

# THE HAWAIIAN ANNUAL

THE  
RECOGNIZED  
BOOK  
OF  
INFORMA-  
TION  
ABOUT  
HAWAII



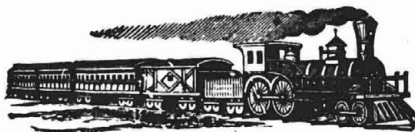
1900

THOS. C. THURON  
COMPILER AND PUBLISHER, HONOLULU, H.I.

Twenty-Sixth Year  
of Publication.

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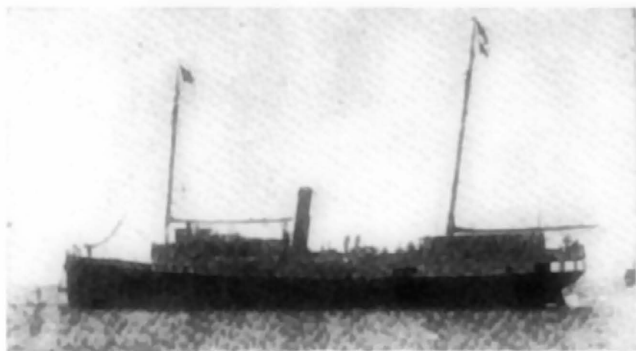
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HAWAIIAN  
Almanac and Annual

FOR

1900

A HANDBOOK OF INFORMATION AND STATISTICS

RELATING TO THE HAWAIIAN ISLANDS, OF VALUE TO MERCHANTS  
TOURISTS AND OTHERS.

THOS. G. THRUM,  
Compiler and Publisher.

Twenty-Sixth Year of Publication.

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HONOLULU:

HAWAIIAN GAZETTE CO., PRINT.

1900.

1900

# Counting-House Calendar.

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

**THOS. G. THRUM,**  
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## HAWAIIAN ANNUAL CALENDAR FOR 1900.

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Second half of the second year and first half of the second year since annexation of Hawaii with the UNITED STATES.

Second half of the sixth year and first half of the seventh year since declaring the REPUBLIC OF HAWAII.

Eighth year since the downfall of the Monarchy.

The 122nd year since the discovery of the Hawaiian Islands by Captain Cook.

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### HOLIDAYS OBSERVED AT THE HAWAIIAN ISLANDS.

<ul style="list-style-type: none"> <li>* New Year . . . . . Jan. 1</li> <li>* Downfall of the Monarchy.. Jan. 17</li> <li>Chinese New Year . . . . . Jan. 30</li> <li>Washington's Birthday . . . . . Feb. 22</li> <li>Kamehameha III. Birthday... Mar. 17</li> <li>Good Friday... . . . . April 13</li> <li>Birth of Queen Victoria . . . . . May 24</li> <li>Decoration Day.. . . . May 30</li> <li>* Kamehameha Day . . . . . June 11</li> </ul>	<ul style="list-style-type: none"> <li>* Birthday Hawaiian Republic. July 4</li> <li>American Anniversary . . . . . July 4</li> <li>Flag Raising Anniversary . . . . Aug. 12</li> <li>* Regatta Day (Third Sat.) Sept. 15</li> <li>* Recognition of Hawaiian Independence . . . . . Nov. 28</li> <li>Thanksgiving Day . . . . . Nov. 29</li> <li>* Christmas . . . . . Dec. 25</li> </ul>
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Those distinguished by an Asterisk have been established as National holidays by Legislative enactment; see Laws 1896, Act 66.

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### CHRONOLOGICAL CYCLES.

<ul style="list-style-type: none"> <li>Dominical Letter . . . . . G</li> <li>Epact . . . . . 29</li> <li>Golden Number . . . . . I</li> </ul>	<ul style="list-style-type: none"> <li>Solar Cycle . . . . . 5</li> <li>Roman Indiction . . . . . 13</li> <li>Julian Period . . . . . 6613</li> </ul>
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### CHURCH DAYS.

<ul style="list-style-type: none"> <li>Epiphany . . . . . Jan. 6</li> <li>Ash Wednesday . . . . . Feb. 28</li> <li>First Sunday in Lent . . . . . March 4</li> <li>Good Friday . . . . . April 13</li> <li>Easter Sunday . . . . . April 15</li> <li>Ascension Day . . . . . May 24</li> </ul>	<ul style="list-style-type: none"> <li>Whit Sunday . . . . . June 3</li> <li>Trinity Sunday . . . . . June 10</li> <li>Corpus Christi . . . . . June 14</li> <li>Advent Sunday . . . . . Dec. 2</li> <li>Christmas . . . . . Dec. 25</li> </ul>
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### ECLIPSES IN 1900.

There will be three eclipses this year; two of the sun and one of the moon.

I. A total eclipse of the sun, May 28th, not visible at these islands.

II. A partial eclipse of the moon, June 12th, latter part only of which terminates at these islands at dusk; moon leaving shadow at 5:01:7 P.M. and penumbra at 7:11:62 P. M., Honolulu time,

III. An annular eclipse of the sun, Nov. 21st, not visible in the Pacific,



# FIRST QUARTER, 1900.

JANUARY.				FEBRUARY.				MARCH.			
D.	H. M.			D.	H. M.			D.	H. M.		
1	New Moon	3.21.9	A.M.	6	First Quarter	5.53.1	A.M.	7	First Quarter	7. 4.4	P.M.
7	First Quarter	7. 9.9	P.M.	14	Full Moon	3.20.3	A.M.	15	Full Moon	9.41.8	P.M.
15	Full Moon	8.37.6	A.M.	22	Last Quarter	6.14.2	A.M.	23	Last Quarter	7. 6.5	P.M.
23	Last Quarter	1.22.9	P.M.	28	New Quarter	2.55.2	P.M.	30	New Moon	10 05 A.M.	
30	New Moon	2.52.6	P.M.								
Day of Mon	Day of Wk.	Sun Rises..	Sun Sets...	Day of Mon	Day of Wk.	Sun Rises..	Sun Sets...	Day of Mon	Day of Wk.	Sun Rises..	Sun Sets...
		H. M.	H. M.			H. M.	H. M.			H. M.	H. M.
1	Mon	6 38 0	5 29 8	1	Thurs	6 37 5	5 50 3	1	Thurs	6 20 7	6 4 4
2	Tues	6 38 3	5 30 5	2	Fri	6 37 2	5 50 9	2	Fri	6 19 9	6 4 8
3	Wed	6 38 6	5 31 1	3	Sat	6 36 8	5 51 5	3	Sat	6 19 1	6 5 2
4	Thurs	6 38 8	5 31 8	4	SUN	6 36 4	5 52 2	4	SUN	6 18 3	6 5 6
5	Fri	6 39 0	5 32 4	5	Mon	6 36 0	5 52 8	5	Mon	6 17 5	6 6 0
6	Sat	6 39 2	5 33 1	6	Tues	6 35 5	5 53 4	6	Tues	6 16 6	6 6 4
7	SUN	6 39 5	5 33 8	7	Wed	6 35 0	5 54 0	7	Wed	6 15 8	6 6 7
8	Mon	6 39 7	5 34 4	8	Thurs	6 34 5	5 54 5	8	Thurs	6 15 0	6 7 1
9	Tues	6 39 9	5 35 1	9	Fri	6 34 1	5 55 0	9	Fri	6 14 1	6 7 5
10	Wed	6 40 0	5 35 8	10	Sat	6 33 6	5 55 6	10	Sat	6 13 2	6 7 8
11	Thurs	6 40 2	5 36 5	11	SUN	6 33 0	5 56 1	11	SUN	6 12 3	6 8 2
12	Fri	6 40 3	5 37 2	12	Mon	6 32 5	5 56 6	12	Mon	6 11 5	6 8 5
13	Sat	6 40 4	5 37 9	13	Tues	6 31 9	5 57 1	13	Tues	6 10 6	6 8 9
14	SUN	6 40 4	5 38 5	14	Wed	6 31 3	5 57 6	14	Wed	6 9 7	6 9 2
15	Mon	6 40 4	5 39 2	15	Thurs	6 30 7	5 58 1	15	Thurs	6 8 8	6 9 5
16	Tues	6 40 4	5 39 9	16	Fri	6 30 1	5 58 6	16	Fri	6 7 9	6 9 8
17	Wed	6 40 4	5 40 6	17	Sat	6 29 4	5 59 1	17	Sat	6 7 0	6 10 1
18	Thurs	6 40 4	5 41 3	18	SUN	6 28 8	5 59 6	18	SUN	6 6 1	6 10 4
19	Fri	6 40 3	5 41 9	19	Mon	6 28 1	6 0 1	19	Mon	6 5 2	6 10 8
20	Sat	6 40 2	5 42 6	20	Tues	6 27 5	6 0 6	20	Tues	6 4 2	6 11 1
21	SUN	6 40 1	5 43 3	21	Wed	6 26 8	6 1 1	21	Wed	6 3 3	6 11 4
22	Mon	6 40 0	5 44 0	22	Thurs	6 26 1	6 1 5	22	Thurs	6 2 4	6 11 7
23	Tues	6 39 8	5 44 6	23	Fri	6 25 4	6 2 0	23	Fri	6 1 5	6 12 0
24	Wed	6 39 7	5 45 3	24	Sat	6 24 7	6 2 4	24	Sat	6 0 6	6 12 4
25	Thurs	6 39 5	5 45 9	25	SUN	6 23 9	6 2 8	25	SUN	5 59 7	6 12 7
26	Fri	6 39 3	5 46 6	26	Mon	6 23 1	6 3 2	26	Mon	5 58 8	6 13 0
27	Sat	6 39 1	5 47 2	27	Tues	6 22 3	6 3 6	27	Tues	5 57 8	6 13 3
28	SUN	6 38 8	5 47 8	28	Wed	6 21 5	6 4 0	28	Wed	5 56 9	6 13 6
29	Mon	6 38 5	5 48 4					29	Thurs	5 56 0	6 13 9
30	Tues	6 38 2	5 49 1					30	Fri	5 55 0	6 14 2
1	Wed	6 37 9	5 49 7					31	Sat	5 54 1	6 14 5

It would seem as if these islands might raise all the hogs required for its market, and net a handsome profit from the rates prevailing for pork for a long time past, viz: 20 cents per pound at retail. In 1898 the importation of hogs and pigs numbered 4,815, invoiced at a value of \$23,285.50. Adding the expenses of shipment we have easily paid over \$30,000 for what might readily have been raised at home.

## SECOND QUARTER, 1900.

APRIL.				MAY.				JUNE.			
D.		H. M.		D.		H. M.		D.		H. M.	
6	First Quarter	10.24.7	A.M.	6	First Quarter	3. 9.0	A.M.	4	First Quarter.	8.28.8	P.M.
14	Full Moon	2.32.7	P.M.	14	Full Moon	5. 6.6	A.M.	12	Full Moon....	5. 8.5	P.M.
22	Last Quarter.	4. 3.4	A.M.	21	Last Quarter.	10. 0.9	A.M.	19	Last Quarter..	2.27.4	P.M.
28	New Moon	6.53.3	P.M.	28	New Moon	4.19.8	A.M.	26	New Moon....	2.57.4	P.M.

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

Very naturally apples figure the largest in quantity and value of fresh fruit importations into these islands, but strange to say oranges come next, followed by lemons and limes leading all other varieties. It is a strange anomaly that in an orange growing country like this, producing fruit of acknowledged superior quality, our people should encourage importations to the discredit of local effort.

# THIRD QUARTER, 1900.

JULY.				AUGUST.				SEPTEMBER.			
D.	H. M.	H. M.	D.	H. M.	H. M.	D.	H. M.	H. M.	D.	H. M.	H. M.
4	First Quarter	1.43.6 P.M.	3	First Quarter	6.15.6 A.M.	1	First Quarter	9.25.8 P.M.	8	Full Moon	6.36.2 P.M.
12	Full Moon	2.51.9 A.M.	10	Full Moon	10.59.9 A.M.	8	Full Moon	6.36.2 P.M.	15	Last Quarter	10.27.2 A.M.
18	Last Quarter	7.1.4 P.M.	16	Last Quarter	1.16.3 P.M.	15	Last Quarter	10.27.2 A.M.	23	New Moon	9.27.1 A.M.
26	New Moon	3.12.9 A.M.	24	New Moon	5.22.6 P.M.						

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

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

Day of Mon.	Day of Week	Sun Rises ...		Sun Sets .....	
		H. M.	H. M.	H. M.	H. M.
1	Sat	5 43	3 6	1 6	1
2	SUN	5 43	5 6	1 5	2
3	Mon	5 43	8 6	1 4	5
4	Tues	5 44	0 6	1 3	6
5	Wed	5 44	3 6	1 2	6
6	Thurs	5 44	6 6	1 1	6
7	Fri	5 44	8 6	1 0	6
8	Sat	5 45	1 6	9 7	
9	SUN	5 45	4 6	8 7	
10	Mon	5 45	6 6	7 8	
11	Tues	5 45	9 6	6 8	
12	Wed	5 46	2 6	5 8	
13	Thurs	5 46	4 6	4 9	
14	Fri	5 46	6 6	3 9	
15	Sat	5 46	9 6	3 0	
16	SUN	5 47	1 6	2 0	
17	Mon	5 47	4 6	1 1	
18	Tues	5 47	6 6	5 0	1
19	Wed	5 47	9 5	5 9	2
20	Thurs	5 48	1 5	5 8	3
21	Fri	5 48	4 5	5 7	3
22	Sat	5 48	6 5	5 6	3
23	SUN	5 48	9 5	5 5	4
24	Mon	5 49	2 5	5 4	4
25	Tues	5 49	4 5	5 3	5
26	Wed	5 49	7 5	5 2	5
	Thurs	5 50	0 5	5 1	6
	Fri	5 50	3 5	5 0	6
	Sat	5 50	6 5	4 9	7
	SUN	5 50	9 5	4 8	8

It may interest some readers to know that in addition to the output of our local soap factories, the value of importations of the several grades of soap in these islands in 1898 was \$38,154.54. The bulk of this came, of course, from the United States, but Japan is credited with supplying us toilet grades to the value of \$841.16.

# FOURTH QUARTER.

OCTOBER.				NOVEMBER.				DECEMBER.			
D.		H. M.		D.		H. M.		D.		H. M.	
1	First Quarter	19 46.7	A. M.	6	Full Moon	0.29 8	P. M.	6	Full Moon	0. 83	A. M.
8	Full Moon	2.48.2	A. M.	13	Last Quarter	4.27.5	P. M.	13	Last Quarter	0.12 2	P. M.
14	Last Quarter	11.20.9	P. M.	21	New Moon	8.47.2	P. M.	21	New Moon	1.31.3	P. M.
23	New Moon	2.57.3	A. M.	29	First Quarter	7. 5.1	A. M.	28	First Quarter	3.18.0	P. M.
30	First Quarter	9.47.5	P. M.								
Day of Mon	Day of Wk.	Sun Rises...	Sun Sets...	Day of Mon	Day of Wk.	Sun Rises...	Sun Sets...	Day of Mon	Day of Wk.	Sun Rises...	Sun Sets...
		H. M.	H. M.			H. M.	H. M.			H. M.	H. M.
1	Mon	5 51 15	5 47 9	1	Thurs	6 3 15	5 24 1	1	Sat	6 21 25	5 17 3
2	Tues	5 51 45	5 47 0	2	Fri	6 3 65	5 23 6	2	SUN	6 21 85	5 17 4
3	Wed	5 51 75	5 46 0	3	Sat	6 4 15	5 23 1	3	Mon	6 22 55	5 17 5
4	Thurs	5 52 05	5 45 1	4	SUN	6 4 65	5 22 6	4	Tues	6 23 25	5 17 6
5	Fri	5 52 35	5 44 2	5	Mon	6 5 15	5 22 1	5	Wed	6 23 85	5 18 8
6	Sat	5 52 65	5 43 3	6	Tues	6 5 75	5 21 7	6	Thurs	6 24 55	5 18 0
7	SUN	5 52 95	5 42 4	7	Wed	6 6 25	5 21 2	7	Fri	6 25 15	5 18 2
8	Mon	5 53 25	5 41 5	8	Thurs	6 6 85	5 20 8	8	Sat	6 25 75	5 18 5
9	Tues	5 53 65	5 40 7	9	Fri	6 7 45	5 20 4	9	SUN	6 26 35	5 18 8
10	Wed	5 53 95	5 39 8	10	Sat	6 7 95	5 20 1	10	Mon	6 27 05	5 19 1
11	Thurs	5 54 35	5 39 0	11	SUN	6 8 55	5 19 7	11	Tues	6 27 65	5 19 4
12	Fri	5 54 65	5 38 2	12	Mon	6 9 25	5 19 4	12	Wed	6 28 25	5 19 8
13	Sat	5 55 05	5 37 3	13	Tues	6 9 85	5 19 0	13	Thurs	6 28 85	5 20 1
14	SUN	5 55 35	5 36 5	14	Wed	6 10 45	5 18 7	14	Fri	6 29 45	5 20 5
15	Mon	5 55 75	5 35 7	15	Thurs	6 11 05	5 18 4	15	Sat	6 30 05	5 20 8
16	Tues	5 56 05	5 34 9	16	Fri	6 11 65	5 18 2	16	SUN	6 30 65	5 21 3
17	Wed	5 56 45	5 34 1	17	Sat	6 12 25	5 17 9	17	Mon	6 31 15	5 21 7
18	Thurs	5 56 85	5 33 3	18	SUN	6 12 85	5 17 7	18	Tues	6 31 65	5 22 1
19	Fri	5 57 25	5 32 6	19	Mon	6 13 45	5 17 5	19	Wed	6 32 25	5 22 5
20	Sat	5 57 65	5 31 8	20	Tues	6 14 05	5 17 3	20	Thurs	6 32 75	5 23 0
21	SUN	5 58 05	5 31 0	21	Wed	6 14 75	5 17 2	21	Fri	6 33 25	5 23 5
22	Mon	5 58 45	5 30 3	22	Thurs	6 15 45	5 17 1	22	Sat	6 33 75	5 24 0
23	Tues	5 58 85	5 29 6	23	Fri	6 16 05	5 17 0	23	SUN	6 34 25	5 24 5
24	Wed	5 59 35	5 29 0	24	Sat	6 16 65	5 17 0	24	Mon	6 34 75	5 25 0
25	Thurs	5 59 75	5 28 3	25	SUN	6 17 35	5 17 0	25	Tues	6 35 25	5 25 6
26	Fri	6 0 25	5 27 7	26	Mon	6 17 95	5 17 0	26	Wed	6 35 75	5 26 2
27	Sat	6 0 75	5 27 0	27	Tues	6 18 55	5 17 0	27	Thurs	6 36 15	5 26 7
28	SUN	6 1 15	5 26 4	28	Wed	6 19 25	5 17 0	28	Fri	6 36 55	5 27 3
29	Mon	6 1 65	5 25 8	29	Thurs	6 19 95	5 17 1	29	Sat	6 36 85	5 27 9
30	Tues	6 2 15	5 25 2	30	Fri	6 20 55	5 17 2	30	SUN	6 37 25	5 28 5
31	Wed	6 2 65	5 24 7					31	Mon	6 37 45	5 29 1

The importation of butter into Hawaii in 1898 was valued at \$44,873.75 and of butterine \$12,041.50. Of other farm products the value of cheese imports reached \$18,834.49, while our egg bill was shown as \$10,501.90. This last commodity was supplied as follows: from the United States to the value of \$3,682.65, from China \$6,776.01, and from Japan \$43.24.

INTER-ISLAND DISTANCES BY SEA IN SEA MILES.

Revised for this edition of the ANNUAL by C. J. Lyons.

AROUND OAHU FROM HONOLULU—ESPLANADE WHARF—TO

	MILES.		MILES.
Bell Buoy.....	1 1/4	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 N. pt.....	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
Koloa, ".....	102		
Waimea, ".....	120	Niihau.....	144

LAHAINA, MAUI, TO

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

KAWAIIHAE, HAWAII, TO

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

HILO, HAWAII, TO

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

WIDTH OF CHANNEL.

EXTREME POINT TO POINT.

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.....	18

OCEAN DISTANCES.

HONOLULU TO

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

OVERLAND DISTANCES.

Revised expressly for this edition of the ANNUAL by C. J. Lyons, 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.		MILES. INTER.	
Bishop's corner (Waikiki) . . . . .	3.2			Kahana . . . . .	26.4 4.5
Waikiki Villa . . . . .	3.6			Punaluu . . . . .	28.4 2.0
Race Course . . . . .	4.5			Hauula . . . . .	31.4 3.0
Diamond Head . . . . .	5.9			Laie . . . . .	34.4 3.0
Kaalawai . . . . .	6.0			Kahuku Mill . . . . .	37.2 2.8
				Kahuku Ranch . . . . .	40.0 2.8
Thomas Square . . . . .	1.0				
Pawaa corners . . . . .	2.0	1.0		Moanalua . . . . .	3.4
Kamoliili . . . . .	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
Nuuanu Bridge . . . . .	1.1			Ewa Church . . . . .	10.2
Mausoleum . . . . .	1.5	0.4		Waipio (Brown's) . . . . .	11.2 1.0
Electric Reservoir . . . . .	2.7	1.2		Hoaeae (Robinson's) . . . . .	13.5 2.3
Honolulu Dairy . . . . .	2.9	0.2		Barber's Point L. H. . . . .	21.5 8.0
Luakaha . . . . .	4.3	1.4		Nanakuli . . . . .	23.5 2.0
Pali . . . . .	6.2	1.9		Waianae Plantation . . . . .	29.9 6.4
Kaneohe (new road) . . . . .	11.9	5.7		Kahanahaiki . . . . .	36.9 7.0
Waiahole . . . . .	18.9	7.0		Kaena Point . . . . .	42.0 5.1
Kualoa . . . . .	21.9	3.0		Waialua to Kaena Point . . . . .	12.0

OAHU RAILWAY: DISTANCES FROM HONOLULU DEPOT TO

MILES.		MILES.	
Moanalua . . . . .	2.76	Waipio . . . . .	13.58
Puuloa . . . . .	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 . . . . .	69.50

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 7.9
Waiawa . . . . .	31.5 4.4	Kalihiwai . . . . .	26.6 3.0
Nualolo . . . . .	44.8 13.3	Hanalei . . . . .	31.8 5.2
		Wainiha . . . . .	34.8 3.0
Hanamaulu . . . . .	3.3	Nualolo (no road) . . . . .	47.0 12.2

## ISLAND OF MAUI.

	KAHULUI TO			MILES. INTER.	
	MILES	INTER.		MILES.	INTER.
Spreckelsville.....	3.5		Makawao Court House ..	10.5	5.0
Paia.....	5.5	2.0	Makawao Seminary ..	13.4	2.9
Hamakuapoko Mill.....	8.6	3.1	Olinda.....	16.7	3.3
Haiku.....	10.2	1.6	Haleakala, Edge Crater	22.5	5.8
Halehaku.....	16.0	5.8	Haleakala Summit.....	24.7	2.2
Huelo.....	19.5	3.5			
Keanae.....	27.2	7.7	Maalaea.....	9.9	
Nahiku.....	32.7	5.5	End of Mountain Road..	15.4	5.5
Ulaino.....	36.3	3.5	Olowalu.....	19.6	4.2
Hana.....	36.3	6.0	Lahaina Court House...	25.5	5.9
Reciprocity Mill.....	42.4	3.0			
Wailua.....	48.9	3.6	Waiehu.....	3.3	
Kipahulu Mill.....	52.2	3.3	Waihee.....	4.8	1.3
Mokulau.....	56.6	4.4	Kahakuloa.....	10.1	5.5
Nuu.....	62.1	5.5	Honokohau.....	14.5	4.9
			Honolua.....	17.4	2.4
Wailuku.....	3.1		Napili.....	20.0	2.6
Waikapu.....	5.5	5.4	Honokawai.....	23.8	3.8
Maalaea.....	9.9	4.4	Lahaina Court House...	29.3	5.5
Kalepolepo.....	14.6	4.7			
Mana.....	22.3	7.7			
Ulupalakua.....	25.6	3.3			
Kanaio.....	28.9	3.3			
Pico's.....	35.5	6.6			
Nuu.....	41.0	5.5			
Paia.....	5.5				

## MAKENA TO

Ulupalakua.....	3.3	
Kamaole.....	7.1	3.8
Waiakoa.....	12.1	5.7
Foot of Puu Pane.....	15.8	3.1
Makawao Seminary ..	18.9	3.9
Makawao Court House.	21.8	2.0

## ISLAND OF HAWAII.

## WAIMEA COURT HOUSE TO

	MILES. INTER.			MILES. INTER.	
	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 Station	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
Humuula Sheep Station,			Kohala Court House...	22.0	5.0
via Laumaia.....	47.5	11.0	Mahukona.....	22.0	
Auwaiakekua.....	12.5		Puako.....	12.0	
Humuula Sheep Station.	29.0	16.5			

## NORTH KOHALA.—FOREIGN CHURCH, KOHALA, TO

	MILES.			MILES.	
	MILES.	INTER.		MILES.	INTER.
Edge of Pololu Gulch.....	4.00		Native Church.....	1.00	
Niulii Mill.....	2.80		Union Mill.....	2.25	
Dr. Wight's Store, Halawa...	1.15		Union Mill R. R. Station.....	3.25	
Halawa Mill.....	1.15		Iionomakau.....	2.55	
Hapuu Landing.....	2.56		Hind's, Hawi.....	3.25	
			Hawi R. R. Station.....	4.25	
Dramatic Hall, Kaiopihi.....	.40		Honoipu.....	7.20	
Kohala Mill.....	.50		Mahukona.....	10.50	
Kohala Mill Landing.....	1.50		Puuhue Ranch.....	57.25	

## NORTH KOHALA.—ON MAIN ROAD, MAHUKONA TO

	MILES.	INTER.		MILES.	INTER.
Hind's Mill .....	7.0		Dr. 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—KAWAIHAE TO

	MILES.	INTER.		MILES.
Puu Ainako.....	4.4		Mana, Parker's.....	19.5
Puuiki, Spencer's.....	7.7	3.3	Keawewai.....	6.0
Waiaka, Catholic Church	9.5	1.8	Puuhue Ranch.....	10.0
Puuopelu, 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 Ahu a Lono boundary	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.
Keauu, Forks of Road .....	9.0	Kaimu .....	32.0
Pahoa .....	20.0	Kalapaua .....	33.0
Pohoiki (Rycroft's) .....	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, Nanawale, old road	18.5
Kamaili Beach.....	29.0	Kapoho, old road.....	22.0

## TO VOLCANO.—HILO TO

Shipman's .....	1.7	Mountain View .....	16.8
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
Furneaux'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 .....	24.6
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	Waipanihua	24.3
Kaala Church	6.8	Stream at Kukuihaele	26.0
Kukaiuu Gulch	8.0	Edge Waipio	26.5
Horner's	8.5	Bottom Waipio	27.0
Catholic Church, Kainehe	9.0	Waimanu (approximate)	32.5
Notley's, Paauilo	10.5	Kukuihaele to Waimea (approximate)	10.5
Kaumoali Bridge	12.5	Gov't Road to Hamakua Mill	1.5
Bottom Kalopa Gulch	14.0	" " Paauhau Mill	1.0
Wm. Horner's, Paauhau	15.2	" " Pacific Sugar Mill,	
Paauhau Church	16.3	Kukuihaele	0.7
Holmes' Store, Honokaa	18.0		
Honokaia Church	20.5		

ISLAND OF MOLOKAI.

KAUNAKAKAI TO

Meyer's, Kalae	5.0	Pukoo	15.0
Kalaupapa	9.0	Halawa	25.0
Kamalo	9.0	Ka Lae o ka Laau	19.0
Kaluaaha	13.5		

TABLE OF ELEVATIONS OF PRINCIPAL LOCALITIES THROUGHOUT THE ISLANDS.

(From the Records of the Government Survey. Measurements are from mean Sea Level.)

OAHU PEAKS.

	FEET.		FEET.
Kaala, Waianae Range	4030	Telegraph Hill or Kaimuki	292
Palikeya, " "	3111	Koko Head, higher crater	1206
Konahuanui Peak, S. of Pali	3106	Koko Head, lower crater	644
Lanihuli Peak, N. of Pali	2780	Makapu, east point of island	665
Tantalus or Puu Ohia	2013	Mokapu, crater off Kaneohe	696
Olympus, above Manoa	2447	Olomana, sharp peak in Kailua	1643
Round Top or Ualakaa	1049	Maelieli, sharp peak in Heeia	713
Punchbowl Hill or Puowaina	498	Ohulehule, sh'p peak in Hakipuu	2263
Diamond Head or Leahi	762		

LOCALITIES NEAR HONOLULU.

Nuuanu Road, corner School St.	40	Nuuanu Road, Queen Emma's	358
" " second bridge	77	" " cor. above Electric Light Works	429
" " corner Judd St.	137	Nuuanu Road, large bridge	735
" " Cemetery gate	162	" " Luakaha gate	848
" " Mausoleum gate	206	" " Pali, old station	1214
" " Schaefer's gate	238		

MAUI.

Haleakala	10032	Mrs. C. H. Alexander's	2150'
West Maui, about	5820	Puu Niania, Makawao	6850'
Piiholo, Makawao	2256	Puu Kapuai, Hamakua	1150'
Puu Io, near Ulupalakua	2841	Puu o Umi, Haiku	629
Ulupalakua, about	1800	Puu Pane, Kula	2568
Puu Olai, (Miller's Hill)	355	Lahainaluna Seminary	600
Makawao Female Seminary	1900	Kauiki, Hana	392
Grove Ranch, Makawao	981	"Sunnyside," Makawao	930
Puu Olai, near Makena	250	Paia Foreign Church, about	850

## HAWAII

	FEET.		FEET.
Mauna Kea.....	13825	Parker's, Mana .....	3505
Mauna Loa.....	13675	Honokaa Store .....	1100
Hualalai.....	8275	Lower edge forest, Hamakua. . .	1700
Kohala Mountain.. . . .	5505	Lower edge forest, Hilo . . . .	1200
Kilauea Vol House by levelling	3971.6	Laupahoehoe Pali .....	385
Kulani, near Kilauea .....	5576	Maulua Pali .....	406
Kalaieha .....	6660	Kauku Hill.....	1964
Aahuwela, near Laumava . . .	7750	Puu Alala.....	762
Hitchcock's, Puakala.....	6325	Halai Hill.....	347
Ahumo'a .....	7035	Puu o Nale, Kohala.. . . .	1797
Waimea Court House.....	2669.6	E. Bond's, Kohala.....	585
Waipio Pali, on N. side.....	1200	Anglican Church, Kainaliu . . .	1578
Waipio Pali, on S. (Road)....	900	Puu Enuhe, Kau .....	2327
Waipio Pali, in mountain.. . .	3000	Kapoho Hill, Puna .....	432
Waimanu, at sea.....	1600	Kaliu Hill, " .....	1065
Waimanu in mountain .....	4000	Olaa Trig. Station.....	622
Hiilawe Falls .....	1700		

## MOLOKAI, ETC.

	FEET.		FEET.
Kamakou Peak.....	4958	Meyer's, Kalae.....	1485
Oloku Peak.....	4600	Mauna Loa near Kaunakakai. . .	1382
Kaunuohua.....	4535	Kualapuu Hill.....	1018
Kalapamoa.....	4004	Kahoolawe (Moaula Hill).....	1427
Puu Kolekole .....	3951	Molokini.....	160
Kaulahuki.....	3749	Lanai .....	3400
Kaapahu Station.....	3563		
Kaolewa Pali, overlooking Leper Settlement.....	2100		

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

## HAWAII'S ANNUAL TRADE BALANCE Etc. SINCE 1879.

Revised and compared with recent official tables.

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	423,192 01
1882	4,974,510 01	8,299,016 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	11,707,598 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	13,142,829 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	896,975 70

## DIMENSIONS OF KILAUEA, ISLAND OF HAWAII.

(The largest active Volcano in the World)  
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.

## DIMENSIONS OF 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.

## DIMENSIONS OF HALEAKALA,

(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 of Summit, 10,032 feet.  
Elevation of principal cones in crater, 8,032 and 7,572 feet.  
Elevation of cave in floor of crater, 7,380 feet.

## DIMENSIONS OF 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, 5,788 feet.  
Elevation of Crater of Eke, above Waihee Valley, 4,500 feet.

## AREA, ELEVATION AND POPULATION OF THE HAWAIIAN ISLANDS.

As revised by the Government Survey in 1899 from the latest maps.

	Area in stat. sq. miles.	Acres.	Height in feet.	Population 1896 last census.
Hawaii . . . . .	4,015	2,570,000	13,825	33,285
Maui . . . . .	728	466,000	10,032	17,726
Oahu . . . . .	600	384,000	4,030	40,205
Kauai . . . . .	544	348,000	4,800	15,228
Molokai . . . . .	261	167,000	4,958	2,307
Lanai . . . . .	135	86,000	3,400	105
Niihau . . . . .	97	62,000	800	164
Kahoolawe . . . . .	69	44,000	1,427	.....

Total area of Hawaiian Islands, 6,449 square miles.

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

The previously-published areas were from the general map compiled from all sources then available, for the Philadelphia Centennial of 1876. It has not heretofore been deemed best to change any of the figures until an entire and permanent measurement of area could be made.

October 1, 1899.

CURTIS J. LYONS.

## SELECTIONS FROM CUSTOM HOUSE TABLES, 1898.

## VALUE OF IMPORTS.—HAWAIIAN ISLANDS.

ARTICLES.	VALUE GOODS	VALUE GOODS	VALUE GOODS	TOTAL.
	PAYING DUTY	FREE BY TREATY.	FREE BY CIVIL CODE.	
Ale, Porter, Beer, Cider	\$ 118,296 96	\$	\$ 23 00	\$ 118,319 96
Animals and Birds	384 73	123,007 19	1,907 32	125,299 24
Building Materials	165,856 91	147,255 90	5,222 34	318,325 15
Clothing, Hats, Boots	211,868 95	260,715 11	2,529 10	475,113 16
Coal and Coke		8,184 15	600,534 17	608,718 32
Crockery, Glassware, Lamps, Etc	68,717 70		880 31	69,598 01
Drugs, Surgical Instruments and Dental Material's	89,195 73		550 00	89,745 73
Dry Goods	Cottons	155,834 44	291,638 08	447,472 52
	Linens	50,633 45		50,633 45
	Silks	48,127 83		75 00
	Woolens	136,665 91	10,472 22	891 68
	Mixtures	29,768 43	736 15	
Fancy Goods, Millinery, etc	130,768 79	16,005 69	633 38	147,407 86
Fertilizer, Bonemeal, etc			308,415 21	308,415 21
Fish (dried and salt)	33,034 15	63,636 08		96,670 23
Flour	10,684 10	262,696 94		273,381 04
Fruits (fresh)	1,389 71	20,827 03		22,216 74
Grain and Feed	204 90	441,343 29	382 50	441,930 69
Groceries and Provisions	284,935 33	491,221 16	666 20	776,822 69
Guns, Gun Material and Gun Powder	22,922 65	3,170 92	1,440 40	27,533 97
Hardware, Agricultural Implements and Tools	101,226 28	372,531 39	17,802 07	491,559 74
House Furnishings	70,343 48	84,637 62	1,360 15	156,341 25
Iron, Steel, etc.	15,567 48	63,234 19	23,343 00	102,144 67
Jewelry, Plate, Clocks	33,573 30		1,352 50	34,925 80
Leather	2,040 24	36,752 25		38,792 49
Lumber	277 63	356,243 39	8 35	356,529 37
Machinery	188,107 66	634,144 16	36,877 91	859,129 73
Matches	1,754 77	21,069 66		22,824 43
Musical Instruments	5,387 13	22,976 01	4,017 70	32,380 84
Naval Stores	8,997 44	54,724 80	10,539 07	74,261 31
Oils (cocoanut, kerosene, whale, etc.)	43,100 57	84,477 89	549 47	128,127 93
Paints, Paint Oil and Turpentine	48,373 79	3,434 78		51,808 57
Perfumery and Toilet Articles	18,313 32	9,257 34		27,570 66
Railroad Materials, Rails, Cars, etc	43,914 70	137,757 67		181,672 37
Saddlery, Carriages & Materials	83,856 95	58,023 51	2,547 96	144,428 42
Sheathing Metal		78 00	4,543 26	4,621 26
Shooks, Bags and Containers	256,848 68	14,131 85	22,218 02	293,198 55
Spirits	76,708 75		171 98	76,880 73
Stationery and Books	17,947 93	85,710 94	10,369 84	114,028 71
Tea	53,160 05			53,160 05
Tin, Tinware and Materials	15,409 39		639 81	16,049 70
Tobacco, Cigars, etc.	83,647 57	179,788 71	39 96	263,476 24
Wines (light)	31,569 39		90,728 00	122,297 39
Sundry Personal & Household Effects	6,123 41		51,662 77	57,786 18
Sundry Merchandise not included in the above	182,846 30	100,402 83	22,101 23	305,350 36
Charges on Invoices	90,804 83	33,311 10	3,731 24	127,847 26
25% added on Uncertified Invoices	2,128 58			2,128 58
Discounts	\$ 3,041,360 79	\$ 4,493,598 09	\$ 1,228,754 90	\$ 8,763,713 78
	14,754 71	7,300 89	69 48	22,124 08
Total at Honolulu	\$ 3,026,607 08	\$ 4,486,297 20	\$ 1,228,685 42	\$ 8,741,589 70
Total at all other ports	110,969 18	1,233,873 72	282,382 49	1,627,225 39
Total at Honolulu	\$ 3,026,607 08	\$ 4,486,297 20	\$ 1,228,685 42	\$ 8,741,589 70
Total at Hilo	54,522 85	559,982 38	172,597 82	787,103 05
Total at Kahului	47,303 49	521,284 68	79,258 39	647,846 56
Total at Mahukona	9,142 84	142,533 78	30,502 28	182,178 90
Total at Kailua		10,072 88	24 00	10,096 88
Total Hawaiian Islands	\$ 3,137,576 26	\$ 5,720,170 92	\$ 1,511,067 91	\$ 19,368,815 09
Specie			1,282,075 72	

VALUE DUTIABLE GOODS AND SPIRITS FROM		VALUE BONDED GOODS AND SPIRITS FROM	
United States.....	\$ 837,813 80	United States.....	\$ 52,420 95
Great Britain.....	1,109,034 74	Great Britain.....	15,959 25
Germany.....	314,190 50	Germany.....	4,208 46
Australia and N. Z.....	23,090 22	Australia and N. Z.....	3,918 10
China.....	305,187 19	China.....	23,440 68
Japan.....	309,673 74	Japan.....	1,964 24
Canada.....	14,490 88	Canada.....	2,784 10
Islands of Pacific.....	271 53	France.....	6,209 06
France.....	16,612 80	Other countries.....	45,957 15
Other countries.....	50,348 85		
	<u>\$2,980,714 25</u>		<u>\$157,862 01</u>

VALUE OF GOODS AND SPIRITS FREE BY CIVIL CODE FROM		RESUME OF IMPORTS, 1898.	
		TOTAL..	%
United States.....	\$2,085,185 94	United States..	\$8,695,591 63   74.64
Great Britain.....	162,732 68	Great Britain..	1,287,726 67   11.05
Germany.....	33,644 69	Germany.....	352,043 65   3.02
China.....	224 00	China.....	328,851 87   2.82
Japan.....	42,687 00	Japan.....	354,324 98   3.04
Australia and N. Z.....	171,376 29	Australia and N. Z.	198,384 61   1.70
Canada.....	266,108 42	Canada.....	283,383 40   2.43
Islands of Pacific.....	7,020 59	Islands of Pacific	7,292 12   .06
France.....	20,833 69	France..	43,655 55   .38
Other countries.....	3,330 33	Other countries..	99,636 33   .86
Total.....	<u>\$2,793,143 63</u>	Total.....	<u>\$11,650,890 81</u>   100.00

NATIONALITY OF VESSELS WITH IMPORT CARGOES.

	Value.	%
American.....	\$ 7,028,026 36	60.32
Great Britain.....	2,466,116 08	21.17
Hawaiian.....	1,548,352 23	13.29
Germany.....	535,975 59	4.60
All others.....	72,420 55	.62
Total.....	<u>\$11,650,890 81</u>	<u>100.00</u>

## CUSTOMS RECEIPTS, 1898.

Import Duties:			
Goods.....	\$377,176	40	Custom House Guards...\$ 1,492 25
Goods Bonded.....	35,826	91	Labor..... 59 24
Spirits.....	84,688	83	Realization..... 117 06
Spirits Bonded.....	229,838	39	Import Duties Appraised. 330 88
Blanks.....	22,083	00	“ “ Liquidated 3,013 62
Passports.....	4,005	00	
Fees.....	11,149	32	\$896,975 70
Lights.....	1,760	61	
Buoys.....	754	00	RECEIPTS BY CUSTOM DISTRICTS.
Hospital Fund.....	18,965	80	Total at Honolulu.....\$873,267 68
Registry.....	971	24	“ Kahului..... 7,093 59
Coasting License.....	3,679	60	“ Hilo..... 14,882 91
Fines and Forfeitures....	460	00	“ Mahukona..... 1,617 52
Storage.....	6,131	90	“ Waimea..... 14 00
Pilotage.....	31,949	01	“ Kailua..... 100 00
Wharfage.....	46,503	41	
Towage.....	16,019	23	Total for 1898 .. ..\$896,975 70

**TOTAL VALUE OF MERCHANDISE IMPORTED AT THE  
VARIOUS HAWAIIAN PORTS 1898.**

PORTS.	FREE BY TREATY	DUTIABLE GOODS.	FREE BY CIVIL CODE.	TOTAL.
Honolulu .....	\$4,486,297 20	\$3,026,607 08	\$1,228,685 42	\$ 8,741,589 70
Hilo.....	559,982 38	54,522 85	172,597 82	787,103 05
Kahului .....	521,284 68	47,303 49	79,258 39	647,846 56
Mahukona .....	142,533 78	9,142 84	30,502 28	182,178 90
Kailua .....	10,072 88	.....	24 00	10,096 88
Totals .....	\$5,720,170 92	\$3,137,576 26	\$1,511,067 91	\$10,368,815 09
Specie .....	.....	.....	1,282,075 72	1,282,075 72

**TOTAL VALUE OF ALL EXPORTS HAWAIIAN ISLANDS, 1898.**

Honolulu Exports.....	\$11,611,510 06
Hilo .....	\$ 3,463,952 14
Kahului .....	1 843,654 95
Mahukona .....	427,627 64
	\$17,346,744 79
Less total value Foreign Goods and Specie Exported.....	241,202 24
Total Value Domestic Exports.....	\$17,105,542 55

TABLE SHOWING QUANTITY AND VALUE OF EXPORTS TO ALL COUNTRIES, 1897.

ARTICLES.	UNITED STATES		AUSTRALIA AND NEW ZEALAND		ISLANDS PACIFIC CHINA AND JAPAN		CANADA.		TOTAL.	
	99.62 PER CENT.		.12 PER CENT.		.11 PER CENT.		.15 PER CENT.		100.00 PER CENT.	
	QUANTITY.	VALUE.	QUAN.	VALUE.	QUAN.	VALUE.	QUANT.	VALUE.	QUANTITY.	VALUE.
Sugar.....lbs	520,532,192	\$15,390,223 09	3,200	\$ 126 00	1,623	\$ 73 04			520,158,232	\$15,390,422 13
Rice.....lbs	5,448,700	225,055 60			10,799	519 92			5,499,499	225,575 52
Coffee.....lbs	288,228	89,813 36	27,273	5,803 00	305	58 90	21,352	4,021 36	337,158	99,696 62
Bananas...bchs	74,759	74,364 50			18	12 00	1,068	1,036 00	75,835	75 412 50
Wool.....lbs	204,720	17,750 44					44,480	3,558 40	249,200	21,308 84
Hides.....lbs	241,886	87,545 48							241,886	87,545 48
pcs	20,100								20,100	
Pineapples...cr	1,585	11,946 25	3,083	263 05			55	2,213 87	1,640	14,423 17
pcs	93,312						20,320			
Goat Skins...pcs	6,085	2,055 00						6,085	2,055 00	
Sheep Skins...pcs	9,907	2,711 95						9,907	2,711 95	
Tallow.....lbs	9,000	225 00						9,000	225 00	
Molasses...gals	33,020	2,799 72					759	93 00	33,770	2,892 72
Betel Leaves..bxs	145	509 00						145	509 00	
Taro Flour...sks	218	267 50						218	267 50	
Plants, Seeds.pcs	40,752	1,735 40	2	5 25				40,754	1,740 65	
Oranges.....pcs	8,250	569 00						8,250	572 00	
Sundry Fruit..bxs	501					3	3 00			
Awa.....pkgs	6	27 49						6	27 49	
Bones, Horn.pcs	105,235	665 80						105,235	665 80	
Curios.....pkgs	11	168 50	14	351 00	1	00		26	588 50	
Canned Fruit..cs	72	165 40					45	182 50	115	347 90
Sundries....pkgs	13	648 66	24	985 70	14	33 65		40 00	51	1,708 21
Foreign.....		52,134 04		7,635 71		18,571 85		9,744 90		88,086 21
Honey.....cs	108	648 00	368						476	4,993 00
.....lb			49,060	4,147 00			3,960	198 00	53,020	
Total.....		15,969 2		\$19,316 71		\$19,275 27		\$21,154 03		\$16,021,775 19

TABLE SHOWING QUANTITY AND VALUE OF EXPORTS OF THE HAWAIIAN ISLANDS TO ALL COUNTRIES FOR 1898.

ARTICLES.	UNITED STATES.		Aust & N Zeal'nd		China & Japan		CANADA.		TOTAL.	
	99.44 per Cent.		.13 Per Cent.		.28 Per Cent.		.15 per Cent.		100.00 per Cent.	
	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.	Quantity.	Value.
Sugar.....lbs	444,961,611	\$16,614,430 53	1,425	\$ 192 00	.....	\$ .....	.....	\$ .....	444,963,036	\$16,614,622 53
Rice.....lbs	2,865,500	149,268 64	.....	.....	.....	.....	200	9 50	2,865,700	149 278 14
Coffee.....lbs	659,947	102,938 11	38,494	7,249 62	8,065	1,265 00	26,779	4,492 16	733,285	115 944 89
Bananas...bnchs	79,482	65,418 61	.....	.....	.....	.....	1,161	1,162 30	80,643	66 580 91
Wool.....lbs	3,731	265 00	.....	.....	.....	.....	.....	.....	3,731	265 00
Hides.....pcs	31,230	114,646 82	.....	.....	50	300 00	.....	.....	31,280	114,946 82
Pineapples....pcs	48,910	6,337 53	24	2 40	.....	.....	14,793	2,329 32	63,727	8,669 25
Goat, d'r s'ks.pcs	9,087	4,264 65	Deer 4	20 00	.....	.....	.....	.....	9,091	4,284 65
Sheep Skins...pcs	7,519	2,357 91	.....	.....	.....	.....	.....	.....	7,519	2,357 91
Tallow.....lbs	220,707	7,949 10	.....	.....	.....	.....	.....	.....	220,707	7,949 10
Molasses.....gals	14,537	919 18	.....	.....	.....	.....	.....	.....	14,537	919 18
Betel Leaves .bxs	120	512 00	.....	.....	.....	.....	.....	.....	120	512 00
Taro Flour .sks	35	23 00	.....	.....	.....	.....	.....	.....	35	23 00
Plants, Seeds..pcs	962	2,909 40	6	12 00	.....	.....	.....	.....	968	2,921 40
Sundry Fruit..pkgs	748	450 65	.....	.....	.....	.....	12	22 00	760	472 65
Awa.....lbs	5,376	409 47	.....	.....	.....	.....	.....	.....	5,376	409 47
Bones & Horns..	33,971	2,352 60	.....	.....	.....	.....	.....	.....	33,971	2,352 60
Curios.....pkgs	7	111 00	19	725 00	2	35 00	.....	.....	28	871 00
Canned Pines...cs	3,077	5,580 85	.....	.....	.....	.....	74	235 50	3,151	5,816 35
Honey.....cs	11	65 00	692	3,058 25	70	190 00	.....	.....	773	3,313 35
Specie.....	.....	100,000 00	.....	480 00	.....	33,620 00	.....	.....	.....	138,420 00
Hide Trim'gs..lbs	3,030	39 60	.....	.....	.....	.....	.....	.....	3,030	39 60
Sundries.....pkgs	53	1,427 60	34	755 00	40	16 82 5	46	642 00	173	2,992 85
Foreign.....	.....	73,407 24	.....	5,059 50	.....	9,245 25	.....	15,070 50	.....	102,782 24
Total.....	.....	\$17,256,084 49	.....	21,873 77	.....	44,823 25	.....	\$23,963 28	.....	\$17,346,744 79



**COMPARATIVE TABLE OF QUANTITY AND VALUE OF DOMESTIC EXPORTS, 1894-97.**

ARTICLES.	1894.		1895.		1896.		1897.	
	QUANTITY.	VALUE.	QUANTITY.	VALUE.	QUANTITY.	VALUE.	QUANTITY.	VALUE.
Sugar, lbs. ....	306,684,993	\$ 8,473,609 10	4,784,819	\$ 7,975,590 41	443,569,282	\$ 14,932,172 83	520,158,232	\$ 15,390,422 13
Rice, lbs. ....	7,803,972	327,381 09	3,768,762	161,547 16	5,025,491	195,317 16	5,499,499	225,575 52
Hides, pcs. ....	21,603	34,168 54	19,180	47,234 14	25,079	60,311 29	25 140	87,545 48
Bananas, bnchs. ....	123,004	123,507 12	105,055	102,599 25	126,413	125,089 30	75,835	75,412 50
Wool, lbs. ....	261,337	18,876 03	227,987	17,873 14	462,819	33,297 38	249,200	21,308 84
Molasses, galls. ....	72,979	6,050 11	44,970	3,037 83	15,885	1,290 72	33,770	2,892 72
Goat Skins, pcs. ....	6,759	2,304 70	6,466	2,638 20	12,647	4,447 00	6,085	2,055 00
Awa, lbs. ....	32	203 10	12,600	1,304 50	14,120	988 50	6	27 49
Betel Leaves, bxs. ....	114	612 50	119	640 00	125	612 50	145	509 00
Coffee, lbs. ....	189,150	38,117 50	118,755	22,823 68	255,655	53,650 39	337,158	99,096 63
Tallow, lbs. ....	.....	.....	.....	.....	.....	.....	9,000	225 00
Sheep Skins, pcs. ....	6,472	820 10	.....	798 90	7 886	1,053 81	9,907	2,711 95
Taro Flour, lbs. ....	1,100	70 00	6,564	22 20	4,230	61 25	218	267 50
Pine Apples, pcs. ....	44,903	9,889 81	65,213	8,783 84	147,451	15,349 96	149,515	14,423 17
Sundry Fruits, bxs. ....	.....	2,200 25	.....	878 00	.....	699 50	.....	572 00
Canned Fruits. ....	.....	.....	972	972 82	(Doz) 1,138	2,276 00	115	347 90
Sundries. ....	.....	14,494 42	.....	11,363 54	.....	6,562 14	.....	9,696 16
<b>Total Value. ....</b>	.....	<b>\$ 10,742,658 50</b>	.....	<b>\$ 8,358,106 79</b>	.....	<b>\$ 15,515,230 13</b>	.....	<b>\$ 15,933,688 98</b>

For 1898 see preceding page.

