave Rose.....Major 2nd Batt.

REGIMENT STAFF OFFICERS.

Edward T. Simpson.....Chaplain
 Thomas P. Cummins.....Capt. and Adjutant
 Merle Johnson.....Captain and Q. M.
 Arthur W. Neely.....Captain and Comsy.

Department of Judiciary.

SUPREME COURT.

Chief Justice.....Hon. A. S. Hartwell
 Associate Justice.....Hon. J. T. De Bolt
 Associate Justice.....Hon. Antonio Perry

Clerk Judiciary Dept.....Henry Smith
 First Judge 1st Circuit, Oahu.....
Hon. H. E. Cooper
 Second Judge 1st Circuit, Oahu.....
Hon. W. L. Whitney
 Third Judge 1st Circuit, Oahu.....
Hon. W. J. Robinson
 Second Circuit, Maui.....Hon. S. B. Kingsbury
 Third Circuit, Hawaii.....
Hon. J. A. Matthewman
 Fourth Circuit, Hawaii.....Hon. C. F. Parsons
 Fifth Circuit, Kauai.....Hon. J. Hardy

CLERKS OF SUPREME AND CIRCUIT COURTS.

Henry Smith.....ex-officio
 Clerk Supreme Court.....J. A. Thompson
 Clerks, 1st Circuit, Oahu..Job Batchelor,
 M. T. Simonton, Jno. Marcellino
 Assist. Clerks, Judiciary Dept.....
J. M. Ulunahale, Robt. Parker
 Stenographer and Asst. Clerk, Supreme
 Court.....Miss Kate Kelly
 Second Circuit, Maui.....E. H. Hart
 Third Circuit, Hawaii.....James Ako
 Fourth Circuit, Hawaii.....A. S. Le B. Gurney
 W. Ragsdale, Deputy Clerk
 Fifth Circuit, Kauai.....Phillip Rice

INTERPRETERS, ETC.

Hawaiian Interpreters
 C. L. Hopkins, F. W. Beckley
 Japanese Interpreter..... S. K. Maruyama
 Chinese Interpreter..... Farm Cornn
 Portuguese Interpreter..... J. M. Camara
 Stenographers: P. M. McMahon, J. L. Horner,
 Gilson Bell.
 C. A. K. Hopkins..... Bailiff 1st Judge
 A. K. Aona..... Bailiff 2nd Judge
 V. M. Harrison..... Bailiff 3rd Judge

DISTRICT MAGISTRATES.

Oahu.

Wm. B. Lymer..... Honolulu
 P. L. Weaver, Second..... Honolulu
 S. Hookano..... Ewa
 J. Kekahuna..... Waianae
 L. B. Nainoa..... Koolauloa
 A. S. Mahaulu..... Waialua
 E. Hore, Second..... Waialua
 E. P. Aikue..... Koolaupoko

Maui.

W. A. McKay..... Wailuku
 Edward C. Robinson..... Lahaina
 Guy S. Goodness..... Makawao
 Edward Wilcox..... Second Makawao
 L. K. Kakani..... Hana
 J. K. Piimanu..... Second Hana
 C. C. Conradt..... Molokai
 S. K. Kaunamano..... Kalawao
 J. D. McVeigh..... Second Kalawao
 S. Kahohalahala..... Second Lahaina

Hawaii.

L. A. Andrews..... Hilo
 A. V. Marceil..... North Hilo
 R. H. Atkins..... North Kohala
 Thos. Nakanelua..... South Kohala
 Henry Hall..... Hamakua
 Jos. S. Ferrv..... Puna
 Walter H. Havselden..... Kau
 Chas. H. White, Second..... Kau
 J. L. Kaulukou..... North Kona
 Robt. Makahalupa..... South Kona
 Second..... South Kona

Kauai.

Chas. S. Dole..... Lihue
 Jas. H. K. Kaiwi, Second..... Lihue
 D. K. Kapahce..... Koloa
 Wm. Schelempennig, Second..... Koloa
 W. Werner..... Hanalei
 C. B. Hofgaard..... Waimea
 J. A. Akina, Second..... Waimea
 R. Puuiki..... Kawaihou

DEPARTMENT OF SECRETARY.

Secretary..... E. A. Mott-Smith
 Chief Clerk of Department..... Henry O'Sullivan
 Clerks... C. Calvert, H. Klemmer, R. S. Lono

FOREIGN REPRESENTATIVES.

Portugal—Consul General
 Senhor A. de Souza Canavaro
 Italy—Consul—F. A. Schaefer (Dean of the
 Consular Corps).
 Netherlands H. M. von Holt
 Norway—Acting Consul..... Geo. Rodiek
 Denmark C. Hedeman
 Germany W. Pfothenhauer
 Mexico—Acting Consul..... W. Lanz
 Peru Bruce Cartwright
 Chili—Acting Consul..... H. Focke
 Great Britain—Consul..... R. G. V. Forster
 Belgium—Vice-Consul..... R. W. Lange
 Sweden—Consul Geo. Rodiek
 Spain—Vice-Consul (Acting)..... A. Marques
 France—Consular Agent..... A. Marques
 Japan—Consul, S. Uyeno; Eleve Consul,
; Vice-Consul,
 China—Consul..... Liang Kuo Ying
 Panama—Consul..... A. Marques
 Russia—Consul..... A. Marques

DEPARTMENT OF ATTORNEY GENERAL.

Attorney-General..... Alex. Lindsay, Jr.
 1st Deputy Atty-General..... E. W. Sutton
 2nd Deputy Atty-General..... A. G. Smith
 Clerk of Department..... Saml. Upa
 Stenographer Miss E. Dwight
 High Sheriff..... Wm. Henry

BOARD OF PRISON INSPECTORS.

Oahu—G. J. Waller, Edward Davis, E. H.
 Wodehouse.
 Maui—Wm. Henning, J. N. K. Keola, H. A.
 Baldwin.
 W. Hawaii—L. S. Aungst, H. H. Renton, M.
 A. Malakaua.
 E. Hawaii—E. N. Holmes, A. B. Lindsay, R.
 A. Lyman, Jr.
 Kauai—A. S. Wilcox, J. M. Lydgate, John
 Gandall.

TREASURY DEPARTMENT.

Treasurer..... D. L. Conkling
 Registrar of Public Accounts..... H. C. Hapai
 Bookkeeper T. Treadway
 Corporation Clerk..... Francis Evans
 Stenographer and Typewriter... E. J. Treadway

BUREAU OF CONVEYANCES.

Registrar of Conveyances..... C. H. Merriam
 Deputy Registrar..... Isaac Ibihi

ASSESSORS AND COLLECTORS.

First Division, Oahu.

