HAWAIIAN ANNUAL

FOR

1933

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

THE PRINTSHOP COMPANY, LTD.
Compiler and Publisher

FIFTY-NINTH ISSUE

HONOLULU, HAWAII
1932

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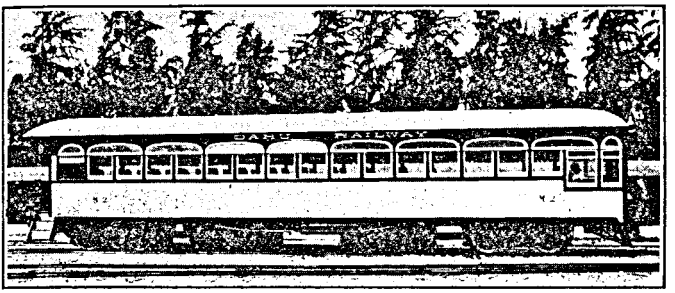

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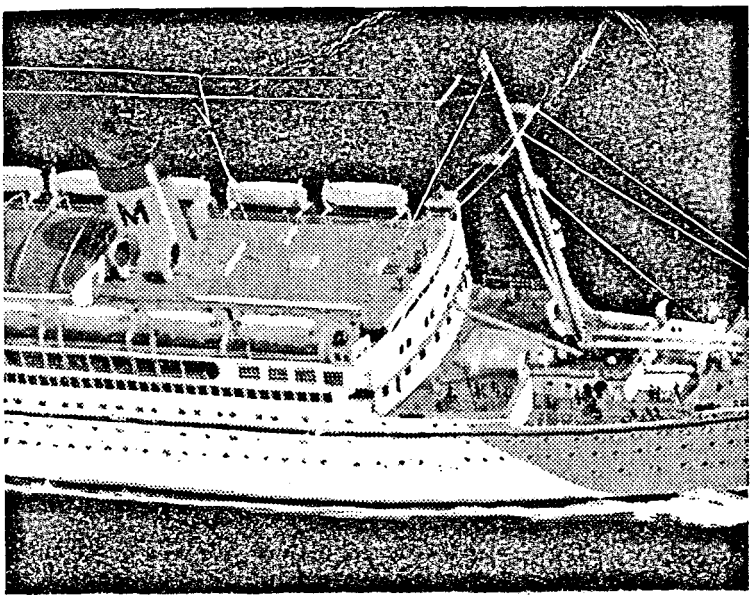

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Oldest Japanese Newspaper in Hawaii

The history of The Nippu Jiji dates back to October, 1895, when The Yamato, a four-page tabloid, was issued semi-weekly.

Becoming a daily on May 2, 1902, the paper was named the Nippu Jiji (meaning the Hawaiian Japanese Times) on November 3, 1906, by Yasutaro Soga, who has been its president and editor ever since.

The present English section, consisting of from three to four pages daily, in addition to the eight or ten pages of the Japanese section, was started on January 1, 1919.

In April, 1932, the morning edition, supplementing the main afternoon edition, was inaugurated.

The Nippu Jiji, which is issued every day in the week, including Sundays, has the largest circulation among the Japanese newspapers in Hawaii. It is published in Honolulu, with branch offices in various parts of the territory and in Japan.

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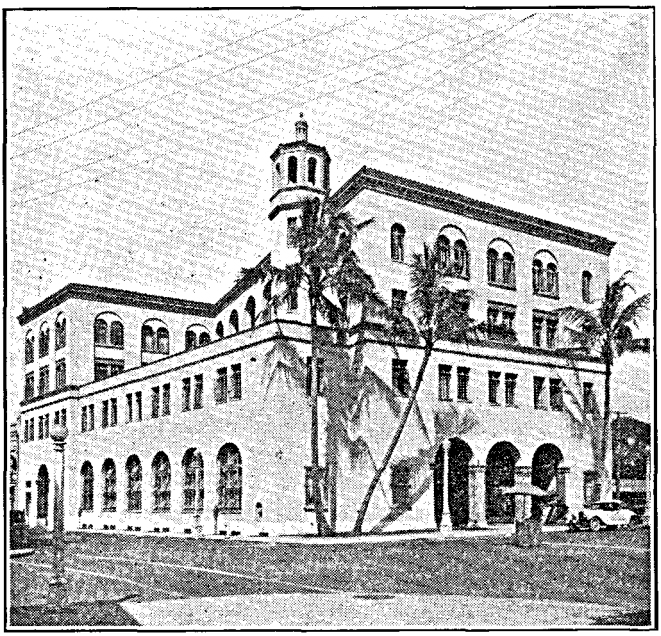

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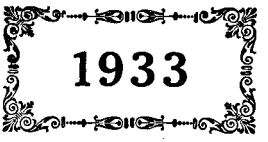
THE HAWAIIAN ANNUAL

FOR



THE REFERENCE BOOK OF INFORMATION AND STATISTICS

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

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THE PRINTSHOP COMPANY, LTD.
Compiler and Publisher

Fifty-Ninth Year of Publication

HONOLULU
December, 1932
43-318

Counting House
1933 Calendar 1933

	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
JAN.	1	2	3	4	5	6	7
	8	9	10	11	12	13	14
	15	16	17	18	19	20	21
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MAR.	....	....	....	1	2	3	4
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NOV.	....	....	....	1	2	3	4
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DEC.	....	....	....	....	....	1	2
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	17	18	19	20	21	22	23
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	31	....	....	....	....	....	....

The Printshop Company, Ltd.
RESEARCHER AND PUBLISHER
The Hawaiian Annual
HONOLULU, HAWAII

TABLE OF CONTENTS

STATISTICAL

ARTICLES

REFERENCE

ECLIPSES DURING 1933

During the year 1933 there will be two eclipses, both of the sun, neither of which will be visible in Hawaii.

On February 24, an annular eclipse of the sun will be visible across southern South America, the South Atlantic Ocean, and Central Africa.

On August 21, an annular eclipse of the sun will be visible across Asia Minor, India, the Malay region, and northern Australia. It will be visible as a partial eclipse in the Philippine Islands, half the sun being obscured at Manila.

INDEX TO ADVERTISERS

HAWAII'S OBSERVANCE DAYS FOR 1933

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

Thirty-eighth year since the downfall of the Monarchy.

The 155th year since the discovery of the Hawaiian Islands by Captain Cook.

Holidays Observed at the Hawaiian Islands

*New Year	Jan. 1	*Labor Day (1st Monday)	Sept. 4
Lincoln's Birthday	Feb. 12	*Regatta Day (3rd Saturday)	Sept. 16
*Washington's Birthday	Feb. 22	*Victory Day	Nov. 11
*Decoration Day	May 30	Thanksgiving Day	Nov. 30
*Kamehameha Day	June 11	*Christmas Day	Dec. 25
*Birthday Haw'n Republic	July 4		
*Independence Day	July 4		

* Those distinguished by the asterisk have been established by law, and all election days, both primary and general, in each county wherein such election is held, and any day designated by the President or the Governor.

Church Days

Epiphany	Jan. 6	Ascension Day	May 25
Ash Wednesday	Mar. 1	Whitsunday	June 4
First Sunday in Lent	Mar. 5	Trinity Sunday	June 11
Palm Sunday	April 9	Corpus Christi	June 15
Good Friday	April 14	Advent Sunday	Dec. 3
Easter Sunday	April 16	Christmas	Dec. 25

Moon Changes, 1933

Month	Full Moon		New Moon	
	Day	Honolulu Time	Day	Honolulu Time
January	11	10:06 a. m.	25	12:50 p. m.
February	10	2:30 a. m.	24	2:14 a. m.
March	11	4:16 p. m.	25	4:50 p. m.
April	10	3:08 a. m.	24	8:08 a. m.
May	9	11:34 a. m.	23	11:37 p. m.
June	7	6:35 p. m.	22	2:52 p. m.
July	7	1:21 a. m.	22	5:35 a. m.
August	5	9:02 a. m.	20	7:18 p. m.
September	3	6:34 p. m.	19	7:51 a. m.
October	3	6:38 a. m.	18	7:15 p. m.
November	1	9:29 p. m.	17	4:54 a. m.
December	1	3:01 p. m.	16	4:23 p. m.
	31	10:24 a. m.		

HAWAIIAN ANNUAL

Fifty-Ninth Issue

Devoted to Statistics, Research and Progress of Hawaii

Resources of Hawaii, 1932

Population, Territory, census 1930	368,336
Population, Territory, estimate, June, 1932	380,507
Population, Honolulu, census, 1930	137,582
Population, Honolulu, estimate, June, 1932	144,018
Assessed valuation, Territory	$328,685,005.00
Assessed valuation, real estate	215,309,471.00
Assessed valuation, personal property	113,375,534.00
Assessed valuation, Honolulu and Oahu	217,002,162.00
Assessed valuation, Honolulu realty	147,905,847.00
Assessed valuation, Honolulu personal	69,096,315.00
Amount Insurance written, 1931	304,771,577.00
Banks have credits	73,684,161.52
Banks have commercial accounts	38,653,331.79
Banks have savings accounts	35,030,829.75
Corporations (1273) are capitalized at	344,998,258.00
Hawaii's sugar crop, 1932, tons	927,316
Value sugar exports, 1931	57,119,164.00
Value pineapple exports, 1931	43,099,401.00
Total value all exports	106,098,975.00
Total value all imports	82,392,386.00
Total value exports over imports	23,706,589.00
Amount of public debt	32,405,000.00
Total amount of year's revenue	14,676,183.00

Hawaii's Bonded Debt, June 30, 1932

Public Improvement 4% Bonds	$ 7,680,000.00
Public Improvement 4½% Bonds	24,725,000.00
Total Bonds outstanding	$32,405,000.00

Overland Distances, Island of Oahu

(By Government Road Only)

Revised by R. D. King, Survey Department

DISTANCE FROM NEW POST OFFICE, HONOLULU, TO

	Miles
Cor. Judd and Nuuanu	1.6
Nuuanu, Country Club Entr.	2.8
Pali	6.9
Waimanalo Fork	8.3
Waimanalo Mill	13.2
Waimanalo Landing	14.9
Kailua Beach	13.3
Kaneohe Court House	11.9
Heeia (Naval Radio Station)	12.5
Kahaluu	15.1
Kaalaea	15.6
Waiahole Bridge	18.4
Waikane Post Office	19.3
Kualoa	21.5
Kaaawa	23.8
Kahana Bridge	26.2
Punaluu Bridge	28.3
Hauula Bridge	31.1
Laie Middle	34.5
Kahuku Plantation Office	37.0
Moana Hotel	3.3
Kapiolani Park (Entrance)	3.8
Diamond Head Lighthouse	5.3
Kahala and Isenberg Road	7.5
Kaimuki Car Line (Terminus)	4.6
Kaimuki Hill Reservoir	4.7
Waialae	5.9
Wailupe (Naval Radio Station)	7.5
Niu	8.5
Koko Head	11.5
Makapuu	14.5
Naval Station, Pearl Harbor	7.8
Fort Kamehameha	9.4
Fort de Russy	3.0
Fort Ruger	5.0
Liliha, Corner King Street	1.0
Fort Shafter	3.3
Moanalua Stream	3.7
Puuloa Junction	4.1
Aiea	7.7
Pearl City Junction	10.9
Ewa Junction	12.1
Schofield Barracks (Gate)	20.3
Wahiawa R. R. Station	20.7
Waialua Hill	29.8
Haleiwa Hotel	30.8
Kawailoa Bridge	32.9
Waimea Bridge	35.2
Paumalu	36.0
Pupukea	38.0
Waialee	39.7
Kahuku Plantation Office	45.0
Oahu Mill, Waipahu	14.8
Honouliuli	18.4
Ewa Mill	20.8
Nanakuli	26.9
Waianae Mill	33.1
Makaha	35.0
Makua	40.4

HONOLULU BY WATER TO

Lahaina, Maui	72.0
Kahului, Maui	90.0
Hana, Maui	128.0
Mahukona, Hawaii	134.0
Kawaihae, Hawaii	144.0
Kealakekua, Hawaii	157.0
Hilo, Hawaii	192.0
Nawiliwili, Kauai	98.0
Koloa, Kauai	102.0
Waimea, Kauai	120.0

OAHU RAILWAY DISTANCES—FROM HONOLULU TO

	Miles		Miles		Miles
Puuloa	6.0	Wahiawa	24.0	Makua	40.0
Aiea	8.0	Hoaeae	14.0	Kawaihapai	49.0
Kalauao	9.0	Honouliuli	15.0	Mokuleia	51.0
Waiau	10.0	Ewa Mill	17.0	Puuiki	53.0
Pearl City	11.0	Gilbert	21.0	Waialua	55.0
Waipio	13.0	Nanakuli	27.0	Haleiwa Hotel	55.0
Waipahu	13.0	Waianae	32.0	Waimea	61.0
Leilehua	26.0	Makaha	34.0	Kahuku	70.0

Total Population by Districts and Islands—1930 and 1920, Comparative

Hawaii	1920	1930	Oahu	1920	1930
Hamakua	9,122	8,864	Honolulu	83,327	137,582
North Hilo	5,644	5,028	Ewa	17,899	25,507
South Hilo	23,828	29,572	Waianae	1,802	1,923
Puna	7,282	8,284	Waialua	7,641	8,129
Kau	4,028	4,751	Wahiawa	4,302	18,103
North Kona	3,709	4,728	Koolauloa	4,490	5,258
South Kona	3,703	4,677	Koolaupoko	4,035	6,385
North Kohala	6,275	6,171			
South Kohala	1,304	1,250		123,496	202,887
	64,895	73,325	Midway	31	36
Maui			Kauai		
Lahaina*	7,142	7,938	Waimea	8,672	10,212
Wailuku	14,941	21,363	Niihau	191	136
Hana	3,100	2,436	Koloa	7,270	8,452
Makawao†	10,897	17,019	Kawaihau	4,533	7,441
			Hanalei	2,549	2,186
	36,080	48,756	Lihue	6,223	7,515
Molokai	1,784	5,032			
Lanai	185	2,356		29,438	35,942
Kahoolawe	3	2	Total whole group	255,912	368,336

* Not including Lanai. † Not including Kahoolawe.

Comparative Table of Population, Hawaiian Islands—Census Period 1872-1930

Islands	1872	1878	1884	1890	1900	1910	1920	1930
Hawaii	16,001	17,034	24,991	26,754	46,843	55,382	64,895	73,325
Maui	12,334	12,109	15,970	17,357	24,797	28,623	36,080	48,756
Oahu	20,671	29,236	28,068	31,194	58,504	81,993	123,496	202,887
Kauai	4,961	5,634	*8,935	11,643	20,562	23,744	29,247	35,806
Molokai	2,349	2,581	2614	2,652	2,504	1,791	1,784	5,032
Lanai	348	214		174	619	131	185	2,356
Niihau	233	177	.....	216	172	208	191	136
Kahoolawe	.....	.....	.....	.....	.....	2	3	2
Midway	.....	.....	.....	.....	.....	35	31	36
Total	56,897	57,985	80,578	89,900	154,001	191,909	255,912	368,336
All Foreigners	5,366	10,477	36,346	49,368	116,366	153,362	214,162	317,476
Hawaiians	51,531	47,508	44,232	40,622	37,636	38,547	41,750	50,860

Population of Honolulu, 1930, by Race, Sex and Citizenship

Race, etc.	1930			Total 1920	% distribution 1930
	Total	Male	Female		
Total population	137,582	74,456	63,126	83,327	100.0
Hawaiian	9,675	4,739	4,936	8,459	7.0
Caucasian-Hawaiian	8,283	4,028	4,255	5,970	6.0
Asiatic-Hawaiian	5,959	2,885	3,074	3,102	4.3
Portuguese	12,297	6,081	6,216	9,978	8.9
Porto Rican	2,211	1,160	1,051	841	1.6
Spanish	574	272	302	636	0.4
Other Caucasian	23,961	14,171	9,790	12,670	17.4
Chinese	19,334	11,146	8,188	13,383	14.1
Japanese	47,468	24,953	22,515	24,522	34.5
Korean	2,604	1,442	1,162	1,319	1.9
Filipino	4,778	3,337	1,439	2,113	3.5
Negro and all other	440	242	198	334	0.3
Native, all races	110,629	58,798	51,831	58,641	80.4
Native parentage	52,628	28,930	23,678	27,971	38.3
Foreign or mixed parents	58,001	29,848	28,153	30,724	42.2
Foreign born, all races	26,953	15,658	11,295	24,606	19.6
Naturalized	3,098	1,808	1,281	2,402	2.2
First papers	346	269	77	262	0.3
Alien	23,411	13,527	9,884	21,840	17.0
Unknown	107	54	53	182	0.1
Population of, or over 21 years	69,811	39,964	29,847	45,649	100.0
Hawaiian	5,537	2,706	2,831	5,174	7.9
Caucasian-Hawaiian	3,152	1,472	1,680	2,278	4.5
Asiatic-Hawaiian	1,604	731	873	1,061	2.3
Portuguese	6,228	3,040	3,188	4,379	8.9
Porto Rican	965	553	412	384	1.4
Spanish	261	124	137	264	0.4
Other Caucasian	16,748	10,100	6,648	9,099	24.0
Chinese	9,359	6,037	3,322	6,984	13.4
Japanese	21,667	11,962	9,705	13,500	31.0
Korean	1,200	751	449	782	1.7
Filipino	2,873	2,352	521	1,560	4.1
Negro and all other	217	136	81	184	0.3
Native, all races	43,440	24,640	18,800	22,640	62.2
Foreign, all races	26,371	15,324	11,047	23,009	37.8
Naturalized	3,016	1,769	1,247	2,232	4.3
First papers	334	259	75	257	0.5
Alien	22,922	13,243	9,679	20,370	32.8
Unknown	99	53	46	150	0.1

Population in 1930 by Sex and Race

Races	Total	Male	Female	Total 1920	Per Cent Illit.*
Hawaiian	22,336	11,311	11,325	22,723	3.4
Caucasian-Hawaiian	15,632	7,760	7,872	11,072	0.6
Asiatic-Hawaiian	12,592	6,282	6,310	6,955	0.9
Portuguese	27,588	13,870	13,718	27,002	9.7
Porto Rican	6,671	3,635	3,036	5,602	32.0
Spanish	1,219	631	588	2,430	16.4
Other Caucasian	44,895	30,570	14,325	19,708	0.3
Chinese	27,179	16,561	10,618	23,507	15.7
Japanese	139,631	75,008	64,623	109,274	12.7
Korean	6,461	3,999	2,462	4,950	17.6
Filipino	63,052	52,566	10,486	21,021	38.5
Negro and all other	780	447	333	658	8.8
Total	368,336	222,640	145,696	255,912	15.1
Native born, all races	299,744	180,593	119,151	168,671	
Native parentage	161,541	108,142	53,399	79,242	
Foreign or mixed parentage	138,203	72,451	65,752	89,429	
Foreign born, all races	68,592	42,047	26,545	87,241	
Naturalized	5,260	3,282	1,978	4,566	
First papers	828	708	120	518	
Alien	62,336	37,975	24,361	81,734	
Unknown	168	82	86	373	

* Per cent illiterate of 10 years and over.

Comparative Race Population of Hawaii, 1932-1930

Race	1931	1932	Increase since 1930
The Territory	377,859	380,507	2,648
Hawaiian	22,310	22,230	*80
Asiatic-Hawaiian	16,755	17,056	301
Caucasian-Hawaiian	14,004	14,459	455
Portuguese	28,407	28,595	188
Porto Rican	6,943	7,000	57
Spanish	1,254	1,253	*1
Other Caucasian	42,743	43,517	774
Chinese	27,276	27,235	*41
Japanese	144,972	146,189	1,217
Filipino	65,782	65,515	*267
Korean	6,618	6,653	35
Negro and all other	795	805	*10

* Decrease.

Births and Deaths by Nationalities, 1932

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

Racial Descent	Deaths	Births	Estimated Population
Hawaiian	530	369	22,230
Caucasian-Hawaiian	232	834	17,056
Asiatic-Hawaiian	185	1,095	14,459
Portuguese	260	619	28,595
Puerto Rican	87	201	7,000
Spanish	13	15	1,253
Other Caucasian	356	764	43,517
Chinese	330	626	27,235
Japanese	1,039	4,398	146,189
Korean	67	150	6,653
Filipino	562	1,535	65,515
All others	27	46	805
Total	3,688	10,652	380,507

Vital Statistics by Counties, 1932

Counties, etc.	Est. Population	Births	Marriages	Deaths
Honolulu City	144,018	4,334	1,415	1,579
Outer Oahu	63,820	1,568	307	459
Hilo City	15,450	490	224	204
Hawaii County (other)	60,741	1,561	204	495
Kalawao County	552	11	22	46
Kauai County	37,436	947	191	312
Maui County	58,490	1,741	351	593
Total	380,507	10,652	2,714	3,688

Nationality of Plantation Labor, June 30, 1932

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

Nationality	No.	Nationality	No.
Americans, Men	900	Japanese, Men	9,395
Spanish, "	90	Chinese, "	706
Portuguese, "	2,022	Koreans, "	442
Hawaiians, "	615	Filipinos, "	34,915
Porto Ricans, "	797	Others, "	65
		Total Men	49,947

Women, 1,480; Minors, Regular, 811; School, 2,754.

Grand total—men, women and minors 54,992

School Statistics, Territory of Hawaii, 1932

From Report of the Superintendent of Public Instruction

NUMBER OF SCHOOLS, TEACHERS AND PUPILS

Islands	No.	Teachers			Pupils		
		M.	F.	Total	M.	F.	Total
Hawaii	59	155	420	575	8,547	7,962	16,509
Maui	40	99	313	412	6,154	5,745	11,899
Oahu	59	180	1,204	1,384	22,361	20,362	42,723
Kauai	20	63	194	257	3,882	3,650	7,532
Total	178	497	2,131	2,628	40,944	37,719	78,663

PUPILS, ALL AGES, PUBLIC SCHOOLS

Islands	6 yrs.	7-10	11-15	Over 15	M.	F.	Total
Hawaii	1,099	7,171	6,868	1,371	8,547	7,962	16,509
Maui	614	5,372	5,032	881	6,154	5,745	11,899
Oahu	2,284	18,540	17,800	4,099	22,361	20,362	42,723
Kauai	527	3,435	3,087	483	3,882	3,650	7,532
Total	4,524	34,518	32,787	6,834	40,944	37,719	78,663

NATIONALITY PUBLIC SCHOOL PUPILS

Race	Pupils	Race	Pupils
Hawaiian	3,006	Chinese	6,733
Part-Hawaiian	8,245	Japanese	42,864
Anglo-Saxon	3,382	Korean	1,934
Portuguese	5,737	Filipino	4,156
Spanish	299	Others	1,009
Porto Rican	1,298	Total	78,663

Hawaii's Annual Federal Revenue

Sources	1930	1931	1932
Internal Revenue Office	$5,515,911	$4,816,475	$3,785,879
Custom House Receipts	1,881,262	1,908,382	1,572,732
Post Office Receipts	544,938	548,334	545,970
District Court Receipts	12,860	11,321	

Import Values from United States, Comparative for Calendar Years 1931 and 1932

Compiled from Monthly Summary of Foreign Commerce, Bureau of Statistics

Articles	Domestic Merchandise	
	1931	1932
Agricultural Machinery and Implements	427,251	280,394
Aluminum and Manufactures	178,458	155,370
Animals	39,113	19,018
Animals Edible	136,064	119,805
Animal Oils and Fats, Edible	140,195	92,273
Automobiles and other Vehicles	5,223,554	3,503,938
Books, Maps, Pictures and Other Printed Matter	1,281,382	1,107,079
Brass and Bronze	366,614	290,506
Brushes	72,571	78,146
Canned Fruits	195,151	178,516
Clay and Clay Products	574,954	396,346
Clocks and Watches	199,368	265,489
Coffee, Green	27,007	38,917
Coffee, Roasted	118,749	113,593
Composition Roofing	144,396	149,321
Copper	521,680	332,067
Cotton Manufactures:		
Cotton Duck	70,854	71,697
Cotton Cloth	1,275,720	1,012,893
Bleached	188,461	126,625
Colored	982,454	801,037
Cotton Wearing Apparel	1,081,150	934,206
Bags of Jute	211,921	125,245
Dairy Products	1,590,541	1,543,538
Dried and Evaporated Fruits	89,750	85,595
Eggs in Shell	513,229	501,274
Electrical Machinery and other Apparatus	2,934,196	2,897,462
Explosives, Fuses, Etc.	145,530	111,479
Fertilizers and Fertilizer Materials	2,392,637	2,390,673
Fish	947,448	819,697
Fodders and Feeds	1,771,771	1,542,971
Fruits and Preparations	942,628	1,210,334
Furs and Manufactures	10,768	8,912
Glass and Glass Products	432,177	370,940
Grains and Preparations	4,830,650	3,876,992
Hats and Caps	333,515	265,939
House and Personal Effects	327,476	285,226
Industrial Chemicals	275,522	274,328
Industrial Chemical Specialties	560,530	518,585
Industrial Machinery	3,800,322	2,257,953
Iron and Steel Manufactures	11,498,679	6,846,516
Lead and Manufactures	183,854	143,745
Leather	83,787	74,637
Leather Manufactures	1,222,773	886,060
Meat Products	2,173,954	2,352,145
Medicinal and Pharmaceutical Preparations	508,115	488,510
Miscellaneous Office Supplies	218,488	173,746
Molasses and Syrups	32,588	36,233

Import Values from United States for 1931-1932—Continued

Articles	Domestic Merchandise	
	1931	1932
Musical Instruments	450,980	252,790
Naval Stores	24,299	1,831
Nuts	96,212	104,359
Office Appliances	286,982	240,348
Other Non-Metallic Minerals	314,262	321,415
Paper and Manufactures	3,078,296	2,248,016
Petroleum and Products	7,630,408	7,146,643
Photographic and Projection Goods	534,649	436,035
Pigments, Paints and Varnishes	884,931	696,614
Rayon and other Synthetic Textiles	193,879	223,546
Rubber and Manufactures	1,835,798	1,517,036
Scientific and Professional Instruments, Apparatus and Supplies	184,434	176,022
Silk Manufactures	713,451	638,296
Soap and Toilet Preparations	1,337,894	1,285,548
Stone, Sand, Cement and Lime	720,330	642,967
Sugar, Refined	158,298	126,562
Tobacco and Manufactures	2,995,021	2,971,640
Toys, Athletic and Sporting Goods	389,433	377,354
Vegetables and Preparations	600,610	1,570,489
Vegetables, Oils and Fats	115,701	102,470
Wire and Manufactures	310,920	285,195
Wood and Manufactures	2,917,603	2,107,153
Wool and Manufactures	777,953	624,555
Total Value Merchandise Shipments	$77,830,339	$64,252,845
Other Merchandise Shipments	$ 4,562,047	$ 3,262,662
	$82,392,386	$67,515,507

Coin Shipments, Calendar Year 1931

	Silver
Coin, domestic, export	$75,000

Value Domestic Merchandise Shipments to the United States from Hawaii for Calendar Years 1931 and 1932

Compiled from Monthly Summary of Foreign Commerce and Finance

Articles	1931	1932
Animals	$ 20,975	$ 44,450
Bones, hoofs, etc.	7,472	4,185
Beeswax	8,750	5,395
Chemicals, drugs, etc.	3,087	1,939
Coffee	1,081,062	831,666
Fish, Canned	440,293	235,925
Fruits and Nuts:		
Bananas	127,260	103,805
Pineapples	37,255	188,733
Canned Pines	43,035,951	31,237,355
Prepared or Preserved	18,546	10,047
Nuts	7,473	4,155
Hides and Skins	127,889	67,026
Honey	35,612	62,133
Molasses	1,163,669	285,725
Musical Instruments	7,527	1,412
Paper and Manufactures of	1,705	889
Pineapple Alcohol	5,977	7,889
Pineapple Stock Feed	1,678	16,262
Rice and Rice Products	23,980	33,025
Straw and Palm Leaf, Manufactures of	2,043	969
Sugar, Brown	55,594,111	57,706,332
Sugar, Refined	1,525,053	1,474,875
Vegetables	47,632	28,752
Wool, Raw	15,620	57,448
Wood and Manufactures of	13,110	42,586
All Other Articles	260,950	262,404
Total Value Shipments Hawaiian Products	$103,614,680	$ 92,715,382
Returned Shipments Merchandise	2,422,085	2,547,077
Total Foreign Merchandise	62,210	100,408
Total Shipments Merchandise	$106,098,975	$ 95,362,867

Quantity and Value of Principal Articles of Domestic Produce Shipped for Calendar Year 1931

Compiled from Monthly Summary of Foreign Commerce, and Customs Tables

Articles	Unit of Quantity	Quantity	Dollars
Citric Acid	pounds	515,177	$ 158,486
Coffee	pounds	6,636,656	1,066,872
Fish, Canned, Etc.	pounds	1,398,666	299,766
Fruits			35,567,195
Hides and Skins	pounds	1,567,864	95,218
Molasses	gallons	14,340,633	532,388
Sugar, Raw	pounds	1,915,791,016	59,825,306
Sugar, Refined	pounds	20,137,906	939,970
U. S. Goods Returned			2,553,738
Other Articles			396,327
Total			$101,435,266

Hawaiian Imports and Exports for Year Ending December 31, 1931

Courtesy of Collector of Customs

Countries	Imports	Exports
Argentina	$ 14,886	$
Australia	42,416	4,200
Austria	12,717	.....
Belgium	21,056	6,625
British India	991,819	.....
British Malaya	27,254	582
Canada	163,930	194,167
Chile	1,392,072	.....
China	203,743	29,627
Denmark	161	21,761
French Oceania	161,813	.....
Germany	803,134	40,215
Hong Kong	453,837	5,620
Japan	2,771,572	144,207
New Zealand	324,998	13,145
Panama	13,768	.....
Philippine Islands	337,187	272,137
Sweden	25,451	29,146
United Kingdom	72,053	402,737
Other Countries	30,514	25,111
Totals	$7,864,381	$1,189,280

Shipments from the United States to Hawaii	$ 79,092,387
Imports from Foreign Countries	7,864,381
Total	$ 86,956,768
Shipments to the United States from Hawaii	$101,548,555
Exports to Foreign Countries	1,189,280
Total	$102,737,835
Commerce	$189,694,603

Hawaiian Sugar Export Statistics

For earlier years see Annuals 1896-1920

Year	Sugar		Molasses		Total Export Value
	Pounds	Value	Gallons	Value	
1925	1,372,343,019	$64,613,849	19,827,189	$ 848,203	$65,462,052
1926	1,752,776,646	68,770,346	16,552,584	763,566	69,533,912
1926*	1,494,261,515	58,953,423	16,983,594	763,173	59,716,596
1927*	1,563,071,332	69,827,821	13,867,665	569,946	70,392,067
1928*	1,757,366,472	80,035,826	21,485,888	900,631	80,936,457
1929*	1,764,856,039	61,914,504	28,369,599	1,016,299	62,930,803
1930*	1,731,574,640	55,233,469	30,359,226	1,330,378	56,563,847
1931*	1,854,632,035	57,119,164	26,959,516	1,163,669	58,282,833

Hawaii's Annual Trade Balance

Year	Imports	Exports	Excess Export Values	Custom House Receipts
1925	$82,679,058	$102,016,882	$19,337,824	$1,854,403
1926	82,159,060	110,619,796	28,460,709	1,748,241
1926*	86,517,189	100,145,020	13,627,831	1,894,254
1927*	89,037,480	111,504,045	22,466,565	1,881,787
1928*	88,184,853	119,479,835	31,294,982	2,036,681
1929*	92,414,934	108,439,103	16,024,169	1,881,262
1930*	91,213,049	105,915,783	9,702,734	1,908,632
1931*	82,392,386	106,098,975	23,706,589	1,572,732

Receipts, Expenditures and Public Debt of Hawaii

From Official Reports

Year	Revenue	Expenditures	Cash Balance In Treasury	Public Debt
1925	$15,847,969.93	$15,610,482.15	$1,220,948.83	$17,990,000.00
1926	15,847,969.93	8,815,063.47	2,681,460.18	22,070,000.00
1927	10,511,032.26	12,293,163.52	1,971,804.57	24,210,000.00
1928	10,405,773.41	12,708,585.21	2,485,744.05	28,585,000.00
1929	11,749,009.26	12,924,533.84	2,186,657.39	29,760,000.00
1930	12,359,805.37	12,685,352.71	8,910,220.86	31,705,000.00
1931	13,594,170.49	12,853,753.23	8,022,391.43	32,000,000.00
1932	13,234,870.72	13,105,247.92	4,699,773.08	32,405,000.00

Growth of Bank Deposits, Territory of Hawaii

Fiscal Year	No. Banks	Commercial Deposits	Savings Deposits	Total
1925	29	$39,101,344.22	$21,708,371.75	$60,809,715.97
1926	29	44,861,828.81	22,989,564.24	67,851,393.05
1927	29	47,922,072.00	27,102,220.00	75,024,292.00
1928	31	48,931,629.35	31,278,434.34	80,210,063.69
1929	21	43,611,426.60	35,424,194.59	79,038,619.25
1930	29	46,232,391.03	33,942,357.47	80,174,748.50
1931	29	42,217,616.83	41,657,979.74	83,805,596.57
1932	31	38,653,331.79	35,030,829.73	73,684,161.52

* Calendar year.

Arrivals and Departures of Shipping, 1932

Compiled from Board of Harbor Commissioners Report

Month		Honolulu				Hilo	
		Steam		Sail		Vessels	
		No.	Tons	No.	Tons	No.	Tons
1931	July	75	695,998	0		13	102,678
	August	61	549,441	1	1,527	16	120,803
	September	66	590,033	0		14	115,355
	October	63	551,315	1	1,748	15	109,892
	November	49	456,562	2	3,130	13	94,364
	December	59	567,970	0		13	99,020
1932	January	64	605,563	0		15	106,663
	February	58	552,998	1	1,527	12	87,670
	March	62	665,941	1	1,603	15	156,602
	April	62	587,596	0		16	126,456
	May	67	644,939	1	1,527	22	177,682
	June	57	619,142	0		19	122,702
Total		743	7,087,498	7	11,062	183	1,419,887

Kahului reports 155 vessels of 1,074,129 tons.
Kauai reports 126 vessels of 631,507 tons.

Domestic Produce to Foreign Countries, Year Ending December 31, 1931

Articles	Unit of Quantity	Quantity	Dollars
Coffee, Raw	pounds	1,524,850	$ 239,364
Coffee, Roasted	pounds	89,862	14,705
Molasses	gallons	2,633,655	81,410
Pineapple, Canned	pounds	8,286,280	610,747
Sugar Machinery			47,125
Other Articles			105,090
Total			$1,098,441

Export Value of Pineapple Products

	1928	1929	1930	1931
Fresh Pineapples	$ 25,548	$ 29,842	$ 26,091	$ 37,255
Canned Pineapples	40,576,082	38,430,805	39,086,235	43,035,951
Pineapple Alcohol		21,553	22,390	5,977
Preserved	80,259	32,276		18,540
Pineapple Stock Feed	† 8,911	1,201	3,101	1,678
Total	$40,690,800	$38,515,677	$39,137,817	$43,099,401

Summary of Insurance Business, Territory of Hawaii, for 1931

Class	Amount Written	Premium	Losses and Claims Paid
Fire	$144,411,448	$ 1,285,766	$ 116,405
Marine	140,923,948	354,512	75,271
Life	19,436,201	* 4,999,961	1,263,799
Accident and Health		163,768	63,600
Automobile		621,668	220,363
Burglary		26,341	4,465
Employers' Liability		17,688	275
Fidelity and Surety		205,089	71,410
Plate Glass		11,785	1,843
Property Damage		24,353	7,942
Workmen's Compensation		419,315	233,778
Tourist Baggage		735	985
Other Liability		84,797	17,314
Total	$304,771,597	$ 8,235,782	$ 2,077,456

* Life renewal premiums $4,331,074.

Customs Receipts, Fiscal Year 1932

Total Customs Collections	$1,484,995.95
Tonnage Taxes	60,510.34
Commerce Collections	2,281.96
Head Tax	17,144.00
All Other Labor Collections	4,380.00
Public Health Collections	3,420.33
Total Collections	$1,572,732.58

Taxes Collected for Fiscal Year 1932

Courtesy Treasury Department

Real Property	$ 8,031,305.92
Personal Property	4,414,152.83
Personal	445,562.55
Income	1,382,189.15
Penalties and Costs	50,455.72
Inheritance	213,430.30
Insurance	89,087.25
Total	$14,626,183.72

Building Construction Values, Honolulu

Compiled from Building Inspector's Reports

Year	New Dwellings	New Business	Misc. and Repairs	Total All Bldgs.	
				Permits	Values
1921	$2,439,059	$1,249,800	$1,391,684	2,040	$5,080,543
1922	3,468,646	1,112,129	1,640,864	3,143	6,221,639
1923	3,053,302	1,519,592	1,292,964	3,239	5,865,858
1924	3,339,995	1,487,325	583,872	3,783	5,411,192
1925*	5,095,877	1,698,759	886,919	4,078	7,681,555
1926	3,450,077	1,728,641	553,883	3,521	5,732,601
1927	3,771,789	2,179,240	446,326	3,637	6,397,363
1928	3,777,261	2,241,944	731,281	3,808	6,750,486
1929	3,626,291	2,770,882	856,869	3,577	7,254,042
1930	2,203,152	1,268,821	2,449,442	2,402	6,786,222
1931	2,055,522	807,646	759,272	2,176	3,622,440

* Garages not included in cost.