DOMESTIC EXPORTS.

COMPARATIVE VIEW OF COMMERCE OF HAWAIIAN ISLANDS FROM 1869; GIVING TOTALS FOR EACH YEAR.

Revised and Compared with Recent Official Tables.

Year.	Total Imports.	Total Exports.	Domestic Produce Exported.	Foreign Produce Exported.	Total Custom House Receipts.	Shipping.			Spirits-Gallons. Consid.	Haw. Reg. Vessels.		
						Mer. Vessels.		Whal. 'ON.		No.	Tons.	
						Natl. Vess. No.	No.					Tons.
1869	\$ 2,040,680	\$ 2,366,359	\$ 1,743,292	\$ 623,067	\$ 215,798	6	127	75,656	102	17,016	61	10,528
1870	1,930,227	2,144,942	1,514,425	630,517	223,815	16	159	91,248	118	19,948	64	10,855
1871	1,625,884	2,892,069	1,733,094	1,158,975	221,332	9	171	105,993	47	18,817	57	8,068
1872	1,746,178	1,607,522	1,402,685	204,837	218,375	7	146	98,647	47	18,843	54	6,407
1873	1,437,611	2,128,054	1,725,507	402,547	198,655	12	109	62,767	63	21,212	58	8,561
1874	1,310,827	1,839,620	1,622,455	217,165	183,857	13	120	71,266	43	18,466	54	8,101
1875	1,682,471	2,089,736	1,835,383	254,353	213,447	22	120	93,110	41	21,131	51	7,376
1876	1,811,770	2,241,041	2,055,133	185,908	199,036	14	141	108,706	37	19,707	45	6,753
1877	2,554,356	2,676,202	2,462,417	213,786	230,499	17	168	116,621	33	24,223	54	8,994
1878	3,046,370	3,548,472	3,333,979	214,492	284,426	11	232	163,640	27	36,360	55	7,949
1879	3,742,978	3,781,718	3,665,504	116,214	359,671	6	251	151,576	25	43,166	63	10,023
1880	3,673,268	4,968,445	4,889,194	79,251	402,182	15	239	141,916	16	44,289	63	10,149
1881	4,547,979	6,855,436	6,789,076	66,360	423,192	13	258	159,341	19	46,085	60	9,338
1882	4,974,510	8,299,017	8,165,931	133,085	505,391	6	258	172,619	32	50,064	60	9,351
1883	5,624,240	8,133,344	8,036,227	97,117	577,333	13	267	185,316	18	61,272	64	11,589
1884	4,637,514	8,856,610	8,067,649	788,961	551,737	11	241	187,826	23	70,160	53	9,826
1885	3,830,545	9,158,818	8,958,664	200,154	502,337	6	253	190,138	26	80,115	51	9,250
1886	4,877,738	10,565,886	10,340,375	225,510	580,444	6	310	222,372	20	100,703	58	13,529
1887	4,943,841	9,707,047	9,435,204	271,843	595,003	12	254	210,703	23	74,913	57	12,244
1888	4,540,887	11,707,599	11,631,435	76,164	546,143	18	246	221,148	17	68,247	61	15,406
1889	5,438,791	13,874,341	13,810,070	64,271	550,010	20	271	218,785	19	74,816	57	15,403
1890	6,962,201	13,142,829	13,023,304	119,525	695,957	13	295	230,120	21	88,884	55	14,222
1891	7,439,583	10,258,788	10,107,316	151,473	732,595	11	310	284,155	17	88,536	51	13,430
1892	4,028,295	8,060,087	7,959,938	100,149	494,385	10	262	238,622	20	86,441	50	13,851
1893	4,363,178	10,818,158	10,742,658	75,500	545,754	13	315	323,685	17	46,428	53	19,565
1894	5,104,481	9,140,795	9,053,310	87,485	522,855	15	350	343,844	19	41,136	51	21,495
1895	5,339,785	8,474,138	8,358,107	116,031	547,149	8	318	337,817	10	39,653	52	21,679
1896	6,036,652	15,515,230	15,436,037	79,193	56,896	14	386	477,997	5	44,168	59	29,024
1897	7,682,628	16,021,775	15,933,689	88,086	708,493	...	427	513,826	...	53,345	62	34,069
1898	10,368,815	17,346,745	17,105,543	241,202	896,976	...	481	569,632	...	63,253	64	33,551

COMPARATIVE TABLE OF PRINCIPAL ARTICLES OF EXPORTS, 1869 TO 1898.

YEAR	SUGAR. LBS.	MOLASS'S GALLS.	RICE. LBS.	PADDY. LBS.	COFFEE LBS.	HIDES. PCS.	TALLOW. LBS.	GOAT SKINS.	WOOL. LBS.	PULU. LBS.	FUNGUS. LBS.	SALT TONS	BUNCHES BANANAS	TOTAL VALUE ALL DOM'STIC EXPORTS.
1869	18,302,110	338,311	48,830	1,586,959	340,841	12,803	85,937	62,736	218,752	622,998	85,215	1,152	6,936	\$ 1,743,791,59
1870	18,783,639	216,662	152,068	535,453	415,111	13,095	90,388	67,463	234,696	233,803	41,968	2,513	4,007	1,514,425,06
1871	21,760,773	271,291	417,011	867,452	46,926	19,384	185,240	58,900	471,706	292,720	37,475	711	3,876	1,733,094,46
1872	16,995,402	192,105	455,121	894,582	39,276	27,066	493,978	53,598	288,526	421,227	32,161	522	4,520	1,402,685,38
1873	23,129,101	146,459	941,438	507,945	262,025	20,677	609,855	66,702	329,507	412,823	57,538	445	6,492	1,721,507,78
1874	24,566,611	90,060	1,187,986	439,157	75,496	22,620	125,596	71,955	399,926	418,320	50,955	730 1/4	6,494	1,622,455,37
1875	25,080,182	93,722	1,573,739	556,495	165,977	22,777	851,920	60,598	565,469	379,003	45,098	96	10,518	1,835,382,91
1876	26,072,429	130,073	2,259,324	1,542,603	153,667	11,105	327,291	45,265	405,542	314,432	35,893	5	14,982	2,055,133,55
1877	25,575,965	151,462	2,691,370	2,571,987	101,345	22,164	369,829	51,551	385,703	150,586	11,629	322	15,995	2,462,416,66
1878	38,431,458	93,136	2,767,768	2,784,861	127,963	25,309	239,941	64,525	522,757	212,740	22,364	180 1/4	13,431	3,333,979,49
1879	49,020,972	87,475	4,792,813	38,815	74,275	24,885	.....	24,940	464,308	137,001	2,571	50	12,369	3,665,503,76
1880	63,584,871	198,355	6,469,840	.....	99,508	22,945	19,169	31,013	381,316	44,846	14,801	14 1/2	19,164	4,889,194,40
1881	93,789,483	263,587	7,682,700	102,370	18,912	21,972	118,031	21,308	528,489	53,415	4,282	302	20,776	6,789,076,38
1882	114,177,938	221,293	12,169,475	459,633	8,131	26,007	77,898	23,402	528,913	.....	2,111	.....	28,848	8,165,931,34
1883	114,107,155	193,997	11,619,000	1,368,705	16,057	38,955	32,252	24,798	318,271	.....	3,783	.....	44,902	8,036,227,11
1884	142,654,923	110,530	9,493,000	46,224	4,231	21,026	2,864	20,125	407,623	465	2,247	.....	58,040	8,067,648,87
1885	171,350,314	57,941	7,367,253	.....	1,675	19,045	.....	19,782	474,121	.....	1,137	.....	60,046	8,958,663,82
1886	216,223,615	113,137	7,338,615	.....	5,931	31,207	21,305	21,173	418,784	.....	.....	.....	45,862	10,540,375,18
1887	212,763,647	71,222	13,684,200	400	5,300	28,639	56,713	16,233	75,911	.....	.....	.....	58,936	9,435,204,12
1888	235,888,346	47,965	12,878,600	.....	7,130	24,494	204,743	17,589	562,289	.....	.....	.....	71,335	11,631,434,88
1889	242,165,835	54,612	9,669,896	.....	43,673	27,158	97,125	11,715	241,925	.....	.....	.....	105,630	13,810,070,54
1890	259,798,462	74,926	10,579,000	.....	88,593	28,196	33,876	8,661	374,724	.....	.....	.....	97,204	13,023,304,16
1891	274,983,580	55,845	4,900,450	.....	3,051	26,427	27,225	7,316	97,119	.....	5,368	1,217	116,660	10,107,315,67
1892	263,656,715	47,988	11,516,328	.....	13,568	21,622	792	3,449	288,969	.....	40,171	61	105,375	7,959,938,05
1893	330,822,879	67,282	7,821,004	.....	49,311	19,826	13,250	5,911	391,592	.....	19,042	.....	108,239	10,742,658,50
1894	306,684,993	72,979	7,803,972	.....	180,150	21,603	.....	6,759	261,337	.....	44,903	.....	123,004	9,053,309,87
1895	294,784,819	44,970	3,768,762	.....	118,755	19,180	.....	6,466	227,987	.....	65,213	.....	105,055	8,358,106,79
1896	443,569,289	15,885	5,25,491	.....	255,655	25,079	.....	12,647	462,819	.....	147,451	.....	126,413	15,436,037,23
1897	520,158,232	33,770	5,499,499	.....	337,158	25,140	9,000	6,085	249,000	.....	151,715	.....	75,835	16,021,775,19
1898	444,963,030	14,537	2,865,700	.....	733,285	31,280	220,707	8,262	3,731	.....	63,727	.....	80,643	17,094,542,55

ARTICLES OF EXPORT.

COMPARATIVE TABLE OF IMPORT VALUES, FROM VARIOUS COUNTRIES SINCE 1892.

COUNTRIES.		1893.	1894.	1895.	1896.	1897.	1898.
United States.....	Dutiable.	\$ 568,345 31	\$ 344,275 79	\$ 619,150 78	\$ 665,834 67	\$ 725,862 90	\$ 837,813 80
	Bonded.	87,106 42	86,257 65	73,015 22	40,187 48	38,761 12	52,420 97
	Free by Tr'ty. " Code.	2,413,369 25 1,257,679 08	2,738,213 68 986,043 30	3,018,755 42 805,912 86	3,225,659 80 1,532,526 25	4,318,944 30 1,716,460 02	5,720,170 92 2,085,185 94
Great Britain.....	Dutiable	362,093 45	397,054 77	413,223 64	636,238 19	774,476 22	1,109,034 74
	Bonded.	22,694 06	16,643 63	12,091 67	12,690 45	14,223 09	15,959 25
	Free by Code	36,230 82	51,781 32	45,807 67	106,782 7	77,081 94	162,732 68
Germany.....	Dutiable.	64,821 43	98,920 41	64,318 76	103,058 59	149,526 30	314,190 50
	Bonded.	5,309 18	7,377 23	6,970 10	8,406 76	8,799 44	4,208 46
	Free by Code.	3,825 70	33,935 43	39,482 75	36,661 32	34,606 45	33,644 69
Brit. Col. & Canada.	Dutiable.	18 100 28	41,312 05	8,846 02	9,493 12	12,506 75	14,490 88
	Bonded.	482 88	3,088 72	4,560 17	2,086 82	2,684 11	2,784 10
	Free by Code.	46,766 35	73,797 80	17,325 02	41,402 05	43,484 07	266,108 42
Australia and New Zealand.	Dutiable.	42,871 07	94,967 78	66,460 36	24,175 54	19,001 99	23,990 22
	Bonded.	16,096 33	1,110 62	2,865 05	1,534 30	209 26	3,918 10
	Free by Code.	67,077 03	90,440 35	53,469 19	87,934 81	103,241 94	171,376 29
China	Dutiable.	141,666 56	181,967 24	164,239 17	236,148 72	242,477 69	305,187 19
	Bonded.	29,248 92	46,551 40	59,452 39	62,306 00	17,293 04	23,440 68
	Free by Code.	1,218 46	1,751 77	10 00	616 25	646 67	224 00
Japan.	Dutiable.	120,263 33	170,044 37	183,487 51	264,849 34	267,819 84	309,673 74
	Bonded.	1,137 97	3,391 40	18,124 46	3,330 83	4,513 64	1 64 24
	Free by Code.	18,057 54	10,431 75	5,513 62	8,313 63	19,982 86	42,687 00
France	Dutiable.	5,215 63	8,215 53	7,849 90	8,322 98	13,050 74	16,612 80
	Bonded.	.....	476 98	.....	5,794 08	5,122 48	6,209 06
	Free by Code.	85 35	93 80	.....	3,603 96	12,824 10	20,833 69
All other countries..	Dutiable.	400 59	1,555 83	507 87	6,259 60	28,513 96	50,620 38
	Bonded.	.....	.....	.....	2,998 10	47,668 80	22,977 74
	Free by Code.	16,965 60	21,260 83	22,377 84	27,865 12	137,419 38	3 330 33
Totals..		5,346,808 58	5,713,181,43	5,714,017 54	7,164,561 40	8,838,203 09	11,651,890 81

NATIONALITY OF VESSELS EMPLOYED IN FOREIGN  
CARRYING TRADE, 1891-98.

NATIONS.	1891.		1892.		1893.		1894.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
American...	233	169,472	212	160,042	219	177,422	259	187,647
Hawaiian...	21	26,869	11	4,340	27	20,134	13	11,435
British.....	33	52,866	30	59,317	58	111,655	67	132,085
German.....	9	9,005	5	5,978	5	5,062	6	6,708
Japanese....	5	8,239	3	4,701	4	7,167	3	4,155
All others...	10	8,401	11	8,201	2	2,245	2	1,814
Total...	311	274,852	722	242,579	315	323,685	350	343,844

NATIONS.	1895.		1896.		1897.		1898.	
	No.	Tons.	No.	Tons.	No.	Tons.	No.	Tons.
American...	219	183,876	247	243,983	286	270,045	331	272,138
Hawaiian...	28	22,592	26	25,049	41	46,387	42	52,328
British.....	60	119,841	88	175,120	84	174,041	102	225,666
German.....	9	10,805	8	9,705	4	4,788	6	8,189
Japanese....	..	..	9	16,735	7	13,159	3	5,456
All other....	2	1,703	8	7,405	5	5,406	7	5,855
Total...	318	337,817	386	477,997	427	513,826	481	569,632

## PASSENGER STATISTICS.

ARRIVALS AND DEPARTURES, HONOLULU, 1898.

FROM AND TO	FROM			TO		
	Males.	Females.	Children.	Males.	Females.	Children.
San Francisco	2,193	1,008	275	1,821	770	280
Australia and New Zealand	77	34	13	174	38	10
Oregon & Washington	113	70	19	37	14	8
China and Japan..	10,061	2,176	402	2,955	450	448
Islands in the Pacific.	6	14	2	4	2	1
Brit. Columbia	219	130	43	177	93	30
Other Countries	237	73	64	1	.....	.....
Total..	12,906	3,505	818	5,169	1,367	777

## ARRIVALS AND DEPARTURES BY NATIONALITY.

	ARRIVALS.				DEPARTURES.			
	Males.	Fem.	Childn	Total.	Males.	Fem.	Childn	Total.
Foreigners.....	2,856	1,345	414	4,615	1,969	919	276	3,164
Chinese.....	2,551	362	187	3,100	1,532	76	176	1,784
Japanese.....	7,460	1,774	200	9,434	1,600	329	264	2,193
Portuguese.....	39	24	17	80	68	43	61	172
Totals.....	12,906	3,505	818	17,229	5,169	1,367	777	7,313

## TABLE OF ANNUAL LICENSE RATES.

	Fee and Stamp.		Fee and Stamp
ALCOHOL. (Bond \$1000)....	\$ 51 00	HACK AND PASSENGER VEHICLE.	
AWA. Upset price at Auction:		\$1 00 for each person for	
District of Honolulu.\$1000		which the vehicle has a carrying	
"    Hilo, or		capacity, and stamp.	
Wailuku... 500		On Certif. of Inspection and capacity.	
"    Lahaina... 250		KEROSENE OIL FOR FUEL <sup>2</sup> ..\$	10 50
Each other District... 100		(Bond \$1000.)	
And Stamps.		LIVE STOCK	255 00
AUCTION. District of Honolulu,		LIVERY STABLE.	
(Bond \$3000).....	613 00	District of Honolulu.....	51 00
Each other Dis. (Bond \$500).	15 50	"    Wailuku or Hilo	26 00
AGENT TO TAKE ACKNOWLEDGMENTS.		LODGING OR TENEMENT HOUSE	2 50
Honolulu.....	10 50	On Certif. Agent Board of Health.	
Each other Dis.		MERCHANDISE.	
or Jud. Circuit... 5 50		If annual gross sales are less	
AGENT TO ACKNOWLEDGE LABOR		than \$20,000	51 00
CONTRACTS.		If \$20,000 or over, 3/8 of 1%	
Honolulu. . . . .	51 00	of annual gross sales,	
BANKING. . . . .	765 00	and stamps.	
BILLIARD. \$25 00 each table,		Application must be sworn to.	
and stamp.		MILK	3 00
BOWLING ALLEY. \$25 00 each		NOTARY PUBLIC. Honolulu...	10 50
alley, and stamp.		Each other Jud. Circuit.	5 50
BEEF BUTCHER. "Slaughter		PHYSICIAN.....	10 50
and sell," Honolulu..	102	On Recom'dtn. by Board of Health.	
Each other District.	0 0	PEDDLING CAKE.....	26 00
(Bond \$500.)		On recom'dtn. of Marshal or Sheriff.	
BEEF BUTCHER. "Sell." each		POISONOUS DRUGS.	51 00
District.....	10 50	PORK BUTCHER. "Slaughter	
BOAT. Harbor of Honolulu,		and Sell." Honolulu..	41 00
Lahaina, Hilo or Kahului.		Each other District....	20 50
With 4 or more Oars....	8 50	PORK BUTCHER. "Sell."....	10 50
With less than 4 Oars....	4 50	PUBLIC SHOW. \$5 00 for each	
BOATMAN. Harbor of Honolulu	1 50	Performance, and stamp.	
COMMERCIAL TRAVELER.		SALMON	10 50
Island of Oahu... 510 00		STEAM LAUNDRY	0
Each other island	255 00	STOCK AND SHARE BUSINESS..	102 00
DRAY, CART, WAGON, ETC....	3 00	SPIRIT. Dealers.....	511 00
Dis. of Honolulu,		Retail.....	1,021 00
Lahaina, Wailuku		Wholesale.....	511 00
or Hilo.		(Bond \$1000.)	
DRIVER.. . . .	1 50	Application subject to approval of	
On Certif. as to Competency.		Marshal or Sheriff.	
FIRE-ARM (to own or possess)	1 50	TOBACCO, CIGARS AND CIGAR-	
Hunting .....	5 50	ETTES <sup>3</sup> .....	10 50
HOTEL, BOARDING-HOUSE OR		WINE, ALE AND BEER.....	200 00
RESTAURANT.....	51 00	(Bonded \$500.)	
On Certif. of Agent Board of Health.		WINE. Manufacture of, from	
		grapes of Hawaiian growth.	
		(Bond \$100). 3 years. No fee.	

<sup>1</sup> Application countersigned and forwarded by Sheriff.<sup>2</sup> Outside the limits of a circuit of three miles from the junction of King and Nuuanu Streets.<sup>3</sup> This does not exempt the holder from the payment of a fee for a Mercantile License.

## NOTABLE TRIPS OF PACIFIC OCEAN STEAMERS.

TRIP.	MILES.	STEAMER.	DATE.	D.	H.	M.	
San Francisco to Honolulu,	2100,	Mariposa,	July, 1883,	5,	20,	0.	
“ “ “	“	Australia,	April, 1893,	5,	19,	53.	
“ “ “	“	Alameda,	Dec. 1885,	6,	0,	30.	
“ “ “	“	China,	Aug., 1899,	5,	9,	55*	
“ “ “	“	America Maru	July, 1899,	5,	9,	59.	
Honolulu to San Francisco,	“	Zealandia,	Oct., 1882,	6,	10,	45.	
“ “ “	“	Mariposa,	May, 1898,	5,	22,	0.	
“ “ “	“	China,	Dec., 1898,	5,	7,	41*	
“ “ “	“	China,	Oct., 1895,	5,	13,	54	
“ “ “	“	China,	Sept., 1896,	5,	8,	29	
“ “ “	“	Coptic,	Oct., 1896,	5,	20,	0.	
San Francisco to Yokohama,	4764,	China,	Oct., 1893,	9,	4,	17*	
Hongkong “	1595,	China,	—, —,	3,	23,	45.	
Yokohama to San Francisco,	4595,	Arabic,	Oct., 1882,	13,	21,	43.	
“ “ “	“	China,	—, —,	1893,	12,	00,	45.
“ “ “ via Hono.	“	Coptic,	Oct., 1896,	15,	21,	0†	
“ to Honolulu,	3400,	China,	Sept, 1896,	9,	10,	11.	
“ “ “	“	China,	Dec., 1897,	8,	6,	15*	
“ “ “	“	Coptic,	Oct., 1896,	9,	12,	39.	
San Francisco to Sydney,	7297,	Alameda,	Dec., 1895,	21,	10,	0*	
Auckland to Sydney,	1286,	Mariposa,	Jan., 1886,	3,	11,	50*	
“ Honolulu,	3810,	Mariposa,	April, 1882,	11,	10,	0.	
“ “	“	Alameda,	July, 1897,	11,	10,	35	
Sydney to Auckland,	1286,	Zealandia,	Dec., 1890,	3,	20,	51*	
Honolulu to Samoa,	2279,	Mariposa,	Jan., 1886,	6,	7,	45.	
“ Auckland,	3810,	Zealandia,	April 1882,	11,	23,	0.	
“ Victoria,	2342,	Warrimoo,	July, 1896,	6,	22,	19*	
“ “	2342,	Miowera	Aug., 1896,	7,	7,	0.	
Victoria to Honolulu,	2360,	Miowera,	Sept. 1896	7,	4,	0.	
“ “	2360,	Warrimoo,	Jan., 1896,	7,	1,	9*	
“ Yokohama,	—,	Empress of Japan	July, 1897,	10,	3,	44*	
Vancouver to Sydney,	6999,	Warrimoo,	Nov., 1895,	20,	15,	17*	
“ “	6999,	Miowera,	Sept., 1896,	21,	9,	0.	
Sydney to Honolulu,	—,	Miowera,	Aug., 1896,	14,	0,	30.	
“ Vancouver,	6670,	Warrimoo,	April, 1896,	21,	4,	23*	

\* Best record trips. † Including 31 hours stoppage at Honolulu.

## CLIPPER PASSAGES TO AND FROM THE COAST.

- 1859—Am. ship Black Hawk, 9 days and 9 hours from San Francisco.  
 1861—Am. ship Fair Wind, 8 days and 17½ hours from San Francisco.  
 1861—Am. ship Norwester, 9 days and 16 hours from San Francisco.  
 1861—Am. bark Comet, 9 days and 20 hours from San Francisco.  
 1862—Am. ship Storm King, 9 days and 10 hours from San Francisco.  
 1879—Am. bktne. Catherine Sudden, 9 days and 17 hours to Cape Flattery.  
 1879—Am. schooner Claus Spreckels, 9½ days from S. Francisco to Kahului.  
 1880—Am. schooner Jessie Nickerson, 10 days from Honolulu to Humboldt.  
 1881—Am. brgtne. Wm. G. Irwin, 8 days and 17 hours from S. F. to Kahului.  
 1884—Am. schooner Emma Claudina, 9 days and 20 hours fm Hilo to S. F.  
 1884—Am. schooner Rosario, 10 days from Kahului to San Francisco.  
 1884—Am. brgtne. Consuelo, 10 days from Honolulu to San Francisco.  
 1886—Am. bark Hesper, 9½ days from Honolulu to Cape Flattery.  
 1888—Am. brgtne. Consuelo, 9 days 20 hours from S. Francisco to Honolulu.  
 1893—Am. bktne. Irmgard, 9 days 16 hours from San Francisco.  
 1893—Am. bktne. S. G. Wilder, 9 days 14 hours from San Francisco.  
 1898—Am. bark Rhoderic Dhu, 9½ days from Hilo to San Francisco.

## LAND STATISTICS.

## APPROXIMATE DIVISION OF LANDS 1848-55.

Government.....	1,495,000 acres	in 1848.
Kuleanas.....	28,658	“ “
Crown Lands.....	915,000	“ in 1893.
Bishop Estate.....	420,000	“ “
Other Chiefs' Lands surveyed before '55.....	133,013	
Chiefs' Lands not surveyed before '55.....	1,018,329	

Total..... 4,010,000 acres.

Total of Chiefs' Lands, including Bishop Estate, 1,571,341 acres.

The foregoing estimate of areas is largely increased by the inclusion of several exceptionally large grants, viz.:

Grant 2769 to J. P. Parker, in amakua.....	37,888 acres.
“ 2791 to C. C. Harris in Kau.....	184,298 “
“ 3343 to C. Spreckels, in Wailuku.....	24,000 “
“ 3146 to C. R. Bishop, on Molokai.....	46,500 “
“ 2944 to J. M. and F. Sinclair, Niihau.....	61,038 “

Total..... 353,714 “

## TOTAL AREA OF LAND COMMISSION AWARDS (KULEANAS.)

Hawaii—Hilo District .	466.35 acres.	Kona District .	2,119.00 acres.
Hamakua “	2,542.00 “	Kau “	2,124.18 “
Kohala “	2,129.16 “	Puna “	32.13 “

Total area of Hawaii Kuleanas.....	9,412.87 acres.
“ “ Maui “.....	7,379.74 “
“ “ Molokai “.....	2,288.87 “
“ “ Oahu “.....	7,311.17 “
“ “ Kauai “.....	1,824.17 “
“ “ Lanai “.....	441.97 “

Grand Total..... 28,658.49 “

## AHUPUAAS AND ILIS.

Hawaii—Hilo.....	6,620.25 acres,	Kohala.....	1,933.00 acres.
Hamakua....	8,248.48 “	Kona..	1,261.79 “

Total Hawaii.....	18,063.52 acres.
“ Maui.....	17,547.83 “
“ Molokai.....	10,343.62 “
“ Oahu.....	32,785.62 “
“ Kauai.....	54,272.00 “

Grand Total..... 133,012.59 “

A late estimate of the present government lands gave a total in round numbers of 828,000 acres, which, together with the total amount granted would give in round numbers 1,495,300 acres as the amount originally held by the government.



TOTAL AREA OF ALL GOVERNMENT GRANTS (LAND SALES) TO  
JANUARY 1, 1899, IN ACRES.

First Prepared for the ANNUAL by Prof W. D. Alexander, and Revised by  
Subsequent Official Reports.

HAWAII—Kohala.....	21,834.36	OAHU—Kona.....	5,707.73
Hamakua.....	65,549.04	Ewa & Waianae.....	7,508.84
Hilo.....	29,306.80	Waialua.....	19,828.77
Puna.....	28,994.18	Koolau.....	12,472.11
Kau.....	215,538.81		
Kona.....	61,001.62	Total for Oahu.....	45,517.45
Total for Hawaii.....	422,224.81		

MAUI—Lahaina.....	364.17	MAUI—Continued.	
Kaanapali.....	2,675.00	Kipahulu.....	1,540.03
Wailuku.....	25,825.51	Kaupo.....	11,544.22
Hanakua.....	18,711.53	Kahikinui.....	3,595.67
Koolau.....	2,031.72	Honuaula.....	15,100.84
Hana.....	6,210.92	Kula.....	14,186.22
		Total for Maui.....	101,778.83

SUMMARY.

Hawaii.....	422,224.81
Maui.....	101,778.83
Oahu.....	45,517.45
Molokai.....	58,433.53
Lanai.....	735.95
Kauai.....	16,384.75
Niihau.....	61,088.00
Grand Total.....	706,163.32

SUMMARY OF GOVERNMENT LANDS, SEPT. 30, 1897.  
(From Senate Report of the Hawaiian Commission.)

ISLAND.	COFFEE ACRES.	CANE ACRES.	RICE ACRES.	GRAZING ACRES.	FOREST ACRES.	ESTIMATED VALUE.
Hawaii.....	62,890	18,156	140	368,849	749,302	\$ 1,874,900
Maui.....	8,180	520	110	112,570	58,550	453,800
Oahu.....	800	2,050	327	71,414	13,778	983,500
Kauai.....	4,400	4,900	400	80,050	86,650	648,000
Molokai.....				40,625		77,500
Lanai and Kah.....				77,669		70
Laysan, Etc. Is..						40,000
Total.....	76,270	25,626	977	751,177	908,280	\$ 4,147,700

Building lots, Honolulu.....	Value	\$521.800
“ “ Hilo.....	“	160, 00
Esplanade and city front; leased lots.....	“	450,000
“ “ “ “ market, custom house, etc “	“	250,000
“ “ “ “ old lots; reclaimed land... “	“	100,000
Total value.....		\$1,481,800
		\$5,629,500

TABLE OF RECEIPTS, EXPENDITURES AND PUBLIC DEBT OF  
HAWAII, FOR BIENNIAL PERIODS.

Compiled from various Finance Reports to the Legislature and carefully revised.

Periods ending Mar up to 1894, then Dec 31	Revenue.	Expenditures.	Cash Balance, in Treasury	Public Debt.
1856 .....	\$ 419,228 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 95	4,712,285 20	109,465 60	1,936,500 00
1890.....	3,632,196 85	50,510 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	3715,232 83	184,113 53	3,417,459 87
* 1894.....	1,972,135 43	1,854,053 08	302,676 27	3,574,030 16
1895.....	2,050,729 41	2,284,179 92	69,225 76	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	866,355 98	4,457,605 85

BONDED DEBT, HAWAIIAN ISLANDS, JULY 1, 1899.

*Loan Act 1882, 6 per cent, (Balance)	\$ 3,300		
Loan Act 1886, 6 per cent,....	2,000,000		
Loan Act 1888, 6 per cent, .....	190,000		
†Loan Act 1890, 5 per cent, (Balance)	1,000		
§Loan Act 1890, 6 per cent, (Balance)	50,000		
Loan Act 1892, 5 and 6 per cent ...	130,400		
Loan Act 1893, 6 per cent .....	650,000		
Loan Act 1896, 5 per cent .....	981,000		
		\$4,003,700 00	
Less Cash in Hand .....		189,665 37	
Net Bonded Indebtedness .....			\$3,814,034 63
Net Postal Indebtedness .....			798,181 62
Total Net Public Indebtedness ..			\$4,612,216 25

\* Called in August 3, 1898, balance outstanding \$1,300

† Called in August 3, 1898, balance outstanding \$1,000.

§ Original amount issued \$9,000, of which \$52,000 was called in on January 9th, 1899, of this amount \$7,000 is still outstanding. The remaining \$43,000 will probably be called in before the end of this year.

INTERNAL TAXES FOR BIENNIAL PERIODS, 1872-1894; SINCE, ANNUAL.

(Compiled from Finance and Board of Education Reports.)

PERIODS.	REAL ESTATE.	PERSONAL PROPERTY.	POLL.	HORSES.	MULES.	DOGS.	CARRIAGES	SEAMEN.	ROADS & CARTS.	SCHOOL.	TOTALS.
1872 .....	52,353	45,329	27,841	53,006	6,140	22,271	3,125	5,894			
1874 .....	53,892	42,708	27,620	50,088	6,073	19,555	3,490	3,296			
1876 .....	58,645	47,988	27,372	48,194	6,012	18,676	3,987	3,056			
1878 .....	94,584	94,378	28,722	47,564	3,053	16,465	4,865	2,114	39,418	54,106	385,269
1880 .....	143,716	155,944	35,484	43,399		15,173	5,780	815	64,940	67,472	532,723
1882 .....	187,929	208,096	45,998	42,819	Insurance.	13,965	7,125	642	90,041	87,322	683,937
1884 .....	223,100	254,286	52,964	21,975	1,941	13,924	8,750	402	103,054	100,278	780,674
1886 .....	227,195	262,307	61,745	† .....	3,303	13,315	10,635	114	118,256	115,298	812,167
1888 .....	252,362	299,974	63,115		6,279	11,985	11,835	.....	120,872	119,565	885,987
1890 .....	339,390	329,908	69,116		3,063	14,100	13,940		132,286	131,160	1,032,963
1892 .....	358,745	341,205	78,964		4,156	13,660	14,628	Penalty & Costs	152,137	151,906	1,115,401
1894 .....	338,894	213,126	78,990		3,867	11,744	11,980	5,476	152,268	152,247	1,068,592
1894 9 mos	167,083	151,580	39,050		1,850	4,698	4,427	3,922	74,891	75,082	522,583
1895 .....	196,608	164,272	43,663	Inheritance	1,803	5,971	5,425	7,297	84,183	83,470	592,692
1896 .....	240,971	210,194	46,655	7,698	1,837	6,302	5,889	7,255	90,297	89,443	698,844
1897 .....	246,828	242,719	47,973	.....	974	7,313	5,849	10,375	101,858	95,814	759,703
1898 .....	268,204	266,621	49,580	.....	2,185	6,248	5,717	8,476	105,814	98,974	811,818

† Included in Personal Property.

ANNUAL INTERNAL TAXES FROM 1876.

1876, Taxes Collected, ....	\$162,880.	Tax per capita* ...	\$2.84	1887, Taxes Collected, ....	\$417,103.	Tax per capita* ..	\$4.67
1877, " " "	219,628.	" " "	3.86	1888, " " "	482,938.	" " "	5.71
1878, " " "	245,387.	" " "	4.23	1889, " " "	537,494.	" " "	6.19
1879, " " "	290,380.	" " "	4.58	1890, " " "	560,757.	" " "	6.23
1880, " " "	317,872.	" " "	4.76	1891, " " "	555,428.	" " "	5.85
1881, " " "	367,004.	" " "	5.18	1892, " " "	529,180.	" " "	5.50
1882, " " "	379,071.	" " "	5.29	1893, " " "	539,412.	" " "	5.37
1883, " " "	417,794.	" " "	5.16	1894, " " "	522,583.	" " "	5.14
1884, " " "	409,000.	" " "	5.07	1895, " " "	592,692.	" " "	5.62
1885, " " "	432,656.	" " "	5.09	1896, " " "	698,844.	" " "	6.32
1886, " " "	467,719.	" " "	5.41	1897, " " "	759,704.	" " "	6.54
				1898, " " "	811,818.	" " "	6.45

† Omitting fractions.

## TABLE OF RAINFALL, PRINCIPAL STATIONS,

(From Government Survey Weather Service Records.)

Station.	Observer.	1898.					
		July	Aug	Sept.	Oct.	Nov.	Dec.
<b>HAWAII.</b>							
Waiakea .....	R. Kennedy .....	10.32	6.83	(8.31)	9.41	8.25	2.04
Hilo (town) .....	L. C. Lyman .....	10 20	6.88	8.31	6.84	9.80	3.49
Kaunama .....	G. H. Williams .....	22.53	11.10	12.21	18.90	12.94	6.39
Pepeekeo .....	W. H. Rogers .....	9.73	7.07	7.62	11.77	10.78	3.68
Honomu .....	Plantation .....	11.38	7.62	8.68	11.36	10.96	7.96
Hakalau .....	George Ross .....	8.75	6.00	7.72	9.03	9.14	6.98
Laupahoehoe .....	E. W. Barnard .....	16.79	7.97	5.76	8.32	8.04	8.73
Ookala .....	W. G. Walker .....	11.71	5.27	3.99	5.63	7.32	4.39
Kukaiua .....	E. Madden .....	6.44	2.99	2.03	4.98	3.99	4.42
Paauhau .....	A. Moore .....	3.93	1.77	1.45	2.56	3.03	4.01
Honokaa .....	J. M. Muir .....	3.91	2.26	1.48	2.35	2.96	6.42
Waimea .....	E. W. Lyons .....	3.24	2.88	1.49	3.47	1.78	4.02
Kohala .....	C. A. Austin .....	4.52	4.06	3.47	3.03	4.70	(4.45)
Kailua .....	W. S. Yowell .....	8.88	4.98	6.35	4.91	3.45	1.97
Kealakekua .....	S. H. Davis .....	12.16	10.04	5.67	6.90	5.35	2.25
Kalahiki .....	C. D. Miller .....	3.33	7.34	1.69	4.48	1.86	1.34
Naalehu .....	G. C. Hewitt .....	1.61	1.37	3.48	0.18	3.02	5.77
Pahala .....	T. C. Wills .....	1.03	1.96	2.78	2.23	3.30	3.94
Olaa .....	J. W. Mason .....	18.03	19.03	12.76	16.82	10.08	8.04
Kapoho .....	D. B. Lyman .....	4.99	4.12	6.55	6.11	7.22	4.05
Pohoiki .....	R. Rycroft .....	4.77	5.06	5.73	7.50	5.53	6.70
<b>MAUI.</b>							
Haleakala Ranch .....	D. Morton .....	0.52	1.11	1.62	0.65	1.15	5.24
Puomalelei .....	A. McKibbin .....	2.54	2.74	4.07	2.20	2.72	9.64
Paia .....	D. C. Lindsay .....	0.63	1.47	1.14	1.01	1.96	2.63
Kula .....	D. Von Tempsky .....	2.18	4.94	1.44	1.44	0.60	4.87
Hamao .....	Plantation .....	4.08	2.72	4.35	5.78	4.26	5.84
Olowalu .....	A. Haneberg .....	0.00	0.00	0.00	0.00	0.00	0.92
Mokolau .....	Joseph Garnett .....	5.55	3.59	6.50	5.44	4.89	6.53
Molokai .....	Dr. Mouritz .....	3.73	2.42	3.28	2.95	3.57	4.55
Mahiku .....	S. Fukuda .....	8.13	5.78	8.02	8.83	7.10	11.85
<b>OAHU.</b>							
Punahou .....	C. J. Lyons .....	1.63	2.08	1.28	2.16	1.64	2.03
Kulaokahua .....	W. R. Castle .....	0.63	0.58	0.15	0.52	0.50	0.77
Kapiolani Park .....	H. McCallum .....	0.13	0.16	0.10	0.41	0.18	2.16
Paoua .....	S. E. Bishop .....	2.09	2.43	1.71	3.28	2.36	1.95
Nuuanu Avenue .....	W. W. Hall .....	2.06	2.17	1.78	3.01	1.94	1.76
"    Valley .....	Electric Station .....	(7.70)	5.57	4.05	6.11	7.99	6.41
Luakaha .....	Water Works .....	10.84	8.71	6.88	8.00	9.12	9.65
Waimanalo .....	A. Irvine .....	1.19	0.63	0.37	1.83	0.45	5.67
Maunawili .....	George Gibb .....	3.59	3.31	0.94	3.74	1.93	4.23
Kaneohe .....	J. P. Mendonca .....	2.36	2.54	0.68	1.45	0.60	3.73
Ahuimanu .....	H. Macfarlane .....	4.70	4.22	2.89	3.01	3.26	9.06
Kahuku .....	George Weight .....	2.05	1.37	1.29	1.08	0.97	1.05
Waianae .....	C. A. Widemann .....	4.33	2.29	2.85	1.02	0.65	7.43
Ewa Plantation .....	Geo H. Renton .....	0.17	0.24	0.07	0.41	0.00	1.39
<b>KAUAI.</b>							
Libue .....	G. N. Wilcox .....	2.96	1.12	1.22	1.23	1.22	3.42
Hanamaulu .....	W. G. Smith .....	3 30)	1.76	1.21	2.69	1.02	2.50
Kilauea .....	H. R. Anahu .....	1	2.49	2.45	2.47	2.91	4.05
Hanalei .....	W. H. Deverill .....	9	4.39	3.49	3.61	4.23	4.05

Figures in brackets are interpolated from other stations.

## THROUGHOUT THE HAWAIIAN ISLANDS, 1898-99.

By C. J. Lyons, Continued from last ANNUAL.

Locality.	Feet Elevn	1898-99.						Total.
		Jan	Feb.	Mar.	Apr.	May	June	
<b>HAWAII.</b>								
Waiakea	50	4.78	8.80	22.80	16.51	19.61	7.70	125.36
Hilo	100	4.54	8.81	22.44	16.52	18.93	(7.70)	124.46
Kaumana	1250	6.37	8.74	24.90	19.49	18.58	12.44	174.59
Pepeekeo	100	3.27	7.46	23.87	9.31	18.82	6.83	120.21
Honomu	300	2.63	8.43	25.11	12.71	19.90	7.74	134.48
Hakalau	200	2.68	7.58	20.12	9.61	17.92	6.82	112.35
Laupahoehoe	10	1.04	5.58	33.54	9.74	12.00	10.15	127.66
Ookala	400	0.49	3.61	22.87	8.26	8.54	5.44	87.52
Kukaiua	260	0.27	1.23	18.46	6.88	3.98	2.35	58.02
Paauhau	300	0.49	0.90	14.38	3.82	2.17	2.48	40.99
Honokaa	425	0.43	0.65	16.87	4.30	2.00	2.96	46.59
Waimea	2720	1.41	3.72	4.73	5.13	4.28	2.62	38.77
Kohala	350	1.26	2.02	6.86	2.87	2.86	2.38	42.48
Kailua	950	1.79	5.12	5.83	0.97	13.81	3.38	61.44
Kealakekua	1580	1.36	2.38	3.13	2.39	9.09	4.37	65.09
Kalahiki	800	2.22	2.79	.....	.....	.....	.....	.....
Naalehu	650	4.57	2.26	6.11	11.74	4.76	1.39	46.26
Pahala	850	2.76	1.35	7.56	10.49	2.26	0.00	41.16
Olaa	1650	4.65	.....	.....	.....	.....	.....	.....
Kapoho	110	2.83	7.29	8.77	9.40	8.37	6.45	76.15
Pohoiki	10	3.83	7.31	7.83	13.76	10.59	(8.00)	86.61
<b>MAUI, ETC.</b>								
Haleakala Ranch	2000	0.55	1.10	7.13	6.64	1.45	0.94	28.10
Puunomalei	1400	0.49	1.21	12.17	2.63	2.52	2.82	45.75
Paia	180	0.34	1.00	9.55	1.44	0.31	1.60	23.08
Kula	4000	0.75	2.17	4.00	0.40	4.03	0.07	26.89
Hamoā	60	2.35	4.79	8.85	6.59	7.61	2.83	60.65
Olowalu	15	0.29	1.48	1.01	0.00	0.00	0.00	3.70
Kaupo	300	5.73	6.91	8.88	7.82	6.32	2.71	80.87
Mapulehu, Molokai	70	1.84	2.26	2.21	1.07	5.20	2.24	35.32
Nahiku	.....	3.29	3.50	2.51	13.78	9.64	(5.00)	87.43
<b>OAHU.</b>								
Punahou	50	1.22	4.01	4.94	1.07	2.44	1.14	24.64
Kulaokahua	50	0.87	3.55	3.73	0.81	1.44	0.68	14.23
Kapiolani Park	10	0.31	4.35	4.34	1.55	0.91	0.00	14.60
School Street	50	1.33	4.72	4.57	1.49	2.50	2.01	30.44
Nunānu Avenue	50	1.07	4.40	5.16	1.26	2.42	1.53	28.56
Valley	405	1.58	13.30	12.50	3.84	9.47	4.05	82.57
Luakaha	850	4.41	15.90	26.59	6.44	12.53	7.23	126.30
Waimanalo	25	1.18	7.17	8.45	1.91	10.09	0.39	39.33
Maunawili	300	2.42	4.35	14.46	4.21	4.90	0.92	49.00
Kaneohe	100	0.88	7.35	10.45	3.08	6.20	1.31	41.63
Ahuimanu	350	2.93	10.81	18.37	5.79	8.22	0.73	63.99
Kahuku	25	2.50	2.03	6.14	2.90	3.51	0.64	25.03
Waianae	1700	1.75	2.25	7.78	4.51	4.43	1.34	41.63
Honouliuli	60	0.00	3.96	1.72	0.06	2.20	0.65	10.78
<b>KAUAI.</b>								
Lihue	200	0.95	2.12	2.91	5.80	7.20	1.36	31.51
Hanamāulu	200	.....	.....	.....	.....	.....	.....	.....
Kilauea	325	0.94	3.34	10.77	5.04	10.25	2.90	53.23
Hanalei	10	0.24	4.08	21.34	3.21	7.80	3.93	67.86

## SUMMARY OF METEOROLOGICAL OBSERVATIONS AT HONOLULU, 1898-99.

(Compiled from Records of Weather Bureau by C. J. Lyons.)

Month.	BAROMETER.		Rainfall	REL. HUMID.		TEMPERATURE.						ABSOLUTE HUMIDITY Gr. to Cu. Ft	Cloud Amt.	Wind Force
	9 A. M	3 P. M.		9 A. M.	9 P. M.	Mid.	Max.	6 A. M.	2 P. M.	9 P. M.	Aver.			
1898 { July .. . . . . August .. . . . September. October. . . . . November . . . . December. . . .	30.007	29.950	1.63	66.0	72.9	71.7	82.2	73.5	80.6	75.8	76.6	7.07	4.8	3.4
	30.014	29.948	2.08	65.7	71.0	71.9	83.2	73.9	81.6	76.2	77.2	6.93	5.0	2.9
	29.998	29.922	1.28	63.5	71.1	71.6	83.3	73.3	81.8	76.3	77.1	6.93	4.6	3.0
	30.022	29.935	2.16	69.3	73.0	71.5	81.7	73.1	80.1	75.5	76.2	7.14	4.8	3.0
	29.993	29.908	1.64	67.1	71.5	70.7	79.7	72.4	77.9	74.3	74.9	6.71	4.8	3.5
	29.997	29.886	2.03	70.4	81.3	64.7	77.7	63.7	75.8	69.3	70.6	6.28	4.5	2.1
1899 { January February . . . . March . . . . . April . . . . . May . . . . . June . . . . .	30.030	29.935	1.22	67.4	80.8	63.4	78.0	65.8	76.4	69.1	70.4	6.17	3.6	2.0
	30.012	29.936	3.99	73.1	81.1	66.5	78.4	68.4	76.7	70.7	71.9	6.64	4.9	2.1
	30.026	29.940	4.94	70.4	77.9	65.4	76.6	66.9	76.4	70.6	71.2	6.35	5.5	2.1
	30.053	29.977	1.07	64.5	71.9	67.0	79.1	69.3	77.0	72.5	72.7	6.17	4.7	2.5
	30.047	29.986	2.44	66.3	72.1	69.7	80.5	71.8	77.8	73.1	74.2	6.47	4.7	3.0
	30.054	29.988	1.14	62.5	69.0	70.4	82.3	72.0	79.8	74.1	75.3	6.33	3.7	3.3
Year . . . . .	30.019	29.943	25.62	67.2	74.5	68.7	80.2	70.3	78.5	73.1	74.0	6.80	4.6	2.0

## LATEST CENSUS RETURNS, HAWAIIAN ISLANDS.

Taken September 27, 1896.

SUB-DIVISION.	POPULATION.			DWELLINGS.			
	Male.	Female.	Total.	Inhab- ited.	Unin- habi- ited.	Build- ing.	Total.
OAHU--Honolulu . . . . .	18,775	11,145	28,920	5,153	840	47	6,040
Ewa . . . . .	2,284	783	3,067	390	67	7	464
Waianae . . . . .	886	395	1,281	206	2		208
Waialua . . . . .	926	423	1,349	211	37		248
Koolauloa . . . . .	1,289	546	1,835	232	37	3	272
Koolaupoko . . . . .	2,004	749	2,753	493	82	3	578
	26,164	14,041	40,205	6,685	1,065	60	7,810
HAWAII--Hilo . . . . .	9,071	3,807	12,878	1,880	165	7	2,052
Puna . . . . .	1,228	520	1,748	256	38	3	297
Kau . . . . .	2,031	877	2,908	437	135	4	576
S. Kona . . . . .	1,397	930	2,327	403	33	7	443
N. Kona . . . . .	1,905	1,156	3,061	526	129	7	662
S. Kohala . . . . .	318	240	558	102	52	1	155
N. Kohala . . . . .	2,675	1,450	4,125	611	139	2	752
Hamakua . . . . .	4,007	1,673	5,680	818	268	4	1,090
	22,632	10,653	33,285	5,033	959	35	6,027
MOLOKAI . . . . .	1,355	972	2,307	651	92	3	746
LANAI . . . . .	51	54	105	23	13		86
MAUI--Lahaina . . . . .	1,529	869	2,398	454	198	3	655
Wailuku . . . . .	4,098	1,974	6,072	989	165	4	1,158
Makawao . . . . .	3,261	2,203	5,464	1,177	120	3	1,300
Hana . . . . .	2,547	1,245	3,792	536	167	8	711
	11,435	6,291	17,726	3,156	650	18	3,824
KAUAI--Niihau . . . . .	76	88	164	31	3		34
Waimea . . . . .	3,226	1,205	4,431	586	21	1	607
Koloa . . . . .	1,277	558	1,835	359	21	3	383
Lihue . . . . .	2,304	1,121	3,425	263	65	1	629
Kawaihau . . . . .	2,067	695	2,762	387	62		449
Hanalei . . . . .	1,950	825	2,775	425	130	4	559
Total--Kauai and Niihau . . . . .	10,900	4,492	15,392	2,531	302	9	2,661
RECAPITULATION.							
Oahu . . . . .	26,164	14,041	40,205	6,685	1,065	60	7,010
Hawaii . . . . .	22,632	10,653	33,285	5,033	955	35	6,027
Molokai . . . . .	1,335	972	2,307	651	92	3	746
Lanai . . . . .	51	54	105	23	13		36
Maui . . . . .	11,435	6,291	17,726	3,156	650	18	3,824
Niihau . . . . .	76	88	164	31	3		34
Kauai . . . . .	10,824	4,404	15,228	2,320	299	8	2,627
Totals . . . . .	72,517	36,503	109,020	17,099	3,081	124	21,104





THE CENSUS OF 1896 BY AGE AND NATIONALITY.