Chas. T. Wilder..... Assessor
 A. W. Neely..... Deputy 1st Division
 T. V. King, P. J. Jarrett, H. Sing Fook, V.
 Fernandez, Jr., J. H. Harbottle, J. W.
 Francis, John A. Palmer, T. Mito, Deput-
 ties, Honolulu.
 S. L. Kekumano..... Ewa and Waianae

Edward Hore Waialua
 J. Kekuku Koolauloa
 H. C. Adams Koolaupoko

Second Division, Maui.

J. H. Kunewa Assessor
 J. N. K. Keola Wailuku
 G. H. Dunn Lahaina
 A. P. Tavares Makawao
 M. H. Reuter Hana
 G. H. Dunn Molokai and Lanai

Third Division, Hawaii.

N. C. Willfong Assessor
 E. K. Kaiwa North Hilo
 G. H. Kaihenui South Hilo
 H. J. Lyman Puna
 W. A. Schwallie Kau
 James Ako North Kona
 L. P. Lincoln South Kona
 W. P. McDougall North Kohala
 Moses Koki South Kohala
 Wm. Horner Hamakua

Fourth Division, Kauai.

J. K. Farley Assessor
 Chas. Blake Koloa
 J. K. Kapuniai Waimea
 A. G. Kaulukou Lihue
 Ed. Deverill Hanalei
 J. W. Neal Kawaihau

AUDITING DEPARTMENT.

Auditor J. H. Fisher
 Deputy Auditor G. W. R. King
 Clerks—A. May, Jno. W. Vannatta.

DEPARTMENT OF PUBLIC WORKS.

Superintendent Marston Campbell
 Chief Clerk of Department Manuel K. Cook
 Clerks—O. K. Stillman, B. K. Kane, Miss B. K. Dwight, H. Bishaw.
 Supt. Water Works and Sewers, Honolulu J. M. Little
 Clerks Water Works, Honolulu Daniel M. Woodward, S. Oneha
 Harbor Master, Honolulu Capt. A. N. Tripp
 Assistant H. S. Swinton
 Pilots, Honolulu—Capts. J. C. Lorenson, J. R. Macaulav, M. N. Saunders.
 Harbor Master and Pilot, Hilo Capt. F. Mosher
 Pilot, Kahului Capt. E. H. Parker

BOARD OF IMMIGRATION.

Commissioners—E. H. Wodehouse, Superintendent; J. J. Carden, Alex. McBryde, A. L. C. Atkinson.
 Executive Officer Victor S. Clark
 Assistant Secretary Ralph A. Kearns

HONOLULU PARK COMMISSION.

President
 Secretary G. P. Wilder
 Marston Campbell (ex-officio), W. M. Giffard, E. S. Cunha, H. E. Cooper, Geo. P. Castle.

GOVERNMENT SURVEYING CORPS.

Marston Campbell Surveyor
 Walter E. Wall Asst. Surveyor
 S. M. Kananui, Robt. D. King, H. E. Newton, Assistants.

BOARD OF COMMISSIONERS OF AGRICULTURE AND FORESTRY.

Commissioners—Marston Campbell, President and Executive Officer; D. P. R. Isenberg, H. M. von Holt, Albert Waterhouse, J. M. Dowsett.

Division of Entomology.

E. M. Ehrhorn Superintendent of Entomology and Inspector
 A. Koebele Consulting Entomologist
 H. O. Marsh Asst. Entomologist
 D. B. Kuhns Inspector's Assistant
 Fred. Muir Beneficial Insect Collector
 Miss Melika Peterson Clerk and Stenographer

Division of Forestry.

Ralph S. Hosmer Superintendent of Forestry
 David Haughs Forest Nurseryman
 Joseph F. Rock Botanical Assistant
 Bro. M. Newell In Charge Nursery, Hilo
 W. D. McBryde In Charge Nursery, Kauai

Division of Animal Industry.

Victor A. Norgaard, V. S. Superintendent and Territorial Veterinarian
 Dr. L. N. Case Assistant
 John Vanhuizen Live Stock Inspector
 Dr. J. C. Fitzgerald, Dep. V. S. Maui
 Dr. H. B. Elliott, Dep. V. S. Hilo
 A. R. Glazier, Dep. V. S. Kauai
 Mrs. C. H. Brown Sec. to the Board
 Miss Ella K. Dayton Librarian

BOUNDARY COMMISSIONERS.

Hawaii G. F. Parsons, Hilo
 J. A. Matthewman, Kailua
 Kauai Jacob Hardy

FENCE COMMISSIONERS.

Honolulu—F. T. P. Waterhouse, J. A. Gilman, Manuel K. Cook.
 Ewa and Waianae—A. Waterhouse, E. O. White, C. A. Brown.
 Waialua—A. S. Mahaulu, R. Kinney, W. P. Thomas.
 Makawao—C. D. Lovekin, J. K. Kahookle.
 S. Kona—E. K. Kaaua, L. P. Lincoln, A. Halli.
 Kau—J. Monsarrat, C. J. Macomber, Luka Kila.

LIQUOR LICENSE COMMISSIONERS.

City and County of Honolulu.

- W. E. Brown.....Chairman
- C. A. Long.....Secretary
- C. H. Cooke, J. H. Craig, O. Sorenson,
County of Maui.
- J. N. S. Williams.....Chairman
- Geo. Copp, H. A. Baldwin, C. D. Lufkin, D.
C. Lindsay.

County of Hawaii.

- John T. Moir.....Chairman
- R. A. Lyman.....Secretary
- Albert Horner, W. G. Ogg, S. M. Spencer.
County of Kauai.

- W. H. Rice, Sr.....Chairman
- G. N. Wilcox, W. D. McBryde, J. K. Apolo,
A. F. Knudsen.

DEPARTMENT OF PUBLIC LANDS.

- Marston Campbell.....Commissioner
- J. D. Tucker.....Secretary
- Henry Peters.....First Clerk
- S. K. Kamaioipili.....Second Clerk
- Eileen Bertelman.....Third Clerk

Sub-Agents.

- 1st District, Hilo and Puna. } G. H. Williams
- 2nd District, Hamakua. }
- 3rd District, Kona and Kau. } T. C. White
- 4th District, Maui.....W. O. Aiken
- 5th District, Oahu.....J. D. Tucker
- 6th District, Kauai.....
- L. M. McKeague; Miss B. Hundley, Asst.

LAND BOARD.

- W. A. Kinney.....Chairman
- J. F. Brown.....Secretary
- A. W. Carter, R. H. Trent, S. C. Dwight,
F. Andrade.

BOARD OF COMMISSIONERS OF PUBLIC ARCHIVES.

- Chairman, ex-officio.....E. A. Mott-Smith
- Commissioners—Prof. W. D. Alexander and
G. R. Carter.
- Librarian.....R. C. Lvdecker
- Translator.....Sol. Meheula

DEPARTMENT OF PUBLIC INSTRUCTION.