Hawaiian Corporations, 1932

Tables by Courtesy of Treasury Department

Class	No.	Capital		Total
		Before 1898	After 1898	
Agricultural	53	$ 46,675,000	$ 63,868,000	$110,543,000
Mercantile	760	45,175,000	134,161,348	179,336,348
Railroad	6	6,700,000	4,674,960	11,574,960
Street Car	7	3,035,000	336,450	3,371,450
Steamship	1	6,500,000		6,500,000
Bank	11	1,650,000	3,650,000	5,300,000
Savings and Loan	4	50,000	3,510,000	3,560,000
Trust	13	1,750,000	5,650,000	7,400,000
Mortgage and Invest	74	1,152,000	15,010,500	16,162,500
Insurance	3		750,000	750,000
Air Transportation	1		500,000	500,000
Total	904	$112,687,000	$232,311,258	$344,998,258

Assessed Values Real and Personal Property for 1932, by Taxation Divisions

Taxation Divisions	Real Property	Personal Property	Total
First, City & County of Honolulu	$147,905,847	$ 69,096,315	$217,002,162
Second, County of Maui	23,189,925	19,599,522	42,789,447
Third, County of Hawaii	26,846,647	15,406,080	42,252,727
Fourth, County of Kauai	17,367,052	9,273,617	26,640,669
Total for Territory	$215,309,471	$113,375,534	$328,685,005

Gross Assessments of Real and Personal Property, by Years, Since Organization of Territorial Government

Year	Real Property	Personal Property	Total
1901	$ 58,547,890	$ 62,625,038	$121,172,928
1902	60,591,587	62,319,216	122,910,803
1903	66,137,075	63,675,607	129,812,682
1904	63,516,979	60,381,525	123,898,504
1905	67,509,036	66,415,064	133,924,100
1906	66,908,337	64,266,678	131,175,015
1907	64,001,609	66,149,614	131,051,223
1908	66,936,032	65,354,150	132,290,182
1909	68,440,615	70,470,205	138,910,820
1910	75,792,523	74,475,944	150,268,467
1911	77,887,826	76,696,206	154,584,032
1912	90,889,057	85,945,744	176,834,801
1913	93,853,819	81,347,351	175,201,161
1914	91,050,895	70,136,331	161,187,226
1915	99,186,323	77,414,899	176,601,222
1916	113,922,014	93,048,215	206,970,229
1917	129,340,001	102,580,918	231,920,919
1918	134,543,320	101,107,647	235,650,967
1919	139,893,251	110,631,095	250,524,346
1920	155,238,071	131,768,721	287,006,792
1921	160,460,493	126,097,039	286,557,532
1922	158,695,753	112,966,729	271,662,484
1923	172,965,016	122,449,954	295,414,970
1924	212,871,428	144,130,652	357,002,080
1925	229,715,291	131,117,604	360,832,895
1926	254,789,192	137,992,951	392,782,143
1927	272,090,635	141,973,968	414,064,603
1928	258,924,338	131,634,153	390,558,491
1929	279,668,732	135,303,324	414,972,056
1930	283,857,048	133,242,343	417,099,391
1931	259,934,617	130,649,093	390,583,710
1932	215,309,471	113,375,534	328,685,005

Cost of Assessing and Collecting Taxes, Years Ended—June 30*

Fiscal Year	Actual Cost	*Percentage of Amount Collected
1901	$ 54,996.06	4.52
1902	63,300.33	3.81
1903	70,194.46	4.25
1904	71,362.16	4.24
1905	59,665.71	3.66
1906	73,350.92	2.83
1907	66,711.41	3.78
1908	67,160.18	3.64
1909	62,768.42	3.08
1910	65,532.11	2.56
1911	63,516.59	2.44
1912	73,520.67	2.48
1913	78,086.02	2.44
1914	81,352.68	2.86
1915	89,789.99	2.97
1916	85,480.08	2.29
1917	92,719.92	2.12
1918	94,111.55	1.84
1919	111,161.07	1.96
1920	107,525.69	1.54
1921	125,985.81	1.30
1922	153,552.72	1.58
1923	219,881.08	2.41
1924	239,564.24	2.12
1925	246,250.00	2.00
1926	286,707.66	2.26
1927	280,410.00	2.04
1928	324,672.78	2.23
1929	282,092.83	1.88
1930	327,568.31	2.06
1931	313,482.88	1.97
1932	371,101.50	2.59

*Not including inheritance and insurance taxes.

PACK OF HAWAIIAN CANNED PINEAPPLE

Compiled from Official Records

Companies	1929	1930	1931
California Packing Corporation	1,908,919	2,227,566	2,521,095
Hawaiian Pineapple Co., Ltd.	3,247,204	4,577,091	4,862,110
Libby, McNeill & Libby, Ltd.	1,947,609	3,289,501	2,913,205
Hawaiian Canneries Co., Ltd.	502,804	601,179	569,678
Kauai Fruit and Land Co., Ltd.	432,903	573,215	541,705
Baldwin Packers	426,249	434,045	423,932
Haiku Fruit & Packing Co., Ltd.	530,248	740,700	735,302
Honolulu Fruit Co.	104,000	148,896	.....
Kohala Pineapple Co., Ltd.	110,114	80,103	159,264
Total Pack (cases, 2 dozen cans each)	9,210,240	12,672,296	12,726,291

PINEAPPLE COMPANIES OPERATING IN THE HAWAIIAN ISLANDS

Company:	Office Location:	Manager:	Representatives:
California Packing Corporation	Honolulu, Oahu	G. R. Ward	Cal. Packing Corporation, San Francisco
Hawaiian Pineapple Co., Ltd.	Honolulu, Oahu	James D. Dole	Haw'n Pineapple Co., Ltd., San Francisco
Libby, McNeill & Libby, Ltd.	Honolulu, Oahu	L. E. Arnold	Libby, McNeill & Libby, S. F. & Chicago
Hawaiian Canneries Co., Ltd.	Kapaa, Kauai	Albert Horner	American Factors, Ltd., Honolulu
Kauai Fruit & Land Co., Ltd.	Lawai, Kauai	R. G. Bell	Alexander & Baldwin, Ltd., Honolulu
Baldwin Packers	Lahaina, Maui	D. T. Fleming	Alexander & Baldwin, Ltd., Honolulu
Haiku Fruit & Packing Co., Ltd.	Haiku, Maui	Hosmer Rolph	Haiku Fruit & Packing Co., Ltd., San Fran.
Kohala Pineapple Co., Ltd.	Kohala, Hawaii	A. D. Wilder	Prat, Low Preserving Co., Santa Clara, Cal.

POST OFFICE STATISTICS

Courtesy Post Office Department

Value of International Money Orders

Year	Issued at Honolulu	Paid at Honolulu	Certified to Japan by Honolulu
1925	$131,843.70	$ 10,008.28	$379,818.05
1926	100,036.82	16,593.77	313,743.12
1927	121,667.77	15,842.40	345,136.91
1928	118,898.01	17,322.34	347,588.82
1929	111,001.81	17,388.99	322,840.32
1930	98,894.37	21,346.41	294,273.65
1931	87,190.81	23,365.11	300,377.75
1932	82,034.50	15,445.03	272,071.38

Value of Domestic Money Orders

Year	Issued at Honolulu	Paid at Honolulu
1925	$2,058,438.81	$2,004,849.64
1926	1,514,444.23	1,623,994.61
1927	1,433,836.85	1,567,531.83
1928	1,531,069.65	1,664,738.14
1929	1,562,349.18	1,652,622.62
1930	1,502,932.38	1,628,276.77
1931	1,657,054.43	1,617,389.07
1932	1,713,103.12	1,601,655.86

Number of Articles Registered and Insured and Sent C. O. D. at Honolulu

Year	No. Pcs. Registered	No. Pcs. Insured	No. Pcs. Sent C.O.D.
1925	95,334	128,392	14,292
1926	80,016	119,446	15,747
1927	92,351	121,138	22,422
1928	95,181	123,549	20,932
1929	98,926	139,832	20,884
1930	99,546	138,139	18,729
1931	91,926	128,958	17,425
1932	90,081	116,402	31,668

POPULATION TOWNS AND VILLAGES, 1930

Hawaii: Hilo, 19,468; Honokaa, 1,069.
Maui: Wailuku, 6,996; Kahului, 2,353; Lahaina, 2,730.
Oahu: Waipahu, 5,874; Wahiawa, 3,370; Waialua, 4,511.
Kauai: Lihue, 2,399; Koloa, 1,844; Waimea, 2,091; Kapaa, 2,818.

Table of Rainfall, Principal Stations

Compiled from Weather Bureau Reports

Stations	Observer	1931					
		July	Aug	Sept.	Oct.	Nov.	Dec.
Hawaii							
Hakalau	Hak. Sug. Co.	13.97	13.11	18.90	15.48	19.30	7.10
Hilo (town)	C. E. Martin	13.15	12.57	23.32	9.34	15.91	6.01
Honokaa	Hon. Sug. Co.	6.38	3.64	7.17	6.15	3.35	7.28
Huehue	A. J. Stillman	4.48	0.63	2.78	2.66	1.20	0.54
Kaumana	J. E. Gamalielson	17.39	14.66	23.95	10.57	16.00	4.96
Kealakekua	Robt. Wallace	7.32	6.94	5.79	4.47	7.04	1.28
Kohala Mission	Miss C. S. Bond	3.95	3.32	7.72	2.72	5.50	5.96
Kukaiau Mill	Hamakua Mill Co.	8.83	3.99	6.77	6.22	7.78	6.23
Mahukona	Thos. Awai	2.50	1.30	0.00	1.00	0.00	0.40
Naalehu	Hutch. Pln. Co.	1.74	2.00	8.05	3.20	0.80	0.45
Olaa (17 miles)	Olaa Sug. Co.	15.48	14.90	20.89	12.50	22.71	7.49
Ookala	Kaiwiki Sug. Co.	9.30	7.49	12.61	9.86	13.60	8.97
Paauhau Mill	Paauhau Sug. Co.	6.61	4.29	8.07	6.51	4.05	7.77
Pahala	Haw. Agrl. Co.	3.94	0.29	5.52	4.65	0.58	0.63
Pepeekeo	Pepeekeo S. Co.	11.25	8.73	14.76	10.10	12.42	6.40
Puakea Ranch	R. L. Hind	2.69	1.77	3.35	1.45	2.37	3.44
Volcano Obs.	T. A. Jaggar, Jr.	9.85	4.89	14.55	5.19	8.58	3.21
Waiakea Mill	Waiakea Mill	14.89	12.66	22.71	8.79	17.26	6.35
Waimea	Frank Pinho	3.62	3.51	3.18	1.93	1.30	6.14
Maui							
Haiku	Libby, McN. & L.	8.54	5.69	5.88	3.44	8.98	7.09
Haleakala Ranch	Hal. Ranch Co.	4.21	4.83	4.97	2.79	3.17	7.26
Hana	Kaeleku Sug. Co.	7.24	8.02	8.61	4.81	7.75	9.02
Keanae Valley	J. H. Foss	23.36	24.86	28.03	16.30	24.20	23.25
Kula (Erehwon)	Mrs. von Tempsky	2.09	5.95	6.96	1.85	0.96	0.00
Puuomalei	Libby, McN. & L.	6.41	6.31	10.90	3.33	7.51	9.34
Wailuku	Bro. Raymond	1.52	0.53	1.44	2.04	2.28	4.46
Oahu							
Ewa Plantation	J. A. Hattie	0.06	1 21	1.74	0.88	0.23	1.24
U. S. Weather Bu.	Weather Bureau	0.52	1.83	2.69	2.33	1.02	2 08
Kahuku	R. Christoffersen	1.59	2.82	2.54	4.56	3.60	1.99
Luakaha (Lower)	B. of W. Supply	13.14	30.31	25.14	15.95	15.88	9.31
Manoa Valley	Miss C. Hall	4.53	7.30	10.75	5.42	6.69	4.62
Maunawili	John Herd	5.86	9.41	8.53	10.03	9.42	8 12
Schofield Bks.	Med. Corps, U.S.A.	0.96	4.33	2.70	2.76	1.97	1.70
Waialua Mill	Waialua Agr. Co.	1.12	3.01	1.64	3.47	1.67	2.48
Waimalu	Hon. Pln. Co.	1.14	3.22	2.77	1.69	1.70	1.51
Waimanalo	Waimanalo Plntn.	2.62	2.22	2.73	5.34	1.51	5.00
Kauai							
Eleele	McBryde Sug. Co.	0.40	5.67	1.69	2.63	2.00	0.59
Grove Farm	G. N. Wilcox	2.34	4.33	4.33	6.11	2.10	4.52
Kealia	Makee Sug. Co.	1.01	2.33	4.64	2.42	3.61	5.32
Kilauea	Kilauea Sug. Co.	2.61	6.95	6.72	5.74	5.86	7.47
Kukuiula	F. S. Christian	1.45	6.45	2.39	5.40	3.11	3.77
Waiawa	E. A. Knudsen	0.38	2.64	0.15	3.25	0.14	0.49

Throughout the Hawaiian Islands, 1931-1932

J. F. Voorhees, Meteorologist—Continued from last Annual

Stations	Feet Elv.	1932						
		Jan.	Feb.	Mar.	Apr.	May	June	Year
Hawaii								
Hakalau	200	26.74	34.97	6.80	13.15	11.59	6.38	187.49
Hilo (town)	40	26.38	24.94	5.26	12.17	12.34	8.50	169.89
Honokaa	461	5.13	28.14	5.64	8.27	3.31	1.71	86.17
Huehue	2020	2.99	4.10	3.92	6.26	4.38	4.76	38.70
Kaumana	500	23.13	22.98	6.60	19.67	12.66	8.80	181.37
Kealakekua	1450	2.71	4.56	4.32	6.72	10.36	5.09	66.60
Kohala Mission	537	5.83	16.51	3.73	9.54	6.90	4.47	76.15
Kukaiau Mill	260	7.75	30.67	6.07	8.55	4.55	2.46	109.87
Mahukona	11	3.95	0.00	0.70	1.95	0.05	0.20	
Naalehu	650	15.07	6.51	2.87	0.84	2.20	0.58	44.31
Olaa (17 miles)	1530	34.12	26.26	6.60	19.10	15.61	8.88	204.54
Ookala	400	12.71	45.23	7.79	14.23	8.37	3.93	154.09
Paauhau Mill	400	6.34	27.00	5.83	8.54	3.45	2.15	90.61
Pahala	850	12.26	6.16	2.30	1.38	0.57	1.04	39.32
Pepeekeo	100	20.55	31.19	5.94	12.12	12.68	6.45	152.59
Puakea Ranch	600	5.20	0.00	2.33	5.05	3.35	1.54	
Volcano Obs	3984	24.55	14.34	4.15	8.30	6.64	3.26	107.51
Waiakea Mill	50	27.28	27.55	5.17	12.14	12.42	7.43	174.65
Waimea	2700	1.14	5.90	3.10	5.96	2.59	2.79	41.16
Maui								
Haiku	530	7.46	19.74	4.55	9.70	11.26	5.12	97.45
Haleakala Ranch	2000	1.58	22.40	3.16	8.43	2.32	0.73	65.85
Hana	200	3.82	33.05	3.28	12.11	11.38	2.44	111.53
Keanae Valley	1000	27.59	81.82	10.64	32.69	22.98	11.64	327.36
Kula (Erehwon)	4000	1.12	14.05	1.80	1.81	1.30	3.15	42.02
Puuomalei	1480	5.21	17.85	3.28	12.86	8.22	3.63	94.85
Wailuku	200	1.28	17.70	2.32	2.66	0.44	0.34	37.21
Oahu								
Ewa Plantation	50	0.48	10.80	1.98	0.24	1.85	0.02	20.73
U. S. Weather Bu	81	1.52	8.36	3.05	3.41	0.68	0.29	27.78
Kahuku	25	7.31	13.85	1.69	2.80	1.82	2.70	47.27
Luakaha (Lower)	881	17.10	51.10	9.33	21.98	11.06	11.22	231.52
Manoa Valley	210	3.90	14.94	5.86	8.90	11.07	1.94	85.92
Maunawili	250	9.65	23.48	3.76	7.34	11.26	2.99	109.85
Schofield Bks	861	1.56	20.28	3.75	3.93	1.36	4.32	49.62
Waialua Mill	30	3.27	17.40	3.38	1.34	0.85	1.99	41.62
Waimalu	200	1.53	14.80	2.79	1.82	1.90	2.48	37.35
Waimanalo	25	3.30	14.68	1.52	2.83	1.22	0.37	42.34
Kauai								
Eleele	150	3.07	7.42	3.63	3.23	1.79	0.40	32.52
Grove Farm	200	5.65	13.04	1.77	4.14	3.29	1.44	53.06
Kealia	15	5.86	10.18	2.87	3.32	4.60	1.41	47.57
Kilauea	342	7.64	13 92	3.14	5.74	8.36	2.17	76.32
Kukuiula	100	3.39	8.89	2.31	3.00	1.97	0.71	42.84
Waiawa	35	0.93	5.24	1.39	0.33	0.49	1.33	16.76

Summary of Meteorological Observations, Honolulu, 1931-1932

Compiled from U. S. Weather Bureau Records, by J. F. Voorhees, Meteorologist

(Continued from preceding Annuals)

	MONTH	BAROMETER		RAIN-FALL	RELATIVE HUMIDITY		EXTREME TEM-PERATURE		MEAN TEMPERATURE				
		8 a. m.	8 p. m.		8 a. m.	8 p. m.	Max.	Min.	Mean Maxi-mum	Mean Mini-mum	Mean of Max. & Min.	Cloud Am't	Wind Veloc-ity
1931	July	30.02	30.00	0.52	70	72	84	70	82.4	73.3	77.8	3.5	8.7
	August	30.01	30.00	1.83	73	76	84	72	82.6	74.5	78.6	5.5	9.1
	September	30.00	29.99	2.69	76	77	84	71	81.9	73.7	77.2	5.6	9.2
	October	29.99	29.99	2.33	75	77	85	68	81.8	73.3	77.6	5.7	6.8
	November	29.99	29.99	1.02	75	75	81	63	79.2	70.8	75.0	5.7	8.0
	December	30.02	30.00	2.08	75	74	79	60	75.5	66.5	71.0	5.9	8.1
1932	January	30.01	30.00	1.52	79	76	81	65	77.8	68.6	73.2	4.8	9.2
	February	29.92	29.92	8.36	82	78	78	60	74.4	66.0	70.2	7.1	11.5
	March	30.04	30.02	3.05	73	72	79	58	76.7	67.1	71.9	5.3	9.0
	April	30.08	30.06	3.41	72	75	81	64	77.2	68.9	73.0	5.3	11.7
	May	30.09	30.08	0.68	74	74	82	67	78.3	70.1	74.4	6.0	11.3
	June	30.07	30.05	0.29	70	70	82	68	80.1	71.6	75.8	3.9	9.4
	Year	30.02	30.01	27.78	74	75	85	58	79.9	70.4	74.7	5.4	9.3

THOMAS GEORGE THRUM

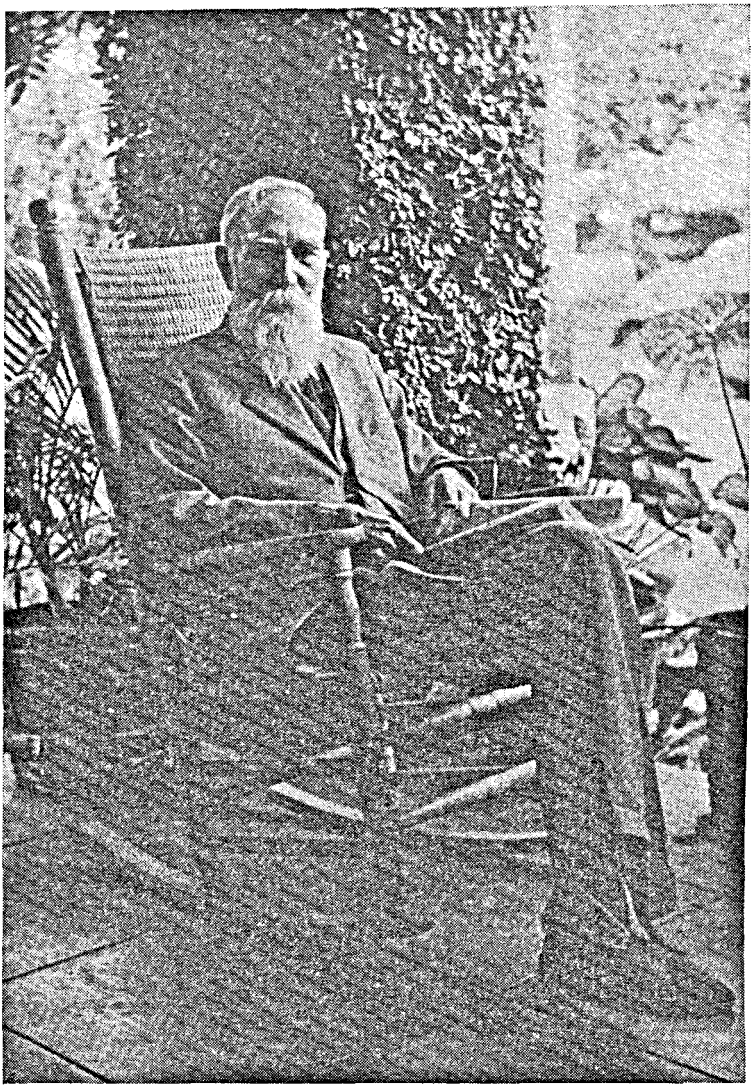
A SKETCH OF HIS LIFE

By Ralph S. Kuykendall

Assistant Professor of History, University of Hawaii

IN the history of Hawaiian historiography there are three names which stand out most prominently: Abraham Fornander, William D. Alexander, and Thomas G. Thrum. These men comprise an interesting triumvirate. They were of Swedish, American, and British extraction, and while differing much in education, in point of view, and in the nature of their contributions to Hawaiian historical writing, they had some things in common: industry, thirst for the truth, scholarly habits of mind. It is the purpose of this short article to furnish a sketch of the life of the third and last of this trio of historians.

Thomas George Thrum was born at Newcastle, New South Wales, Australia, on May 27, 1842. His parents were Thomas Augustine Thrum, who had migrated from England to Australia a few years earlier, and Elizabeth Wharton (McPhail) Thrum. His formal schooling, which ended when he was fourteen years of age, was received partly in Australia and partly in Hawaii; his *education,* however, continued far beyond the limited curriculum of those early schools and went on for many years, as he had opportunity for reading and study, training in business, and research in the history and lore of Hawaii. In 1851 the elder Thrum came to Hawaii, his family following him in 1852 and 1853. The boy Thomas spent a year with his grandfather in Tahiti and arrived in Honolulu May 16, 1853, on the British topsail schooner *Royalist.* In after years he preserved a vivid recollection of his first day in Hawaii. Writing sixty years later, he said: "The arrival of the pilot, Captain Luce, in the early morn acquainted us with the news of smallpox being in town . . . Our vessel was towed in partly by boats and partly warped in by bullocks hauling on a hawser on the eastern side of the passage, for this was before the advent of steamers . . . My attention was taken up at this time more by the military appearance of the port with the bristling guns of Punchbowl and the then fort" on the water-



THE LATE THOMAS G. THRUM

front. These and other comments in the same article show what an immense development took place in the Hawaiian Islands directly under the eye of Mr. Thrum from 1853 to 1932.

The journey from Australia in sailing ships must have created a pleasing impression on the boy's mind, for three years later we find him setting forth on a whaling voyage. He entered as cabin boy, but during the three years he spent at sea he advanced to other more responsible and more hazardous positions. With this experience he was ever afterwards content to lead a landman's life, though he always retained a keen interest in the development of navigation and sea-borne commerce.

Mr. Thrum's business career began in the store of John Thomas Waterhouse in 1855. After his return from sea he worked as a clerk in stores in Honolulu and Hilo, lived for a short time in California, and spent a few years in the sugar industry on the Kohala Plantation, Hawaii; during part of this time his occupation was that of sugar boiler. He returned to Honolulu about the beginning of 1870, and the following advertisement published in the *Hawaiian Gazette* of April 13, 1870, marks his first venture into business for himself:

> THOS. G. THRUM,
>
> *Stencil Plate Cutter, Copyist and Caligrapher,*
>
> Is now prepared to attend to all orders in his line, such as Stencil Name Plates, (for marking clothing, books, etc.) Business, Plantation and Advertising Plates.
>
> Charts, Surveys, Plans, Music, Legal and other Documents accurately copied.
>
> Books opened or closed, Accounts kept and made out.

Evidently the business prospered, for in the following September Mr. Thrum purchased the stationery, news, periodical, and book business of Messrs. Black & Auld and carried it on under his own name and management in the store on Merchant Street. In connection with this store he also maintained a circulating library and continued the work he had commenced in the preceding April. The business developed steadily; after some years a branch store was opened on Fort Street, and a bookbinding and

printing department installed at the Merchant Street site. In 1880, when the *Saturday Press* was started, Mr. Thrum was its business agent; at the beginning of the second volume, in September, 1881, he assumed the entire editorial and business management of the paper, carrying it on for five years. In 1888 he was associated with J. J. Williams in the founding of the *Paradise of the Pacific.*

In 1875 Mr. Thrum began the publication of the *Hawaiian Almanac and Annual,* latterly named the *Hawaiian Annual,* but more commonly referred to as "Thrum's Annual". He lived to put out fifty-eight issues of this handbook. It is in many respects his most valuable and characteristic work and will be an enduring monument. Into it he poured from year to year not only the statistical record of Hawaii's changing population, industry, and commerce, but also a wealth of information in the form of articles, historical, descriptive, and literary, a large number of which were the product of his own research. A file of this *Annual* is an indispensable part of every library of Hawaiiana. A few years ago the League of Nations secretariat sent for a complete file to add to the library of that organization at Geneva.

In 1888 (January 6) Mr. Thrum was appointed Registrar of Conveyances and continued to hold that office until 1904, serving under four governments, Kingdom, Provisional Government, Republic, and Territory. During these years he left the direct management of his stationery and book business to his sons. In 1913 the business was incorporated as Thrum's Limited, Mr. Thrum becoming vice-president, and from this time gave his attention mainly to research and editorial work. In 1920 Thrum's Limited was consolidated with the Hawaiian News Company as the Hawaiian News and Thrum's Limited. Mr. Thrum continued as an officer of the company until 1925 when it was succeeded by the Honolulu Paper Company.

During the last thirty years of his life Mr. Thrum devoted the greater part of his time to research in the traditional history, folklore, and mythology of the Hawaiian people. One of his projects was the study of heiaus (temples) and the identification of heiau sites. In this work he traveled over all the islands, locating more than 500 heiaus and heiau sites and making surveys and descriptions of many of them. He published several volumes of Hawaiian folk-tales and prepared an extensive work on Hawaiian mythology.

In 1915 he was engaged by the trustees of the Bernice P. Bishop Museum to edit the translation and supervise the publication of the extensive Fornander Collection of manuscripts. This required several years and was accomplished in a highly satisfactory manner. In 1921 Mr. Thrum was made a permanent member of the Museum staff as Associate in Hawaiian Folklore. In recognition of his work along these lines and in the publication of the *Hawaiian Annual,* the University of Hawaii in 1931 conferred upon him the honorary degree of Master of Arts.

Mr. Thrum was one of the organizers (1879) of the Honolulu Library and Reading Room Association (predecessor of the Library of Hawaii) and served that organization as Secretary, President, and Director. He was a charter member of the Hawaiian Historical Society and a member of the Polynesian Society of New Zealand. He was modest in manner, mild in temperament, but independent of mind, and had strong moral convictions from which he never swerved.

Mr. Thrum was married in San Francisco, January 11, 1865, to Anna Laura Brown. Four children were born to them: George Ernest, F. William, David F., and (Mrs.) Ella L. (Rowland). Mrs. Thrum died in 1916. During the last few years of his life Mr. Thrum was in frail health, but his mind remained clear and vigorous. He died May 21, 1932.

IN MEMORIAM THOMAS G. THRUM

By Henry B. Restarick

A FEW days before his death Thomas G. Thrum sent me a message that he would like to see me as one of his old friends. As I entered the room where he was lying on his bed he greeted me and said: "You have been often in my thoughts since I heard of your daughter's death."

I was deeply touched that he, on what he knew was his deathbed, should think of my sorrow.

As he lay there with his kindly eyes and benevolent countenance and talked with me, I was impressed with the fact that his

faculties were unimpaired. His memory dealt not only with the past, but that he had a keen interest in men and affairs of the present. I recalled incidents of our friendship of thirty years and said to him as I thought of his varied career: "What Soloman said is true, 'A good name is rather to be chosen than great riches,' and you have the real riches of a good name earned by your long life of service in this community." I read a few passages of scripture to him and he said, "I rely on those promises."

Thomas G. Thrum was born at Newcastle, New South Wales, Australia, May 27, 1842, and died in Honolulu May 21, 1932, so that if he had lived a few days longer he would have been 90 years old. His father was English and his mother Scotch. It is worthy of mention that his great-grandfather, John Thrum, was with Captain Cook when he discovered the Hawaiian Islands in 1778, and in these Islands his great-grandson made his home for nearly four score years. He came here in 1853 at the age of eleven and with the exception of two years in California, in 1863-65, Honolulu was his residence, for his life at sea on a whaler from 1858 for a few years, with calls at Honolulu, can not be counted as affecting his residence.

In San Francisco he married Anna Brown, an American girl, and on his return to Honolulu he engaged in clerical work. In 1870 he bought the stationery business of Auld and Black. He went several times to San Francisco to purchase supplies and was asked so many questions about Hawaii that he determined to print a booklet giving information about the Islands. In 1875 he published "The Hawaiian Annual and Almanac" which consisted of fifty pages. This was the first of what is always called "Thrum's Annual" which has been issued by him every year, the last one being that of 1932. Having in mind its continuance he outlined in general way the topics and the writers of articles for 1933. These notes are in the hands of his son David F. Thrum who will arrange for the publication of the Annual this year. It is to be hoped that the family will continue its issue for its discontinuance would be a distinct loss to Hawaii. The file of the Annual is sought by libraries and collectors and some of the early copies are very rare, are difficult to obtain and command a large price.

When he reached Honolulu at the age of eleven, he attended what was called the "Free School" which was conducted for the

education of English speaking children. But while he left school at an early age he continued his education as long as he lived. He read widely and was a remarkably well informed man. Especially was this the case with all that related to Hawaii. During my acquaintance with him of thirty years I have been to him with many questions concerning men, places and occurrences in Hawaii and in every instance he could give a full and accurate account. His estimate of men was truthful and kindly. On some Hawaiian subjects, notably heiaus, he was the undisputed authority. He knew their location and when possible their history.

He was one of the last resident white men who had a thorough knowledge of the Hawaiian language, for he came here when it was the language of the country. His knowledge of the terms used in deeds and other documents was unsurpassed for he was registrar for fifteen years from 1888 onward, during which period he served under the monarchy, the Provisional Government, the Republic and the Territory of Hawaii. He was a charter member of the Hawaiian Historical Society to whose annual reports he contributed valuable papers continuing these articles until recently.

Besides his historical work he was interested in Hawaiian folk lore and legends. Only one who knew the Hawaiians, and was their trusted friend, could get from the older people the stories which had been handed down to them by their ancestors. Much is due to him and others, that the Hawaiian folk tales were not lost when those who knew them died. He wrote two books containing the tales of old Hawaii.

Besides the Annual he started several other publications. In 1876 he published a weekly paper called "The Islander" which did not last long. In 1881 he began "The Saturday Press" which continued five years. For a time he was the publisher of "The Friend", and he founded "The Paradise of the Pacific" in partnership with the late J. J. Williams. This monthly magazine is still published, though Mr. Thrum has not been connected with it for many years.

He was a quiet and exceedingly modest man and it was only when questioned about things Hawaiian that one realized what a fund of information he had in his memory. He had the respect of the community for his integrity and righteous conduct. While he was interested in all public affairs he was not active in politics. He was from time to time a member of many societies for civic

betterment. For many years he was a member of the Congregational Church as it worshipped in the Old Bethel, in the Fort Street Church, and later in the Central Union, from which he was buried on Sunday afternoon, May 22 at 3 o'clock. Those who knew him best were the elderly people of the community and these gathered to pay their respect to the memory of a good man.

The Rev. Henry Judd made an address in which he reviewed the life of the deceased as one who contributed greatly by his work to the history of Hawaii and one whose righteous character was known to all who came in contact with him. He was a faithful and loyal friend and led a peaceable and useful life.

The writer wishes to bear testimony to the worth of Thomas G. Thrum. He endorses all that Mr. Judd said of him and in his passing he has lost a friend, a counsellor and an instructor in all things Hawaiian. He was one whose simplicity of character and moral stability always impressed him. He will miss him as one more of his friends among the older men, who had so much to do with the making of history in Hawaii, who have been called away by death in the past few years.

THOMAS G. THRUM

In estimating such a life as that of Thomas George Thrum ordinary eulogy and obituary compliments are out of place. It is at a deeper angle that it is well to pause and view such lives; their public equally with their private aspects; their civic as well as their personal worth.

We have come to the days when it is asked, or should be, of every man who has emerged from the rank and file, what were his basic principles and beliefs, the secret mainspring of his life, its leading motives and impulsions, and in what measure and manner did he give them practical and consistent expression in this urgent business of us all—the business of living.

Did he act upon the principle of including, as ground work, as much of the pure and of good report as possible, in his public and professional undertakings, his commercial and financial concerns, rejecting the contrary; or, did he veer round, change sides, "crawfish", and straddle? Was his word of promise sacred and binding, or was it repudiatory at will? Did success spell spoilation

for his own use and advantage, pelf and yet more pelf, or devoted and unselfish service in the cause of truth and right?

Appraising his life by this standard of value, and crucial test, Thomas G. Thrum is not found wanting.

There was that in his nature which our serene sage of Concord has called "centrality of character". Every one who knew Thomas G. Thrum knew that his foundations were laid upon ribbed and bedded rock—a solid virtue underneath on which his life was builded and which could neither be concealed nor overset. Complacency with superficial standards was foreign to him. A high and steadfast purposefulness, founded on rectitude, and based on stainless probity, was the lodestone of his life.

His heart grew easily, soft and tender—it *would* keep breaking in, despite all he could do, from a marked and natural reticence, to secrete this gentler and more winsome side of his nature, but his moral fiber remained unalterable and never slackened. There was no laxity in his manliness, his honor, and his tenacity of will. He shirked no labor; he flinched from no obligation. And he united these qualities with the balanced self-restraint and modesty of the gentleman. There was a poise in his nature that seldom, if at all, offended by extremes.

The shrill trump, that oft proclaims o'erweening ambitious virtue, was never sounded in his life. Incapable of pretence, or self-aggrandizement, Thomas G. Thrum was not to be found among those who are ever on parade.

Truth and sincerity bespoke him. He was concerned in meeting the high demands of his own exacting and unboastful self-approval, and not in swerving and bowing to obtain the applause of men.

Natural gifts, bountifully meted, acquired capacities, and trained abilities and powers, all intensively applied to a scholarly vocation, and its successful and highly significant pursuit—these, throughout the thick-sown years of an earnest and aboundingly productive life, Thomas George Thrum faithfully employed, in the interest of science, and for the good of his fellow-man.

"The Creator said:

'I was justified in giving you your life.
You have vindicated the gift.'"

EDWARD BARBER
Santa Barbara, California.

It grieves us much to think that we will not see our dear old friend again in the flesh. Honolulu will not be the same place to us without him. True we knew him only for a decade, but in that comparatively short time we seem to have got so close to him that he was more like the friend of a lifetime.

How warm was his welcome! How sweet his smile! How gentle his handshake! He was one of the quietest men we have ever known. Physically he appeared frail, but his great steadfastness and poise made him like a grand old tree that had weathered the storms of centuries; a tree of which the Psalmist speaks whose roots are planted by the river of waters, and whose leaf fails not in time of drought.

We will miss his gracious presence; his venerable figure; his beautiful face with the kindly eye and long grey beard. It is no wonder the little children on the street loved him and called him Santa!