NATIONALITY.	UNDER 15 YEARS.	15 TO 30 YEARS.	30 TO 45 YEARS.	45 TO 60 YEARS.	60 TO 75 YEARS.	OVER 75 YEARS.	TOTAL.
Natives.....	9,991	8,560	6,042	3,579	2,211	636	31,019
Part Hawaiian.....	5,027	2,186	962	239	67	4	8,485
Haw'n-born Frgnrs..	12,844	639	170	63	19	1	13,733
Americans.....	201	708	821	348	166	22	2,266
British.....	94	428	579	317	102	18	1,538
Germans.....	75	302	326	151	53	5	912
French.....	1	12	28	16	15	3	75
Portuguese.....	917	3,369	2,212	1,398	303	33	8,232
Norwegians.....	13	56	112	32	2	1	216
Chinese.....	730	8,655	6,657	2,933	392	15	19,382
Japanese.....	287	13,491	7,958	564	27	2	22,329
Polynesians.....	8	169	145	65	18	4	409
Other Nationalities..	13	97	182	101	27	4	424
Totals.....	30,201	38,669	26,194	9,806	3,402	748	109,020

COMPARATIVE TABLE OF NATIONALITY OF POPULATION OF HAWAIIAN ISLANDS AT VARIOUS CENSUS PERIODS SINCE 1853.

NATIONALITY.	1853.	1866.	1872.	1878.	1884.	1890.	1896.	
Natives.....	70,036	57,125	49,044	44,088	40,014	34,436	31,019	
Part Hawaiians.....	983	1,640	1,487	3,420	4,218	6,186	8,485	
Chinese.....	364	1,206	1,938	5,916	17,937	15,301	19,382	
Americans.....	692	2,988	889	1,276	2,066	1,928	2,266	
Haw'n-born Frgnrs..	309		849	947	2,040	7,495	13,733	
British.....	435		619	883	1,282	1,344	1,538	
Portuguese.....	86		395	436	9,377	8,602	8,232	
Germans.....	81		224	272	1,600	1,434	912	
French.....	60		88	81	192	70	75	
Japanese.....	.....		.....	.....	.....	116	12,360	22,329
Norwegian.....	8		.....	.....	.....	362	227	216
Other Foreigners.....	80		364	666	416	419	424	
Polynesian.....	4		.....	.....	.....	956	588	409
Totals.....	73,138	62,959	56,897	57,985	80,578	89,990	109,020	

\* There was no complete division of nationalities noted in the census of 1866.

ESTIMATED POPULATION HAWAIIAN ISLANDS, JUNE 30, 1899.

(Omitting reference to Birth and Death changes, owing to incomplete records.)

	Natives	Chinese	Japanese	Portugse.	All other Foreigners.	Total.
Population as per Census, Sept. 1896.....	39,504	21,616	24,407	15,191	8,302	109,020
Passenger Arrivals. { Excess over departures, 4th Quarter, 1896.....	....	1,377	1,673	....	339	3,389
{ Excess over departures, Jan., 1897, to June, 1899.....	....	4,204	16,296	37	2,007	22,544
Total.....	39,504	27,197	42,376	15,228	10,648	134,953

## TABLE OF SEX, BY NATIONALITY.

(From latest Census returns, 1896.)

NATIONALITIES.	HAWAIIAN BORN OF FOREIGN PARENTS.			WHOLE POPULATION		
	Males	Femal.	Total.	Males.	Femal.	Total.
Hawaiians.....	.....	.....	.....	16,399	14,620	31,019
Part Hawaiians.....	.....	.....	.....	4,249	4,236	8,485
Americans.....	401	419	820	1,975	1,111	3,086
British.....	352	360	712	1,406	844	2,250
German.....	252	268	520	866	566	1,432
French.....	10	16	26	56	45	101
Norwegian.....	71	91	162	216	162	378
Portuguese.....	3,606	3,353	6,959	8,202	6,989	15,191
Japanese.....	1,054	1,024	2,078	19,212	5,195	24,407
Chinese.....	1,204	1,030	2,234	19,167	2,449	21,616
S. Sea Islanders.....	21	25	46	321	134	455
Other Nationalities.....	87	89	176	448	152	600
Totals.....	7,058	6,675	13,733	72,517	36,503	109,020.

## POPULATION BY NATIONALTY, OF PRINCIPAL TOWNSHIP

## DISTRICTS OF HAWAIIAN ISLANDS.

From latest Census.

NATIONALITIES.	HONO'LU OAHU.	HILO, HAWAII.	LAH'INA, MAUI.	WAIL'KU MAUI.	LIHUE-KAUAI,
Hawaiians.....	7,918	1,868	1,098	2,206	625
Part Hawaiians.....	3,468	480	276	580	171
Hawaiian born foreigners.....	4,612	1,933	194	451	612
American.....	1,538	153	44	58	20
British.....	909	130	11	42	21
German.....	383	42	19	24	191
French.....	54	2	.....	.....	1
Norwegian.....	104	3	.....	10	2
Portuguese.....	1,973	1,662	34	295	345
Japanese.....	2,174	5,124	409	1,054	1,066
Chinese.....	6,484	1,404	227	1,295	359
S. Sea Islanders.....	59	22	129	29	4
Other Nationalities.....	244	27	.....	28	8
Total, Census of 1896.....	29,920	12,878	2,398	6,072	3,425
Total, at previous Census.....	22,907	9,935	2,113	6,708	2,792
Net gain.....	7,013	2,943	285	.....	633

## SCHOOL STATISTICS, HAWAIIAN ISLANDS.

(From Reports of the Department of Education.)

## COMPARATIVE TABLE OF SCHOOL POPULATION, 1897-98.

ISLANDS.	NO. SCHOOLS 1898.	IN SCHOOL, JAN. 1898.			NO. SCHOOLS 1897.	IN SCHOOL, JAN. 1897.		
		Boys.	Girls.	Total.		Boys.	Girls.	Total.
Hawaii . . . . .	60	2,055	1,773	3,828	64	2,008	1,703	3,711
Maui & Lanai . . . . .	36	1,321	1,167	2,488	37	1,319	1,151	2,470
Molokai . . . . .	5	90	67	157	6	114	64	178
Oahu . . . . .	73	3,638	2,790	6,428	71	3,429	2,670	6,099
Kauai & Niihau . . . . .	18	913	708	1,621	17	878	687	1,565
Totals . . . . .	192	8,017	6,505	14,522	195	7,748	6,275	14,023

## NUMBER OF SCHOOLS, CLASS, ETC., 1898.

ISLANDS.	* GOVERNMENT SCHOOLS.					INDEPENDENT SCHOOLS.		
	No. of Schools . . .	No. of Teachers . .	No. of Pupils, Boys.	No. of Pupils, Girls.	Total No. of Pupils.	No. of Schools . . .	No. of Teachers . .	No. of Pupils.
Hawaii . . . . .	48	90	1,700	1,462	3,162	12	32	666
Oahu . . . . .	36	108	2,224	1,618	3,842	37	148	2,586
Maui and Lana . . . . .	28	59	1,100	850	1,950	8	20	538
Kauai and Niihau . . . . .	15	35	811	646	1,457	3	9	164
Molokai . . . . .	5	6	90	67	157	..	..	..
Totals	132	298	5,925	4,643	10,568	60	209	3,954

\* Of Government Schools taught in Hawaiian there is now but one, with a total of 28 pupils.

## NATIONALITY OF PUPILS, 1897 AND 1898.

	1897.	1898.		1897.	1898.
Hawaiians . . . . .	5,480	5,330	Norwegians . . . . .	98	106
Part Hawaiians . . . . .	2,448	2,479	Chinese . . . . .	921	1,078
Americans . . . . .	417	484	South Sea Islanders . . . . .	28	10
English . . . . .	256	280	Japanese . . . . .	397	560
Germans . . . . .	288	302	French . . . . .	2	2
Portuguese . . . . .	3,600	3,815	Other Foreigners . . . . .	88	76
Total, 1897, . . . . .		14,023	Total, 1898 . . . . .		14,522

The nationality of teachers in all schools of the islands, January 1, 1898, was as follows: Hawaiian 57, Part Hawaiian 62, American 253, British 69, German 12, French 6, Scandinavian 6, Portuguese 20, Chinese 13, Japanese 3; total, 507.

TABLE OF ILLITERACY AND RELIGIOUS BELIEF  
BY NATIONALITY.

NATIONALITIES.	ILLITERACY.		RELIGIOUS BELIEF.				Total %
	No over 6 years.		No m <sup>k</sup> return	%Pro- testa't	%R'm. Catho	%Mor mon.	
Hawaiian .....	26,495	83.97	25,637	50.09	32 87	17.04	100 00
Part Hawaiian .....	5,895	91.21	6,271	51.70	41 99	6.31	100.00
Hawai'n born foreigners	5,394	68.29	8,438	21.34	78 48	.18	100.00
Americans .....	2,060	82.02	1,650	85.09	12.85	2.06	100 00
British .....	1,516	95.44	1 371	86.36	13 13	.51	100.00
Germans .....	899	86.31	677	87.44	12 26	.30	100.00
French .....	75	92.00	63	9.54	90.46	..	100.00
Norwegians .....	215	80.46	162	95.06	4 94	..	100.00
Portuguese .....	8,089	27.84	7,959	1.84	98.15	.01	100.00
Japanese .....	22,189	53.60	764	93.06	6 42	.52	100.00
Chinese .....	19,317	48.47	953	87.83	7.03	5.14	100.00
South Sea Islanders .....	407	40.05	223	79.82	18.83	1.35	100.00
Other Nationalities .....	423	75.41	354	49.72	48.30	1.98	100.00
Total .....			54,522	42.68	48.36	8.96	100.00

MORTALITY TABLES OF HONOLULU.

Comparative monthly totals, 1893 to 1898.

MONTHS.	1893	1894	1895	1896	1897	1898
January .....	38	48	49	50	52	71
February .....	46	45	45	78	38	65
March .....	51	45	45	65	51	73
April .....	40	60	62	69	56	108
May .....	42	44	53	65	57	68
June .....	68	36	57	57	57	69
July .....	54	62	51	48	59	75
August .....	46	57	61	38	51	88
September .....	64	45	112	43	53	56
October .....	52	50	71	48	53	74
November .....	60	46	60	58	51	93
December .....	55	75	65	54	81	86
Total .....	616	613	731	673	659	926

ANNUAL DEATH RATE PER 1,000.

	1896	1897	1898	Est. Popltn. Honolulu
All Nationalities ..	22.43	21.97	29.73	30,000
Hawaiians .....	32.78	29.30	40.06	11,500
Asiatics .....	14.60	19.30	24.42	9,000
Portuguese .....	19.48	15.79	22.02	2,000
All Others ..	16.10	14.68		7,500

## MORTALITY TABLES, HONOLULU, 1897 AND 1898

Compiled from Board of Health Reports.

CAUSE OF DEATH.	'97	'98	CAUSE OF DEATH.	'97	'98	CAUSE OF DEATH.	'97	'98
Abcess	11	6	Diphtheria	6	5	Intestin'l Trouble	11	11
Accident	7	7	Dis. of Brain	4	1	Inflammation	11	7
Actelectedasis	4	4	Dis. of Heart	48	55	Influenza	1	1
Acute Mania	1	1	Dis. of Kidneys	2	2	Injuries	1	1
Alcoholism	13	5	Dis. of Lung	5	2	Jaundice	1	1
Aneurism	1	3	Dis. of Liver	4	4	Marasmus	1	1
Apoplexy	5	10	Dropsy	11	20	Measels	3	3
Appendicitis	1	10	Drowned	5	2	Meningitis	12	20
Asthma	5	10	Dysentery	5	12	Nephritis	4	4
Beriberi	4	4	Dyspepsia	6	6	Obst. of Bowels	4	3
Bl'd. Poisoning	6	2	Elephantiasis	1	1	Old Age	46	89
Bright's Disease	9	5	Enterocolitis	6	17	Opium	3	3
Bronchitis	28	19	Epilepsy	1	1	Paralysis	21	26
Burns	5	2	Erysipelas	1	1	Peritonitis	13	13
Cancer	12	12	Exhaustion	12	6	Pleurisy	5	5
Catarrh	4	4	Fever Typhoid	12	57	Pneumonia	31	37
Child-birth	5	6	Fever, various	24	42	Rheumatism	2	1
Cholera Infntm	12	26	Fract. Spin	3	3	Scrofula	2	2
Congest'n Lungs	5	4	Gangrene	2	5	Septicaemia	3	3
Consumption	59	102	Gastritis	3	2	Shock	3	3
Convulsions	35	44	Gun Shot Wnds	1	1	Suicide	13	3
Croup	7	9	Hanged	1	1	Syphilis	1	8
Cystitis	1	1	Hemorrhage	16	15	Tetanus	4	4
Debility	2	10	Hernia	3	3	Tumor	2	3
Diabetes	1	1	Inanition	46	54	Unknown	33	34
Diarrhoea	25	29	Indigestion	1	1	Whpng Cough	1	1

## TOTAL DEATHS BY AGE AND NATIONALITY.

BY AGES.	1897	1898	NATIONALITY.		
			1897	1898	
Death under 1 year	141	190	Hawaiians	337	461
“ from 1 to 5	55	99	Japanese	82	102
“ “ 5 to 10	18	22	Chinese	111	148
“ “ 10 to 20	41	48	Portuguese	60	81
“ “ 20 to 30	90	142	American	31	77
“ “ 30 to 40	82	116	British	19	23
“ “ 40 to 50	86	88	Other Nations	19	34
“ “ 50 to 60	45	60	SEXES.		
“ “ 60 to 70	43	72	Males	401	578
Over 70	58	89	Females	258	348
Total	659	926	Total	659	926

## HAWAIIAN SUGAR PLANTATION STATISTICS.

From January, 1875, to June, 1899, inclusive.

YEAR.	SUGAR.		MOLASSES.		TOTAL EXPORT VALUE.
	POUNDS.	VALUE.	GALLONS.	VALUE.	
1875	25,080,182	\$ 1,216,388 82	93,722	\$ 12,183 86	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	3,109,563 66	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 65	221,293	33,193 95	6,354,084 60
1883	114,107,155	7,112,981 12	193,997	34,819 40	7,147,800 58
1884	142,654,923	7,328,896 67	110,530	16,579 56	7,345,476 17
1885	171,350,314	8,356,061 94	57,941	7,950 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	7,603 29	12,167,188 30
1891	274,983,580	9,550,537 80	55,845	4,721 40	9,555,258 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 *	387,599,795	15,154,826 41	.....	.....	15,154,826 41

\* Six months to June 30

## PLANTATION LABOR STATISTICS.

NUMBER AND NATIONALITY OF SUGAR PLANTATION LABORERS.

(Summarized from Report of Bureau of Immigration, December 31, 1898.)

A detailed table of latest compilation is given elsewhere in this issue.

ISLANDS.	Haw'n	Portug	Japs.	Chines	S. S. I.	All oth	Total.
Hawaii.....	516	875	6,338	2,542	20	336	10,627
Mau.....	457	468	3,117	1,300	27	198	5,567
Moloka.....	49	4	308	.....	.....	12	373
Oahu.....	274	245	3,016	1,727	3	220	5,458
Kaua.....	213	472	4,007	1,631	18	213	6,554
Total, 1898.....	1,482	2,064	16,786	7,200	68	979	28,579
" 1897.....	1,497	2,218	12,068	8,114	81	675	24,653
Increase.....	.....	.....	4,718	.....	.....	304	3,926
Decrease.....	15	154	.....	914	13	.....	.....

## LIST OF FISH KNOWN TO THE HONOLULU MARKET.

[Revised by L. D. Keliipio, Fish Inspector, Board of Health, for this issue of the ANNUAL.]

Aawa	Ohe	Hahalua	Kapa
Aawa-lelo	Ohua-aliko	Halahala	Kawakawa-kinau
A'ea'e	Ohua-lii	Hapuupuu	Kawakawa
Aeaea	Ohua-nihonui	He (squid)	Kawelea
Aoao-nui	Ohua-palemo	Hee-makoko	Kekee
A'u	Ohua-paawela	Hee-okaluli	Kihikihi
A'ua	Okuhekuhe	Hee-pali	Kihikihi
A'ua'u	Olali	Hee-puloa	Koae
Auku	Omakaka	Hihimanu	Kokala
A'ulepa	Omilu	Hilu	Kole
Aha	Ono	Hilu-ula	Kowali
Ahaaha	Opae (shrimps)	Hilu-uli	Kumu
Ahi	Opakapaka oolola	Hilu-pano	Kupala
Aholehole	Opae-hune	Hinalea	Kupipi
Ahi-kihikihi	Opae-kai	Hinalea-niau	Kupoupou
Ahi-palaha	Opae-kalaole	Hinalea-nukuiwi-	Kupoupou
Ahi-poonui	Opae-lolo	[ula	Kupoupou-lilo
Ahuluhulu	Opae-oehaa	Hinalea-nukuiwi-	Laenihi
Aku	Opelu	[uli	Laenihi-eleele
Akule	Opule	Hinalea-akilolo	Laenihi kea
Aku-kinau	Opule-uli	Hinalea-eleele	Lai
Alaihi	Opule-kika	Hinalea-luahine	Laihala
Alaiaua	Opule-lalii	Hinalea-olali	Laipala
Alaihi-kalaloa	Opelu-palahu	Hinana	Lauhau
Alamoo	Uouoa	Hou	Lauhau-kikapu
Aloalo	Uu	Honu (turtle)	Lauhau-mahauli
Aloiloi	Uukanipo	Honu-ea	Lauhau-kapuhili
Amaama (mullet)	Uukanipo	Honu-kahiki	Lauki-pala
Amoomoo	Uha	Humuhumu	Laumilo
Anae	Uhu	Humuhumu-hi'u-	Lahau-wiliwili
Aniholoa	Uhu-aa	[kole	Lehe
Awa	Uhu-ula	Humuhumu-kapa	Leleiona
Awa-aua	Uhu-uli	Humuhumu-mee-	Loulu
Awa-kalamoho	Uhu-palukaluka	[mee	Lolohau
Aweoweo	Uku-makaokai	Humuhumu-nuku-	Lupe
Awela	Ukikiki	[apuaa	Maika
Enenu or nenu	Uku	Humuhumu-ma-	Maiii
Iaulaula	Ula	[neoneo	Maikoiko
I'aulaula-ula	Ulaula	Humuhumu lii	Mahimahi
I'aulaula-kea	Ulua	Kaapeape	Makapuu
Iapake	Ulapapapa	Kahala-mokulele	Malamalama
Iiao	Ulae-ula	Kahala	Malolo
Iheihe	Ulae-uli	Kahali	Malamalama-ula
Oama	Ulaia	Kaku	Malamalama-uli
Oio	Ula-koae	Kaku	Malolo-eheuula
Oila	Ula-poni	Kakala-hooulu	Malolo-hapuu
Oililepa	Umaumalei	Kala	Mamamo
Oopu	Upapalu	Kala-uli	Mamahaao
Oopuhue	Uwiuwi	Kala-pala	Manini
Oopukai	Uwiuwilua	Kala-palaholo	Mano (shark)
Onoholoa	Hauliuli	Kalekale	Mikiawa
Ono-malani	Halalu	Kalaha	Moa
O'u	Hapuupuu	Kalu-niau	Monomi
Oukuuku	Ileapi	Kanio	Mu

## LIST OF FISH--CONTINUED.

Maomao	Palahoana	Kuhonu	Pipipi
Manoni	Palani	Kukuau	Pu
Mano-ihuwaa	Pakuikui	Kumimi	Puhikaua
Mano-kihikihi	Panuhunuhu	Moala	Puleoleho
Mano-lalakea	Papiopio-ulua	Papa	Pupu
Mano-paele	Piopio	Pokipoki	Wana
Moamoa	Piha	Pokipoki-aumoana	Wi
Moano-auki	Pilikoa	Pokipoki-kuapua	
Moano-ukali	Pipio		SEA WEED, etc. (Limu)
Moano-lehua	Poe	SHELL FISH (Pupu)	
Moano-papaa	Poo'u	Ina ula	Akiaki
Moi-ii	Poopaa	Ina-uli	Alaula
Moi-mana	Pua-ii	Okole	Oolu
Muheee	Pualu	Okupe	Huluhuluwaaena
Naenae	Puilih	Olepe	Kaihee
Na'i	Puhi (eels)	Opihi	Koeleee
Na'u	Puhikii	Owakawaka	Limueleee
Nakea	Puhikii	Haukeuke	Limu-huna
Nihokomaka	Pohopoho	Halula	Limu-kala
Nehu	Wana	iiawae	Limu-kopu
Nohu	Weke	Kuapaa	Limu-koko
Nopili	Wekeula	Kupee	Limu-lipoa
Nukumomi	Weke-moelna	Leho-okala	Limu-make
Nunu	Weke-pueo	Leho-ula	Lipala
Paakaihelei	Wela	Leho-kupa	Lipepee
Pauu	Welea	Leho-paulu	Lipuupuu
Paoo		Lepokolea	Loloa
Paoo-lekei	CRABS, etc. (Paipai)	Loli-kae	Nanue
Paoo-moana	Aama	Loli-koko	Pahapaha
Paopao	Aloa	Loli-pua	Pakaiea
Paoo-puhi	Elekuma	Nahawale	Palawai
Pahapuu	Elepi	Naka	Panoonoo
Paka	Ohiki	Papaua	Panohonoho
Pakii	Ohiki-aumoana	Pioe	Pepeiao
Palailai	Opeapea	Pipi	Wawahiwaa

## HAWAIIAN SILVER COIN.

The following denominations of Hawaiian Silver were coined during the reign of Kalakaua, at the San Francisco mint, and imported the circulating medium of the islands in 1883 and 1884. They are of the same intrinsic value as the United States silver coins and were first introduced into circulation January 14th, at the opening of the bank of Claus Spreckels & Co. in Honolulu. The amount coined was \$1,000,000, divided as follows:

Hawaiian Dollars	500,000
“ Half Dollars	350,000
“ Quarter Dollars	125,000
„ Dimes	25,000
Total	\$1,000,000



VALUE OF HAWAIIAN GOVERNMENT LANDS AND PROPERTY.

At the Annexation of the Islands to the U. S., August 12th, 1898.

SUMMARIZED FROM THE SENATE REPORT OF THE HAWAIIAN COMMISSION.

	ESTIMATED VALUE.
Government Lands, 1,772,640 acres.....	\$ 5,581,000
“ “ under control of Minister of Interior.....	2,050,859
“ Property, Department of Interior.....	155,082
“ “ Bureau of Conveyances.....	71,321
“ “ Bureau of Public Works.....	1,386,200
“ “ Honolulu Water Works.....	448,444
“ “ Honolulu Roads Bureau.....	19,760
“ “ Road Boards, outer districts.....	19,200
“ “ Fire Department, Honolulu.....	32,688
“ “ Fire Department, Hilo.....	6,325
“ “ Board of Health.....	162,886
“ “ Survey Office.....	260,000
“ “ Judiciary Department.....	80,098
“ “ Finance Office.....	5 100
“ “ Tax Offices.....	1,218
“ “ Customs Bureau.....	456
“ “ Postal Bureau.....	8,068
“ “ Audit Bureau.....	557
“ “ Department of Foreign Affairs.....	60,625
“ “ Police Departmen.....	17,351
Total estimated value.....	\$10,370,238

STANDARD AND LOCAL TIME.

The Standard Time of the Hawaiian Islands is that of Longitude 157° 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° 30 and the longitude of the station.

The corrections would be for the following stations:

STATION.	CORRECTION.	STATION.	CORRECTIONS.
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
Laiialua, 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		

## HAWAIIAN REGISTERED VESSELS.

## COASTERS—STEAMERS

REGISTER NUMBER.	CLASS.	NAME.	TONS.	REGISTERED OWNERS.
190	Stmr	Kilauea Hou. ....	153 85	Wilder Steamship Co.
196	Stmr	Mokolii. ....	49 21	Wilder Steamship Co.
204	Stmr	Lehua. ....	129 80	Wilder Steamship Co.
243	Stmr	Kinau. ....	773 07	Wilder Steamship Co.
286	Stmr	Hawaii. ....	227 44	Wilder Steamship Co.
291	Stmr	Claudine. ....	609 16	Wilder Steamship Co.
330	Stmr	Helene. ....	392 54	Wilder Steamship Co.
338	Stmr	Maui. ....	393 54	Wilder Steamship Co.
207	Stmr	James Makee. ....	136 61	Inter-Island S. N. Co.
224	Stmr	Iwalani. ....	239 81	Inter-Island S. N. Co.
326	Stmr	Mauna Loa. ....	536 07	Inter-Island S. N. Co.
247	Stmr	W. G. Hall. ....	380 27	Inter-Island S. N. Co.
262	Stmr	Waialeale. ....	175 60	Inter-Island S. N. Co.
269	Stmr	Mikahala. ....	354 24	Inter-Island S. N. Co.
311	Stmr	Ke Au Hou. ....	192 64	Inter-Island S. N. Co.
314	Stmr	Kauai. ....	265 13	Inter-Island S. N. Co.
195	Stmr	Kaena. ....	24 43	Inter-Island S. N. Co.
328	Stmr	Noeau. ....	221 18	Inter-Island S. N. Co.
346	Stmr	Niihau. ....	200 92	Inter-Island S. N. Co.
266	Stmr	J. A. Cummins. ....	79 44	Waimanalo Sugar Co.
294	Stmr	Rover. ....	15 26	J. A. Scott.
334	Stmr	Upolu. ....	53 95	R. R. Hind.

## COASTERS.—SAILING.

REGISTER NUMBER.	CLASS.	NAME.	TONS.	REGISTERED OWNERS.
41	Schr	Rob Roy. ....	17 32	J. I. Dowsett.
155	Schr	Mille Morris. ....	13 45	F. W. Wundenberg.
200	Schr	Luka. ....	70 52	Allen & Robinson.
205	Schr	Mokuola. ....	17 10	O. Kalua.
215	Schr	Kauikeaouli. ....	72 13	Allen & Robinson.
244	Schr	Kawailani. ....	24 39	Sing Chong & Co.
250	Schr	Kulumanu. ....	85 22	S. C. Allen.
260	Schr	Moiwahine. ....	75 49	S. C. Allen.
276	Schr	Lavinia. ....	40 06	S. C. Allen.
279	Schr	Kamoi. ....	108 06	S. C. Allen.
239	Sloop	Healani. ....	9 67	F. M. Hatch.
297	Sloop	Kaiulani. ....	12 93	Sing Chong & Co.
298	Schr	Liliu. ....	47 26	J. F. Colburn.
310	Sloop	Hiilawe. ....	3 20	Akona.
313	Schr	Norma. ....	50 69	W. E. Rowell.
321	Schr	Ada. ....	27 93	H. L. Evans.
331	Schr	Mokihana. ....	15 60	P. oseph.
332	Schr	Waialua. ....	24 51	H. L. Evans.
340	Schr	Lady. ....	20 47	H. R. Macfarlane.
344	Schhr	Malolo. ....	23 61	Walter E. Wall.

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.

NAME.	LOCATION.	MANAGER.	AGENTS.
American Sugar Co., Beecroft Plantation,* Ewa Plantation, Gay & Robinson,* Grove Farm,* Haiku Sugar Co., Hakalau Plant'n Co., Halawa Sugar Co., Hamakua Mill Co., Hamoa Plantation., Hana Plantation Co., Hawi Mill & Plantation, Hawaiian Agricultural Co., Haw'n Com'l & Sugar Co., Hawaiian Sugar Co., Heeia Agrl. Co., Ltd., Hilo Sugar Co., Hilo Port. Sugar Mill Co. Kona Sugar Co., Honolulu Sugar Co., Honokaa Sugar Co., Honomu Sugar Co., Hutchinson Sugar Co., Kahuku Plantation, Kaiwilahilahi Mill, Kekaha Sugar Co., Kilauea Sugar Co., Kamalo Sugar Co., Kipahulu Sugar Co., Kihei Plantation, Kohala Plantation, Koloa Sugar Co., Kukaiau Mill Co., Kukaiau Plantation Co.,* Laie Plantation, Laupahoehoe Sugar Co., Lihue & Hanamaulu Mill. Makee Sugar Co., Maunalei Sugar Co. McBride Sugar Co. Nahiku Sugar Co., Niulii Mill & Plantation, Oahu Sugar Co., Olaa Sugar Co. Olowalu Sugar Co., Onomea Sugar Co., Ookala Sugar Co., Paauhau Plantation Co., Pacific Sugar Mill,†	Molokai, Kohala, Hawaii, Ewa, Oahu, Makaweli, Kauai, Nawiliwili, Kauai, Haiku, Maui, Hilo, Hawaii, Kohala, Hawaii, Hamakua, Hawaii, Hana, Maui, Hana, Maui, Kohala, Hawaii, Kau, Hawaii, Spreckelsville, Maui, Makaweli, Kauai, Heeia, Oahu, Hilo, Hawaii, Hilo, Hawaii, Kona, Hawaii, Halawa, Oahu, Hamakua, Hawaii, Hilo, Hawaii, Kau, Hawaii, Kahuku, Oahu, Laupahoehoe, Haw. Kekaha, Kauai. Kilauea, Kauai, Molokai, Kipahulu, Maui, Kihei, Maui, Kohala, Hawaii, Koloa, Kauai, Hamakua, Hawaii, Hamakua, Hawaii, Laie, Oahu, Laupahoehoe, Haw. Lihue, Kauai, Kealia, Kauai, Lanai. Wahiawa, Kauai, Koolau, Maui, Kohala, Hawaii, Waipahu, Oahu, Olaa, Hawaii, Olowalu, Maui, Hilo, Hawaii, Ookala, Hawaii, Hamakua, Hawaii, Hamakua, Hawaii,	D. Center, H. H. Bryant, G. F. Renton, Gay & Robinson A. H. Smith, H. A. Baldwin, George Ross, T. S. Kay, A. Lidgate, J. Meyers, K. S. Gjerdrum, J. Hind, C. M. Walton, W. J. Lowrie, H. Morrison, E. N. Bull, John A. Scott, W. von Grav'm'y'r J. Coerper, Jas. A. Low, John Watt, Wm. Pullar, G. C. Hewett, George Weight, C. McLennan, H. P. Faye, G. R. Ewart, P. McLean, L. Barckhauson, W. F. Pogue, E. E. Olding, A. Cropp, E. Madden, J. M. Horner, S. E. Wooley, C. McLennan, C. Wolters, G. H. Fairchild, W. Stodart, E. E. Conant, A. Hocking, Robert Hall, A. Ahrens, F. B. McStocker, A. Hanneberg, John T. Moir, W. G. Walker, A. Moore, D. Forbes,	C. Brewer & Co. Davies & Co. Castle & Cooke. H. Waterhouse. Hackfeld & Co. Alex'r & Baldwin Irwin & Co. H. Waterhouse. Davies & Co. C. Brewer & Co. Grinbaum & Co. Davies & Co. Brewer & Co. Alex'r & Baldwin Alex'r & Baldwin Grinbaum & Co. Irwin & Co. Hackfeld & Co. M'Ches'n'y&Sons Irwin & Co. Schaefer & Co. Brewer & Co. Irwin & Co. Grinbaum & Co. Davies & Co. Hackfeld & Co. Irwin & Co. F. Hustace. Hackfeld & Co. Alex'r & Baldwin Castle & Cooke. Hackfeld & Co. Davies & Co. H. Waterhouse. Davies & Co. Hackfeld & Co. Brewer & Co. Gear, Lans'g & Co Alex'r & Baldwin Davies & Co. Davies & Co. Hackfeld & Co. Alex'r & Baldwin Irwin & Co. Castle & Cooke. Irwin & Co. Irwin & Co. Schaefer & Co.

## LIST OF SUGAR PLANTATIONS, ETC.—CONTINUED.

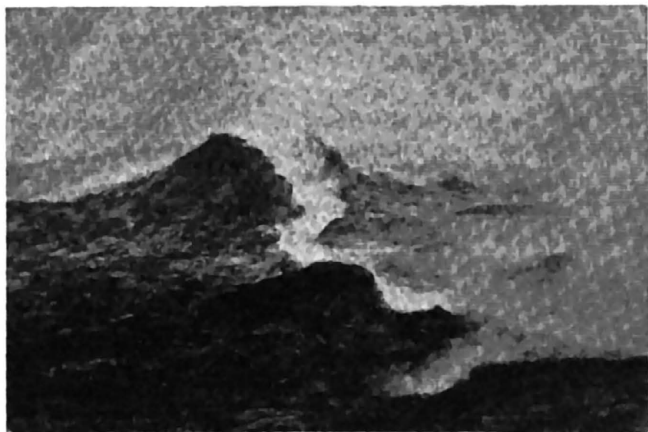
NAME.	LOCATION.	MANAGER.	AGENTS.
Paia Plantation,	Paia, Maui,	D. C. Lindsay,	Alex'r & Baldwin
Palawai Development Co.	Lanai,	W. F. Hasson,	W. H. Pain.
Pioneer Mill Co., Ltd.,	Lahaina, Maui,	L. Ahlborn,	Hackfeld & Co.
Pepeekeo Sugar Co.,	Hilo, Hawaii,	H. Deacon,	Davies & Co.
Union Mill Co.,	Kohala, Hawaii,	J. Renton,	Davies & Co.
Waiakea Mill Co.,	Hilo, Hawaii,	C. C. Kennedy,	Davies & Co.
Waialua Agricultural Co.,	Waialua, Oahu,	W. W. Goodale,	Castle & Cooke.
Waianae Plantation,	Waianae, Oahu,	Fred Meyer,	J. M. Dowsett.
Wailuku Sugar Co.,	Wailuku, Maui,	C. B. Wells,	Brewer & Co.
Waimanalo Sugar Co.,	Waimanalo, Oahu,	G. C. Chalmers,	Irwin & Co.
Waimea Sugar Mill Co.,	Waimea, Kauai,	W. A. Baldwin,	Castle & Cooke

## ASSOCIATED CHARITIES.

In coming years doubtless many of the benevolent disposed of this city will refer back with interest and satisfaction to the organization this past summer, under the above title, of a number of the charitable societies of Honolulu, on a basis of sound business, for the dispensing of needed aid to worthy applicants and placing a check upon imposition, and will wonder why such a system, found so necessary and working so satisfactorily in many cities of the mainland, was not adopted earlier.

The subject has had much thought and quiet agitation among a number of prominent citizens for some two years past, but it received material aid in focusing public opinion to its many advantages through the visit here a short time ago of a lady who, on the occasion of several gatherings, illustrated its successful working in several large cities of the West.

That the new organization does not, as yet, include all the National Benevolent Societies of the city must be due largely from the fact that there are certain prejudices to be overcome, and a general education of public thought on these new lines of systematized charitable work to be accomplished. These conditions, if existing, will gradually be dispelled as the successful and practical working thereof is demonstrated through the experienced manager, who gives personal attention, daily, to all applications of the needy. Its board of officers is, furthermore, a guarantee that the benevolent work of the city will be properly administered.



*Photo by J. J. Williams*

*Sketch by D. Howard Hitchcock*

ACTIVE CONE VIEW

## MAUNA LOA'S ERUPTION OF 1899.

Narrative of a trip from the Kona side to include a view of the Summit Crater, Mokuaweoweo.

**I**N the early part of July, 1899, the residents and visitors in the city of Honolulu were thrown into a fever of excitement by the report of a volcanic outbreak on the slopes of Mauna Loa, that restless mountain on the Island of Hawaii. Two days later the report was confirmed, the outbreak having occurred on the morning of July 4th. Among others the writer packed his grip, saddle, bridle and other equipment for "roughing it" and boarded the first steamer for the "big island," resolved to make the most of this chance of a life-time.

On reaching the west coast of Hawaii it was learned that the new crater was located on the east slope of Mauna Loa, yet it seemed best to our party of five, on arriving at Kailua, to land there and make the ascent from the Kona side. A party had just returned to this point after making the trip and while they reported the usual hardships of mountain travel, still they gave such glowing accounts of the grandeur of what they had seen, that we immediately secured their guide and made other necessary arrangements. I was especially pleased to make the trip from the Kona side as this would necessitate visiting the summit crater Mokuaweoweo, a point not often visited either by tourists or residents. We knew this would be a harder trip than from the Kau side, as we were to ascend from 3,000 to 4,000 feet above the level of the new vent and would have to travel several miles from our camping place around the rim of the summit crater before descending to the active cone.

A ride of twelve miles, for the most part over good roads and between thriving coffee plantations, brought the party to a small country hotel where we rested for the remainder of the day and night.

Early the next morning (July 13) we were up, putting on coarse garments and heavy hobnailed shoes for the rough trip and at six o'clock the horses and pack animals came clattering up the highway. Gasper, the guide, a short wiry Portuguese with small pale blue eyes, bids us "hurry up" and about nine o'clock the train sets out.

Our trail led away from the public roads and we began an upward ride which did not end until the following afternoon. The path at first bold gradually became narrower. The jungle was avoided, Gasper leading the party through the wooded pasture lands, so that we had little opportunity to see the rank growth of tree ferns and iaia vines which abound in the virgin forests of this region. But the koa trees were giants, towering in the air, and stretching their crooked limbs far out from the main trunk. The undergrowth was rank with grass, weeds, and coarse ferns, brushing the horses' sides and wetting our feet and legs as we followed the narrow trails, for the clouds daily settle down over this region and the vegetation drips with water. Of the ferns

there were many of the smaller varieties of the *Asplenium*, *Aspidium*, *Pteris*, *Polypodium*, *Sadleria*, and the finest specimens of the *Gymnogramme Javanica* that I have ever seen. There was likewise a giant growth of wild raspberry and blackberry bushes from ten to twelve feet high.

We halted for the night near the upper limits of the forest, pitched our tent with open side towards a roaring fire and after a hot supper, whiled away the evening hours telling stories and inwardly rejoicing that we were in a measure simulating the mode of life of our prehistoric ancestors. Gasper got us out at an early hour the next morning, and in a half hour after mounting our animals we had passed above the upper limits of the forest. A few stumps of stunted lehua trees among low shrubs, and sparse grass struggling in a shallow soil among rocks and boulders of a lava character, gradually gave place to the ever increasing rocks until by eleven o'clock we had reached the pahoehoe with never a spear of grass or frond of a fern to be seen.

In 1896 Gasper guided Dr. Benedict Friedlander to the summit of Mauna Loa. After making the trip, for the most part on foot, he told that gentleman that he believed he could conduct a party to the summit on horseback the entire distance. He was right. By carefully studying the surface of the mountain one can follow the longer reaches of pahoehoe on which any well shod horse can easily travel by avoiding the patches and streams of aa on which no beast of burden could travel any great distance. Only once or twice was it necessary to drive our animals on the aa and even then, only to cross narrow streams from pahoehoe to pahoehoe; the average slope of the mountain is only seven ( $7^{\circ}$ ) degrees. But the summit seemed to be a sort of phantom, ever luring us on, and ever eluding us. Many times, ahead of us, we saw a ridge where earth and sky seemed to meet and there we expected to find the summit. But no. On closer approach this ridge was seen to be flanked by another and still another; so that at least ten times did we think the highest and most distant visible ridge must be the summit, and yet it was not. On, on, up, up, ever up over the most desolate country God's hand has created; no plant, no animal, no water, nothing but a waste of barren rock. However, by five o'clock p. m. we really reached the summit and I rushed quickly

ahead of the train to the rim of the summit crater for a "first view."

To a person who has spent a few days at the Volcano House visiting Kilauea and its environs, or to one who has climbed to the summit of Haleakala, Mokuaweoweo is disappointing. Probably this feeling arises partly from the fact that Mokuaweoweo is very similar to, yet a little smaller than, Kilauea, and of course is insignificant compared with mighty Haleakala; and again, after two days' steady riding in the saddle a person becomes somewhat weary, so much so that only a very tremendous sight can possibly arouse enthusiasm on the part of the observer: and Mokuaweoweo is not tremendous.

The long axis of this crater extends in a nearly north and south line. At the northern extremity there are terraces of considerable breadth, while at the southern extremity there is a narrow opening whose termination could not be seen from our position on the west side, at the highest point of the mountain, owing to the jutting walls of the west side. From beyond this region farther to the south great volumes of steam came pouring up, suggesting several steam cracks of considerable size. Directly across, the almost vertical east wall rose above the floor of the crater from 600 to 750 feet while immediately in front of our position the west wall stood up about the same height, appearing, as we leaned to look over the edge to be vertical: the usual optical illusion, stones thrown out horizontally as far as possible, fell short of the floor of the crater.

The floor of the crater was of black lava, to all appearances precisely like that of Kilauea, with a few rough patches here and there which I believe was aa. Extending in a direction roughly parallel with the west wall, from the talus at the base of the lower terrace at the north, pretty nearly to the gap in the south, there stretched a crack in the crater-floor, all points of which lay slightly west of the medial north and south axis. From various places along this fissure rose up nearly all the signs of the existence of volcanic fires beneath; these evidences were sickly jets of steam, rising in such a manner as to suggest no urgency from below. Also at the bottom of the southwest wall the talus appears to be undergoing a transformation into sulphur banks. There was nothing in the appearance of this summit crater to warrant an



assumption that, at this very time at an elevation of 3,000 to 3,500 feet below the level of this floor, there was a genuine volcano in terrific eruption.

By 5:30 p. m. the air became decidedly chilly and we were glad to get refreshments of meat, hard-bread and hot coffee. The tent was erected and anchored with stones. The air became gradually colder until we were obliged to get all the protection possible, either in the tent or in a cave near by, wherein we passed the night more or less miserably on account of the cold wind which somehow entered in spite of all we could do. One of the party already had a severe case of mountain sickness accompanied with violent headache. All suffered a little with pains in the head. My respiration and pulse were both normal as long as I remained quiet, but quickened some on exercising. Yet all night long I had a sense of insufficient air for easy breathing. The horses really suffered severely, having no protection whatever. They amused themselves by chewing off the ropes and leading the packer lively races to prevent their going down the trail homeward. We found water in fissures, enough for all the horses on our arrival at the summit, over the surface of which on the following morning not less than ( $\frac{3}{8}$ ) three-eighths of an inch of ice had formed during the night.

Early morning found us preparing for the foot journey to the new crater. As little luggage as possible was carried, the most essential being canteens of water, light provisions and photographic apparatus. The new vent lay directly east on the farther side of the crater of Mokuaweoweo, near the source of the flow of 1881, so that we were obliged to make a detour around the north extremity before proceeding directly down the slopes to the active cone. This gave Mr. Davey, the photographer, opportunity to secure views from several different positions.

By ten o'clock two of the party had had a sufficient amount of the sort of travel required in getting anywhere in that region and turned back. Messrs. F. Davey, Harry Klugel, Sterns Buck, the guide, his son and the writer pressed on for the goal. By noon we could plainly see that two vents had formed since the first outbreak and, of course, the upper nearer one was now merely a smouldering heap while the lower and farther one was the real

fountain-like crater. But they were yet far away. Still we pressed on, stumbling and staggering over the jagged shoe cutting aa. And how many times we said ah! ah! By two o'clock we had reached a ledge near, and a little to the northwest, of the upper vent. This had the shape of a truncated cone with a deep gash on the upper side in which we could plainly see red hot rock: from this vent as well as from the top of the cone great volumes of sulphurous steam poured forth. The trade wind carried these fumes over the southwest side, compelling us to pass along to the north and east of this pile on our way down to the spouting crater.

We had now reached the pahoehoe of the '81 flow and could have proceeded rapidly, but here on the north side of this vent was scattered broadcast a deep layer of sponge like pumice of a light brown color into which our feet sank as in sand on a beach. Progress was slow. On arriving at a position on the lower aspect of this smouldering heap we could see that there was also a great vent, still red hot, on the lower side, from which the lava had escaped from the interior and it had flowed down the mountain in a wide stream twenty feet deep, now hardened into aa but still hot, lying upon the pahoehoe of 1881. All the region between the two cones was covered with this new flow and the spouting crater was surrounded on the upper (west) and north and northeast sides by this new hot aa. We were able to approach within about 1,000 feet of this crater, and remained here several hours watching the display. Mr. Davey took photographs both for detail of the crater and for spiriting lava and clouds of vapor. Here, one could say with truth, was nature in her devilish mood. To sit and watch and listen, was to be filled with awe; to wonder and reflect on one's own insignificance in this mighty universe of which somehow, and in some mysterious way, each of us is to be yet accounted an organic active part.

The display was a continuous lava fountain without cessation. Rocks were ever rising from or falling back into the mighty cauldron, and yet the shapes of the pieces and the general structure and outline of the masses as they stood for an instant before commencing to fall back into the seathing pit was never twice alike. So with the clouds of vapor.

From the myriads of fantastic structures two impressed them-

selves vividly and indelibly on my memory: at one time I could imagine a mighty fiery dome pinnacled by a column of flame red lava: at another time an Eiffel Tower stood in outline for an instant and then fell back in a heap of ruins.

At other times one could imagine a mighty demon at work within the pit having in his control the nozzle of a huge pipe from which he was directing a stream of liquid rock, sweeping it from one side to the other as easily as we direct the stream from a garden hose, and so the lava was thrown from side to side, occasionally falling back on the exterior of the crater and thus gradually building it up.

When such masses fell on the outside it was interesting to note how rapidly they flowed, like water, for a second and then stopped in an instant, frozen into a brownish black mass indistinguishable from the rest of the cone on which it had landed.

By daylight one could see that the lava rapidly cooled even as it arose aloft, darkening perceptibly. But by night such cooling was scarcely observable so that the grandeur and beauty of the night effects greatly exceeded that of the day. The rock still glowed after falling back on the outside of the cone.

Several observations were made to determine if possible the height to which the lava was thrown; many times pieces of rock were visible for fully eight seconds above the rim of the cone. Now on the basis that the laws of freely falling bodies can be applied here, the time of rising or falling being four seconds each, by using the well known formula, the height to which the masses were hurled comes out 256 feet. I believe, however, the laws of freely falling bodies can not be applied: the lava is too porous and light, feathery; and there are upward currents of air and steam which must greatly impede the fall of these masses of low specific gravity; if so, the extreme elevation never exceeded 150 feet.

Having remained by the crater several hours, we began to retrace our steps to our camping place, ten or twelve miles distant on the summit of the mountain. We had proceeded but a short distance when we noticed that the wind had shifted around  $180^{\circ}$  and that the fumes from the upper pile were drifting down and across our former trail and also far off to the northwest were hovering down upon the slopes of the mountain. This caused me a little

anxiety as soon as I saw it, but we tramped along until we encountered the fumes. Then anxiety became acute. The sulphurous fumes were dense and strong. We attempted to pass through but could not do so, either close to the base of the cone or farther away to the northwest. The choking sensation in the lungs and irritation in the nostrils could not be endured.

The situation looked serious: to cross the hot aa between the lower and upper crater and thus gain the windward side of the upper crater was absolutely impossible. We tried it. To attempt retreat down the mountain towards Hilo was out of the question. The general direction to Hilo was down the slope over the barren lava to the forest, and then a two days' trip through the jungle unless we might accidentally strike a trail: and worse than all that, we had no water for such a trip, every canteen was dry. To move out parallel with the stream of fumes towards the northwest until they should be thinned out so that we could pass through them seemed questionable. Sulphurous oxide is a heavy gas and would hug the surface for miles. This would be almost as bad as to try and reach Hilo. Just then the wind shifted  $10^{\circ}$  more, crowding us towards the hot aa. At this moment we began to utterly despair of ever reaching civilization and some of us pictured ourselves overcome trying to push through the fumes to the upper side of them, or imagined a lingering death on the barren waste of rocks or in the forest jungle, maniacs raving for water.

Just then one of the party studying the cloud of fumes, saw near the top of the cone a patch of blue sky through a rent in the smoke. This less dense portion was slowly drifting along with the rest. Brief calculation from its motion indicated about where it would settle down on the rocks to the north. "Fellows, there's our chance! Come on!" Snatching up packs and canteens we ran with all speed to the spot, made a dash through the vapors which choked us terribly and irritated both eyes and nostrils. The boy with the heavy camera plates falls down, overcome. Grabbing his pack I pushed him up and urged him on a few steps farther. They closed in behind us. But we were on the upper side of them now and were safe. Never again, as we looked back on those vapors during the night did we see another break in them.

The remainder of that night and part of the next morning were



ON PELE'S HIGHWAY

*Photo by J. J. Williams*

occupied in making the ascent of the slopes and reaching again our summit camp. Without water, with sore feet, and painful steps, with aching muscles, with hands benumbed with the cold, freezing air, up, over the shoe cutting aa we stumbled along, picking our way as best we could by the glare from the volcanic fires and the dim light of a quarter moon. Some one exhausted dropped down; we all rested a little; then up again until another dropped exhausted. After a time exhaustion became so great that to sit down to rest meant to immediately fall asleep; but the freezing wind piercing our garments chilled us to the bone and presently we would awake with chattering teeth and quivering limbs. Thus the night passed. Morning began to dawn; the sun lighted up the distant clouds below us and the smoke of the volcano, still drifting off to the north, hung like a claret colored scarf against the feathery whiteness of the clouds beyond. A cheerful warmth in the sunbeams was very welcome.