- Superintendent.....Willis T. Pope
- Commissioners.

- Oahu.....Mrs. May Wilcox, W. L. Stanley
- Maui.....W. O. Aiken
- Hawaii.....Jno. T. Moir, Ella H. Paris
- Kauai.....W. H. Rice, Sr.
- Normal Inspector.....T. H. Gibson
- Supervising Principals—
- E. Hawaii.....Wm. McCluskey
- W. Hawaii.....Chas. E. King
- Maui.....H. M. Wells
- Kauai.....Cyril O. Smith
- Secretary.....Miss Daisy Smith
- Asst. Secretary.....C. K. Stillman, Jr.
- Stenog. and Book Clerk.....H. H. Williams

BOARD OF HEALTH.

- President.....E. A. Mott-Smith
- Members—F. S. Smith, Dr. W. C. Hobdy, Jas.
F. Morgan, Alex. Lindsay, Jr., D. Ka-
lauokalani, Sr., Dr. W. D. Baldwin.
- General Health Officer.....Dr. J. S. B. Pratt
- Chief Sanitary Officer.....C. Charlock
- Secretary.....K. B. Porter
- Bacteriologist.....Dr. A. N. Sinclair
- Registrar Births, Deaths and Marriages.....
Miss M. Hester Lemon
- Chief Clerk.....W. K. Simerson
- Stenographer.....Miss M. Weir
- Food Commissioner and Analyst.....
Ed. B. Blanchard
- Supt. Insane Asylum.....Dr. C. A. Peterson
- Supt. Leper Settlement.....J. D. McVeigh
- Med. Supt. Leper Settlement.....
Dr. J. W. Goodhue
- Sanitary Inspector, Hilo.....D. S. Bowman

Government Physicians.

- Oahu—
- A. N. Sinclair.....Honolulu
- H. Wood.....Waialua
- C. P. Durney.....Kahuku

Maui—

- Franklin Burt.....Lahaina
- W. F. McConkey.....Makawao
- W. B. Deas.....Hana
- Wm. Osmers.....Wailuku
- F. L. Sawyer.....Kihei, Kula, etc.

Hawaii—

- E. S. Goodhue.....N. & S. Kona
- F. A. St. Sure.....S. Kohala
- B. D. Bond.....N. Kohala
- F. W. Taylor.....Hamakua
- L. L. Sexton.....S. Hilo
- Archer Irwin.....N. Hilo
- Frederick Irwin.....Puna
- W. A. Schwallie.....E. Kau
-W. Kau

Kauai—

- B. F. Sandow.....Waimea
- A. H. Waterhouse.....Kohala
- F. L. Putnam.....Lihue
- K. Yanagihara.....Hanalei
- K. Hofmann.....Kawaihau

BOARDS OF EXAMINERS.

- Medical—Dr. Geo. Herbert, Dr. A. N. Sin-
clair, Dr. Jas. R. Judd.
- Pharmacy—A. J. Gignoux, S. S. Peck, Dr. F.
F. Hedeman.
- Dental—P. F. Frear, H. Bicknell, A. J.
Derby.

COMMISSIONERS OF INSANITY.

- L. J. Warren.....Chairman
- Drs. W. L. Moore, G. H. Herbert.

CONSERVATION BOARD.

- J. P. Cooke, Marston Campbell, S. V. Wilcox.

PACKET AGENCIES.

Brewer Line N. Y. Packets—Theo. H. Davies & Co., Ltd.
 Matson's Line Sailing Vessels San Francisco—C. Brewer & Co., Ltd.
 Canadian and Australian S. S. Line—Theo. H. Davies & Co., Ltd.
 Oceanic S. S. Co.'s Line—C. Brewer & Co., Ltd.
 Pacific Mail S. S. Co.—H. Hackfeld & Co., Ltd.
 European Packets—H. Hackfeld & Co., Ltd.
 Hawaiian Packet Line, San Francisco—H. Hackfeld & Co., Ltd.
 American-Hawaiian S. S. Co.—H. Hackfeld & Co., Ltd.
 Matson Nav. Co.—Castle & Cooke, Ltd.
 San Francisco and Honolulu—F. A. Schaefer & Co., Ltd.

CHAMBER OF COMMERCE.

President J. F. Morgan
 Vice-President J. P. Cooke
 Secretary and Treasurer H. P. Wood
 Trustees—E. I. Spalding, E. D. Tenney, J. A. Kennedy, A. W. T. Bottomley, R. Catton, B. F. Dillingham, J. W. Waldron, J. D. Dole, R. Ivers, E. E. Paxton, F. Klamp, E. H. Wodehouse.

MERCHANTS' ASSOCIATION.

Organized March 18, 1901.

President F. L. Waldron
 Vice-President W. F. Dillingham
 Secretary E. A. Berndt
 Treasurer C. Von Hamm
 Directors—G. F. Bush, C. Du Roi, O. C. Swain, N. Watkins, M. Brasch.

MAUI CHAMBER OF COMMERCE.

Organized Jan. 29, 1910.

President H. P. Baldwin
 Vice-President R. A. Wadsworth
 Secretary D. H. Case
 Treasurer C. D. Lufkin

HAWAII PROMOTION COMMITTEE.

Representing the Territory of Hawaii, Chamber of Commerce and Merchants' Association.

Organized 1903.

C. F. Bush, Chairman; W. H. Hoogs, W. H. McInerney, Jas. L. McLean, N. Watkins, H. P. Wood, Secretary
 H. von Damm, Treasurer

HONOLULU STOCK AND BOND EXCHANGE.

Organized August 8, 1898.

President Wm. Williamson
 Vice-President A. F. Afong
 Secretary Wm. Simpson
 Treasurer Hawaiian Trust Co.

HAWAIIAN SUGAR PLANTERS' ASSOCIATION.

Re-organized Nov. 18, 1895.

President E. D. Tenney
 Vice-President T. Clive Davies
 Secretary and Treasurer L. J. Warren
 Auditor G. H. Robertson
 Trustees—E. D. Tenney, T. Clive Davies, J. M. Dowsett, W. Pfotenhauer, E. F. Bishop, W. O. Smith, J. P. Cooke, A. W. T. Bottomley, J. W. Waldron.

EXPERIMENT STATION OF PLANTERS' ASSOCIATION.

Experiment Station Staff.

C. F. Eckart Director
 R. C. L. Perkins Entomologist
 Noel Deerr Sugar Technologist
 H. L. Lyon Pathologist
 S. S. Peck Chemist
 E. G. Clarke Agriculturist
 A. Koebele Consulting Entomologist
 R. S. Norris, F. R. Werthmueller, A. E. Jordan, W. J. Hartung, Assistant Chemists
 F. W. Terry, F. Evans, Otto H. Sweezey, F. Muir Assistant Entomologists
 L. D. Larsen Assistant Pathologist
 J. H. Wale Assistant Agriculturist
 D. C. Broderick Field Foreman
 G. H. Tuttle Cashier
 W. R. R. Potter Illustrator
 A. Warren Clerk
 J. F. Melanphy Fertilizer Sampler

HAWAIIAN SUGAR CHEMISTS' ASSOCIATION.