As life runs on the road grows strange,
With faces new and, near the end,
The milestones into headstones change,
'Neath everyone a friend.

And now another friend has passed beyond the veil. Life's long journey is over. But his milestones have not changed for us into a headstone. Oh no! We can never think of him as dead! He has just gone Home, bearing his sheaves with him. The memory of such a life is like the fragrance of a lovely flower.

What more can we say?

. . . . . .

Farewell, a long farewell sweet friend, until we meet in that bright land where pain and death shall be no more.

FROM MR. AND MRS. W. F. KENNEDY,
Auckland, New Zealand.

FIRST AUTOS

Automobiles were introduced into Honolulu in 1890, and a public service attempted a little later. The Automobile Company began operating March 9, 1891, but discontinued after a short time. These pioneers were electric motored.

EARLY HAWAII MEDICOS

THE report of the city and county physician for 1931, to the mayor and board of supervisors, as given in the Honolulu Advertiser of February 21, 1932, touched lightly, in its introduction, upon a few points in the early days of medical practice in Hawaii,—Honolulu more particularly—that suggests some research on the very interesting and little understood subject, with a few corrections in passing.

Its heading, "Surgeons of Sailing Ships first Medical men in Isles," has in it more of fact than fancy, and apart from the nine medical men that formed part of the several American Mission bands arriving from 1820 to 1849, other pioneer work along its line may be said to have been accidental.

In the "Voyage of the *Blonde*", which brought back the bodies of King Liholiho and his queen, from England, in 1825, its surgeon, Dr. Davis, attended the seriously ill child of Mr. and Mrs. Bingham, and a little later successfully tapped Kalaimoku for dropsy, much to the anxiety, wonder and delight of the attendant chiefs. On Kotzebue's visit Kalaimoku was found relapsed and the surgeon of the ship tapped the old chief again, but it was not so successful.[1]

Doubtless there were other instances of material medical aid rendered Hawaiians and others by transient visitors prior, and subsequent, to the Mission band referred to.

Scattered over a period of twenty-nine years in their arrivals and distribution to important posts on the several islands, it is plain to understand the inadequacy, even for the mission needs, that will account in a large measure for the sad inroads in many mission families. These pioneers were:

For this very full account of Doctors of the American Mission to Hawaii, the Annual would acknowledge the courteous aid of Miss Bernice Judd, Librarian H. M. C. Society.

DR. THOMAS HOLMAN
1st company, arrived Kailua, April 4, 1820.
Stayed at Kailua until July 1820.
Went to Honolulu in August.
Was on Kauai for eight months, 1820-21.

[1] Voyage of the Blonde, London, 1826, pp. 139-140.

Left for U. S. on ship *Mentor,* Capt. Porter, Oct. 2, 1821. As they went by way of Canton, Mrs. Holman is believed to be one of the earliest American women to go around the world.[2]

DR. ABRAHAM BLATCHLEY
2nd company, arrived Honolulu, April 27, 1823.
Stationed at Kailua, 1823-1826.
Stationed at Honolulu, 1826.
Ill-health forced him to leave.
Left Nov. 6, 1826 on whale ship *Connecticut,* Capt. Chester.
Allowed free passage by the captain.
Arrived at New London, May 26, 1827.
Died in Illinois in 1860.[3]

DR. GERRIT P. JUDD
3rd company, arrived Honolulu, March 30, 1828.
Stationed at Honolulu, but his profession frequently took him to the other islands.
Left the mission in May 1842 to become advisor and translator to the king and chiefs.
Served in various positions in the government until 1853.
Resumed professional practice Jan. 1, 1854, opening an office and drug store on Kaahumanu St., next to R. Coady & Co.
Died in Honolulu July 12, 1873.[4]

DR. DWIGHT BALDWIN
4th company, arrived Honolulu, June 8, 1831.
An ordained minister as well as a physician.
Stationed at Waimea, Hawaii. Arrived there in January 1832.
His health failed, so took a voyage to Tahiti in 1835.
Upon return, stationed at Lahaina, 1835-71.
Was Government doctor for Maui, Molokai and Lanai, and by personal vigilance kept the smallpox from spreading in 1853.
Visited U. S. in 1856-57.
Taught with B. W. Parker in Theological School, Honolulu from 1872-77.
Died in Honolulu, Jan. 3, 1886.[5]

DR. ALONZO CHAPIN
5th company, arrived Honolulu, May 17, 1832.
Mrs. Chapin had been seriously ill on the voyage, so in an attempt to restore her health, the Chapins visited Kauai, Lahaina, Waimea on Hawaii and Kaawaloa in the first 14 months of their stay in these islands.
Stationed at Lahaina in July 1833, where besides practicing his profession, he helped Mr. Andrews with mapping at Lahainaluna. He also made professional visits to Molokai and Hilo.
Mrs. Chapin's continued ill-health made them go back to U. S.
Left Honolulu Nov. 28, 1835 on ship *Mariner,* Capt. Coleman.
Stopped 10 days at Tahiti and reached Boston, May 7, 1836.
Dr. Chapin died Dec. 25, 1876; Mrs. Chapin died Oct. 26, 1885.[6]

[2] Ref.—Journal of Lucia Ruggles Holman, (Bishop Museum Special Publication No. 17).
[3] Ref.—Missionary Album, p. 13
Missionary Herald, July 1827, p. 226
A. B. C. F. M. Report, 1827, pp. 74-75
[4] Ref.—Missionary Album, p. 25
Judd's Letters, (Fragments II)
[5] Ref.—Missionary Album, p. 29
The Friend, Feb. 1886, pp. 9-10
[6] Ref.—Chapin Journals and Letters, 1831-33
Missionary Album, p. 36
Missionary Herald, June 1836, p. 236

DR. SETH L. ANDREWS
8th company, arrived Honolulu, April 9, 1837.
Stationed at Kailua, Hawaii; his wife, 3 children died there.
Because of ill-health, he, with only surviving child, returned to U. S.
Arrived at New Bedford, May 11, 1849 (Date of departure from these islands not found).
Died at Romeo, Michigan, Feb. 17, 1893.[7]

DR. THOMAS LAFON
8th company, arrived Honolulu, April 9, 1837.
Ordained minister as well as a physician.
Stationed at Koloa, Kauai, 1837-1841.
Released from mission June 22, 1841.
Returned to U. S. but date of departure not found.
Died March 20, 1876.[8]

DR. JAMES W. SMITH
10th company, arrived Honolulu, Sept. 21, 1842.
Stationed at Koloa, Kauai, where he worked the rest of his life.
Ordained to the ministry in 1857.
Brief visit to U. S. in 1880.
Died at Koloa, Nov. 30, 1887.[9]

DR. CHARLES H. WETMORE
Arrived Honolulu, Mar. 11, 1849, on ship *Leland,* Capt. Eldridge.
Stationed at Hilo, Hawaii.
Visited U. S. in 1871 and 1887; Micronesia in 1885.
Died in Hilo, May 13, 1898.[10]

In tracing back for the early free-lance medicos we find ourselves again indebted to the visiting ship for the locating here of Dr. T. C. Byde Rooke, surgeon of an English whaler, in 1829. In "Wyllie's Notes," in the Friend, 1844, Dr. Rooke reports on health conditions in Honolulu from an experience of fifteen years; was two years absent on account of ill health, during which time a John Gibson, surgeon of H. B. M. ship *Modeste,* substituted. Dr. Rooke died at Kailua, Hawaii, November 28, 1858, aged 52 years. He had resided for nearly thirty years upon the islands, and during that long period, was favorably known as an able and experienced physician. But few men were more extensively known in this part of the world, having occupied various offices of honor and trust in the Hawaiian Kingdom. His funeral took place December 28, with burial in the Royal Tomb.[11]

Another prominent physician of this early era was Dr. R. W.

[7] Ref.—A. B. C. F. M. Report, 1849, p. 176
Cousins' Society Genealogical Records
Missionary Album, p. 55

[8] Ref.—Cousins' Society Genealogical Records
Missionary Album, p. 64

[9] Ref.—Missionary Album, p. 78
The Friend, Jan. 1888, p. 2

[10] Ref.—Cousins' Society Genealogical Records
Missionary Album, p. 90

[11] The Friend, January, 1859

Wood. According to his report of like health conditions of the town, also in "Wyllie's Notes," he arrived here in 1839, and in a long residence in these islands became identified also with planting and other interests. At the sale of the Koloa Plantation in the famous Ladd & Co. crash, Dr. Wood was its purchaser at $17,000. The Wood residence was the two-story coral building, on Hotel street, better known to us of later years as Dr. McGrew's, that gave way to the Young Hotel.

An item of interest, in passing, belonging to the Mission regime is that of Kapiolani's experience, in 1841. For more than a year before her death Kapiolani suffered from a cancer of the breast. On the advice of Dr. S. L. Andrews, at that time of Kailua, Hawaii, she removed to Honolulu, in March, for treatment. She agreed to the doctors' decision that the breast must be amputated. The operation was performed by Dr. Judd in presence of Drs. Wood and Fox (the latter perhaps a visitor, as the name is not met with again). Kapiolani recovered from the operation and was preparing to leave for Maui, when she developed erysipelas and died May 8th.[12]

From this time to 1850 a number of new names appear of Honolulu medical practitioners, as also on Maui. Dr. C. F. Winslow arrived and located at Lahaina, January 6, 1844. Dr. John Rae also settled on Maui prior to 1850, locating at Hana. Dr. F. W. Hutchison who became Minister of the Interior under Kamehameha V, came from a Lahaina experience of several years.

A Board of Health was first organized here December 13, 1850, by order of Kamehameha III by and with the advice of the Privy Council, which consisted of Dr. T. C. B. Rooke, Dr. Geo. A. Lathrop, Dr. B. F. Hardy, Dr. G. W. Hunter, Dr. C. Hoffman, Dr. R. H. Smyth and Dr. W. Newcomb, four of them to be a quorum.[13] This introduces us to several new names of evident established practice, most of whom were called to take a prominent part in the activities dealing with the small-pox epidemic that broke out here in May, 1853, and lasted till January 1854.

The name of Dr. T. Kemble Thomas, Jr., is met with in 1836, with an office in the Pagoda building, on Merchant street, but is lost sight of before the year closes.

Dr. Geo. W. Hunter, surgeon, arrived here in January 1847;

[12] Hawaiian Annual, 1926, p. 52
[13] The Polynesian, December 21, 1850

was absent awhile in 1850, but returned to do valiant service. A Dr. G. Watson was also an arrival in January 1847, who located on Fort street, next to C. Brewer & Co., but through protracted illness a benefit concert was given September 24, to enable him and his family to return to the States. A business card of Dr. Mauron appears as a Honolulu physician, which ran for a year from November 1849, without other mention found.

Owing to a break in our reference files, dates of arrival on several of the above, and others well known yet to be dealt with, accounts for the incompleteness in our reminiscences.

Dr. Geo. A. Lathrop, with a drug store opposite Honolulu Hale, Merchant street, is well established in 1850, and he becomes active not only as a family physician, surgeon, and druggist, but was given also to politics. He was connected with Dr. S. Porter Ford, in May, 1852, conducting a Hydrop establishment in Nuuanu valley, as a private hospital; they separated after a short while and conducted distinct offices and drug stores. He later moved to Queen street adjoining the McKee Building, where he established the Medical Hall, that later, for many years was the water-front land mark of the McKibbons. Lathrop was in charge of the U. S. Marine hospital in 1855, at which time it was located on Punchbowl street, moved from the corner of Hotel and Alakea—site of present Y. M. C. A. building—where private patients were received also by Drs. Rooke, Hardy, Newcomb and Guillou. At the time of the small-pox epidemic, he, with Drs. Rooke and Newcomb were the appointed Commissioners of Health, to deal with the situation, during which, he became an important figure in the political upheaval that ousted Dr. G. P. Judd from government administration.

The time of Dr. W. Newcomb's arrival is not met with, but he was a well known esteemed physician at time of his appointment on the Board of Health, and in his few years' residence here became known as an authoritative Hawaiian chonchologist. The Newcomb home, with office in the rear, was on Beretania street, opposite the then Kaumakapili church, and became, about 1850, the first home of two other of the medical fraternity who became well identified in Hawaiian affairs.

Wm. Hillebrand on arrival here from San Francisco, December 22, 1850, did not come as a doctor, but in search of health, and made his first home with the Newcombs, and getting bene-

fitted by climate and care, in due time a business card showed they had joined forces professionally. On November 16, 1852, a nearer relationship is formed, as Miss Anna Post, step-daughter of Dr. Wesley Newcomb, became Mrs. Wm. Hillebrand.[14] Shortly after this the new couple established their new home on Nuuanu Avenue, where, with the doctor's botanical proclivity, he gathered rare plants from many lands, to which our city fathers have recently fallen heir as a public garden, bequeathed them by its late owner, the late Mrs. M. E. Foster. Dr. Hillebrand was closely identified with the Queen's Hospital from its start up to the time of his departure, of which the grounds bear testimony.

Dr. J. Mott-Smith, from Albany, N. Y., appears to be Honolulu's pioneer dentist, coming here about the same time as Hillebrand, and like him first locating at Dr. Newcomb's. In due course he opened dental quarters on Fort street, adjoining the French hotel. Not long afterwards he and Dr. Hillebrand joined forces in launching the Family Drug Store, at corner of Fort and Hotel streets.

Other arrivals of this period were a Mr. Lloyd, surgeon, in May, 1850, who advertises himself as "ready for service," as also Dr. W. W. King, October 5, who located on King street. Business cards of S. Lester, M. D., from Baltimore, with office on Nuuanu street, and Dr. J. W. Palmer, without address, appears February 15, 1851. No further mention of them is gathered.

Drs. C. Hoffman and B. F. Hardy, surgeons and physicians, form a partnership January 4, 1851, and locate corner of Merchant and Kaahumanu streets, but separate in 1852, since which time the senior member drops out of sight. At and during the smallpox epidemic, Dr. Ed. Hoffman is known as in charge of one of its divisions and did important work. In his long and popular medical practice here he maintained a drug store, part of the time at the above location, and part of the time on Queen street, being one of the first tenants of the Makee building on its completion, in 1854. He was a fine pianist and a natural leader in the social life of the city. The date of Dr. Ed. Hoffman's arrival is not met with, but the important event of his marriage, November 1, 1849, by Rev. S. C. Damon, to Miss Maria L. Morse, at the residence of Dr. R. W. Wood is an interesting introduction.[15]

[14] Hawaiian Annual, 1919, p. 59
[15] The Friend, November 1, 1849.

The Dr. Smyth that has been mentioned is given as removing in May, 1851, next to Dr. Rooke, on Nuuanu street, though we knew him a little later on the opposite side of the way, near Love's bakery, up to the time of his illness and retirement.

Few names, if any, stand higher in memory for medical and surgical skill and popularity than that of Dr. Seth Porter Ford. That he was not on the Board of Health at its origin might imply that he had not arrived, though it probably occurred the following year. Beside the attempt to establish a private hospital, as mentioned with Dr. Lathrop, we find him enlisting Dr. J. C. Bullion in like service in launching the City Hospital, in 1855, on King street, which was also short lived. When the town was mapped out for medical attention during the small-pox scourge, Dr. Ford was assigned to the temporary hospital at Mauna Pohaku, Dr. B. F. Hardy to the one at Kulaokahua, and Dr. Ed. Hoffman to Honuakaha.

Beside a very busy medical practice, Dr. Ford lent material aid in introducing rice growing as a Hawaiian industry, even to the extent of destroying large patches of growing taro, in the Moanalua valley, to plant the new product.[16] This was in 1860. Dr. Ford died in 1866, aged about 48 years.

This paper presents the proper opportunity to clear the confusion of an earlier Dr. Ford being here than the above Seth Porter. In August 1844, a so styled Dr. Ford arrived, and, as such, delivered an introductory lecture, but a short while thereafter he opens an office as a lawyer.

As Hawaiians of old reckoned by events rather than by years, so we may bring this historic sketch to a close with its account of the small-pox visitation as furnishing a good division line of by-gone medicos times. The scourge lasted till the opening of 1854, the last authoritative notice being January 28, with a total of 6,405 cases, of which there were 2,485 deaths.[17]

[16] Hawaiian Annual, 1877, p. 48
[17] Hawaiian Annual, 1914, p. 88

NEW LIGHT ON THINGS ANCIENT

TRANSLATED FROM S. M. KAMAKAU, IN THE KUOKOA, JANUARY 10, 1867

[Inquiry comes from New Zealand for Hawaii's account of Luukia having come from that land, as mentioned in Miss S. M. Jones' booklet on Hawaiian Quilts, p. 11, published by the Honolulu Academy of Arts, 1930. New Zealand has a long and very good story of Rukutia and Tu-te-koropanga—representing the Hawaiian Luukia and Olopana—but the Hawaiian version, so far as seen, is tantalizingly meager. Their accounts have very full details of both characters, including the reasons for their journey, and presenting Rukutia as a famous dancer. Under the above heading Kamakau endeavors to show Hawaii's claim to these celebrities in the following account.]

"Changing is the fire over Hahaiole,
Igniting the thatch of Laukupu,
Heated is the cliff of Nuukauila,
Excelling Kaohikaipu at Kamaomao,
Gradually approaching upper Manana,
That would be the end of the Koolau cliffs.
Seizing the loved one toward Kualoa
Ascending above Konahoalani."

On returning to my old home place of Kapiipiilani, I noticed a piece of paper blown by the wind, which I chased till secured and carefully examined for its information of value. There in its foreign language I studied to unravel its subjects and found matters of great interest. I leaped like Lonomuku, except that he leaped heavy-hearted, whereas I leaped with joy, gratified with the thought of learning the valuable information in that scrap of paper, in its new light on things of old. What is it of value? Is it coin, or diamonds, perhaps? Let us consider together awhile to understand my outburst of speech. Its value is beyond those things beautiful to the eye.

Upon examining that piece of paper I learned whence came

Pilikaaiea, Paao, Makuakaumana, Manukau, the place of Lonopele, of Awanui and Awamuku where Paao built the canoes of the Kanaloamuia party, Mount Kaukahi, and the Kaakaheo cliff, the place where the prophets called after Paao.

When I saw all these names, unequaled was my joyous exaltation. Paao had given these names to places at Puuwepa and Kokoiki at the seaward cliff, and in Puna, in remembrance of the land of his birth.

The name of the paper referred to was the *Weekly News,* September 30, 1865, of Auckland, New Zealand. Of New Zealand was the piece of paper and the place I am speaking of. The names mentioned above are in that land. New Zealand is a foreign (introduced) name, but the above names are of ancient origin.

The islands of New Zealand are near those of Savaii, whence perhaps was Keliikinolua. Laiakea perhaps was of Kumuhea in the island of Bolabola, judging by the manner of speech, * * * *

[A brief illustration of alleged Bolabola expressions follow, in an effort perhaps to impress the reader with the writers' linguistic knowledge, which, having little or no bearing on the subject of his paper, is omitted].

In reflecting upon these things I have mentioned, if the names are correct there in New Zealand, and in lands adjoining that group, it is certain that Paao belonged there, and most of those who migrated to Hawaii. This is the important thing; the ocean was the course of their journeying. Paao and party sailed from New Zealand to Savaii, and from Savaii to the islands of Tahiti, to Nuuhiva, thence to the east coast of Hawaii, at Puna.

Their skill is remarkable, as also the depth of knowledge of the ancient people of Hawaii. There were none like them as we view things, for in much later times was the discovery of America by Columbus. Hawaii* was much earlier in circuiting the islands of Tahiti. The paper says: "the young people taught in the *fapaa* school believe the ancient people were deceivers. If they speak so, should they fall from the Esplanade wharf they would sink in the depths unless they are aided by those who know how to swim, and so escape death.

Such was the enduring, matchless skill of the ancient people.

* Hawaii-loa, traditional discoverer also of this group, to which he gave his name.

The young people boast of their knowledge, it's but the remains of the skill of the ancient people of Hawaii nei.

On my ascending the narrow projecting cliffs I looked across the resting place to niches still above, and again saw other names suspended, such as Wailau, Ahulili, Makaula, Waimea, Waalulu, Analoa, Waawaa, and many others like ours here, therefore, I folded the piece of paper lest it fly off as a kite, and have preserved it. Perhaps those skilled in foreign language will see and interpret these words.

If these named places are in New Zealand, it is remarkable that they should resemble names here in Hawaii. That is my great marvel. And if they are names of certain land sections, it is certain some of our place names came from there, or else they originated here. Then I thought of the prophetic chant of Kualii, the ancient king of Oahu:

"Whose is Tahiti? For Ku indeed.
Tahiti, land of Olopana.
Without is the sun, beneath is the land,
By the shaft of sunlight he comes.
Have you seen it? I have seen it,
I have seen Tahiti,
A strange language indeed is Tahiti,
To Tahiti belong the people who ascend
The shoulders of the sun.
Proudly descending they look down.
There are none like us in Tahiti.
Tahiti has but one kind of people, the haole;
They are like unto gods; I am like a man."

In our reading this ancient chant there is this certainty, the side placement of the sun, as though the old people saw the North Pole, and perhaps the South Pole, circling the light of the sun. Notice in its opening lines the sun is likened to a land at the side of the sun encompassing the land. In the second place, the foreigner with strange untelligible speech, of deep superior wisdom and knowledge of the ancient people. We have no claim in these days upon their skill, which I greatly regret.

This also: the chants of the ancients were of many kinds; there were prophetic chants, prayer chants, chants of war, chants of

settled land, and many other kinds. But the chants of the young people in these days are largely love songs, songs to ennoble and excite the heart.

This prophecy of Kualii again comes to mind:

"Whose is the sea? For Ku indeed.
Tahiti drinks the sea.
The ocean embodies the sea.
The sea covers the shoals,
The sea rumbles over the pebbles.
Rich is the soup of the cooked hog;
Glistening is the soup of the fowl.
Dressed is the hair by the sea;
Red is the hair by the sea;
Red is the hair by the very salt sea;
Brown is the hair with the foamy sea;
The sea for surfing is at Kahalou;
The enticing sea is at Kalia;
The sea for swimming naked is at Mamala;
The sea for swimming out is at Kapuone;
The sea for kicking up mullet is at Keehi;
The sea for small crabs is at Leleiwi;
The sea of many crooked harbors is at Puuloa,
A sea that blows up nehu and lala
Is the sea of Ewa, so calm.
The great Ewa [lands] of Laakona.
Ku holding the heaven and its rain.
A mottled sea has Heeia;
A sea for spearing squid has Kapapa.
The sea watcher is at Kualoa;
The sea is furious at Kaaawa;
The wild sea is at Kahana;
The sea is open for Paao.
The great one is seen below, he is the great one."

I am your exponent of traditions. Regards to the people who read thoughtfully, they have my salutation.

POLYNESIAN RELIGION

By Peter H. Buck

THE Polynesians believed that nature was pervaded by supernormal powers. These powers they personified into gods, who were given certain names and particular attributes. The gods were jealous gods and became inimical if neglected. Thus to ensure success in any important enterprise, a particular god had to be placated by a ritualistic phrase or incantation, an offering, or even by an elaborate ritual.

In the simplest form of belief, the supernormal power was sometimes vague and un-named; yet something had to be done to avoid arousing its animosity. Thus in New Zealand, there are certain trees and rocks which have to be placated by the stranger who passes by for the first time. A green branch is placed upon or against them. Neglect of this procedure will bring down a heavy shower of rain to the discomfiture of the neglectful stranger. At the same time, there is a feeling that further ill luck may occur. In Mangaia, after the major gods in the national god-house were fed with offerings of taro, a further taro was offered to the host of smaller gods whose names were not known. When exploring voyagers landed on an uninhabited island, a ritual was conducted to placate the unknown powers of that area. In Hawaii a number of sacred stones, known as *akua,* were placated by offerings of leaves and leis.

A simple form of ritual is observed by fishermen all Polynesia over. In the Cook Islands, the god Rua'atu is represented by some natural rock. The fishermen on their return from sea lay a coral pebble against Ruahatu's rock as an offering to command future success. Each fisherman is his own priest, and a priestly intermediary is not necessary. Another god is Ruatama'ine, whose basket was hung up on the shore by a priest. The fisherman on the way to fish brought an offering of cooked taro, which was placed in the basket to bring success. On his return he recognized the principle of sharing food by placing a fish in the basket; but if unsuccessful, he used a coral pebble as a substitute. The principle of recognition pleased the unseen god; and the material taro and fish went to the god's human medium, the priest. When a

fisherman continued to be unlucky, it was said that "he had neglected the basket of Ruatamine." In Hawaii the heaps of stones on the shore forming fishermen's shrines or *koa* have been built up of the stone offerings of generations of fishermen.

In higher society, the religious rites and observances were more elaborate. The major gods were the offspring of the Sky-father and the Earth-mother. They had power over various aspects of nature and have been termed "Departmental Gods." In Hawaii their number has been restricted to four: Ku (Tu), Kane (Tane), Lono (Rongo), and Kanaloa (Tangaroa). As departmental gods in other areas, Tu was concerned with war, Tane with forests and wood craftsmanship, Rongo with agriculture and peace, and Tangaroa with the sea. A number of gods of the same family, important in other areas, have been omitted from the Hawaiian pantheon. The modern contention by Hawaiian scholars that Ku, Kane, and Lono represent the Christian Trinity and that Kanaloa represents the devil is a local rationalization which gains no support from Polynesia.

Each major god had its own medium or priest to act as an intermediary between the god and the people. The priests were hereditary and transmitted the incantations and ritual of their gods from generation to generation within their own families. The people brought offerings. The priests conducted the ritual services, and by reading signs and omens or by direct possession made known the wishes of the gods. The form of offerings ranged from the simple pebble to human sacrifice, which in Hawaii was offered to Ku only.

The simple stone shrine of the minor gods developed into the stone inclosures of the major gods. The religious stone inclosures are typical of eastern Polynesia. They are absent in Western Polynesia, where they are represented by thatched houses in Samoa and Tonga. A simple courtyard enhanced by spaced pillars is characteristic of an early wave of people. K. P. Emory of the Bishop Museum has found this simple form of temple in Nihoa and Necker islands, which form part of the Hawaiian chain extending beyond Kauai and Niihau. He has also studied them in inland Tahiti. The inland temples of Tahiti may be associated with the traditional early inhabitants of Tahiti known as the Manahune. It seems feasible that the similar structures on Nihoa and Necker were made by the early inhabitants of Hawaii known

as the Menehune. The more elaborate walled inclosures known as *heiau* according to tradition were introduced by an ancestor named Paao. Paao was a priest who came from Tahiti after the Menehune were well established in Hawaii. He was also reputed to have introduced human sacrifice into the *heiau* ritual, and the red feather girdle as the insignia of high chieftainship. The walled inclosure, human sacrifice, and the red feather girdle are all typical of the culture of the later Tahitian chiefly families, who dominated the earlier Manahune of Tahiti. The three elements are not found in Samoa. J. F. G. Stokes in writing on "Whence Paao" argues logically that Paao must have come from Tahiti and not from Samoa, as some seem to think. K. P. Emory sees a definite affinity between the Hawaiian *heiau* and the Tahitian walled *marae*.

Myth and tradition assert that the Menehune constructed some of the existing walled inclosures; but if so, they probably followed the plans and specifications imposed upon them by their masters from the Tahiti area. The material of their own simpler structures were probably incorporated in the later more elaborate constructions, and the earlier pattern disappeared on the main islands of the Hawaiian group. In far away Necker Island, evidently not reached by the later Tahitian immigrants, some isolated group of Menehune fugitives left evidence of the earlier form of temple that links them up with the Manahune builders of ancient Tahiti. Stone work gives invaluable information regarding the history of the past, and any evidence of this nature is too valuable to be neglected. The late Mr. Thrum in recording the various *heiau* throughout Hawaii has made an invaluable contribution to science which has facilitated the work of later students of archaeology.

Ancestors were sometimes deified and adopted by the descendants as the family or tribal god. A god might be represented by some material form or image. The image was a symbol, for the god itself was an unseen spirit. The god might also manifest itself in some living thing, which may be regarded as an incarnation of the god. The incarnation in the form of a bird or a fish, such as the shark, appeared at times to the followers of the god to warn them of danger or assist them in trouble. Some students have loosely regarded such incarnations as totems, and the statement has been made that the Hawaiians had shark totems. The main idea in totemism is that the animal or plant totem is the

actual ancestor of the people. In Melanesia and Australia, where totemism exists, physiological paternity is denied. This opens the way for a spirit father of animal or plant origin. In Polynesia, physiological paternity is universally understood. Thus the shark is not a totem, but the incarnation of a deified human ancestor, who was normally produced and figured in the family pedigree as a human being before he was elevated as a family god.

In some areas a supreme god or creator figures in the ancient teaching. In Samoa and Tahiti, Tangaroa was held to have created the present material world. The investigations of K. P. Emory and J. F. Stimson incline to show that Kiho-tumu was the supreme god in part of the Tuamotu area. In New Zealand, Io was the one supreme god, who caused the other gods to be. This concept was held by the higher priesthood and not communicated to the masses. It was from Io that Tane obtained knowledge by ascending to the 12th or highest heaven where Io dwelt. After death, the spirit passed to the under realm of Rarohenga or ascended to the upper realms. This concept is brought out in a beautiful lament by a chief for his favorite granddaughter. Addressing the soul of the loved one, he concludes the lament as follows:

Grasp with thy hand the guiding vine,
By which the god Tane ascended to the highest heaven,
That thou mayest enter within the courtyard of Te Rauroha,
And be welcomed by the Celestial Maids within the palace of Rangiatea.
Then and there shall all desire for this world cease,
Ah! little maid of mine.

"IN THE GOOD OLD DAYS"

In the year 1849, in company with others, a Captain Cole purchased the schooner *Boston,* at San Francisco, and sailed for these islands for a cargo of vegetables, and on her return to San Francisco, sold Irish potatoes for $37.00 per barrel, that cost $2.00.

THE WELFARE OF NATIVE PACIFIC FOLK

By E. S. Craighill Handy

IN recent years there have been numerous significant indications of an awakening conscience on the part of peoples and nations responsible for the welfare and future of native Pacific populations. The creation of the Mandates Commission of the League of Nations, and its functioning in relation to Pacific mandated territories formerly belonging to Germany (parts of Micronesia assigned to Japan, northeast New Guinea and neighboring territories to Australia, and Western Samoa to New Zealand) was the first evidence of a sense of common responsibility on the part of European nations. In due course, evidence of a growing interest in the destiny of native populations was manifest in writings of British authors who sought to penetrate the causes of the alarmingly rapid depopulation under way in certain parts of Melanesia. In 1927 there appeared *Population Problems of the Pacific,* by Stephen H. Roberts of Australia, in which the author assembled a great array of facts relative to the causes of depopulation. Dr. Roberts will be remembered by many in Honolulu as one of the delegates from Australia at the first meeting of the Institute of Pacific Relations in 1925. In the same year (1927) there was published in England a book entitled *The Clash of Culture and Contact of Races,* by G. H. L-F. Pitt Rivers. In this, evidence was adduced in support of the thesis that decadence and depopulation follow the disruption of native cultural life due to conflicts set up by the imposition or substitution wholesale of foreign ways. In the year following there was published by the Maori Board of Ethnological Research a study of the cultural transition, the problems and needs, of the Maori of New Zealand, by Mr. Felix M. Keesing, entitled *The Changing Maori.*

The determination of organized science to grapple with this problem has been revealed in two recent moves. In 1926 a resolution was presented to and unanimously adopted by the Pan-Pacific Science Congress meeting in Tokyo, which called for the appointment of a committee to ascertain the views of anthropologists and

others in the Pacific known to have practical experience and ideas relative to the needs of native peoples, asking them for suggestions as to the practical utilization of anthropological knowledge. The resolution stated further that utilization of anthropological knowledge should be made a subject of prime importance for discussion at the next Congress. At the next Science Congress held in Java in 1929 there appeared under the editorship of Professor B. Schrieke, of The University of Batavia, *Western Influences in the Netherlands East Indies,* containing articles relative to various phases of colonial administration written by Hollanders serving as officials, doctors and so on in the Dutch East Indies. A similar volume, dealing with the effects of and problems due to Western influence in the whole Pacific, is being prepared for the Vancouver Science Congress (to be held in 1933) under the editorship of Dr. Robert E. Park of the University of Chicago.

The Institute of Pacific Relations has inaugurated a far reaching program bearing on this subject. Since 1929 Mr. and Mrs. F. M. Keesing, under the auspices of the Institute, have been engaged in a general survey of the problems of administration and dependent peoples throughout the Pacific, travelling continuously and studying conditions in Polynesia, Melanesia and Malaysia.

As a part of the unfolding program of this enterprise, a Round Table on Dependencies and Native Peoples in the Pacific was planned for the meeting of the Institute in Shanghai in October and November last year. In advance prospective delegates received copies of a syllabus prepared by Mr. and Mrs. Keesing which gave a preliminary summary of the whole subject to be discussed. In addition to this general review of the topic, there were a number of "Data Papers" which were circulated in advance and on hand at the Conference. (See list at end of article).

The agenda prepared immediately preceding the Conference by a sub-committee of the Program Committee, with a view to coordinating discussion may be quoted by way of giving an impression of the avenues of approach to basic phases of this interesting and urgent subject which presents such an array of diverse problems that some simplifying and guiding lines had to be laid down in order that the hope of crystallizing issues might not evaporate in fruitless exchange of information and opinion.

QUESTIONS framed for Round Table discussion:

1. In Pacific dependencies, how have modern influences affected native peoples?

   Special problems: a) Race mixture.
   b) Depopulation and overpopulation.
   c) Cultural disintegration.

2. What are and should be the policies of governments administering dependencies?

   Particularly as regards:
   a) Preserving, developing and utilizing native leadership and institutions, as against alien substitutions.
   b) Education. Training officials. Native leadership.
   c) Isolation or assimilation of the native, status of the mixed-bloods.
   d) Labor and economic development.

3. To what extent can systemative anthropological and other scientific research throw light on the nature of the problems relating to dependent peoples, and on what lines should such research be organized?

In the deliberations of the "Dependencies Round Table", members from Australia and New Zealand, the Philippines, Java, Japan, China, Hawaii and mainland U. S. A. contributed facts, ideas and proposals. While this Round Table was not as exciting as others which gave opportunity for matching facts and wits to the protagonists of the two sides of the Manchurian issue, nor perhaps as alluring as the discussion of Gold and Silver in world economy, those who participated found it both interesting and stimulating, as well as informative; and further were even rewarded with moments of mild excitement as when several British members good humoredly questioned both the principle underlying American acculturation in Hawaii and the success of our democratic practice and policy. Several Hawaii members, with equal good humor, rose to the occasion and submitted opinions in defense of our experiment and questioned other policies in certain islands of Polynesia where, in their view, the indigenous populations seem not altogether contented with things as they are.

Race mixture and culture transition in all parts of the Pacific were discussed in the light of what is transpiring, of personal attitudes and official policies. The peoples who are wards of civilization, like the Australian aborigines, the Ainu, and the

American Indians were considered. Perhaps the most significant issue that was crystallized was the part that native leadership must play in the ultimate solution of all difficulties.

Following the general discussion the group devoted several sittings to considering what studies were immediately practicable in continuation of the unfolding program of investigation relative to Dependencies and Native Peoples. Of the specific recommendations made at that time, the following were approved by the Research Committee of the Institute. Local groups in different countries will doubtless also follow up certain other suggestions.

> "Dependencies and Native Peoples of the Pacific"; a co-operative international study directed by Mr. F. M. Keesing and under the general supervision of the Chairman and Secretary of the International Research Committee. (Continued).
>
> "Japanese Dependencies and Colonial Policy": to be directed by Mr. T. Maeda, Japanese Council of the Institute of Pacific Relations.
>
> "Redistribution of Population in the Philippine Islands": to be undertaken under the auspices of the Philippines National Council when arrangements for securing a director have been made.

The importance of this subject from a humanitarian point of view rests on the fact that there exist in all the islands of the Pacific altogether over one hundred millions of native peoples. Consequently it is evident that we are dealing with a human problem which from the point of view of numbers of humanity concerned is comparable in dimensions to any of the problems relating to the United States. Again, from the point of view of the obligations of civilization, we are concerned with an area in which some of the worst abuses of superior civilizations against less favored peoples have been committed. Therefore, it is incumbent on modern nations concerned with the Pacific and particularly upon those countries whose people have committed atrocities rising out of ignorance and exploitation, to do all they can to correct the evils that have resulted and to study out the situation so that there shall not be a repetition of the mistakes of the past.