Some of the party suffered intensely from thirst; one said: "I never had so much respect for water before, I'd give \$5.00 for a glass of it." Thirst works strange havoc with vision. Late in the afternoon when watching the crater a sufferer pointing to a spot on

the hot aa said he surely saw a stream of water not more than a hundred paces distant. The following morning as we were nearing the water holes adjacent to our camp two thirsty men looking into a fissure thought they saw water in it. They threw off their packs; one with a canteen quickly descended to the bottom of the fissure. There was no water there. He called back in a surprised and disappointed tone, "there is no water down here." The fellow above gazing in replied. "Yes there is. Can't you see it? See it splash when this stone strikes it." He dropped the stone. It passed directly through the apparent water surface and bounced on the rocks at the bottom of the crevace. What was it? Simply a little mirage in a fissure deceiving a human being suffering intensely with thirst.

But we all reached camp after a while, straggling in one at a time. Then a little hard tack, hot coffee, and gallons of water, and a little delicious rest on soft blankets under the sheltering tent, and all were ready to mount horses and descend the mountain.

A day and a half later we rejoiced in the simple luxuries of a little country hotel well satisfied with our trip.

This volcanic outbreak was found to have occurred near the source of the flow of 1881, with two streams coursing down the mountain side, one running toward Kau—lasting some ten days—and the other and larger flow directed toward Hilo, until July 23rd, when eruptive activity ceased. This was followed by severe earthquakes, felt in various parts of the island during the day, though doing no harm. And the flows of nearly three weeks duration by traversing areas already claimed by vast lava beds, did no damage to the country whatever.

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*Oahu College, Honolulu.*

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TURKEYS were first introduced into these islands in 1815 by Captain John Meek, from Coquimbo, Chili, in the trading ship *Enterprise*. Mangoes are reported to have been first introduced by Captain Finch in the U. S. S. *Vincennes*, followed in 1824, by plants from Manila by Captain Meek, then in the brig *Kamehameha*, which were divided between Messrs. Goodrich and Marin.

## THE HAWAIIAN ISLANDS.

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BY WALTER MAXWELL,

*Director and Chief Chemist of Hawaiian Sugar Planters' Association.*

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(From Year Book of Department of Agriculture, 1898, and revised by the Author.)

### AREA AND POPULATION.

THE Hawaiian group comprises some eight distinct islands, seven of which have a registered population. These islands are separated from each other by ocean channels that vary in width from the narrowest, covering 6 miles of sea, to the broadest, measuring 61 miles. The archipelago lies within the limits of latitude  $19^{\circ}$  to  $22^{\circ} 15'$  north and of longitude  $154^{\circ} 48'$  to  $160^{\circ} 20'$  west.

The superficial areas composing the group, with their respective populations, are as shown on page 17.

The population record is the result of the census of 1896. Since that time, however, the total given has been appreciably added to, and the growth is in progress.

### CLIMATIC CONDITIONS.

In relation to the small land areas, the variations in temperature and rainfall are extremely great. These variations are due, first, to land altitudes and, second, to the exposure to rain-bearing winds. Taking Honolulu as an example, the average of temperature for the year is  $73^{\circ}$  F., with an average of night temperatures of  $68^{\circ}$  F., and with  $80^{\circ}$  as the average of the year's day temperatures. The extremes of variation are  $48^{\circ}$  F. and  $87^{\circ}$  F. during the year's course. Locations at sea level, corresponding to Honolulu, with leeward exposures, present the same conditions, some

having temperatures  $1^{\circ}$  to  $3^{\circ}$  higher, others  $1^{\circ}$  or  $2^{\circ}$  lower; while sea-level temperatures with a windward exposure are generally lower, in some cases  $5^{\circ}$  to  $7^{\circ}$ . Leaving the sea level, the air temperature falls with increasing altitude; in certain ascertained locations it falls at the rate of  $1^{\circ}$  F. for each 200 feet. The rate of decrease of temperature, however, is very variable, being affected by such factors as prevailing winds, open or forest-covered areas, level or extremely broken up land surfaces, and the prevalence of deep valleys and alternating ridges. Due to these factors, climate is extremely local, varying with the prevalence of conditions confined within very small areas. Yet, there is the general decrease in temperature with the increase in altitude, this rule progressing until a temperate climate is reached, the variation in temperature moving between  $3^{\circ}$  above freezing point and  $70^{\circ}$  F. Finally the elevation depresses the mercury below freezing point, from which level the ascent leads up to the great mountain altitudes of from 8,000 to 14,000 feet, where many degrees of frost have been recorded, and where the snow lies during most, and in some places all, of the months of the year.

The variations in rainfall are as great as in temperature, the factor of altitude being the main cause of variation. At the sea level in Honolulu the rainfall is some 32 inches per annum; at an altitude of 900 feet the rainfall is 116 inches. On the island of Maui in one district the rainfall at sea level was 28 inches, and, during the same period, at an altitude of 2,800 feet the yearly rainfall was 179 inches. Exposure to rain-bearing winds, especially where the land surfaces are covered with forest, is also a controlling factor, in unison with the factor of elevation. In the driest district the rainfall rises with the altitude; but, taking the island of Hawaii as an example, between districts of the same island, and at corresponding altitudes, the actual records show variations in rainfall between 60 and 160 inches per annum. The extremes of variation in recorded rainfalls, covering the four chief islands, are between 12 inches and  $19\frac{1}{2}$  feet of rain per year.

These varying conditions of climate, due mainly to altitude, provide most reassuring possibilities in respect to the public health. It is also apparent that these great variations in temperature, by which even the limited area of these islands is resolved into actu-



ally tropical and temperate zones, constitute a basis upon which a most diverse agriculture can be built up.

#### SOILS OF THE ISLANDS.

Over the sites upon which the several islands rest today the waters of the Pacific rolled, and but a short time ago. The islands are the result, on one hand, of vast internal earth movements, whereby submarine levels were lifted up, and even raised sheer out of the water; on the other hand, continuous or successive periods of eruption, which were at first submarine, by vast outpourings of lava laid the broad foundations of the islands beneath the ocean surface, and finally raised the superb mountain cones and heights, reaching up to as much as 14,000 feet above the level of the sea. The whole islands, therefore, are of volcanic origin, and, geologically speaking, they are of very recent date.

In consequence of the volcanic origin of the islands, the soils are wholly derived from basaltic lavas. In respect of color and geological and chemical composition and nature they fall into the following classes:

(1) **DARK-RED SOILS.**—Soils formed by the simple decomposition of normal lavas under climatic action, and more particularly where great heat and small rainfall have prevailed.

(2) **YELLOW AND LIGHT-RED SOILS.**—Soils which differ not only in color but also in their composition from the dark-red soils, these differences being due to special physical and chemical influences which marked their origin.

(3) **SEDIMENTARY SOILS.**—Soils derived from the decomposition of lavas at high altitudes, the decomposed matter being removed by rainfall and deposited over lower levels.

#### LOCATION AND CHARACTERISTICS OF THE SOILS.

On account of the gradual rise in altitude of the lands from the sea level to the mountain elevations already described, the soils have come to be spoken of also as "lowland" and "upland" soils. The measure of increase in altitude is, on an average, some 300 feet per mile, thus furnishing the acute slopes which have caused the formation of the sedimentary soils.

The "sedimentary soils" cover the levels and flats bordering on the sea, forming also the deltas receiving the wash from mountain gorges and valleys. These soils, almost without exception, are very fertile, and because of their great depth over considerable areas the fertility will be of long duration.

The "dark-red soils" are chiefly confined to the areas located immediately above the sedimentary flats and lowlands, on the leeward and dry sides of the islands. These soils are also of great depth and uniform composition, and their fertility, so far, is equal to that of the lower lands.

The higher lands, or such as range from 200 to 500 feet above sea level up to 2,000 feet, are extremely different in type and composition. Due to the heavy rains that fall upon the uplands, the decomposing lavas and soils have been largely borne down to the lower levels, and, as a result of the climatic conditions, these highland soils are not only of small depth, but they also have been largely depleted of the more soluble elements upon which vegetation thrives. These soils therefore are less fertile, and their virgin fertility becomes comparatively quickly exhausted. In general, however, Hawaiian soils are of great virgin fertility. Agriculturally, they are young and in a state of primary freshness as compared with the soils of old continents and islands.

#### PRODUCTS OF THE ISLANDS.

The Hawaiian Islands are wholly dependent on agriculture for their industrial maintenance. There has been no industry not directly agricultural up to the present date of their history. This fact makes it very urgent that the agricultural resources, so far the only source of wealth of the islands, should be developed along all possible lines and to the utmost limit.

#### SUGAR.

The production of sugar employs the major portion of the capital and labor upon the Hawaiian Islands; it also furnishes the bulk of the exports, and provides the wealth and maintenance of the great majority of the people.

It is about sixty years since sugar was first produced for sale

upon the islands. At that time the methods of cultivation and manufacture were very crude and the production was small. Even so late as the year 1880 the total output is recorded as having been 30,000 tons. Without taking the time and care to traverse each stage in detail in order to show the "ups and downs" of the industry and by what efforts it has reached the present dimensions, it will be sufficient to state the total value of Hawaiian exports for 1897 and the proportion of that value accruing from the shipment of sugar: The total of Hawaiian exports for the year named amounted to \$16,021,775.19, while the sales of sugar amounted to \$15,390,422.13. These figures present at a glance both the sum of the trade which the islands transacted in 1897 with foreign countries (over 99 per cent of which was with the United States) and the dominant and vital part that sugar plays in the industrial existence of the country.

Sugar is grown on Hawaii, Maui, Kauai and Oahu, the four largest islands in the group, and its cultivation is about to commence on the islands of Molokai and Lanai. There are some sixty plantations now in operation, each one having its own mill or factory equipped for the manufacture of raw sugar. The sugar-growing and sugar-making capacities of these estates vary between less than 1,000 tons up to near 20,000 tons of sugar per annum.

Much of the low, level, sedimentary areas bordering on the seashore is used for growing sugar, while the areas of rich, dark-red soils, located at comparatively low altitudes, are used, exclusively for this purpose. Very considerable breadths of the less fertile yellow and light-red soils, with larger stretches of uplands that reach up to 1,500 feet, and in locations as high as 2,000 feet, above the sea, are also used, so far as it is found profitable, for sugar growing.

The relative fertility and values of the several soils are shown in the following statement from an official investigation, which embraces the average results of three successive crops:

*Productiveness of Soils.*

	Pounds of sugar per acre.
Dark-red soils.....	10,411
Sedimentary soils.....	10,301
Yellow soils.....	6,291

On an average two years are required to make a crop of sugar in Hawaii, while only one year is required in Louisiana, so that the sum of the Hawaiian yield requires so to be cut in two in order to compare it more accurately with the annual production of Louisiana.

The area of arable lands used in growing sugar in Hawaii may be deduced from the figures in the following table, which also shows the annual production of sugar :

*Annual production of Sugar in Hawaii.*

Year	Cane manu- factured	Sugar made	Yield of sugar per acre
	<i>Acres</i>	<i>Tons (2,000 pounds)</i>	<i>Pounds</i>
1895 .....	47,399½	153,419½	6,472
1896 .....	55,729	227,093	8,148
1897 .....	53,825½	251,126	9,331

The average number of acres of cane manufactured for the three years given was 52,318. As the crop requires most of two years to mature, and as two crops are always in course of growth at the same time, it is seen that the acreage under cane is not less than 105,000 acres. Since some small areas of extreme uplands are two and one-half years in reaching maturity, the above area must be considerably added to. Considering the further fact that some portion of the total area is always lying out for rest, we are justified in concluding that the land in use for cane growing is 125,000 acres.

RICE.

At the present time rice occupies the second place in the area of production and in the value of product. The total production can not be exactly estimated, since a part is consumed upon the islands. The exports of rice for 1897 were 5,499,499 pounds, valued at \$225,575.52.

The home consumption is large and would greatly augment the production indicated by the exports.

The lands used for rice are chiefly the lowest flats found at the

outlets of valleys and close on the sea. These lands are generally fertile, but often too low and swampy for cane culture. These locations are favored with an abundance of sweet water, which is discharging to the sea, and this is a first essential condition in rice culture. During the growth of the crop and up to the time of maturity the lands bearing rice are held under water, which is kept gradually flowing and not allowed to stagnate and sour on the ground.

The rice growers are almost wholly Chinamen. This race is able to work and thrive in conditions of location and climate which other peoples do not appear able to endure. From lowland climatic action, which is liable to induce low fever, especially among Japanese, the Chinaman is apparently immune. Certain small areas of low bog lands in and about the suburbs of Honolulu are being rapidly drained, cultivated, and planted with vegetables or fruits or overflowed with sweet running water to support the rice crop.

The area of rice lands is not appreciably increasing. There is a tendency to use certain of these lands, which allow of it, for sugar growing, the present prices of sugar being very tempting.

#### COFFEE.

The coffee berry is a natural product of Hawaii. It is growing wild in locations upon several of the islands. These wild trees have reached a large growth, and they are still furnishing berries to the native Hawaiians. When the berry was first introduced into the country is not known. It passes as one of the growths native to the islands and their conditions.

The interest taken in coffee today, however, with its prospective value, is lifting the question of production from a wayside matter into one of the most engaging industries of the islands.

Coffee is being cultivated upon the four larger islands. On Maui and Kauai the work has not passed the experimenting stage in areas and results. On Oahu the production is, in one district, getting on to a commercial basis. It is to the island of Hawaii, however, that one must go in order to see what is being done and to estimate the possibilities of the industry.

There are four main coffee districts on the island of Hawaii, namely, Puna, Olaa, Kona, and Hamakua. A census of the areas in the several districts that are at this time under coffee has been attempted, but the data do not justify a precise statement regarding the number of acres and accomplished results. Many planters express areas by number of trees, but as the distance between trees are not uniform acreage can not be reliably deduced. In the district of Olaa, which claims the largest total area and the greatest number of planters, the land actually under coffee is about 6,000 acres. The other districts have relatively smaller areas under plant than Olaa, but this present circumstance does not necessarily indicate the future relative importance of the several districts. The matter of soil, with the essentially associated climatic conditions, are the prime factors which will ultimately determine the values of the respective districts for permanent coffee growing.

An idea is had of the commercial importance of the coffee industry by observing the exports of the berry to other countries. Foreign shipments, however, do not express anything like the volume of the total production, since the coffees used on the islands are chiefly home grown. The exports for 1897 were 337,158 pounds, valued at \$99,696.62. These figures, however, not only do not represent the volume of production for the year stated, but they fall still further short of indicating the present basis of the industry. The coffee tree requires several years of growth in coming to economic bearing. This means that while the present area of actually bearing lands is so much, a larger or smaller area may be in course of coming up and will be added to the actually producing lands within a year or so. This fact is well illustrated by the following condition now obtaining in the Olaa district: Coffee area—under one year old, 1,821½ acres; one to three years old, 2,749½ acres; over three years old, 1,344 acres.

Certain of the areas of "from one to three years old" in 1897 are now bearing, and other areas are closely approaching that state.

The coffee industry of Hawaii is not destined to impress the world by the great areas under cultivation or the volume of shipments corresponding to the production of other countries. Hawaiian coffees, however, are on the way toward a permanent reputation for high and specific quality. They have their own aroma

and marked flavor as distinctly as does the Hawaiian pineapple, which makes it aromatically superior to most known pineapples. With the delicate flavor is also associated a mildness and freedom from the acridness that marks many individual and unmixed coffees that are on the market. Hawaiian coffee is complete in itself, and no known mixture adds to its native excellence. Prices already obtained for selected samples sold abroad justify the view that this coffee is capable of reaching a unique position, where quality and not price is the first consideration of the consumer. This consideration of "quality" makes it necessary in the highest degree that the culture shall receive specially intelligent care. It is further and equally necessary that the utmost attention shall be given first to the cleaning, and then to the grading of the berries, in order to place them on the market in presentable and advantageous form.

The coffee industry is in the hands of men of varied nationalities. Among these are found Germans, Portuguese, Americans, Englishmen and Asiatics. The great body of coffee growers, however, are Anglo-Saxons. These men are, in the main, prospective and permanent settlers. If they succeed in their undertakings the country will be benefited by the addition of an industry which will bring it a class of weighty and valuable citizens.

It is not possible at this time to speak with full detail and assurance upon the present economic condition of the industry. There are concerns which are reported to be already upon a paying basis and where good interest is being received upon the capital invested. There are others which have not yet reached the stage of returns on the outlay, and there are cases where loss and failure have resulted. These cases of actual failure, however, should not be allowed to prejudice the situation of the industry. The causes of failure in certain cases have been just those causes which would have induced failure in any undertaking. For example, where a man has gone into coffee with too little capital he has not been able to hold out until the crop reached the bearing stage, or stage of returns. Again, men have gone into coffee culture without knowledge of, and experience in, the work, and loss and failure have followed in those cases also. It is most liable to be the case, however, that the man of small capital is also a man of little exper-

ience, since where there is more capital at stake and more experience to direct its expenditure men move slowly. Where both want of capital and of experience come together then the result is sure and not far off. Apart from individual cases, it must be said that natural conditions, such as soil and climate, the state of the younger plantations that are on the way to the bearing stage, with certain actual results from older plantations—all these indicate that coffee growing may become a sound and paying industry in these islands.

The scale upon which it will be most profitable to carry on coffee planting has not yet been determined. The small planter may be able to make it work with coffee as the money-yielding crop, but producing most of the articles of food for himself and family. By men of capital, who have looked into the question more precisely from the financial standpoint, it is definitely stated that, in order to make coffee a permanent industry and capable of taking its place with other industries, the plantations must be on a comparatively large scale, so that it will be possible to engage a steady supply of labor for them and provide the best mechanical means for the cleaning and grading of the berries. One other view is that coffee will become the most remunerative as an adjunct to existing sugar plantations, chiefly on account of the matter of labor. It is strongly represented that as the altitude for coffee planting commences where sugar planting ceases, the industries are naturally contiguous, and by an adjustment of the labor staff could be made interdependent. There are two examples which indicate that this latter view may develop into a reality.

#### FRUITS.

The fruits that are grown in quantities to amount to items of export are bananas and pineapples. The total production of these fruits it is not possible to give. The home consumption of each fruit is very considerable, being consumed by all classes of the community. The exportations of the two fruits, respectively, for the year 1897, most of which went to the United States, with a fractional portion to Canada, were as follows: Bananas, 75,835 bunches, valued at \$75,412.50; pineapples, 149,515 pcs., valued at \$14,423.17.



These are the two chief fruits of the islands, for which there is an ample market in the United States free from competition with the American articles. Any other fruits, such as oranges, limes, and lemons, or stone fruits, although capable of being grown in abundant quantities to meet the island requirements, can not be grown for export to enter into competition with the fruits of California.

The bananas grown on the islands are well known for their extremely good quality. Chinamen are the chief cultivators of the banana, which flourishes in rich, deep, alluvial or deposit soils on the low levels near the sea and in the rich and protected valleys. White men with their better methods surpass Chinamen in the cultivation of this fruit.

The pineapple culture has been taken up by Americans and other white culturists. The very finest fruit, however, is the small native pineapple, which has an extremely delicate aromatic flavor. The latter has been grown an indefinitely long time and chiefly by the native Hawaiians.

The capabilities of the Hawaiian soils and climates for variety and excellence of fruit production have not yet been amply tested. There are individual locations and private grounds where experiments are seen in course of trial which indicate that fine quality and an enormously increased quantity of the fruits mentioned and numerous others can be grown with full success.

#### VEGETABLES.

The city of Honolulu is almost wholly supplied as to its table needs by Chinamen, who occupy suitable lands within and around the city limits. The mode of distribution or service of houses is fairly good, but the quality and variety are limited and poor. Without specifying in detail, there is an ample field for improvement in the methods of supplying the tables of the city with green food of well-developed quality and freshness. The country districts provide themselves, yet hardly any surplus reaches Honolulu excepting native taro and a few bags of Irish potatoes.

#### NEW CULTURES AND INDUSTRIES.

Concerning the addition of new cultures and industries to the ones that have been described very considerable may be indicated.

lands which attest beyond question that much can be done in grape and wine production. It is not possible to say at this time what action the soils may have upon the character of the juice and its products, excepting that much of these lands naturally tends to produce high purity and quality in the saps and juices of vegetable organisms generally as compared with the soil and atmospheric conditions of other lands.

Also, in addition to fruits and their products that may be added to the present industries of the islands, it is quite within the limits of probability to say that the soils and climates of the islands will be found favorable for the culture of plants and trees that yield "barks" and "milks" from which medicinal preparations are made. The cinchona barks can certainly be produced on the sheltered altitudes of the islands. Again, there are the conditions here for producing growths yielding flavors and dyes.

Further, there is room for a great expansion in fruits and growths that thrive specially well in salt soils near the sea. The cocoanut trees thrive admirably in these locations, and in time would be remunerative as an incidental culture.

Some note is to be made of possibilities in cereal production. The great differences in climatic conditions, that is, in temperature and rainfall, of which account has been given, indicate that there probably exist locations at temperate altitudes where wheat, barley, oats, and corn can be, and in fact are successfully grown. At an earlier time wheat was grown in small amounts for bread making. Patches of oats may be seen to-day, while very recent experiences with American corn have shown that this cereal grows and matures perfectly. These observations are of special moment, since the successful establishing of small holdings and permanent settlers upon the available lands not under sugar will largely depend upon the ability of those small farmers to provide all the feed required by their animals, as well as most of the sustenance for themselves and their families. It is thus fortunate that the conditions suitable for growing coffee are also the conditions in which corn, sorghum, rye, and other cereals, and all common vegetables can be produced.

## FORESTS.

The forest areas of the Hawaiian Islands were very considerable, covering the upland plateaus and mountain slopes at altitudes above the lands now devoted to sugar growing and other cultures. Those areas, however, have suffered great reduction, and much of the most valuable forest cover has been devastated and laid bare. The causes given, and to-day seen, of the great destruction that has occurred are the direct removal of forest without any replacement by replanting. Again, in consequence of the wholesale crushing and killing off of forest trees by cattle which have been allowed to traverse the woods and to trample out the brush and undergrowth which protected the roots and trunks of trees, vast breadths of superb forests have dried up, and are now dead and bare. All authorities of the past and of the present agree in ascribing to mountain cattle, which were not confined to ranching areas but allowed to run wild in the woods, the chief part in the decimation of the forest-covered lands.

Forest areas reserved with respect to location and maintained in a state of vigor and sound growth are of the first importance to the agriculture of the islands. The greater number of the sugar plantations and all of the rice and banana fields are depending upon an elaborate and costly system of irrigation for their water supply, and the operation and availability of the irrigating waters are largely depending upon the area and state of the forests upon the mountain altitudes. It is not only claimed that cool forest covers cause precipitation of rain, but that the thick undergrowth and brush assist in conserving the water and in preventing its precipitous discharge to the sea, which conditions are indispensable in maintaining a regulated supply of water for distribution over lower lands.

Efforts have been made to restore the forest where it has been killed out. Several of these individual efforts have not only resulted in great benefit to the localities where the experiments have been made, but they are serving as object lessons, showing the immediate need of inclosing given forest areas and defending

them against the action of cattle, thus allowing the depleted undergrowth and trees to come up again, a result which has followed in every case where inclosure has been adopted. Local efforts, however, do not meet the demands of the forest question from the standpoint of the interests of the islands as a whole. What appears to be the most immediate needs are a thorough expert examination of the islands and of their requirements in permanent forest areas, an inspection of the existing forests, and the adoption of means for improvement and maintenance. It may be possible for such an expert survey to show that portions of lands still under forest could be cleared for cropping without prejudice to the immediate or to distant localities, and, on the other hand, to indicate that the disturbance of existing forest areas in given locations would result in detriment to agriculture all around. Because of its bearing upon the immediate and permanent interests of agriculture, there is no question which demands at once a more careful and expert investigation than the state of these island forests.

#### INSECT PESTS AND PLANT DISEASES.

In reference to insect pests and plant diseases, a statement from Prof. A. Koebele, official entomologist of the Hawaiian Islands, bearing upon the existence of or liability to plant diseases, is here given, as follows:

DR. WALTER MAXWELL,

*United States Special Agent, Hawaiian Islands.*

DEAR SIR: In reply to your inquiries, I will say that it appears to me that little fear need be entertained in regard to the introduction of scale and other insects, since we have here an abundance of parasites and predatory insects preying upon and keeping the same in check.

Strict attention, however, should be paid toward guarding against the introduction of Melolontid, Elaterid beetles, etc., destructive to living roots of plants, as well as to any fungoid diseases destructive to vegetation that are liable to reach the islands with soil or plants imported.

Respectfully,

January 5, 1899.

A. KOEBELE.

The labors and experiences of Professor Koebele upon the islands amply qualify him to speak upon the matter in question, and his statement gives the assurance desired within the limits spoken of.

#### RANCHES.

Up to the present time the Hawaiian Islands have been supplied by home-grown meats, and the supply has been ample. In fact, it is recorded that the number of cattle ranging the grazing areas some years ago was so large in proportion to the consumption of meat, that they were slaughtered chiefly for the hides, the carcasses having but very small value. Since that period the meat-eating population has increased, while the areas devoted to grazing and the number of cattle have gradually diminished, so that at the present time we are face to face with a situation in which the supply will no longer cover the demand. The supply of the country districts is furnished by the immediate localities. In some cases the sugar plantations have cattle lands which meet the demands of the plantation labor and of local private requirements. There are also large independent ranches. After the local demands have been satisfied the surplus of meat cattle produced upon the several islands is gathered up and shipped to Honolulu, to meet the consumption of the city tables. It is thus seen that the first indications of short supply will be felt in Honolulu, and the meat supply associations state that this is already the case.

It has been found by investigation that districts upon the islands, notably Kauai, which formerly had a large surplus for shipment, are at this time barely meeting the increased and increasing local demands. Ranchmen report that "in given districts the supply is now hardly adequate to the immediate local calls." In view of these facts, it is at once apparent that the future meat supply of the islands, and particularly of Honolulu, will depend upon new factors and conditions. The present requirements of the city and of vessels making port at Honolulu are shown by the animals slaughtered in 1898, as follows: Cattle, 8,780; calves, 1,578; sheep, 9,171; swine, 7,266. These data

were furnished by William T. Monsarrat, veterinary surgeon and Government inspector of meats. Mr Monsarrat not only possesses all data relating to the number of cattle slaughtered, but he can also report upon the state of health of Hawaiian cattle. Concerning cattle slaughtered outside of Honolulu data are not available.

The course through which ranching may develop into a more remunerative industry and the means by which the home supply of meats may be rendered a sure factor and more nearly adequate to the growing demands of the community are bound up with the future character of other industries, more notably that of sugar.

Formerly, and but little more than a quarter of a century ago, cattle were more numerous upon the islands. They had wider ranges to rove over and feed upon; they were the possessors of the land, and their value consisted chiefly in the labor and hides which they yielded. At that time the plantations, which were of smaller areas than now, were almost wholly worked by bullock labor. Even to-day there are still thousands of oxen used in plowing and hauling, their energies being utilized as mechanical force instead of in the form of meat. In the course of time, and that very recent, the sugar industry has undergone great expansion. The lands, some of which formerly were among the best for meat-making uses, have been absorbed by the plantations, and the cattle have been gradually forced within narrower limits at higher altitudes. With the increase in sugar the number of cattle has become relatively and constantly less. A first result of this change was that an adequate supply of "cattle labor" was not available. Room was thus made for mule and horse labor; more recently steam, as applied to the plow, has come in, and in some districts has almost wholly superseded animal labor in the field. With the extension of the use of steam for plowing and hauling and the introduction of electricity where steam is less practicable, it appears a question of only a short time when the bullocks will be forever released from their yokes and the island cattle will be grown and used only for meat purposes. The present trend is wholly in the direction of a higher condition of

things and the rate of change is distinctly rapid. Any change or reversion of the present relations of the sugar and cattle industries must depend chiefly upon the relative values of sugar and meat. At the present prices of sugar even the thinnest upland soils pay to plant with sugar cane. As an immediate fall in sugar values is not imminent, it is not apparent that an immediate change in the relations of the two industries will take place. However, this is not positive. When sugar declines from the present prices, which the cost of production makes probable in the near future (within the comparatively short time of three to five years as regarded by most authorities) and the price of meat goes up, then the land areas, respectively under sugar and meat production, will undergo some change. A fall of from 1 to 1½ cents per pound in the price of sugar and an increase of the same amount in the price of meat will put back certain areas of the uplands to meat production. This change would very materially aid the increased production of meat, and would not seriously, if at all, curtail the output of sugar, since those poorer uplands are the least productive in sugar, although among the best quality for grazing at certain seasons of the year. Moreover, experience has shown that a greater and more permanent increase in sugar production is practicable by leaving out the worst of the uplands from sugar and concentrating labor, fertilization, and costly water upon the richer and more durable lowlands. With a reversion of a part of the uplands to grazing purposes the sugar production can still continue to expand to the limits that have been stated.

There are other conditions than the relative values of sugar and meat that control the remuneration from ranching, which depend upon the ranch owners. In the first place is mentioned the quality of the cattle, which is dependent upon the management of the herds. Very considerable sums of money have been expended by well-known ranchmen and patrons of cattle breeding for high-class bulls. Pedigree animals of such breeds as Shorthorns, Devons, and Scotch Angus (also some of the finer milk-yielding Jerseys and Alderneys) have been introduced and

let loose upon the ranches. Considerable improvement has resulted from the use of these high-bred animals, yet the permanent results have not been anything like so great as they should have been, and for the following reasons: In the first place, the influence of the pure-bred bulls, when let loose in the herds, was spread over cows and heifers of all sorts and sizes instead of their service being confined to selected animals that would have rendered the most immediate benefits from crossing with good blood. Of course, it is not so practicable a matter to isolate and paddock cattle on a large ranch as it is upon a modern farm. Again, the stock coming from the high-bred crosses were not made the most of. The selection, omitted in the first coming together of the imported bulls and ranch heifers, continued to be neglected, no "culling" of the weaklings and undersizes being practiced, the breeding continuing from big and little, good-grade and scrub cows alike. These matters have been reported to the writer by several of the better-known ranch owners, and the results are apparent. With better values in prospect for home-grown meats, the management of the ranching properties will be brought under the more modern systems in respect of the methodic introduction and changing of blood and a careful selection and culling of the breeding stock. At no previous time have the inducements to do good work on the ranches been so great, nor has the certainty of remuneration been so sure for investments in meat production on the islands. Ranchmen will be prudent if they take immediate advantage of the present situation; if they do not, and the supply of home-grown meat declines still further, the country will be obliged to enter upon the importation of frozen meats. This will only be profitable if done on a considerable scale; if large importations of meats are made it seems necessary for prices to fall, and home-meat producers will be the first sufferers. The meat supply is a matter of prime concern to the city of Honolulu. It is in the first degree desirable that fresh meats shall be available for daily use. Frozen meats that have been a long period on the ice, and subjected to changes of temperature during movements in transit, are not the same as meats killed on the ground and kept in cool chambers for a



few hours, or at the most a day or two, before being consumed. It is found that meats and fowls that have been long on the ice spoil very rapidly in warm countries after removal from the ice. But the argument for the necessity of a home-meat supply in view of the contingencies of a war does not obtain, since if an enemy were able to cut off the islands from the mainland of the United States, it would be a much more simple matter to stop shipments between the islands, when Honolulu would be just as effectually starved out.

#### DAIRYING.

The requirements in milk and butter of the country districts of the islands are supplied locally. The milk demands of Honolulu are met by suburban dairies, which also furnish a part of the butter consumed, but the chief supply of butter is by importation.

The milk supply of Honolulu is also a matter of some concern. During the past year it has barely met the city's demands. This was, in part, due to the presence of United States troops, who were quartered near the city for some months. When considerable numbers of the soldiers were in the hospitals and in special need of milk extreme difficulty was experienced in obtaining anything like an adequate supply from the public dairies. In consequence several private families turned over their individual cows to the service of the United States military authorities.

The current price of milk (10 cents per quart) indicates the inadequacy of the supply; although it has to be considered that the cost of maintaining a dairy in or near Honolulu is greater in proportion to the number of cows kept than on farms in the United States. This is due partly to the price of imported feedstuffs and also to the prices of lands and the cost of applying irrigation water within the city limits.

The interests and protection of milk and meat consumers have been undertaken by the board of health, this organization having instituted examinations of meats and of dairy animals in respect of the existence or prevalence of liver fluke, tuberculosis, and other diseases. Recent examinations, covering the year 1898,

have furnished the following data upon the condition of herds and dairies:

*Condition of meat cattle slaughtered.*

Animals	Number slaughtered	Number with liver fluke	Number with liver abscess	Number condemned from tuberculosis	Total condemned
Cattle .....	8,780	2,589	21	15	17
Calves .....	1,578	433	.....	.....	.....
Sheep .....	9,171	50	.....	.....	.....
Swine .....	7,266	.....	.....	.....	.....

Inspections of milch animals are given as follows: Number of cows inspected, 286; number of cows affected with tuberculosis, a majority; number of cows condemned, 10.

Mr. Monsarrat states that several of the worst affected cows were the individual animals of private families. These data, although not worse than are furnished by other countries, show the need of vigorous care.

The increase in the population of the city, with a permanent establishment of United States military headquarters, will increase the call for fresh meats and fresh milk and butter. Therefore dairymen, as well as ranchmen, will be amply remunerated for a more systematic and careful selection of animals from the standpoint of the public health, for a more rational management upon the ranches, and in the providing of food for the dairies. The people of Honolulu are prepared to pay a just price for these cardinal articles of diet, but they may demand that the wholesomeness of the supply shall be guaranteed by the health authorities.

#### LABOR CONDITIONS.

The hired labor of the islands is used chiefly upon the sugar plantations, other industrial labor requirements being small in comparison.

In line with the expansion of sugar production, the demands

for labor have increased. Originally the labor was done almost wholly by Hawaiians, but as the requirements increased, coupled with the somewhat native objection of many Hawaiians to hire at regular labor, the leaders of the sugar industry were obliged to look elsewhere, and this led to the introduction of Asiatic and other labor. In the following table is presented a view of the component nationalities of the population, and the relative numbers of each nationality engaged in plantation labor:

*Population and plantation labor.*

1897	Hawaiians	Chinese	Japanese	Portu- guese	Other foreigners	Total
Population . . .	39,504	21,616	24,407	15,191	8,302	109,020
Labor . . . . .	1,497	8,144	12,068	2,218	756	24,658

These figures amply illustrate the labor relations of the respective nationalities to the main agricultural industry of the islands. The Hawaiians, relative to their number, do not seek plantation work, and when they do, it is chiefly as teamsters, in which work they are good and desirable. The inclination of the Hawaiian is to personal occupation rather than to labor for others. This is, in part, due to an objection to continuous labor, but more to the native instinct, which is averse to subjection, unless to Hawaiians of high standing or white people of authority. The writer hopes to see this characteristic of the Hawaiians maintained, and that the pride of the native people will assume such a course as to accommodate them to the new conditions in such a way that the race will yet reestablish for itself a permanent economic position in the community.

A reference to the figures of the above table also shows that the Portuguese do not generally go to plantation labor. These people are very energetic and thrifty. They are inventive along the line of introducing new, small horticultural growths, such as the grape, etc. When they do work on plantations it is usually as teamsters, and they are comparatively highly paid for unskilled labor.

The burden of agricultural labor is borne by the Asiatics. One-

third of the Chinese and one-half of the Japanese populations are engaged in plantation labor. The large remainder of the Chinese is privately occupied in rice, or fruit and vegetable culture, or in domestic service.

Concerning the conditions of the Asiatic laborers, it may be said, in general, that the presence of these peoples here demonstrates that the wages and personal comforts are greater in their present situation than they were in their native countries. This is further accentuated, in the case of the Japanese especially, by their disposition to settle permanently on the islands.

In regard to the question of compensation, a bare statement of wages does not cover the situation nor furnish a full comparison of the conditions that obtain here with the compensation of labor in other countries. The cost to the laborer of providing himself with fuel, clothing, and food is less upon these islands than, for example, in Louisiana, or in any other section of the United States. On the other hand, the value of labor to the employer, where the labor is paid at so much per man per day, depends upon the laborer and his power to work. From this standpoint it is found that different nationalities are capable of rendering different amounts of labor per day, and they are thus paid different wages. The power to work and the rate of wages of the Asiatics are less than in the case of white men (and of colored peoples in cooler climates) where the conditions of climate allow the latter to work. Where the climate conditions exclude the white man the labor power of other races is also low.

General statements, however, upon this and all similar subjects are not of much value, so that a summary is here given of the labor roll for the month of December, 1898, from the largest sugar-making estate on these islands, the Ewa Plantation Company. All skilled labor, composed of Americans, British, Germans, and Norwegians, is excluded, only Portuguese and Asiatics being included:

*Laborers and wages.*

Laborers	Number of laborers	Wages per month	Monthly total
Portuguese .....	34	\$27 55	\$ 930 70
Contract Chinamen.....	204	15 16	3,092 64
Day Chinamen .....	67	16 73	1,120 91
Contract Japanese .....	380	15 66	5,950 66
Day Japanese .....	100	18 04	1,804 00
Total .....	785	.....	\$12,899 05

The differences between "day" and "contract" men are chiefly due to the fact that the day men are ex-contract and experienced laborers. It is thus seen that 785 laborers receive \$12,899.05 in money, which is \$16.43 per man per month, or 63 cents per day. Where overtime is made by the laborers, either contract or day men, the time is duly paid for. If all the plantations were canvassed the mean monthly wage would be found to be slightly higher than that in the example given, since on the larger plantations the number of higher-priced men is relatively smaller than on smaller plantations. This is still more specially the rule in respect to skilled labor.

The table gives only the payment in money per month. All the laborers, however, receive free lodging, free fuel, and free medical attendance, and their children free education.

More point will be given to the statement of wages paid to labor on these islands if a comparison is made with the values of labor in corresponding conditions in the United States. For this purpose Louisiana is selected. In 1896 data upon the prices of plantation labor in Louisiana were furnished to the writer by the Hon. John Dymond, planter, editor, and sugar statistician of New Orleans. Mr. Dymond states in reply to questions: "The average monthly wage for years has been and is \$20, or 75 cents per day. This does not cover the grinding season (of some sixty days), when about \$1 per day is paid." The grinding season in Hawaii lasts one hundred and fifty days or more, when special wages are earned by overtime. For the purpose of comparison the special wages are excluded in both cases, although that item is in favor of the Hawaiian laborer. Mr. Dymond further says, "The plantation laborers are furnished free house room; they steal

their fuel, and require but little medical attention; work stopped by weather stops also the wages." These conditions are partly similar, but less favorable than corresponding conditions on Hawaiian plantations, the difference being decidedly in favor of the Hawaiian laborer. Again, the Hawaiian laborer requires less clothing, and, what is more important, he does not need to lose one day in the year from the weather. These considerations cause the comparison to be drawn as follows:

*Comparison of wages in Louisiana and Hawaii.*

Place	Wage per day	Wage per month
Louisiana .....	\$0 75	\$20 00
Hawaii .....	70	18 20

A detailed comparison, including the extra money earned by over-time, would make the wages paid in the two localities almost, if not exactly, equal.

So far, the case has been stated for the laborer, showing the value of his labor to him. The cost of labor to the employer in Hawaii may now be shown. In addition to the 63 cents per day paid in money, the employer furnishes fuel, which is very dear (coal, \$10 per ton; wood relatively dear), and a free doctor in addition to what is allowed in Louisiana. These extras raise the cost to 66 cents per day per man, but these extras are trifling in comparison with the extra cost per laborer per day that rises from the difference in the ability of the several nationalities to work. In the example given, the Portuguese receive, on an average, \$27.55 per month, and the Asiatics \$15.93 per month, which indicates that the latter possess a power to work, and consequently are paid 43 per cent less than the Portuguese. Mr. Dymond states that where men in Louisiana are on piecework the variation in their earnings is  $37\frac{1}{2}$  per cent. These examples are very pronounced, and probably extreme. It appears quite safe, however, to put the labor power of the Asiatic at 18 per cent less than that of the mixed labor of Louisiana, which is equivalent to saying that four Louisiana laborers are equal to five Asiatics. The difference is greater rather than less than is stated. Then, in view

of these special considerations, at least 18 per cent has to be added to the 66 cents per day that the Hawaiian employer has to pay for his laborers, and this raises the cost of labor per day to 81 cents, which is 6 cents per day more than the average rate of wages in Louisiana, as stated by Mr. Dymond.

There is extreme confusion existing in the matter of labor values in different countries, which is due to the fact that the daily wage is taken as the sole evidence of cost. This applies to other kinds as well as to agricultural labor. A house carpenter in Boston receives from 25 cents to 75 cents per day more than a corresponding carpenter in Honolulu, but the Boston man, due to total suspension of business for about four months in the winter, earns very considerably less annually than the man in Honolulu, who practically has not to lay off a day in the year; and between what is called coolie labor, operating in warm climates, and mixed American labor, or selected Asiatic labor, working in cooler climates, there are differences in labor power which cause extreme variations in the values and cost per day of those kinds of labor.

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In the coming census work of these islands with its scope of details, it may be of interest—for comparison—to know that in the census of 1853, for Oahu, out of the total of 202 Hawaiian born of foreign parents, the following nationalities were shown, viz: Of American, 137; of British and Irish, 51; German, 5; French, 3; Danish, 5 and Spanish, 1. Of these only five were over 20 years of age.

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IN the street widening improvements of Honolulu that have been slowly progressing the past few years quite a number of desirable trees have had to be sacrificed. It is notable that the tamarind, more than any other one variety, has been the victim. A number of these were large, mature trees; the planting of a past generation, when their utility for a sea-port town was recognized as well as their desirability for shade and beautiful foliage had due appreciation. When a few more have been laid low it will be then noticed, perhaps, that there are no young trees of this species coming along to take their place, the taste for new varieties of wholly ornamental trees, of more rapid growth, largely predominating.

## THE PASSING OF HAWAII'S ALIIS.

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Princess Kaiulani and Queen Dowager Kapiolani.

THE year 1899 is made memorable in Hawaiian annals in its claiming within a few months of each other two of the few remaining aliis of these islands; one the Princess Victoria Kawekiu Kaiulani, only daughter of Honorable Archibald Scott Cleghorn and the late Princess Like-like, just as she was stepping on the threshold of womanhood, and the other, Queen Dowager Kapiolani, relict of the late King Kalakaua, after a well rounded life.

Both of these royal ladies held strong claims upon the affection and esteem of the people. Nor was this high consideration confined to those of the Hawaiian race, for resident foreigners and natives alike grieve at the loss of two so prominent personages in the land whom it was a delight to honor.

### PRINCESS KAIULANI.

Notwithstanding the changed political status of Hawaii the overthrow of the Monarchy was to Kaiulani, wholly thwarting the high aims she for several years was being educated to when she should come to her inheritance, the grace with which she accepted the situation won her the regard of many throughout the land, and sympathy to herself was but the natural outcome, as also to those of her people who were looking forward with hope and pride in their young alii, at the sudden shattering of all their anticipations through no fault or act of hers.

The grief of the community at her sudden death which occurred March 6, 1899, in the twenty-fourth year of her age, after a brief illness, was manifest throughout the city and sympathetic hands hastened to render the last acts of ministration, or lay some floral offering on her bier as a tribute of affectionate regard. The many condolences received by the grief-stricken father was but a par-



tial evidence of the sorrow in hearts too bowed for expression, and the throng of visitors at Ainahau to pay their last tribute of respect embraced but a moiety of those who held a warm place in their hearts for the dead princess.

The government tendered its aid in preparations for the funeral and its conduction, and in deference to Governor Cleghorn's desire that it be similar to that of Queen Emma's (in 1885) it was so arranged and carried out. The remains lay in state at Ainahau on Wednesday the 8th, from 9 a. m. to 5 p. m., and at Kawaiahao church the following Saturday, to which place the body was borne at midnight of the 10th, the funeral services occurring Sunday, March 12th.

At the laying in state, both at the home and the church Col. Soper, Majors Potter and Pratt and Capt. Gartenberg, in full military regalia, formed the guard of honor. Kahilis, feather capes and other insignias of rank were prominent and floral set pieces, wreaths, ferns, palms and vine decorations were elaborate and tasteful. Four Hawaiian kahili bearers, or wavers, stood on each side of the casket, silent, and at periodical intervals of about three minutes of time would slowly bend forward their kahilis to meet its opposite and pausing awhile, or with one or two slow lateral motions, would raise them again and bring them to shoulder. This waving of the Kahilis over the dead, is an impressively sad Hawaiian custom.

At the hour of midnight of Friday the sad procession set forth from Ainahau, led to town by a guard of mounted police and two Kukui bearers, emblems of the Kalakaua ancestral line. On each side of the hearse marched the pall bearers, outside of whom were the bearers of large Kahilis and they in turn flanked by petty chiefs with feather capes as guard of honor. Back of the hearse were two carriages in which rode Gov. Cleghorn and other relatives and near friends, followed by a body of retainers of the dead Princess. Arriving at the churchyard the plaintive wail from among the crowd of natives that had been gathering since early evening greeted the cortege. The casket was borne into the church and placed on the bier in front of the platform. Covering the bier was a purple plush pall, lined with yellow silk, over which was spread the yellow feather pall of royalty, while around the

bier were arranged the large Kahilis, royal insignias, some twenty in number.

Kawaiahao church lends itself to internal decoration perhaps better than any other edifice in the city, and the ladies of the flower committee carried out their self-imposed labor with rare artistic effect. The pillars of the church were wreathed with maile on a ground of white tarletan. An arch spanned the centre isle from standards placed at the entrance to the square forming the bier enclosure. This was likewise covered with white tarletan and twined with the fragrant maile. From the center of the arch was suspended an emblematic white dove with outstretched wings. At the head and foot of the bier, on stands, were two floral crowns, one of white carnations and the other of ilima and maile. On high, at each side of the organ pipes, were hung the royal standards of Kaiulani and Likelike, her mother, while the choir rail was banked with various floral designs, the whole combination presenting a scene of beauty not readily effaced from memory.

A large number of relatives and friends kept vigil night and day; the Kahili bearers, and military guard of honor being relieved at stated hours. Not only was the church thronged with a steady stream of people of various nationalities during the hours of laying-in-state, but again at night many gathered to hear the Hawaiian songs and chants in honor of the deceased, a custom that has become a prominent feature at death watches of royalty, taking the place of late years of the Kanikau and mele of olden time, and entirely supplanting the questionable nightly orgies attending the death of an Alii in heathen days.

The time set for the funeral services was 2 p. m., but long before that hour the church was packed to its utmost capacity. The services were conducted by Rt. Rev. Alfred Willis, D.D., Bishop of Honolulu, assisted by his clergy, with an address in Hawaiian by Rev. H. H. Parker, pastor of Kawaiahao church, and closing with Handel's "Angels Ever Bright and Fair," sung with great depth of feeling by Mrs. G. W. Macfarlane to Mr. Wray Taylor's organ accompaniment. Then came the preparations for removal. Some time was occupied in assigning the large feather and flower Kahilis and placing the feather capes on the bearers thereof for their place in the procession. As they

filed out, the white casket, flower laden, was tenderly borne out of the church to the hearse in readiness at the front steps, the organist meanwhile playing softly the strains of "Home, Sweet Home."

The procession under the direction of Major G. C. Potter, formed on King and Richard streets as the services began, so that little delay occurred at its close ere the cortege started on its last sad journey to the Royal Mausoleum, in Nuuanu valley, to the continuous boom of the minute guns. The catafalque was drawn by a company of two hundred and thirty natives who had coveted this service, and as guards of honor completely surrounding the pall bearers and those with small Kahilis were the bearers of twenty-seven large Kahilis which blazoned with Hawaiian regal splendor.

Some wailing and oliing of Kaiulani's virtues occurred from among the people as the cortege started, and again as the casket was borne into the Mausoleum, for she was to pass out of their sight forever, where, after a final brief service, daughter and mother were placed side by side.

#### QUEEN DOWER KAPIOLANI.

After an illness of some two years duration, during which time three paralytic strokes were experienced, Kapiolani passed from a comatose state to death on the morning of June 24th, 1899, at Pualeilani, her Waikiki residence, in the presence of her nephews, Princes David Kawanakoa and Jonah Kalaniana'ole, her physician and members of the household.

Following so soon the death of Kaiulani at the mauka adjoining premises, the sadness that befell all seemed doubly poignant. The death wail of the people broke forth anew; preparations for laying in state again called for ministering hands; Kahili bearers and Kanikau chanters renewed their mournful services, and sympathetic hands brought or arranged numerous floral offerings as mute tributes of their affection and esteem.

Kapiolani was born at Hilo, Hawaii, December 31, 1834, of Kuhio, a high chief of that district, and Kinoiki his wife, daughter of Kaumualii the last King of Kauai, and was therefore nearly

sixty-four and a half years of age at the time of her death. Her early life was spent in the Hilo and Kona districts of Hawaii, moving to Honolulu about 1855 and marrying Namakeha, an uncle of Queen Emma, a year or so later. They voyaged together to the Gilbert and other islands by the *Morning Star* in 1857 in the interest of Namakeha's health, but returned the following year, he succumbing to his malady December, 1860.

Kapiolani was a woman of fine commanding presence, of easy manner and quiet disposition, and became eminent in good works for the help of her people of which the Maternity Home at Makiki and the Girls' Home at the Kalihi receiving station are evidences of her forethought and consideration.

December 19, 1863, she was quietly married to the then high chief David Kalakaua, during the period of court mourning for the death of Kamehameha IV., thereby securing the marked disfavor of Kamehameha V. for several years. Upon Kalakaua's election as King in 1875 she came with him to the throne and shared his coronation honors in 1883. Through all her court life she filled her queenly station with graceful dignity. The death of Kalakaua in 1891 was a great blow for she was deeply attached to him and proved her devotion to his memory by assisting to liquidate his obligations. She held large possessions in different parts of the islands, which, with her cumulative faculty were made to realize good returns, so that at the time of her health its value was estimated at a quarter of a million dollars. This she transferred to her two nephews in 1898, to avoid litigation in the event of her death, the same to take effect upon her decease.

The changed political affairs of the islands, since 1893, occasioned her small concern, for she showed no spirit of bitterness, but maintained the same friendly intercourse with prominent public men as she did in monarchical days. It has been well said that "through all her life she was equal to any development of circumstances, showing at times a strength of intellect and a grasp of affairs that well qualified her for her high station."