President F. E. Greenfield
 Vice-President R. S. Norris
 Secretary-Treasurer S. S. Peck
 Executive Committee—J. W. Donald, C. C. James, H. E. Savage, H. Johnson.

HAWAIIAN ENTOMOLOGICAL SOCIETY.

Organized 1905.

President
 Vice-President F. W. Terry
 Secretary and Treasurer D. B. Kuhns
 The above officers also constitute the Executive Committee.

BOARD OF MARINE UNDERWRITERS—AGENCIES.

Boston C. Brewer & Co.
 Philadelphia C. Brewer & Co.
 New York Bruce Cartwright
 Liverpool Theo. H. Davies & Co.
 Lloyds, London Theo. H. Davies & Co.
 San Francisco Bishop & Co.
 Bremen F. A. Schaefer

BOARD OF FIRE UNDERWRITERS OF TERRITORY OF HAWAII.

F. A. Schaefer.....President
 J. A. Gilman.....Vice-President
 A. R. Gurrey.....Secretary
 Bishop & Co.....Treasurer
 H. Hackfeld & Co.....Auditor

QUEEN'S HOSPITAL.

Erected in 1860.

President.....
 Vice-President.....A. Gartley
 Secretary.....Geo. W. Smith
 Treasurer.....Geo. C. Potter
 Auditor.....Jno. Waterhouse
 Surgeons—Drs. C. B. Cooper, W. C. Hobdy,
 G. F. Straub.
 Physicians—Drs. J. H. Raymond, F. F.
 Hedeman, F. L. Morong.
 Resident Physician.....Dr. H. F. Trautman
 Intern.....Dr. J. M. Thompson
 Oculists and Aurists.....
Drs. W. G. Rogers, H. P. Nottage
 Superintendent.....J. F. Eckardt
 Head Nurse.....Miss E. Maloney
 Trustees—G. C. Potter, W. W. North, W. E.
 Brown, A. Gartley, T. C. Davies, G. W.
 Smith.

LEAHI HOME.

Organized April 4, 1900.

President.....
 Vice-Presidents—W. O. Smith, C. H. Atherton.
 Secretary.....Geo. F. Davies
 Treasurer.....A. W. T. Bottomley
 Auditor.....J. P. Cooke
 Medical Supt.....A. N. Sinclair, M. B. C. M.
 Asst. Supt.....H. Taylor
 Matron.....Mrs. H. Taylor
 Trustees—J. P. Cooke, C. H. Atherton, T.
 Clive Davies, A. W. T. Bottomley, W. O.
 Smith, Geo. P. Castle.

SAILORS' HOME SOCIETY.

Organized 1853. Meets annually in December.

President.....F. A. Schaefer
 Vice-President.....
 Secretary-Treasurer.....C. H. Atherton
 Executive Committee—W. M. Giffard, F. W.
 Damon, B. F. Dillingham, E. D. Tenney.

CIVIC FEDERATION.

Organized Jan. 26, 1905.

President.....John W. Gilmore
 Vice-President.....Dr. D. Scudder
 Secretary.....P. M. Pond
 Treasurer.....C. H. Dickey

LIBRARY AND READING ROOM ASSOCIATION.

Organized March, Incorporated June 24, 1879.

President.....Prof. M. M. Scott
 Vice-President.....Dr. W. D. Alexander
 Secretary.....J. H. Fisher
 Treasurer.....A. Gartley
 Auditor.....J. H. Fisher
 Librarian.....Miss Edna I. Allyn
 Asst. Librarian.....Miss M. Peacock

HAWAIIAN HISTORICAL SOCIETY.

Organized Jan. 11, 1892.

President.....Rev. W. D. Westervelt
 Vice-Presidents—Dr. W. D. Alexander, Gov.
 W. F. Frear, Hon. A. S. Hartwell.
 Recording Secretary.....A. Lewis, Jr.
 Cor. Secretary.....S. M. Ballou
 Treasurer.....Edgar Wood
 Librarian.....Miss E. I. Allyn

BERNICE PAUHI BISHOP MUSEUM.

Board of Trustees.

Albert F. Judd.....President
 E. F. Bishop.....Vice-President
 A. W. Carter.....Secretary
 J. M. Dowsett.....Treasurer
 Samuel M. Damon, W. O. Smith, H. Holmes.

Museum Staff.

William T. Brigham, A. M., D. Sc.....Director
 W. H. Dall, D. Ph.....Hon. Curator of Mollusca
 John F. G. Stokes.....
Curator of Polynesian Ethnology
 Miss Higgins.....Assistant and Acting Librarian
 C. Montague Cooke, Jr., D. Ph.....
Curator of Pulmonata
 C. N. Forbes.....Curator of Botany
 J. W. Thompson.....Modeler
 John J. Greene.....Printer

BAR ASSOCIATION OF HAWAII.

Organized June 28, 1899.

President.....D. L. Withington
 Vice-President.....F. E. Thompson
 Secretary.....L. A. Dickey
 Treasurer.....C. H. Olson
 Auditor.....W. C. Parke

KILOHANA ART LEAGUE.

Organized May 5, 1894.

President.....Miss Frances Lawrence
 Vice-President.....Mrs. A. B. Tucker
 Secretary.....Mrs. L. G. Marshall
 Treasurer.....Mrs. W. C. Weedon
 Auditor.....W. A. Lane
 Managing Trustee.....B. F. Dillingham

HAWAIIAN MEDICAL ASSOCIATION.

Organized May 24, 1895. Annual Meeting in May.

President.....Dr. Wm. G. Rogers
 Vice-President.....Dr. W. D. Baldwin
 Secretary and Treasurer.....Dr. W. C. Hobdy
 Drs. C. B. Wood, St. D. G. Walters, with the above officers, constitute the Executive Committee.

HAWAIIAN SOCIETY SONS OF THE AMERICAN REVOLUTION.

Organized June 17, 1895.

President.....Dr. C. B. Cooper
 Vice-President.....C. H. Dickey
 Secretary.....F. D. Lowrey
 Treasurer.....P. L. Horne
 Registrar.....J. Effinger

HAWAIIAN EVANGELICAL ASSOCIATION.

Originally Organized 1823.

Constitution revised 1863. Annual Meeting June.

President.....P. C. Jones
 Vice-President.....F. J. Lowrey
 Cor. Secretary.....Rev. Wm. B. Oleson
 Rec. Secretary.....Rev. W. D. Westervelt
 Treasurer.....Theo. Richards
 Auditor.....F. C. Atherton

WOMAN'S BOARD OF MISSIONS.