But there is also a very practical consideration that enters into

the situation. Southern Asia and the Pacific Islands represent one of the three great areas upon which the world is dependent for such products of tropical agriculture as rubber, sugar, rice, cincona, coconuts, etc. Now it is certain that the vast resources of such great islands as Borneo and New Guinea, and of the multitude of other large and small land areas, will have to be developed by peasant populations and by means of the crude labor of people who belong to races indigenous in the Pacific and South Asia. These questions, therefore, which bear directly upon the problems of governments and native peoples as a result of complex causes are of immediate importance in relation to the future economic history of this part of the world. Humanity should be capable of removing the causes responsible for depopulation and degeneration which in some localities have occurred on a stupendous scale in the past, and which are proceeding unabated in many areas still. At the same time, we shall be paving the way for efficient exploitation of the natural resources of the Pacific, and shall be building a happy and hardy Insular Pacific population for the future.

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WILLIAM ELLIS

MISSIONARY AND SCHOLAR
1794—1872

With Special Reference to his life in the Pacific Islands

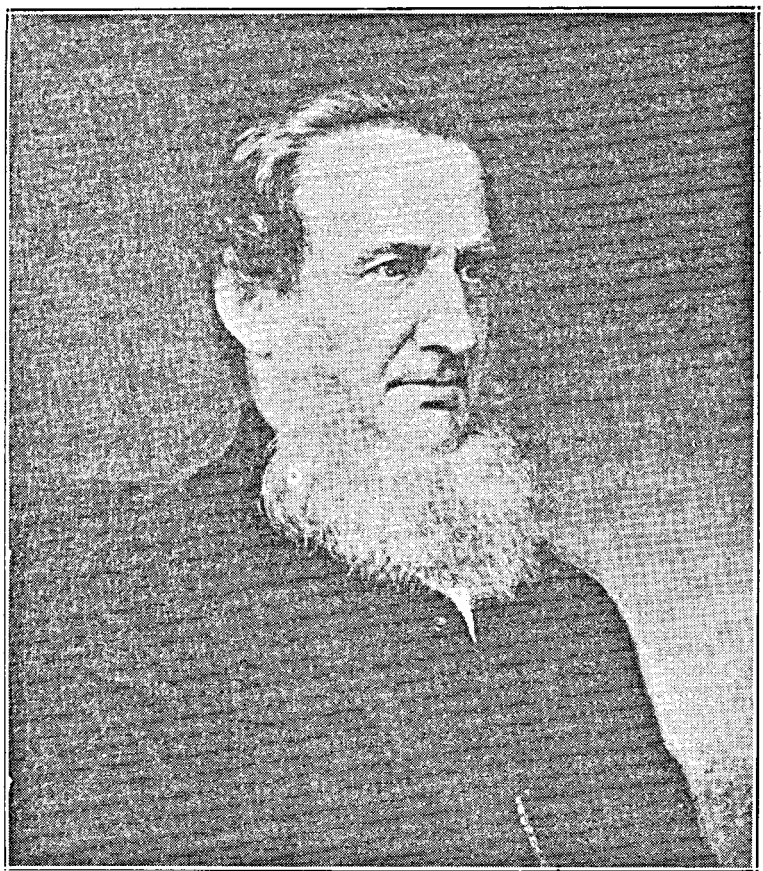
By Penrose Clibborn Morris

"Even as the moments are dying, the present is flying,
The dice are snatched from our hands and the game is done.
Naught but the deeds of the just live on in a flower that is blessed:
Sweetness comes from the grave where a good man lieth dead."
—Venantius Fortunatus, translated from the Medieval Latin by Helen Waddell.

ON August 29, 1794, there was born in the City of London without any favoring influences or hereditary advantages, a boy who was destined to become an eminent missionary, a distinguished writer and the trusted confidant and ambassador of his Queen and Country. This boy was William Ellis, a name revered in Hawaii, and in the History of the Christian Church in the Pacific and Madagascar.

Ellis' parents were English people in the humbler walks of life. They were not able to give their family any better start in this difficult world than a solid foundation of training in morals and diligence. The father was a man of little education, but considerable common sense and natural ability. For many years of his life he was a candle manufacturer by trade. After his marriage he became a Unitarian by religious persuasion. The mother of the future missionary was a loving and sensitive woman who brought up a large family under the serious handicap of poverty, and her own frequent ill health. The Ellis family lived in various places in or near the great area now known as London.

William was the oldest surviving son. When scarcely six years of age, he was put to work, probably in a candle factory at two shillings a week. His education was largely self administered. From his earliest days his mind was full of intelligent curiosity, especially in regard to plants and horticulture. The admirable



WILLIAM ELLIS

powers of observation afterwards made manifest in the "Polynesian Researches", were developed by the boy in the study of the growth of plants, and by watching developments of nature. Any money available was spent in the purchase of books. Works of travel had a special fascination for him. He developed a robust well informed mind, and a reasonable ambition to make the best of life. He worked as a gardener and nurseryman. In his twentieth year, Young Ellis experienced serious religious convictions, and became a member of one of the English Free Churches.

Here he became interested in Foreign Missions, and met the young woman who was destined to become his first wife. This was Mary Mercy Moor, who had long been desirous of engaging in Missionary work. In the year 1814, William Ellis offered himself to the London Missionary Society for service abroad and was accepted. Years of preparation and training in England followed. William's parents strongly opposed his leaving England, especially as a Foreign Missionary. His father made no secret of his opinion that a mission was a fool's errand. However, both parents gradually came to recognize the inevitable. William set himself diligently to learn all that was possible in the time available to prepare for his new life. He learnt the art of printing, acquiring expert knowledge of all the processes of the trade, and also book-binding. He attended lectures in medicine and surgery. He studied drawing and photography and even learnt to play the flute, an accomplishment that stood to him later in teaching singing to the natives of the South seas. He was ordained as a Congregationalist Minister in 1815.

In the same year William Ellis and Miss Moor were married, and on January 23, 1816, the young couple left on their joint venture abroad.

Mr. and Mrs. Ellis voyaged to New South Wales, and did not arrive in Tahiti until February 1817. They were not the first missionaries to arrive at the Society Islands. Idolatry had been officially abolished, and Christianity introduced before their arrival. The new missionary was astonished at the accounts he received of the change that had taken place among the people. He found the profession of Christianity was general. Many had learnt to read, and were teaching others. The account of how this state of things came about is graphically told in the first volume, and first half of the second volume of Ellis' celebrated "Polynesian Researches". That interesting book gives in great detail the story of the life of the young English couple in the Society Islands. Mr. Ellis learnt the Tahitian language and printed portions of the scriptures in Tahitian. In the year 1818, he preached his first sermon in the native tongue, and later helped in the founding of a system of jurisprudence throughout the Islands.

In 1822, a deputation from the London Missionary Society, made a tour of the English Missions in the South Seas. They also visited Hawaii. Ellis and his native assistants accompanied

the party to the "Sandwich Islands", as Hawaii was then called, where a stay of some months was made. So great an impression was made upon the American Missionaries at Honolulu by William Ellis, that they asked him to remain with his native assistants. This invitation was accepted, and entailed an absence from the Society Islands for eight months during 1822. With the close of that year after a residence of six years in the Society Islands, broken only by the visit to Hawaii, Mr. and Mrs. Ellis terminated their regular labors in the South Seas. They arrived at Oahu on February 5, 1823.

At the time of William Ellis' arrival, the aggregate population of all the Sandwich Islands was estimated at 160,000. The American Mission had then established permanent stations on Oahu and Kauai only. Shortly after the Ellises' arrival at Oahu, the exploration of the Island of Hawaii was decided on. It was desired to learn something of that Island, and to see what were the prospects for establishing Mission Stations there. The group chosen for the tour of exploration was William Ellis, Asa Thurston, Artemas Bishop and Joseph Goodrich. They left Oahu in June 1823, and landed at Kailua. The tour round the Island occupied two months. It is believed that the four missionaries were the first white men to go round Hawaii, or to visit the volcano of Kilauea.

When Ellis returned with his companions to Honolulu, a joint account of the journey, and observations was written, and later published in Boston. After his return to England, he rewrote his Journal in the form of a personal narrative with large additions. This amounted to a new and original work, and was published in London in 1825. There were several English editions. Ellis afterwards collected all he had written concerning the South Seas, and the Sandwich Islands, and published the whole under the title of "Polynesian Researches" in two volumes and later in four volumes. The fourth volume contains the Tour round Hawaii. There is no other book ever written that contains so much first hand information about early Polynesia as the "Polynesian Researches." The poet Coleridge said of the "Tour through Hawaii", that it was the most interesting and instructive book of travel that he had ever read. The "Tour" was reprinted in Honolulu in the year 1917, and copies are probably still obtainable of this reprint in the Honolulu book stores, or at the office of the Advertiser

Publishing Company, Honolulu. All our Public Libraries have copies of the Tour in some form. It is therefore unnecessary to refer to it in detail.

While resident in Oahu, there occurred an incident, that is of interest, because it shows the remarkable strength of character of William Ellis. While a cannon was being loaded for the firing of a salute, the charge exploded prematurely causing terrible injuries to the hand and forearm of the sailor from one of the ships in the harbor who was firing the salute. No Surgeon was within reach. Ellis was called upon to attend the unfortunate man. As already said, while in London prior to departure for the South Seas, Ellis had some study and training in medicine and surgery. But he had never performed an operation, and may have never seen one. When he witnessed the extent of the man's injuries, he realized it was a case of amputation of the arm or death. The sailor asked for amputation. Ellis consented to undertake the task, and successfully accomplished it. The patient steadily improved for many days, but unfortunately before the wound could quite heal the sailor became intoxicated and tore off his bandages. There was no one at hand to aid him, and he bled to death.

The Ellis family remained in the Sandwich Islands for about two years. They would have stayed indefinitely, but for the bad state of Mrs. Ellis' health. For this cause they were compelled to leave for England. William Ellis had made short journeys through the South Pacific from time to time during his residence in the South Seas. He had also visited New South Wales and New Zealand. These brief visits are well described in the third volume of the "Polynesian Researches."

Some time was spent preaching in America, on the way back to Europe, and the two missionaries arrived in England on August 18, 1825, after an absence abroad of nine years and seven months.

Then ensued a long period of residence in England lasting until April 1853. Ellis lived a very full and busy life doing duty as Minister of his Church and travelling throughout Great Britain and Ireland as lecturer for the Missionary Society. In leisure moments he attended to his roses. Mrs. Ellis died in 1835, after a long illness, leaving four children, three daughters and a son, and her husband.

In 1837, William Ellis married Miss Sarah Stickney, a writer

of merit, author of the "Poetry of Life," and "Women of England."

An aggregate of nearly 28 years of middle life were spent in social aid and religious work in England, but space does not permit to describe this period of an active and useful life.

The call to further service abroad had come in the year 1853, when Ellis was sent by the Missionary Society to Madagascar. He went alone, leaving his wife and family in England. His services there in building up the infant Church and helping to lay the foundation of civilization are described very fully in the volumes written telling of his residence of seven years and upwards in Madagascar. The dangers and difficulties that were faced and successfully overcome were immense. The services rendered to the cause of civilization and Christianity were great and enduring. Ellis' name became known and respected throughout the Christian World. On several occasions he was appointed by the English Government as an official ambassador between Queen Victoria and the Royal House of Madagascar.

The entire time that Ellis was away from England engaged in Missionary work was almost seventeen years.

In June 1872, William Ellis and Mrs. Ellis both fell victims to pneumonia. Ellis had all his lifetime been keenly conscious of the reality of the spiritual world. During this illness, which was his last, he said that he had a vivid realization and pre-view of the state beyond death. The experience greatly consoled him. He died on June 9, 1872, and Mrs. Ellis died one week later.

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By his son, John E. Ellis. London: Murray, 1873

This short paper can only cover the most meagre details of Ellis' long life.

The biography by his son gives a picture in detail of the life of the good man, whose name will remain indelibly impressed upon the history of the Christian Church. With small inherited advantages, he lived greatly, always showing himself possessed of that abandonment of self, and reliance on the power of God that is spoken of by Fenelon as resulting in "the true peace reserved for men of right will, when men can do naught against us, for they cannot touch us through our desires nor through our fears." That, said the great and wise Fenelon is "to become invulnerable."

In such sense William Ellis was strong to endure and to fully accomplish a long and difficult life work, and that completed, to die in peace.

Here follows a concise recapitulation of the leading events and dates in the life of William Ellis. This birds-eye view, useful it is hoped for record, may also serve to give in perspective the extent of William Ellis' achievements:

SYNOPSIS OF EVENTS IN LIFE OF WM. ELLIS

Born, August 29, 1794, in Charles Street, Long Acre, London. Church Member, Kingsland Chapel, London, February 1, 1814. Studied at Gosport and Homerton. Appointed to the South Seas by the London Missionary Society. Ordained at Kensington, November 8, 1815. Married November 9, 1815, Mary Mercy Moor, born October 16, 1793; Church Member, Silver Street, London, 1813. Sailed, January 23, 1816. Arrived at Sydney, July 22, and at Papetoai in Moorea, February 13, 1817. Removed to Afareaitu, in Moorea, on March 26, and to Huahine in 1818, arriving at that island, June 20. Accompanied Messrs. Tyerman and Bennet, the Society's Deputation, on their visit to the Sandwich Islands, leaving Huahine, February 24, 1822, and arriving at Hawaii, March 31. In April, visited Oahu, and began to preach in the Hawaiian language. Being invited by the king and chiefs of Hawaii to join the mission in the Sandwich Islands, which invitation was cordially seconded by the American Missionaries, Mr. Ellis returned to Huahine to remove his family. On August 22, left for Huahine, where he arrived October 4. On December 31, 1822, accompanied by his family, left Huahine, and arrived at Oahu on February 5, 1823. In July of that year he was one of a Deputation of missionaries, visiting Hawaii, to decide on eligible sites for Mission establishments in that island. Because of the long and severe illness of Mrs. Ellis, a voyage

to England was deemed advisable. Unable to proceed to England direct, they sailed for the United States, leaving Oahu, September 18, 1824, and arriving at New Bedford, U. S., on March 19, 1825. While he was in the United States, he visited Boston and other places, advocating the cause of Christian Missions. Sailed from New York on July 20, 1825, arriving in London, August 18, 1825. From August, 1826, until early in 1831, visited various places in the United Kingdom for the Society. On the death of the Rev. W. Orme, Foreign Secretary of the Society, Mr. Ellis, in 1831, was requested by the Directors to assist in the conduct of the Foreign Department, and entered on this work, March 1, 1831. On March 26, 1832, was appointed Foreign Secretary by the Directors, which appointment was confirmed at the annual meeting of the Soociety, May 9, 1833. Mrs. Ellis died January 11, 1835. On May 23, 1837, married Sarah Stickney, Church Member, Hull. Serious failure of health led him to resign the Secretariat on May 10, 1841. In 1836 gave evidence before a Parliamentary Committee on Aborigines in British settlements. Residing at Hoddesdon, rendered occasional pastoral aid to the Congregational Church there. Early in 1847, he accepted the pastorate. Resigned the pastorate in the autumn of 1852. Towards the close of that year, reports having reached England of a favourable change in the aspect of the Malagasy Government towards Christianity, the Directors requested Mr. Ellis to visit Madagascar, with a view to the re-introduction of missionaries into that island. Sailed for Mauritius, April 14, 1853. Arriving at Cape Town, May 22, Mr. Cameron, who was to accompany Mr. Ellis in his visit to Madagascar, joined him. Arrived at Port Louis, Mauritius, June 7, and at Tamatave, July 18. The native Government not favouring their remaining on the island, they returned to Port Louis, sailing August 9, and arriving in Mauritius, September 2. Here Mr. Ellis spent nine months, visiting mission stations and schools, and taking part in public meetings. On June 8, 1854, sailed for Madagascar, arriving at Tamatave, June 12. Permission was now sought to visit the capital; but this was refused by the Government. Therefore, after making numerous inquiries, and distributing portions of the Scriptures at Tamatave and at Foule Pointe, he returned to Port Louis, September 21, sailing from Tamatave, September 14. There being no reason for remaining in Mauritius, he sailed from Port Louis, December 20, for Cape Town, as he had been deputed by the Directors to visit the Society's Stations in the Cape Colony. In carrying out this plan, he, arriving at Cape Town, January 11, 1855, remained in South Africa until June 14, 1855, when he sailed for England, arriving July 18. While he was in South Africa, he received from the Malagasy Government a letter conveying permission to visit the capital, and on arriving in England another letter to the same effect was received. The permission offered was for a visit of one month. It being deemed advisable to embrace the opportunity, he, conveying from the British Government assurances of friendly feeling towards the Malagasy Government, sailed March 20, 1856, and arrived at Mauritius, via Ceylon, June 17. Arrived at Tamatave, July 13; set out for the capital, August 6, and arrived at Antananarivo, August 26. Had an audience of the Queen, September 5. Permission to extend his stay at the capital beyond one month having been refused, he left for Tamatave, September 26, arriving October 12. Left Tamatave, November 18, and arrived at Port Louis, December 2. Sailed for England, January 13, 1857, arrived in England, March 20. When news of the death of the Queen of Madagascar, on August 15, 1861, and the accession of her son to the throne as Radama II., reached England, arrangements for Mr. Ellis' return to Madagascar were promptly made. Leaving England, November 20, 1861, he arrived at Port Louis, December 27. The prevalence

of fever at Tamatave, and the unfavourable season, detained him in the Mauritius for some months. On May 18, he sailed from Port Louis, and arrived at Tamatave May 22, and at the Capital, June 16, 1862. Here he remained until July 18, 1865, during which time numerous events of great importance in their political and religious bearing occurred. Leaving the capital, July 18, 1865, he proceeded via Tamatave and Mauritius, to England, where he arrived October 14. From this time he was much engaged in visiting various parts of the United Kingdom in the interests of the Society, and in indefatigable efforts to promote the progress of Christianity in Madagascar. Died at Hoddesdon, June 9, 1872, aged 77. Mrs. Ellis died at Hoddesdon, June 16, 1872.

THE PARASITIC HABIT OF THE SANDALWOOD TREE

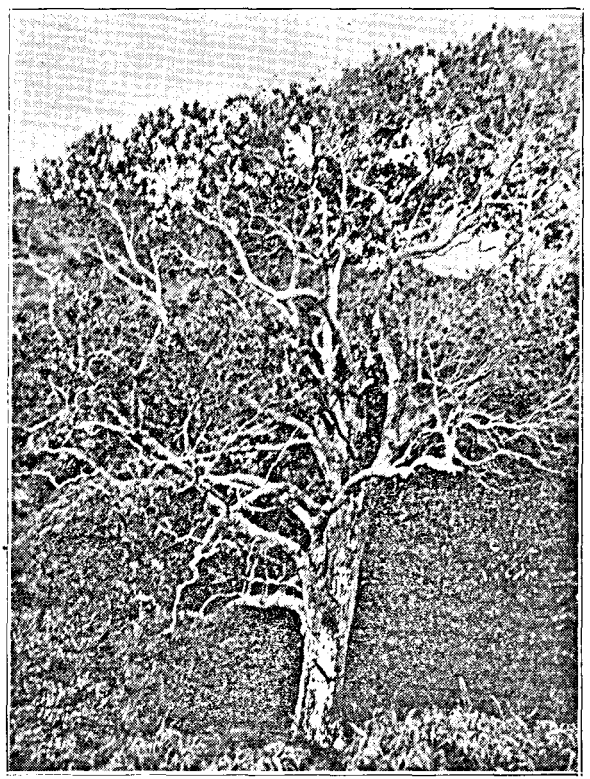
By C. S. Judd

An aura of romance, ignorance and mystery surrounds the sandalwood tree in Hawaii and the purpose of this paper is to place you on better terms with this interesting and valuable tree and particularly with its parasitic habit as worked out on the species which is found in India where at least 144 other plants serve as its host.

The *laau ala* or "fragrant wood" of the iliahi, as the sandalwood tree was called by the Hawaiians, gave the infant kingdom of Hawaii its start in the commercial world. Just as certain occurrences of an unfortunate nature have recently focussed the attention of the world on these islands, so did sandalwood attract the attention of Pacific Ocean traders to Hawaii when in 1791 Captain Kendrick made known its existence here by landing three men from his Boston brig on Kauai to contract for several cargoes. A brisk trade in this commodity was soon set up. The wood was shipped to Canton where it was sold for incense and the manufacture of fancy articles. From this contact the Chinese call this group *Tahn Heung Shan* which means "Sandalwood Islands." The trade was at its height from 1810 to 1825; no sandalwood was exported after 1840; and by 1856 the remaining trees were reported to be very scarce.

The trees were felled in the woods, cut into logs from 3 to 4

feet long, the sapwood hacked off and the remaining heartwood was packed down the mountains on the backs of natives to the loading place or store houses on the shore. In one year alone $400,000 were realized from the sale of sandalwood and by 1818 Kamehameha and his people began to accumulate considerable wealth.



The King's desire, however, to possess new articles of luxury readily made him the dupe of eager traders. Having no man of judgment to consult with he paid $800 for a looking glass, $10,000 for a brass cannon and $70,000 for a schooner. When sandalwood was to be exchanged for a vessel, it is recorded that a pit of the same dimensions as her bulk was dug in the ground and filled with sandalwood and this amount was exchanged for the ship. Such drafts upon the King's purse compelled him to

denude the islands of this precious tree and to force the natives to work so untiringly, wholly without compensation, that labor became distasteful and tyranny and oppression by the chiefs towards their dependents resulted.

The sandalwood trade in Hawaii ended with the national calamity of Boki's disastrous expedition to Eromanga in the New Hebrides, in search of additional supplies of sandalwood when one ship, the "Kamehameha", was never heard of again and out of the 500 people who started out only 20 returned alive to Honolulu in 1830.

The rise and fall of the sandalwood trade and the fancied extinction of the tree is epitomized in the following poem entitled "Sandalwood" by our Irish friend Padraic Colum:

SANDALWOOD

By Padraic Colum

Sandalwood, you say, and in your thought it rhymes
With Tyre and Solomon; to me it rhymes
With places bare upon Pacific mountains
With spaces empty in the minds of men!

Sandalwood!
The Kings of Hawaii call out their men;
The men go up the mountains in files;
Hands that knew only the stone axe now wield the iron axe;
The sandalwood trees go down.

More sandalwood is called for:
The men who hunt the whale will buy sandalwood:
The Kings would change canoes for ships:
Men come down from the mountains carrying sandalwood upon their backs;
More men and more are levied:
They go up the mountains in files; they leave their taro-patches so that famine comes down on the land.

But this sandalwood grows upon other trees, a parasite;
It needs a growing thing to grow upon;
Its seed and its soil are not enough for it.

Too greedy are the Kings,
Too eager are the men who hunt the whale to sail to Canton
with fragrant woods to make shrines for the Buddhas,
Too sharp is the iron axe.

Now nothing will ever bring together again
The spores and the alien sap that would nourish them,
The trees and the trees they would plant themselves upon:
Like the myths of peoples,
Like the faiths of peoples,
Like the speech of peoples,
Like the ancient creation chants,
The sandalwood is gone—
A fragrance in shrines—
But the trees will never grow again.

Many persons have been led to believe that the spirited pursuit of the trade in sandalwood resulted in the extermination of the tree in Hawaii but this is not so. Sandalwood trees occur as near Honolulu as on the ridge between Manoa and Palolo Valleys and may be found more or less abundant on practically all the ridges on the southwest slope of the Koolau Range on Oahu. They are particularly abundant in the Waimea and Pupukea region and are also found on the other islands.

While only one species, *Santalum album,* occurs in India, where the wood is sold by weight and, pound for pound, is by far the most valuable wood in that country, if not in all the world, botanists find more than one species in our group of islands. In 1916, Rock described 9 species and 2 varieties and ten years later while revising this group Skottsberg set forth 8 species and 3 varieties. One of these is found only on Haleakala on Maui, two on Lanai, one on Kahoolawe and a variety occurs as far westward as Laysan island. Representatives of a species may be found today near the shore at the toe of Diamond Head and the commonest species on Oahu is *Santalum freycinetium,* named after the distinguished French circumnavigator who commanded the "Uranie" on a visit here in 1817. The average size of this species is 25 feet in height and 10 to 18 inches in diameter. I have lately measured what is probably the largest sandalwood tree on Oahu. It grows on a small spur ridge running into Wai-

mea Valley and is 20 inches in diameter and about 25 feet high. It has a clear trunk of eight feet. This species is not conspicuously beautiful or even attractive and many persons to whom I have pointed it out have been disappointed not only in its appearance but also because the fragrance is not present in the leaves and twigs. The leaves have a tendency to curl and droop, as if the tree were dying or sadly in need of water. The tree may readily be distinguished by the reddish midrib of the leaf, the small reddish blossoms, and by the tight, dark brown bark which is red on the inside and marked with vertical cracks. The tree, as a rule, is small and insignificant, with brittle and slender, drooping branchlets and occurs singly or in groups among the open scrub forests on well drained soil in the drier regions from sea level up to 5000 feet in elevation. The simple entire leaves are arranged oppositely on the branchlets and are shiny on the upper surface.

It is comparatively a slow grower and produces a hard, close-grained wood. The sapwood is white and scentless but the heartwood is yellowish brown, oily and strongly scented. In India the heartwood begins to form rapidly at 20 years of age and commercial maturity is reached in 40 to 60 years. Very little is known about the habits and rate of growth of the Hawaiian species but a wild, low specimen of *Santalum Ellipticum* at Maunalua, Oahu, released from the surrounding brush was observed by the staff of the Bishop Estate to put on a height growth of about 8 feet in 4 years.

The heartwood of commercial sandalwood is used nowadays somewhat for carving but chiefly for the extraction, by distillation, of its fragrant oil which is used in perfumery and medicine. The yield in oil is usually about 5% of the weight of the heartwood. An analysis made in 1916 of the oil of *Santalum freycinetianum* at the University of Hawaii showed that it is milder and less pungent than the sandalwood oil of commerce and compares very favorably with the better grade of oil of *Santalum album* of India.

The seed of the sandalwood, which has a conspicuous white albumen is very attractive to rats and birds and the foliage is found to be very toothsome by deer, cattle, goats and other browsing animals. Rats also pull up the young seedlings and eat the fleshy hypocotyls which are swollen by the transfer after

germination of nutriment in the seed. Young seedlings are tender and require protection from excessive drought and the direct heat of the sun. In India they are therefore found mainly under bushes. They require lateral shade but must have their heads free and are often found coming up in lantana thickets. The seedlings also die when there is excessive water in the soil. Taken all together, it is a particular and delicate plant beset by many hazards.

Although it forms a taproot, most of the roots of the sandalwood are surface feeders and it produces long lateral roots not far below the surface of the ground. The Indian sandalwood may extend its roots 100 feet or more and at Aimuu Gulch on Oahu I have traced out a root 15 feet long which started from a 3 foot high wild seedling. Root suckers are freely produced where the roots are exposed or cut through and young trees coppice fairly well.

Very little is known about the parasitic habit of the Hawaiian sandalwoods and in the start that has but recently been made in the study of our own species, a search has been made during the past few months for young, wild, seedlings on Oahu with surprisingly negative results. So far only one young seedling, about 18 inches high, has been found. It was discovered growing in the shade of a naupaka bush in a location that had been protected against fire and grazing for at least ten years. Seed of native species planted in the greenhouse in the furtherance of this study have not yet germinated and so results cannot as yet be reported. Such a study will be worth while if it informs us how to raise successfully this tree which produces probably the most valuable wood in the world.

Studies already made in India, however, and particularly those made by C. A. Barber on the parasitic habits of the sandalwood give us much information of value and I now pass on some of the results of his investigations.

There are two main classes of parasites according as they attack parts above or below the ground. Mistletoes and dodder are of the first and are aerial in their growth and fasten themselves on the stems of their host. Of the other class, the root parasites, the sandalwood is perhaps the most highly organized, forming as it does a luxuriant tree laden with masses of green leaves, flowers and fruits. That such a large and highly organized

plant should obtain a part at least of its nourishment by parasitism on a host plant still remains one of the wonders of the vegetable kingdom.

The fact that the sandalwood tree is a root parasite was established as far back as 1871 by Mr. John Scott, curator of the Royal Botanic Garden of Calcutta. The attachment of the roots of sandalwood on the host plant is made by a special organ or sucker called "haustorium". Many of these appear along the external layers of the rootlet as early as two months after the seed has germinated, arising independently of the presence or even nearness of surrounding rootlets. If no host is met with which would be a rare occurrence in nature, the haustoria remain small and ultimately wither away. If a foreign rootlet is met with, the haustorium grows rapidly and develops into a mass of white and succulent tissue, at first club-shaped, but later on adapting itself to and enfolding the surface of the root attacked, becoming elongated and assuming more or less the shape of a flattened bell with a length and longest diameter of about one-third of an inch.

These haustoria or suckers form on the younger roots and it is through these that the crude sap is taken from the vessels of the host roots, thus giving food to the robber plant. The haustorium applies itself closely to the surface of the root and becomes enlarged at the point of contact and thus assumes a concave shape with an oval outline.

The cells of the surface of the haustorium have the power of dissolving the walls of the root cells opposed to them by the use of a ferment which a secreting gland in the nucleus supplies and this, combined with physical pressure, brings about penetration and entrance into the root of the host which is split as far as the cambium layer and thrust apart into two cortical wings to make room for the penetrating process.

When the haustorial cells reach the cambium they follow it to either side and spread out until they embrace more than half of the fibro-vascular cylinder. It is the aim of the intruding sucker to bring its absorbent cells into close contact with the conducting elements in the younger woody tissues of the host's root.

Two vascular strands composed of tracheids are early set apart in the nucleus of the haustorium as conducting tissue to transfer the stream of water and salts from the host to the mother

root. All the cells of the nucleus in contact with the woody cylinder of the host take part in the absorption work and direct connection is readily traceable under the microscope between the elements belonging to the two roots. This is the most important and interesting part of the haustorium and here the real transference of nutriment from the host to the sandalwood takes place.

With the life of the tree so dependent on such delicate organs as the haustoria on the roots of the sandalwood which are nearly always within a few inches of the surface of the soil, the tree is peculiarly susceptible to damage not only by the tramping of the ground by grazing stock but also by fire, the heat of which passing over the ground would destroy the haustoria but which perhaps would not be sufficient to kill the rootlets themselves.

With this handicap, added to its widespread decimation one hundred years ago, and to the facts already stated, that rats are fond of its seeds, browsing animals of its foliage, and strong sunlight is fatal in its scorching effect, it seems remarkable that the sandalwood trees in Hawaii have been able to survive in such numbers as they are found today.

A suggestion has been made by Rock that the Hawaiian sandalwoods are not true parasites but may be able to grow quite independent of a host and even in pure stands. For proof, he cites the observation of such trees on the lava fields of Kona, Hawaii and a *Santalum cuneatum* growing all alone with no trees or other plants near it within a radius of a mile on the eastern end of Lanai. There is a flourishing *Santalum freycinetianum* tree in the arid region at Kupehau in Honouliuli on Oahu growing at the foot of a rocky ledge with no other tree or even bushes within 200 feet of it.

By the study which has been undertaken, it is hoped not only to settle this doubt but to find out so much about the habits of this valuable tree that it will be possible to raise it successfully and in quantity.

JOURNAL OF HALEMAUMAU ERUPTION

DECEMBER 23, 1931 TO JANUARY 7, 1932

By T. A. Jaggar

THERE is much about this eruption identical in character with those of 1927, 1929 and 1930, each of which tended to add 50 to 60 feet to the bottom of the pit after the lava had shrunk and solidified, and each tended to break out along a crack either diagonally across the former floor or tangentially along the former edge of the floor. The duration of these eruptions varied from a day to three weeks; it is quite in order for such an eruption to develop increased violence of fountaining even when it is dwindling, as the spurting fountains are indicative of clogging vents.

There has been a series of events pointing to the coming of this eruption. The interval average for seismic and volcanic crises in Hawaii during the last 20 years has been one year, and the average of outbreaks of Halemaumau since 1924 has been one a year. The last outbreak ended December 7, 1930, so that now an eruption was expectable. The tilt instrument near the southeast edge of Halemaumau has shown 50 seconds of tipping of the ground away from the center of the pit since the last eruption, suggesting upward pressure. The tilt instrument at the Observatory on the northeast rim of Kilauea Crater has shown tilt away from the crater center of 5.4 seconds to the northeast between November 30 and December 20, 1931, suggesting upward pressure in the mountain. Finally came the rim block avalanche on the northeast edge of Halemaumau December 7 and the excessive number of seismic disturbances for the week ending December 13, 1931, followed on December 23 by the smart local earthquake in the forenoon that left 15 scars of avalanches on the big west bluff of Kilauea Crater, and left the walls of Halemaumau pit continually sliding for hours. This was undoubtedly the actual rending asunder of the inner heap which constitutes the floor of Kilauea Crater.

December 23.

When the dust cleared after the earthquake of 10:38 a. m., Wingate saw that avalanches had fallen around the northern walls of the pit, scattering debris and dust on the 1930 floor. There were scars on the walls and in some places rim rock had fallen, while 15 whitish scars on the great west wall of the big crater marked places where avalanches had fallen. Before the earthquake the rim cracks measured had shown no opening and the sulphur patches on the 1930 floor showed no fume, this being attributed to dispersal by strong northeast wind. After the earthquake there was no visible increase in fume. Sixteen crack points on the edge of Halemaumau were measured and showed increases in width up to more than an inch in places. A large block on the east rim had moved as a whole, and fresh cracks in the dirt appeared along the north, east, and south rims. Small slides were continuous for hours. After 2:15 p. m. six large slides were counted in 20 minutes. About 2:40, when he was working at surveying stations back of the rim, Wingate heard a low, rumbling noise not like an avalanche. He ran to the edge, where heavy fume clouds had already reached the rim level and were spreading about the interior of the pit. The whole floor was rapidly cracking open along a straight line athwart the middle of the bottom beginning at the southwest under the rift tunnels. Lava fountains there started up and spread to the northeast along the crack. Voluminous fume followed immediately after the first cracking, and the molten lava appeared following the fume. The whole time consumed for the break was probably less than half a minute. It was just at this time, 2:36 to 2:39 p. m., that the seismographs at the Observatory showed sudden development of continuous harmonic tremor from slight to strong.

Wingate reported visibility bad, but the bottom crust appeared rather to be pulled apart than to be heaved up and broken. There was undoubtedly tumescence. He was in imminent danger of asphyxiation, but went to the Park phone and could get no answer. He returned to the rim for a few seconds and saw spatter from the fountains blown high over the rim wall. Some of this from later fountains has been collected, light brown basaltic pumice like the "thread-lace scoria" of the Kilauea Iki region, and like the first ejecta of the Mauna Loa cones. Hasty count showed him 17 large fountains with the two strongest at the northeast end of

the crack across the bottom of the pit. He ran for his car, badly gassed, and succeeded in escaping to the Keanakakoi sandspit where the air was clear. The sun was obscured for a time, appearing as though viewed through smoked glasses, bluish over the pit against a dark background, and reddish brown in transmitted light where it blew away and was seen against the sky. This was the first time that a scientific observer here watched details of first outbreak inside the pit, and it will be remembered that it was Mr. Wingate's party, engaged in topographic surveys, that was camped nearest to the place of summit outbreak on Mauna Loa in 1926.

The outbreak at the Observatory was observed by the change from rising dust to rising fume, and by the sudden development of harmonic tremor at the instruments. Also there was sudden change at the time of the earthquake in tilting of the ground from northeast to south.