Under the directing care of Prince David the arrangements for a state funeral were made similar to that of Kaiulani's, though in some features it partook more of the dignity and splendor of

the old time aliis, and deserves description as being the last, probably, to be carried out on such lines.

Tuesday, June 27th, the body lay in state at the Pualeilani residence, Waikiki, draped with the robe of state in which she was crowned, and throughout the day a steady stream of visitors viewed the remains. Large stand Kahilis graced the bier at which stood mute attendants, while another set of eight hand kahili wavers performed their silent service.

After midnight of Wednesday, the body was conveyed to Kawaiahaeo Church by a solemn procession similar to that of Kaiulani only a few months before. Company G, of the National Guard was detailed for duty in attendance at the church and received the sad cortegø at the steps, while from among the throng that had gathered in the grounds arose the mournful Hawaiian wail of grief-stricken souls.

As the casket was borne in and placed on the bier, the church was thrown open for a time to the multitude that had gathered, following which, arrangements progressed for the laying in state which held from Friday noon, till midnight of Saturday. Deft and loving hands wrought tasteful decorations appropriate to the occasion.

Four large arches, draped in royal purple and yellow enclosed the space in front of the platform for the bier, which stood in the center, covered with a heavy pall of black velvet. Floral harps, crowns, wreaths of carnations, ilima and maile, with palms and ferns were artistically arranged, and with the feather capes, royal kahilis, puloulou and other insignias of high rank, together with the kahili wavers, some eight or ten in number gave the place an air of regal splendor and solemnity rarely witnessed.

During the period of laying in state many viewed the remains and paid their last token of respect and at night the church was thronged with people to hear the native melodies and witness their customs at royal obsequies. The solo and chorus singing of the different watches of kahili wavers,—a number of whom were chosen for their musical ability, was a rare treat. This was interspersed with the kanikau and other songs by women to guitar accompaniment, or an oli, or kahea inoa (name recital), by some

retainer, kahu, or intimate friend of the deceased. This latter was an ancient tribute to rank that has about become obsolete.

Sunday, July 2, 1899, at 2 p. m., was set for the funeral services, which were to be conducted by Rt. Rev. Bishop Willis and clergy of St. Andrews Cathedral, of which the queen had been a member. In spite of the care exercised in admitting the public to the services, standing room even was strained to its utmost long before the hour named. The St. Andrew's and Kawaiahao choirs took part in the choral service, Mr. Wray Taylor presiding at the organ. The funeral ritual of the Anglican church, delivered by Bishop Willis, was followed by Mrs. Annis Montague Turner's rendition of "Nearer My Good to Thee" in full voice with much depth of expression.

At the close of the services the kahili bearers and others were assigned to their respective places, their feather capes adjusted, and at a given signal moved outward with their insignias of rank, followed by the pall bearers with the royal remains which were placed on the catafalque at the church steps. As the long double line of uniformed natives (in place of caprisoned horses) drew it forward apace the various kahilis of which a larger or grander display has not been seen for many years were arranged on each side as guards of honor.

The procession was under the direction of Major Potter, as before, and the various societies, military and naval detachments and other participating, were formed in line during the services so that all was in readiness to set forth as the minute guns signaled the close of the ceremonies.

The pageant was meant to take on more of the characteristics of Hawaiian splendor than has been want of late, and Prince David did honor to the occasion by his successful effort.

At the Royal Mausoleum, in Nuuanu, the remains, after a brief committal episcopal service, were placed in their final resting place, and the doorway of Hawaii's departed Aliis was again shadowed by somber and stately kahilis.

## WHAT A BOTANIST MAY SEE IN HONOLULU.

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SIX days without sight of land. No wonder there is excitement among the passengers when, in the dawn of the seventh day, they distinguish close at hand outlines of mountains losing themselves above in cloud.

With impatience they wait for daylight, eager to see once more the green of living plants. It is well that their eagerness does not hasten the imperturable course of nature, for the volcanic cones of the lee coast they are passing, though striking in outline are nearly bare of vegetation.

At last as we pass Diamond Head, with the entrance of the harbor only three miles ahead, the growing light enables us to discriminate the deep green of the tree-embowered city, the paler shades of grass lands and the ruddy brown of the great tufa cone in the fore-ground. The fringe of cocoanut palms along the Waikiki beach, distinguishable even to the naked eye although two miles distant, tells us that we are in the tropics. Otherwise, while the verdure delights the starved eye as verdure, there is nothing in it suggestive of tropical luxuriance. Indeed, unless there have been copious rains, the country will strike one as rather parched.

A botanist, new to the tropics, will be eager to make closer acquaintance with the vegetation seen thus in mass in the distance. He tries with his field glass to make out details as the steamer continues its course, parallel with the shore, but at a tantalizing distance, owing to the coral reef.

Arrived at the dock he will look in vain for any green thing. Even the water will be destitute of the weeds that would seem to him prizes. He must content himself with watching the kanaka boys, clad save for a breech cloth in their bare, brown skins, diving for the coins that passengers throw into the water.

At last he is safely stowed in what is called a hack with the agreeable prospect of a breakfast on shore occupying a large part of his thoughts, and as he is whirled on through town he catches glimpses of unfamiliar trees and shrubs that make him impatient to form their closer acquaintance.

The results of his observations in the next few days he may summarize somewhat as follows: The streets of Honolulu for the most part are unshaded, although the city seems like one great park—the houses, in their spacious grounds embowered in trees and shrubbery. Palm trees abound of numerous species. Most stately of all is the royal palm, always rigidly erect, its head of comparatively few pinnate fronds surmounting the pale colored, smooth, gracefully tapering column of its stem. Less striking but more beautiful is the date palm, whose slender, numerous fronds curve gracefully outward and whose erect, shaggy, massive trunk is symbolic of strength in repose. There are palms with slender stems not more than three inches in diameter and twenty feet high, stocky palms with immense fronds twice as large and three times as numerous as those of the royal palm, the stem two feet or more in diameter and only ten or fifteen feet high, palms with smooth, strictly cylindrical jointed trunks, looking like gigantic bamboos, fan palms, feathery palms, palms with berry-like drupes, palms with cone-like fruit, palms bearing nuts small and large, naked and covered with a husk. Queen of them all with its slender, crooked trunks 50 to 100 feet high, its plume of magnificent, gracefully waving, yellow-green fronds and its generous burden of fruit is the cocoanut palm, which however, finds the climate of Honolulu scarcely warm enough for its finest development.

One will find in Honolulu very few plants belonging to the original flora of the islands. Even the grasses and weeds are nearly all exotic. The few "indigenous" trees occasionally planted are after all not aboriginal, having been brought from the Polynesian islands further south by the original settlers. Very few species peculiar to the Hawaiian Islands are to be found anywhere except in the forests of the interior, where such species mostly originated. There are however many species of littoral



plants which are widely distributed, the seeds, tubers or stems being transported long distances without injury by the salt sea water. These, with some cosmopolitan ferns, whose spores are readily carried long distances by wind, or accidentally adhering to the feathers or feet of migratory birds, are about the only truly native plants one will see in the vicinity of Honolulu. Only a few of the 135 or more native ferns are commonly planted in gardens. The one that will particularly attract attention is the birdsnest fern, *Neottopteris nidus*, which is frequently placed in the crotch of a branching tree trunk, its favorite location in its habitat. One would not recognize it at first glance as a fern at all. Its fronds are entire, 3 to 5 feet long, by 5 to 7 inches wide, forming a regular crown. The foliage is rather that of an indigenous plant like the banana than a fern, but the spores growing on its under surface betray it.

The tree ferns which abound in the forest, and which are peculiar Hawaiian species, you will rarely see in cultivation in Honolulu. They do not thrive in so dry a climate. This is unfortunate, for nothing could be more ornamental. The finest of them is the pulu fern, *Cibotium Chamissoi*, whose uncoiling young fronds are clothed with a glistening, silky, capillary chaff of an old gold color, fine and soft as the finest wool; formerly collected under the vernacular name pulu for filling pillows and mattresses—the same thing that in Sumatra is known as pengawar jambi, or paku kidang, used by surgeons as a styptic. The fern trees in the woods have trunks six to fifteen or even twenty feet high and six to ten inches or more in diameter.

Among the indigenous trees occasionally seen in Honolulu is the breadfruit tree, which is planted as a shade tree with an eye to utility. The young trees are very beautiful as long as they retain their symmetrical, pyramidal form. The ample, dark green, rigid leaves, more than a foot long and pinnately lobed make a very dense shade, and suggest the idea of extraordinary vigor of growth which is carried out consistently by the great green globes of its fruit. In the older trees the beauty of symmetry is lost, but there remains an air of sturdy self assertion which seems to excuse their grotesque ugliness.

Another tree doubtless imported by the aborigines is the ohia, or mountain apple, *Eugenia Malaccensis*, occasionally seen in Honolulu, but not happy where there is so little rain. A noble tree it is under favorable conditions, with its large, oval, deep green, shining leaves, and the scarlet tassels of its numerous blossoms, but it is when the fruit is ripe that the tree is in its glory, great clusters of the deep red luscious looking "apples" clinging about its branches and larger limbs everywhere. Juicy and refreshing the fruit is, although rather insipid.

Conspicuous by the paleness of its silvery foliage among the shade trees near the city, as well as in the valleys of the interior, is the Kukui, or candlenut tree, *Aleurites Moluccana*. The fruit looks something like the black walnut, but is larger and frequently contains two nuts. These are as large as an English walnut, with a shell nearly as hard as that of a hickory nut, from which are carved effective ornaments, black as jet, and capable of receiving a high polish. The oily kernels were formerly strung on bamboo splints by the natives for torches, whence, to this day, a lamp is an *ipu kukui*.

Another native plant, abundant in the mountains, you will often see planted for hedges—a *Dracaena* (more properly *Cordyline*)—but with green, not red or variagated, foliage. The natives call it *ti*, and find many uses for it. The roots which are three to six inches thick and several feet long are roasted or steamed in underground ovens, sugar being produced abundantly in the process. In this condition it is eaten, or rather chewed and the juice sucked from it, but the principal use made of it by the natives is to produce *okolehao*, a kind of moonshiner's whiskey. The leaves take the place of wrapping paper in the fish market. Haoles (white people) make a bungle of putting up packages with it, but the native Hawaiian is very dextrous in its use, and the imitative Chinaman succeeds equally well.

Banana trees you see everywhere, but not generally planted for ornament. The trade wind blows too constantly to allow them to keep a whole leaf more than a day or two, unless under shelter of a house. The stranger is surprised at their variety, as different one from another as the varieties of pear or apple. Some

grow on small "trees," not more than six feet high, others run up fifteen, twenty and even twenty-five feet. The rapidity of growth is something amazing. Cut off the trunk of a half grown plant—you find that it is made up simply of the sheaths of leaf stalks, the centre occupied by the coming leaf, which immediately begins to push forward so that in a few minutes it projects noticeably, and in half a day it will have grown out several inches.

The fruit of the different varieties varies greatly in size, shape color and flavor; the fruit cluster in some varieties are very large, in others always small. Of the thousands of blossoms produced from each "bud," only a few, fifty or less to two hundred of the first, are followed by fruit; a seed is never developed.

One variety has the fruit cluster erect instead of pendant. Some are good to eat uncooked, and spoiled by cooking, others are unpalatable unless cooked, when they are delicious.

You would not distinguish a plant of Manila hemp from a banana "tree," but the fruit of the former is insipid, and filled with perfectly developed seeds.

Your guide will point out to you as the traveler's palm a plant which your botanist's eye will recognize as a banana rather than a palm. Unlike the banana it is a branching perennial plant, and unlike banana, its great banners of leaves are so tough in texture that they are but little split to pieces by the wind. The flower clusters are lateral, not terminal, and the bracts are persistent, so that the fruit is concealed from view. You find, however, that it resembles a banana in shape, although only three or four inches long. But the part of the fruit which in the banana is the edible pulp is tough and horny, and your curiosity to know what is inside subsides after you have tried your jackknife on it a while. You will make a mistake, though, if you throw the refractory thing away. Take it home and let it lie a day in the sun and you will find that your curiosity was justified. The tough fruit yields to the persuasion of the sun, and splits into three valves, which separate and recurve, revealing one of Nature's marvels. Each valve is found to hold two lines of seeds, each enveloped in a fantastic jacket of deep, clear blue. What for? That is more

than I can tell, but the bony bananas make very pretty ornaments in a botanist's collection.

One of the most stately trees seen in Honolulu is the mango. Compact in its growth, its foliage is dense, consisting of linear-lanceolate, rather rigid leaves, six to nine inches long, dark green when mature, but while young in the spring, of a rich purple-red color; the new leaves contrasting with those of the last year's growth, which in a tropical tree are of course persistent. Following the flowers, which are not more showy than those of our native sumacs, comes a fruitage which bends low the sturdy boughs of the tree. Nature outdid herself in forming and painting the mango. The curves of its outline are faultlessly graceful—the fruit ovoid, but flattened a little, and with the two sides unequally developed, giving it something of a comma shape. The fruit when ripe is a rich yellow, with the side exposed to the sunlight crimsoned, as in red-cheeked apples. But then there are as many varieties of mango as of apple.

A beautiful sight, but as yet a rare one in Honolulu, is a litchi tree (*nephelium litchi*) in full fruit. At a little distance you would mistake the separate fruits for exceptionally large and rich colored strawberries, and the trees are so loaded that they seem a mass of crimson. The fruit, which is about one and a quarter inches in diameter, contains a single large brown seed, surrounded by a juicy, but rather firm pulp like that of a malaga grape, the whole covered with a rough skin, thin, but almost woody in texture. The pulp is sweet with a flavor something like that of a musky grape, but with a suggestion of smokiness that leaves you divided in your mind whether you care to try another. If you decide in favor of such trial, you may come to understand how the Chinaman can consider this the most luscious of all fruits.

There is nothing beautiful about a guava tree, except its white, rose-like blossoms, and its profusion of golden-yellow fruit. The habit of the tree or bush is straggling, the foliage coarse, and often disfigured by a black fungus growth. It is rarely planted, but it grows spontaneously on the uplands and in the valleys, forming, over extensive tracts, a dense chaparral. Thousands of tons of the fruit go to waste every year. Under Annexation we may ex-

pect that these will be manufactured into delicious jelly, for which there should be a good demand.

The plebian guava has an aristocratic cousin, called the mandarin guava, which forms an ornamental tree of considerable size—its trunk and branches smooth from exfoliation of the bark, its foliage of rather small, obovate, thick, shining leaves—the fruit small and quite acid.

A third species, *Psidium Cattlejana*, with similar foliage, grows only into a small shrub, whose fruit is an inch or less in diameter, globular, red, and quite acid, though of an agreeable flavor. It is known as the strawberry guava.

The orange family is well represented of course, the trees, orange, lime, lemon, shaddock, citron, etc., having a very strong family resemblance, and all ornamental, particularly when in fruit. The trees naturally have a more luxuriant growth than in California, but are not more prolific.

A characteristic plant in Honolulu, especially about the houses of natives is the papaya. An erect trunk, generally, but not always unbranched, bearing at the summit a cluster of large palmately lobed or divided leaves, fifteen to twenty inches in diameter on petioles two feet long, in the axil of each, in the female plant, a bud, blossom or fruit. There will thus be always fruit in all stages of growth, the lowest quite ripe and yellow, the rest green. The fruit is melon-like in size and structure, obovoid and four to five inches in diameter, but the peppery seeds are surrounded with a fleshy covering. A plant will ripen several of these fruits each week for several years. The male tree produces great panicles of white blossoms having a delicious spicy fragrance.

Another tree during the summer months will attract especial notice by its tempting display of fruit: this is the avocado, more commonly known as the alligator pear, *Persea gratissima*. The tree is not usually large, nor is its foliage particularly attractive—the rather coarse, somewhat rough, obovate leaves six or eight inches long. The fruit is commonly elongated pear shape—sometimes club shaped, occasionally curved like a crooknecked squash, but also sometimes quite spherical, smooth skinned, green until quite mature, then in some varieties, suddenly changing to a dark purple like that of the egg plant fruit, in others becoming some-

what yellowish. The weight might range from eight to thirty ounces, according to the variety, or rather according to the individual tree, for each seems to be a law unto itself. The fruit contains a single very large seed, the shape and size of a peg-top; this is surrounded with a pulp of delicate texture which almost melts in one's mouth—not sweet nor acid, but having a characteristic nutty flavor that commends it highly to the educated palate. It is commonly eaten with salt and pepper, with or without vinegar, often with a mayonnaise dressing, or in a sandwich with thin bread and butter; frequently as an addition to (bouillon or consommé) soups. Unfortunately the fruit does not bear transportation well, or it would be better known in America.

The custard apple (*Cherimoyer*) is not much planted in Honolulu, although the fruit sometimes comes into market from other districts. The sour sop, a congener, you will meet with more frequently, the tree with foliage somewhat like that of the avocado, the large fruit, remaining green when ripe, covered with prickle like scales. As in other custard apples, the pulp contains scattered through it numerous seeds. It is fibrous and quite acid, resembling cotton batting soaked in a solution of cream of tartar. Few persons profess a fondness for the fruit.

Over arbors you will often see trained a vine of luxuriant growth, with ample, nearly round leaves, and fragrant, dark purple flowers, four inches or more in diameter, whose multitudinous rays proclaim it a passion flower. Among the leaves here and there is the large, melon-like fruit six to eight inches long, oval, pale green, with a smooth skin. This is the grenadilla, one of the most delicious of tropical fruits. The edible part is precisely that which is rejected in the melon or the papaya. Each seed is enveloped in a pulp which is agreeably acid, and of a flavor like that of the Catawba grape. Only those with antiquated ideas about the cause of appendicitis hesitate about partaking of the delicacy, for to remove the seeds would be profanation.

Another passion flower produces a dull purple fruit of the size of a goose egg, which has a similar acid pulp, less delicate in flavor, but prized by many; it is known as the water lemon. Still another species, distinguished as the sweet water lemon, has a

fruit somewhat larger and of a rich yellow color when ripe, the pulp however wanting acidity, and so not highly esteemed.

Other fruits that will be found in Honolulu are the South American mammee apple, a fine tree with handsome foliage; the pomegranate, planted as an ornamental shrub rather than for the sake of its fruit; the pineapple, in numerous varieties; the loquat (*Rosaceous*); the Java plum and so-called Spanish cherry (both *Myrtaceous*) and the familiar peach. Very few of the fruits of the temperate zone will grow in Honolulu. Apples, pears, plums, cherries, as well as such berries as the raspberry, blackberry, currant, gooseberry are conspicuous by their absence.

But few coniferous trees appear in Honolulu. The Monterey cypress is planted occasionally, and seems to thrive. Arbor Vitae was planted long ago in Nuuanu Cemetery, and perhaps for this reason is scarcely seen elsewhere. Instead of pines and spruces, we find araucarias, which certainly supply their places very well, and which maintain their symmetry of growth in spite of the trade wind.

One tree which is more frequently seen in and about Honolulu than any of the foregoing, and which is frequently mistaken for a conifer is the ironwood, *Casuarin equisetifolia*, probably originally a native of Australia, although now widely distributed in tropical countries. A leafless tree with drooping filamentous branchlets simulating the foliage of the pines, and with a fruit quite as cone-like in appearance certainly as that of the juniper, it might with great show of plausibility claim relationship with pine, cypress or cedar. The heavy, black, hard wood of the tree has been used by the South Sea islanders for making war clubs, and in the Fiji islands forks were made of it to be used exclusively in the cannibal feasts. Except in eating human flesh they used simply their fingers. The tree was not known, however, to the aboriginal Hawaiians.

One of the finest exotic shade trees is the samang, commonly known in Honolulu as the monkey-pod tree. It is one of the numerous leguminous trees that have been introduced—most of them belonging to the Acacia or to the Cassia group, and having accordingly compound or decomposed leaves. This is a great spreading tree of rapid growth, throwing out its branches as near the ground as

circumstances will permit. Like many other plants of the family, it has the habit of folding together its leaflets at night, so that after six o'clock it presents a peculiar wilted appearance quite in contrast with its ordinary aspect, which is one of exuberant vitality. The foliage may become a little ragged in winter, but only preparatory to a more glorious rehabilitation, which culminates with its blossoming time, when for weeks the deep, rich green of its foliage is seen as through a haze or mist of rose-purple. The blossoms, like those of other acacias, are tassels consisting mostly of the conspicuous filaments. A tree twenty years old may have a bole twelve or fifteen feet in girth, and cover with its shade a circle a hundred feet in diameter. The samang obviously, like the banyan, also occasionally seen in Honolulu, is a tree for the wealthy man. For the poor—and for the rich as well—there is the algaroba, the tree that more than any other gives character to the Honolulu landscapes. What the elm is to those in the Northern states, the algaroba is to the *kamaaina* in Honolulu. Its lank, lawless, often contorted, branches are too conspicuous, but they have a picturesqueness of their own, and if we have been inclined to take offense at them on artistic considerations, there is a grace in the poise of its slender branchlets and a witchery in their swaying to the breeze, and a lightheartedness and abandon with which the living tree gives itself to play with sunlight and shower, with gale and zephyr, that makes irresistible appeal to that in the human life that reflects the life universal.

Not on sentimental grounds only is the algaroba a favorite. It is a tree easily propagated and of rapid growth. Its diaphanous shade moderates the heat of the tropical sun, yet permits the grass of the lawn beneath it to grow perfectly well, in dry seasons indeed saves it from scorching. It supplies fuel for the kitchen, fodder (in its saccharine pods) for the horses, and honey of finest quality for the beehive. Finally its roots go so deep that they find water for vigorous growth where other trees can be kept alive only by irrigation. The arid lowlands on the lee coasts of Oahu, Molokai and Hawaii have been converted from desert to forest by the algaroba tree. And the parent tree from which these forests have sprung still stands, not yet an old tree, near the Roman Catholic "Cathedral" on Fort street.



In driving out into the country near Honolulu, you are surprised to find how few wayside flowers there are. You look in vain for anything corresponding with buttercups, daisies, sunflowers, goldenrods, asters or gentians. You may, very rarely, see a forlorn May weed—the plant was introduced long ago, but does not thrive and multiply—the bright colors are almost absent.

Yes, there are white poppy thistles, *Agemone Mexicana*, as fine as you will see anywhere—and over rocky ledges you may see spread a mantle of convolvulus, with profusion of blossoms perhaps white striped with pink, perhaps blue, pale, but vivid, changing to pink. Here and there the sand near the shore may be carpeted with *nohu*—*Zygophyllum tribulum*—and surely nothing could be more gay than the gold of its delicately fragrant blossoms—Mahukona violets they are called locally. But, for the most part the flowers by the wayside are inconspicuous and of dull colors.

But you have forgotten lantana! No, "that is another story." Lantana cannot be counted as a wayside wild flower. It has taken possession of all the land, and would leave no road at all if perpetual warfare were not waged upon it. Gay enough it is, but with its calico colors covering hill and dale and field, you look in vain for the individual prize which you could bring home as a wild flower. For once nature has placed in juxtaposition in this plant harshly incongruous colors, but who could have imagined thirty years ago that the carefully tended garden novelty seen here and there in Honolulu would within a generation convert into impenetrable thicket half the pasture land of Oahu? Those who have seen only the little plants which in temperate climes must be kept in pots half the year for fear of injury from frost can hardly understand what I mean when I speak of this plant as in complete possession, but on Oahu it is not frost but drought that it has to contend with, and it seems impossible to scorch the life out of the plant. In a tropical climate its growth is astonishingly robust. Three or four feet in height is a minimum; except in parched regions, five to eight feet is more common, and in the borders of the forests where moisture is abundant, it becomes almost a tree. I have a piece of one of the trunks that measures fully four inches in diameter; the plant, supported as it was by neighboring forest trees, was not less than twenty feet high. But however favorable

the climatic environment, the lantana could never have spread as it has without assistance. It found an ally in the newly introduced mynah bird, which feeds on its fruit and so scatters far and wide its seeds.

Returning to the city, where lantana is proscribed, we look about for garden flowers. Every dwelling of any pretension shows evidence of the care of a yard man, who keeps up the grounds. He could surely find time to plant and tend a flower bed, but it is quite the exception to find that he has done this. In place of flowering plants, you will find bordering the driveway and about the dwelling, foliage plants and ferns rather than flowers. Is it because the yard man is not a skilled horticulturist, or is there good reason why preference is given to the foliage plants? Custom or fashion has something to do with it, but custom is generally based on reason, and here it is evident in the first place that shade-loving plants must have the preference, and in the second that plants which retain their beauty the year round, and year after year will in the natural course of things displace in a little while the flowering plants which are not equally perennial.

There is another reason. The eye delights in color, and will not be content with the beauty of form alone. But in Honolulu the flower bed is not a necessity in order to satisfy this craving. If one has a few oleander shrubs—not the spindling little plants seen in some countries in tubs, but perennial sheaves of bloom, redolent of perfume; an Alamanda vine shading the veranda, and gorgeous the year round with its great golden blossoms; perhaps a Thunbergia giving generously blue to supplement the gold, or if a richer blue is sought, a Clitoria vine; a hedge of scarlet Hibiscus perpetually in bloom, and one or two Plumierias, that may be ungainly in aspect for a month or two when the leaves drop from their club like stems, but which make ample atonement the rest of the year in the profusion of their fragrant, exquisitely molded, delicately tinted, starlike blossoms; if one has a few plants like these he may rest satisfied as regards his appetite for color. Even without this, he may have all through the summer months almost a surfeit of color. A neighbor has perhaps an arbor covered with a Bougainvillea vine. When the blossoming time comes, the deep green of its foliage will be flecked at first with a ruddy purple—more ac-

curately magenta—but soon the patches of color will spread and become confluent, until the whole arbor is a mass of purple. It seems like an experiment in decorative art belonging to a primitive and barbaric stage. You are not sorry that nature has not yet repeated it. There are varieties of *Bougainvillea*, however, of a more pleasing color—salmon, brick red, even an orange scarlet. What is remarkable in all is that it is not the flowers at all that are thus colored. It is only the bracts that enclose the inconspicuous flower clusters. The plant is of the same family as the four o'clock, in which, botanists tell us that the colored part is calyx, not corolla.

Another vine often trained over porches and barns, a *Bignonia*, but unlike the Trumpet Creeper, makes the *Bougainvillea* envious when it puts on its gala dress. Here again is solid color, but no longer the suggestions of the dye vat. It is the color of living flame, not uniform in tint, but full of lights and shades such as belong to veritable flame, and the plant wears this gorgeous attire wholly concealing the every day garment of green which it covers, for weeks at a time, and more than once in the year.

More prized but less common is the *Stephanotis*, whose fragrant clusters in their season transform the trellis into a snow bank.

The same snow effect is produced when the ungainly fleshy stems of the nightblooming cereus (*Cereus triquetra*) which are piled up on stone fences, making the semblance of an evergreen hedge, clothe themselves, as they do once in three or four weeks, through the summer months, with their giant lily blossoms. There is one of those hedges at Oahu College—a continuous stretch of two hundred yards, on which it is a common thing to see two thousand blossoms at once—sometimes there have been three or four times that number. Of course this snow melts under the morning sun. By nine o'clock in the morning the glory is departed, although the following night may see it restored. The plant blossoms two nights in succession, with perhaps a few belated flowers for the third night, or a few that anticipate the general blossoming—then there will be a rest while a new crop of buds develop. The flowers are provided each with a score of stigmas and a thousand stamens—I have counted them more than once,

myself—they are visited by swarms of honey bees and by other insects, and yet very rarely indeed is fruit matured. Only twice in thirty years, I believe, has fruit appeared, a very few each time, on the hedge I have just spoken of.

But trees vie with vines and humbler plants in decking themselves in lively colors. With us in the temperate zone, the blossoming time of a tree is of necessity short, and it must come generally not later than June or early July. The flowers, if colored at all, are generally white, the tulip tree, Judas tree, and a few Rosaceae forming the principal exceptions. Among tropical trees the colors are often brilliant, and the blossoming season may be greatly prolonged, and trees of the same species do not necessarily put forth their blossoms the same week or the same month.

It is trees of the Cassia family, Caesalpineae, especially that light up with color the spacious grounds about Honolulu residences. Yellows are perhaps the most common. The species of cassia which are shrubs or shrubby vines rather than trees have all yellow flowers, and many of them are perennial bloomers. The Caesalpinias are sometimes shrubs, sometimes large trees, the blossoms being commonly yellow. A very beautiful tree of this genus is the yellow poinciana, a massive head of finely cut foliage; the ample flower clusters giving place to purple pods, so numerous as to give the whole tree their ruddy hue.

The Bauhinias, sturdy climbers or small trees, remarkable for their two-lobed leaves (whence named for the two brothers Bauhin), give preference to pink and red rather than to yellow. In the St. Thomas tree, the petals of the showy flowers have crimson spots on a paler ground, having been springled according to tradition with the blood of the martyred saint.

Very conspicuous throughout the summer months is the tree known in Honolulu as the golden shower, or more prosaically as the pudding stick tree—to medical men familiar as Purging cassia, *Cathartocarpus fistula*. The foliage is comparatively scanty, consisting of pinnate leaves with large entire leaflets. The cylindrical, deep brown pods, fifteen inches or more in length and three-fourths of an inch in diameter, are rather ornamental than otherwise, as they sway with every breeze. In spring the buds appear in drooping panicles, and then for four months there is a continu-

ous succession of the pure primrose yellow, fragrant blossoms that justify the popular name of the tree. The petals which are of a delicate, rich color, are really coarse in texture; this explains why they last as they do ten days or a fortnight without noticeable change.

Another tree allied to the Purging Cassia, and called Horse Cassia, has foliage resembling that of the locust, although the leaves are larger, and the huge, rough, club-like pods are eighteen to twenty inches long, and more than an inch in diameter; but in this species, the blossoms which remind one of those of the Judas tree last only a few weeks.

A third allied species has a foliage very similar to that just described, only that the heavy fronds have a peculiarly graceful droop. The pods in external appearance resemble those of Purging Cassia. In the latter the pod has transverse diaphragms separating the seeds, which are embedded in pulp. In this species each seed is enclosed in a tiny box, shaped just like a pill box, of woody texture, yet with walls not thicker than Bristol board. These little cells lie inside the pod exactly like so many coins rolled up in brown paper. The flowers are produced in clusters which closely surround the boughs of the previous year's growth. They resemble in size, shape and color the largest, deepest colored crab apple blossoms, but the tree remains apparently in full bloom ten or twelve weeks, a joy to the eye to behold. There is in fact, as in the golden shower, a succession of blossoms, no one lasting probably more than about ten days. The only name known for it in Honolulu is simply *Cathartocarpus*. I have never learned its true botanical name.

I have left for the last, mention of a genus which must be the first to attract the attention of the stranger, viz: *Poinciana*, nearly related to *Caesalpinia*. One species forms a rather straggling shrub with thorny branches, known commonly as Pride of Barbadoes, or Barbadoes flower-fence, the scarlet and orange blossoms with crimped petals and long exserted stamens, forming stately pyramids of bloom, each raceme occupying a month or more in expanding its numerous buds. A second species (*sappan*) is very similar except that the flowers are of an orange yellow color.

A third forms a fine tree of medium size, the smooth trunk expanded at the base laterally into buttresses corresponding with the principal roots, the foliage arranged in horizontally spreading layers, and consisting of regular mimosa-like leaves, as beautiful as the fronds of a fern. Were it not for the great flat coarse pods, twelve to sixteen inches long, by one and a half wide, you would say that in the freshness of its new foliage at the close of the rainy season, it had no peer for beauty among the shade trees of the city. By and by it begins to put on its summer adornments. Here and there among the branches burns a dazzling glow of crimson. Day by day new flames burst out, and then they spread and coalesce until the whole tree is ablaze. How the landscape is lighted up by those masses of solid color! In another tree such gaudiness of attire would seem vulgar. Here it is regal. Gold and crimson belong of right to this queen, for whom it is right too, that the ground beneath should have its thick piled carpet of the unfaded fallen petals.

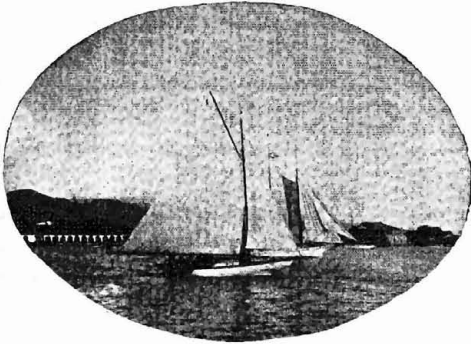
There are other plants equally imbued with a passion for brilliant color—the cardinal flower of the meadow, the *Zauchneria* of California hillsides, the Atamasco lily, the scarlet *Salvia*, the rose and the carnation of the gardens, but where among them all is one which can pour forth her passion in any such lavish creation? Well is the tree named *Poinciana regia*.

*Albert B. Lyons, M. D.*

*Detroit, Mich.*

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THE outlook for business activity throughout these islands was never more promising than that which faces Hawaii at this closing of the nineteenth century, and Honolulu and Hilo are both making due preparations to meet the increasing demands upon their capacities to handle the same. The imperative need to accommodate the increase of shipping is calling for larger harbor and wharfage facilities, increasing productions and commerce, and the influx of population is causing the establishment of new banks; erecting substantial business blocks; larger and finer hotels; numerous residences; increased church and school accommodation; faster time for all steam lines, and rapid transit for our streets. All this means activity in the various mechanical trades, and in commodities, that gives a bright future to this "cross roads of the Pacific."



*Photo by LeMungon*

LA PALOMA AND GLADYS STARTING FOR LAHAINA

#### YACHTING IN HAWAIIAN WATERS.

**G**IVEN an equable climate; situated in the belt of the "trade winds" which blow with a regularity in their season wholly void of the treacherous weather common to higher latitudes, the fascinating charm, and exhilarating effects of yachting in Hawaiian waters assure all devotees of this health giving recreation ample returns for the time spent and money invested, and is a sufficient reason for the growing interest therein among the residents of Honolulu. That it did not secure a stronger hold upon our young men of sea-faring proclivities long ago, so as to have obtained the benefits of organization in stimulating fact, rather than in name only for occasional summer use, is not easy to explain, unless it has been lack of numbers having leisure time for practice to form yacht crews with a sufficient spirit of rivalry to give it spice.

While the racing ground for yachting contests as conducted at these islands may be limited and the yachts diminutive compared with those on both sides of the Atlantic, the spirit is the same, with much in our favor as above shown. The practice grounds

for yachting sport can be varied as the size of the craft and experience of the yachtsman warrants, from the almost mill pond smoothness of Pearl Harbor's sheltered lochs, to the choppy seas and heavy swells of our channels.

Yachting interest has been considerably augmented this season by two new additions to the fleet from abroad, viz: the Gladys and La Paloma, the former built to an island order, as will be dealt with later, and the latter a well known schooner yacht of high repute of San Francisco, built in 1895 by Stone & Co., and after several changes of ownership was purchased by C. W. Macfarlane, of this city, and sailed down here in command of Captain McPhail. The La Paloma is a model of nautical grace and beauty, finished and furnished throughout with luxurious taste. She is 49 feet in length, 14.7 feet beam, 6.1 feet draught and 20 tons burthen. Her arrival here, August 25th, just preceded the challenge and annual regatta races, but in which she took no part. The success of the Gladys therein, however, soon brought the new comer a challenge for a test of speed, which was accepted for a trip to Lahaina, Maui, and back. Both yachts started together September 23rd, accompanied for some distance by the Helene, and returned to port in the same relative position before midnight of the 24th, the race being won by the Gladys, as the La Paloma, through calms, lost 52 minutes in an unsuccessful effort to round the Lahaina buoy, had not sailed the full course. The Gladys had reached and was leaving Lahaina as the La Paloma hove in sight eight miles distant, yet in spite of the time lost to reach the buoy they arrived in port together.

"History repeats itself," and this race recalls like tests over this same course between the schooners Maria and Kamo'i, in the "fifties," the Nettie Merrill and Emma Rooke in the early "sixties" as also other rival coasting clippers, with little if any satisfaction at the end as to which was the speediest boat, for the friends of each were as confident at the end as at the beginning that they possessed the fastest clipper.

The yachting interest at present existing also recalls periods of like enthusiasm that have occurred from time to time during the past thirty years, and it may not be amiss to recount, briefly, the developement of local yachting as it is known to an onlooker without the pale of even the amateur's precincts.



Like the tall oaks that from little acorns grew, so Honolulu yachting fervor had its small origin, beginning with a trio of local built sail boats in the summer of 1869. The leading spirits in the enterprise appear to have been S. M. Carter, C. A. Castle, Robt. Newcomb and M. T. Donnell for whom the *Cara Bell* was built by T. K. Clark (now port Captain of Wilder's S. S. Co.) and Alex. Smith, as against C. N. Spencer, E. C. Macfarlane, H. E. Whitney, D. W. Cartwright and A. W. Bush who had the *Dauntless* built by Tibbets and Sorenson. Both boats were flat bottomed with centre-board, and of sloop rig, but no mention is made of dimensions. Friends of the rival craft arranged for a test of sailing qualities by a race "under the auspices of the Honolulu Yacht Club" for a champion flag and a purse of \$100.00 which took place July 5th. The *Cara Bell* was sailed by T. K. Clark one of her builders, and the laurels of the *Dauntless* was entrusted to Capt. Thos. Norton, the former coming in the winner by six minutes, the course being from Brewer's wharf out to a stake boat off Waikiki and back.

Another test of speed was had the following week, the *Dauntless* meanwhile having been slightly altered in her rig, which resulted in turning the tables of the first race and, naturally, strengthened the yachting interest.

In the course of the next few months the *Fearless*, built by T. A. Thrum as a venture, appeared on the scene. She was sloop rig; 24 feet long, 8 feet beam, and drew 20 inches in ballast; of round bottom model with center-board. Shortly following her launching a pennant race took place between the three boats, September 30th, 1869, in which the new boat was the winner, with the *Cara Bell* second. The *Fearless* was sailed by Jos. Gurney, the *Cara Bell* by T. K. Clark and the *Dauntless* by Jos. Brewster. The race was close and spirited throughout, the lead changing several times.

While nothing special appears to have been done in yachting circles the following year, boat builders here and abroad were at work for the season of 1871, for we find this year the new and larger sloop *Kulamanu*, built here by T. Carl for Mark P. Robinson, and the schooner yacht *Henrietta*, built in Plymouth, Mass. by Watson for I. B. Peterson, C. H. Rose and Ed. Everett. This

boat was brought out on the Syren, from Boston, arriving here March 30th, 1871, two days after the yachting season had opened with a trial spin between the Fearless, sailed by Clark, and the King Phillip (from a ship of that name in port) sailed by Chas. Long.

On May 10th, 1871 occurred the "Honolulu Yacht Club race" for a silver cup, in which were six entries, as follows:

NAME	RIG	ENTERED BY	SAILED BY
Henrietta .....	Schr.,	Peterson, Rose and Everett .....	D. Taylor.
Fearless .....	Sloop,	J. I. Dowsett .....	J. C. Cluney.
King Phillip .....	"	Love Bros. ....	Chas. Long.
Kulamanu .....	"	M. P. Robinson .....	Jos. Brewster.
Dauntless .....	"	Tibbets and Sorenson .....	J. H. Black.
Cara Bell .....	"	Robt. Newcomb .....	Thos. Clark.

The start was made a little after noon, with the trades quite moderate. The course lay out the channel to and windward of the spar buoy, then to leeward to a stake boat off the Quarantine Station, thence to the bell buoy and back to place of starting. The prize was won by the Kulamanu, the Henrietta coming in second and the Fearless third.

The Dauntless, though fifth, challenged any of the contestants to race for a cup prize to Koko or Diamond Head and back. This was accepted by the Cara Bell, but no account of the contest is found of record. The foregoing particulars are given as being in reality the starting point.

Apparently this marked interest was too active to last long, for little was done for several years following by Annual regatta or other public events, though the enjoyment of occasional exercise in yachting by a coterie of aspirants for cup honors kept alive the embers which in due time took form for permanent recognition. During this period two boats of a different type from any so far seen in these waters were built by Jos. Murdock. First was the Thistle of about 30 feet in length, narrow of beam and deep of hold, and for the first year or two was easily the crack yacht. About 1873 or 4 the Pauline, of a similar model was launched by Murdock and became the property of W. L. Wilcox, since which time he has given evidence of continued yachting spirit; in fact

perhaps to Judge Wilcox more than any other one individual is Honolulu indebted for the steady development of island yachting, either as owner, sailing-master or adviser.

In aid of this development during the "Seventies," credit also is due W. F. Williams, who, with his sloop Pumpkin Seed, built by John Frazer about 1875, followed later by the Kahihilani, built by Wm. Ryan; and the Pokii, an importation from San Francisco, has, with one or the other, carried off not a few laurels in the various regattas.

Thus yachting matters progressed in a somewhat desultory way till the latter part of the "seventies" when King Kalakaua entered the arena as patron of aquatic sports and made this a feature of his birthday celebrations, November 16th.

About 1881 or 2 the sloop yacht Lotus, of Shoalwater Bay, was brought here on the J. A. Falkenburg to W. F. Williams, who changed its name to the Sarah and added it to his racing fleet. In the Kings birthday regatta of the latter year (1882) is found scheduled first and second class yacht races, but some of the same boats, and boats of like tonnage appear in both lists, so we make no attempt to explain how the line of class distinctions were drawn.

The first class entries were the Sarah,  $5\frac{1}{2}$  tons; Restless, 6 tons; Kahihilani,  $11\frac{1}{2}$  tons; Pauline, 3 tons and Kaholomua, 20 tons. For some reason during the race the Pauline withdrew, the first, second and third named winning in exact reverse order. The second class race also had five entries and embraced the Pauline, and Sea Waif, each 3 tons; Mabel, and Emma, each  $\frac{3}{4}$  ton and the Pumpkin Seed,  $1\frac{1}{2}$  tons. A collision between the Pauline and Mabel occurred whereby the latter was capsized and caused the former to again give up attempt for race honors. In the contest between the others the Pumpkin Seed came in first, Emma second, closely followed by the Sea Waif.

For the Coronation regatta, which took place February 22nd. 1883, as part of its festivities the King had the Healani built by T. Sorenson, a fine sloop of 9 tons, and which commemorated the event by carrying off the first prize.

In the November regatta of that year there were seven entries in the race for first class yachts and three for second. The former embraced the Sarah, Healani, Kahihilani, Restless, Kapio-

lani, Pauline, and Consuelo. The boats all had a fine start with a good stiff breeze, giving life to the contest. The Healani took the first prize again, the Kahihilani second and the Restless third. The following Annual regatta, 1884, enthusiasm seems to have waned materially for we find but two contestants each in the first and second class, the Healani winning her third consecutive race as against the Pauline, and the latter entering in the second class and again losing to the Lena.

Following this period yachting interest appears to have become quiescent, notwithstanding the organizing of the Honolulu Yacht and Boat Club, with Governor J. O. Dominis as its first Commodore, followed by Judge R. F. Bickerton, and Jno. H. Paty, each two years respectively. The Rowing and Yachting Association, of which the King was President, also came into existence about 1885, yet under both of these, several seasons passed before new life was infused by the introduction of new rivals to compete for yachting laurels, though about 1885, the Spray, a Turner built boat was brought down from San Francisco to W. Sproul and won the pennant in its first race. Changing hands subsequently this yacht became the Alice, and lately the Dewey.

The new starting point of interest appears to have been in 1889, and was occasioned by the arrival of the Helene, a sloop yacht of 13 tons, built by Turner of San Francisco, for Wm. G. Irwin Esq and which arrived here on the W. H. Dimond. In July of that year Mr. Sorenson completed the Hawaii, a 9 ton yacht, for Messrs L. A. Thurston, W. O. Smith, W. L. Wilcox and one or



HELENE

two others, and toward the latter part of the year appeared Dr. Trousseau's Catamaran.\*

The annual regatta of 1889, by this infusion of new blood, was entered into with much spirit and enthusiasm, but which occurred July 4th, instead of on the King's birthday. The regatta was under the auspices of the Hawaiian Rowing and Yachting Association, in



HAWAII

which two yacht races were scheduled; the first for yachts of 5 to 10 tons to sail for a cup and pennant, and the second for yachts under 5 tons to sail for three cash prizes. In the first were entered the Healani, Spray, Hawaii, Helene and Kahihilani. The course was out the channel to a stake boat off Waikiki, then to one stationed off Pearl Harbor, thence back to port. With a fresh breeze the boats had a flying start, going out of the channel with spinnakers set and presenting an animated picture. The Hawaii led in rounding the first and second stakes followed by the Spray at first and Helene at the second, the Healani being third at both points, but on beating back and reaching the point of starting the cup and pennant was awarded to the last named, and second prize to the Spray.

Eight boats entered the second class race, and comprised the Edith L., Kaohinani, Pokii, Laura, Onward, Lorna Doone, Park

\* This twin craft after several tests which proved its inability to compete in any of the races, was changed by C. Johnson by bringing the halves together as a single model, and has since done competitive service as the Marion.

Street and Pauline. These latter four did not finish, and of the other contestants the prizes were awarded the first three in the order named.

This contest suggested changes in several of the new yachts, the most pronounced being the Helene which had her spars lengthened and canvas area correspondingly increased. Following this alteration a spin was had out into the Oahu channel to near Molokai and back, giving her party of six an enjoyable time.

Without attempting a detail of the various annual regattas, the foregoing will fairly indicate the character of yachting in Hawaiian waters. But while the racing course of our regattas differs not, as it is in full view across our harbor, the practice season varies with trips to and around Pearl Harbor Lochs, or an occasional cruise to Hanauma Bay, the noted fishing ground of Oahu chiefs in early days, and as indicated elsewhere in this article, runs to other points are not beyond the possibilities, especially with the larger yachts.

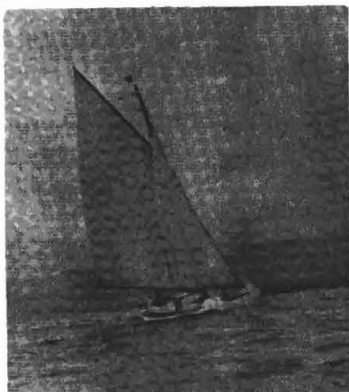
Not a little interest was felt in yachting circles by the arrival in 1892 of the sloop yacht Bonnie Dundee, built in Scotland, a creation of Fyfe's, the designer of the Shamrock, recently engaged in the famous contest with the Columbia for the American Cup.

Our Scotch yacht, as she is often called, which arrived here on the Benmore, was built to the order of a syndicate comprising S. B. Dole, W. L. Wilcox, E. O. White and one or two others and up to this year (1899) was the successful contestant in all the races she had entered, though handicapped of late years by being barred from the use of topsail or spinnaker.

Regatta days up to 1896 were erratic, as they are here shown to have occurred in early and mid-summer and fall. That year in deference to the desire of many citizens the third Saturday of September was set apart by legal enactment as Regatta day, and made a national holiday, for which the public are indebted to A. G. M. Robertson.

In March, 1899, T. W. Hobron had the Gladys built in San Francisco, one of the new type model sloop yachts, designed for him by V. D. Bacon of Boston. This boat was brought down

on the R. P. Rithet, and with a little practice gave evidence of exceeding its owners' expectations of her as simply a pleasure boat, so lines were laid for a challenge cup race with the Bonnie Dundee which took place September 13th. To add interest the Hawaii sailed by Judge Wilcox, and Marion by Dr. Humphris, joined in the fray, but the contest was virtually between the Scotch and American boats. The Bonnie was sailed by President Dole and the Gladys by T. W. Hobron, and in a spirited race over the usual regatta course the latter wrested the brush so long held by the



GLADYS

Bonnie, winning the race and cup by 23:5 difference in sailing time over the Scotch yacht and 49:08 over the Hawaii.

As a result of this race the yachts for the Annual regatta, which took place three days later, were divided into three classes, as follows:

First class—Gladys and Bonnie Dundee. Second class—Helene, Hawaii, Healani, Dewey and Marion. Third class—Pokii, Clytie, Abbie M., Myrtle, Edith L., Volante and Pauline.

The events of the day were successfully carried out and public interest well sustained. In the first-class yacht race the Bonnie had the lead at start, but was passed by the Gladys beyond the bell buoy. At the turn of the Waikiki stake boat the Scotch yacht was one and a half minutes behind her rival, but gained on the free course to the second stake off Pearl harbor as to round it four minutes ahead. This she lost and more on the home stretch, the Gladys crossing the line over five minutes ahead of the Bonnie. T. W. Hobron sailed the former and W. L. Wilcox the latter. But two boats started in the second-class yacht race; the Helene sailed by Fred Whitney and the Hawaii

sailed by L. A. Thurston. In the first part of the race both boats kept well together, but beyond the Bell buoy the Helene steadily increased the distance between them so that she came in winner by nearly 15 minutes. Five boats set out in the third-class race, the Myrtle coming in winner, followed by the Pokii then the Abbie M., Edith L. and finally the Volante.

Since the three victories of the season by the Gladys E. O. White has become owner of the yacht, but not its name, that being reserved by Mr. Hobron for probably the new vessel which he, with E. A. Mott-Smith and perhaps others will be interested in, which they expect to have built for 1900. It is likely that other changes will occur in the near future and that there will be a general brushing up all around which gives promise of a more exciting yachting spirit than has so far been experienced in these islands.

Yachting interest at Hilo, Hawaii, is making commendable progress of late, so that the day is probably not far distant when we may look forward to Inter-Island, if not International, races in these waters.

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### **New Corporations.**

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The Report of the Minister of the Interior for the year ending December 31, 1898, shows that forty new corporation charters were issued during the year for mercantile, agricultural and manufacturing purposes, with a capital stock amounting to \$9,119,000.

There were also eight charters amended to permit the increase of their capital stock, and four corporations dissolved.

The mercantile, manufacturing and agricultural corporations of the islands in existence at the opening of 1899, as shown by the Interior Department records, numbered 207. For the six months of 1899 up to June 30, there were fifteen additional corporation charters granted, capitalized at \$16,236,000, besides nine or ten of the existing concerns which have increased their capital stock materially.