Organized 1871.

President.....Mrs. Theo. Richards
 Recording Secretary.....Miss M. L. Sheeley
 Home Cor. Secretary.....Mrs. John W. Gilmore
 Foreign Cor. Secretary.....Mrs. E. A. Jones
 Treasurer.....Mrs. B. F. Dillingham
 Asst. Treasurer.....Mrs. W. L. Moore
 Auditor.....O. C. Swain

MISSION CHILDREN'S SOCIETY.

Organized 1851. Annual Meeting in June.
 President.....Jos. P. Cooke
 Vice-President.....W. F. Dillingham
 Secretary.....Mrs. R. W. Andrews
 Recorder.....R. W. Andrews
 Treasurer.....L. A. Dickey

YOUNG MEN'S CHRISTIAN ASSOCIATION.

Organized 1869. Annual Meeting in April
 President.....R. H. Trent
 Rec. Secretary.....W. G. Hall
 Sec. Secretary.....G. S. Waterhouse
 Treasurer.....F. C. Atherton
 General Secretary.....Paul Super
 Educational Secretary.....A. F. Larimer
 Physical Instructor.....Dr. E. H. Hand

YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

Organized 1900.

President.....Mrs. B. F. Dillingham
 Vice-President.....Mrs. A. F. Cooke
 Secretary.....Mrs. H. M. von Holt
 Treasurer.....Miss Carrie Gilman
 General Secretary.....Miss C. O. Moyer

WOMAN'S CHRISTIAN TEMPERANCE UNION OF HAWAII.

Organized December, 1884.

President.....Mrs. J. M. Whitney
 Vice-Presidents—Mrs. D. Scudder, Mrs. J. W. Wadman.
 Recording Secretary.....Miss Florence Yarrow
 Cor. Secretary.....Mrs. E. W. Jordan
 Treasurer.....Mrs. Lydia Coan

FREE KINDERGARTEN AND CHILDREN'S AID ASSOCIATION.

Organized 1895.

President.....Mrs. Theo. Richards
 Vice-Presidents—Mrs. L. L. McCandless, Mrs. L. T. Peck, Mrs. C. H. Cooke.
 Recording Secretary.....Mrs. R. Ivers
 Treasurer.....Mrs. F. M. Swanzy
 Financial Secretaries.....
Mrs. G. P. Wilder, Mrs. J. R. Judd
 Auditor.....D. W. Anderson

ASSOCIATED CHARITIES.

Organized June 7, 1899.

President.....S. B. Dole
 1st Vice-President.....Mrs. C. du Roi
 2nd Vice-President.....W. D. Westervelt
 Secretary.....Mrs. J. M. Whitney
 Treasurer.....Wm. Williamson
 Manager.....Mrs. E. W. Jordan

STRANGERS' FRIEND SOCIETY.

Organized 1852. Annual Meeting in June.

President.....Mrs. A. Fuller
 Vice-Presidents—Mrs. E. F. Bishop, Mrs. S. B. Dole.
 Secretary.....Mrs. S. M. Damon
 Treasurer.....Mrs. E. W. Jordan
 Auditor.....E. W. Jordan
 Directress.....Mrs. E. B. Waterhouse

BRITISH BENEVOLENT SOCIETY.

Organized 1869. Meets Annually.

President (Ex-officio).....H. B. M's. Consul
 Vice-President.....
 Secretary.....R. Catton
 Treasurer.....George Davies
 Relief Committee—G. R. Ewart, J. C. Cook, W. H. Baird, F. Harrison, R. Anderson and H. E. McIntyre, with the above officers.

GERMAN BENEVOLENT SOCIETY.

Organized August 22, 1856.

President F. A. Schaefer
 Vice-President W. Pfothenauer
 Secretary John F. Eckardt
 Treasurer B. von Damm
 Auditor H. Hugo

HAWAIIAN RELIEF SOCIETY.

Organized 1895.

President Mrs. C. S. Holloway
 Secretary Mrs. E. S. Cunha
 Treasurer Mrs. F. W. Macfarlane

PORTUGUESE CHARITABLE SOCIETY.

Organized Sept. 1, 1902.

President J. P. Rodriguez
 Vice-President J. Madeira
 Secretary A. H. R. Vieira
 Treasurer J. D. Marques

CATHOLIC ORPHANAGE, KALIHI.

Established 1909.

Mother Mary Lawrence in charge.

RED CROSS SOCIETY.

Hawaiian Chapter.

Organized Sept. 2, 1907.

Chairman F. J. Lowrey
 Vice-Chairman Mrs. B. F. Dillingham
 Secretary H. G. Dillingham
 Treasurer C. H. Cooke
 Auditor J. R. Galt
 Executive Committee—Chairman, Secretary,
 with Dr. W. C. Hobdy, Mrs. E. A.
 Weaver, J. A. Rath.

HOSPITAL FLOWER MISSION.

President Mrs. E. W. Jordan
 Vice-President Mrs. A. F. Judd
 Secretary Mrs. G. F. Davies
 Treasurer Mrs. Allen Bottomley
 Auditor E. W. Jordan

OAHU CEMETERY ASSOCIATION.

President F. J. Lowrey
 Vice-President F. J. Lowrey
 Secretary and Treasurer J. R. Galt

ANTI-SALOON LEAGUE OF HONOLULU,
T. H.

Organized March 4, 1901.

President W. A. Bowen
 Vice-President Rev. W. D. Westervelt
 Vice-Pres. Honorary Mrs. J. M. Whitney
 Secretary L. A. Dickey
 Treasurer C. H. Dickey

PACIFIC CLUB.

Organized 1852. Premises on Alakea Street,
two doors below Beretania.

President J. M. Dowsett
 Vice-President J. M. Dowsett
 Secretary Geo. C. Potter
 Treasurer A. W. T. Bottomley
 Governors—C. S. Holloway, E. I. Spalding,
 Geo. Rodiek, A. Gartley, P. Muhlendorf,
 with the above officers, comprise the
 Board.

UNIVERSITY CLUB.

Organized 1905.

President Hon. S. M. Ballou
 Vice-President Hon. W. L. Whitney
 Secretary A. M. Nowell
 Treasurer Wm. Williamson

HARVARD CLUB OF HAWAII.

Ernest A. Mott-Smith, '95 President
 Ralph S. Hosmer, a '94 Secretary-Treasurer
 Executive Committee—With the above, D. L.
 Withington, '74; H. G. Dillingham, '04;
 R. B. Anderson, L '03.

COMMERCIAL CLUB OF HONOLULU.

Organized Aug. 30, 1906.

President E. H. Paris
 Vice-President Marston Campbell
 Secretary Theo. Lansing
 Treasurer E. A. Berndt

SCOTTISH THISTLE CLUB.