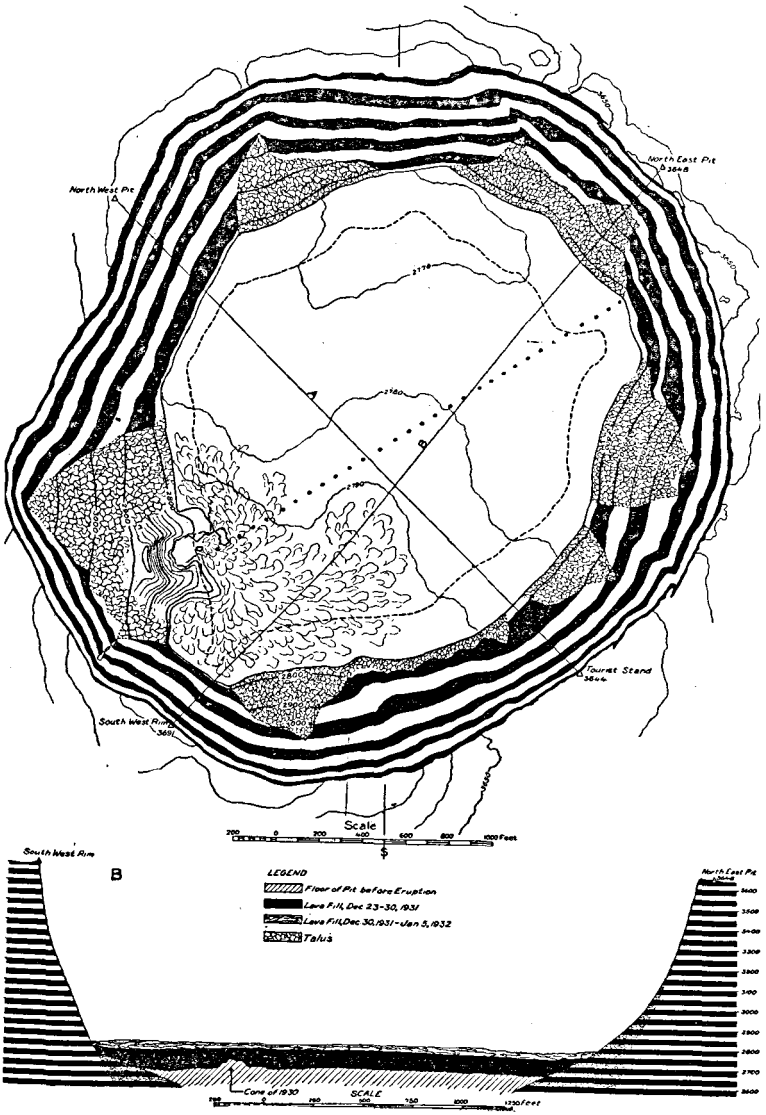
At 4 p. m., the volume of fume rising was greater than in any recent eruption since 1924, and the eddying tornado effects due to convection from the large number of fountains, including the four enormous dome fountains at the north end of the bottom crack, coupled with the high wind from northeast, submerged the road terminals under clouds of sulphur dioxide. The fume and grit were bad on the roadway from Uwekahuna to leeward of the pit. From the north lip of the pit about 30 fountains were counted making a great roar, in a nearly straight line, after darkness began to fall between 5 and 6 p. m., but the seeing was poor. There was already a great lake with bright lines between the skins, spreading out over the whole of the inner mound of 1930 lava. At 4 the glowing froth had been seen flowing away from the fountain line, at 5:30 it was already a flat lake covering the irregularities of the 1930 floor. Therefore the volume of inflow in the first three hours was enormous. The poisonous blue fume tended occasionally to spread in a low layer to the eastward, so that it was necessary to make a wide detour. A fortunate photograph at 7:30 p. m. by Higashida showed four large fountains at the corners of a square under the northeast sill, with a small fountain in the middle, and a grotto fountain against the bank, while the line of smaller fountains extended southwestward across the middle of the lake in the line of the two eastward big gushers of the square. The crack proved to be very slightly offset to the

west from the rift tunnels in the southwest Halemaumau wall. The inward convectional draft was from the north and west, and the brown clouds boiled up and rolled off over the desert to the southwest and southeast. Spurts from the big fountains were probably several hundred feet high, but they could not be measured. Pellets of pumice and Pele's hair fell to leeward. The smaller fountains were partly merged, and partly isolated, and there were some outlying fountains, with concentric patterns of bright lines clear to the edges of the big lake, where there were outward-pushing toes and some minor grotto fountaining. The illumination at night was so brilliant that every detail of the ground could be seen by pedestrians.

December 24

At 2 a. m. the amplitude of the continuous tremor diminished to about half, and at 5 a. m. increased slightly, and thereafter continued. This was the index of the cessation of the big northeastern fountains. At 3 a. m. Powers reported the fountaining almost stopped except for a few bubbling spots along the rift line. The bright-line pattern of the lake surface extended to the edge of the new fill. The liquid lava had reached the rock cliff, covering the low talus NNW. Both 1929 and 1930 spatter cones appeared to be covered.

At 10 a. m. the bottom appeared to be a continuous leaf-shaped lake with nearly flat floor, the line of fountains making a short belt of big domes southwest of the center. This was extended by small bubble fountains in both directions, ending at the southwest in a small grotto fountain at the bank which was increasing in size. There were traces of crust islands at the southeast about where the 1930 cone had been. The shore line of the lake had made a nearly continuous rampart of congelation and piled crusts, interrupted at one place between the northwest and west taluses where the liquid lava appeared to be nearly against the rock wall. There was a cross line of small fountains, nearly straight and at right angles to the main fountaining line between the central group and the southwest grotto. There was another straight line of fountains parallel with the central line across the northwest part of the lake. The crust northwestward from the central fountains showed a pattern like a flow or belt of streaming. Small islets were forming in front of the southwest grotto, and the central fountains showed signs of migrating southwestward during the



Map of January 5, 1932 to accompany profile B, showing new southwest cone. Dotted line was floor of 1930. Profile section of Halemaumau pit at the end of the eruptive period December 23, 1931, to January 5, 1932, showing topography of bottom left by the eruption. See discussion in text. Line of small circles is the fountaining rupture crack of December 23, 1931. Drawn by E. G. Wingate.

day. There were concentric skins of pahoehoe pattern. The northwest edge showed some cliffs in the rampart facing inward. The southeast edge showed toes of flowing through the rampart. The brightness at night was moderate.

December 25

At noon the nature of the activity was in general as before, but the gas pressure at the fountains was increasing and there was apparent a change in the cross line of small fountains to become the arc of a circle concentric with the lake instead of a straight rectilinear belt. The southwest border fountain was building a higher grotto against the talus, bright lines were radial from this grotto, and there was a clifflet or infacing scarp along the northeast rampart. Rapid moving puffs of blue fume rose up the west wall from the fountains. The liquid lava about the central fountain belt made slow waves outward. The fountaining waxed and waned, some individual spurts going up 200 feet during a time of high pressure, and the noise was like surf on rocks. There was a fine-meshed pattern about the central fountains bounded by a U-shaped curve of contact to the southwest with a broad horseshoe of coarse-meshed bright lines extending from the southwest grotto as a center away to the east and west so as to envelop the central more liquid pool. It was evident that the northeastern region was cracking and solidifying so that the rampart belt was widening inward, and measurements later proved that the southwest was becoming a center of elevation with individual pools about the several fountains, and these tended to stream and make overflows northeastward, over something that was solidifying below. The lake was definitely against the WNW wall of the pit, without any rampart.

December 26

At 9 a. m. a new fountain had developed to the northeast of the elongated central belt, and the southwest grotto was now dominant with a large crescent niche behind it built against the talus. The lake edge was here irregular. At noon it was apparent that the northeastern fountain was sending streams radially outward to the northeast and that the central fountains occupied the most liquid portion of the floor with a fine greenish pattern to the skins. This area was a thick crescent with two horns northward. The big strong fountains of the southwest grotto had built up a high canopy of spatter on the bank, a crescent wall with over-

hang which broke down from time to time and immediately built up again. A coarse bright-line pattern extended out to the north and east from this grotto with a surface in daylight like black satin. The central fountains were smaller and more separated. There were fresh overflows between the rampart and the talus at the east.

December 27

Measurements by the Observatory engineer on this day showed that lava covered the top of the 1930 cone to a depth of 50 feet, and the depths of the new covering on the irregular relief of the 1930 mound were as follows:

West Bay, 85 feet
North Bay, 96 feet
Northeast Bay, 98 feet
Southwest Bay, 115 feet

As there are shallower places over the big 1930 cone, the average depth of the new fill was about 90 feet, its size 2600 feet long northeast-southwest and 1950 feet wide, covering an area of about 80 acres. Its volume is estimated at 260 million cubic feet, which would amount to some 20 million tons. If this had been distributed over the interval from the beginning it would mean about 45,000 cubic feet per minute from all the vents. The height of lava lake above sea level at southwest grotto was 2773 feet, making the depth of the pit from the southeast rim 971 feet.

At 10 a. m. December 27 fountaining was more violent and the lava from the central group of fountains had encroached on the southwestern crusted belt and on the northeast fountain pool. The latter was fountaining steadily but with decreased strength.

At 3 p. m. the northeast margin of the floor for perhaps one-eighth of the area had become bench lava. Marginal overflowing was active SE and N. The southwest horseshoe lake was feeding flows at the edges, and the middle lake was spilling over a bench magma slope at the northeast. At 5:30 p. m. the northeast fountain was making only a sluggish gushing, but the southwest grotto had become a very powerful continuous fountain with a high grotto behind it, and this was beginning to develop the true Mauna Loa type of spraying jet. Detonations now accompanied some of the viscous bursts of the central area.

At 11 p. m. the southwest fountain was sometimes 400 feet high, overflow continued southeast, the lake was shrinking, and gas

bubbles burst with loud reports.

It was now evident that the activity of the bottom of Halemaumau in the current eruption was stronger, and the lava fill more voluminous than in any outbreak since 1924. The current week brought to a close the eleventh day of the eruption with the fill at the highest southwestern side of the bottom of the pit at an elevation 110 feet above the corresponding floor of 1930. The progress of the week had determined a concentration of all visible inflow at the big southwestern grotto, where the lava piled up a horseshoe cone with an open cup overflowing to the floor of the pit. The topmost spatter of this cone stood 280 feet above the highest summit of the cone of 1930, and only 650 feet below the tourist station at the southeast rim of the pit. The line of central fountains disappeared after December 29, when it became evident that the southwest border of the floor was to become the top of a new mound from which flows would radiate across a swollen heap of fresh lava in the pit, and these flows themselves developed a lake at the top of the mound bordered by a rampart of crusts which divided the lake at the southwest from the slope down to the edge of the floor at the northeast. This lake was continually fed by the torrents of lava from the fountaining craterlet, and from time to time the lake broke through its rampart with overflows that flooded the northern slopes of the mound. Seismic activity as usual had dwindled since the magma was released, harmonic tremor from the fountains was continuous, and the change in tilt from northeast to southwest at the Observatory was what would be expected with the lava ejection relieving upward pressure and replacing it by heavy weight of new fill.

December 28

At 11:20 a. m. the concentration of activity at the big southwest fountain was sending frothy jets 350 to 400 feet high and spattering halfway up the west talus. The material appeared to be basaltic froth, and in dimensions and structure the whole cone and fountain were like the Alika source cone of 1919 on Mauna Loa (Volcano Letter 348, Page Three). Heat was strong on the edge of the pit, and this grotto fountain played like a jet from a hose, swinging slowly around a central vertical position, and dropping its light spatter first on one side, then on another. The resemblance to the Mauna Loa source cone was increased by the action of the minor fountains in the central lake and the two

explosive vents, at the north, of the fountain line, which were making extraordinary flings of ropy lava to a great height and detonations accompanied by puffs of blue gas. Just these things happened in the northern cones of the Alika rift, in contrast to the big fountain, with its frothing pool, farther south.

The central fountain was a bubbling pool which occasionally sent up a string of slag even higher than the steady spray of the southwest cone, and this string would loop and bend at the top, and then fall with a slap on the pool below. Both the central fountain and the one farther north made explosive bursts with loud thudding detonations, some of which sounded like a chemical explosion. At the area of the northern fountain there were three definite streams pouring northward on a downhill slope from an edge of crust, indicating that a lake had formed within a slag heap. About 18 fountains of small size extended from the center to the southwest.

The whole area of the northern edges of the floor was cracked and mashed into pressure ridges like the slopes of the mound of 1930. There were four or five jets of blue fume in this slope area. A wide patch of crust made an island about where the big cone of 1930 had been. The lake was leaf-shaped with the southwest fountain at the stem, and the latter was building a high, cracked half circle of its hardened flings on the uphill side against the talus behind it. The inside of its cup would continually cave in revealing red-hot walls. Measurements had shown a gain in height of the built-up bottom of 100 or more feet at the southwest, and only 40 feet to the northwest of the center of the pit, showing that there was development by both overflow and tumescence around the region of maximum fountaining. A cloud of blue fume was always rising from the big fountain, and smaller amounts of it came from the other fountains.

A nationwide broadcast was sent out from the edge of the pit describing the activity for the half hour following 10:45 a. m., by KGU of the Honolulu Advertiser. A microphone attached to the end of a long timber was thrust inside the pit so that listeners might hear the roar of the big fountain and the explosive bursts of the central and north central vents. The arrangement of this apparatus, with wires for relays by radiophone, had been accomplished in less than a day, and was of interest as showing what

could be done for securing assistance in case such a volcanic happening were disastrous.

New cracks were discovered in the bottom lava of Kilauea Crater outside of Halemaumau, occasioned by the stresses which produced this eruption at the time of the earthquake of December 23, as follows: Three cracks concentric with the rim to the northeast and seven cracks concentric with the rim to the northwest within 500 feet of distance. Close under Uwekahuna bluff in the same direction appeared nine similar cracks as though the inner heap of Kilauea Crater were broken by motion on the fault of which the Uwekahuna bluff is the trace. The west, southwest, and south outer country of the Kilauea floor showed widening of old cracks and development of some new ones. Large blocks of spatter from the fountains were found to leeward of the pit, and a wounded tropic bird was picked up which had been dashed against the pit wall by the wind and was bleeding. The earthquake of December 23 had dislodged a bowlder three feet in diameter from the Uwekahuna wall and rolled it 200 feet out on the Kilauea floor. Several new steam vents were noted about the inner talus heaps of Halemaumau.

At 4 p. m. the southwest grotto fountain had a quiet spell jetting only about 50 feet high, and along the inner belt there were only two sluggish small fountains southwest of the center. Sluggish lava flowed from the grotto. At 9 p. m. for about a half hour the southwest grotto was merely bubbling, but later it renewed activity. The rift fountains in the lake had almost disappeared.

December 29

At 8:30 a. m. the southwest fountain had completely revived, the pit had been bright at night, and the central fountains had gone out of action. Flows were pouring over the floor in two streams from the southwest half-cone, and at this time the northern edges of the floor appeared slumping inward, and the southern edges were being built up and the southern half of the floor was evidently becoming a mound. The flows spreading out on the floor were meandering in leaf-like forms and there was nothing that could be called a lava lake except the pool surrounding the fountain inside the cone, which was hemmed in by an island of half-hardened lava that divided the two streams in front of it. At 8 p. m. the situation remained the same except that only the western of the two torrents from the cone was open.

Elevations above sea level of various points inside Halemaumau were as follows on December 29:

Summit Southwest Grotto	2860 feet
Edge lava in front of grotto	2764 feet
Southwest floor level of pit	2763 feet
Small cone center of pit	2761 feet
West bay of floor	2744 feet
Northwest bay of floor	2743 feet
Northeast bay of floor	2740 feet
Interior floor northwest	2738 feet

It will be seen by these figures that the southwest grotto was 96 feet high, the small central cone was seven feet high by a measurement taken on a point beside it (2754 feet), and the maximum relief of the bottom area between a sagged portion of the northwest floor and the top of the southwest grotto was 122 feet. There had been a slump of from 5 to 10 feet over most of the northern floor and overflows were slowly filling the collapsed area.

December 30

At 8:30 a. m. the fountaining at the southwest grotto continued to fluctuate and as on the previous evening the torrent from the craterlet was pouring to the west of the island in front of it and spreading over the crusts of previous flows. There were some trickling flows at the northwest edge of the new fill, but otherwise the northern floor was now inactive. The last gas puffs from the central vents had been noticed on the afternoon of December 29.

At 3 p. m. the two torrents from the southwest craterlet, cascading on each side of the island in front of the open eruptive amphitheater, had reasserted themselves as glowing streams, the eastern one pouring from under a crust. The puddled flows in front showed the usual bright-line pattern radiating from the two inflows, with numerous islets of accumulation, and enough building around the edges of the big puddle (covering the greater part of the southern half of the floor) to produce the effect of 20 overflow streams out from the edges of the lake of lava. This was to develop into a definite leaf-shaped lake with ramparts about its border, and with the southwest grotto for its source well.

At 8 p. m. the fling of the big fountain was continually falling on the outside of the cone, while the bombardment and overweighting of the inside caused red-hot avalanches into a pool be-

neath. Two torrents poured east and west of the island in front, but the western one was now arched over with crust at its narrowest part, with a cascade pouring from the froth pool in under the crust.

During these days a single, thin column of blue smoke from the fountain rose high above the west rim of the pit making a cumulus of rain moisture above, thin on a sunny morning, thick and spectacular in the moist evenings. The sun in late afternoon here and in Kona appeared like a red ball through the fume. The nights showed spectacular glowing cloud effects over the pit, with the glow waxing and waning. No fume obscured the view.

December 31

At 9:30 a. m. it was evident that the area of flows was widening in front of the southwest fountain, and that the cone was growing. Only the west cascade appeared as an open channel. Some jets from the fountain appeared to go up 400 feet. There were frontal streams at the north and northeast edges of the heap. The activity appeared somewhat greater than on the previous evening.

January 1

At 11 a. m. the lake over the southwestern part of the floor continued to enlarge. The floor was now getting to be a mound with concentric ridges and ramparts within the northern half of the area and many cracked areas. The outer edge was like a spoon with some inward slope. The top of the mound was at the southwest and the big fountain was building it up with a lake at the crest. Much pumice had been found in the country outside of Halemaumau to the southwest, some of the pieces two to three inches across. In the night following this day the glow over the pit was very bright, and was added to by the development of electrical storms on the mountains which produced snow on Mauna Loa and Mauna Kea.

January 2

At 9 a. m. the activity appeared to be as strong as ever. At 10:30 a. m. it was evident that the lake in front of the fountain had definite border ramparts where some lava spilled over, the pool covering about one-third of the floor. The spatter rims of the grotto had built out about 150 feet from the large western talus, forming a typical Mauna Loa horseshoe cone with the main channel about 100 feet wide above where it divides about islands

into cascades. Apparently the weight of the lake accumulations was causing the sunken northern area to rise, and measurements detected slight rising against the walls of the pit. This is the isostatic effect, frequently noticed a decade ago, when the bench magma is weighted down on one side and the other side rises. At 3 p. m. the fountain was smaller and more like normal Kilauea lava. The lake was scalloped with two big flows through its rampart. At 8 p. m. there was much cracking and foundering of crusts in large fields of half-hardened lava to the north of the lake. The lake overflows were in wide streams on top of these fields.

January 3

At 11 a. m. a single wide cascade was flowing toward the east, the ramparts around the lake were continually pushing out and being overflowed, and the fountain was more sluggish.

January 4

The flow of lava from the southwest cone out over the floor of the pit continued as before, but there was no longer a single lake of lava filling the bottom of the pit as there had been during the first days of the eruption. The line of fountaining vents across the middle of the pit no longer appeared. Everything had been concentrated in an upflow at the big cone at the base of the southwest talus. There were doubtless intrusions going on within the heap covering the bottom of the pit, but their only effect at the surface lay in what was revealed by the surveys with transit showing differences of level of different parts of the bottom. Other effects of piling up, which produced differences of level, were due to the puddled flows from the cone as shown in the accompanying map, which have collectively been called a lake, because of a definite rampart bordering the pool in scallops and numerous islands of clustered crusts. The thickness of the new fill is various, both because of irregular heaping up, with a maximum near the southwest cone, and because of irregular topography of the mound of lava of 1930 which the new fill covered. This variability is shown in the profile in its relation to the map.

On this morning at 7:30 a. m. there was the usual convection cloud of rain mositure due to the heat rising from the lava fountains and lake. At 8 a. m. three streams were forking from a wide river at the open side of the cone. Rapid cascades carried black crusts past two small islands in the central rivulet. The fountain

was variable, as a whole not so high as at the beginning of the previous week, at times somewhat sluggish, and then developing a spurt of high jets with a roar. There were occasional brilliant slides as the red-hot sides of the cone caved in.

At 3 p. m. the fountains were bubbling steadily in the cone and spouting up from 50 to 75 feet. One river of lava poured out from the center of the horseshoe, its course at first northeast, and then deflected to the east by the slaggy slope which had been built up as a mound straight in front of the cone, when the river in earlier days had forked both east and west around an island. The western torrent no longer showed, whatever it may have been doing in tunnels, and the eastern one now divided into three streams surrounding three islands. The whole distributary system radiated out with bright lines and surfaces covered with satiny skins into a lake that covered about a third of the floor and was confined in a well defined rampart. On the west side there was much overflow amid crust islands and one small overflow stream poured from the lake to the east. Back of this was a large island which had been a remarkably persistent feature throughout the eruption, and perhaps marked the site of the cone of 1930. The rest of the floor showed pressure ridges and mounds and irregular hardened flow patterns, with chasms and cracks particularly conspicuous near the borders at the north.

January 5

Surveys were made from 9:30 to 11:30 a. m., and before this at 8 a. m. it was seen that the flow had lessened, but the fountain was still central in the cone, though weaker.

The eruption which began in Halemaumau pit of Kilauea Volcano December 23, 1931, finished its apparent surface activity the evening of January 5, 1932, after somewhat more than thirteen days of inflowing lava.

Elevations of the parts of the surface of the new bottom when the lava lake was highest, 9:30 to 11:30 a. m. January 5, 1932, reported by E. G. Wingate, were as follows:

Area over 1930 conelet filled 73 feet.....elevation 2793 feet
Southwest bay filled 134 feet.....elevation 2792 feet
Lake under southwest cone filled 125 feet.....elevation 2798 feet
Lake southwest of center filled 107 feet.....elevation 2777 feet
West bay filled 113 feet.....elevation 2773 feet

The amount of filling over the whole floor was about 115 feet,

or some 25 feet more than was shown by the measurements of December 29-30, 1931. The accompanying section profile shows the later fill light colored and the earlier solid black. December 29 was the day when central fountains stopped. At the end the principal mound was the southwest cone itself, at the edge of the lava floor, not shown in the profile. The average bottom elevation 2789 feet, is 855 feet below the tourist station at the southeast rim of the pit.

The final heaping up of the border cone, with the fountain in its midst sending multiple cascades of lava to spread out on the floor, was quite like the closing stages of the eruption in November-December 1930. The cessation was rapid and quiet, without any marked down-sinking, within a few hours. The flowing simply stopped, the surface solidified, and the tremor at the seismographs stopped simultaneously with the end of fountaining.

The volume of outflow had lessened considerably, the forenoon of January 5, 1932, as shown by the size of the streams, and the lake on the floor was smaller and the overflows through the ramparts had dwindled. Most of the filling appeared to be in the south bay. The river flowing from the cone forked into two streams with rapid cascades, and the islets were tending to become peninsulas. Fume above the pit had increased at 8:40 a. m. At 10 a. m. it was seen that the increased fuming was due to a revival of the fountain, which appeared quite normal with much puffing and splashing. Heat from the lake was strong at the south edge of the pit. The lake had vacated its ramparts on the west, and was overflowing ramparts to the east.

The scarp or heap in front of the main channel appeared brick-red and rusty on its upper surface. Three rapid cascades poured eastward from the channel, and over the pool on the floor of the pit there was streaming with radial zigzag bright lines fanning out to the east and northeast. Three island accumulations divided the cascades. The north floor of the pit showed scallop rampart patterns over its surface, and some pressure ridges. A remarkable feature was a group of four crevasses trending northeast toward the dike in the northeast wall of the pit. These were on the line of the first fountains of December 23, and where the line of fountains had been buried up by subsequent flows. The hardened surface, however, had become cracked on the line of the original rift and was apparently gaping open by tumescence.

The new floor of the pit was now against the rock wall between the taluses at the NE, NNW, WNW, S, and at two places on the E. The old rock wall at the southeast which had extended to the 1930 floor as a triangular ledge parting two taluses was now entirely buried. The cone and crater around the big fountain appeared to be in adjustment, and the noise of the cascades was a steady crackling.

The afternoon of January 5 created a new situation, with reports of avalanches, of a new position of the fountain, spells of excessive harmonic tremor at the seismographs alternating with very weak tremor, and dwindling of the cascades. The details of these changes were as follows, proving important as on this evening the eruption stopped:

At 2 p. m. the big fountain central to the cone went out of action and was replaced by a small fountain in what had been the main stream northeast from the craterlet. Inquiry from bystanders indicated that the large fountain was still erupting at 1 p. m. when the activity during 15 minutes migrated into the channel and about 1:15 the large fountain stopped. At 2 p. m. small streams were pouring down both cascades, but at 2:15 only the southern stream was visible leading from the channel fountain. It was at this time that heavy tremor at the Observatory was replaced by very weak motion.

At 2:20 p. m. booming noise was heard continuing for five minutes, and the northern cascade reasserted itself. It stopped, and the lava in the pot appeared to be rising and flowing back over part of the black lava where the central fountain had been. This action increased. At 2:42 p. m. the channel fountain appeared to be migrating northeast, somewhat smaller than before, and the streams were darker colored. Booming noise was repeated 2:58 to 3 p. m. and again at 3:15, when the cascades were small, duller in color, and flowing more slowly. At 3:24 there was a spell of vigorous fountaining. At 3:30 there was intermittent spurting with some booming. The southern cascade was very narrow and most of the outflow poured through the northern channel. At 3:55 there was a spell of rather heavy fountaining.

During the course of these changes the crater margins in the cone had caved in, the pool on the lake floor was lowering and becoming dotted with many islands and crusted lumps, and there were some fuming patches about its borders. The dwindling of in-

flow appears to have been gradual from 4 to 6 p. m., though at the beginning of this time the fountain sent up some spurts 50 feet high. The cessation of the tremor at 6 p. m. probably coincided with actual cessation of inflow.

At 8 p. m. there was very dull red glow over the pit, hardly perceptible on the walls as seen from a distance, and almost none on the cloud above. When the pit was visited, it was found that the pattern of the lake was outlined in bright glow cracks, that of the overflows was less bright, and the cone was clearly outlined by incandescent fissures. There were a few glowing spots at the north edge of the floor. Gas activity still asserted itself in occasional spurts of sparks from the side of the channel fountain. There were hissing noises at these times. A small central cone in the floor which had been the last remnant of the central fountains caved in about 8:15 p. m. revealing a glowing chamber inside and making a noise of cracking slabs. There were some slides heard at the south wall of the pit. It was observable that the glow pattern of the floor showed colors in blue, purple, and red, suggesting the presence of some small flames through the cracks.

January 6

At 6 a. m. there was no visible flowing lava, and cracking sounds were nearly continuous with spells when they were louder. This suggested that cooling and slumping were going on. There were numerous glowing points like a bed of coals. Occasionally a cascade of cinders would fall from the inner walls of the cone showing glow underneath. There were some squeaking noises like rubbing slabs. Where the lake had been there were parts of the outlying rampart and numerous hummocks. A little fume rose at several places in the bottom of the pit, but was not noticed at the cone. There was steam from the talus slope above. Later in the day slight fuming was noticed at the top of the new cone and still more near its eastern base. The lake surface had evidently been slumping. Vapor was noticed on the southeast talus.

January 7

The end of this eruption, as in 1930 and the other shortlived fills within Halemaumau which have occurred since 1924, showed no sinking of the entire lava column. Such sinking was a characteristic of the end of eruptive episodes between 1915 and 1924. The explanation of the difference appears to be a difference in continuity of inflow and volume of material in the upright shaft

that remains fluid. These small annual eruptions of the last few years appear to come up a crack in the bottom of the pit, cover the former floor with a layer of paste which more or less congeals with the term of the eruption, the inflow concentrates at one well, and this material also congeals and forms a plug. There may be more or less pastiness and incandescence to the bottom of the temporary fill, and loss of gas from this viscous fluid accounts for some slumping of the surface, also volume is diminished by crystallization. But there is no sign of sudden back-flow into the depths, such as caused lowerings of hundreds of feet in 1916, 1919, etc. The evidence seems rather to favor the supposition that there is a steady upward pressure of magma at present released by an occasional breaking through.

On this day, January 7, the floor of the pit was very irregular and hummocky and all sounds of settling had ceased. Two small wall slides were heard at the northwest and the northeast about 10:50 a. m. Otherwise the bottom was still and motionless just as the congealing lava had left it.

HAWAIIANA FOR 1932

"Manual of Wayside Plants of Hawaii" by Willis T. Pope, belongs in fact to the 1930 list, is an unusually interesting and instructive work of 289 pages, 8 vo. descriptive of some 200 species of plants to be found here, of which there are 164 illustrations. Its color scheme show lists of yellow, white, green, red, blue and pink with their variants. Some 80 come under the term of weeds, defined as "a wild plant that has the habit of intruding where it is not wanted." 36 plants are listed as medicinal and 25 poisonous.

The book is no hasty compilation, but the result of occasional study for a number of years; the valued information embodied in the description of each species carries the weight of scholarly research. Published by the Advertiser Publishing Co., Ltd.

THE HAWAIIAN GOOSE OR NENE

By Wm. T. Pope

THE bird-life of a country is usually of considerable consequence to the people who inhabit it. Many kinds of birds are a source of food and other materials which may be converted to the uses of mankind. There are other valuable services given by birds, which might be mentioned: their assistance in the control of insect pests has inestimable value; their presence and songs have been a cheer to the inhabitants of every land, and bird activities have been a precious guide for human thought and action. The bird-life of Hawaii has made all of these contributions since the arrival of the first people in these islands, and as a natural group it is of unusual interest on account of the many species being peculiarly different from their apparent relatives in other countries.

Until comparatively recent years, the native geese were among the foremost beneficial birds of Hawaii, but adverse conditions during the past one hundred and thirty years have almost exterminated the species.

The Hawaiian geese or Nene is known scientifically as *Nesochen sandvicensis* or *Bernicla sandvicensis.* The species is one of a number forming a large group of web-footed, swimming birds, which includes ducks, geese and swans and form the Natural Order *Anatidae.* Most of the species are found in the cooler parts of the North Temperate zone. One of these, native of Northern Europe, is said to be the original stock of most domesticated geese, however, several kinds are easily tamed and are content to live together. Geese in general are distinguished from other birds by their comparatively large size; the bill is broad and about as long as the remainder of the head, the upper part slightly hooked over the lower and the edges of both roughened, which is an adaptation for cropping grass and other herbage upon which they usually feed. Although more or less web-footed, they seldom swim and never dive. Most species have the habit of migrating from the north each fall to warmer localities, thereby avoiding the severe weather of winter. When on long journeys, they usu-

ally fly in double line converging to form a more or less wedge, from the point of which they are led by an experienced gander. The orderly arrangement tends to prevent collision and the uniformity of progress of the flock is assisted by the mellow honk of the leader to which occasional response is made by some one of the followers in the column. On these trips, numerous flocks of several hundred each, occasionally settle on the fields to feed and rest for a few hours. They return from the Gulf of Mexi-

co and Carribean regions to the north in the early spring to nest and rear their young in Canada, Labradore or Alaska. The Canadian wild geese, *Brantia canadensis,* are the largest, most valuable and most numerous of the several species of North America.

The origin of the Hawaiian geese is unknown. It is believed, however, that the original stock came from North America. Possibly a flock of one of the species now commonly called Canadian geese, in migration wandered far from their regular course,

reached the Hawaiian Islands and, finding conditions favorable, remained. It is well known that conditions peculiar to these islands have brought about certain changes in both plant and animal life and it seems possible that these same conditions continuing during many generations would have brought about changes in the geese which are now recognized as of a different species.

The Hawaiian geese are neat and beautiful birds weighing from three to four and a half pounds. The males and females are so near the same size and color that it is difficult to determine the sex. The plumage is beautiful and has a harmonious arrangement of color. The head and back of the neck are black, the beak is usually black but sometimes yellowish or buff, the small eyes are shiny black and very keen of vision. Beginning on the sides of the head and throat are patches of white or light buff which shade into brownish buff and brown stripes near the main part of the body. The feathers of the wings and back are dark gray delicately marked with mottlings of light and dark which gradually become more rippled until they form several oblique stripes near the back part of the body. The breast feathers are whitish with dark brown margins so arranged that the lighter color predominates and the brown shades become more pronounce toward the thighs. The covering of the back part of the body including the tail and primary feathers of the wings are dusky to almost black and the feathers of the underside of the body are white. The legs and feet are very dark gray and toes are webbed to about half their length.

The nesting habits of Hawaiian geese, in recent years, are apparently very unsettled. The time of year for nesting and the nature of location differs greatly. This is due, no doubt, to numerous disturbances which also result in but few young being successfully reared. Several years ago, while in search for an unusual species of Hawaiian raspberry, the writer found the nest of a native goose on the old Kaupulehu lava flow, north side of Hualalai, at an elevation of about 3,000 feet. The occasional showers which cross the flow of this section have caused considerable disintigration, partially filling low places with small patches of cinder and course sand. In these, clumps of grass and weeds grow during a part of the year. The nest containing three eggs was in a small depression partially hidden by the dead grass. Cattle-men also tell of finding nests of the wild geese in old barren lava fields at but a few feet above sea level. In such places, the goose selects

a partially sheltered spot among the rough irregular masses of lava and the nest is merely a depression scratched, picked and wallowed into shape, the edge being maintained by fragments of the lava and in some cases, small bits of sticks and dead grass. The nest is not lined but when the goose leaves it, the eggs are covered temporarily with down plucked from its body—this regulates the temperature and proves to be more or less of a camouflage.

FOOD HABITS

The Hawaiian Geese are strictly vegetarians. Their food consists of tender shoots, stems and berries. Their favorite and most common food is the "pualele" (*Sonchus oleraceus*), which is a weed also native of North America where it is commonly called "sow thistle". At certain times of the year they feed upon tender grass of several kinds and such native berries as ohelo (*Vaccinium reticulatum*), akalas (*Rubus hawaiiensis* and *R. macraei*) wild strawberries (*Fragaria chiloensis*), puakeawe (*Cyathodes tameiameiae*), and a mountain coprosoma (*Coprosoma ernodeoides*). In their respective seasons most of these berries ripen over a considerable part of the year. When in domestication, Hawaiian geese will eat grain, cultivated grasses and parts of some kinds of vegetables.

The early explorers who came to the Hawaiian Islands after the discovery by Europeans in 1778 reported having obtained native geese from the Hawaiians.[1] The Reverend William Ellis, an early missionary who visited the Island of Hawaii in 1823, saw several flocks of native geese fly down from the mountains and settle among the ohelo berry bushes of the open country near the crater of Kilauea. The natives informed him that there were large flocks in the highlands of the interior of the island. He was also informed that the geese were rarely seen near the sea. Charles Wall, who was a sheep rancher between Mt. Hualalai and Mauna Loa from 1859 to 1875, reported native geese as abundant in that region. Professor W. H. Henshaw, an able authority on Hawaiian birds, states in an article, Hawaiian Annual, 1904, that native geese were not formerly confined to the Island of Hawaii but were common on Mount Haleakala, Maui, previous to 1891, and that a few have been seen on the Islands of Kauai and Niihau. When Professor Henshaw wrote in 1904, reference was

[1] Bell, Edward, Log of the Chatham, "The Honolulu Mercury", Sept. 1929, p. 21.

made to the migratory habit of the native geese, he believed that large numbers, probably all, leave the higher plateau in the fall resorting to altitudes below 1200 feet on comparatively barren lava flows near the sea known as "Kula" lands in sections of Puna, Kau, Kona and Kohala. At the time of Ellis' visit, in 1823, herds of wild livestock, cattle, sheep and goats, introduced thirty years before, were beginning to overrun the uplands. This semi-arid area, which is quite limited, has a temperate climate with scant vegetation consisting mostly of herbs and shrubs productive of abundance of berries and seeds; and it is bounded in many places with wooded slopes, the density of which increases with the downward trend into belts of greater rainfall. Each year the vegetative growth of the upland area is temporarily suspended for four of five months due to lack of warmth and moisture in winter. In the days before the grazing animals became so numerous, the native geese were very abundant and fed upon the tender plants of spring, and the berries and seeds of summer, fall and winter, but the rapidly increasing livestock devoured most of the vegetation and having adaptation to a wider variation of forage could increase their range into the surrounding forests extending down the slopes and thereby survive the period when plant-growth is suspended for the winter. At that season wild geese found it necessary to migrate to the lowlands near the sea where they could find new growth of grass and weeds. Packs of vicious wild dogs have also roamed over the uplands from time to time, destroying calves, sheep, goats, in fact, all forms of animal life including native geese, breaking up their nests and devouring the young; also hunters with firearms took a liberal portion and a little later the mongoose, which was introduced from the West Indian Islands in 1883, took an active part in wanton destruction which has reached near to extinction.

DOMESTICATION AND EFFORT FOR PRESERVATION

Practically all of the native geese remaining are on the Island of Hawaii and are either domesticated or existing in a semi-wild condition. They are contented to live more or less with other fowls and depend largely upon the rancher for food. Native geese enjoy the freedom of the farmyard and open country but sometimes make long flights to highlands or may be seen on the great lava fields of the low-lands. In domestication they quickly de-

velop a fondness for their home and for the persons who care for them. Mr. Allen Wall, a resident for many years on Hawaii, has had considerable experience with the native geese and he still has a few of them on his ranch near Kainaliu in Kona. Mr. Wall recalls many incidents in relation to the Hawaiian geese as far back as 1870 when they were the chief game birds of Hawaii. He has seen the geese so completely tamed that they could be handled and often would become quite playful with the friends who fed them.

Mr. Herbert Shipman of Keaau, near Hilo, Hawaii, is said to have the largest flock of Hawaiian geese in existence. It now consists of about thirty birds. Mr. Shipman has become considerably interested in raising and domesticating this species and his effort is inspired with the hope that it may not be exterminated. Some two years ago a wild North American goose wandered to these Islands, discovered Mr. Shipman's flock of Hawaiian geese and evidently observing some family relation, joined it and still remains as a contented visitor. This lonely goose no doubt hesitates to attempt the long flight over the vast ocean that would be necessary to reach its original summer home, possibly located on the far off shores of Hudson Bay or Alaska.