## HONOLULU STREET CHARACTERS.

**H**ONOLULU, like other and larger cities, has its street characters. They are, fortunately, but few, which fact renders them perhaps all the more familiar to residents and noticeable to strangers. It is to be noted, however, that none of them are of long duration, nor does the number of these eccentrics vary very much from year to year. In nationality, naturally, the Hawaiian predominates; a foreign element coming in the last few years to share the honors of distinction as was done once before, during the "seventies."

Not all of these street characters are mendicants, nor were all their predecessors, for this is not a beggar country, yet some in this manner seek to eke out an existence.

The principal character of the city front of late has been Kauhane, well known also as "whistling bo'sun," who delights to attract attention, dressed in a military suit decorated with odds and ends of imaginary medals. With toy sword, or short stick in hand, he will parade the wharves or streets where the crowd is thickest, giving now and again his bo'sun whistle preliminary to his call of "all hands on deck," or "wela ka hao."

During the visit of the soldiers en route to Manila Kauhane was in his element, his quasi military dress and actions affording the "boys in blue" no little amusement, and familiarizing them at the same time with Honolulu's latest exultant phrase "wela



KAUHANE

ka hao," echoes of which come back to us from other lands. Unfortunately this eccentric character has a weakness for strong drink, and there have been those who have pandered thereto till getting boisterous, it is not strange that he occasionally becomes a nuisance and gets locked up for safe keeping.

Kauhane's fondness for military display seems to have been engendered by his connection with the army in the days of Kalakaua, and as an officer in the "King's na'avee" on the Kaimiloa in that famous expedition to Samoa. It was during that cruise, doubtless, where his bo'sun whistling proclivities were developed, and this he did so well that, it is said, on one occasion, as he stood at the end of the esplanade watching a man-o-war coming into port and slowly swinging around to back to her anchorage, he whistled attention then called out "Let go your anchor!" which order was promptly obeyed, to the disconcertion of pilot and officers. The truth of this water-front yarn we do not vouch for.

Another relic of monarchial days is blind Ioane who, for the past year or so, has endeavored to earn a daily pittance from passers by through his jewsharp playing. Before his loss of sight this unfortunate was the acknowledged leader or director of hulas in Kalakaua's time. No entertainment of this character whether for royal master or distinguished visitors was considered complete without Ioane as master of ceremonies, and in this capacity he may be recognized in the photographs of the Kalakaua coronation festivities.



IOANE

Many residents of and visitors to Honolulu in yet earlier days can recall the striking character of a faultlessly dressed Hawaiian that used to appear on Saturday afternoons parading the streets, or at the band concerts, or other places where he could capture the eye of the admiring multitude through his "Beau Brummell" attire and mein at such a time, for at other times during the week he was an industrious porter of a hardware store. Those who pandered to his vanity in those days would hardly realize that blind Ioane was the same person.

Another blind Hawaiian character that has made himself conspicuous of late is Kaaleinawai, known also as "Bill, the blind whistler," who, with his bagfull of bamboos of various lengths and diameter, for tones, will produce therefrom on call, by blowing into them, the sound of nearly every steamer's whistle of the coasting service.

Though a devout Catholic, Bill is very impetuous and hot tempered, getting frequently in trouble, and occasionally rendering himself so much of a nuisance as to secure cautionary police lectures.

On tiring of "life in the metropolis" he returns to Hilo, his native town, for a few months then drifts back to this city to take up his wonted beat along King and Fort streets. Unlike Ioane, who is quiet and unobtrusive in public, the blind whistler is boisterous in two languages without being choice of his expressions in either, and on more than one occasion has given emphasis thereto by a vigorous fling of his stick in the direction of the object of his wrath, regardless of consequences. For this reason he has less sympathy in his misfortune than he otherwise would receive,



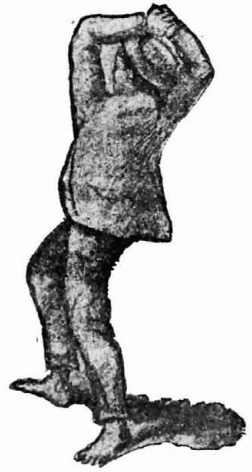
THE BLIND WHISTLER

for he invariably crosses himself and mutters a grateful prayer for any contribution to his finances.

And still another subject of note under this category is one Manuel Rodrigues, a partially demented Portuguese who, with remarkable regularity, makes his morning visits of adoration, or devotion, to the statue of Kamehameha in front of the Judiciary building. His rule is to approach the statue on the left side, from the Mililani street entrance to the grounds, at a rapid pace, then walk around to its front and clasping his hands together in front of him he will crouch low in obeisance, and in the intensity of devotion gives expression only to the word "sgee!" He then steps backward a few paces and repeats his act, then to the sidewalk, pacing back and forth with eyes fixed on the bronze figure all the

while, every now and then bowing in abject adoration, at times almost to violence. During such spells of devotion many attempts have been made by passers by to dissuade him, but to no purpose—unless a camera be leveled at him, from which he invariably rushes away. It is not known that even a snap-shot prize exists. For the sketches here given of him the ANNUAL is indebted to Miss Wheeler, a recent addition to Honolulu's art league.

At times he appears to wish to avoid attracting public attention, and again he is perfectly oblivious. Occasionally he will stop his pacing back and forth, and with one foot crossed over the other stand, pelican like, gazing with spell-bound admiration on the statue; or, crossing to the opposite side of the street he will lean against the fence, with his chin in his hand and eyes riveted on his ideal. This quiet admiration from a distant point of observation is more frequently the procedure of a noon time visit than a part of his morning routine.



Manuel bothers no one, nor converses with any passers by, though occasionally he will reply briefly to enquirers. An idea prevailed with some that he was possessed with the notion that the statue of Kamehameha personified his father, long since departed, but this is an error, as that relative is still with us in the flesh.

To his assertion of,—“I like him too much,” whether as father, or King, his actions clearly show an increasing infatuation.


It is not generally known that the statue of Kamehameha is not his only object of adoration, for he is reported to make regular visits of like nature to a stone on the slope of Punchbowl, off Alapai street. What his belief in this object might be our informant did not learn.

There are two other unfortunates, a Portuguese and a Hawaiian both partially paralyzed, that occasionally claim the attention of charitably disposed persons, but they make no parade of their condition to the extent of being noted characters of the town.

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## AN ISLAND ART CENTRE.

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AHU College, called Punahou, is the seat of learning in these Islands. It was founded in 1841. This was some years before the discovery of gold in California, when the whole Pacific Coast region of the Mainland was practically a terra incognita. The Mormon pioneers had not yet looked upon the Great Salt Lake Valley. States of the Union now called old were not yet territories. Rev. Daniel Dole, father of Sanford B. Dole, was the first Executive of Punahou. It was in a building still in use at the institution that the one who was to be President of the Provisional Government and of the Republic of Hawaii, first saw the light of day. This college has on its list of graduates the names of men who have achieved international and lasting fame in the world of letters, in the arts, in the professions, in commerce, in soldiery, in many missionary fields. Finished Punahou students enter the great universities of the Mainland constantly "without conditions." One graduate had no trouble at all in matriculating at Cambridge, England.

Punahou is one of the show places of the country. It has an impressive group of buildings with all the modern educational furnishings, including the equipment of an observatory and a laboratory. Within the 300 acres is a beautiful campus. There are ponds with lilies and lotus. There are tropical orchards. The pride of the whole is a night blooming cereus hedge several hundred feet in length. This is of entrancing charm and without a rival in the wide world.

With a most picturesque Southern Cross setting, with a noble, reverberating past, upon a most substantial footing financially and with many generous and devoted patrons of ample means,

Punahou's prospects are brilliant indeed. In one line or direction or feature may be said to be centered the hopes and aspirations of many of the best friends of the place. These persons are determined upon the establishment at the college of an art gallery which shall become, say with due humility, what the Metropolitan Museum is to New York. During the control of President Frank A. Hosmer, A.M., at Oahu, a great impetus has been given this young movement and pieces have been secured for Pauahi hall that make the grand structure already the Mecca for those who would feast the "windows of the soul" upon a nucleus collection of genuine merit from the critic's standpoint and of inestimable worth to the scholar.

Chas. R. Bishop has given: Giovanni Tiepolo's "Finding of Moses," a copy of Guido Reni's "Aurora," J. G. Stone's "Street Scene in Constantinople," three North American landscapes by T. Hill and six of Luigi Ademolli's etchings of scenes from Homer's Iliad. Jas. S. McCandless has given Hugo Fisher's "Merced River." Prof. Wm. T. Brigham has given copies of Bernardino Luini's "St. Catherine Borne by Angels to the Tomb" and the famous Pinturicchio "Christ Among the Doctors." Mrs. P. G. Taylor has given an oil painting "The Bread Fruit" and E. Bailey his oil painting "Punchbowl." D. Howard Hitchcock, Hawaii's foremost artist, has lent his "View at Fontainebleau," which had the distinction of being favorably displayed at the Paris Salon.

The year 1899 marks the placing in Pauahi hall of the beginning of the statuary section. It is a pretentious initiatory. On the recommendation of President Hosmer the college trustees purchased of D. Brucciani, London, two plaster casts. These are the superb Augustus Caesar, heroic, and Diana Gabii, life—profoundly dainty and expressive. Augustus, the nephew of Julius, in his pose represents the Empire in its fullest prime, marking the era of the birth of Christ. The ruler is addressing his legions. He has laid aside the sword and with the staff of civil authority on his shoulder is proclaiming universal peace. This eloquent cast is from a colored marble in the Vatican museum, found at Prima Porta, near Rome. The subject of the decoration on the cuirass is the return of captured Roman stand-

ards to Augustus. At Chicago, in the Art Institute, there is another of these casts and to see half a hundred students sketching it is not uncommon. The original of Diana Gabii, the cast being by Brucciani, is in the Louvre. The Virgin Goddess, twin sister of Apollo, they being, according to mythology, the children of Jupiter and Latona, is presented as fastening at her right shoulder the golden clasps of her robe. There is an atmosphere of repose, of vast natural, unaffected beauty in the attitude of the "Moon Goddess," sometimes the "Huntress of Gods." This Diana is the choicest of all. In a grouping she typifies gentleness as a counterpoise to the world-swaying strength of which Augustus is the embodiment. The pieces are prizes, worthy any educational institution or any community having an appreciation of the very best that may make for the highest culture and the most exalting thought.

More and more of an Art Gallery for Pauahi hall at Oahu college is the cherished ambition of many. The present management is moving to secure two better than standard pieces for the spacious court at the foot of the broad stairways. The selections are: "Laocoon Group" (The Serpent Conquering Humanity) and Guido Reni's "St. Michael Conquering the Dragon." Acquisition of these would well warrant the statement that Punahou had an art collection. Gifts would follow, reputation would accrue to the profit of the whole country and there would radiate from this beneficent center the striking lessons filling the chapters that are to make up the book of the "Brotherhood of Man."

*Ed Towse.*

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AN elaborate celebration of the fiftieth anniversary of the establishment of the house of H. Hackfeld & Co. in Honolulu was observed October 2nd, 1899, not only at the head concern in this city, but at their several branches on the other islands. In commemoration of its remarkably successful career the firm donated the sum of \$1000 each to the thirteen benevolent associations of the city, and Messrs. Paul Isenberg and J. F. Hackfeld, the leading officers of the corporation, donated further the sum of \$50,000 toward the erection and maintenance of a German Lutheran church in Honolulu.

## INTERESTING HAWAIIAN DISCOVERY.

### MORE PICTURE ROCKS.

MUCH added interest to J. K. Farley's account of the pictured rocks of Kauai, which appeared with illustrations in the ANNUAL of 1898, was manifest upon the finding, in the latter part of January, 1899 of an ancient cave by a party consisting of Dr. Carmichael, H. W. Adams, C. L. Beal and Judge F. J. Finnuane out upon a tour of observation and discovery, in which were found a like series of crude pictures cut into the rock ledge floor. This cave is situate beyond Koko Head, right on the shore about midway toward Makapuu Point, on this Island of Oahu. No legendary or other account of the existence of this pictured ledge has been met with, nor the traditional "oldest inhabitant's" version of the time, object, and people who sought to immortalize themselves by this illustrated rebus.

The public is indebted to Mr. C. L. Beal for the sketch of this interesting discovery by his party, which he obtained by taking with him on a subsequent visit a large sheet of detail drawing paper which he laid upon the floor of the low cave and traced the figures through. The area covered by these pictures is about six and a half by eleven feet, and from the replica



Shaded portions of the plate indicate worn or broken surface of the rock.

duced photographs enable us to present the subject for a com-



parative study with those photographed by Mr. Farley from the rocks at Keoniloa beach, Kauai, in 1897.

To the student of ethnology these fragmental discoveries may be of more value than at first appears, as it is not improbable that they may furnish some clue to the migration of a race or tribe of which Hawaiian tradition is ignorant. While very different in style of execution in certain features there is a similarity between the two. The bare outline work of the Kauai sketches may have been due to the interference by the swashing tide, as well as perhaps indicating an earlier period than those of Oahu.

Comparing this new series of figures with those of the Waialua stone, illustrated in Mathison's "Narrative of a Visit to the Sandwich Islands," in 1822, (reproduced in the ANNUAL of 1898) there is more similarity than exists between the Koko Head and Kauai figures, yet not sufficient to warrant the supposition of their execution by the same people, or period. The marked differences between those of this island and of Kauai form an interesting study. The rock pictures of Keoniloa beach for the most part are merely in outline, and where triangular shaped bodies are shown, these are shaded as a rule, whereas the Oahu pictures show less crudeness of effort in the formation of the figure. Similar rock carvings are reported to have been noticed near the Nuuanu stream, in the vicinity of Kapena Falls, but no sketch thereof has as yet been made.

In the Koko Head sketches are to be seen figures not unlike the illustrations of some of the ancient idols of the Hawaiian race, notably the pose of Kalaipahoa, the poison god of Molokai. This would lead to the supposition of the sketches being the work of Hawaiians. The lower portion indicates this more than the upper section which bear traces of resemblance to the sign writing of North American Indians occasionally met with and elaborately set forth in Director J. W. Powell's Annual Report of the Bureau of Ethnology to the Secretary of the Smithsonian Institution," a copy of which was sent Mr. Beal in response to his reported discovery, with photographs, to the Smithsonian Institute.

Mention was made in Mr. Farley's article, already referred to, of the reported pictured rocks of Honaunau, in Kona, Hawaii,

but all effort to gather information from parties in the vicinity, or secure drawings thereof, up to this time, has proved fruitless.

Solomon Mahelona, of Waianae, a venerable native of intelligence above the average of his race, tells of a legendary account of a canoe made of sewed skins having landed near Waimea, in the Waialua district, Oahu, ages ago, in which was a chiefess and several men, brown foreigners, who remained in the land and some of their descendants may still be identified. If there is fact for this story the skin canoe points probably to the North-west coast, and may have furnished Hawaii with the people who endeavored to portray their adventurous travels on the rock ledges of our coast. But it is strange that at this late day only should such a narrative be presented and until confirmed we must question whether or not this legendary canoe with Indians has not been confused with the circumstance of stranded Japanese junk and remainders of famished crew, off the northern coast of this island, on, we believe, two occasions, in comparatively recent times.

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### **The Coffee Industry.**

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From various causes the interest in coffee growing, in certain sections of the country, Hawaii more particularly, is not as pronounced as it was. Advantages offered by a change to the cultivation of sugar cane, where the land was found suitable, is transforming most of the Olaa coffee plantations into one vast sugar estate, and Kona is similarly affected though not to so great a degree. Owing to low market rates ruling for coffee the past year and the scarcity and high price of labor, few if any new fields are being planted out, the idea prevailing being to care for what is nearing, or has reached, the bearing period, rather than extend their area of cultivation until better returns for the labor outlay and investment can be assured. Under these circumstances, and for reasons stated in the last ANNUAL, no attempt was made this year to secure individual returns from coffee growers throughout the islands, nor has a single planter volunteered a report, hence the omission of our usual tables devoted to this industry.

### ANCIENT IDOL UNEARTHED.

ANOTHER interesting discovery has been made recently in the line of Hawaiian antiquities by the unearthing of an ancient wooden idol in one of the rice fields of the Ewa district, on this island of Oahu, where it had laid buried, probably, ever since the edict of Kaahumanu for their collection throughout the islands, in 1822, for a wholesale idol bonfire. Notwithstanding its long time burial beneath rice field and taro patch dampness it is remarkably well preserved, a portion only of the head ornament being wanting for completeness—as shown in our marginal cut.

Altogether the rude carving stands a little over five feet in height, the figure itself being a little short of two feet. It seems to be made of the close-grained heavy ohia, which has become black from its long mud bath. As can be seen, it is unlike any other known Hawaiian idol. Much speculation exists among our antiquarians as to its probable history, for none of the older natives who have examined it appear to be able to recognize, or give an account of it, yet all agree upon its genuineness. Several seem to agree upon its being a heiau, or temple, deity rather than a household god.

This valuable relic has been secured by Mr. A. L. C. Atkinson of this city, for the enrichment of his collection of Hawaiian antiquities. Our illustration is reduced from a photograph by J. J. Williams.





*Photo by Davey*

HALEIWA, THE NEW WAIALUA HOTEL

### WAIALUA'S NEW ATTRACTION.

WAIALUA—by the sea—with its unsurpassed hotel, Haleiwa, at last opens up a place of resort for residents of Honolulu and visitors to these islands that has long been desired, and for which the public in general is indebted to B. F. Dillingham's enterprise and far-sighted policy. In providing so tempting an inn as an adjunct and special attraction for travel by the Oahu Railway—also of his creation—the old maxim of "what is worth doing is worth doing well" has been well observed, everything about the hotel being first class and, of a truth, "up-to-date." It has been truly said that its cool inviting external appearance, so appropriate to our climate, and especially so to the charming site it occupies, is a faint indication of its unique and perfect internal arrangement and fittings for the comfort and convenience of guests, surpassing the expectations of not a few

experienced travelers who have expressed the unqualified opinion that for its size one could not find a finer hotel in Europe.

For this high tribute its manager, Major Curtis P. Iaukea, comes in for a large share of credit since his personal attention has been devoted to it during its construction, and the selection of its furnishings, etc., devolved upon him.

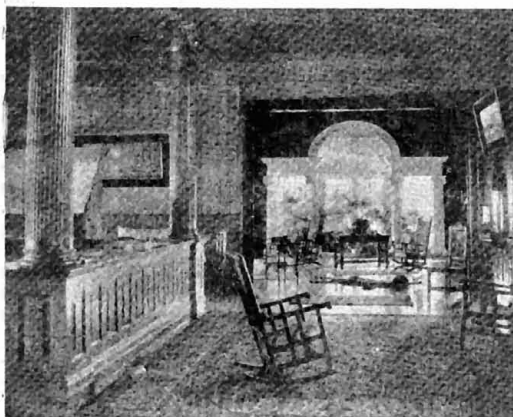
Haleiwa opened August 5th, 1899, since which time many parties have been made up for a few days or weeks change from Honolulu life for an outing to peaceful Waialua at its famed hotel, thus indicating the felt need of our community for some attractive first class caravansary to hie away so handily to for recuperation for longer or shorter stay as time and circumstances warranted, and there is no reason why Haleiwa should not be to Honolulu what the Del Monte is to San Francisco, a joy and pride to its residents and world-wide fame in its attraction for tourists.

Haleiwa—signifying beautiful home—is situated on the sloping bank at the mouth of the Anahulu, one of the twin streams which gives name to the district and village of Waialua, on a commanding site overlooking the sea, a short distance beyond the railroad station whose road to Kahuku passes along the seashore directly in front of the hotel, connecting with it by a lodge, or way station, of picturesque rustic design over a bridge of similar construction spanning the small lake-like arm of the stream between its inner grassed bank and the outer walled bank on the beach side.

The view of the hotel, its grounds and adjacent cottages, present a charming picture from any point, but none more artistic in effect than from its station, as shown in our heading illustration.

The architect, O. G. Traphagen, has successfully produced a symmetrical edifice, massive in appearance yet of cool and graceful design. Its broad spacious verandahs is a confirmation of the idea of lanai necessity for house comfort in these islands where doors and windows are ever open. The rounded ends and front porch relieve it of any idea of stiffness in appearance. The verandah encircles the building, giving it protection from the sun and weather while multiplying its comforts and affording overflow space from its spacious rooms on the first floor.

The first floor is devoted to office, parlor, dining room, kitchen, and intermediary departments necessary from its isolated situation,



*Photo by Davey*

HALL VIEW SHOWING OFFICE AND PARLOR

the dining room occupying the west end and the parlor the east end of the building. A broad stairway leads from the hall opposite the office to the second floor which is all devoted to sleeping apartments. The front rooms overlooking the ocean are single, while the end and mauka rooms are en suite, with bath, etc. Each room has its individual color or tint; paper, paint work and furnishings harmonizing in the production of the blue, pink, or buff room, no two alike. Each room also has a telephone for "central" connection if desired. The building throughout, as also its several cottages, are supplied with electric lights, furnished by its own electric plant situated some little distance away. The water supply for the hotel is obtained from a natural spring on the Emerson premises. This is pumped to a reservoir at an elevation of some 80 feet above sea-level, which gives sufficient pressure to throw a stream 20 feet above the hotel roof.

The furniture and furnishings, glassware, silver and china, were all of special selection and importation for Haleiwa, hence the delay

of the opening from the time that had been planned, but the high quality, completeness and harmony of everything throughout is the joy of the manager and satisfaction of his guests. There are four separate cottages in connection with the Waialua hotel, all of which are furnished with every requisite for the comfort and convenience of guests. For their pleasure and pastime one cottage at the west of the hotel is fitted up as a billiard room with marked completeness, while for those who care to "row upon the waters" pleasure boats are available for them, as also skiffs for sportsmen in the season when ducks and plover abound.

For the special benefit of the latter class a huntsman's lodge has been constructed in the mountain range, toward Waimea, of rude logs and thatch roof at a place called Puukapu, some five miles distant. The district has long been an attraction for gunning; wild turkeys, pheasants, goats, and even cattle and hogs, as well as duck and plover in their season affording sportsmen ample opportunity for a profitable and enjoyable outing. To such, the Waialua hotel's mountain log cabin will prove a convenience and necessity.

Across the road from the hotel, at Waialua, ample stable accommodation has been established to assure guests all the comforts, conveniences and attractions it has been possible to group together at this point, destined in the near future to be one vast sugar plantation, with its fields of cane to the east, south and west as far as the eye can reach, and for the handling of which the Waialua Agricultural Company is now preparing one of the largest and most complete mills in the islands.

A view from the upper porch, or the roof of the hotel, affords one an excellent idea of the magnitude of the concentrated industry to which the district will be devoted hereafter, instead of the diversified industries of cane and rice growing and cattle raising for which it has been noted for years past.

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JULY 1st, 1899, Captain Freitsch in his little sloop *Coke* arrived at Honolulu, from San Francisco, on a planned lone voyage across the Pacific as an advertisement venture, but finding less glory therefrom than he anticipated, the scheme was abandoned at this port. Lone voyages in frail canoes in this ocean is ancient history.

## THE CHANGED HOMESTEAD.

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THE giant, kindly mind of the immortal Froebel, had not, with all its expanse of sublime faith, sufficient of the quality of imagination to conjure up a vision of the end of the century proportions of the child garden work of the world. Honolulu is one of the active, effective, practical centers and powers in this wide-spread and bounteous philanthropy.

Curious, but responsively harmonious is the case in point to these lines. Just off the edge of the urban district of the Hawaiian capital is a homestead established as a station of the well known missionary work of the Islands. The place stands for the whole-souled devotion, entire consecration and unselfish aim and practice of those courageous pioneers who brought the gospel to these shores more than three-quarters of a century ago, and who have never wearied in well-doing.

The Castle place, on King street, near historic Kawaiahao church, was assigned to Mr. S. N. Castle in 1837 and was his home till his death in 1894. Honolulu was of course in 1837 an insignificant village, without form and uninviting. At that period property values were simply nil. In fact from the first up to a very few years ago land throughout the group was ridiculously cheap and its title but little prized.

It was for Rev. E. W. Clark, one of the preachers and teachers and the father of Mrs. O. H. Gulick and Mrs. Luther Severance, that the house was built. Rev. Mr. Clark leaving the place, it was allotted to Mr. S. N. Castle. That the house was constructed by capable and honest hands is evidenced by the excellent state of preservation today of the original parts.

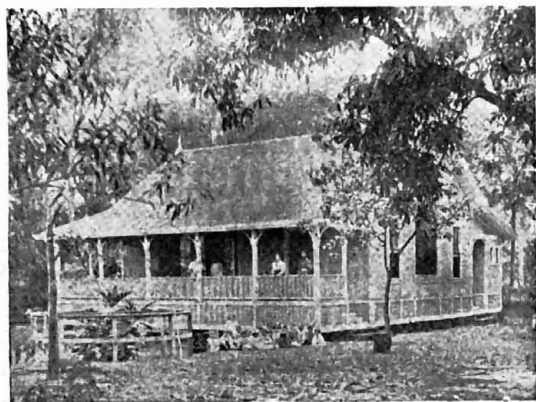
All through the active and earnest years of the strong and healthy growth or formation of the staunch and vigorous and destructive elements that mark the clean-cut and admirable character of the delightful social life of Honolulu, the Castle home was a



center of true culture. Both Mr. and Mrs. Castle delighted in entertaining and than this old homestead there was no more hospitable point anywhere in the group. Here was genuine open house. All were welcome, but the fiber of the informal organization that tacitly understood the Castle home to be headquarters had in it the individualities that build states. Religious, literary, musical and aid and auxiliary societies here had their birth and were forwarded and given permanent place in the great field of usefulness which had its hot house or nursery within the walls of the old homestead's inviting parlor. Many movements of the greatest moment and most lasting and beneficial effect to the church, to society at large, to the various nationalities assembled in the Islands were launched from the Castle place. On the occasions of extraordinary gatherings in Honolulu the house was well understood to be a haven of rest and entertainment for friends from out of town till the last inch of space was in use. Not a few weddings have had the home for the scene of the ceremony. Scores of newly arrived citizens were introduced here by a reception, when the best people of the city crowded the rooms. Church socials, Sabbath school celebrations, birthday parties and the like were often held in the old homestead. Mr. and Mrs. Castle never abated interest in these affairs, but as time passed on had the valued assistance and co-operation of their sons and daughters. In fact, it may well be remarked that in matters appertaining to the best welfare of the young people, the master and mistress of the homestead had always a keen and abiding interest. Some of the societies meeting at the home studied or investigated the deeper and wider religious, social, scientific and political questions, keeping in close touch with the most advanced thought of the great world beyond. And so it is that hundreds upon hundreds of persons, not only in Hawaii nei, but as well located in other lands will cherish to the last memories of the pleasant associations with which any recollection of the old homestead must be invested. S. N. Castle was known as a worker, but analysis of his mental composition or equipment and a glance at the results he achieved or reached, would show that he was first a thinker. Perhaps unconsciously, he massed thoughts or observations about him much as he attracted people. His mind was wax to receive and stone to retain and he

thus was enabled to get to conclusions with the far-reaching accuracy of the incisive reasoner. He was one of two or three men of his day able to predict to a nicety the distant outcome of existing conditions and passing events. It is well known that he foretold much that has transpired since he crossed the river, including exact mention of a marked change in evangelization methods here and the climax of government trend. Such was the attractive life and light of the old homestead.

S. N. Castle came to the Islands as the business agent of the American Board. His services in that capacity were of the greatest worth. His native sagacity and business accomplishments were strengthened by a brave, aggressive Christian spirit, industriously and co-operatively in sympathy with the great tasks of the organizations and individuals having use for his talents. When he passed from the shadows of life into the silence of death a nation mourned and paid tribute. The writer can never forget the grand impressiveness of seeing the four sons of S. N. Castle acting as pall-bearers at the funeral, which was from the house across the



CASTLE MEMORIAL FREE KINDERGARTEN.

street to old Kawaiahao cemetery, where the bodies of so many missionary band members have been laid.

Mrs. Mary Castle is just such a woman as would be expected in the widow of such a man. She wants the old homestead to continue as an instrument in the blessed work of bettering mankind. To this end she has recently established upon the premises the "Henry and Dorothy Castle Memorial Free Kindergarten." It opened with an attendance of thirty-five; will accommodate half a hundred and is liberally endowed for all time against even most extraordinary circumstances. There has been installed as director Miss Florence La Victoire, whose extra and special preparation for the headship of the Memorial consisted of a full year in the famous Dewey school, an annex of the University of Chicago. This kindergarten has a housing correct in every detail and there are charming grounds, with the locality a delightful one. Between the Memorial and old homestead buildings is a smooth lawn.

It is but a few years ago that Mrs. S. N. Castle decided to leave the old place. There came to her naturally the thought that the hallowed home should continue to be a part of some such service as that with which it had for so many years been so prominently and usefully identified. The first step was to set up the child garden as a doing, building, making monument to Henry N. Castle, her youngest son, who had always been interested in Froebel theory and development and Dorothy, his little daughter, both of whom were lost in the fearful Elbe steamship disaster in 1895. Mrs. Henry N. Castle and Mrs. Harriet Castle-Coleman are both free kindergarten enthusiasts.

Mrs. S. N. Castle, thinking on the needs of the local humanitarian movement for the children of the poor, missed "Orphans' Home" from the list of things that were. She was not long in reaching the decision that the old missionary station should serve as a refuge for so many wee waifs as it could hold. Mrs. Castle caused the ancient house to be thoroughly repaired and to be equipped with furnishings required for the care of thirty to forty little ones. It can and will do for more. The "Orphans' Home," fairly breathing recollections of extension of help to the helpless, will early in the present year be given over by its owner to the

Honolulu Free Kindergarten and Children's Aid Association and Mrs. Castle's interest in the welfare of the project will be no small, diminishing nor idle one. The orphans to people the old missionary homestead haven will come from the child class found in the free kindergartens. The eligibles will be many. All received will have the best of care and the strongest of incentive and encouragement. They, with the graduates of the Memorial, will carry down through all time the almost romantic story of the Old Castle Homestead—an evolution of Hawaii.

*Ed Towse.*

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### FORNANDER'S ACCOUNT OF HAWAIIAN LEGENDS RESEMBLING OLD TESTAMENT HISTORY.

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A valuable research paper by the late Rev. Dr. C. M. Hyde - Revised from  
from the Saturday Press, 1881.

**I**N the first volume of Judge Fornander's elaborate work on *The Polynesian Race* he has given some old Hawaiian legends which closely resemble the Old Testament history. How shall we account for such coincidences?

Take, for instance, the Hawaiian account of the Creation. The Kane, Ku and Lono: or Sunlight, Substance and Sound. These constituted a triad named Ku-Kaua-Kahi or the Fundamental Supreme Unity. In worship the reverence due was expressed by such epithets as Hi-ka-po-loa, Oi-e, Most Excellent, etc. "These gods existed from eternity, from and before chaos, or as the Hawaiian term expressed it, 'mai ka po mai,' from the time of night, darkness, chaos. By an act of their will these gods dissipated or broke into pieces the existing, surrounding, all-containing po, night, or chaos. By this act light entered into space. They then created the heavens, three in number, as a place to dwell in; and the earth to be their footstool, 'he keehina honua a Kane.' Next they created the sun, moon, stars, and a host of angels, or spirits—i kini akua—to minister to them. Last of all they created man as the model, or in the likeness of Kane. The body of the first man was made of red earth—lepo ula, or alaea—and the spittle of the

gods—wai nao. His head was made of a whitish clay—palolo—which was brought from the four ends of the world by Lono. When the earth-image of Kane was ready, the three gods breathed into its nose, and called on it to rise, and it became a living being. Afterwards the first woman was created from one of the ribs—lalo puhaka—of the man while asleep, and these two were the progenitors of all mankind. They are called in the chants and in various legends by a large number of different names; but the most common for the man was Kumuhonua, and for the woman Keolaku-honua," (or Lalahonua)—p. 62.

"Of the creation of animals these chants are silent; but from the pure tradition it may be inferred that the earth at the time of its creation or emergence from the watery chaos was stocked with vegetable and animal. The animals specially mentioned in the tradition as having been created by Kane, were hogs, puua, dogs, ilio, lizards or reptiles, moo."—p. 76.

"Another legend of the series, that of Wela-ahi-lani, states that after Kane had destroyed the world by fire, on account of the wickedness of the people then living, he organized it as it now is, and created the first man and the first woman, with the assistance of Ku and Lono, nearly in the same manner as narrated in the former legend of Kumuhonua. In this legend the man is called Wela-ahi-lani, and the woman is called Owe."—p. 63.

Of the primeval home, the original ancestral seat of mankind, Hawaiian traditions speak in highest praise. "It had a number of names of various meanings, though the most generally occurring, and said to be the oldest, was Kalana-i-hau-ola, Kalana with the life-giving dew." It was situated in a large country, or continent, variously called in the legends Kahiki-honua-kele, Kahiki-ku, Kapa-kapa-ua-a-Kane, Mololani. Among other names for the primary homestead or paradise, are Pali-uli, the blue mountain, Aina-i-ka-kaupo-o-Kane, the land in the heart of Kane, Aina-wai-akua-a-Kane, the land of the divine water of Kane. The tradition says of Pali-uli, that it was a sacred, tabued land, that a man must be righteous to attain it; if faulty or sinful he will not get there; if he looks behind he will not get there; if he prefers his family he will not enter Pali-uli."—p. 77. "Among other adornments of the Polynesian Paradise, the Kalana-i-hau-ola, there grew the Ulu

kapu a Kane, the breadfruit tabued for Kane, and the ohia hemo-lele, the sacred apple tree. The priests of the olden time are said to have held that the tabued fruit of these trees were in some manner connected with the trouble and death of Kumuhonua and Lalohonua, the first man and the first woman. Hence in the ancient chants he is called Kane-laa-uli, Kumu-uli, Kulu-ipo, the fallen chief, he who fell on account of the tree, or names of similar import."—p. 79.

According to those legends of Kumuhonua and Wela-ahi-lani, "at the time when the gods created the stars, they also created a multitude of angels, or spirits, i kini akua, who were not created like men, but made from the spittle of the gods, i kuaia, to be their servants or messengers. These spirits, or a number of them, disobeyed and revolted, because they were denied the awa, which means that they were not permitted to be worshipped, awa being a sacrificial offering and sign of worship. These evil spirits did not prevail, however, but were conquered by Kane, and thrust down into uttermost darkness, ilalo loa i ka po. The chief of these spirits was called by some Kanaloa, by others Milu, the ruler of Po, Akua ino, Kupu ino, the evil spirit." Other legends, however, state that the veritable and primordial lord of the Hawaiian Inferno was called Manua. The Inferno itself bore a number of names such as Po-pau-ole, Po-kua-kini, Po-kini-kini, Po-papa-ia-owa, Po-ia-milu. Milu, according to those other legends was a chief of superior wickedness on earth who was thrust down into Po, but who was really both inferior and posterior to Manua. This inferno, this Po with many names, one of which remarkably enough was Ke-po-lua-ahi, the pit of fire, was not an entirely dark place. There was light of some kind and there was fire. The legends further tell us that when Kane, Ku, and Lono, were creating the first man from the earth, Kanaloa was present, and in imitation of Kane, attempted to make another man out of the earth. When his clay model was ready, he called to it to become alive, but no life came to it. Then Kanaloa became very angry and said to Kane, "I will take your man, and he shall die," and so it happened. Hence the first man got his other name Kumu-uli, which means a fallen chief, he 'lii kahuli. \* \* With the Hawaiians, Kanaloa is the personified spirit of evil; the origin of death, the prince

of Po, or chaos, and yet a revolted, disobedient spirit, who was conquered and punished by Kane." \* \* "The introduction and worship of Kanaloa, as one of the great gods in the Hawaiian group, can only be traced back to the time of the immigration from the southern groups some eight hundred years ago. In the more ancient chant he is never mentioned in conjunction with Kane, Ku, and Lono, and even in later Hawaiian mythology he never took precedence of Kane."—pp. 83-85. "The Hawaiian legend states that the oldest son of Kumuhonua the first man was called Laka, and that the next was called Ahu; and that Laka was a bad man, he killed his brother Ahu."—p. 35.

"There are these different Hawaiian genealogies, going back with more or less agreement among themselves to the first created man. The genealogy of Kumuhonua gives thirteen generations inclusive to Nuu, or Kahinalii, or the line of Laka, the oldest son of Kumuhonua. (The line of Seth from Adam to Noah counts ten generations.) The second genealogy called that of Kumu-uli, was of greatest authority among the highest chiefs down to the latest times, and it was tabu to teach it to the common people. This genealogy counts fourteen generations from Huli-honua the first man to Nuu, or Nana-nuu, but inclusive on the line of Laka. The third genealogy, which, properly speaking is that of Paa'o, the high-priest who came with Pili from Tahiti, about twenty-five generations ago, and was a reformer of the Hawaiian priest-hood, and among whose descendants it has been preserved, counts only twelve generations from Kumuhonua to Nuu, on the line of Kapili, youngest son of Kumuhonua."—p. 86, 87.

"In the Hawaiian group there are several legends of the Flood. One legend relates that in the time of Nuu or Nana-nuu (also pronounced *lanā*, that is, floating) the flood, *Kaiakahinalii*, came upon the earth, and destroyed all living beings; that Nuu, by command of his god, built a large vessel with a house on top of it, which was called and is referred to in chants as '*He waa halau Alii o ka Moku*,' the royal vessel, in which he and his family, consisting of his wife *Lilinoe*, his three sons and their wives were saved. When the flood subsided, Kane, Ku and Lono entered the *waa halau* of Nuu, and told him to go out. He did so and found himself on the top of *Mauna Kea* (the highest mountain on the island of Hawaii).

He called a cave there after the name of his wife, and the cave remains there to this day as the legend says in testimony of the fact. Other versions of the legend say that Nuu landed and dwelt in Kahiki-honua-kele, a large and extensive country."—p. 91. "Nuu left the vessel in the evening of the day and took with him a pig, cocoanuts and awa as an offering to the god Kane. As he looked up he saw the moon in the sky. He thought it was the god, saying to himself, 'You are Kane, no doubt, though you have transformed yourself to my sight.' So he worshipped the moon, and offered his offerings. Then Kane descended on the rainbow and spoke reprovingly to Nuu, but on account of the mistake Nuu escaped punishment, having asked pardon of Kane."—p. 42. "Nuu's three sons were Nalu-akea, Nalu-hoohua, and Nalu-manamana. In the tenth generation from Nuu arose one Lua-nuu, or the second Nuu, known also in the legend as Kane-hoa-lani, Kupule, and other names. The legend adds that by command of his god he was the first to introduce circumcision to be practiced among all his descendants. He left his native home and moved a long way off until he reached a land called Honua-ilalo, 'the southern country.' Hence he got the name Lalo-kona, and his wife was called Honua-po-ilalo. He was the father of Ku-nawao by his slave-woman Ahu (O-ahu) and of Kalani-menehune by his wife Mee-hewa. Another says that the god Kane ordered Lua-nuu to go up on a mountain and perform a sacrifice there. Lua-nuu looked among the mountains of Kahiki-ku, but none of them appeared suitable for the purpose. Then Lua-nuu inquired of God where he might find a proper place. God replied to him, 'Go travel thou to the eastward, and where you find a sharp, peaked hill projecting precipitously into the ocean, that is the hill for the sacrifice. Then Lua-nuu and his son Kupulu-pulu-a-Nuu and his servant Pili-lua-nuu, started off in their boat to the eastward. In remembrance of this event the Hawaiians called the back of Kua-loa, Koolau, Oahu, after one of Lua-nuu's names, Kane-hoa-lani, and the smaller hills in front of it were named Kupulu-pulu and Pili-lua-nuu. Lua-nuu is the tenth descendant from Nuu by both the oldest and the youngest of Nuu's sons. This oldest son is represented to have been the progenitor of the Kanaka-maoli, the people living on the main land of Kane—Aina kumupuaa a Kane;



the youngest was the progenitor of the white people—ka poe keo-keo maoli. This Lua-nuu, (like Abraham, the tenth from Noah, also like Abraham) through his grandson Kini-lau-a-mano, became the ancestor of the twelve children of the latter, and the original founder of the Menehune people, from whom this legend makes the Polynesian family descend.”—p. 98.

Rev. Sheldon Dibble in his history of the Sandwich Islands, published at Lahainaluna, in 1843, on page 28, gives a tradition which very much resembles the history of Joseph. “Waikelenui-aiku was one of ten brethren who had one sister. They were all the children of one father, whose name was Waiku. Waikelenui-aiku was much beloved by his father, but his brethren hated him. On account of their hatred they carried him and cast him into a pit belonging to Holonaeole. The oldest brother had pity on him, and gave charge to Holonaeole to take good care of him. Waikelenui-aiku escaped and fled to a country over which reigned a King whose name was Kamohoalii. There he was thrown into a dark place, a pit under ground, in which many persons were confined for various crimes. Whilst confined in this dark place he told his companions to dream dreams and tell them to him. The night following four of the prisoners had dreams. The first dreamed that he saw a ripe ohia, (native apple,) and his spirit ate it; the second dreamed that he saw a ripe banana, and his spirit ate it; the third dreamed that he saw a hog, and his spirit ate it; and the fourth dreamed that he saw awa, pressed out the juice, and his spirit drank it. The first three dreams, pertaining to food, Waikelenui-aiku interpreted unfavorably and told the dreamers they must prepare to die. The fourth dream, pertaining to drink, he interpreted to signify deliverance and life. The first three dreamers were slain according to the interpretation and the fourth was delivered and saved. Afterwards this last dreamer told Kamohoalii, the king of the land, how wonderful was the skill of Waikelenui-aiku in interpreting dreams, and the king sent and delivered him from prison and made him a principal chief in his kingdom.” Judge Fornander alludes to this legend, giving the name however Aukelenui-a-Iku, and adding to it the account of the hero's journey to the place where the water of life was kept, ka-wai-ola-loa-a-Kane, his obtaining it and therewith resuscitating his brothers

who had been killed and drowned some years before. Another striking similarity is that furnished to Judge Fornander in the legend of Ke-alii-waha-nui: "He was King of the country called Honua-i-lalo. He oppressed the Menehune people. Their god Kane sent Kane-apua and Kaneloa his elder brother to bring the people away, and take them to the land which Kane had given them, and which was called 'Ka aina momona a Kane, or Ka one lauena a Kane, and also Ka aina i ka haupo a Kane. The people were then told to observe the four Ku days in the beginning of the month as Kapu-hoano, sacred or holy days, in remembrance of this event, because they thus arose, Ku, to depart from that land. Their offerings on the occasion were swine and goats. The narrator of the legend explains that formerly there were goats without horns, called malailua, on the slopes of Mauna Loa on Hawaii, and that they were found there up to the time of Kamehameha I. The legend further relates that after leaving the land of Honua-i-lalo, the people came to the Kai-ula-a-Kane, the 'Red sea of Kane;' that they were pursued by Ke-alii-waha-nui; that Kane-apua and Kaneloa prayed to Lono, and finally reached the Aina lauena a Kane."—p. 99.

"In the famous Hawaiian legend of Hiiaka-i-ka-poli-o-Pele, it is said that when Hiiaka went to the island of Kauai to recover and restore to life the body of Lohiau, the lover of her sister Pele, she arrived at the foot of the Kalalau mountain shortly before sunset. Being told by her friends at Haena that there would not be daylight sufficient to climb the pali, (precipice), and get the body out of the cave in which it was hidden, she prayed to her gods to keep the sun stationary, i ka muli o Hea, over the brook Hea, until she had accomplished her object. The prayer was heard, the mountain was climbed, the guardians of the cave vanquished, and the body recovered."—p. 100.

A story of retarding the sun and making the day longer to accomplish his purpose is told of Maui-a-kalana, according to Dibble's history.—p. 29. Judge Fornander alludes to one other legend with incidents similar to the Old Testament history wherein "Naula-a-Mainea, an Oahu prophet, left Oahu for Kauai, was upset in his canoe, was swallowed by a whale, and thrown up alive on the beach at Wailua, Kauai."—p. 100.

Judge Fornander says that when he first heard the legend of the two brother prophets delivering the Menehune people, "he was inclined to doubt its genuineness and to consider it as a paraphrase or adaptation of the Biblical account by some semi-civilized or semi-christianized Hawaiian after the discovery of the group by Captain Cook. But a larger and better acquaintance with Hawaiian folklore has shown that though the details of the legend, as interpreted by the Christian Hawaiian from whom it was received, may possibly in some degree, and unconsciously to him perhaps have received a Biblical coloring, yet the main facts of the legend, with the identical names of persons and places, are referred to, more or less distinctly, in other legends of undoubted antiquity." p. 99. And Rev. Mr. Dibble in his history, (p. 29) says of these Hawaiian legends, that "they were told to the missionaries before the Bible was translated into the Hawaiian tongue, and before the people knew much of sacred history. The native who acted as assistant in translating the history of Joseph was forcibly struck with its similarity to their ancient tradition. Neither is there the least room for supposing that the songs referred to are recent inventions. They can all be traced back for generations, and are known by various persons residing on different islands who have had no communications with each other. Some of them have their date in the reign of some ancient king, and others have existed time out of mind. It may also be added, that both their narrations and songs are known the best by the very oldest of the people, and those who never learned to read; whose education and training were under the ancient system of heathenism."

"Two hypotheses," says Judge Fornander, "may with some plausibility be suggested to account for this remarkable resemblance of folk-lore. One is, that during the time of the Spanish galleon trade, in the sixteenth and seventeenth centuries between the Spanish main and Manila, some shipwrecked people, Spaniards and Portuguese, had obtained sufficient influence to introduce these scraps of Bible history into the legendary lore of this people.

\* \* On this fact hypothesis I remark, that if the shipwrecked foreigners were educated men, or only possessed of such scriptural knowledge as was then imparted to the commonality of laymen, it is morally impossible to conceive that a Spaniard of the

sixteenth century should confine his instruction to some of the leading events of the Old Testament, and be totally silent upon the Christian dispensation, and the cruciolatry, mariolatry and hagiolatry of that day. And it is equally impossible to conceive that the Hawaiian listeners, chiefs, priests, or commoners, should have retained and incorporated so much of the former in their own folk-lore, and yet have utterly forgotten every item bearing upon the latter."

"The other hypothesis is, that at some remote period either a body of the scattered Israelites had arrived at these islands direct, or in Malaysia, before the exodus of 'the Polynesian family, and thus imparted a knowledge of their doctrines of the early life of their ancestors, and of some of their peculiar customs, and that having been absorbed by the people among whom they found a refuge, this is all that remains to attest their presence—intellectual tombstones over a lost and forgotten race, yet sufficient after twenty-six centuries of silence to solve in some measure the ethnic puzzle of the lost tribes of Israel.' In regard to this second hypothesis, it is certainly more plausible and cannot be so curtly disposed of as the Spanish theory. \* \* So far from being copies one from the other, they are in fact independent and original versions of a once common legend, or series of legends, held alike by Cushite, Semite, Turanian and Arian, up to a certain time, when the divergencies of national life and other causes, brought other subjects peculiar to each other prominently in the foreground; and that as these divergencies hardened into system and creed, that grand old heirloom of a common past became overlaid and colored by the peculiar social and religious atmosphere through which it has passed up to the surface of the present time. But besides this general reason for refusing to adopt the Israelitish theory, that the Polynesian legends were introduced by fugitive or emigrant Hebrews from the subverted Kingdoms of Israel or Judah, there is the more special reason to be added that on the organization and splendor of Solomon's empire, his temple and his wisdom, become proverbial among the nations of the East subsequent to his time; on all these, the Polynesian legends are absolutely silent."—pp. 101-103.

In commenting on the legend of Hiiaka-i-ka-poli-o-Pele, Judge

Fornander says, "If the Hebrew legend of Joshua, or a Cushite version give rise to it, it only brings down the community of legends a little later in time. And so would the legend of Naulua-Mahea, \* \* unless the legend of Jonah with which it corresponds in a measure as well as the previous legend of Joshua and the sun were Hebrew anachronisms compiled and adapted in later times from long antecedent materials, of which the Polynesian references are but broken and distorted echoes, bits of legendary Mosaics, displaced from their original surroundings and made to fit with later associations."—p. 100.

In regard to the account of the creation he remarks that "the Hebrew legend infers that the gods Elohim, existed contemporaneously with and apart from the chaos. The Hawaiian legend makes the three great gods, Kane, Ku, and Lono, evolve themselves out of chaos."—p. 68. "The order of creation, according to Hawaiian folk-lore, was that after heaven and earth had been separated, and the ocean had been stocked with its animals, the stars were created, then the moon, then the sun. Alluding to the fact that the account in Genesis is truer to nature, Judge Fornander nevertheless propounds the enquiry whether this fact may not "indicate that the Hebrew text is a later emendation of an older but once common tradition?"—p. 76.

Highest antiquity is claimed for Hawaiian traditions in regard to events subsequent to the creation of man. "In one of the sacrificial hymns of the Marquesas, when human victims were offered, frequent allusions were made to 'the red apples eaten in Naoau,"

\* \* and to the 'tabued apples of Atea,' as the cause of death, wars, pestilence, famine, and other calamities only to be averted or atoned for, by the sacrifice of human victims. The close connection between the Hawaiian and the Marquesan legends indicates a common origin, and that origin can be no other than that from which the Chaldean and Hebrew legends of sacred trees, disobedience, and fall, also sprang."—p. 82. In comparison of "the Hawaiian myth of Kanaloa as a fallen angel antagonistic to the great gods as the spirit of evil and death in the world."

\* \* "The Hebrew legends are more vague and indefinite as to the existence of an evil principle. The serpent of Genesis, the satan of Job, the Hillel of Isaiah, the dragon of the Apocalypse,

—all point however to the same underlying idea that the first cause of sin, death, evil and calamities, was to be found in disobedience and revolt from God. They appear as disconnected scenes of a once grand drama, that in olden times riveted the attention of mankind, and of which strange to say the clearest synopsis and the most coherent recollection, are, so far, to be found in Polynesian traditions. It is probably in vain to inquire with whom the legend of an evil spirit and his operations in heaven and on earth had its origin. Notwithstanding the apparent unity of design and remarkable coincidence in many points, yet the differences in coloring, detail, and presentation are too great to suppose the legend borrowed by one from either of the others. It probably descended to the Chaldeans, Polynesians and Hebrews alike, from source or people anterior to themselves, of whom history now is silent.”—p. 85.