Organized April 27, 1891.

Chief Jas. H. Fiddes
 Chieftain John Walker
 Secretary J. C. McGill
 Treasurer W. C. Shields
 Master-at-Arms E. McKenzie
 Club Rooms, 11 and 12 Young Building.
 Meetings 2nd and 4th Fridays, 7:30 p. m.

BUCKEYE CLUB.

Organized 1904.

President Rev. W. D. Westervelt
 Vice-President Mrs. W. C. Woodson
 Sec. and Treas. Mrs. C. E. Livingston

COUNTRY CLUB.

Organized 1906.

President W. F. Dillingham
 1st Vice-President J. P. Cooke
 2nd Vice-President J. D. McInerney
 Secretary A. C. Robinson
 Treasurer J. O. Young
 Auditor W. Jamieson

TRAIL AND MOUNTAIN CLUB.

Organized April 5, 1910.

President.....W. R. Castle
 Vice-President.....L. A. Thurston
 Recording Secretary.....Irwin Spalding
 Corresponding Sec.....Alex. Hume Ford
 Treasurer.....Robert Shingle

HAWAII YACHT CLUB.

Organized Oct., 1901.

Commodore.....Jas. Jaeger
 Vice-Commodore.....T. V. King
 Secretary and Treasurer.....R. H. Rycroft
 Measurer.....O. L. Sorenson
 Captain.....H. D. Bowen
 Regatta Com.—Gunkhase, H. L. Kerr, A. Robertson.
 Directors—R. L. Scott, H. D. Bowen, G. S. Smithies, L. M. Vettleson.

MYRTLE BOAT CLUB.

Organized Feb. 5, 1883.

President.....T. V. King
 Vice-President.....A. F. Ewart
 Secretary.....R. B. Rietow
 Treasurer.....I. Spalding
 Captain.....W. Lyle
 Trustees—H. F. Brown, G. Cowan, P. Schmidt.

HEALANI YACHT AND BOAT CLUB.

Incorporated Dec., 1894.

President.....Jas. E. Jaeger
 Vice-President.....A. H. Tarleton
 Secretary.....A. T. Longley
 Treasurer.....H. Lempke
 Captain.....Lawrence Cunha
 Commodore.....Walter Rycroft
 Vice Commodore.....Paul Jarrett
 Auditor.....Geo. Gall

OAHU COLLEGE.

President—Arthur F. Griffiths, A. B., History and Economics.
 Wilbur J. MacNeil (absent on leave), C. E. Barber—Chemistry and Natural Sciences.
 Ernest T. Chase, D. J. Ricker—Mathematics.
 Susan G. Clark—Latin and Greek.
 C. S. Schmutzler—German.
 C. W. Kitt, Lucy E. Crosby—Commercial Department.
 Ada M. Arthur—French.
 Antoinette J. Foster, J. May Fraser—English
 Charlotte P. Dodge—Science, Mathematics and History.
 Beth S. Smith, Mrs. S. N. Bobo—Voice.
 Abby W. Brooks—Oral Expression.
 Maud Seyde, Caroline Sheffield—Instructors in Piano.
 Margaret E. Clarke—Organ and Piano.
 Howard Hitchcock—Art Drawing.
 Mrs. A. B. Ingalls—Instructor on Violin.

Mrs. Maud Taylor, Ada F. Self, Mrs. C. W. Kitt—Matrons.
 Ernest J. Reece—Librarian.
 Edith C. Lawrence, Doris E. Girdler—Assistant Librarians.
 Jona. Shaw—Business Manager.
 Frank Barwick—Supt. of Grounds.
 H. G. Wooten—Engineer.
 Sila Pratt—Office Secretary.

PUNAHOU PREPARATORY.

Chas. T. Pitts—Principal.
 Claire H. Uecke—First Grade.
 Mary Persis Winne—Second Grade.
 Mrs. Elizabeth A. Turner—Third Grade.
 Florence N. Carter—Fourth Grade.
 Mary G. Borden—Fifth Grade.
 Anna F. Johnson—Sixth Grade.
 H. R. Bainbridge, B. M. Folsom, M. Harriett Williamson—Seventh Grade.
 Ray M. Sheldon—Eighth Grade.
 Mrs. E. B. MacNeil, Ethel A. McKenzie—Special.

REGENTS COLLEGE OF HAWAII.

H. E. Cooper.....President
 C. H. Cooke.....Treasurer
 A. Gartley, R. S. Hosmer, C. M. Cooke, C. F. Hemenway.

Library of Hawaii.

W. L. Whitney, Chairman; F. C. Atherton, Treasurer; W. H. Babbitt, W. P. Dillingham.

College of Hawaii Faculty.

John W. Gilmore, M.S.A.
 President, Professor of Rural Economy and Agronomy.
 Vaughn McCaughey, B.S.A.
 Professor of Botany and Horticulture.
 John S. Donaghho, B.A.
 Professor of Mathematics.
 John M. Young, M.E., M.M.E.
 Professor of Engineering, and Engineer for the College.
 Rev. W. Felmy.
 Asst. Professor of German.
 S. Russell.
 Professor of French.
 Frank T. Dillingham, B.S.
 Professor of Chemistry.
 Briggs E. Porter, B.S.A.
 Professor of Animal Husbandry.
 Wm. Alanson Bryan, B.S. (absent on leave).
 Henry H. Severin, M.A., Ph.D.
 Professor of Zoology.
 Arthur L. Andrews, M.L.Ph.D.
 Professor of English.
 Miss Mildred M. Yoder, B.S.
 Instructor in English.
 Arthur R. Keller,
 Professor of Civil Engineering.
 Howard M. Ballou, A.B.
 Professor of Physics.
 Florence M. Lee, B.S.
 Instructor in Domestic Science.
 Minnie E. Chipman,
 Asst. Professor Ceramics.
 Carrie P. Green,
 Librarian.

KAWAIAHAO GIRLS' SEMINARY.

Miss Mabel E. Boshier—Principal.
 Assistants—Mary F. Kinney, Mary Stambaugh, Bertha Kemp, Rose Faast.
 Teacher of Music—Jane Winne.
 Sewing—Miss Goad.
 Nurse—Miss L. Worthington.
 Housekeeper—Miss May Worthington.
 General Assistant—Miss Esther Kalino.

THE KAMEHAMEHA SCHOOLS.

Officers of Administration.

Perley L. Horne—President.
 Uldrick Thompson—Vice-Principal.
 Stanley C. Livingston—Acting Vice-Principal.
 John Lloyd Hopwood—Chaplain.
 Clifford E. Livingston—Registrar and Business Agent.
 Ida M. Pope—Principal Girls' School.
 Florence A. Perrott—Preparatory Department School for Boys.

FACULTIES.

School for Boys' Manual Department.