The Territorial Board of Agriculture and Forestry through its Fish and Game Warden, has been working in co-operation with a number of ranchers of Hawaii in an effort to preserve this interesting species from extinction. Large, well-made notices calling public attention to this important effort and to the Territorial regulation passed against their destruction, have been placed along the highways. It has become a duty of every one to cooperate in this movement to preserve Hawaii's noble bird—the Hawaiian goose or Nene.

HONOLULU AS A CONVENTION CITY

By John A. Hamilton
Chamber of Commerce

DURING the past year, according to a report of the Chamber of Commerce of Honolulu, this city has had several opportunities to demonstrate its suitability as a meeting place for international gatherings.

National-Pacific Foreign Trade Convention

The meeting of the National Foreign Trade Council held here during 1932 was pronounced one of the most successful of the nineteen annual conferences of this organization. The National Council, created in 1914 in order that constant and continuing effort might be devoted to the development of a national policy of foreign trade encouragement, met in joint session May 4, 5, and 6 with the Pacific Foreign Trade Council, which is concerned more particularly with foreign trade as it affects the Pacific Coast.

This gathering brought to Honolulu representatives from continental United States, Canada, Australia, New Zealand, Japan, China, Siam, and the Philippine Islands. The leading executives of financial, industrial, commercial organizations, and transportation lines met for a frank discussion of problems affecting foreign commerce, with the object of building up trade in the Pacific area.

It has been shown on several occasions that the atmosphere of Hawaii is one of freedom of speech; that the most controversial questions can be talked over in a frank and friendly manner. This was noticeable during the Foreign Trade sessions when matters vitally affecting the interests of the countries of the Orient came up for discussion and were treated in an amicable manner, assisting immeasurably in a better understanding of existing problems.

The three-day sessions were under the Chairmanship of James A. Farrell, retiring President of the United States Steel Corporation, and Mr. Farrell and other members of the Council ex-

pressed themselves well pleased with Honolulu as a meeting place, with the hospitality accorded them, and as definitely satisfied with convention results. The feeling was expressed also that the personal contacts made here were quite as important as the speeches and discussions.

FOURTH PACIFIC ROTARY CONFERENCE

While Hawaii is situated strategically for a Foreign Trade meeting on account of the definite shifting of world commerce to the great Pacific area, it is none the less admirably adapted for meetings of other organizations whose interests affect the countries south and west of us, as well as our own continent.

Notable among these was the Fourth Pacific Rotary Conference held in Honolulu June 12, 13, and 14. Delegates were in attendance from the Pacific Coast of the United States, Canada, Mexico, South America, Australia, New Zealand, Japan, China, and the Philippine Islands.

Regional conferences of Rotary International are held once in two years for discussion of problems affecting a particular district. Honolulu, assisted by the Hilo Rotary Club, was the meeting place for the first Pacific Conference; Japan entertained the second; the third went to Australia, and in 1932 Honolulu was again honored to be host to Rotarians of the Pacific area.

WORLD FEDERATION OF EDUCATION ASSOCIATIONS

The first Pacific regional conference of the World Federation of Education Associations convened in Honolulu from the 25th to the 30th of July. Chinese, Japanese, New Zealanders, Australians, English, Filipinos, Americans, and Hawaiians participated in a discussion of matters involving not only educational movement and development but every phase of international and interracial relationships of the Pacific Basin.

The Federation comprises 180 organizations, embracing about 2,500,000 members, of which 225,000 are in the United States.

While it is a fact that Honolulu has received and will receive much commendation for carrying through to success, with substantial representation from around the Pacific, such meetings as have been mentioned, there is no question of the immeasurable direct benefit to Hawaii. Retail sales have been increased, the economic wealth of the community has been increased, and an

enormous amount of personal advertising for Hawaii has been developed and will be spread around the world.

The greatest success to Hawaii from conventions will only be attained by the people as a whole entering into the spirit of the work, and such an endeavor should have the enthusiastic attention of everyone interested in the development of these Islands.

INSTITUTE OF PACIFIC RELATIONS

The Institute of Pacific Relations, an international organization of research and conference on the fundamental problems of the Pacific area, has also found Hawaii to be a most logical site for its central headquarters, situated as it is in the heart of the Pacific and on the main route of travel between Orient and Occident and Southern Hemisphere ports. Here, in its administrative and research work, it can keep in closer touch with its constituent groups all around the Pacific rim than if it were located at any point on that rim. Here, in its editorial work, it can keep a better balance in point of time and perspective and is subject to the influence of a genuine Pacific environment, interracial in character.

This peculiar community character was in the first instance responsible for the original conception of the need of such an organization as the Institute of Pacific Relations and the first two conferences, held in Honolulu, were in large part responsible for determining the organization's character. Two subsequent conferences have been held in the Orient, in order to give members a more realistic view of the distinctly Oriental aspects of Pacific problems, but in the minds of a large section of Institute constituents, a return to the more impartial and quiet atmosphere of Hawaii for future conferences is eminently desirable. The existence, in miniature, as it were, within the confines of Hawaii of many of the problems which, in enlarged version, agitate the broader area of the Pacific and its relationships, makes Hawaii a particularly suitable spot for such conferences; while the research carried on here or directed from this point does much to increase that suitability.

MEMORIES OF ALOHALAND

By William F. Kennedy

AS I sit at the window of our third floor flat here in Auckland, New Zealand, on a gloomy winter afternoon, the wind whistling through the electric light wires and the rain beating against the window panes, visions of blue skies and warm sunshine, balmy breezes and waving cocoanut palms, tropic seas of unimagined beauty float before my eyes. Never shall we forget the first time we saw Hawaiian soil. First impressions are proverbially telling, and on this occasion ours were no exception to the rule.

FIRST IMPRESSIONS

It was away back in the fall of 1919. My wife and I were among a happy band of Australians and Maorilanders who, after being held up for over three months by a stewards' strike, at last got away on the *Niagara*—then the proud flag ship of the C. and A. S. S. Company. We were through passengers for Vancouver, and did not land until late in the afternoon, so had only a glance round town that evening. But what a new and strange world it was to drop down upon? Those who are familiar through long residence with Honolulu, can never experience the thrill which comes to those who step into its streets and drive along its boulevards for the first time. Many lengthy visits since that occasion have made us also familiar with its fascination, but the glamor of that first sight will always remain with us. The genial warmth, the bright sunshine, the lei-sellers, the many races, the oriental people and stores, the queer little newsboys, the delightful Japanese and Chinese children, the tropic costumes of men and women; Waikiki, with its hotels and bungalows; its gay beaches, its swimmers and surfriders—all help to make a picture which swims before the eyes of the visitor like a scene out of a world that he has never seen before.

HAWAII CALLS US BACK

After a year and a half spent in California we returned to Honolulu. Alohaland had called us back. Accommodation at the

time was very hard to get, so knowing some friends who were importing some ready made houses from San Francisco, through an agent, and erecting them on the John Ena estate at Waikiki, we decided to do likewise. Our house was to cost $1,000 landed, but when floored and roofed, bath and plumbing and a screened lanai and garage added, this mounted to $2,500. There were two bedrooms, a long living room, kitchen and bathroom, and when in six weeks time it was finished, mighty pleased we were with it. With bright window curtains, sea-grass furniture, Japanese matting, our own pictures and photos, the interior was quite charming. Our lot was only 50x60, but it is wonderful what you can do with such a small bit of ground. A little bow-legged Japanese of the old school, who lived close by and went out working, planted grass; while Mr. Pauau, a kind Hawaiian neighbour, brought over some banana trees, dug holes and planted them. My wife, always an enthusiastic and successful gardener, soon had many flowers in and growing, besides papaias, an alligator pear, a scarlet poincianna and a row of poinsettie which when they bloomed made our little yard gay with color.

THE PIERPOINT PIER

Five minutes from our place was the beach and the old Pierpoint pier, then in good condition. A walk to the end of it was like going out to sea. Many a time, morning or evening have I walked down that remarkable structure for a swim. It was the finest dip, in my opinion, to be had anywhere in Waikiki. What wonderful sunsets were to be seen from the pier-end? Evening after evening, I would go down to watch the sun dip below the horizon; the afterglow was almost always indescribably lovely. There were times when its ethereal beauty was such that I hardly knew whether I was on earth or in heaven.

TWO FRIENDS AND A SUNSET

I remember one evening, some years later when we had sold our little house and moved to one on the beach in the same locality —we had the late Charles Eugene Banks and Frank L. Kern to dinner. When the meal was over we took a stroll down the pier to watch the day close. The tropic afterglow with its soft mother o' pearl tints, was exquisitely beautiful, but "Daddy" Kern was in one of his talkative moods—like Tennyson's "Brook" he could go on for ever—and he kept telling us about his experiences in

Alaska much to the annoyance of Mr. Banks who wanted to enjoy in silence the beauty of the scene before us.

The first time we met C. E. B. was at the home of Professor Tower—the house built round a tree. It was a very warm summer night we all sat outside at the back of the house in the thickly planted garden, while Mr. Banks read to us his poem "Evolution" by the dim light of a lantern fastened near the back door. That lovely poem deserves to be better known. And now he who wrote it has gone from his well-loved haunts to "the bourne whence no traveller returns" and we shall see his face no more.

That little spot near the pier, 1925 Y2 Kalia Road, was quite unique. There was a tiny park with algaroba trees sloping down to the beach, fishing boats went out and came in and when the tide was low, a long stretch of sand—it always seemed to me like a little bit of old Hawaii that had somehow got left out of the advance of civilization.

MOTOR DRIVES

I do not think there is any other place than Honolulu that has within a small compass such a variety of beautiful drives. How often have we met friends at the New Zealand boats and taken them up Nuuanu Valley to the Pali. It was always a pleasure to see their surprise at the lovely scenery and the wonderful panoramic view from the top. I think that Pali view is one of the finest I have seen anywhere. A call in at the Country Club on the way back was always made, the golf links being much admired. Then there was Round Top and Makiki Heights with its winding road and suburb views; Pacific Heights; Diamond Head and Kahala; Manoa Valley with its lovely homes, surely one of the most beautiful suburban localities in the world. Further afield was Schofield, with its red hills, its sugar-cane and pineapple plantations. Memories cluster round Leilehua, where brother John Purcell presided in "The Little House by the Side of the Road", where all who passed by might enter and find welcome. Life had dealt hardly with "Dad", he had lost his two good legs, but he had not lost his courage, and he faced the world with a smile and acted as guide and councillor to the soldier boys who came to his studio day by day.

THE PAGEANT OF FLOWERS

Perhaps of all nature's beauties in Alohaland, the flowers and

flowering trees will linger longest in memory. How shall I describe them? First and last and all time comes Hawaii's national flower, that wonder of wonders, the Hibiscus. Hedges and hedges everywhere one goes all the year round. It is a universal favorite with many hues and varied forms—a thousand varieties —the blossoms picked unstintingly to decorate homes, hotels and stores, yet bringing forth as many fresh blooms next day to fill the gap. I am writing this in June and in imagination I see before my eyes the streets and avenues of pink and yellow shower trees, the blue jacarandas, the flaming red poinciannas—later to throw their scarlet blossoms on the ground like a beautiful carpet. At my side is an enlarged photograph of a pink shower tree in the Makiki district, not far from Hastings Street, and which I think is the most magnificent example of floral beauty I have ever seen. Then there is the night blooming cereus, which flowers for a night and dies at the first kiss of the morning sun, and the bougainvellia, and acacia, to say nothing of the lilies and crotons and begonias and poinsettia whose leaves are as bright as other plant flowers. In our New Zealand country we have delightful blooms too, but for sheer wealth of color Hawaii has the world beaten every time.

THE PAN-PACIFIC UNION

Very early in our first stay we became interested in the work of the Pan-Pacific Union. This child of the heart and brain of Alexander Hume Ford—which has now grown into young manhood—seems to us part and parcel of Honolulu. Its idealism is of the very essence of the spirit of love and brotherhood, taking in every race and nation, irrespective of creed or color, of the great Pacific area. The Pan-Pacific Union is an object lesson of what must come to the whole of humanity if the world is to be saved. The P. P. U. was the means of our meeting many fine people of other races. Its weekly luncheons are among the most treasured memories of our island visits. The conferences at which it was my privilege to represent my country brought us into touch with a still wider acquaintance meeting at these gatherings many distinguished people from all over the Pacific.

Then there were those most enjoyable "At Homes" at Washington Place during the time of Governor and Mrs. Wallace Farrington. The final reception especially lingers in memory—the Hawaiian band in the grounds; the scores of guests; the brilliant

flower decorated rooms; the ladies choir; the Governor and Mrs. Farrington—adorned with lovely leis—standing to receive their guests—made a picture of life in Honolulu that will not soon fade away.

Of almost equal interest were the receptions at the Japanese Consulate when Consul-General Akamatsu and his charming little wife held office. The oriental courtesy and hospitality of host and hostess; the tasteful floral decorations; the dainty afternoon tea, served by dainty little maids; the friendliness and fascination of those from another land—always made a special appeal to us, and helped to make us feel that after all we were indeed all children of One Heavenly Father.

I cannot conclude these few Memories without a reference to what is perhaps the best memory of all—the memory of a good and honored friend—the esteemed editor of this Annual for nearly sixty years, Mr. Thomas G. Thrum. When last we heard he was failing fast, and perhaps ere now our good friend has passed "to where beyond these voices there is peace."

If so we will miss his sweet presence, for we will not see his like again. Aloha! Aloha! and once again, Aloha!

THE LURE OF WINDWARD OAHU

By Will J. Cooper

HAD the discovery of Hawaii been delayed about half a century, the world would probably never have heard of Honolulu. Instead, the metropolis of the islands, and the "Cross-Roads of the Pacific" would very likely have developed along the shores of Kaneohe Bay, on the opposite side of the Island, and be known by some quite different name.

But the discovery came before the day of the steamship. And so it came about that a city gradually grew up about the harbor

of Honolulu because this was favored by sailing captains for reason, largely, that it was on the lea shore for the greater part of the year. With the normal trade winds blowing from the land vessels were not likely to be piled up on the reef in case of a dragging anchor or other mishap.

Honolulu, in the early part of the last century, was not especially attractive. Except in the valleys back of the town, the vegetation was sparse owing to inadequate rainfall. Much of what now constitutes the city was a desolate plain. With subsequent development of adequate water for irrigation, this condition has of course changed, but as a place to live it is still lacking the natural attractions that other parts of Oahu possess. For one thing, it is considerably warmer than is the windward side.

Until recent years white residents of Honolulu have not for the most part realized these facts. Lack of adequate roads and means of transportation were largely responsible. People did not get away from Honolulu often enough to learn just how different other sections are. But in the last few years there has been an awakening. Good roads and many automobiles have brought home to thousands the climatic attractions of "the other side of the Pali."

The lure has become so strong that many already have established homes on the Koolau side of the mountains. There is small doubt that this tendency will rapidly increase. There is every reason to believe that the time is not far distant when the fashionable element of Honolulu's population will tunnel through the mountains and establish for themselves on the slopes on the other side, more pleasant and comfortable homes than they have yet known.

But what is this urge that is beginning to make Honolulu people dissatisfied with their homes under Punchbowl and Diamond Head? It isn't easy to describe, because it is made up of many elements. But one begins to sense some of them in the awe-inspiring beauty that overwhelms one at the Pali brink—a beauty that in time becomes familiar, perhaps, but never commonplace. Probably few who have gazed have not dreamed of living in that sublime picture; perhaps in a palace, perhaps in a cottage. Either finds a fitting place in the panorama.

And you hear the expression—"the air is different." And there is no doubt about that fact. It is different. You note it before you reach the Pali gap. It is not only the cooler temperature, but

there is an invigorating quality to it that seems to sweep away the burdens and cares of the city. Nor is this due simply to the rarified air of elevation, for it persists as one descends to the eastern shore line and turns northward along the coast. It is the wine of the sea that sweeps in to one's eager lungs from thousands of miles of unsullied space—from the chalice of the gods! Yes, the air is different.

The old Hawaiians knew the lure of windward Oahu. At the time of the coming of the white man the mass of the native population lived in the narrow strip between flashing reef and frowning mountain wall, extending from Waimanalo to Kahuku. It was a densely populated area, but it was well suited to support such a population. The great coral reef extending almost its entire length supplied in never failing abundance the squid, mullet, akule and other fishes so important to native life, as well as the limu and salt to garnish them. The strip of low land just back from the beach was subdivided into thousands of taro patches, wonderfully engineered so that all received their necessary proportion of the water brought down from the valleys in skilfully constructed ditches.

Back of the taro lands, a strip of kula, or upland, provided place for growing the sweet potatoes and sugar cane; while the deep cut valleys supplied sheltered space for the bananas and miscellaneous herbs that rounded out the old Hawaiian dietary.

And the vast wall of mountain at the back of all the rest. Here ancient Hawaii obtained his timber for canoes and for house construction and for domestic implements. And in these mountains he found shelter in times of danger. Alike beneficent and menacing, the mountains were awe-inspiring to the ancients as they are to the white man today. They were full of spirits both friendly and unfriendly, and the deep gorges were the homes of various demi-gods with whom ancient mankind was obliged to contend.

But with the coming of the white man to the Islands, the lure of the reef, and of a fruitful shore, and of the mountains, lost their potency for the Hawaiian. The garish spell of the white man's city on the south side of the island has been a stronger charm. A pitiful remnant of the thousands of natives who once occupied this favored shore still live on the ancestral homesteads and glean their livelihood from the sea and from their taro patches as did their fathers. But for the most part the old kuleanas have

been deserted, or have been absorbed by large estates which surround them.

And so for a century or more the Koolau section of Oahu has played but a minor part in the affairs of the island. Cut off by the impassable mountain barrier, and by two all but impassable roads, the most beautiful district has dreamed through the years. Unsuited for the greater part to sugar and pineapple culture, there was little else of commercial importance to attract the attention of the white man.

But now it is being rediscovered. Hundreds of cottages now dot the best beaches, owned for most part by people who work in the city. Many of these are but week-end or vacation homes, but each year sees additional permanent residences erected and occupied by either daily commuters to the city or by those who have taken up various forms of light agriculture. These are the ones who have felt and yielded to the lure of windward Oahu. They are the pioneers of the hosts that tomorrow will repeople the land.

COMMERCIAL AVIATION IN HAWAII

By Arthur H. Armitage

NOVEMBER 11th, 1929 is a day long to be remembered in the annals of transportation in Hawaii, for on that day there was inaugurated the first regular commercial air transportation service between the various islands comprising the Territory of Hawaii.

It is a long step from the days of the early sailing vessel to the modern airplane, with the paddle steamer, the sailing auxiliary, the low powered screw steamer of the end of the last century, and the high powered electrical drive steamship of today in between; but in a Territory, the component parts of which are separated by open sea, it is only logical to expect the population to be more than interested in means of transportation, which provides speed combined with safety and comfort.

Hence, with the inauguration of commercial air transportation, the people of Hawaii were enthusiastically receptive. They had seen for quite a number of years prior to that time airplanes of the U. S. Army and Navy make flights from their central bases on Oahu to the outlying islands, they had been thrilled by the exploits of Commander John Rodgers of the U. S. Navy in his flight from San Francisco to ultimately land on Kauai and impressed by various successful and partly successful flights from the mainland to Hawaii including that of Smith and Bronte flying privately from the coast to land on Molokai short of fuel; to be shortly followed by the entirely successful flight from the coast of Lieutenants Maitland and Hegenberger of the U. S. Army; Kingsford Smith of the Southern Cross fame enroute to Fiji and the Antipodes; also Art Goble and Martin Jensen winners of first and second place in the Dole flight; so that aviation, at least from a spectator's point of view was nothing new.

From the point of view of the travelling public and of the Inter-Island Airways, Ltd., the locally owned and operated air transport company which is a subsidiary of the Inter-Island Steam Navigation Co., Ltd., the pioneer company in inter island transportation, the most important factor in establishing an air service, was safety; hence, after investigating many types of planes and taking into consideration the fact that all flights between the islands are over water, twin motored Sikorsky Amphibion planes, Type S38, were selected, due principally to their ability to alight and take off from either land or water, their rugged construction and the fact that they are able in case of necessity to fly on one motor thereby minimizing to the utmost degree the possibility of forced landings.

So on November 11, 1929, commercial inter island air transportation with three planes of the type mentioned became an accomplished fact, for in the presence of Governor L. M. Judd, the members of the Territorial Air Commission and a large gathering of prominent island people, the christening ceremonies at John Rodgers Airport were performed by Miss Betty Judd and Mrs. F. J. Halford, following which the planes took off for their initial flight to Hawaii, Maui and Kauai.

It has been mentioned that the U. S. Army and Navy had been operating airplanes for military purposes for some years prior to this time, which pre-supposes proper landing facilities on all islands. It is worthy of mention that only one year before the inaugura-

tion of commercial air service all landing fields other than those at the Army and Navy bases on Oahu were more in the nature of emergency landing fields than developed airports. Even John Rodgers Airport, Honolulu's commercial field, was far from being in its present good shape; and on the island of Maui, the Inter-Island Airways found it necessary to purchase land and develop an airport at its own expense, although since that time the Territorial Government has taken over that property.

In entering the business of air transportation, the natural hesitancy of the general public to venture into the air was one of the obstacles to be met and overcome, so to cope with this situation the Airways Company purchased a Bellanca plane and operated same on short sightseeing flights over the city of Honolulu and around the Island of Oahu at moderate rates in order to permit as many people as possible an opportunity to experience the thrill of flying and thereby become air-minded. The result of these sightseeing flights and vast amount of preliminary work is, that air travel hitherto looked upon more or less in the nature of an adventure, is now an accepted fact and an everyday means of rapid and convenient transportation.

In July, 1931, the company found it necessary, due to constantly increasing demand by the public for this mode of transportation, to purchase and place in operation a fourth Sikorsky plane of the same type as the original ships.

From the inception of the service, a regular schedule to outside islands has been maintained—daily except Sunday to Hilo and Upolu on the Island of Hawaii, also daily except Sunday to the Islands of Molokai, Lanai and Maui and thrice weekly to Kauai.

It is interesting to note as an illustration of the acceptance of air transportation by the people of Hawaii that for the two years, 1930 and 1931, that the planes flew 539,134 miles and carried 19,659 passengers during that period.

When it is considered that the total population of the Territory is some 365,000 people, these figures constitute a remarkable showing of which the airways company can point with a great deal of pride.

Passenger transportation is of course the mainstay of the service, but consideration must be given also to the carriage of express matter. In many cases the advantage of the facility thus offered has proved itself of untold value and on more than one occasion

a real service has been rendered in the prompt delivery of medicinal aid and medical assistance which would not otherwise have been so promptly available.

It is hoped that the next step will be a decision on the part of the U. S. Postal Authorities to use the plane service for the carriage of first class mail matter thereby speeding up business between the islands and placing the Territory of Hawaii on an equality with the mainland as regards mail service.

After two years of successful operation commercial inter island transportation by air is now an accepted fact and is here to stay and the men who have put their time, their energy and their money into it are to be congratulated for their foresight, their courage and the spirit of enterprise they have displayed.

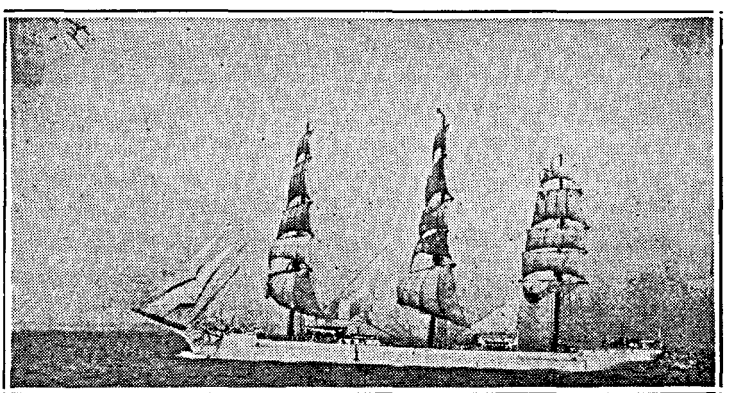
THE SAILING SHIP AND HAWAII

By Arthur A. Greene

WHAT the covered wagon was to the American West the sailing vessel was to Hawaii. Originally it was a fulfillment. Now it is a symbol. The days when it was vital to the history and well-being of these Islands are now as remote as are those of the creaking wain and the multiple ox-teams that threaded their way across the Great American Desert. The first of them made trails across the wilderness of the Pacific just as their contemporaries, the prairie schooners, blazed the way through the continental wilderness. They were the means of bringing into contact the far places of the earth—the wedding to the old established order of civilization with the pagan and crude culture of a different world. When Hawaii shall have fully matured it would be most fitting that a delicately executed bronze effigy of one of the old "windjammers" of the early Nineteenth century be erected on Honolulu's waterfront to commemorate the part these antiquated argosies had in the making of Hawaii.

They are all gone now, save that once a year a lonely full rigged ship, the glorious old *Tusitala,* calls at this port, thanks to the generosity of a sentimental magnate of steel, merely as a memorial of a past time, and that at long intervals a schooner comes into port to remind us that the traditions die hard. Insofar as any practical application to the Machine Age is concerned these "last leaves" are as incongruous as would be the transportation methods of Sidon and Tyre.

Yet it is well that the days of sail be not forgotten for we who thrive because of the elaborate floating palaces that have succeeded the old vessels, with their electrical drive, their radio and all the other appurtenances of modern navigation, should



pause occasionally to do tribute to the time of beginnings.

Out of the mists of legend and tradition there come to us stories of a day when Spanish galleons, groping their way from the South American coast to the Philippines in the Sixteenth century, made haven at these shores. But the best authority scouts this and it seems altogether probable that the first ships, as we understand them, that Hawaiians ever saw were the *Resolution* and the *Discovery* in which Captain James Cook and his exploring expedition reached the Islands in 1778.

In Samoa to this day foreigners are known as "papalagi" which liberally translated means "heaven bursters". The Samoans of Cook's day looked upon his monsters of the sea, with their huge expanse of white sail wings, with religious awe.

They believed them to be divine transports from the upper world and that the strange beings who manned them were those who had broken out of heaven to revisit the scenes of their earthly probation. Hence "heaven bursters".

Apparently it was in some such way that the Hawaiians of the late Eighteenth century looked upon the *Resolution* and the *Discovery,* and the men who manned them, for they deified the English navigator who so badly requited them although they finally took his life when they discovered the imposition and that their visitors were merely mortal, and so mortal.

Following Cook came a few scattering British and American skippers seeking profitable adventure in the fur trade of Northwest America and calling here for the replenishment of food and water. In 1792 came Captain George Vancouver, who had been a youthful officer with Cook fourteen years before, under commission of the British government with the *Discovery* and the armed tender *Chatham* to complete the survey of the Northwest American coast begun by Cook.

Here was the greatest benefactor of the Hawaiians of the premissionary days. He brought them orange trees, grapevines, cattle, horses, sheep and goats.

He also brought to the chiefs some idea of the might of the British Empire, then in its infancy, and a proffer of Church of England missionaries which, unfortunately he could not fulfull. As a demonstration of the esteem which he established for himself among the chiefs he was offered the cession of the Islands but he found it advisable to decline the offer. Had he accepted and had the cession been ratified the entire history of Hawaii might have been far different. It was one of those strange tricks that fates play upon peoples and nations.

The Northwest fur trade, which attracted such men as John Jacob Astor and the eccentric "Lord" Dexter next engaged the attention of shipowners and captains in connection with the "Sandwich Islands". Then came the whaling industry in which Nantucket and New Bedford vied for two generations. This was the half-way point, the crossroads of the Pacific, then as now, and the whalers came here in great numbers for fresh water, general supplies and a few days or weeks of "whoopee" for Jack ashore. Whale hunting has left an indelible stamp on the Islands.

Many families of financial and social prominence here had their foundation in this adventurous commerce. At times a number of local capitalists engaged in the enterprise and there were numerous Hawaiian whale ships in the trade during the two decades preceding the Civil War and for a time afterwards. But it is not of record that their ventures were highly successful and the business gradually waned. But as a rendezvous the Islands were favored until well into the Eighties. At one time, so the old chroniclers tell us, there were as many as 145 whalers at the port of Honolulu at one time and Lahaina on Maui on occasion exceeded that number.

There were "goings on" in those days and the records include riots ashore and many conflicts of authority between the missionary and monarchial authorities and the captains of the ships. Many of the established families of Hawaii trace their way back to these whaler captains and their crews and are proud of the union of Yankee blood and Hawaiian blood. The whaling waxed wonderously during the middle of the last century and its "lays" made fortunes or the foundation of fortunes both in New England and Hawaii, but the Civil War with its Confederate commerce raiders and the discovery of oil in Pennsylvania and the rise of the Rockefellers set the seal of doom upon it. It fell away in the sixties, dwindled in the seventies and expired ingloriously in the eighties.

In the meantime the sailing ship had played a major part in the history of the Islands. Following the discovery of gold in California in '48 the windjammers carried Hawaiian products to California to feed the argonauts. It is of record that many cargoes of Hawaiian wheat and potatoes, meat and other commodities were sent to the West Coast for the treasure seekers. Later there were regularly established lines of sailing packets between Honolulu and San Francisco which brought an exchange of commodities and passengers between the Islands and California, the crude steamers of the day meanwhile competing under a handicap for the business.

Even until the close of the first decade of the present century the sailing ship played an important role in transporting Hawaii's sugar crop to the Mainland, and even at that late date there were occasional passengers. Some residents of the Islands still of

middle age recall passages between Diamond Head and the Golden Gate and there are even those who have been around the Horn.

To tell the story of the influence of the sailing ship on Hawaii would require a volume. It would be a stirring and pungent volume and perhaps some future chronicler will tell it. I started out to do just that thing but the exigencies of business prevent. This is the most sketchy review. It is woefully incomplete and I fear the pundits will call it inaccurate. It may be so. For I am of a later generation in Hawaii and can merely try to evocate some of the scenes and incidents of a period that now seems as remote as the thousand ships launched in Helen's cause. The period of the sailing ship in Hawaii was a picturesque and eventful one. It will live in song and story and on the painter's canvas forever.

RETROSPECT FOR 1932

By W. F. Sabin

VOLCANIC fireworks ushered in the New Year of 1932 for Hawaii.

In Kilauea's pit of Halemaumau some 200 lava fountains played, though not for long. Dr. T. A. Jaggar, volcanologist, said an eruption of Mauna Loa was considerably overdue and Kilauea, on Mauna Loa's slope, should be performing again soon. Pele, goddess of fire mountains, may be reserving spectacular doings for 1933.

It was an eventful year, with people on the mainland, more especially lawmakers at Washington, expressing doubt as to this American territory being able to govern its affairs properly, and suggesting a change to some form of military or commission government; with the annual maneuvers of the American fleet in these waters; with a special session of the Hawaiian legislature, and a second special session thereof; with solving problems of unemployment, clipping budgets, and carrying on main industries under price and marketing disadvantages; and with the strenuous political campaigns, first for the primaries of October 1 and then for the general elections of November 8.

As this is written the Christmas "Shop Early" slogan or advice is apparently being heeded and there is in evidence a feeling that the long period of universal business depression has almost worn itself out and that conditions, having shown slowly growing improvement for several months, will accumulate betterment speed for a really prosperous New Year.

Police and related conditions in Honolulu that worried national lawmakers, whose anxiety or political ideas were in no way diminished by the exaggerated reports of less reliable newspapers on the mainland, were remedied by the legislature, called primarily for that purpose. Mistrial of five defendants in a rape case directed attention, for one thing, to the need of making over the police system.

Then, in January, one of the assault defendants, on parole, was abducted and shot to death, the husband of the rape victim

testifying at the trial of himself and associates that he had held the death gun. Indictment for second-degree murder added to the criticism of local conditions in certain mainland quarters, and when a verdict of manslaughter was returned, instead of "not guilty" as many considered appropriate in an "honor slaying", for a little while it seemed that certain congressmen would rush some sort of measure to do away with home rule in Hawaii. More of this matter appears on another page under "The Killing of Kahahawai."

Ignorance of conditions in Hawaii (geographical, historical, social, inter-racial, cultural, educational, and all other conditions, in fact) made many mainland newspaper reports of the Hawaiian situation very absurd, and worse than absurd where it was evident that articles were inspired by racial prejudice.

But "public opinion" soon had the other side of the story of Hawaii to consider, for many correspondents, who were sent to the islands to cover an expected re-trial of the rape defendants and the trial of those indicted for the killing of one of the men charged with the criminal assault, found much to write home about, while waiting on prosecution and court procedure, that was greatly to Hawaii's credit. None found conditions here as alleged in an over-sensational element of the mainland press.

Much, of course, was written for mainland consumption by penmen of Honolulu and the rest of the territory, by way of denial, correction, explanation and illuminating information. Magazine writers also came. People abroad, who had lived in Hawaii, contributed to the mainland publications their testimony for Hawaii.

On April 5 Secretary of the Interior Wilbur said of the Richardson report that it substantiated his opinion that affairs in Hawaii were handled on as satisfactory basis as in most other parts of the United States; that the people of Hawaii exhibited as high regard for law observance and displayed as much capacity for self-government as did citizens of the rest of the country; that a specialized situation called for some special handling, but the ability and character of the citizens of Hawaii gave him assurance that such trying situations would be adequately met.

Special session legislation made something altogether new of the Honolulu police department, with an appointive instead of an elective head; the board of prison directors was empowered to appoint and remove the Oahu prison warden, and changes for the

better were made for the selection of jurors and for the prosecution of criminal cases.

Honolulu was caught with great laxity in its law-enforcement system when the Massie tragedies focussed outside attention on Hawaii, and some circumstances of preparation for the trial of the criminal-assault defendants were susceptible to severe criticism, but whether the five accused would have been found guilty under other conditions of police investigation, is a matter for speculation. The assault and the subsequent killing of one of the accused can hardly be said to have been avoidable even under perfect policing.

For a while there were reports that the American fleet would cancel maneuvers in Hawaiian waters; then, that if the fleet came there would be no shore leave; the people of Hawaii naturally resented the suggestion, because of an unusual crime, that Hawaii was not safe for officers' wives; the occurrence was as much regretted and condemned in the islands, as elsewhere, except that islanders were aware of the extraordinary nature of the happening, whereas people abroad, knowing little or nothing of Hawaii, believed much of what they read in false accounts, one mainland newspaper even picturing the Hawaiian as lying in wait in the jungle to spring upon every woman setting foot upon Hawaii's shore.

Newspaper men and women, magazine writers, mainland lawyers and special investigators added something to a year's travelers' list less large than usual. It was said that mainland reports of alleged conditions here kept many tourists away. Old Man Depression is not likely to concede many stay-aways on the score of their being afraid.

During the political campaigns the various candidates said little of the business depression except when they wished to impress their hearers with the idea that their election, or a victory for their party, would hasten the return of prosperity. There are some besides Republicans who believe that the radio reports from the mainland of Roosevelt's piling up votes, long before the polls closed here, had much to do with the local Democratic victory.

THE KILLING OF KAHAHAWAI

An element of the mainland press blazoned many untruths concerning law and order and social conditions in Hawaii, during

more than the first half of the year, its misstatements and exaggerations accumulating with reference to a sexual assault in September of 1931 and the killing, in January, 1932, of one of the five rape case defendants. Home rule in Hawaii territory was threatened; bills were introduced in congress looking to some form of commission government for the islands, one, the Guinn Williams bill, seeking to provide a senate of nine, appointed by the President, two of whose members would be the chiefs of the army and navy forces on duty in the territory.

While there was never a crime problem in Hawaii of major proportions, an unusual offense in Honolulu, by no means so unusual on the mainland, afforded opportunity to certain political interests to agitate military or commission control here instead of local self government.

Came Seth W. Richardson, U. S. assistant attorney general, who reported: "We found in Hawaii no organized crime, no important criminal class, and no criminal rackets. We found no present serious racial prejudices. Our tabulations do not show that crime, including sexual crime, can properly be laid at the door of the Hawaiian. The amount of sex crime in the territory seemed less than reported from many cities and localities of similar population on the mainland. We found, however, ample evidence of extreme laxity in the administration of law-enforcement agencies."

To correct law-enforcement troubles the governor called the legislature to special session. Recommendations by Richardson to the effect that the President appoint a territorial police head, to the end that a territorial constabulary might be formed, brought no action, since it was not necessary. The Hawaiian legislature stripped the elected sheriff of important powers, creating a police commission to appoint a chief.