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### A SUGGESTIVE CRITICISM.

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On reading the “Sketch of the Evolution of Allodial titles in Hawaii,” that appeared in the last ANNUAL, I notice that the author has fallen into the common error of assuming that a given combination of letters can have but one meaning, and that for purposes of translation, a word may be arbitrarily divided into syllables and each syllable translated to mean what it might when standing as a separate word. A proceeding capable of producing very uncouth or infelicitous results. Thus *ilikupono*, a Hawaiian division of land, is translated, “skin standing right.”

I make no pretensions to a grammatical or scholarly knowledge of Hawaiian, such as Prof. W. D. Alexander or Dr. N. B. Emerson might claim, nor a thorough colloquial knowledge such as might be claimed by Hon. W. H. Rice, W. L. Wilcox or others, but I venture to think that no Hawaiian, in using this word, ever had in his mind the shadow of a thought of *skin*, or *hide*. I doubt if even the approximate idea conveyed by our word *surface* or *patch* of land, had a place in his mind. I should deem it more probable that the idea entertained was that of possession received

by right from another, as distinctly hinted at by the author, since to *ili*, meant to pass from one to another as a gift or inheritance, but more particularly the latter. In this sense, the idea conveyed by the word *ilikupono*, as nominately applied to a section of land, would be that of land acquired, originally, as a *direct* gift or inheritance from its primary possessor. Some of the parties named as being better versed in Hawaiian than I, might attach to the word an idea entirely different from this, and it would be interesting to have their views on this question. But I will pass to the consideration of other errors that appear in the article, as for example "*popoke*\* (poor pussy)." We must assume that, either the orthography of this Hawaiian word is wrong as here used, or its translation incorrect, for if the translation is correct, the word used should be *popoki*.

Again, "*Honokua* (turtle back)," is incorrect. Turtle would be *honu*. To *honu*, would, in its primitive Hawaiian sense mean to *mend a fishing net*. Whether *hono* as a noun was ever used to mean the meshes of a net, is more than I am able to say at present. Another word *hono*, meant abounding in numbers, or in some quality, as instance Honolulu, abounding in calmness, or shelter from wind. Honopueo, abounding in owls. Another *hono*, is the back of the neck, and since *kua* is back, why should not the full word *honokua* mean the prominent part, over and just above the joint at the base of the neck, where it merges into the back proper? Just that and nothing more I believe it means.

Errors should not be perpetuated, certainly not in forms that will be referred to as authority. Writers are sometimes at fault in not taking pains to inform themselves correctly before attempting to use foreign words or phrases and give their interpretation.

E. C. B.

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\* "This is a Common error, to be accounted for; perhaps, from similarity of sound unless carefully expressed, Ed."

## OUTLINE OF THE COMING CENSUS.

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THE following plan of the next census for these islands is gathered from authoritative sources, by courtesy of Hon. A. T. Atkinson, with the view of preparing the general public with its particular features and special lines of enquiry in its several schedules.

The Hawaiian Census for 1900 will form a small portion of the 12th Census of the United States. At the head of the Census is the Hon. Wm. R. Merriam, formerly Governor of Minnesota, his title being Director of Census. With him are associated as Chief Statisticians some of the ablest men in their line in the United States.

The Census on the American plan differs from that pursued in these islands. The Hawaiian Census was what is known as the photographic method, that is, everybody is taken on one night, and wanted as of the place the person slept at. The American is the house to house method and may be anywhere from a fortnight to a month in gathering information. No matter where a person may be temporarily sleeping, he is wanted as of his own home. Thus a child at school in Oakland will be wanted as belonging to the home in Hawaii, while transient visitors at hotels and boarding houses will not be wanted at all.

The United States Census, to be taken for the first time in Hawaii, will be as of the 1st June, A. D. 1900. Much information will be elicited from the inhabitants, but such information will not be used as a basis of taxation and will in all cases be treated as strictly confidential. These queries are set out in six schedules, approximately as follows:

### SCHEDULE ONE.

Street ; Number ; Name ; Relation to family, as head, wife, son ; Race ; Sex ; Date of birth ; Age at last birthday ; Single, married ; widowed, or divorced ; Years married ; Mother of how many



children; No. children living; Place of birth of individual; Place of birth of his father; Place of birth of his mother; Year of immigration to Islands; Naturalized or denizen; Occupation; Months employed; Attend school; Can read; Can write; Can speak English; Can speak Hawaiian; Ownership of home, i. e. owned or rented; Owned free or mortgaged; Homestead lot or kuleana.

## SCHEDULE TWO.—SCHOOLS.

Name of school; Location; Government or independent; Day or boarding; No. school buildings; Cost of school buildings; Rent of building; No. teachers, male, female; No. pupils; Nationality of same; Average daily attendance; No. days of school in 1899-1900; How supported.

## SCHEDULE THREE.—CHURCHES.

Name of Church; Location; Denomination; Number of members; Nationality; Males, Females; Value of Church property; How supported.

## SCHEDULE FOUR.—FISHERIES.

Name of owner; District; No. persons engaged in fishing; Nationality; Method of taking fish; No. canoes or other vessels used; Amount paid in wages past year; Value of catch.

## SCHEDULE FIVE.—AGRICULTURE.

Name of person, firm, etc., conducting farm; P. O. Address; Nationality; Tenure; Acres forest land; Acres pasture; Acres other than forest or pasture; Acres owned; Acres leased from Government; Acres leased from individuals; Value of farm June 1st, including improvement; Value buildings; Value implements and machinery; Value farm products year prior to June 1st; Expenditures for fertilizers; For labor; For water; Value coffee; Rice; Grapes and wine; Value other fruit; Value vegetables; Value wood and other forest products used or sold; Value all other crops; Farm products and No. acres cultivated, Acres irrigated, No. bearing trees, No. young trees; Quantity produced of Coffee; Banana; Oranges; Limes; Lemons; Pineapples; Alligator

pear; Fig; Peach; Tamarind; Cocoanut; Grape; Products not grown on tree, as Taro; Corn; Potatoes; do. Sweet; Strawberries; Rice; Tobacco. Farm animals, ages; numbers; value; Pure blooded animals, receipts from sale Dairy products, as milk, cream, butter, cheese; quantity of each produce and receipts for sale of. Wool, No. fleeces; weight of all value of wool. Poultry and eggs; chickens, turkeys, geese, ducks; value all kinds. Dozen eggs produced in 1899. Value eggs. Bees and honey; No. swarms; value bees; lbs. honey; lbs. wax; value honey, wax, and queen bees.

SCHEDULE SIX.—SUGAR.

Name of corporation; P. O. Address; Nationality of manager; Acres in Plantation June 1st, detailed as owned in Fee; Rented from Government; from individuals; Forest land; Pasture land; all land not in forest or pasture; Expenditures in 1899; for Fertilizers; Labor; Water supply; Coal; Wood; Trash; Feed for stock; Total value Plantation including land, buildings, improvements as of June 1st, 1900; Value buildings; Value machinery for crushing; Value R. R. tracks and moving stock; Value all land owned in fee and its improvements; do of leased land and improvements; Value agricultural machinery; Acres cane land lying fallow in 1899. Gallons water used in irrigating; Acres plant, and ratoon. Acres irrigated; Tons cane produced; Tons Sugar produced; Gallons molasses; Value Sugar; Value Molasses. By-products and value; Employees, nationality of; Average annual wages.

Farm products of Plantation, as in Schedule Five.

Alatau T. Atkinson, who took the former census in Hawaii has been appointed Special Agent in Chief for the Islands and is now engaged in districting the Islands and organizing a staff to take the census when the date for action arises.

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## INFORMATION FOR TOURISTS AND OTHERS.

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**I**N the prominence to which these islands have been brought the past few years the world has familiarized itself with Hawaii as never before, and the enquiries for information pertaining to its present conditions and future prospects indicate a healthy awakening to a realization of the excellent opportunities these islands offer in certain lines of agriculture, in scenic attractions varying from tropic growth to Yosemite and Alpine grandeur, with a healthy climate and balmy atmosphere, withal, that rivals the famed Mediterranean resorts.

It has been the province of the HAWAIIAN ANNUAL, ever since its existence, to present just such lines of reliable information as indicated above, for the benefit of foreign inquiry and home reference, and the widening circle of readers and flattering testimonials received give evidence that the labors in this direction have not been in vain.

The carefully prepared and revised statistical tables cover the fields of Government and commercial progress for many years past, while special articles present attractions and existing conditions in Hawaii nei and indicate also its possibilities.

But while the preceding information has value for many readers, the transient visitor and tourist, with but a few days—or may be hours only—at their disposal, is desirous of improving the most of his (or her) opportunity to see the attractions of place and people. For such readers the following brief outline is given:

To the incoming visitor, Honolulu, situate on the island of Oahu—and the capital city of the group—presents peculiar attractions, nestled as it is amid evergreen foliage at the foot and in the valleys of a mountain range whose peaks kiss the clouds at a height of 3,000 feet. The grove of cocoanut trees that fringe the shore along Waikiki give strangers their first tropical impression after rounding Diamond Head—Honolulu's landmark—and the nestling cot-

tages, or more pretentious residences, that open up to view while passing down the reef to the entrance of the harbor, presents a picture of restfulness that charm alike all incomers. First impressions are said to be lasting, and nature has so favored Hawaii that it is a rare occurrence for visitors after a tour of the city, or of the islands, not to express the hope to return for re-enjoyment of place and people.

Vessels on entering port find, with but rare exceptions, wharfage facilities awaiting them, and as the mail steamers warp in to the dock, numerous native boys swim about anxious to display their skill in diving for nickels, or a "nimble six-pence," that may be thrown in the water. The scramble of from six to twenty divers after a single coin affords rare sport to strangers.

Upon landing, courteous hack drivers are at hand or within easy reach by telephone, to convey passengers to hotels or private residences, or for a drive about the city and suburbs. The charge for such service is regulated by law, and will be found elsewhere in this issue.

If one's time is limited to the few hours' stay of a through steamer in port, the first important point of interest to visit is the Pali, at the head of Nuuanu valley, distant six miles from the Honolulu Post Office. The road leads through the earlier residence portion of the city, affording a view of spacious and well kept grounds to the majority of homes, indicative of the comfort and taste of our residents, then on past stretches of wilder country, flanked on either side by moss and fern banked mountain slopes, till all of a sudden the gap is reached and the scenic view of the precipices of Koolau, with its rolling table land some twelve hundred feet beneath, and the blue Pacific Ocean in the distance, presents a scene of entrancing beauty. The Pali is made historically famous as the place over which the forces of Kamehameha the First drove his enemies in the final battle in the conquest of this island in 1795.

Next in scenic interest would be a trip to Tantalus, a mountain peak some 2,000 feet high, overlooking, not only Honolulu, but the stretch of country ranging from Koko Head to Barber's Point. A good winding carriage road traverses the entire distance and passes through shady forest glades and wild shrubbery into a

balmy atmosphere that is attracting public attention as an unsurpassed location for summer cottages, tourists' resort, or sanitarium.

Another pleasant drive to a commanding point is around Punchbowl, an extinct volcano some 500 feet high, just back of the city. From this advantageous position many delightful views are obtained. Honolulu, hidden for the most part amid luxuriant foliage, gives the impression of one large park on the borders of the sea.

While the attractiveness of a drive to Waikiki and Kapiolani Park is admitted by visitors to afford rare enjoyment, the ideal is reached by a sojourn among its seductive groves where the sound of the restless surf, dashing on the guarding reef, or wavelets rippling on its sandy shore, sings a sweet lullaby, and the pleasure of ocean bathing in a temperature that, like its skies, its seas, and atmosphere, is surpassed by no other spot in all the wide world. Poets have sung its praises; writers have vied with each other in describing its charms, and artists have sought inspiration to depict on canvass glimpses of its beauty.

An experienced traveler, not long since, on watching the changing color reflections in the water of sky and cloud, likened it to "A sea of smashed rainbows."

To the north of Honolulu are situated the Kamehameha Schools, for boys and for girls, established for Hawaiians by will of the late Mrs. Bernice Pauahi Bishop. The Museum, established by Hon. Chas. R. Bishop, in connection therewith, is an exceptionally fine institution, noted for a completeness in Polynesian antiquities second to none other. Certain days of each week are set apart for the free admission of all visitors. At present this is Fridays and Saturdays, from 10 A. M. to 4 P. M. These institutions are reached by the King street cars.

Trains of the Oahu Railway and Land Company leave the station at Lele, King street, thrice daily for Pearl Harbor, Ewa Plantation and way stations. Two trains continue on to the Waianae Plantation, distant thirty-three miles, and from thence around the northern point of the island to Waialua, where a fine hotel has just been erected, (see description elsewhere in this issue). Trains to this point continue on to Kahuku the terminus of the line. Visitors taking a railway trip have an opportunity of viewing the

magnificent Pearl Harbor, also of witnessing the interesting features, en route, in the cultivation of rice and sugar cane. At no other point, throughout the islands, can these two industries be seen so advantageously working, as it were, side by side. Ewa Plantation, and the recently established Oahu Plantation, on lands adjacent, will afford tourists an insight into the most modern methods of cane culture and sugar manufacture by two of the largest concerns of the kind on the islands.

If time is too limited to permit any of the above mentioned trips, an observation tour of the city would be in order, and an interesting time spent in visiting the different public buildings and grounds, hotels, places of business, and the attractive residence portions of the city.

The attractions of the other islands are not to be ignored, each presenting interesting features of individuality as to scenery, places of historic interest, or established industries. Naturally the volcano of Kilauea, on Hawaii, is the main object of interest to all tourists and is well worth a visit even in its periods of inactivity. The scenic attractions of the windward coast of Hawaii, which visitors pass on the trip to Hilo, is varied and delightful, while of Hilo itself an eminent visitor wrote—"See Naples, and then die! said somebody. 'See Hilo, and live for ever!' say I." Her strong natural attractions and business outlook, through the sugar and developing coffee industry in its neighborhood, is bringing in an enterprising population that is rapidly extending the limits of the town. Old streets are being widened and new ones are being laid out to meet the public demand of improvement.

Comfortable steamers offer frequent facilities to reach all principal points between the islands, two or more weekly for windward ports of Hawaii and one or more for its leeward coast ports, nearly all of which take in Maui en route. Among the strong attractions of the island of Maui, additional to its extensive sugar plantations, are, the picturesque valley of Iao—rivaling the Yosemite—celebrated as the scene of one of the fiercest battles in Hawaiian history, when bodies of the slain dammed the Wailuku and its stream ran blood. The crater of Haleakala, the largest extinct volcano in the world, also on this island, well repay all visitors.

The "garden island" of Kauai in turn presents unrivaled scenic attractions, facilities to visit which occur thrice or more each week by regular and convenient steamers.

In connection with the foregoing, the following tables may be of service :

FOREIGN PASSAGE RATES.

Cabin passage per steamer, Honolulu to San Francisco, \$75.00.

Round trip tickets, good for three months, \$125.00.

Steerage passage per steamer, Honolulu to San Francisco, \$25.00.

Cabin passage per steamer, Honolulu to Victoria and Vancouver, \$75.00; and to San Francisco per company's steamer arrangements, if desired, at the same figure.

Second Cabin passage per steamer, Honolulu to Victoria and Vancouver, \$25.00.

Cabin passenger per steamer to Fiji, \$87.50; to Sydney, \$150.00.

Second Cabin passage per steamer to Fiji, \$50.00; to Sydney, \$75.00.

Cabin passage by sailing vessel, to or from San Francisco, \$40.00, or \$25.00 by steerage.

Cabin passage per steamer, Honolulu to Hongkong or Japan, \$250.00.

Steamers to and from San Francisco are two or more every four weeks—one direct and return, the others en route to or from the Colonies and the Orient.

Steamers of the Canadian-Australian line to and from Vancouver are also two every four weeks.

Steamers from San Francisco to Japan and China, and *vice versa*, touch almost regularly at this port en route.

INTER-ISLAND PASSAGE RATES.

*Cabin Passage per Steamers, from Honolulu to*

Lahaina, Maui .....	\$ 5 00
Kahului or Hana, Maui.....	6 00
Maalaea, Maui .....	6 00
Makena, Maui .....	8 00
Mahukona or Kawaihae, Hawaii.....	10 00

Kukuihaele, Honokaa or Paauhau, Hawaii.....	10 00
Laupahoehoe or Hilo, Hawaii.....	12 50
Kailua or Kealakekua, Hawaii.....	10 00
Honuapo or Punaluu, Hawaii.....	12 00
Koloa, Nawiliwili, Hanalei, Kilauea or Kapaa, Kauai, each.	6 00

Round trip tickets are usually obtained at a fair reduction, with privilege of getting off at any port along the route.

## CARRIAGE FARE.

Carriage fare from steamer to hotel, for either one or two passengers . . . . .	\$ 25
Each additional passenger.....	10
Carriage fare per hour, one passenger.....	1 50
“ “ “ “ two passengers.....	2 00
“ “ “ “ three passengers.....	2 50
“ “ “ “ four passengers.....	3 00
Specially for the Pali, one passenger each way.....	3 00
“ “ “ “ two passengers each way.....	4 00
“ “ “ “ three passengers each way.....	5 00
“ “ Kapiolani Park, one passenger each way....	1 00
“ “ “ “ two passengers each way....	1 50
“ “ “ “ three passengers each way..	2 00

Special Punchbowl drives, one passenger, \$1.00; two passengers, \$1.50; three passengers, \$2.00.

The foregoing rates are for between the hours of 5 A. M. to 11 P. M. At other hours the rates of fare may be doubled. No driver is compelled to take a single fare beyond the two mile limit, except by special bargain. When two or more offer, the regular fare must be accepted.

Good saddle horses may be engaged by the hour at one dollar or less, according to length of time.

Bicycles can be rented from several cycle agencies at moderate rates, by the day, or hour.

## HOTEL RATES.

Board with room at the Hawaiian and Arlington Hotels, at from \$3.00 to \$5.00 per day.



Private accommodations, in various parts of the city, are obtainable at prices ranging from \$10.00 per week up.

#### CURRENT MONEY.

American and Hawaiian currency is the standard throughout the islands. Other coins may be exchanged at the banks at about the United States Treasury ruling rates.

#### TAXES.

The annual taxes of the country consist of: Poll, \$1.00; school, \$2.00, and road, \$2.00. Owners of carriages pay \$5.00 each. The dog tax is \$1.00 for male and \$3.00 for female dogs. Real and personal property pays a tax of 1 per cent. upon its cash value as of January 1st of each year.

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### RETROSPECT FOR 1899.

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**T**HE year now drawing to a close has been a remarkably prosperous one throughout these islands, notwithstanding established industries and enterprises by annexation, indeterminate drawbacks. The impetus given to the various cations of which were outlined in our last issue, has resulted in a year of agricultural and commercial prosperity unequalled in Hawaii's history. Not only is this condition true of and in ourselves, but a like condition prevails regarding Hawaiian trade at all Pacific coast ports with which we have to do. Other commercial and manufacturing centres of the Middle and Eastern States are also reaching out for island business and are appreciating the opportunity afforded by this period of activity and expansion.

With the strides taken during 1899 while suffering under the spell of transition, awaiting the enacting laws of Congress that shall complete the annexation compact and fix our legal status as a territory,—if so it is to be,—with the necessary laws for our government, the enterprising citizens of Hawaii are to be congratulated upon their energy and foresight. Not a little uneasi-

ness has been felt at the confirming opinion of the Attorney-General, at Washington, arresting sales of government lands, etc., since August 12th, 1898, and no part of the group has felt the disturbed effect in the cessation of all government land transactions for the present than our progressive second city, Hilo. It is hoped, however, that all interests established in good faith, upon the previous authoritative instruction to the executive of this government to continue its land policy, will receive confirmation.

#### REAL ESTATE AND BUILDING ACTIVITY.

There has been unprecedented activity in real estate transactions throughout the year in city and suburban properties, and at figures far in advance of prices ruling hitherto.

The demand for building lots has caused new tracts to be secured for subdivision for residence purposes. The Kaimuki addition and Pacific heights tracts are attracting a number of selectors, and desirable residences are in course of construction in both of these sections. Both localities are providing an ample water supply at expense of the promoters to assure the prospective needs of a large populace. Main roads and streets have also been constructed, and the Pacific heights enterprise promises Honolulu its first electric road in the course of a few weeks, to be followed by the construction of an elegant hotel, plans of which are completed.

Four other properties have recently been secured by real estate dealers, for subdivision into residence lots and placing same upon the market.

This activity in real estate has naturally carried with it the erection of many new residences, a number of which are of imposing appearance; others, pictures of coziness, creditable to any part of the world. Like progress, but of a more substantial character, is being made in the business part of the city. It may be safely said that Honolulu is on the eve of the greatest improvement in her history. The buildings recently erected, now in progress, and to be entered upon next year will make great changes. The principal structures are: Brewer & Co.'s and McChesney & Son's, Queen street, each two stories; a two story brick building on Fort street adjoining the Orpheum block, the Princess Kaiulani school,

at Palama, and two brick warehouses on the Esplanade. Nearly completed: Dr. Day's two story brick business block on Beretania street, adjoining the Fire station; the Beretania street school and the three story Elite block on Hotel street, of brick with terra cotta trimmings, promising to be the handsomest business block in the city, so far. Foundation work is completed and the first story well advanced on the new Boston Building of the Brewer Estate, on Fort street, to be of four stories. Massive foundations are also laid for the six story "up-to-date fire proof" office building to be known as the Stangenwald block, Merchant street, adjoining the Judd building. These, with a number of new residences would all have been further advanced but for the delays in procuring material from the Coast, and the East. Ground is also broken for Hackfeld & Co.'s block to take in their Fort street frontage, from Queen to Halekauila street, and running back to near their present building. It will be three stories in height. Preliminary work has also been made for new buildings at the corner of Fort and Beretania, and also for a new structure for Hall & Son, in place of their present store, corner of King and Fort streets.

#### PUBLIC IMPROVEMENTS.

The long desired and carefully planned sewer system of the city has at last been entered upon, work thereon having commenced early in August, and already the pipe laying in many of the streets is about finished and the receptive cistern and pumping works at Kakaako to carry all sewerage through discharging pipes out beyond the reef is far advanced.

Street widening has made considerable progress, yet much remains to be done to complete the improvements mapped out for the city, sections of work being hindered through lack of co-operative spirit in certain property holders contesting commissioners awards for strips condemned.

Harbor deepening continues, and further wharf extension is proved beyond question to be a necessity for even the present business of the port. Additional to the work of our own dredger, a new one of a different pattern has been constructed for the U. S. Government, for completing the coral excavations found necessary

in the wharf facilities formerly planned for the Pacific liners, but now within the area of the naval reserve.

Hilo is at last provided with a wharf for its shipping, and will need more port facilities in the near future to keep pace with its progress. Kahului's needs in this respect has also been taken under consideration as the presence there of the survey ship *Pathfinder* attests.

Road work throughout the islands has gone as far as legislative provision allowed, and rather than stop important work in progress, through exhaustion of its appropriation, the Cabinet have authorized continuance to completion of the Hilo-Hamakua road.

Masonry work along the banks of Nuuanu is done and nearly completes the important changes in that section of Honolulu. Work on the new King street bridge is under way. Aala park is yet to be.

A project to enlarge Honolulu harbor by connecting with Kālihi is contemplated, by dredging a passage thereto. The scheme presents no serious difficulties, and would help solve the serious problem as to accommodating the rapidly growing commerce of the Pacific.

#### OMAHA EXPOSITION BENEFITS.

The Islands received most advantageous advertisement abroad during the year by sending to the Omaha Exposition a display which was given 4000 square feet of floor space in one of the main buildings. This showing, which was in charge of Ed Towse and Dan'l Logan, well-known newspaper men and citizens of the capital was a collection excellent in every way. It was nothing less than a graphic and comprehensive exploitation of the resources and development of the country. Especial attention was given the placing of articles and presentation of facts depicting the productiveness of the group, the perfection of the climate and the uniqueness and attractiveness of the scenery. This display, well placed at an Exposition visited in the four months of its life by upwards of 900,000 people was creditable to Hawaii and arrested and held attention of investors, settlers and tourists. Messrs. Towse and Logan were enabled to secure for the group an almost incredible amount of newspaper mention of the proper character.

The exhibit was under the auspices of the Honolulu Chamber of Commerce and the expense—several thousand dollars—was borne by business men who are well satisfied with the results.

Hawaii is to have pretentious representation at the Paris Exposition of 1900. The Chamber of Commerce of Honolulu has made a liberal appropriation for the purpose. Wm. G. Irwin has been made President of the Board and Geo. C. Potter secretary. Mr. Irwin is already on the way to Europe and Mr. Potter will leave in February. The Exposition opens in April. The showing is being assembled here by Mr. Potter and while the space allotted will be small, it is certain that there will be made the impression which it is sought to establish.

#### PLANTATION EXPANSION.

Steps taken during 1898 toward the establishment of several new plantations, referred to in our last issue, was followed this year by the promotion of a number of others, of considerable magnitude mostly, and the increase in capital of several existing well known corporations indicate a bold stroke towards attaining "the possible" in our main industry, all of which was planned for accomplishment without the aid of foreign capital other than what might naturally be attracted hither for stock investment.

The new sugar corporations of this year is the Kihei, on Maui, capitalized at \$3,000,000, with one-half paid up; the Oloa, of Hawaii, capitalized at \$5,000,000, with one-half paid up, and the McBryde, of Kauai, which absorbed the Elele plantation and incorporated at \$3,500,000 with \$1,850,000 paid up. Other like enterprises within the period embrace the Nahiku, and Maui Sugar Co., of Maui, incorporated at \$750,000 and \$250,000 respectively; the Kona Sugar Co., of Hawaii, capitalized at \$500,000; the Manalei, of Lanai, and Kamalo, of Molokai, incorporated at \$1,000,000 each.

Beside the above enumerated new concerns, capitalized at \$15,000,000, a number of existing plantations increased their capital stock considerably, for the improvement or extension of their plant, or cane area, making together a large added value to the sugar industry of the islands.

This is but the evidence of enterprise born of confidence in the country through the settlement of political doubt and uncertainty that has so long hindered Hawaii's progress, by our becoming part and parcel of the United States. And with this stride toward expansion during the transition period, awaiting the enacting laws establishing our Territorial status, with simply local effort and capital what may we not witness when the laws of Congress are made applicable to Hawaii by the attraction hither of capital for investment.

#### PLANTATION LABOR MATTERS.

There has been continuous demand for labor to meet the needs of the expanding sugar industry above indicated, to meet which quite an influx of Japanese have been brought in the various immigration agencies. From the Bureau of Immigration we learn that the number of Japanese arrivals since January 1st and yet due before the close of the year will give a total of 16,650 men and 3,300 women. Of Spanish-Portuguese immigrants there arrived 197 men, 57 women and 83 children, in September, the first addition of this nationality since 1888. There were also 24 "permitted" Chinese. The total number of all nationalities for 1899, as shown above, is 20,311. The total number of departures of the labor class for the year is not shown.

Not a little unpleasant notoriety has been made of certain European laborers' troubles by their refusal to work in fulfillment of their contracts, and political capital is, in consequence, being enlisted against the labor system in vogue in these islands.

Elsewhere is given a full list of laborers on the various sugar plantations, showing nationality and sex, also comparative totals for the two preceeding years.

#### STOCKS AND BONDS.

Mention is to be made of the unprecedented activity during the period under review in the stock market, in this city, in the sale of stocks and bonds. Two prime causes have been the large amount of new stock placed on the market by the new and increased sugar corporations, and business concerns and estates corporating, and

the encouragement to investors by the satisfactory dividends paid by many plantations through the handsome crops marketed. Some incentive is also to be attributed to the confidence shown in certain of our stock securities abroad by the introduction of foreign capital for their purchase. A prominent broker reports \$5,034,500 as the amount of foreign capital invested in sugar stock, mostly the negotiations of Edward Pollitz & Co., brokers, of San Francisco. This does not include the \$2,000,000 transaction by or through them, in that city in Hawaiian Commercial, as that is largely held here.

Respecting dividends for the season, or year, it is difficult to ascertain correctly. Twenty-six plantations have paid out a sum amounting to nearly \$5,000,000 and a conservative estimate places \$1,000,000 as the probable additional amount of dividends from the others. This together would be in the neighborhood of one-fifth of the total income on our sugars.

The amount of new bonds floated this year amount to \$3,280,000, divided as follows: Ewa Plantation, \$500,000; Kahuku, \$250,000; Ookala, \$80,000; Hawaiian Commercial & Sugar Co., \$2,000,000; Hilo Railroad Co., \$450,000.

#### PROJECTED HILO RAILWAYS, ETC.

There have been two railroad franchises granted during the year for the island of Hawaii, having Hilo as their objective point, each incorporating at \$500,000 with right to increase to \$10,000,000. The first to enter the field was the Hilo R. R. Co., promoted by B. F. Dillingham and Col. Albert White for the immediate needs of the developing Oloo and lower Puna agricultural lands. The second was the Kohala-Hilo R. R. Co., a foreign enterprise with local affiliations, planning to run through the Kohala, Hamakua and Hilo districts, tapping all plantations and opening up new possibilities en route.

During the year the Hawaiian Railroad has been disposed of to parties largely interested in Kohala, and the Kahului Railroad has been purchased by the Hawaiian Commercial & Sugar Co.

#### GENERAL BUSINESS.

The business activity reported in last ANNUAL has had not only

continuance through 1899, but marked increase in all lines. From conditions already touched upon, and the benefits of an increased sugar crop of satisfactory figures, as also the brief sojourn at this port of the large body of United States troops that have touched here again in large numbers this year—en route to and from Manila—the business pulse had quickened by its material benefits. The number of transports have called for larger coal supply, the handling of which has put considerable money in circulation.

Hawaiian trade has taken such strides that even the increased number of steamships touching here, and more and larger sailing vessels devoted entirely to the island trade, have been unable to serve us without much forbearance on the part of merchants and contractors through lack of freight capacity and delays in the filling of orders. This has been very marked in lines of lumber, building materials, machinery, piping, furniture, etc.

The new plantations established, as also the enlargement of others, have contributed materially to existing conditions. As a direct result the two local foundries and machine shops are working to their full capacity, besides importing special mill, machinery, and pumping plants, for which they are the local representatives.

A timely factor in this developing period is the establishment of the First American Bank of Hawaii, incorporated at \$1,000,000, which opened September 5th in the Campbell block, Fort street, having brought in nearly a quarter of its capital as the amount of first assessment from its foreign share-holders. Local capitalists were allotted \$300,000 of the amount subscribed here to its stock. At this writing plans are completed for its establishing a branch at Hilo, to open the first week in January, 1900.

Considerable stringency in the money market was felt toward the middle of the year in consequence of the promotion of so many new enterprises—as already shown—and resulted in a modification of calls on assessable stock-holders in the various concerns. The floatation of bonds, since, and the accumulations in the treasury of the taxes and increased revenues of the country over the appropriations for the period, which up to present writing, locks up one and a quarter million dollars, have not been conducive of relief. It has been fortunate, therefore, that the specie imports have come



in so freely, the sum total for the nine months up to September 30th, 1899, being \$2,536,628.83.

The following table of total imports of the islands for the same period, with the comparative figures for the like three quarters of the previous year, confirms the foregoing exhibit of business and commercial activity.

CLASSIFICATIONS	IMPORT VALUES.	
	9 Mos. 1899.	9 Mos. 1898.
Goods free by Treaty.....	\$ 6,791,571 19	\$ 3,959,413 30
Goods free by Civil Code .....	4,081,930 34	1,500,998 08
Goods and Spirits paying Duty .....	2,659,590 74	1,796,625 77
Goods and Spirits Bonded.....	134,280 33	103,541 41
Total.....	\$ 13,667,372 60	\$ 7,360,580 56

The value of imports for October gave \$1,387,044.71 additional, a slight falling off from the same month's imports of 1898, but showing a total gain over the ten months of last year, by \$6,094,488.81.

Exports for the nine months ending September 30th from all ports show a total value of \$21,149,176.82, as against \$15,840,373.69, for the like period of last year, a gain of \$5,308,803.13.

For the above figures the ANNUAL is indebted to the courtesy of the customs officials.

#### ANNUAL SUGAR CROPS.

Some interesting official tables of the annual product of the various plantations have been compiled recently, but comes too late for use in detail in this issue. A summary shows the total crop of 1897-98, as having been 229,414 tons; last season's crop, 1898-99, 282,807 tons, and the estimate for next season is set down at 304,603 tons. A comparative table will be prepared for our next issue, and will prove valuable for handy reference.

#### VOLCANIC OUTBREAK.

Mauna Loa celebrated Independence day this year by an eruption of lava from its slope at 2 A. M. July 4th, an interesting account

of which is given in this issue by an eye witness. Its action for a time was with great brilliancy and force, and its three streams, at the outset, rapid, which gave ground for wild stories abroad of threatened danger to the town of Hilo and to the planting interests at Oloa, but the flow ceased July 23rd, having simply traversed territory already a vast lava field and could have continued many months without doing any damage whatever. Upon the cessation of activity violent shocks were felt in various parts of Hawaii, but without injury.

During the progress of the eruption, for several days, the islands were enveloped in a haze of volcanic smoke, like a dense dry fog. Vessels approaching the group met the haze three days distant from port.

#### ELECTRICAL PROGRESS.

Some important steps are noted toward establishing the long projected Rapid Transit system for Honolulu thoroughfares, but not sufficient to promise early inauguration, since a section of buried rails, on King street, and preparations for the erection of the power house and station, corner of Young and Alapai streets, is all the public have in evidence, though considerable of its plant and material is due to arrive shortly.

The plans of change in progress by the Tramway Company, from animal to electric power, are arrested for the time being by legal injunction.

Wireless telegraphy between the islands has promise of early establishment, a corporation having formed with F. J. Cross, the expert electrician, at its head, who secured from Marconi the franchise for the use of his system throughout Hawaii.

Automobiles as private conveyances are already in vogue in this city, and a company is formed to conduct a public service, the requisite number of vehicles being already en route for its inauguration early in the opening year.

#### THREATENED PLAGUE.

The islands have been remarkably preserved this year from the scourge of bubonic plague. On June 17th the *Nippon Maru* arriv-

ed from Japan with a suspicious death on board, which, on examination was held to have occurred from black plague. The *City of Columbia* was engaged as a quarantine ship. All passengers and freight for this port was fumigated and transferred to her and she lay off port the allotted time, fortunately, without any case developing.

December 12th the attention of the health authorities were called to the suspicious deaths and illness of two Chinese and a South-sea Islander, two of which were decided to be cases of bubonic plague. Rigid quarantine was immediately established of that portion of the city recognized as the Chinese and Japanese quarters, comprised within the area of River, Kukui, Nuuanu and Queen streets, and its populace confined therein by police and military guards; while thorough cleansing and sanitary measures were carried out by an efficient corps of inspectors. All ailments and sudden deaths were regarded with grave suspicions; but all such cases proving of a less alarming nature, and the period of contagion having passed without any further plague developments the community breathed freer again as the Board of Health removed quarantine restrictions and officially declared the port free of infectious and contagious disease, but at this writing new developments threaten us.

## NECROLOGY RECORD.

The number of old time, or well-known, residents throughout the islands that have passed away during the year makes many serious vacancies felt in high and low life. Beside the deaths of Princess Kaiulani and Queen Dowager Kapiolani, the list embraces R. D. Waldbridge, Mrs. S. A. Thurston, H. H. Wilcox, H. A. Widemann, G. B. Norton, Mrs. H. Dickenson, Mrs. H. J. Nolte, Mrs. M. Gavin, D. F. Sanford, Thos. Campbell, Dr. H. Stangenwald, Jos. Tinker, Geo. McDougall, H. W. Dickey, Ed. Dowsett, Mrs. J. P. Sisson, Robt. Grieve, W. H. Rickard, Capt. Wm. Babcock, Mrs. E. T. (Hitchcock) Smith, J. H. Bruns, Jno. Phillips, Capt. Jas. A. King, Rev. Dr. C. M. Hyde, Chas. Wall, Rev. J. F. Lane, C. F. Phelps, H. F. Poor, Miss E. K. Bingham, Jno. Hopp, Capt. H. English, D. H. Hitchcock, Sr., H. B. Bailey and a number of others.

## MARINE CASUALITIES.

Misfortunes to shipping connected with the port, for the year, while severe, might have been much more so, and embrace the following incidents: February 27th American ship *Edward O'Brien*, coal laden from Departure Bay, stranded on the reef at the entrance of the harbor and eventually became a total loss. May 23rd schooner *Mokulele* was driven ashore by stress of weather at Wainiha, Kauai, becoming a total wreck. Two days later the little steamer *Iwa* took fire off the east coast of Oahu and sank at the entrance to Punaluu. Steamship *City of Columbia* leaving this port for the second time, for Hongkong, August 10th, was abandoned two days later in a sinking condition 70 miles beyond Kauai, which island the officers and crew reached safely in open boats. In September the *Coalinger* from New York got on the reef in trying to make the harbor at night, but with the timely aid of two tugs was brought safely into port. A few days later the *Colusa* went through a like experience at Kahului, and but for the services of the *Maui* and *Kinau* would have been lost with her valuable cargo. December 10th steamer *Kilohana* ran on the reef at Lahaina and may become a total wreck.

Schooner *Hera* left Seattle, November 17th, with a general cargo for Honolulu. After experiencing a succession of heavy gales was discovered on fire and headed for the nearest coast, dropping anchor the following day in Clayoquot Sound. A few hours later she broke out in a mass of flames and burned to the water's edge.

December 22nd ship *Eclipse* arrived from Newcastle with a cargo of coal for this port, in a crippled condition, having been caught by a sudden squall, or gathering water-spout, near the Marquesas Islands, on the 2nd whereby all her sails were split and her maintopmast and mizzen topgallant mast and their yards were carried away. One seaman was also lost overboard and never again seen.

## RECORD TRIPS.

The steamship *America Maru* having made the trip to San Francisco from this port, in July, 1899, in 5 days, 9 hours, 59 minutes,

thereby lowering the *China's* record of 5 days, 14 hours, made in July, 1893, the latter vessel, on her August trip lowered the time still further to 5 days, 7 hours, 55 minutes, and again holds the record for the best trip both ways.

British ship *Kilmory* arrived at Honolulu May 27th, 1899, after a smart run of 99 days from London.

Bark *Rhoderic Dhu* from San Francisco to Hilo, in one of her trips this past summer made the passage in 9½ days.

The ship *George Curtis* is credited in San Francisco with the best round trip record, of 23 days, between that port and Honolulu; 10 days down and 13 back.

#### FIRES, ETC.

More fires have occurred this year than usual; two being in the business section of town that were got under in time to save serious loss, viz: Hopper's planing mill, August 11th, and Harnng Lung Kee's block, Hotel and Nuuanu streets, a few days previous. Three or four residence fires proved a total loss.

### DESTRUCTION OF "CHINATOWN"

Owing to business interruption through strict quarantine in the effort to stamp out the plague (already referred to), the issuance of the ANNUAL has been delayed. This, however, permits the brief record of the sudden wiping out of Honolulu "Chinatown" section, by fire, which occurred January 20th, 1900. The Board of Health in carrying out the policy of purifying all plague spots by fire had so destroyed several partial blocks and single buildings, and on the date mentioned the condemned Kaumakapili block was fired. The Fire Department had done good work in burning out infected premises, and plans were made to preserve the church, but a rising and changing wind carried sparks to the steeples and thereby quickly destroyed the edifice. Buildings across the street, and blocks below, soon took fire and eventually got beyond control, and by nightfall a clean sweep had been made to the water front and Nuuanu stream, some sixty acres in extent. The Honolulu Iron Works narrowly escaped.

## HAWAIIAN ISLANDS POSTAL SERVICE.

Corrected to December 1st, 1899.

GENERAL POST-OFFICE, Honolulu, Oahu.—Jos. M. Oat, Postmaster-General; Henry Davis, Secretary and Deputy P. M. G.; Chas. B. Murray, Supt. Savings Bank Department; C. D. Lufkin, Supt. Money Order Department, J. L. Logan, W. I. Madeira, Assistants; L. T. Kenake, Supt. General Delivery and Stamp Department, J. L. Kukahi, Assistant; Geo. L. Desha, Registry Department; C. J. Holt, Parcels Post Department; Ladies' window, D. Renear. S. L. Kekumano, A. M. Webster, W. J. Smith, Chasles Kaanoi, K. Narita, J. T. Figueredo, W. Y. Afong, S. P. Nohea, Assistants.

## POSTMASTERS ON OAHU.

Aiea.....	James A. Low	Waimanalo.....	A. Irvine
Ewa.....	J. E. Kahoa	Kahuku.....	Geo. Weight
Honouliuli.....	Geo. F. Renton	Laie.....	S. E. Woolley
Peninsular.....	Frank Archer	Punaluu.....	Wm. Rathburn
Waipahu.....	H. D. Johnson	Waiahole.....	S. E. K. Papaai
Waianae.....	R. L. Gilliland	Kaneohe.....	Bishop Pahia
Waialua.....	A. S. Mahaulu	Heeia.....	A. G. Hime
Waialua Plantation.....	W. W. Goodale	Wahiawa.....	L. G. Kellogg
Hauula.....	Christian Andrews		

## OVERLAND MAIL ROUTE, OAHU.

Leaves Honolulu at 8:45 A. M. daily and return. For Ewa, Aiea, Pearl City, Peninsula, Waipahu, Honouliuli, Waianae, Waialua and Kahuku, by train daily, 8:45 A. M. Or, on the arrival of foreign mail in the morning of above days the mail closes at 2:45 P. M. Stage Route, via. Pali, Wamanalo, Kaneohe, Heeia, Waiahole, Hauula, Punaluu and Laie; mail closes daily, 8:45 A. M. Per Train, via. Pearl City, Wahiawa, Mondays and Fridays, closing at 8:45 A. M., returning Tuesdays and Saturdays A. M.

## POSTMASTERS ON KAUAI.

Lihue.....	C. H. Bishop	Kealia.....	R. C. Spaulding
Koloa.....	E. Strehz	Kilauea.....	Jno. Bush
Hanapepe.....	H. H. Brodie	Kekaha.....	H. P. Faye
Makaweli.....	H. Morrison	Waimea.....	C. B. Hofgaard
Mana.....	E. Powell, Jr.	Hanalei.....	C. H. Willis
Eleele.....	E. E. Conant		

## MAIL ROUTES ON KAUAI.

From Lihue to Mana.—Leaves Lihue P. O. every Monday, Wednesday, Friday mornings, arriving at Koloa about noon and at Waimea and Mana in the evening of the same day. On returning leaves Mana on Tuesday, Thursday and Saturday mornings, arriving at Koloa about noon and Lihue in the afternoon.

From Lihue to Hanalei.—Leaves Lihue P. O. every Monday, Wednesday, and Friday mornings, arriving at Kealia in the afternoon, at Kilauea about noon, and Hanalei in the afternoon of the same day. On returning leaves Hanalei on Tuesday, Thursday and Saturday morning and arrives at Lihue in the afternoon.

## POSTMASTERS ON MOLOKAI.

Kaunakakai.....	Mrs. F. W. Carter	Keomuku.....	L. M. Vettlesen
Kamalo.....	H. McCorrison	Lanai.....	Mrs. T. L. Hayselden
Pukoo.....	J. H. Mahoe		

POSTAL SERVICE—CONTINUED.

POSTMASTERS ON HAWAII.

Hilo.....	L. Severance	Kailua.....	J. Kaelemakule
Papaikou.....	J. H. Bole	Keauhou.....	J. N. Koomoa
Honomu.....	W. D. Schmidt	Kealakeakua }	R. Wassman
Kawaihae.....	W. Hookuanui	Napoopoo . . }	
Mahukona.....	Jno. S. Smithies	Hoopuloa.....	Jos. Holi
Kukuihaele.....	W. Horner	Hookena.....	T. K. R. Amalu
Waimea.....	Miss E. W. Lyons	Pahala.....	T. C. Wills
Kohala.....	Miss M. R. Woods	Hilea.....	Jno. C. Searle
Paauilo.....	Anthony Lidgate	Honuaipo.....	Geo. Dawson
Laupahoehoe.....	E. W. Barnard	Waiohinu.....	C. Meinecke
Ookala.....	W. G. Walker	Naalehu.....	G. C. Hewitt
Honokaa.....	A. B. Lindsay	Punaluu.....	Wm. Fennell
Pohoiki.....	Mrs. R. Rycroft	Waipio.....	Mrs. Ana Thomas
Olaa.....	J. W. Mason	Hakalau.....	Geo. Ross
Kalapana.....	H. E. Wilson	Olaa Plantation.....	F. B. McStocker
Volcano House.....	F. Waldron	Keaau.....	Peter Lee
Holuualoa.....	L. S. Aungst	Papaaloa.....	Alfred C. Palfrey

Mail leaves Hilo for Olaa, three times per week.

A daily service is now maintained between Hilo and Hakalau,

Special carriers serve the Laupahoehoe Post Office, as follows: On arrival of the *Kinau* every seven days, a carrier leaves Laupahoehoe distributing mail en route as far as Hakalau, and returns, connecting with the steamer on her down trip to Honolulu. Another carrier is dispatched, on arrival of the *Kinau*, to serve the district as far as Ookala, and returns as above to meet the steamer on the down trip. These are independent of the regular carrier who goes through from and to Hilo, every ten days.

From Hilo to Honokaa.—Leaves Hilo P. O. on Tuesday or Saturday in every ten days, arriving at Honokaa on Thursday or Monday. On returning leaves Honokaa on the same day, arriving at Hilo on Saturday or Wednesday.

Mail leaves Hilo on arrival of *Kinau*, arriving at Volcano House same day; Waiohinu, 2d day; leaves Waiohinu 3d day early and arrives at Papa; 4th day arrives at Kailua; 5th day remains at Kailua; 6th day returns to Papa; 7th day arrives at Waiohinu; 8th day leaves Waiohinu arriving at Volcano House; 9th day arrives in Hilo; 10th day remains in Hilo, and the following day returns to Waiohinu, etc.

Mail leaves Punaluu for Hilo, via Volcano House, immediately on arrival of steamer *Mauna Loa*.

From Kawaihae to Honokaa.—Leaves Kawaihae P. O. on Wednesday and Honokaa on Thursday. On returning leaves Honokaa on Thursday, arriving at Mahukona on Friday. Mail leaves Kawaihae on arrival of *Kinau*, or Kailua, and connecting with the Kau carrier at Hookena.

POSTMASTERS ON MAUI.

Lahaina.....	Arthur Waal	Honokohau.....	D. Kapaku
Wailuku.....	Mrs. W. A. McKay	Kipahulu.....	A. Gross
Makawao.....	Jas. Anderson	Kahului.....	R. W. Filler
Hana.....	John Grunwald	Paia.....	C. D. Lindsay
Hamoa.....	Chas. Weatherbee	Hamakuapoko.....	W. F. Mossman
Spreckelsville.....	W. J. Lowrie	Huelo.....	M. Mattson
Ulupalakua.....	S. W. K. Apua	Honokowai.....	Frank Clark
Waiahoa.....	J. H. Nishwitz	Pauwela.....	P. Keaupuni
Keokea.....	D. Kapohakimohewa	Peahi.....	T. K. Pa
Kaupo.....	C. Lake	Waihee.....	W. G. Ogg
Makena.....	J. M. Napoulou	Keanae.....	W. Napihaa
Kihei.....	J. C. Long	Nahiku.....	R. H. Worrall

POSTAL TABLE OF RATES CHARGED TO COUNTRIES IN THE  
UNIVERSAL POSTAL UNION.

DESTINATION.	Letters, ½ oz.	Postals, each.	Regis. Fee. \$	Papers, ea. 2 oz.	Books & Postal Matter, ea. rate of 2 oz.	Samplest ea. rate of 2 oz.
All countries in the Universal Postal Union.....	5 cts.	2 cts.	10 cts.	2 cts.	2 cts.	2 cts.

\*Merchandise samples not to exceed 250 grams, or 8¾ ounces, except United States, Great Britain, New Zealand and New South Wales, to which countries samples of merchandise not exceeding 350 grams, (12 ounces) may be mailed.

†Papers to United States, Mexico, Canada and Australasian Colonies, 2 ounces 1 cent.

§Register Fee with return receipt, 15 c.

PARCEL POST RATES.

To UNITED STATES of America, 12 cents per lb., or fraction thereof.

Parcels shall not exceed 11 lbs. in weight, nor the following dimensions: Greatest length, three feet six inches; the greatest length and g rth c ombined, six feet.

To CANADA, 20 cents per lb., or fraction thereof.

Parcels shall not exceed 5 lbs. in weight, nor the following dimensions: Two feet in length, and one foot in width or depth.

To UNITED KINGDOM—via Canada—24 cents per lb., or fraction thereof.

Under the same condition as applied to Canada.

Colonies.	1 lb.	2 lbs.	3 lbs.	4 lbs.	5 lbs.
New Zealand.....	\$ .16	.29	\$.41	\$.54	\$.66
Australia..... 25c lb.	.....	.....	.....	.....	.....

Weight of Package not to exceed 5 lbs.

Length, two feet; breadth and depth, one foot.

POSTAL MONEY ORDER RATES.

INTER-ISLAND DENOMINATIONS.	Inter-Island <sup>d</sup> or Domestic.	FOREIGN DENOMINATIONS.	Orders on U. S.	Orders on, Eng. Ger. Portugal & Hongkong.
Orders not over \$ 5	5 cents	Not exceeding \$5.	25 cts	25 cts.
Over \$5, not over 10	10 "	\$5 to \$10.....	40 "	40 "
Over \$10, not over 15	15 "	\$10 to \$20.....	60 "	70 "
Over \$15, not ver 20	20 "	\$20 to \$30.....	80 "	1 00
Over \$20, not over 50	25 "	\$30 to \$40.....	1 00	1 30
Over \$50, not over 500	25c for ea. \$50.	\$40 to \$50.....	1 25	1 60



POSTAL SERVICE—CONTINUED.