Perley L. Horne—President.
 Uldrick Thompson—Vice-Prin. and Science.
 Stanley C. Livingston—Acting Vice-Principal.
 David Kanuha—Tailoring.
 Geo. Paty—Carpentry.
 Albert Parsons—Agriculture.
 C. G. Livingston—Mathematics, Music.
 Jno. Lloyd Hopwood—History, Civics, Economics.
 John Mengel—Forging, Engineer.
 Minnie Reed—Geography, Reading.
 Clifford B. Thompson—Asst. in Agriculture.
 D. S. K. Pahu, W. A. Gill, Miss Armstrong, E. G. Bartlett, N. G. Smith, Wm. H. Winters, Miss D. K. Fairchild, Miss E. J. Little.
 Mrs. Alice M. Bradstreet—Matron.
 Miss Jessie Bradley—Nurse.
 Adolph Hottendorf—Printing.
 Chas. G. Collais—Supt. of Shops.
 L. K. George—Machinist.
 F. H. Partridge—Asst. Agriculturist.

Preparatory Department.

Florence A. Perrott—Principal.
 Estelle Roe—Fifth and Sixth Grades.
 E. R. Angell—First and Second Grades.
 Grace Putnam—Third and Fourth Grades.
 Nevado Moore—Class Teacher.
 Margaret Medill—Matron.
 Assistants—Nora Kahaleole, L. Kamakawiwoale.
 Allan McGowan—Military Instructor.

School for Girls.

Ida M. Pope—Principal.
 Frances A. Lemon—Acting Principal.
 Ruth E. Hoppin—Music.
 Misses McCracken, Cross, Reid.
 Katherine Burgner—Science.
 Katherine Pope—History.
 R. E. Hackett—Nurse.
 Carrie Church—Domestic Art.
 Assistants—Misses Lewa Iokia, H. Aiaiu, Irene Silva, Kaipo Senna.

HONOLULU (STEAM) FIRE DEPARTMENT.

Originally organized 1851, and conducted as volunteers till March 1, 1893, when it was changed to a paid department.

Chief Engineer—Chas. Thurston.
 Asst. Engineer—Augustus Deering.
 Honolulu Engine No. 1—Location, Central Station, cor. Fort and Beretania streets.
 Mechanic Engine No. 2—Location, Central Station, cor. Fort and Beretania streets.
 Chemical Apparatus No. 3—Location, Central Station, cor. Fort and Beretania streets.
 Protection Hook and Ladder Co. No. 1—Location, Central Station, cor. Fort and Beretania streets.
 Engine Co. No. 4—Location cor. Wilder avenue and Piikoi street.
 Engine Co. No. 5—Location King street, near Reform School.

PRINCIPAL PUBLICATIONS.

The Hawaiian Gazette, issued semi-weekly by the Hawaiian Gazette Co., Ltd., on Tuesdays and Fridays. R. O. Matheson, Editor.
 Sunday Advertiser, issued every Sunday morning by the Hawaiian Gazette Co., Ltd. R. O. Matheson, Editor.
 The Daily Pacific Commercial Advertiser, issued by the Hawaiian Gazette Co. every morning (except Sunday). R. O. Matheson, Editor.
 The Daily Bulletin, issued every evening (except Sundays), by the Bulletin Pub. Co. W. R. Farrington, Editor. Weekly editions issued on Tuesdays.
 The Hawaiian Star, issued every evening (except Sundays), by the Hawaiian Star Newspaper Association. Daniel Logan, 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 on the first of each month. Rev. Doremus Scudder, Editor.
 The Hawaiian Church Chronicle, issued on the first Saturday of every month. Rev. H. B. Restarick, Editor.
 The Paradise of the Pacific, issued monthly. W. M. Langton, Editor and 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. Daniel Logan, Editor.
 The Honolulu Times, issued monthly. Anna M. Prescott, Editor and Publisher.
 The Kuokoia (native), weekly, issued every Friday morning by the Hawaiian Gazette Co., Ltd. Solomon Hanohano, Editor.
 Aloha Aina (native) issued every Saturday. J. M. Poepoe, Editor.
 Kuokoia Home Rula (native), issued each Friday. C. K. Nodley, Editor.
 Ka Elele Oiola (native), semi-monthly. E. L. Miner, Editor.
 O Luso (Portuguese), issued weekly on Saturdays. J. S. Ramos, Editor.

Sun Chung Kwock Bo, tri-weekly, Chinese.
 Hawaii Shimpo, issued daily in Japanese. S. Sheba, Proprietor.
 Hilo Tribune, issued weekly on Saturdays by the Tribune Pub. Co., Hilo. H. W. Kinney, Editor.
 The Hawaii Herald, issued weekly at Hilo on Thursdays by the Herald Pub. Co. L. S. Conness, Editor.
 The Maui News, issued weekly at Wailuku, Maui. Chas. C. Clark, Editor and Manager.
 The Garden Island, issued weekly at Lihue, Kauai. C. S. Dole, Editor.
 THE HAWAIIAN ANNUAL, issued the latter part of December for the following year. Thos. G. Thrum, Editor and Publisher.

HONOLULU LODGES, ETC.

Oceanic Lodge No. 371, F. & A. M.; meets on the last Monday in each month in Masonic Hall.
 Hawaiian Lodge, No. 21, F. & A. M.; meets in its Hall, Masonic Temple, corner Hotel and Alakea streets, on the first Monday in each month.
 Honolulu Chapter, No. 1, R. A. M.; meets in Masonic Hall on the third Thursday of each month.
 Honolulu Commandery, No. 1, Knights Templar; meets in Masonic Hall on second Thursday of each month.
 Mystic Shrine, Aloha Temple. No stated time of meeting. Meets at Masonic Hall.
 Kamehameha Lodge of Perfection, No. 1, A. & A. S. R.; meets in Masonic Hall on the fourth Thursday of each month.
 Nuuanu Chapter of Rose Croix, No. 1, A. & A. S. R.; meets in Masonic Hall on the first Thursday in the month.
 Alexander Liholiho Council, No. 1, of Kadosh; meets on the third Monday of alternate months from February.
 Honolulu Lodge, No. 409, F. & A. M.; meets at Masonic Hall every second Monday of the month.
 Leahi Chapter, No. 2, Order of the Eastern Star; meets on third Monday of each month in Masonic Hall.
 Lei Aloha Chapter, No. 3, Order of the Eastern Star; meets on second Saturday of each month in Masonic Temple.
 Excelsior Lodge, No. 1, I. O. O. F.; meets at the hall in Odd Fellows' Building, on Fort St., every Tuesday evening.
 Harmony Lodge, No. 2, I. O. O. F.; meets each Monday evening in Odd Fellows' Building, Fort street.
 Pacific Degree Lodge, No. 1, Daughters of Rebekah; meets in Odd Fellows' Building, Fort street, second and fourth Thursdays of each month.
 Olive Branch Rebekah, No. 2, I. O. O. F.; meets first and third Thursdays each month in Odd Fellows' Building.
 Polynesian Encampment, No. 1, I. O. O. F.; meets in Odd Fellows' Building, Fort street, first and third Fridays of each month.
 Canton Oahu, No. 1, P. M., I. O. O. F.; meets second Friday each month in Odd Fellows' Hall, Fort St.
 Oahu Lodge, No. 1, K. of P.; meets every Thursday evening at Pythian Hall, cor. Beretania and Fort streets.