Concerning the assault and the killing of one of the defendants several months later: The young wife of Lieut. Thomas H. Massie, U. S. N., one night in September, 1931, leaving a dance at an inn, alone on a dark road, was seized by a number of youths, thrust into an auto and taken to a lonely spot near the waterfront where, she charged, most of the five beat and criminally assaulted her. The police arrested five suspects, the next day: Horace Ida and David Takai, Japanese; Benny Ahakuelo and Joseph Kahahawai, Hawaiians, and Henry Chang, Chinese. Mrs. Massie

identified four, including Kahahawai, as her assailants.

Trial began November 16 and after three weeks ended in a mistrial, the jury failing to agree after nearly 100 hours of deliberation. Later, one of the defendants, Ida, was seized in the street by about 20 men, driven into the country and severely beaten, for the purpose of forcing confession, it was supposed. On Friday morning, January 8 of this year, Joseph Kahahawai, out on bail since the jury was deadlocked, was abducted, persuaded into an auto by a false warrant, from in front of the Honolulu judiciary building, taken to the home of Mrs. Granville Fortescue, mother of Thalia Massie, where he was shot and whence his stripped body, wrapped in sheets, was taken by auto toward the seashore, possibly for disposal in the ocean, during which drive, having been notified of the abduction, the police halted the car and arrested Mrs. Fortescue, who was at the wheel, and Lieut. Massie and E. J. Lord, an enlisted man. Later Albert Jones, another enlisted man involved, was apprehended.

All four, indicted for second-degree murder, came to trial before Judge Charles S. Davis on April 4, defended by Thompson and Winn of Honolulu, and Clarence Darrow, famed on the mainland, who was assisted by George S. Leisure of New York and Lieut. Louis Johnson, U. S. N., the latter appointed by the navy. Barry Ulrich assisted Prosecutor John C. Kelley.

All sessions were crowded. People paid servants or unemployed opportunists to sit through the night, outside the court, to reserve seats for them. Numerous mainland newspapers and press agencies had sent special correspondents.

Lieut. Massie took the witness stand on April 14. The slayer of Kahahawai had not been named in the indictment of the four. The young husband testified that they had tricked Kahahawai to the Fortescue house to get him to make a confession. The lieutenant said he stood over the Hawaiian, who was seated, pointing a gun at him, to frighten him into an admission of the assault of September 12. Finally, testified Massie, Kahahawai said "We done it", whereupon, Massie said, in a flash picturing what his wife had suffered, he experienced a sudden mental blank, upon recovering from which he was told he had shot and killed Kahahawai.

Darrow called Mrs. Massie to the stand for testimony as to what she had been through, to evidence reasons for her husband's

mental state. On April 29, after being out 49 hours, the jury found the four guilty of manslaughter, recommending leniency.

This verdict was resented by some national lawmakers and others, and by certain newspapers, and opinions differed in Hawaii as elsewhere, and the threat against Hawaiian home rule was suddenly more grave. Hawaii's degelate to congress, Victor S. Houston, recommended to Governor Judd that he exercise his pardoning power.

On May 4 a ten-year sentence was pronounced by Judge Davis. This sentence was commuted to one hour by Governor Judd. Effective only in that state, Kentucky's governor signed a pardon for Lieut. Massie, a Kentuckian.

Clarence Darrow later said: "Most opinions regarding conditions in Hawaii which have been circulated on the mainland are just poppycock. There is no racial problem whatever. People are just as safe in Hawaii as in any mainland community. Whatever feeling exists may be class feeling, but it is not racial feeling. I am entirely satisfied that Hawaii should be left alone." Congressman Britten characterized the suggestion that Hawaii be placed under military rule as "ridiculous."

WORK OF THE LEGISLATURE

Two special sessions of the legislature were held in 1932, the first beginning January 18 and the second beginning March 29 and ending June 3. Tax laws revised and a program of economy in government enacted.

Chief among the new laws enacted were the following:

Providing for reorganization of Honolulu city and county police department, with control under a non-political police commission of five, the first commission appointed by the governor, later by the mayor; the commission to appoint a chief of police and subordinates.

A public prosecutor, for Honolulu, appointed by the mayor for two years, who may be removed by the attorney general with governor's approval.

Bank excise tax measured by net income computed at the rate of 10 percent.

Creating board of prison directors to control all territorial prisons and prison appointments.

Re-establishing certain election, judicial and taxation district boundaries, for co-ordination.

Amending judiciary statutes, providing that in jury trials all questions of law be settled by the court and all questions of fact by the jury; the court limiting activities of evidence and argument to relevant and material matters.

Authorizing appointment by governor of commission to go to Washington, if necessary, to assist the delegate in congress in preparing information to present fully the territory's position in matters before congress. (The governor, who is chairman, appointed Former-Governor Wallace R. Farrington, Judge A. G. M. Robertson, Judge James L. Coke and Former-Mayor John H. Wilson).

Making compulsory a reduction of 10 percent in salaries of all territorial and county and city and county officers and employees.

Providing that each county receive revenues from real property tax, gas tax, and automobile tax; the territory receiving all revenues from income tax and business excise tax.

Elimination of taxes against personal property, substituting excise tax on business measured by operating cost plus profit or minus loss.

Excise tax on public utilities; minimum rate of five percent.

Increasing income tax rate levied against corporations from five to 7½ percent.

Increasing tax rate on insurance companies from two to 2½ percent.

Motor fuel sales tax of three cents per gallon; proceeds for highways. Went into effect April 1.

A revised public education budget was enacted by the first special session, effecting biennium economies amounting to $2,419,324.78 as compared with the budget authorized by the regular 1931 session.

Under an act of the first special session a revision of selection of trial jurors will take effect with the beginning of 1933. First judicial circuit list is reduced from 1000 to 650, with no requirement as to equal precinct representation; qualifications are raised, and exemptions restricted. Jury commissioners are empowered to summon prospective jurors for examination.

SUGAR AND PINEAPPLES

Reports made early in 1932 gave the 1931 sugar harvest as 993,787 short tons, representing $65,000,000, a new tonnage but not a dollar record. The Hawaiian sugar industry employs about 30 percent of the population. The crop represented 60 percent of the combined dollar exports. It was harvested from approximately 138,000 acres (Hawaii had about 252,000 acres planted in cane last year).

The price of sugar reached the lowest figure ever known. On May 31 the New York price of raw sugar was 2.57 cents per pound. As the year advanced the price improved.

Hawaii's main industry experienced a trying year from a business point of view, but with increased crops and a gradual reduction of operating costs, most sugar plantations weathered the storm.

Of 1931's record production, nearly a million tons, one-fifth was the contribution of Maui island, 201,906 short tons, a new high output for Maui. A share of the credit for increased yields and reduction of costs at Olaa, Hawaii island, was due to substituting the Java seedling.

Much of the unemployment problem in the territory was taken care of by the sugar plantations; as one relief measure, they sent back to the Philippines many indigent Filipinos who were unable to obtain work because of the let-down in other industries, particularly the pineapple industry. Our sugar plantations pay their employees higher rates than do sugar plantations anywhere else.

December 5-8 the Hawaiian Sugar Planters' Association held its fifty-second annual meeting in Honolulu. John E. Russell, president of Theo. H. Davies & Co., was elected to succeed John W. Waldron as the association's president.

In the special session of the legislature, early this year, laws governing co-operative associations were changed to tally with federal legislation, particularly the Capper-Volstead act and the agricultural marketing act, opening the way to the organization of a pineapple co-operative association.

Later in the year Hawaii's seven major pineapple growers and packers formed a producers' co-operative association to stabilize the industry by balancing production with demand, providing orderly marketing. The 1932 pack maximum was set at 5,295,851. Last year's was 12,800,000. A million-dollar advertising campaign was authorized.

The launching of the co-operative association was considered the most important development in the industry since James D. Dole proved the commercial possibilities of canned pineapples 29 years ago. The production of 1931 was far in excess of consumption requirements and with an already overloaded market in canned goods the pineapple industry was placed in a perilous position; prices fell to the lowest on record; fruit was wasted and planting curtailed.

This condition in the pineapple industry decreased taxable assets, lowered the incomes of many and added largely to the unemployed.

Large increases in production in the last two or three years, so much more than the level of preceding years, coupled with reduction in the purchasing power of consumers, due to the general business depression, resulted in a great accumulation of unsold stocks.

A heavy carry-over marked the opening of 1932 but, with packs curtailed, it is thought that warehouse stocks may be disposed of before the packing season in the summer of 1933.

EVENTS IN OCEAN TRAFFIC

Mariposa, first of three new smart ships of the Matson-Lassco-Oceanic Lines, whose service links California, Hawaii, the South Seas, New Zealand and Australia, reached Honolulu on February 8. She has a length of 632 feet, beam of 79 feet, displacement of 26,000 and gross tonnage of 19,000, with 20½ knots speed. Her sister ship, the Monterey, arrived from San Francisco on her maiden voyage on June 9, and the third of the great trio will be in service early in 1933.

After 32 years service on the San Francisco-Honolulu-Australian run, the Sierra was withdrawn in March. The speedy Malolo was placed on the Hawaii-California run regularly, instead of operating on an "open-jawed" schedule. S. S. City of Los Angeles, on the local run since 1922, and the Calawai, a regular visitor since 1923, were recently withdrawn, their trade being cared for by new and larger and speedier ships.

On the last lap of her initial world cruise, the Canadian-Pacific liner Empress of Britain arrived from Yokohama on March 12, the largest commercial liner ever to enter Honolulu harbor (displacement, 42,500).

On a training cruise with 59 cadets, the German cruiser Karlsruhe spent nine days in Hawaiian waters.

United States coast guard cutter Itasca left June 10 on her summer tour of duty in the north, from the Aleutians to the Pribloffs, representing American law and taking medical aid, mail and transportation facilities to isolated persons, and protection to animal life and fisheries.

Japanese training ship Nippon Maru was in Hawaiian waters from May 20 to June 11.

NOTES OF ARMY AND NAVY

Annual maneuvers of the American battle fleet in Hawaiian waters in February and March brought many old friends of the islands to Honolulu and other ports of the territory. Fifty-two ships were engaged in an army-navy game involving attack and defense strategics in which air and land forces participated. First liberty ashore at Honolulu was permitted February 12. Extensive plans for the entertainment of the armada were made in Hilo, flotillas taking their turns entering the harbor. In Maui waters officers and men assisted in the celebration of the Washington bicentenary and early in March the fleet departed for "attack" on Pacific coast ports of the United States.

Admiral F. H. Schofield, commander-in-chief, acted as official umpire of the maneuvers. Admiral R. H. Leigh was commander-in-chief of the battle fleet that "invaded the islands."

U. S. S. Nevada, during the fleet's maneuvers, was the first American battleship ever to be drydocked at Pearl Harbor navy yard.

Sixteen-inch rifles, guarding Pearl Harbor entrance, were fired in first actual target practice on May 13.

At Wheeler Field the army continues the development of a great flying plant and, between the Rodgers airport and the Pearl Harbor entrance, is to be created an army air base, 2200 acres, thus leaving Ford island free for naval operations.

Bids will be opened early next spring for $1,000,000 worth of navy contracts at Pearl Harbor.

Army and navy participated in the third annual Hawaiian Products Show, Pier 11, Honolulu, beginning May 27.

September issue of U. S. Navy Review published an article

by Captain Charles Conrad, supply officer at Pearl Harbor, entitled "Economic Value of the Navy to Hawaii", citing expenditures to show that for five years, starting in 1926, the navy's maintenance cost here was $41,788,394.97, of which over $10,000,000 went as pay to civilian labor; over $23,000,000 for materials and miscellaneous, and nearly $8,000,000 for pay and allowances of officers and enlisted men.

Six navy flying boats, August 18, flew to French Frigate Shoals, 550 miles, and return.

The army fokker "Bird of Paradise", first plane to fly from the mainland United States to Hawaii (arriving early in the morning of June 29, 1927) is to be placed near the entrance of Wheeler flying field, Oahu, as a monument.

FLYING OVER HAWAII'S ISLES

During joint maneuvers in February, 99 planes flew a total of 34,800 miles in 3,408 flying hours; no casualty and but one forced landing.

Hawaii's first inter-island sightseeing tour by air was made June 12 with a fleet of three Inter-Island Airways planes, a one-day tour, with automobile trips on Kauai island. Maui island was the next air excursion's objective, the flight being over the islands of Molokai and Lanai, and now, besides the Airways regular service, all Hawaii's larger islands may be viewed on frequent special air excursions.

During the year ending June 30, Inter-Island Airways flew 264,460 miles, representing 2,721 hours, and carried 8,426 passengers.

SOME MATTERS OF BUSINESS

Retail and wholesale trade in Hawaii is very largely dependent on the condition of the two key industries of the islands, sugar and pineapples, and with the ups and downs of the main businesses, the great majority of other enterprises must rise and fall, so, with sugar striving to "get by" under low prices, and pineapples overproduced in a low and not especially hungry market, the general miscellaneous business of the territory has experienced a difficult year, which, however, appears much more bright in its closing than it was at its opening.

Territory, city and county and county governments have joined

in unemployment relief. Unlike conditions in the mainland United States and in most European countries, Hawaii is fortunately free from any very serious unemployment problem. Projected public works, that had to be accomplished at some time, have been advanced to immediate performance, that such operations might furnish jobs, especially to those with families. Citizens took heed of the many little odd jobs around house or garden or garage, that they may have purposed performing themselves, eventually, and gave out tasks that circulated dollars and fed the hungry. Vacant-lot vegetable gardens proved one means of practical assistance.

Notwithstanding the startling number of bank failures in the mainland United States (4000 since 1929), there has been no bank failure in Hawaii territory. Banking institutions of the islands have experienced no serious difficulty such as would indicate apprehension on the part of the banking public.

Late figures reveal that the cost of government in Hawaii is nearly thirty-one millions a year, or over $80 a head, divided as follows: Territorial, $12,502,314.62; city and county, and counties, $11,764,332.22; territory gives federal, $6,672,252.33; total, $30,938,899.17.

Less than last year's budget by $237,000, the board of supervisors of the City and County of Honolulu placed the 1932 expenditures at $2,498,000. In June the supervisors approved securing the Gamewell police flashlight and fire-alarm system costing $294,000.

LISTENING-IN AND TELEPHONING

Federal Radio Commission granted application of Honolulu Advertiser's station KGU for change of wave length from 940 to 750 kilocycles and for increase in power from 1000 to 2500 kilowatts. Through KGU and NBC, Hawaii listened in on the national capital's program commemorating the 200th anniversary of the birth of George Washington.

Mutual Telephone Company on March 1 inaugurated radio telephone service to Europe, with basic rate of $45 for three minutes, or less, and $15 for each additional minute.

Late last year the Mutual installed for trans-Pacific radio telephone service, furnishing communication with mainland United States, Canada, Mexico and Cuba. In March, 1932, the service

was extended to include the principal South American and European countries and Bermuda.

ELECTIONS BRING DEMOCRATS

General elections, November 8, proved a great victory for the Democrats in Hawaii.

Victor S. K. Houston, Republican, for six years Hawaii's delegate to congress, running for re-election, was defeated by Lincoln L. McCandless (29,430 to 27,016 votes).

Republican Mayor Fred G. Wright narrowly won re-election, his Democratic opponent, John H. Wilson, being but 267 behind.

Of the seven Honolulu supervisors only two are Republicans.

The Democrats now have five times their 1931 strength in the house of representatives, ten members to the Republicans' twenty.

Three new Democrats went to the senate.

Honolulu treasurer, D. L. Conkling, Republican, and Supervisor M. C. Pacheco, Democrat, were elected outright in the primaries, October 1.

From the Republican incumbents the Democrats won the Honolulu city and county offices of clerk, auditor and sheriff.

ODD BITS OF WEATHER

Country districts of Oahu island suffered from floods in February; families were driven from their homes and small farms were damaged. Waialua and Wahiawa recorded the heaviest rainfall. The Wahiawa dam overflowed.

On February 28 Honolulu temperature dropped to 63.

There was no sunshine for two days in succession, an extraordinary condition for Hawaii's capital.

February rainfall was 7.97 inches, as against a normal February rainfall of 3.75. No such rainfall for February since 1911 (7.98). March was normal. August produced the heaviest rain during that month since 1905, 1.90 inches.

A TOUCH OF THE INFLUENZA

Ten thousand cases of "flu" were said to be worrying Honolulans on July 2.

Figures published early in the year established the following facts: Most Honolulu accidents occur between five and six

o'clock in the evening, while the "safest hour" is between four and five o'clock in the morning.

In 1931 the Queen's Hospital treated 7,600 patients.

Many more people have been cared for at the city hospital, Honolulu, and the costs of operation considerably lowered, since the reorganization of the health force.

Benevolent Honolulu cares for about 2,500 hospital patients a year.

EVENTS IN VOLCANIC THEATER

Activity was renewed in Halemaumau pit, Kilauea volcano, December 23, 1931, continuing until January 6, 1932. Preceded by an earthquake, the floor of the crater opened up and lava poured forth. Some of the fire fountains shot up 300 feet. Over 30,000 visitors beheld the spectacle.

During June the second summer school in Hawaii National park, under the auspices of the University of Hawaii and the park service, offered a course in Hawaiian flora and a course in volcanoes, there being two live specimens of the latter on the premises, Mauna Loa and Kilauea. There was an enrollment of 59, chiefly public-school teachers.

Rikan Konoshi, Japanese contractor of Hilo, Hawaii, on June 12 succeeded in recovering from the 900-foot pit of Kilauea crater, the bodies of two victims of a love tragedy.

In Hilo a crazed youth, when a 17-year-old girl refused to marry him, took her from her home at the point of a pistol, shooting her sister in the hand when the latter attempted to interfere, and drove her in an auto 33 miles to the brink of the volcano, where he shot her to death and jumped with her body into the abyss.

Viewing the bodies through telescopes, a corner's jury, having a letter left by the youth, returned a verdict of murder and suicide.

Kilauea National Park authorities prevented reckless volunteers from descending the pit to the smouldering lava bottom, but permitted Konoshi, who was to be paid $1000, to rig apparatus consisting of a cable across the pit on which was run out a cage in which he was lowered and lifted by lines controlled by steam-plow engines.

Without gas mask and risking avalanches from the crater's

sides, the Japanese descended, bound the bodies to his car, and spent several hours collecting lava specimens to be turned over to T. A. Jaggar, volcanologist. Telephone connections kept him in communication with his assistants above. This heroic venture was not a financial success.

CONFERRING IN MID-PACIFIC

National and Pacific Foreign Trade Convention opened on May 4 at the Royal Hawaiian Hotel in Honolulu with over 40 delegates.

James A. Farrell, founder and chairman of the National Trade Council and past president of the United States Steel corporation, said that the aim of the conference was to secure better understanding, by each, of the problems and points of view of all.

Discussions looked to the maintenance and upbuilding of the commerce of the Pacific basin, of which Hawaii was considered the key trade link.

Prominent delegates to the trade meeting included: O. K. Davis, secretary, National Foreign Trade Council; Ralph J. Chandler, general manager, Los Angeles Steamship Co.; Dr. Jaroslav Novak, consul-general Czechoslovakia, New York; John L. Merrill, president, All America Cables, Inc.; A. B. Calder, passenger traffic commissioner, Canadian Pacific.

A thousand delegates from Hawaii's various islands and from numerous countries bordering on the Pacific, met in Honolulu for the Pacific Regional Conference of the World Federation of Education Associations, July 25-30.

The Hawaii Education Association and other civic and educational agencies in Hawaii invited the directors of the World Federation, at the Toronto conference, 1927, to select Hawaii as the meeting place for all nations bordering on the Pacific. In 1930 the invitation was accepted.

The territorial government participated in promoting the conference here, the legislature of 1931 appropriated $10,000 for its support, the sum to become available only when an equal amount had been raised by the teachers of the public and private schools, which was accomplished in January, 1932.

The conference brought to Hawaii many noted educators of Pacific countries and exchange of social and educational ideas contributed much to that understanding, among peoples of dif-

ferent lands, that Hawaii, with the various elements of her own islands and through international conferences of all sorts, is ever doing so much to assist.

CELEBRATIONS AND OCCASIONS

Kawananakoa School, March 10, staged a historical pageant, showing the development of Hawaii, in celebration of the birthday of the late Prince David, for whom the school was named.

Centennial of arrival of fifth company of missionaries on ship *Averick* was celebrated in April by their descendants: Alexanders, Emersons, Lyons, Lymans, Rogers, Forbes, Chapins and Armstrongs. Miss Agnes Judd, directing; Mrs. Emma Lyons Doyle, in charge of pageant.

Maluhia Kiilehua, pure type Hawaiian, selected as Lei Queen in fifth annual celebration of Lei Day, April 30 (May 1 being Sunday).

Twenty-fifth annual celebration of the founding of St. Louis College Alumni Association.

The fourth Pacific Rotary Conference opened June 12.

Over 9,000 attended the opening day of the Maui Fair, October 13.

Navy Day (October 27) demonstrations included an aerial parade of 27 navy flying boats over Honolulu city; a submarine submerged with visitors, five times, in Honolulu harbor, exhibition of rescue work from sunken submarine; ships open to inspection in Honolulu and Pearl Harbors. Chamber of Commerce was host to Admiral Yates Stirling, Jr., commandant of the fourteenth naval district, and other officers, at Young hotel. Review at Schofield Barracks. Dance at Royal Hawaiian hotel.

The new Roosevelt high school in Honolulu was dedicated on Navy Day.

Nine army planes flew over the war memorial natatorium at Waikiki, on Armistice Day, dropping flowers.

Weber college football team, Ogden, Utah, arrived December 6 to play McKinley high school for the benefit of the Shriner hospital for crippled children. The event drew a crowd of nearly 15,000 to the Honolulu stadium. McKinley won, 13-0. In a night game Weber played Kamehameha, the latter winning, 27-7.

OUTSTANDING MISCELLANY

Mrs. Keanui Mananui, aged 115 years, died April 2 in Honolulu where she had always made her home. She was born in 1817, two years before the death of King Kamehameha the Great, and three years before the arrival of the missionaries.

Rt. Rev. Henry Bond Restarick, retired bishop of Honolulu, on May 22 observed the fiftieth anniversary of his ordination to the Protestant Episcopal priesthood. On June 28 the bishop and his wife celebrated their golden wedding anniversary.

On May 23 there was formed the Academy of Criminology, for the study and prevention of crime.

June 10-11 witnessed a notable army horse and transportation show at Schofield Barracks.

Figures published on June 28 showed that 40 percent of the population of voting age were not on the voting list. Hawaiians led in their show of interest. This condition improved considerably for the primary elections, October 1, and still more for the general elections, November 8.

Joseph Medeiros, aged 52, who nearly every day for 34 years held vigil, often for hours at a stretch, beside the Kamehameha monument in front of the judiciary building, died on July 2. Known as "the statue worshipper", he was one of the most photographed and written-about characters of Honolulu.

August estimates revealed a decrease of 18½ percent in the cost of living as compared with 1927 conditions.

Honolulu's fifteenth annual Welfare Campaign went "over the top" in October, bringing in $500,004.15.

A floating island, half an acre in extent, with trees 20 feet high, according to a wireless to the local hydrographic office, was sighted on October 22, 3300 miles east from Honolulu and 120 miles due west from Acapulco.

For the greater part of the year there averaged 15 stowaways a month attempting to land in Hawaii from the mainland. Some were sent back, a few being transferred at sea, in an effort to stamp out the nuisance.

The Charles Henry Atherton House, new men's dormitory and Y. M. C. A. for University of Hawaii attendants, was dedicated June 1.

During the year a handsome chapel was added to the Academy

of Sacred Hearts in Kaimuki, and a new Roman Catholic church arose in Nuuanu valley.

The Honolulu Construction & Draying Company moved into its new edifice at South and Kawaiahao streets.

K. S. Kau, young Chinese business man, welded into one unit 19 independent Honolulu grocers, under the name "Our Own Stores", on June 10.

VISITORS TO ALOHA LAND

Among visitors to Hawaii during 1932 were: General Edward J. Higgins, world head of the Salvation Army; Miss Teresa Carter, assistant executive secretary, Girl Scouts of America; A. C. Brode, Los Angeles Soap Co.; Lily Damita, screen star; delegates Fourth Pacific Rotary Conference; Floyd Gibbons, loud speed-speaker, correspondent; Dr. Arthur H. Compton, studying cosmic ray from Mt. Haleakala; Wolgast, midget flyweight champion; Rana Bhagat Chandra Bahadur, C. S. I., Rajah of Jubbal, and consort, Rani Leilaba; Joseph Clark Grew, American ambassador to Japan, succeeding W. Cameron Forbes; Captain George B. Landenberger, U. S. N., new governor, American Samoa, relieving Captain Gatewood S. Lincoln.

P. L. Jackston, publisher, Portland (Oregon) Journal, January 7.

Thirty-eight members RKO Co., including Dolores del Rio and Joel McCrea, arrived February 2, for "location" to film "Bird of Paradise."

Philip Kinsley, Chicago Tribune special, arrived January 28 to cover Massie trial and "all about Hawaii." Hence to Australia and Orient, and back to Hawaii for a bit, and welcome.

Robert H. (Bob) Davis, of the New York Sun, arrived May 12 for a month's visit. He was in Hawaii in 1925, accompanied by Samuel G. Blythe, of the Saturday Evening Post. There are six "Bob Davis Travel Books" telling something of the 300,000 miles he has traveled.

Rev. Lisa Mae (Mother) Grey, founder-pastor Temple of Light, Inc., Los Angeles (First Church of Christian Metaphysics), visited Hawaii to spread her doctrine.

Lillian Symes spent several weeks visiting all Hawaii's islands,

in the spring, and in the October number of Harper's she had "What About Hawaii?" "This article", remarked Honolulu Advertiser, "will do much to offset the slanders of the shoddy press." Miss Symes writes: "Certainly Hawaii has the opportunity to give the rest of the world an object lesson in human friendliness and co-operation. I am inclined to think she will take it if she is let alone." Hawaii really began this object lesson about 150 years ago.

En route to Los Angeles, 71 members of the Japanese Olympic team glimpsed Honolulu on June 30, and nearly 100 more passed through a week later. On July 2 came 17 athletes from India and eight from the Philippines.

M. T. McKee, personal representative of H. L. Stevens, national commander of the American Legion, was in Honolulu on July 7.

Gerrit P. Judd III, of Philadelphia, brother of Hawaii's governnor, Lawrence M. Judd, arrived for a visit, July 7.

Pearl Buck, author "The Good Earth" and "Sons", was welcomed July 14.

Quo Tai Chi, minister to Court of St. James, here July 14, en route to his post.

John Jacob Astor, world-rounding for pleasure, arrived July 21.

Cheung Chun Liu, only Chinese Olympic entry, enjoyed a few hours of Aloha land, en route to Los Angeles.

Siamese prince, M. R. Chakroting Tongyai, on his way to Cornell.

Grace Roosevelt, daughter of governor-general of Philippines, looked in on Honolulu on July 15.

Beginning August 4, eight days of Hawaii were eight days of Paradise Oasis for 38 mainland Shriners.

Major George F. Davies, M.P., London, director, Theo. H. Davies & Co., Ltd., was a visitor in August.

Douglas Fairbanks, August 30, Orient-bound to hunt tigers.

Sailing the Pacific in an 18-foot skiff since December 31, Fred Rebell treated himself to a bit of Hawaii before heading for Los Angeles.

Robert Montgomery, Jimmie Durante, Walter Huston and

Eugene Pallette were here for the filming of "Pig Boats."

Kenneth L. Stone and others, representing United States tariff commission, arrived November 4 to gather data concerning the cost of producing raw sugar in Hawaii, proceeding to the Philippines on similar business.

Mrs. Woodrow Wilson was in Honolulu, November 17, en route home from Japan.

Hamlin Garland, celebrated American author, visited Hawaii in December.

KNOW HAWAII

The vade mecum of this land we live in is the Hawaiian Annual. Beginning in 1875, its issues have presented a fund of facts and figures of research and progress that early won it recognition as the reliable reference book of information pertaining to Hawaii, statistical and otherwise, being specially designed to meet intelligent inquiry.

Its historic value causes steady demand for back issues, as also for as full sets as may be obtainable, or from certain years, orders for which should be sent to the publisher, The Printshop Company, Limited, successor to Thos. G. Thrum, 821 Alakea St., Honolulu, T. H.

Current issues may be had at all local bookstores at $1.00, plus postage on mail orders.

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

Those marked with an asterisk (*) are planters only; those marked with a dagger (†) are mills only; all others are plantations complete, owning their own mills. (Corrected to November 15, 1932).

Name	Location	Manager	Agents
Apokaa Sugar Co.*	Ewa, Oahu	G. F. Renton	Castle & Cooke, Ltd.
Ewa Plantation Co.	Ewa, Oahu	G. F. Renton	Castle & Cooke, Ltd.
Gay & Robinson*	Makaweli, Kauai	S. Robinson	H. Waterhouse Trust Co., Ltd.
Grove Farm*	Lihue, Kauai	Edwin Broadbent	American Factors, Ltd.
Hakalau Plantation Co.	Hilo, Hawaii	J. M. Ross	C. Brewer & Co., Ltd.
Hamakua Mill Co.	Hamakua, Hawaii	R. M. Lindsay	Theo. H. Davies & Co., Ltd.
Hawaiian Agricultural Co.	Pahala, Hawaii	Jas. Campsie	C. Brewer & Co., Ltd.
Hawaiian Commercial & Sug. Co.	Puunene, Maui	F. F. Baldwin	Alexander & Baldwin, Ltd.
Hawaiian Sugar Co.	Makaweli, Kauai	D. E. Baldwin	Alexander & Baldwin, Ltd.
Hilo Sugar Co.	Hilo, Hawaii	Alexander Fraser	C. Brewer & Co., Ltd.
Homestead Plantation Co., Ltd.	Kohala, Hawaii	Geo. C. Watt	Castle & Cooke, Ltd.
Honolulu Plantation Co.	Aiea, Oahu	Alvah Scott	C. Brewer & Co., Ltd.
Honokaa Sugar Co.	Haina, Hawaii	W. P. Naquin	F. A. Schaefer & Co., Ltd.
Honomu Sugar Co.	Honomu, Hawaii	A. T. Spalding	C. Brewer & Co., Ltd.
Hutchinson Sugar Plantation Co.	Naalehu, Hawaii	W. Campsie	C. Brewer & Co., Ltd.
Kaeleku Sugar Co.	Hana, Maui	Jos. Herrscher	Kaeleku Plantation Co., Ltd.
Kahuku Plantation	Kahuku, Oahu	T. G. S. Walker	Alexander & Baldwin, Ltd.
Kaiwiki Sugar Co.	Ookala, Hawaii	Jas. Johnston	Theo. H. Davies & Co., Ltd.
Kekaha Sugar Co.	Kekaha, Kauai	Wm. Danford	American Factors, Ltd.
Kilauea Sugar Plantation Co.	Kilauea, Kauai	R. M. Allen	C. Brewer & Co., Ltd.
Kipu Plantation	Lihue, Kauai	C. A. Rice	American Factors, Ltd.
Kohala Sugar Co.	Kohala, Hawaii	Geo. C. Watt	Castle & Cooke, Ltd.

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

Name	Location	Manager	Agents
Koloa Sugar Co.	Koloa, Kauai	J. T. Moir, Jr.	American Factors, Ltd.
Laupahoehoe Sugar Co.	Laupahoehoe, Hawaii	R. Hutchison	Theo. H. Davies & Co., Ltd.
Lihue Plantation Co.	Lihue, Kauai	R. D. Moler	American Factors, Ltd.
Makee Sugar Co.	Kealia, Kauai	H. Wolters	American Factors, Ltd.
Maui Agricultural Co., Ltd.	Paia, Maui	H. A. Baldwin	Alexander & Baldwin, Ltd.
McBryde Sugar Co., Ltd.	Eleele, Kauai	F. A. Alexander	Alexander & Baldwin, Ltd.
Niulii Mill & Plantation	Kohala, Hawaii	R. Lindsay	Theo. H. Davies & Co., Ltd.
Oahu Sugar Co.	Waipahu, Oahu	E. W. Greene	American Factors, Ltd.
Olaa Sugar Co.	Olaa, Hawaii	A. J. Watt	American Factors, Ltd.
Olowalu Co.*	Olowalu, Maui	E. Haneberg.	American Factors, Ltd.
Onomea Sugar Co.	Hilo, Hawaii	John T. Moir	C. Brewer & Co., Ltd.
Paauhau Sugar Plantation Co.	Hamakua, Hawaii	F. M. Anderson	C. Brewer & Co., Ltd.
Pepeekeo Sugar Co.	Hilo, Hawaii	Jas. Webster	C. Brewer & Co., Ltd.
Pioneer Mill Co., Ltd.	Lahaina, Maui	C. E. S. Burns	American Factors, Ltd.
Puakea Plantation Co., Ltd.	Kohala, Hawaii	Geo. C. Watt	Castle & Cooke, Ltd.
Union Mill Co.	Kohala, Hawaii	L. W. Wishard	Theo. H. Davies & Co., Ltd.
Waiakea Mill Co.	Hilo, Hawaii	W. L. S. Williams	Theo. H. Davies & Co., Ltd.
Waialua Agricultural Co., Ltd.	Waialua, Oahu	John H. Midkiff	Castle & Cooke, Ltd.
Waianae Plantation	Waianae, Oahu	Robt. Fricke	American Factors, Ltd.
Wailea Milling Co.†	Hilo, Hawaii	A. S. Costa	Fred. L. Waldron, Ltd.
Wailuku Sugar Co.	Wailuku, Maui	S. L. Austin	C. Brewer & Co., Ltd.
Waimanalo Sugar Co.	Waimanalo, Oahu	Geo. Chalmers, Jr.	C. Brewer & Co., Ltd.
Waimea Sugar Mill Co.	Waimea, Kauai	A. E. Faye	American Factors, Ltd.

HAWAIIAN SUGAR CROPS, IN TONS, 1928-1932

From Hawaiian Planters' Association Tables

Prior years, orginating in 1891, will be found in Annuals since 1901

Islands	1928	1929	1930	1931	1932
Production of Hawaii	299,623	308,132	290,331	336,760	336,791
Production of Maui	192,113	198,300	191,474	201,906	217,307
Production of Oahu	249,069	236,955	248,152	248,510	254,400
Production of Kauai	163,233	170,283	194,506	206,611	216,856
Grand Total	904,040	913,670	924,463	993,787	1,025,354
Hawaii Plantations					
Waiakea Mill Co.	13,550	14,659	14,280	18,104	17,720
Hilo Sugar Co.	25,154	23,046	26,487	27,878	25,974
Onomea Sugar Co.	24,927	28,470	25,146	29,749	26,924
Pepeekeo Sugar Co.	11,917	13,038	13,988	12,683	12,976
Honomu Sugar Co.	10,335	9,934	10,146	10,683	10,678
Hakalau Plantation Co.	19,590	17,687	18,576	19,217	18,590
Laupahoehoe Sugar Co.	16,471	16,754	16,533	19,388	20,081
Kaiwiki Sugar Co.	10,177	9,624	8,395	10,351	12,138
Hamakua Mill Co.	13,937	14,058	8,993	15,144	14,225
Paauhau S. Plant. Co.	13,545	12,227	11,197	13,776	15,104
Honokaa Sugar Co. / Pacific Sugar Mill	23,486	23,268	19,826	27,133	28,655
Niulii Mill and Plantation	3,664	3,659	3,602	3,902	3,002
Halawa Plantation	3,213	.....	.....	.....	.....
Kohala Sugar Co.	8,436	12,010	9,793	28,600	23,098
Union Mill Co.	5,983	5,326	4,363	7,505	6,053
Hawi Sugar Co.	7,567	7,769	8,458	.....	.....
Hutchinson S. Plant. Co.	12,781	15,728	13,199	12,832	18,893
Hawaiian Agricul. Co.	26,674	31,040	29,630	27,124	33,709
Puakea Plantation	1,546	1,568	1,281	.....	.....
Olaa Sugar Co.	40,027	38,299	39,850	46,686	44,629
Wailea Milling Co.	4,309	5,541	4,467	6,005	4,342
Homestead Plantation Co.	2,334	2,427	2,121	.....	.....
	299,623	308,132	290,331	336,760	336,791

HAWAIIAN SUGAR CROPS, 1928-1932—Continued

	1928	1929	1930	1931	1932
Maui Plantations					
Kaeleku Plantation Co.	6,007	6,062	5,352	5,239	6,456
Maui Agricultural Co.	45,326	48,503	46,015	49,253	52,917
Hawaiian Coml. & S. Co.	71,720	74,697	72,500	77,050	82,576
Wailuku Sugar Co.	22,011	20,947	18,247	20,356	22,111
Olowalu Co.	2,588	2,728	2,967	2,969	.....
Pioneer Mill Co., Ltd.	44,461	45,363	46,393	47,039	53,247
	192,113	198,300	191,474	201,906	217,307
Oahu Plantations					
Waimanalo Sugar Co.	9,548	8,324	8,817	10,320	9,228
Laie Plantation	4,078	3,249	4,789	.....	.....
Kahuku Plantation Co.	12,574	11,386	14,925	20,073	22,531
Waialua Agricul. Co.	50,386	54,924	53,117	52,423	56,662
Waianae Co.	5,709	5,965	7,209	6,773	7,530
Ewa Plantation Co.	54,369	50,806	52,158	54,003	52,903
Apokaa Sugar Co.	1,091	1,355	1,018	1,307	739
Oahu Sugar Co.	74,643	70,136	72,879	72,993	72,908
Honolulu Plantation Co.	36,552	30,810	33,240	30,618	31,899
Hawaiian Pineapple Co.	119	.....	.....	.....	.....
	249,069	236,955	248,152	248,510	254,400
Kauai Plantations					
Kilauea S. Plant. Co.	6,642	6,801	7,430	8,132	8,289
Makee Sugar Co.	22,190	20,707	25,207	23,568	23,468
Lihue Plantation Co.	28,354	29,391	36,507	37,079	41,206
Grove Farm Plantation	5,949	6,079	7,645	8,241	10,331
Koloa Sugar Co.	13,381	13,123	16,913	17,256	16,200
McBryde Sugar Co.	20,120	20,073	22,192	24,694	22,805
Hawaiian Sugar Co.	26,878	30,349	31,819	34,010	37,670
Gay & Robinson	4,642	5,031	5,240	5,175	8,892
Waimea Sugar Mill Co.	3,066	2,827	3,172	3,281	3,260
Kekaha Sugar Co.	29,770	33,503	35,757	42,603	41,764
Kipu Plantation	2,243	2,397	2,624	2,572	2,971
	163,235	170,283	194,506	206,611	216,856

TERRITORIAL REGISTER AND DIRECTORY FOR 1933

CORRECTED TO DECEMBER 1, 1932

TERRITORIAL OFFICIALS

L. M. Judd.....Governor
Raymond C. Brown.....Secretary
H. R. Hewitt.....Attorney-General
E. S. Smith.....Treasurer
Lyman H. Bigelow.....Supt. Public Works
C. T. Bailey.....Comr. Public Lands
Will C. Crawford.....Supt. Public Instr.
Thos. Treadway .....Auditor
Robt. D. King.....Surveyor
Geo. I. Brown.....
Pres. Board of Agriculture and Forestry
Gordon C. Ross.....High Sheriff
James W. Lloyd.....Bureau of the Budget
Col. Perry Smoot.....Adjutant-General
Florence F. Thomas....Secretary to Governor

L. L. McCandless.....Delegate to Congress

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Hawaii—James Campsie (R), *Stephen L. Desha, Sr. (R), William H. Hill (R), *Robert Hind (R).
Maui—George P. Cooke (R), Harry H. Holt (R), *Harold W. Rice (R).
Oahu—*Francis H. Ii Brown (R), Henry Freitas (D), *William H. Heen (D), Lester Petrie (D), *Joseph L. Sylva (R), David K. Trask (D).
Kauai—*Charles A. Rice (R), Elsie H. Wilcox (R).