**MONEY ORDERS.** — Domestic postal money orders are furnished on application at any of the principal offices, payable at any other money order office.

Foreign Money Orders are issued, on written application, at the General Office in Honolulu, on the United States, England, Scotland, Ireland, Portugal including Madeira and Azores Islands, Germany, Norway, Netherlands, Denmark, China and Hongkong.

OVERLAND MAIL ROUTES, MAUI.

From Lahaina to Kaanapali and Kahakuloa, every week, mail closes about 9 A.M. on Wednesday or Saturday after arrival of steamer *Kinau*, or *Mauna Loa* from Honolulu.

Leaves Lahaina for Wailuku every Tuesday, Thursday and Saturday, at 8 A.M. Returning leaves Wailuku every Monday, Wednesday and Friday, at 10:30 A.M.

From Ulupakakua to Hana, weekly, mail closes in the morning on arrival of mails from steamer *Kinau*.

From Paia to Hana, weekly, mail closes soon after arrival of steamer mails on Tuesdays or Wednesdays. Foreign mail special carrier.

MAUI MAIL ROUTES.

From Paia to Makawao, and to Haiku, daily.

From Paia to Huelo, once a week; to Ulupalakua, via Makawao, diy.

If the steamer *Claudine* leaves Kahului on Saturday for Honolulu, the mails will arrive and leave Paia on that day instead of Friday.

Mail for Hana sent by the *Mauna Loa* on Fridays does not leave Paia till the following week.

INTER-ISLAND AND SOUTH SEA ISLANDS POSTAL RATES.

DESTINATION.	Letters ½ oz.	Postals.	Regis. Fee.	Newspapers.		Other matter.
				Limit of each rate	Postage each rate	
Inter-Island . . . . .	* 2 cts.	1c	10 cts.	4 oz	1 ct.†	1 c. per oz.‡
Islands of the Pacific . .	10 cts.	3c	15 cts.	ea. pa.	2 cts.	4 c. per 4 oz

\*Books, Samples and Merchandise, 1 cent per ounce.

†Pamphlets, Almanacs, Calendars, Magazines, and unbound publications, at newspaper rates.

‡Drop or city letters or printed circulars, 1 cent.

TABLE OF SUGAR PLANTATION LABORERS, OCTOBER 31, 1899.

NAME OF PLANTATION.	HAWAIIAN			PORTUGUESE.				JAPANESE			CHINESE		S. SEA IS		Other Nat.	Total.
	Men contract	Men Day Labor.	Women day labor	Men contract	Men Day Labor	Women day labor	Minors day labor	Men contract	Men day labor	Women day labor	Men contract	Men day labor	Men contract	Men day labor		
<b>OAHU.</b>																
Ewa Plantation .....				17	8		8	749	228	25	230	174			8	1447
Waianae Co .....		27			17			68	64		160	128			13	477
Waialua Plantation .....		21		8	109		10	549	275	84		303		1		1360
Kahuku Plantation .....		23			8	2	1	160	181	35	23	140			13	586
Laie Plantation .....		56	28		1				35	3		6				129
Heeia Agricultural Co .....		7			2			90	176	25		30				330
Waimanalo Sugar Co .....		6			1				130	4		48				189
Oahu Sugar Co .....		15		4	28		9	784	135	86	195	39			30	1325
Honolulu Sugar Co .....		34		8	78			770	108	118		68			66	1250
<b>MAUI.</b>																
Olowalu Sugar Co .....	1	6		3		2		125	4	20		3			3	167
Pioneer Mill Co .....	8	40			5			941	145	100	210	37	4	30	21	1541
Wailuku Sugar Co .....	46	65			85	5	7	225	101	18	37	42			4	635
Hawaiian Commercial & Sugar Co. ....		36		24	52			1114	142	123	241	270			50	2052
Paa Plantation .....		18		11	87	19	1	257	79	48	37	50			36	643
Haiku Sugar Co .....		29		9	92	18	11	223	32	24	57	71			32	598
Hana Plantation .....		13			10	2	3	317	39	36	42	53			11	526
Hamoia Plantation .....		15			8		3	217	6	20	77				4	350
Kipahulu Sugar Co .....		11	9		8	7	42	255	12	62				3	3	412
Kihei Plantation Co .....		56			5			398	26	120		80			1	686
Nahiku Sugar Co .....		6			4			50	22	4		66				152
<b>MOLOKAI.</b>																
American Sugar Co .....		21			17			476	18						27	559
Kamalo Sugar Co .....		9			4			107	60	37		2				219
<b>LANAI.</b>																
Maunalei Sugar Co .....		7						234	59	46		37		4	1	394
Palawai Development Association .....									9			6				15

TABLE OF SUGAR PLANTATION LABORERS—CONTINUED.

NAME OF PLANTATION.	HAWAIIAN.			PORTUGUESE.				JAPANESE.			CHINESE.		S. SEA IS.		Other Nat.	Total.
	Men contract.	Men day labor.	Women day labor.	Men contract.	Men day labor.	Women day labor.	Minors day labor.	Men contract.	Men day labor.	Women day labor.	Men contract.	Men day labor.	Men contract.	Men day labor.		
<b>HAWAII.</b>																
Paauhau Plantation .....		3			10			358	37	30	48	2			8	496
Hamakua Mill Co .....		10			46			253	51		46	51			22	479
Kukaiiau Plantation Co .....		5			9			216	47	57	20	28			10	392
Kukaiiau Mill Co .....		1			5				28			5			2	41
Ookala Sugar Co .....		4	1		20			240	21	22		4			10	322
Laupahoehoe Sugar Co .....	1	2		11	14			300	56	42	158					584
Hakalau Plantation Co .....		20			37	12	3	312	244	60	44	49			16	797
Honomu Sugar Co .....				6	24			276	125	30	68				18	547
Pepeekeo Sugar Co .....		23		7	15	4	3	365	153	48	66	51		4		739
Onomea Sugar Co .....		36			147		12	406	295	71	110				21	1098
Hilo Sugar Co .....				12	65	9	20	381	156	63	117	21				844
Waiakea Mill Co .....		2		6	22	2	2	498	159	66	51				19	827
Hawaiian Agricultural Co .....	2	15		2	34			173	93	19	50	19	2	2	22	433
Hutchinson Sugar Plantation Co .....	16	74		1	29		10	227	102	16	114	145		3	30	767
Hawi Mill .....	24	23		7	13		3	157	37	32		1			2	299
Beecroft Plantation .....	7	11						18	5	7			4	2	1	55
Union Mill Co .....	33	21			12		1	94	44	30	3	78				316
Kohala Sugar Co .....	12	18		4	45			192	37	31	26	69				434
Halawa Plantation .....	11	7			29			68	36	10	13				5	179
Niulii Mill .....		64			1			62	77	14		15				233
Pacific Sugar Mill .....		7			14			285	16	35	52	9			2	420
Honokaa Sugar Co .....		17			25		12	504	30	132	45	15			27	807
Kona Sugar Co .....					5			6				56			10	77
Hilo Portuguese Sugar Mill Co .....					4		12		30	3		50				99
Olaa Sugar Co .....		44			54			884	118	39		111			105	1355

TABLE OF SUGAR PLANTATION LABORERS—CONTINUED.

NAME OF PLANTATION.	HAWAIIAN.			PORTUGUESE.			JAPANESE			CHINESE			SEA IS.		Other Nat.	Total.	
	Men contract	Men day labor.	Women day labor.	Men contract.	Men day labor.	Women day labor.	Minors day labor.	Men contract.	Men day labor.	Women day labor.	Men contract.	Men day labor.	Men contract.	Men day labor.			
<b>KAUAI.</b>																	
Kilauea Sugar Co .....		14	..		53	9	11	288	193	37	19	73	...		5	702	
Makee Sugar Co .....		28	..	..	61	18	18	471	346	40	110	51	...	5	20	1168	
Lihue and Hanamaulu Mill .....		27	..	..	88	16	25	593	298	57	36	164	...	..	55	1359	
Koloa Sugar Co .....	2	3	..	3	4		3	595	31	74	114	9	..	..	13	851	
Hawaiian Sugar Co .....		5	..	10	37	2	9	414	242	69	79	200	..	..	42	1109	
Gay and Robinson .....		12	..	..	23		7		90	..	..	18	..	..		150	
Waimea Sugar Mill .....		..	..	..	7	..	4	64	27	11	..	12	..	..	..	125	
Kekaha Sugar Co .....		7	..	..	7		2	300	149	68	70	85	..	1	16	705	
Grove Farm .....		35	..	..	..	..	..	..	115	18	..	92	..	..	1	261	
McBryde Sugar Co .....		66	..	..	24	3		438	167	97	..	65	..	14	1	875	
Totals .....	1899	163	1125	38	153	1618	130	252	17547	5741	2366	2768	3201	10	69	806	35987
" .....	1898	231	1214	37	36	1683	124	221	10527	5208	1051	4877	2323	43	25	979	28579
Totals .....	1897	334	1128	35	384	1448	108	314	6329	4999	749	6398	1716	50	31	675	24653

**NUMBER AND NATIONALITY OF ALL SKILLED LABOR ON HAWAIIAN SUGAR PLANTATIONS  
OCTOBER 31st, 1899.**

	Americans	Hawaiians	British...	Germans..	Portugu's.	Scandina- vians	Austrians.	Japanese..	Chinese ..	Other Na- tionalties	Total .....
Overseers .....	197	114	125	123	188	36	6	93	34	10	926
Engineers and Firemen .....	73	19	47	32	40	14	5	35	16	.....	281
Book-keepers and Clerks .....	43	9	31	11	5	3	..	7	4	1	114
Sugar Boilers .....	10	8	12	23	3	.....	1	5	6	2	70
Carpenters .....	55	45	10	10	39	14	1	225	31	2	432
Blacksmiths .....	10	15	13	8	14	2	2	42	2	4	112
Masons.....	5	3	9	2	12	.....	.....	7	.....	.....	38
Painters .....	2	4	2	1	4	1	.....	2	1	2	19
Harness Makers .....	1	.....	1	2	.....	1	.....	.....	.....	1	6
Chemists .....	9	2	2	6	.....	.....	1	.....	.....	1	21
	405	219	252	218	305	71	16	416	94	23	2019

## COURT CALENDAR.

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The several terms of Circuit Courts are held chronologically throughout the year as follows:

First Wednesday in January, in the town of Hilo, Island of Hawaii; first Monday in February, in the city of Honolulu, Island of Oahu; first Wednesday in March, in Lihue, Island of Kauai; first Wednesday in April, in the town of Kailua, N. Kona, Island of Hawaii; first Monday in May, in the city of Honolulu, Island of Oahu; first Wednesday in June, in the town of Wailuku, Island of Maui; first Wednesday in July, in the town of Honokaa, Island of Hawaii; first Monday in August, in the city of Honolulu, Island of Oahu; first Wednesday in September, in Lihue, Island of Kauai; first Wednesday in October, in North Kohala, Island of Hawaii; first Monday in November, in the city of Honolulu, Island of Oahu; first Wednesday in December, in the town of Lahaina, Island of Maui.

By Circuits the several terms are held as follows:

**First Circuit—Island of Oahu.**

On the first Monday of February, May, August and November.

**Second Circuit—Island of Maui.**

On the first Wednesday of June, in Wailuku, and on the first Wednesday of December in Lahaina.

**Third Circuit—Island of Hawaii.**

(Hawaii is divided into two circuits.)

On the first Wednesday of April, in Kailua, N. Kona, and on the first Wednesday of October, in North Kohala.

**Fourth Circuit—Island of Hawaii.**

On the first Wednesday of January, in Hilo, and on the first Wednesday of July, in Honokaa.

**Fifth Circuit—Island of Kauai.**

On the first Wednesdays of March and September, in Lihue.

The terms of the Circuit Courts may be continued and held from the opening thereof respectively until and including the twenty-fourth day thereafter, excepting Sundays and legal holidays.

### SUPREME COURTS.

The terms of the Appellate Court are held as follows: On the third Mondays of March, June, September and December.

## REGISTER AND DIRECTORY FOR 1900.

### REPUBLIC OF HAWAII

#### EXECUTIVE COUNCIL.

Sanford B. Dole, President of the Republic of Hawaii.  
 E. A. Mott-Smith.....  
 .....Minister of Foreign Affairs  
 Alex. Young.....Minister of the Interior  
 Samuel M. Damon.....Minister of Finance  
 H. E. Cooper.....Attorney-General

#### COUNCIL OF STATE.

Cecil Brown, Jno. Ena, J. A. Kennedy, A. G. M. Robertson, P. C. Jones, Jno. Nott, C. Bolte, M. P. Robinson, S. K. Kane, A. V. Gear, M. A. Gonsalves, W. C. Achi, D. P. R. Isenberg, J. L. Kaulukou.

#### LEGISLATIVE BODY.

##### SENATORS.

Hawaii—J. Kauhane, F. S. Lyman, F. Northrup, H. L. Holstein.  
 Maui—H. P. Baldwin, A. Hocking, A. N. Kepoikal.  
 Oahu—Cecil Brown, J. A. McCandless, Henry Waterhouse, T. F. Lansing, W. C. Wilder, J. N. Wright.  
 Kauai—W. H. Rice, G. N. Wilcox.

##### REPRESENTATIVES.

Oahu—A. T. Atkinson, A. V. Gear, A. G. M. Robertson, J. L. Kaulukou, L. L. McCandless, S. G. Wilder.  
 Maui—W. F. Pogue, D. Kahaulio, S. W. Kaal.  
 Hawaii—E. E. Richards, A. B. Lobenstein, J. D. Paris, W. C. Achi.  
 Kauai—P. R. Isenberg, S. K. Kaeo.

#### NATIONAL GUARD OF HAWAII.

Commander in Chief..President S. B. Dole  
 Adjutant General.....John H. Soper  
 Ordnance Officer.....Major Geo. C. Potter  
 Quartermaster.....Major Curtis P. Iaukea  
 Aide-de-Camp.....Capt. W. A. Kinney  
 Aide-de-Camp.....Capt. J. W. Pratt  
 Aide-de-Camp.....Capt. H. Berger  
 Aide-de-Camp.....Capt. W. C. Wilder, Jr.  
 Aide-de-Camp.....Capt. Ed Towse

##### First Regiment, N. G. H.

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Oahu.

Koolaupoko—F. Pahia, D. M. Kapalau, E. P. Aikue.  
 Koolauloa—W. R. Campbell, G. Kamaka, W. Isaacs.  
 Waialua—Ed. Hore, A. S. Mahaulu, A. Cox.  
 Ewa and Waianae—J. A. Low, F. Meyers, A. Ahrens.

Kauai.

Koloa—E. E. Conant, M. Kaluna, J. W. Waughop.  
 Lihue—W. H. Rice, J. H. Coney, J. H. K. Kalwi.

Kawaihau—S. N. Hundley, D. Lovell, J. Anderson.  
 Hanalei—C. H. Willis, J. Kakina, J. C. Davis.  
 Waimea—J. K. Kapuniai, T. Brandt, W. A. Baldwin.

DEPARTMENT OF FINANCE.

Minister of Finance.....S. M. Damon  
 Registrar of Public Accounts..W. Wright  
 Auditor-General.....H. C. Austin  
 Deputy Auditor.....H. C. Meyers  
 Collector-General of Customs.....  
 .....E. R. Stackable  
 Clerk of Registrar.....Henry Hapai  
 Tax Assessor and Collector, Oahu....  
 .....Jona. Shaw  
 Deputy Assessor and Collector, Oahu  
 .....A. D. Thompson  
 Tax Assessor and Collector, Maui....  
 .....C. H. Dickey  
 Tax Assessor and Collector, Hawaii..  
 .....N. C. Wilfong  
 Tax Assessor and Collector, Kauai...  
 .....J. K. Farley  
 Collector Port of Hilo.....F. L. Winter  
 Collector Port of Kahului.....E. H. Bailey  
 Collector Port of Mahukona..J. S. Smithies  
 Collector Ports of Kailua and Keala-  
 kekua .....Geo. Clark  
 Collector Ports of Koloa and Waimea  
 .....C. B. Hofgaard  
 Port Surveyor, Kahului..J. W. L. Zumwalt  
 Port Surveyor, Hilo.....R. M. Macaulay  
 Pilot and Harbor Master, Hilo.....  
 .....Capt. Fitzgerald  
 Pilot and Harbor Master, Kahului....  
 .....Robt. English

CUSTOMS DEPARTMENT. HONOLULU

Collector.....E. R. Stackable  
 Deputy Collector.....L. P. Scott  
 Entry Clerks—Jas. Bicknell, M. H. Drum-  
 mond, E. H. Boyen.  
 Statistical Clerks—W. Chamberlain, J. B.  
 Gibson, W. P. Johnson.  
 Appraiser .....R. Weedon  
 Assistant Appraiser.....E. R. Folsom  
 Examiners.....J. H. Hare, F. M. Bindt  
 Storekeepers..J. J. Kelly, M. G. Johnston  
 Gauger and Tester.....H. C. Morton  
 Harbor Master.....Capt. A. Fuller  
 Pilots—J. C. Lorenzen, A. Macauley, M.  
 N. Sanders, J. Hilbus.  
 Port Surveyor.....G. C. Stratemeyer  
 Asst. Guard in charge of Chinese Im-  
 migration.....John W. Short  
 Asst. Guard and clerk to Immigration  
 Office .....Kelly Brown

POST OFFICE DEPARTMENT.

J. M. Oat.....Postmaster-General  
 Henry Davis.....Bookkeeper and Cashier  
 F. B. Oat.....Savings Bank Department  
 C. D. Lufkin....Money Order Department  
 L. T. Kenake..Gen'l Delivery Department

DEPARTMENT OF ATTORNEY-GEN- ERAL.

Attorney-General.....H. E. Cooper

Deputy Attorney-General.....E. P. Dole  
 Asst. to Attorney-Gen'l.....Jno. W. Cathcart  
 Marshal of Hawaiian Islands.....A. M. Brown  
 Deputy Marshal.....C. F. Chillingworth  
 Clerk to Marshal.....H. M. Dow  
 Clerk Attorney-General's Department  
 .....J. M. Kea  
 Sheriff of Hawaii.....L. A. Andrews  
 Sheriff of Maui.....L. M. Baldwin  
 Sheriff of Kauai.....J. H. Coney  
 Jailor of Oahu Prison.....Wm. Henry  
 Oahu—Deputy Sheriffs: Ewa, Anton Fernandez; Waianae, J. E. Kahoa; Wai-  
 alua, Andrew Cox; Koolauloa and  
 Koolaupoko, F. Pahia.  
 Kauai—Sheriff, J. H. Coney; Deputy  
 Sheriffs: Lihue, M. F. Prosser; Ka-  
 waihou, C. K. Haae; Hanalei, D.  
 Donaldson; Koloa, R. Waiialeale;  
 Waimea, E. Omsted.  
 Molokai—Deputy Sheriff, Geo. Trimble.  
 Maui—Sheriff, L. M. Baldwin; Deputy  
 Sheriffs: Lahaina, C. R. Lindsay; Wai-  
 luku, A. N. Hayselden; Makawao, W.  
 H. King; Hana, F. Wittrock.  
 Hawaii—Sheriff, L. A. Andrews; Deputy  
 Sheriffs: North Hilo, L. E. Swain;  
 Hamakua, H. S. Overend; South Ko-  
 hala, Z. Paakiki; North Kohala, Chas.  
 Pulaa; North Kona, J. K. Nahale;  
 South Kona, S. Lazaro; Kau, W. J.  
 Yates; Puna, J. E. Eldarts; S. Hilo,  
 R. A. Lyman.

BOARD OF PRISON INSPECTORS.

F. J. Lowrey, J. A. Magoon, C. P. Iaukea

DEPARTMENT OF PUBLIC INSTRUCTION.

Minister of Public Instruction.....  
 .....E. A. Mott-Smith  
 Commissioners—W. D. Alexander, C. L.  
 Hopkins, Mrs. E. W. Jordan, H. von  
 Holt, Mrs. W. W. Hall.  
 Inspector-General.....H. S. Townsend  
 Traveling Normal Instructor.....T. H. Gibson  
 Secretary.....Dr. C. T. Rodgers  
 Asst. Secretary.....Miss R. Davison

SCHOOL AGENTS IN COMMISSION.

Hawaii.

Hilo.....L. Severance  
 Puna.....J. E. Eldarts  
 Kau.....G. G. Kinney  
 North Kona.....M. F. Scott  
 South Kona.....Miss Ella H. Paris  
 South Kohala.....Miss E. W. Lvons  
 North Kohala.....Dr. B. D. Bond  
 Hamakua.....A. B. Lindsay

Maui.

Lahaina and Lanai.....H. Dickenson  
 Wailuku.....L. W. Zumwalt  
 Hana.....F. Wittrock  
 Makawao.....Mrs. A. E. Dickey  
 Molokai.....D. McCorrison

Oahu.

Honolulu.....Miss R. Davison  
 Ewa.....Geo. Renton  
 Waianae.....R. L. Gilliland  
 Waialua.....Miss R. Davison  
 Koolauloa and Koolaupoko.....H. C. Adams

Kauai.

Waimea and Niihau.....J. F. Scott  
 Koloa and Lihue.....J. K. Burkett  
 Hanalei.....W. E. H. Deverill  
 Kawaihou.....G. H. Fairchild

CHAMBER OF COMMERCE.

President.....T. R. Walker  
 Vice-President.....W. F. Allen  
 Secretary and Treasurer.....J. G. Spencer

HAWAIIAN SUGAR PLANTERS ASSOCIATION.

Reorganized Nov., 1895, from the Planter's  
 Labor and Supply Co.

President.....C. M. Cooke  
 Vice-President.....F. A. Schaefer  
 Secretary.....C. Bolte  
 Treasurer.....F. M. Swanzy  
 Auditor.....G. H. Robertson

BOARD OF UNDERWRITERS—  
 AGENCIES.

Boston.....C. Brewer & Co.  
 Philadelphia.....C. Brewer & Co.  
 New York.....Bruce Cartwright  
 Liverpool.....T. H. Davies & Co.  
 Lloyds, London.....T. H. Davies & Co.  
 San Francisco.....H. Hackfeld & Co.  
 Bremen, Dresden, Vienna.....F. A. Schaefer

HONOLULU BOARD OF UNDER-  
 WRITERS.

F. A. Schaefer.....President  
 F. W. Macfarlane.....Vice-President  
 J. A. Gilman.....Secretary and Treasurer

PACKET AGENCIES.

Boston Packets—C. Brewer & Co.  
 Planters' Line, San Francisco—C. Brewer  
 & Co.  
 Merchants' Line, San Francisco—Castle  
 & Cooke.  
 Pioneer, Liverpool—T. H. Davies & Co.  
 Canadian and Australian S. S. Line—T.  
 H. Davies & Co.  
 Oregon R. & S. Nav. Co., Portland to  
 China and Japan—T. H. Davies & Co.  
 Oceanic S. S. Co.'s Line—W. G. Irwin & Co.  
 Nippon Yusen Kaisha, Japan to Seat-  
 tle—W. G. Irwin & Co.  
 Pacific Mail S. S. Co.—H. Hackfeld & Co.  
 Occidental & Oriental S. S. Co.—H. Hack-  
 feld & Co.  
 Bremen Packets—H. Hackfeld & Co.  
 Liverpool Packets—H. Hackfeld & Co.  
 Hawaiian Packet Line, San Francisco—  
 H. Hackfeld & Co.

San Francisco and Honolulu—F. A. Schaefer & Co.  
 Brit.-Am. S. S. Co., Seattle Line—M. J. Bissell.

**HONOLULU (STEAM) FIRE DEPARTMENT.**

Originally organized 1851, and conducted as volunteers till March 1, 1893, when it was changed to a paid department.

Officers for 1899.

Fire Commissioners—A. Brown, C. Crozier, J. H. Fisher.

Chief Engineer.....Jas. H. Hunt  
 Senior Foreman.....Chas. Thurston  
 Honolulu Engine No. 1, location, King street near Richards.

Mechanic Engine No. 2, location, Central Station, cor. Fort and Beretania sts.  
 Chemical Apparatus No. 3, located at Maunakea street, corner Pauahi.

Protection Hook and Ladder Co. No. 1, location, Central Station, cor. Fort and Beretania streets.

Engine Co. No. 4, location, corner Wilder Avenue and Piikoi street.

**FIRE WARDS OF HONOLULU.**

Fire Alarm Signals.

- 4 Hotel and Fort.
- 5 Hotel and Nuuanu.
- 6 Hotel and Maunakea.
- 7 Hotel and Richard.
- 8 Hotel and Punchbowl.
- 9 King and Kekaulike.
- 12 King and Nuuanu.
- 13 King and Fort.
- 14 King and Alakea.
- 15 King and Punchbowl.
- 16 Queen and Maunakea.
- 17 Queen and Nuuanu.
- 18 Queen and Fort.
- 19 Queen and Richard.
- 21 Queen and South.
- 23 Queen and Kakaako.
- 24 Allen and Fort.
- 25 P. M. S. S. Co. Wharf.
- 26 Smith and Pauahi.
- 27 Beretania and Maunakea.
- 28 Beretania and Nuuanu.
- 29 Beretania and Fort.
- 31 Beretania and Emma.
- 32 Beretania and Punchbowl.
- 34 Nuuanu and Vineyard.
- 35 Nuuanu and School.
- 36 Nuuanu and Kuakini.
- 37 Nuuanu and Judd.
- 38 Liliha and Judd.
- 39 Liliha and School.
- 41 Liliha and King.
- 42 King and Dowsett Lane.
- 43 Iwilei.
- 45 R. R. Depot.
- 46 School and Fort.
- 47 Punchbowl and Pauoa Road.
- 48 Punchbowl and Emma.
- 49 Punchbowl and Miller.
- 51 Kinau and Miller.
- 52 Kinau and Alapai.

- 53 King and Alapai.
- 54 King and Kapiolani.
- 56 Beretania and Kapiolani.
- 58 Pensacola and Wilder Avenue.
- 59 Pensacola and Beretania.
- 61 Piikoi and King.
- 62 Piikoi and Kinau.
- 63 Piikoi and Lunalilo.
- 64 Wilder Avenue and Kewalo.
- 65 Wilder Avenue and Makiki.
- 67 Wilder Avenue and Punahou.
- 68 Beretania and Keaumoku.
- 69 Beretania and Punahou.
- 71 Beyond Punahou Street.
- 72 King and Keaumoku.
- 73 Waikiki.
- 74 Harbor.

**QUEEN'S HOSPITAL.**

Erected in 1860.

President.....The President  
 Vice-President.....F. A. Schaefer  
 Secretary.....Geo. W. Smith  
 Treasurer.....H. Waterhouse  
 Auditor.....M. P. Robinson  
 Physicians, Drs. C. B. Wood, C. B. Cooper  
 Executive Committee—A. S. Cleghorn, H. Waterhouse, F. A. Schaefer, M. P. Robinson, E. F. Bishop.

**SAILORS' HOME SOCIETY.**

Organized 1853. Meets annually in December.

President.....J. B. Atherton  
 Vice-President.....Jno. Ena  
 Secretary.....F. A. Schaefer  
 Treasurer.....T. R. Walker  
 Executive Committee—C. L. Wight, F. W. Damon, Jno. Ena.

**BAR ASSOCIATION OF HAWAII.**

Organized June 28, 1899.

President.....P. Neumann  
 Vice-President.....S. M. Ballou  
 Secretary.....A. A. Wilder  
 Treasurer.....S. K. Ka-ne

**BOARD OF HAWAIIAN EVANGELICAL ASSOCIATION.**

Originally Organized 1823.

Constitution revised 1863. Annual meeting June.

President.....Hon. A. F. Judd  
 Vice-President.....H. Waterhouse  
 Corresponding Secretary.....  
 .....Rev. O. P. Emerson  
 Recording Secretary.....Rev. J. Leadingham  
 Treasurer.....W. W. Hall  
 Auditor.....J. B. Atherton

**MISSION CHILDREN'S SOCIETY.**

Organized 1851. Annual Meeting in June.

President.....A. F. Cooke

Vice-President.....F. C. Atherton  
 Recording Secretary.....Lorrin Andrews  
 Cor. Secretaries—Miss M. A. Cham-  
 berlain and Miss Ada R. Whitney.  
 Elective Members—Rev. J. Leadingham  
 and Mrs. W. F. Frear.  
 Treasurer.....L. A. Dickey

**YOUNG MEN'S CHRISTIAN ASSOCIA-  
 TION.**

Organized 1869. Annual Meeting in April.

President.....W. C. Weedon  
 Vice-President.....T. Clive Davies  
 Rec. Secretary.....B. F. Beardmore  
 Treasurer.....C. H. Atherton  
 General Secretary.....H. E. Coleman  
 Assistant Secretary.....A. J. Coats

**WOMAN'S CHRISTIAN TEMPERANCE  
 UNION.**

Organized December, 1884.

President.....Mrs. J. M. Whitney  
 Vice-Presidents .....  
 ..Mrs. G. L. Pearson, Mrs. P. C. Jones  
 Recording Secretary..Mrs. R. Jay Greene  
 Corresponding Secretary..Mrs. E. W. Jordan  
 Treasurer.....Mrs. L. B. Coan

**WOMAN'S BOARD OF MISSIONS.**

Organized 1871.

President.....Mrs. C. M. Hyde  
 Recording Secretary..Mrs. G. P. Andrews  
 Home Cor. Secretary..Mrs. W. A. Bowen  
 Foreign Cor. Secretary.....Miss Sheeley  
 Treasurer.....Mrs. B. F. Dillingham  
 Auditor.....W. W. Hall

**MISSIONARY GLEANERS.**

President.....Mrs. H. H. Williams  
 Vice-President.....Mrs. H. E. Coleman  
 Rec. Secretary.....Miss Charlotte Hall  
 Cor. Secretary.....Miss E. C. Damon  
 Treasurer.....Mrs. H. M. Ewing

**FREE KINDERGARTEN AND CHILD-  
 REN'S AID ASSOCIATION.**

Organized 1895.

President.....Mrs. C. M. Hyde  
 Vice-Presidents—Mrs. W. F. Allen, Mrs.  
 S. B. Dole and Mrs. T. R. Walker.  
 Recording Secretary.....Miss M. Hopper  
 Treasurer.....Mrs. F. M. Swanzy  
 Financial Secretary..Mrs. H. E. Coleman  
 Auditor.....W. A. Bowen

**AMERICAN RELIEF FUND.**

Organized 1864. Meets annually Feb. 22.

President.....W. F. Allen  
 Vice-President.....R. Lewers  
 Secretary and Treasurer...W. O. Atwater  
 Committee—J. B. Atherton, W. F. Allen,  
 R. Lewers, J. Emmeluth, C. B. Ripley.

**HAWAIIAN RELIEF SOCIETY.**

Organized 1895.

President.....Mrs. S. C. Allen  
 1st Vice-President..Mrs. James Campbell  
 2nd Vice-President...Mrs. Robert Lewers  
 Secretary.....Mrs. Geo. Beckley  
 Treasurer (Acting).....Mrs. S. C. Allen

**HOULU LAHUI SOCIETY.**

Organized 1878.

President.....D. Kawanakoa, Acting  
 Vice-President.....Mrs. K. Campbell  
 Secretary.....Mrs. Eugenia M. Reis  
 Treasurer.....Mrs. F. Jones

**HAWAIIAN MEDICAL ASSOCIATION.**

Organized May 24, 1895.

Annual Meetings in May.

President.....Dr. C. B. Cooper  
 Vice-President.....Dr. \_\_\_\_\_  
 Secretary and Treasurer..Dr. C. L. Garvin

**HAWAIIAN SOCIETY SONS OF THE  
 AMERICAN REVOLUTION.**

Organized June 17, 1895.

President.....A. F. Judd  
 Vice-President.....W. F. Allen  
 Secretary.....W. O. Atwater  
 Registrar.....W. D. Alexander  
 Treasurer.....W. J. Forbes

**ASSOCIATED CHARITIES.**

Organized June 7, 1899.

President.....S. B. Dole  
 1st Vice-President.....Mrs. A. Fuller  
 2nd Vice-President...Rev. A. Mackintosh  
 Secretary.....Mrs. J. M. Whitney  
 Treasurer.....G. R. Carter  
 Manager.....Mrs. E. F. Berger

**STRANGER'S FRIEND SOCIETY.**

Organized 1852. Annual Meeting in June.

President.....Mrs. A. Mackintosh  
 Vice-President—Mrs. T. H. Hobron, Mrs.  
 A. Fuller.  
 Secretary.....Mrs. S. M. Damon  
 Treasurer.....Mrs. E. W. Jordan  
 Auditor.....E. W. Jordan

**BRITISH BENEVOLENT SOCIETY.**

Organized 1860. Meets annually April 23.

President.....W. R. Hoare  
 Vice-President.....Rev. A. Mackintosh  
 Secretary.....R. Catton  
 Treasurer.....J. A. Kennedy

**GERMAN BENEVOLENT SOCIETY.**

Organized August 22, 1856.

President.....F. A. Schaefer



Vice-President.....J. F. Hackfeld  
 Secretary.....John F. Eckart  
 Treasurer .....H. Schultze  
 Auditor.....H. J. Nolte

**PORTUGUESE LADIES' BENEVO-  
 LENT SOCIETY.**

Organized December, 1886.

President.....Mrs. W. G. Irwin  
 1st Vice-President.....Mrs. C. M. Hyde  
 2nd Vice-President.....Mrs. Marques  
 Secretary .....Mrs. Rodrigues  
 Treasurer.....M. A. Gonsalves

**CATHOLIC BENEVOLENT SOCIETY.**

Organized June 26, 1899.

President.....A. S. Humphreys  
 1st Vice-President.....Jas. A. Thompson  
 2nd Vice-President.....M. A. Gonsalves  
 Recording Sec.....J. F. Eckardt  
 Finan. Secretary.....A. W. Seabury  
 Treasurer.....A. E. Murphy

**PORTUGUESE MUTUAL BENEFIT SO-  
 CIETY OF HAWAII.**

Organized Jan. 1882: Incorporated 1887.

President.....J. G. Silva  
 Vice-President.....J. P. Rodrigues  
 Secretary.....J. D. Frias  
 Treasurer.....M. R. A. Viera

**LIBRARY AND READING ROOM AS-  
 SOCIATION.**

Organized March, Incorporated June 24,  
 1879.

President.....C. R. Bishop  
 Vice-President.....M. M. Scott  
 Secretary.....H. A. Parmelee  
 Treasurer.....Miss. M. A. Burbank

**HAWAIIAN HISTORICAL SOCIETY.**

Organized Jan., 11, 1892.

Annual Meeting, November 28.

President.....Dr. N. B. Emerson  
 Vice-President—S. B. Dole, W. F. Allen,  
 J. S. Emerson, H. M. Sewall.  
 Recording Secretary .....  
 Corresponding Secretary .....  
 Prof. W. D. Alexander  
 Treasurer.....Mrs. J. S. Emerson  
 Librarian.....Miss. M. A. Burbank

**KILOHANA ART LEAGUE.**

Organized May 5, 1894.

President.....Harold Mott-Smith  
 Vice-President.....D. H. Hitchcock

Secretary and Treasurer.....  
 .....Miss. E. Swickard

**HILO CHAMBER OF COMMERCE.**

Organized Sept. 10, 1898.

President.....J. W. Mason  
 Vice-Presidents .....  
 .....L. Turner and Dr. P. Rice  
 Secretary.....J. T. Stacker  
 Treasurer.....N. C. Wilfong

**AMATEUR ORCHESTRA.**

Organized 1895.

Rehearses in the Y. M. C. A. Hall every  
 Thursday night.  
 Leader.....Wray Taylor

**KAMEHAMEHA MANUAL SCHOOL.**

Principal.....U. Thompson  
 Teachers.—T. J. Penfield, W. W. Bristol,  
 C. A. Macdonald, T. F. Sedgwick, Ira  
 Eskew, I. H. Beadle, Mr. and Mrs. D.  
 Hill, J. Bicknell, H. Smith, Silas P.  
 Perry, Ethel C. Zimmerman, D. Kanu-  
 ha, James Osborn.

**PREPARATORY DEPARTMENT, KA-  
 MEHAMEHA.**

Principal.....Miss A. E. Knapp  
 Matron.....Miss Gorton  
 Assistants—Misses Alma Krusen, Thomas,  
 Post, E. H. Kahanu and Rosina Shaw.

**KAMEHAMEHA GIRLS SCHOOL.**

Principal.....Miss Ida M. Pope  
 Instructors—Misses F. N. Albright, C. B.  
 Albright, F. Lemon, N. B. Forsythe,  
 I. C. Van Nostrand, S. L. Byington,  
 H. E. McCracken, M. E. Hitchcock.

**OAHU COLLEGE.**

President.....F. A. Hosmer, A. M.  
 Chem. and Nat. Science.....L. H. Miller  
 Math. and Mechan. Drawing .....  
 .....C. Hemenway  
 Lat, Polit, Econ.....W. Williamson  
 Greek, Hist., etc.....Miss Kate Graydon  
 Business Dept—A. N. Campbell, L. C.  
 Howland.  
 German and French.....Miss L. Grau  
 Music, Vocal and Inst.....  
 .....Mrs. J. W. Yarnley  
 Drawing and Painting.....  
 .....Miss C. St. J. Hoffmar  
 Matron.....Miss E. Crozier  
 Supr. Agr. Dept.....F. W. Barwick

**OAHU PREPARATORY.**

Principal.....S. P. French  
 Teachers—H. M. Lull, Mrs. L. B. Turner  
 Misses M. P. Winne, C. Ziegler, A. R.



Whitney, A. B. Alexander, M. C. Widfield.

**KAWAIAHAO GIRLS' SEMINARY.**

Miss C. W. Paulding.....Principal  
 Assistants—Misses Perley, E. Pugsley, F. Pugsley, J. Johnson, Belle Johnson, M. A. Myrick, and Miss Asbury.

**IOLANI COLLEGE.**

Principal—The Rt. Rev. Alfred Willis, D.D., Bishop of Honolulu.  
 Master.....F. C. Fitz  
 Assistant.....Miss Prescott

**PACIFIC (FORMERLY BRITISH) CLUB**

Organized 1852. Premises on Alakea Street, two doors below Beretania.

President.....A. S. Cleghorn  
 Vice-President.....Dr. R. McKibbin  
 Secretary.....Geo. C. Potter  
 Treasurer.....J. G. Spencer  
 Auditor.....W. F. Allen  
 Managers—J. M. Monsarrat, T. M. Stark-ey and Dr. C. B. Cooper, with the above officers comprise the Board.

**YOUNG HAWAIIANS INSTITUTE.**

Organized Aug. 10, 1894.

President.....Geo. H. Huddy  
 Vice-President.....Geo. L. Desha  
 Recording Secretary.....Isaac Sherwood  
 Financial Secretary.....J. L. Holt  
 Treasurer.....Chas. Wilcox  
 Marshal.....T. P. Cummins  
 Meets every 1st and 3rd Wednesday of the month, in the Foster Block, Nuuanu street below King.

**SCOTTISH THISTLE CLUB.**

Organized April 27, 1891.

Officers for 1900.

Chief.....J. Harris Mackenzie  
 Chieftain.....Norman Kay  
 Secretary.....A. B. Kennedy  
 Treasurer.....David Anderson  
 Master-at-Arms.....Alex. Cockburn  
 Club Rooms, Love Block, Fort Street,  
 Meeting on Friday, 7:30 P. M.

**HAWAIIAN RIFLE ASSOCIATION,**

Organized Dec. 1885.

President.....John G. Rothwell  
 Vice-President.....C. L. Crabbe  
 Secretary and Treasurer.....Q. H. Berry

**HONOLULU CEMETERY ASSOCIATION.**

President.....A. S. Cleghorn

Vice-President.....F. A. Schaefer  
 Secretary.....D. Dayton  
 Treasurer.....G. R. Carter

**MYRTLE BOAT CLUB.**

Organized Feb. 5, 1883.

A. G. M. Robertson.....President  
 W. F. Love.....Vice-President  
 T. P. Petrie.....Secretary  
 P. Lishman.....Treasurer  
 W. W. Harris.....Captain  
 G. S. Harris.....Auditor  
 Trustees.—W. H. Soper, O. Sorenson, Geo. Angus.

**HEALANI BOAT CLUB.**

Incorporated Dec. 13, 1894.

G. R. Carter.....President  
 W. E. Wall.....Vice-President and Captain  
 Jas. Lloyd.....Secretary  
 C. B. Gray.....Treasurer  
 K. B. Porter.....Auditor  
 Directors—A. L. C. Atkinson, F. Church, F. B. Damon, G. H. Gere.

**LEILANI BOAT CLUB.**

Organized Oct. 2, 1894.

David Kawanakoa.....President  
 Ed. Stiles.....Vice-President  
 J. L. Holt.....Secretary  
 F. J. Kruger.....Treasurer  
 J. F. C. Hagens.....Auditor  
 Jonah Kalaniana'ole.....Captain  
 Trustees—S. P. Woods, S. E. P. Taylor, P. T. Phillips.

**HAWAIIAN ROWING ASSOCIATION.**

A. G. M. Robertson.....President  
 W. E. Wall.....Vice-President  
 W. C. Parke.....Secretary and Treasurer  
 Regatta Committee—W. C. Parke, W. E. Wall, S. E. P. Taylor.

**PUBLICATIONS.**

The Hawaiian Gazette, issued semi-weekly by the Hawaiian Gazette Co., on Tuesdays and Fridays. Walter G. Smith, Editor.  
 The Daily Pacific Commercial Advertiser, issued by the Hawaiian Gazette Co. every morning (except Sundays). Walter G. Smith, Editor.  
 The Daily Bulletin, issued every evening (except Sundays), by the Daily Bulletin Co. W. N. Farrington, Editor.  
 The Hawaiian Star, issued every evening (except Sundays), by the Hawaiian Star Newspaper Association. A. T. Atkinson, Editor. Semi-weekly issues on Monday and Thursday.  
 Austin's Hawaiian Weekly, issued Saturdays by the Austin Pub. Co., F. Austin, Editor.

- The Friend, issued on the first of each month; Rev. S. E. Bishop, Editor.
- The Anglican Church Chronicle, issued on the first Saturday of every month. Rev. A. Mackintosh, Editor.
- The Paradise of the Pacific, issued monthly; F. Austin, Editor.
- The Planters' Monthly, issued on the 15th of each month. H. M. Whitney, Editor.
- The Honolulu Diocesan Magazine, issued quarterly. Rt. Rev. Bishop Willis, Editor.
- Y. M. C. A. Review, issued monthly, H. E. Coleman, Editor.
- The Kuokoa (native), weekly, issued every Friday morning, by the Hawaiian Gazette Co., Jos. M. Poepoe, Editor.
- O Luso, (Portuguese) issued weekly on Saturdays, J. S. Ramos, Editor.
- As Boas Novas (Portuguese) sectarian monthly, E. Silva, Editor.
- The Hawaiian-Chinese News,, issued semi-weekly, C. Yat Kai, Editor.
- Chinese Times, issued weekly, Leong Pak Lum, Editor.
- Chinese Chronicle, weekly, issued every Wednesday. Yuen Chu Ho, Editor.
- The Independent, issued daily, E. Norrie, Editor.
- Aloha Aina (native) issued daily except Sundays Weekly issue every Saturday. Ed. Like Editor and Manager.
- Ka Loea Kalaaina (native) D. W. Kamaalikane, Editor. Issues daily and weekly.
- Ka Makaaianana, (native) issued every Monday. F. J. Testa, Editor.
- Lahui Hawaii, (native) issued every Friday; J. Makainai, Editor.
- The Yamato Shimibun (Japanese) semi-weekly. Mizemo Hamon, Editor.
- Hawaiian Shimpo, issued daily in Japanese. S. Takahashi, Editor.
- Hilo Tribune, issued weekly, on Saturdays by the Tribune Publishing Co., W. H. Smith, Editor.
- The Hawaii Herald, issued weekly at Hilo, on Thursday by the Herald Publishing Co., J. T. Stacker, Editor.
- Hawaiian Almanac and Annual, issued the latter part of December for the following year. Thos. G. Thrum, Editor and Publisher.

#### LOGGES.

- Lodge Le Progres de l'Oceanie, No. 124, A. F. & A. M.; meets on the last Monday in each month.
- 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.
- 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 first Thursday in the month.
- Alexander Liholiho Council No. 1, of Kadosh; meets on the third Monday of alternate months from February.
- Pacific Lodge No. 822 A. F. & A. M. meets at Hall of Excelsior Lodge every second Monday of the month.
- Kilauea Lodge, No. 313 meets Saturday, nearest full moon at Masonic Hall, Hilo.
- 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 Harmony Hall King St.
- Pacific Degree Lodge, No. 1, Daughters of Rebekah; meets at Excelsior Hall, Fort street, second and fourth Fridays of each month.
- Polynesian Encampment, No. 1, I. O. O. F. meets in Odd Fellows' Building, Fort Street, first and third Fridays of each month.
- Oahu Lodge No. 1, K. of P. meets every Thursday evening at Castle Hall on Fort Street.
- Mystic Lodge, No. 2, K. of P. meets every Wednesday evening, at Castle Hall.
- Section No. 225—Endowment Rank, K. of P. meets on the second Saturday of January, July and December in the hall of Oahu Lodge.
- Aloha Lodge No. 3, Knights of Pythias; meets Saturday evening at their Hall in Custom House, in Kahului, Maui.
- Malle Lodge, No. 4, Knights of Pythias; meets every Saturday night in Lyceum Building, Honokaa, Hawaii. Visiting brothers always welcome.
- Hawaiian Council No. 689, American Legion of Honor; meets on second and fourth Friday evenings of each month in Harmony Hall.
- Oceanic Council, No. 777, American Legion of Honor; meets on the first and third Tuesdays of each month, at the K. of P. Hall.
- Hawaiian Tribe, No. 1.—Imperial Order of Red Men; meets on second and fourth Fridays of each month, at K. of P. Hall.
- Court Lunailo, No. 6600; A. O. of Foresters, meets at hall of Oahu Lodge, K. of P. on first and third Fridays of each month.
- Court Camoes, No. 8110, A. O. F. meets second and fourth Tuesday evenings of month in K. of P. Hall.
- Geo. W. De Long Post, No. 45, G. A. R. meets the second Tuesday of each month at Harmony Hall.

Geo. C. Wiltse Camp, Sons of Veterans; meets on third Tuesday of each month in K. of P. Hall.  
 Capt. Cook Lodge No. 353, Order Sons of St. George; meets at the K. of P. Hall, Fort St., every Monday evening.

## PLACES OF WORSHIP.

Central Union Church Congregational. (Independent) cor. Beretania and Richards sts, Rev. Wm. M. Kincaid, 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.

Methodist Episcopal Church, Rev. G. L. Pearson, Pastor; Sunday services at 11 a. m. and 7:30 p. m. at their new church, corner of Beretania and Miller st. Sunday School meets at 10 a. m. Prayer meeting Wednesday at 7:30 p. m.

The Christian Church, Rev. Jno. E. Hay, Pastor; Sunday services at 11 a. m. and 7:30 p. m. at their new house of worship, Alakea street, near King. Sunday School meets at 9:45 a. m.

Salvation Army, services held nightly at hall corner of Nuuanu and King streets with Sunday services at the usual hours.

Roman Catholic Church, Fort Street, near Beretania; Rt. Rev. Gulstan F. Robert Bishop of Panopolis; Revs. Leonor and Clement, assisting. Services every Sunday at 10 a. m. and at 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, Beretania Street, First Congregation. Clergy: Rt. Rev. Alfred Willis, Bishop and Deacon, Rev. V. H. Kitcat, Vice-Dean and Parish Priest; Services on Sunday: Holy Communion at 7:00 a. m. Morning prayer, with sermon at 11 a. m. Hawaiian Evensong 3:30 p. m. Evening Prayer with sermon 7:30 p. m. Holy Communion at 11 a. m. the last Sunday in each month. Sunday School 10 a. m. Daily prayer at 7 a. m. Holy Days: Communion at 6:30 a. m., Morning Prayer at 9:00 a. m.

Second Congregation, Rev. A. Mackintosh, Pastor. Services on Sunday:

Morning prayer with sermon, 9:45 a. m. Evening prayer with sermon, 6:30 p. m. Holy Communion first Sunday in month, 9:45 a. m. Sunday School 10 a. m. Evening prayer, every Friday at 7:30 p. m.

Chinese Congregation. Rev. Kong Yin Yet, Curate. Services on Sunday at 11 a. m. and 7:30 p. m. Evening prayer every Wednesday, at 7:00 p. m.

St. Clement's Chapel, Punahou. Services on Sundays. Holy Communion 7 a. m. Morning Prayer, 11 a. m. Evening Prayer 7:05 p. m. Rev. John Usborne in charge.

Christian Chinese Church, Fort Street, F. W. Damon, acting Pastor. Services every Sunday at 10:30 a. m. and 7:30 p. m. Prayer Meeting, Wednesdays at 7:30 p. m.

Portuguese (Protestant) Mission; Rev. A. V. Soares, Pastor. Services every Sabbath at the usual hours. Sunday school at 3 p. m. Chapel situated corner Punchbowl and Miller streets.

Japanese Union Church, (Connected with Hawaiian Board Missions), Rev. K. Okumura 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. and evening school Mondays, Thursdays and Fridays.

Japanese Church. Rev. H. Kihara, Pastor. Hold services in hall on Beretania street

## NATIVE CHURCHES.

Kawaiahao Church (Congregational), corner of King and Punchbowl Streets, Rev. H. H. Parker, Pastor. Services in Hawaiian every Sunday at 11 a. m. and at 7:30 on Sunday evenings alternating with Kaumakapili. Sunday School at 10 a. m. Prayer Meeting, Wednesday, at 7:30 p. m.

Kaumakapili Church (Congregational), Beretania Street near Maunakea. Rev. E. S. Timoteo, Pastor. Services in Hawaiian every Sunday at 11 a. m. and at 7:30 p. m. on Sunday evenings alternating with Kawaiahao. Sunday School at 10 a. m. Prayer Meeting every Wednesday at 7:30 p. m.

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