Mystic Lodge, No. 2, K. of P.; meets every Wednesday evening at Pythian Hall, cor. Beretania and Fort streets.
 Section N. 225—Endowment Rank, K. of P.; meets on the second Saturday of January, July and December in Pythian Hall, Honolulu Temple, No. 1, Rathbone Sisters; meets in Pythian Hall, first and third Monday evenings of each month.
 Wm. McKinley Lodge, No. 8, K. of P.; meets every Saturday evening in Pythian Hall.
 Hawaiian Council, No. 689, American Legion of Honor; meets on second and fourth Friday evening of each month in Harmony Hall.
 Oceanic Council, No. 777, American Legion of Honor, meets on the first and third Tuesdays of each month.
 Hawaiian Tribe, No. 1, Improved Order of Red Men; meets on first and third Thursdays of each month at K. of P. Hall.
 Court Lunalia, No. 6600, A. O. of Foresters; meets at K. of P. Hall on first and third Fridays of each month.
 Court Camoes No. 8110, A. O. F.; meets second and fourth Tuesday evening of month in San Antonio Hall.
 Geo. W. de Long Post, No. 45, G. A. R.; meets the second Tuesday of each month at Odd Fellows' Building, Fort street.
 Theo. Roosevelt Camp, No. 1, Dept. of Hawaii U. S. W. V.; second and fourth Saturdays, Waverly Hall, Bethel street.
 Geo. C. Wiltse Camp, Sons of Veterans; meets on third Tuesday of each month in San Antonio Hall.
 Capt. Cook Lodge, No. 353, Order Sons of St. George; meets at Harmony Hall every Monday evening.
 Court Hawaii, No. 3769, Independent Order of Foresters, meets third Monday of each month.
 Damien Council, Young Men's Institute; meets second and fourth Wednesdays of each month at Catholic Mission Hall.
 Honolulu Lodge, B. P. O. Elks, 616; meets every Friday evening in the Elks' Building, King street near Fort.
 Honolulu Aerie, No. 140, Fraternal Order of Eagles, meets fourth Wednesday each month in Pythian Hall.
 American Association of Masters and Pilots of Steam Vessels, Honolulu Harbor, No. 34; meets first and third Sundays of each month at 7 p. m. in Odd Fellows' Hall.
 Marine Engineers' Beneficial Association, No. 100; meets every second and fourth Monday nights at K. of P. Hall.
 Kamehameha Lodge (native); meets last Thursday of each month in Odd Fellows' Hall.
 Kauiekaouli Lodge, No. 1 (native); meets on first and third Fridays each month in St. Antonio Hall.

PLACES OF WORSHIP.

Central Union Church, Congregational (Independent), corner Beretania and Richards streets; Rev. Doremus Scudder, D. D., pastor; Rev. A. A. Ebersole, assistant pastor. Services every Sunday at 11 a. m. and 7:30 p. m. Sunday school meets one hour before morning service. Prayer meeting Wednesday evenings at 7:30.

- Palama Chapel, J. A. Rath, Superintendent. Sunday school at 9:30 a. m. Gospel services at 7:30 p. m.
- Methodist Episcopal Church, corner Beretania and Miller streets. Rev. Robt. Elmer Smith, pastor. Sunday services 11 a. m. and 7:30 p. m. Sunday school meets at 10 a. m. Prayer meeting Wednesdays at 7:30 p. m.
- The Christian Church pastor. Rev. Chas. C. Wilson in charge of Mission work. Sunday services at 11 a. m. and 7:30 p. m. at their house of worship, Alakea street, near King. Sunday school meets at 9:45 a. m.
- Salvation Army, services held nightly at hall, Nuuanu 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.
- St. Andrew's Cathedral, Protestant Episcopal; entrance from Emma street, near Beretania. Rt. Rev. Henry Bond Restarick, Bishop of the Missionary District of Honolulu; Rev. Wm. Ault. Holy Communion, 7; Sunday school, 10; morning prayer, litany and sermon, 11; Hawaiian service, 3:30; evening prayer and sermon, 7:30.
- Chinese Congregation. Rev. Kong Yim 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.
- First Church of Christ, Scientist, Fraternity Hall, Odd Fellows' building. Sunday services 11 a. m.
- Christian Chinese Church, Fort street; Rev. acting pastor. Services every Sunday at 10:30 a. m. and 7:30 p. m. Prayer meeting Wednesdays at 7:30 p. m.
- German Lutheran Church, Beretania St.; Rev. W. Felmy, 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 Punch-bowl and Miller streets.
- Reorganized Church of Jesus Christ, G. J. Waller, pastor. Services in new 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. S. D. M. Williams, pastor. Chapel 767 Kinau street. Sabbath school Saturdays at 10 a. m.; preaching at 11. Wednesday prayer and missionary meeting at 7:30 p. m.
- Japanese Union Church (connected with Hawaiian Board Missions); Rev. T. Hori, pastor. Hold services at the Lyceum at 10 a. m. Preaching at 11 a. m. and 7:30 p. m. Sunday services. Prayer and praise meeting Wednesdays at 7 p. m.
- Japanese Methodist Church, Rev. C. Nakamura, pastor. Hold services in chapel on River street, near St. Louis College.
- Japanese Church, cor. Kinau and Pensacola Sts., Rev. T. Okumura, pastor; hold regular services at the usual hours.
- Bishop Memorial Chapel, Kamehameha Schools. Rev. J. L. Hopwood, Chaplain. Morning services at 11.

COUNTY OFFICIALS.

CITY AND COUNTY OF HONOLULU.

- Mayor Joseph J. Fern
 Sheriff Wm. P. Jarrett
 Clerk D. Kalauokalani, Jr.
 Auditor Jas. Bicknell
 Treasurer Robert W. Shingle
 City and County Attorney . . . John W. Cathcart
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 Deputy Sheriffs—Honolulu, Chas. H. Rose. Koolauloa, L. K. Naone. Koolaupoko, R. W. Davis. Waianae, J. K. Kupau. Waialua, Oscar P. Cox. Ewa, Jno. Fernandez.
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 Chief Engineer Fire Dept.—Chas. H. Thurston.

- Asst. Engineer Fire Dept.—Aug. G. Deering.
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 Supt. Kapiolani Park—Alex. Young.

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