(R)—Republican, 11; (D)—Democrat, 4.
* Holdover Senators from 1930 Election.

Representatives

Hawaii—Herbert N. Ahuna (R), Daniel A. Devine (D), John A. Lee (R), Thomas T. Sakakihara (R), Arthur A. Akina (R), Francis K. Aona (R), George K. Kawaha (R), Shunzo Ushiroda (R).
Maui—Y. H. Char (R), W. R. Engle (R), Thomas Holstein (R), Manuel Gomes Paschoal (R), Henry P. Robinson, Jr. (R), Samuel A. Sniffen (R).
Oahu—Eugene H. Beebe (R), William H. Crozier, Jr. (D), †Thomas V. King (R), O. P. Soares (R), Ralph E. Woolley (R), J. Howard Worrall (R), William Borthwick (D), Yew Char (D), Christopher K. Holt (D), George H. Holt, Jr. (D), Jonah Kumalae (D), Andrew M. Yamashiro (D).
Kauai—Theodore Anderson (D), John J. Gomez (D), Thomas Ouye (R), Fred W. Wichman (R).

(R)—Republican, 20; (D)—Democrat, 10.
† Deceased.

HAWAII NATIONAL GUARD

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.....Asst. Adjutant-General
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Hazel R. Samson.....Stenographer

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Associate Justice.....James J. Banks
Associate Justice.....Chas. F. Parsons

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First Judge, First Circuit, Oahu
.....
Second Judge, First Circuit, Oahu
.....Albert M. Cristy
Third Judge, First Circuit, Oahu
.....C. S. Davis
Fourth Judge, First Circuit, Oahu
.....E. M. Watson
Second Circuit, Maui.....Dan H. Case
Third Circuit, Hawaii....Jas. W. Thompson
Fourth Circuit, Hawaii.....Homer L. Ross
Fifth Circuit, Kauai.....Wm. C. Achi, Jr.

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Asst. Clerk Supreme Court....Gus K. Sproat
Stenographer Supreme Court.....
.....Miss Kate Kelly
Asst. Stenographer.....Flossie G. Fairbanks

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2nd Asst. Chief Clerk.....D. K. Sherwood
3rd Asst. Chief Clerk.....John Lee Kwai
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Asst. Cashier and Bookkeeper....Hilda Smith
Asst. Cashier and Bookkeeper.....
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Stenographer .....Nellie Overand
Clerk 1st Judge.....H. A. Wilder
Clerks, 2nd Judge.....
.....Lawrence R. Holt, Dorothy M. Feder
Clerks, 3rd Judge.....
.....M. M. Wond, A. Cummings
Clerks, 4th Judge.....
.....A. V. Hogan, Ellen D. Smythe
Court Reporters:
J. L. Horner, H. R. Jordan, Reuben N. Linn, Wm. S. Chillingworth
Messenger and Bailiff.....Dee Hing Tenn
Clerk, 2nd Circuit.....Manuel Asue
Clerk, 3rd Circuit, Hawaii....Thos. C. White
Clerk, 4th Circuit, Hawaii.....A. K. Aona
Clerk, 5th Circuit, Kauai.....J. C. Cullen

Land Court

Registrar.....P. H. Mulholland
Assistant Registrar.....W. Akana

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Japanese.....J. H. Hakuole
Filipino .....Alfred O'Campo

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Ferdinand Schnack 2nd Judge.....Honolulu
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Norman D. Godbold, Jr.....Waianae
Wm. K. Rathburn.....Koolauloa
F. W. Carter.....Waialua
Henry H. Plemer.....Wahiawa
P. D. Kellett.....Koolaupoko

Maui

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Antonio Garcia, Second Judge.....Wailuku
Jack P. Kaonohi.....Molokai
Duncan B. Murdock.....Makawao
G. K. Kunukau, Second Judge.....Makawao
William Kalama .....Hana
Edward McCorriston .....Molokai
M. P. Correa, Jr.....Kalawao
A. W. Carlson.....Lanai

Hawaii

S. L. Desha, Jr.....South Hilo
Wm. H. Smith, Second Judge.....South Hilo
E. K. Simmons.....North Hilo
W. P. McDougall.....North Kohala
David M. Forbes.....South Kohala
Manuel S. Botelho.....Hamakua
Henry Lai Hipp.....Puna
Walter H. Hayselden.....Kau
Thos. N. Haae.....South Kona
A. J. Stillman.....North Kona

Kauai

C. K. Holokahiki.....Lihue
Henry Blake .....Koloa
Wm. P. Aarona.....Hanalei
Jas. K. Burgess, Jr.....Waimea
Joe Correia .....Kawaihau

DEPARTMENT OF GOVERNOR

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Secretary to Governor....Mrs. F. F. Thomas
Stenographer .....Eleanor Prendergast
Clerk.....Carl M. Machado
Aide.....Lieut.-Col. W. R. Dunham
Aide.....Commander R. M. McConnell

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Chief Clerk.....Henry Paoa
Stenographer.....Mary C. Meek
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Chile—Consul.....J. W. Waldron
China—Consul.....K. C. Mui
Cuba—Consul.....Dr. Luiz R. Gaspar
Denmark—Consul General....Robt. Anderson
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Great Britain—Acting Consul.....M. Paske-Smith
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The Netherlands.....C. A. Mackintosh
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Portugal at Hilo—Vice Consul.....J. A. M. Osorio
Portugal at Wailuku—Vice Consul.....Enos Vincent
Russia—Vice Consul .....
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Dorothy Tilley, Mrs. D. K. Wood, Mrs. C. P. Wilsie.....Assistants

HAWAIIAN HISTORICAL SOCIETY
Organized Jan. 11, 1892

Rev. H. B. Restarick.....President
W. F. Frear.....Vice-President
R. S. Kuykendall.....Recording Secretary
Thomas W. Ellis.....Treasurer
Miss C. P. Green.....Librarian

KAUAI HISTORICAL SOCIETY

.....President
E. A. Knudsen.....Vice-President
Miss E. H. Wilcox.....Secretary-Treasurer

BERNICE PAUAHI BISHOP MUSEUM
Founded 1889. Opened June 22, 1891

Board of Trustees

Albert F. Judd.....President
E. F. Bishop.....Vice-President
R. H. Trent.....Secretary
Geo. M. Collins.....Treasurer
Geo. R. Carter, R. H. Trent, Geo. M. Collins, C. Montague Cooke, Jr., J. K. Clarke

Museum Staff

Herbert Ernest Gregory, Ph.D.....Director
A. M. Adamson.....Entomologist
Edwin H. Bryan, Jr.....Curator of Collections
P. H. Buck.....Ethnologist
Bruce Cartwright.....Associate in Ethnology
Edwin G. Burrows, Alfred E. Hudson, Gordon MacGregor.....Asst. Ethnologists
C. M. Cooke, Jr.....Malacologist
Paul T. Diefendorfer.....Associate in Ethnology
Charles H. Edmondson.....Zoologist
Kenneth P. Emory.....Ethnologist
E. S. C. Handy.....Ethnologist
Willowdean Handy.....Associate in Polynesian Folkways
J. F. Illingworth.....Research Associate in Entomology

Robert P. Lewis.....Associate in Ethnology
E. P. Mumford.....Entomologist
George C. Munro....Associate in Ornithology
Marie C. Neal.....Botanist
Harold St. John.....Botanist
J. Henry Stimson.....Research Associate in Polynesian Linguistics
Otto H. Swezey.....Consulting Entomologist
Thomas G. Thrum.....Associate in Hawaiian Folk-lore
Margaret Titcomb.....Librarian
Lahilahi Webb.....Guide to Exhibits
d'Alte Welch.....Assistant Malacologist
Gerrit P. Wilder.....Botanist

BAR ASSOCIATION OF HAWAII

Organized June 28, 1899

J. B. Poindexter.....President
R. A. Vitousek.....Vice-President
J. D. Flint.....Secretary
E. W. Sutton.....Treasurer

DAUGHTERS OF THE AMERICAN REVOLUTION, ALOHA CHAPTER

Organized March 5, 1897

Mrs. J. L. Robertson.....Regent
Mrs. Jessie P. Cameron.....Vice-Regent
Mrs. H. S. Bush.....Recording Secretary
Mrs. Y. C. Yang.....Corresp. Secretary
Miss Charlotte Hall.....Treasurer
Miss Harriet Chapell.....Historian
Mrs. I. J. Shepherd.....Chaplain

HAWAIIAN EVANGELICAL ASSOCIATION

Originally Organized 1823
Constitution revised 1863

Annual Meeting in June

Emil Berndt.....President
A. C. Alexander, Walter F. Frear.....Vice-Presidents
Rev. H. P. Judd.....Cor. Secretary
F. B. Withington.....Rec. Secretary
Rev. J. P. Erdman.....Treasurer
Young, Lamberton & Pearson.....Auditor

WOMAN'S BOARD OF MISSIONS

Organized 1871

Mrs. Wm. J. Forbes.....President
Mrs. T. M. Talmage.....Vice-President
Mrs. Peter Huyler.....Recording Secretary
Mrs. Edgar Wood.....Home Corr. Secretary
Miss A. E. Judd.....Foreign Cor. Secretary
Mrs. R. G. Moore.....Treasurer
Otto A. Berndt.....Auditor

MISSION CHILDREN'S SOCIETY

Organized 1852

H. H. Hitchcock.....President
Mrs. F. E. Midkiff.....Vice-President
Miss H. G. Forbes.....Secretary
Agnes E. Judd.....Recorder
W. W. Chamberlain.....Treasurer
J. P. Morgan.....Auditor

YOUNG MEN'S CHRISTIAN ASSOCIATION

Organized 1869

Rolla K. Thomas.....President
Geo. P. Denison, Norman T. Booth.....Vice-Presidents
Stanley Livingston.....Treasurer
Chas. A. Wong.....Secretary
Ralph G. Cole.....General Secretary

ARMY & NAVY Y. M. C. A.

Executive Committee

Dr. J. A. Morgan.....Chairman
John Waterhouse.....Vice-Chairman
Chas. G. Heiser, Jr.....Treasurer
W. T. Wilke.....Executive Secretary

YOUNG WOMEN'S CHRISTIAN ASSOCIATION

Organized 1900

Mrs. C. M. Cooke, Jr.....President
Mrs. F. C. Atherton, Mrs. Geo. P. Castle, Mrs. J. B. Guard.....Vice-Presidents
Mrs. H. L. Andrews.....Rec. Secretary
Mrs. W. N. Chaffee.....Cor. Secretary
Mrs. E. A. Mott-Smith.....Treasurer
Miss Mary L. Cady.....Gen. Secretary
Miss C. Barnes.....Associate Secretary

FREE KINDERGARTEN AND CHILDREN'S AID ASSOCIATION

Organized 1895

Mrs. F. M. Swanzy.....President
Mrs. F. W. Damon, Mrs. G. P. Castle, Mrs. W. McKay.....Vice-Presidents
Miss Nina Adams.....Recording Secretary
Mrs. R. G. Moore.....Treasurer
Mrs. W. J. Forbes.....Assistant Treasurer

SOCIAL SERVICE BUREAU

Organized June 7, 1899

J. R. Galt.....President
R. A. Cooke, A. W. T. Bottomley, Mrs. F. M. Swanzy, Mrs. A. C. Alexander.....Vice-Presidents
Hawaiian Trust Co., Ltd.....Treasurer
Nell Findley.....Executive Secretary
Young, Lamberton & Pearson.....Auditor

STRANGERS' FRIEND SOCIETY

Organized 1852 Annual Meeting June

Mrs. A. Fuller.....President
Mrs. Arthur Wall.....Vice-President
Mrs. E. W. Jordan.....Treasurer
Mrs. Harry Dawson.....Secretary

HAWAIIAN HUMANE SOCIETY

Originated 1897 Organized Sept., 1908

Mrs. H. M. Damon.....President
Mrs. M. B. Carson.....Secretary
Bishop Trust Co.....Treasurer
Mrs. W. A. Inman.....Acting Exec. Officer
J. Dassel.....Agent

OAHU CEMETERY ASSOCIATION

Organized 1844

F. J. Lowrey.....President
S. G. Wilder.....Vice-President
F. W. Jamieson.....Secretary
Hawaiian Trust Co.....Treasurer

THE OUTDOOR CIRCLE

(For the beautifying of Honolulu)

Organized May, 1912

Mrs. Theodore Cooke.....President
Mrs. P. Withington.....1st Vice-President
Mrs. Wayne Pflueger.....2nd Vice-President
Mrs. Cyril Damon.....3rd Vice-President
Miss Charlotte Hall.....Secretary
Mrs. H. Douglas Young.....Treasurer
Mrs. Carl Schaefer.....Membership
Mrs. F. D. Lowrey.....Librarian

PACIFIC CLUB
Organized 1852
Premises on Emma Street

J. L. Galt.....President
J. E. Russell, Richard Atherton.....
.....Vice-Presidents
C. A. Mackintosh.....Secretary-Treasurer

HAWAIIAN VOLCANO RESEARCH ASSOCIATION
Organized October, 1911

Dr. A. L. Dean.....President
Frank C. Atherton.....1st Vice-President
W. F. Dillingham.....2nd Vice-President
L. W. de Vis-Norton.....Secty.-Treas.
Dr. T. A. Jaggar, Jr...Observatory Director

HONOLULU SYMPHONY SOCIETY
Reorganized May 29, 1924

R. Alex. Anderson.....President
Mrs. C. F. Damon.....Vice-President
W. Twigg-Smith .....Secretary-Treasurer
Mrs. G. P. Cooke, Mrs. R. A. Cooke,
Mrs. Douglas Cooke—.....—Directors
(with above officers)
Fritz Hart .....Conductor

COMMERCIAL CLUB OF HONOLULU
Organized August 30, 1906

J. T. Phillips .....President
Paul Leebrick .....Vice-President
H. W. Camp.....Secretary
E. S. Smith.....Treasurer

ROTARY CLUB OF HONOLULU
Organized March 4, 1915

Wayne Stewart .....President
John Word Caldwell.....Secretary
Irwin Spalding .....Treasurer

OAHU COUNTRY CLUB
Organized 1906

M. B. Carson.....President
J. A. Good.....Vice-President
F. G. Cameron.....Secretary
A. E. Steadman.....Treasurer

W. C. T. U.

Mrs. A. P. Broughton.....President
Mrs. O. H. Walker.....Vice-President
Mrs. Edgar Wood.....Secretary
Mrs. E. W. Maire.....Treasurer

TEMPERANCE LEAGUE OF HAWAII

Rev. E. B. Turner.....President (acting)
J. G. Waller.....Vice-President
Harvey W. Metcalf.....Secretary
W. C. Furer.....Treasurer
Edgar W. Henshaw.....Superintendent

ULUNIU WOMEN'S SWIMMING CLUB
Organized March, 1909

Mrs. F. M. Swanzy.....Hon. President
Mrs. Allen N. Nowell.....President
Miss Nina Adams, Mrs. A. Greenwell
.....Vice-Presidents
Mrs. W. J. MacNeil.....Treasurer
Mrs. W. A. Wall.....Secretary

HONOLULU AUTOMOBILE CLUB
Organized Feb. 5, 1915

Geo. S. Waterhouse.....President
Rolla K. Thomas.....Vice-President
C. R. Welsh.....Secretary
Stanley Livingston .....Treasurer
LeRoy Blessing .....Manager

HONOLULU AD CLUB
Organized Feb. 6, 1912

E. R. Christensen.....President
Mrs. M. H. Perkins.....Honorary President
Albion F. Clark.....Secretary-Treasurer

HAWAIIAN CIVIC CLUB
Organized 1918

F. L. Akana.....President
Mary Espinda .....Vice-President
Lillian Markham .....Secretary
Eva Hart .....Treasurer

HONOLULU REALTY BOARD
Organized 1922

Chas. R. Frazier.....President
P. M. Pond.....1st Vice-President
Vincent Fernandez.....2nd Vice-President
Chester Livingston .....Secretary
J. E. Hoch.....Executive Secretary
C. F. Cleveland.....Treasurer

PRINCIPAL PUBLICATIONS

The Honolulu Advertiser, issued by the Advertiser Publishing Co. every morning. Raymond Coll, Managing Editor.

The Honolulu Star-Bulletin, issued every evening (except Sundays), by the Honolulu Star-Bulletin, Ltd. Riley H. Allen, Editor.

The Honolulu Times, issued every Saturday. Edward P. Irwin, Editor and Publisher.

The Guide, issued daily except Sunday by the Guide Publishing Co.

New Freedom, issued every Friday. Thos. McVeigh, Editor-Publisher.

The Friend, Organ of the Hawaiian Board, issued monthly. Rev. H. P. Judd, Editor.

The Hawaiian Church Chronicle, issued on the first Saturday of every month. Rt. Rev. H. B. Restarick, Editor.

The Paradise of the Pacific, issued monthly Mrs. E. A. Langton-Boyle, Publisher.

The Mid-Pacific Monthly, an illustrated descriptive magazine. Alexander Hume Ford, Editor and Publisher.

The Hawaiian Forester and Agriculturist, issued monthly under direction of Board of Com. Agr. and Forestry.

Pacific Affairs, monthly, published by Institute of Pacific Relations. Elizabeth Green, Editor.

Hawaiian Educational Review, issued monthly. The Honolulu Star-Bulletin.

Ke Alakai o Hawaii (native), weekly, issued every Thursday. Jonah Kumalae, Editor.

Hilo Tribune-Herald, issued daily at Hilo by the Tribune-Herald, Ltd. F. J. Cody, Manager; R. K. Crist, Editor.

The Hawaii News (Hilo), weekly, Friday. H. J. Orguet, Editor.

The Maui News, issued Wednesday and Saturdays, Maui. J. A. Morrow, Editor.

The Garden Island, issued weekly at Lihue, Kauai. C. J. Fern, Managing Editor.

Hoku o Hawaii, issued on Friday of each week at Hilo. Rev. S. L. Desha, Editor.

THE HAWAIIAN ANNUAL, issued the middle of December for the following year. The Printshop Co., Ltd., Compiler and Publisher.

PLACES OF WORSHIP

Central Union Church, Congregational, cor. Beretania and Punahou; Rev. H. H. Leavitt, D.D., Minister; Rev. H. F. Loomis, Associate Minister and Director Religious Education; Rev. T. M. Talmage, executive minister. Sunday services at 11 a. m. and 5 p. m. Sunday school at 9:40 a. m. Prayer meeting Wednesday evenings at 7:30.

Kalihi Union Church, King street, Kalihi; Rev. A. S. Baker, pastor. Sunday school at 9:45 a. m. Gospel service at 11 a. m.

Methodist Episcopal Church, corner Beretania and Victoria streets; Rev. C. E. Boyer, pastor. Sunday services at 11 a. m. and 7:30 p. m. Sunday school at 10 a. m. Prayer meeting Wednesdays at 7:30 p. m.

The Christian Church, Kewalo street, Rev. F. L. Purnell, pastor. Sunday services at 11 a. m. and 7:30 p. m. Sunday school at 9:45 a. m. Prayer meeting Wednesday evenings, at 7:30.

Salvation Army, services held nightly at hall, 69 Beretania street, with Sunday services at the usual hour.

Roman Catholic Cathedral, Fort street, near Beretania; Rt. Rev. S. P. Alencastre, Bishop of Arabissus. Services every Sunday at 10 a. m. and 4:30 p. m. Low mass every day at 6 and 7 a. m. High mass Sundays and Saints' days at 10 a. m.

St. Andrew's Cathedral, Protestant Episcopal; entrance from Emma street, near Beretania. Rt. Rev. S. H. Littell, Bishop of the Missionary District of Honolulu; Very Rev. Wm. Ault, Dean. Holy Communion, 7; Sunday school, 10; morning prayer, litany and sermon, 11; Hawaiian service, 9:30; evening prayer and sermon, 7:30.

Chinese Congregation. Rev. Sang Mark, Priest in charge. Services on Sunday at 11 a. m. and 7:30 p. m. Evening prayer every Wednesday at 7 p. m.

St. Clement's, Punahou. Services on Sundays, Holy Communion 7 a. m. Morning prayer, 11 a. m. Rev. E. T. Brown, Rector.

Epiphany Mission, Kaimuki, Rev. J. C. Mason, priest in charge. Sunday services at 7:30 and 10 a. m. Sunday school at 10 a. m.

St. Elizabeth's Mission, Palama. Rev. Jas. Kieb, priest in charge. Sunday services 7 and 11 a. m. Sunday school 9:30 a.m.

First Church of Christ, Scientist, Punahou street. Sunday services at 11 a. m. Sunday school at 9:45 a. m.

Christian Chinese Church, King street; Rev. Hong Tet Yin, pastor. Services every Sunday at 10:30 a. m. and 7:30 p. m. Prayer meeting Wednesday at 7:30 p. m.

Second Chinese Church (Congregational), Beretania street, Lau Tet Wan, pastor. Services at usual hours.

German Lutheran Church, Beretania street. Dr. A. Hoermann, pastor. Services on Sunday at 11 a. m.; Sunday school at 10 a. m.

First Baptist Church, 1306 Miller street. L. T. McCall, acting minister. 9:45, Sunday school; 11 a. m. and 8 p. m., church service; 7 p. m., B. Y. P. U. services.

The Pilgrim Church, Rev. T. M. Talmage, pastor. Services every Sabbath at the usual hour. Sunday school at 3 p. m. Chapel situated corner of Punchbowl and Miller streets.

Reorganized Church of Jesus Christ, Chapel on King street, near Thomas Square; Sunday school at 10 a. m.; preaching in Hawaiian at 11 a. m.; in English at 7:30 p. m.

Seventh Day Adventists: C. R. Webster, minister. Chapel, Keeaumoku street. Sabbath school Saturdays at 10 a. m.; preaching at 11. Wednesday prayer meeting at 7:30 p. m.

Japanese Union Church (connected with Hawaiian Board of Missions); Rev. P. K. Tamura, pastor. —Sunday services at 10 a. m., 11 a. m. and 7:30 p. m. Prayer meeting Wednesdays at 7 p. m.

Korean Methodist Church, Rev. W. C. Pang, pastor; Liliha street. Services at usual hours.

Japanese Methodist Church, Rev. C. Nakamura, pastor. Hold services in chapel on River street, near St. Louis College.

Japanese Church, corner Kinau and Pensacola streets, Rev. T. Okumura, pastor. Hold regular services at the usual hours.

Church of the Cross-roads, Rev. G. R. Weaver, Minister. Hold services at the usual hours in Mission Memorial Hall.

Japanese Harris Memorial Church, Rev. E. Fuginaga, pastor; corner Fort and Vineyard streets. Services at usual hours.

NATIVE CHURCHES

Kawaiahao Church, corner King and Punchbowl streets; Rev. Akaiko Akana, pastor. Services in Hawaiian every Sunday at 11 a. m. and 7:30 p. m. Sunday school at 10 a. m. Prayer meeting Wednesdays at 7:30 p. m.

Kaumakapili Church, King street, Palama; Rev. H. K. Poepoe, pastor. Sunday services at the usual hours.

COUNTY OFFICIALS

CITY AND COUNTY OF HONOLULU

George Fred Wright.....Mayor
Charles H. Rose.....Sheriff
Ernest N. Heen.....Clerk
Edwin P. Murray.....Auditor
D. L. Conkling.....Treasurer
John C. Kelley.....Public Prosecutor
James H. Borthwick, Louis C. Cain, Charles S. Crane, Samuel W. King, Manuel C. Pacheco, William B. Pittman, Henry B. Wolter .....Supervisors
H. A. R. Austin.....
.....Chief Engineer, Dept. Public Works
Wm. W. Blaisdell.....
.....Chief Engineer Fire Department
H. A. Smith.....
.....1st Asst. Engineer Fire Dept.
E. P. Boyle.....
.....2nd Asst. Engineer, Fire Dept.
Geo. L. Haneberg.....
.....Prosecuting Attorney, Police Court
Chas. E. King.....Bandmaster, Haw'n Band
Lester McCoy.....Chairman Parks Board

COUNTY OF MAUI

Clement C. Crowell.....Sheriff
E. R. Bevins.....Attorney
Samuel Alo, Sr.....Auditor
J. P. Cockett.....Treasurer
W. F. Kaae.....Clerk
S. E. Kalama, chairman; R. A. Drummond, D. T. Fleming, A. S. Spencer, Dr. H. K. Tatekawa, H. L. Holstein, Alvin K. Silva .....Supervisors

COUNTY OF HAWAII

Henry K. Martin.....Sheriff
H. K. Brown.....Auditor
Archibald Hapai .....Clerk
W. H. Beers.....Attorney
O. T. Shipman.....Treasurer
W. R. Barringer.....Engineer
S. M. Spencer, chairman; J. R. Yates, G. A. Bush, A. M. Cabrinha, T. M. Cunningham, W. R. Vredenburg, F. R. Greenwell .....Supervisors

COUNTY OF KAUAI

W. H. Rice, Jr.....Sheriff
K. M. Ahana.....Auditor
J. M. Kaneakua.....Clerk
A. G. Kaulukou.....Attorney
K. C. Ahana.....Treasurer
N. A. Akana, Dr. S. Y. Chang, H. R. Peters, J. B. Fernandes, M. R. Aguiar, Jr. .....Supervisors

FEDERAL OFFICIALS

DEPARTMENT OF JUSTICE
U. S. DISTRICT COURT

Hons. William B. Lymer, Edward K. Masse.....Judges U. S. District Court
S. B. D. Wood.....U. S. District Attorney
John Albert Matthewman, W. Z. Fairbanks, William C. Moore, E. A. Towse.....
.....Assistants
Oscar P. Cox.....U. S. Marshal
T. R. Clark.....Office Dep. U. S. Marshal
H. Clarke, L. Kahanamoku.....
.....Assts. Office Dep. U. S. Marshal
Wm. F. Thompson, Jr.....Clerk
Thos. P. Cummins, E. Langwith.....
.....Deputy Clerks
W. R. Ouderkirk.....U. S. Commissioner
Harry Steiner.....U. S. Com., Honolulu
J. D. Flint.....Referee in Bankruptcy
S. Desha.....U. S. Commissioner, Hilo
T. Tsuzaki.....Referee, Hilo
F. A. Lufkin.....Referee, Kahului
Manuel Asue.....U. S. Com., Wailuku
Jos. C. Cullen.....U. S. Com., Lihue
Regular Terms:—At Honolulu on the second Monday in April and October.
Special Terms:—May be held at such times and places in the district as the Judge may deem expedient.
Olaf Oswald.....U. S. Court Reporter
U. S. Jury Commissioners:
Wm. F. Thompson, Jr., Lester Petrie

TREASURY DEPARTMENT
CUSTOMS DIVISION

Jeannette A. Hyde.....Collector
Roger J. Taylor.....Asst. Collector
R. H. Bemrose.....Acting Appraiser
G. M. Meyers.....Dep. Col. and Cashier
E. H. Boyen, H. N. Kimura, F. L. Brewer .....Examiners
A. S. Mau, Ah Sun Chung, Warde C. Hiberly.....Deputy Collector and Clerks
W. I. Stearns, Yuk Sing Hu.....Clerks
M. McNess.....Inspectress and Clerk
Wm. O. Brice.....Storekeeper
L. N. Gillin.....Dep. Collector, Kahului
R. H. Anderson.....Dep. Collector, Hilo
W. M. Gorham....Dep. Collector, Port Allen
J. H. Oliveira, Dep. Insp. in charge outside force.

U. S. INTERNAL REVENUE

Collector's Office

A. H. Tarleton.....Collector
W. G. Ashley, Jr.....Asst. to Collector
Lee Sing .....Cashier
Oren C. Wilson.....Chief Income Tax Div.
Kittie E. Westley.....Bookkeeper
George W. Macy.....Chief Field Division

HONOLULU POST OFFICE

C. F. Chillingworth.....Postmaster
Albert P. Lino.....Asst. Postmaster
George T. Sullivan.....Supt. of Mails
John Nua.....Asst. Supt. of Mails
John A. Swain.....Postal Cashier
E. T. Gilsey.....Money Order Cashier
William Jones.....Foreman Registry Section
Chas. E. Paaluhi....Foreman Mailing Section
Ernest K. Puni.....Foreman of Carriers
Arthur Grantham.....
.....Chief Clerk, Railway Mail Service

DEPARTMENT OF COMMERCE
LIGHTHOUSE SERVICE

Fredk. A. Edgecomb.....Superintendent
C. N. Elliot.....Asst. Superintendent
W. C. Rondeau.....Chief Clerk
Neil W. Wetherby....Asst. Lighthouse Eng.
W. A. Inman, Mrs. Rose V. Wilkins,
F. E. Lenardson.....Clerks
Chas. H. Y. Liu.....
.....Acting Keeper, Lighthouse Depot

Lighthouse Tender Kukui

W. J. H. Siekemeyer.....Captain
Victor B. Gothe.....First Officer
J. F. Miller.....Second Officer
M. B. Jacobsen.....Chief Engineer
Ralph Carson.....1st Asst. Engineer

U. S. DEPARTMENT OF LABOR
IMMIGRATION SERVICE

James B. Bryan.....District Director
Jos. A. Conaty.....Asst. District Director
Chas. B. Borella, William Thomas, Robt.
W. Pierce, Roy McFarlane.....Inspectors
Clara A. Burnett, Mildred Beese.....Clerks
Sunia Tanaka.....Japanese Interpreter
Chu Ming.....Chinese Interpreter

DEPARTMENT OF AGRICULTURE
U. S. WEATHER BUREAU

J. F. Voorhees.....Meteorologist
E. F. Lovridge.....Asst. Meteorologist
W. T. Nakamura.....Observer

HAWAII EXPERIMENT STATION
(Jointly with University of Hawaii)

J. M. Westgate.....Director
Willis T. Pope.....Horticulturist
J. C. Ripperton.....Chemist
Chas. Richter.....Asst. Chemist
R. K. Lum.....Asst. Agronomist
John Castro.....Plant Propagator
H. K. Hee.....Clerk

PUBLIC HEALTH, UNITED STATES SERVICE

S. B. Grubbs, Medical Director, U. S. P. H. S., Chief Quarantine Officer; C. R. Eskey, Surgeon, U. S. P. H. S.
W. W. Nesbit, Passed Asst. Surgeon, U. S. P. H. S.
E. W. Norris, R. D. Millard, Assistant Surgeons
L. L. Sexton, Acting Assistant Surgeon, U. S. P. H. S., Hilo, Hawaii, T. H.
Wm. Osmers, Acting Assistant Surgeon, U. S. P. H. S., Kahului, Maui, T. H.
Wm. T. Dunn, Acting Assistant Surgeon, U. S. P. H. S., Lahaina, Maui, T. H.
J. M. Kuhns, Acting Assistant Surgeon, U. S. P. H. S., Ahukini, Kauai, T. H.
A. H. Waterhouse, Acting Assistant Surgeon, U. S. P. H. S., Koloa, Kauai, T. H.
R. T. Treadwell, Acting Assistant Surgeon, U. S. P. H. S., Mahukona, Hawaii, T. H.

U. S. LEPROSY INVESTIGATION STATION

N. C. Wayson, Surgeon, Director, U. S. P. H. S.
John R. Murdock, Passed Assistant Surgeon, U. S. P. H. S.

Tax Rates

Year	First Division City & County of Honolulu	Second Division Counties of Maui and Molokai	Third Division County of Hawaii	Fourth Division County of Kauai
1912	1.10	1.15	1.18	1.16
1913	1.11½	1.10	1.23	1.16
1914	1.17	1.29	1.38	1.26
1915	1.26½	1.44	1.52¼	1.38½
1916	1.273	1.332	1.42	1.415
1917	1.21	1.26	1.30	1.35
1918	1.83	1.50	1.865	1.81
1919	1.83	1.74	1.83	1.788
1920	2.29	2.11	2.264	2.364
1921	2.57	2.94	2.74	2.90
1922	2.89	3.16	3.25	3.02
1923	3.067	3.274	3.488	3.265
1924	2.747	2.804	2.792	2.468
1925	2.796	2,966	3.127	2.703
1926	3.337	3.390	3.511	2.950
1927	3.497	3.491	3.793	3.225
1928	3.526	3.712	4.136	3.359
1929	3.769	3.764	4.317	3.430
1930	3.794	3.722	4.308	3.481
1931	4.003	3.935	4.341	3.631
1932	4.011	4.099	4.558	3.487

FRED. L. WALDRON, Ltd.

IMPORTERS--EXPORTERS
INSURANCE--SHIPPING

Agencies

International Mercantile Marine Company
White Star Line
Red Star Line
Atlantic Transport Line
White Star Line Canadian Service
Baltimore Mail Line
Panama Pacific Line
Roosevelt Steamship Co., Inc.
United States Lines
American Merchant Lines
General Steamship Corporation, Ltd.
Johnson Line, Stockholm, Sweden
Silver-Java Pacific Line
Canadian National Steamships
Canadian National Railways
Etc., Etc.

Amalgamated Dairies, Ltd., N.Z.
W. & R. Fletcher (N.Z.), Ltd.
F. J. Walker, Ltd., Australia
Beech-Nut Packing Co.
H. G. Prince & Co.
Van Camp Products Co.
Pet Milk Sales Corporation
Kraft-Phenix Cheese Corp.
Owens-Illinois Pacific Coast Co.
Globe Grain & Milling Co.
Johnson-Pickett Rope Co.
Owens Illinois Glass Co.
Libbey-Owens-Ford Glass Co.
American Wire Fabrics Corp.
Gulf States Steel Co.
Wickwire Spencer Steel Co.
Etc., Etc.

The Royal Exchange Assurance of London
The Franklin Fire Insurance Co., Marine Dept.
St. Paul-Mercury Indemnity Co.
St. Paul Fire & Marine Insurance Co.

SUGAR

Wailea Milling Co., Ltd.

Correspondence Solicited

Main Office.....Honolulu, Hawaii
Hilo Office.....Hilo, Hawaii
San Francisco Office.....503 Market St., San Francisco, Calif.