THE HAWAIIAN ANNUAL

FOR

1932

The Reference Book of Information and Statistics
Relating to the Territory of Hawaii, of Value to Merchants, Tourists and Others

THOS. G. THRUM, M.A.
Compiler and Publisher

Fifty-Eighth Year of Publication

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HONOLULU
December, 1931
The Reference Book of Information and Statistics Relating to the Territory of Hawaii

THOS. G. THRUM, M. A.  
Compiler and Publisher

FIFTY-EIGHTH ISSUE

HONOLULU, HAWAII  
1931

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By Plane or
Steamer
Linking the Entire
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Islands.

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<tr>
<th></th>
<th>Hawaii</th>
<th>Kauai</th>
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<th>Year</th>
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HONOLULU
December, 1931
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**Thos. G. Thrum**  
RESEARCHER AND PUBLISHER  
The Hawaiian Annual  
HONOLULU, HAWAII
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</table>
In the year 1932 there will be four eclipses, two of the sun and two of the moon. One partial eclipse of the Moon will be visible in Hawaii.

1. An Annular Eclipse of the Sun, March 7, and a Total Eclipse of the Sun, August 31, will be invisible in Hawaii.

2. A Partial Eclipse of the Moon, March 22, visible throughout North America, the Pacific Ocean, Australia and Asia, and in Hawaii as follows (Honolulu time).

   Moon enters the penumbra, March 21, 11:29 p.m.
   Moon enters the umbra, March 22, 0:29 a.m.
   Middle of the eclipse, March 22, 2:02 a.m.
   Moon leaves the umbra, March 22, 3:35 a.m.
   Moon leaves the penumbra, March 22, 4:36 a.m.
   Magnitude of the eclipse, 0.973 (Moon's diameter = 1.0).

3. A Partial Eclipse of the Moon, September 14, will be invisible in Hawaii.
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<td>Chinese-American Bank, Ltd.</td>
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<td>Norton, Lilly &amp; Company</td>
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<td>Oahu Railway &amp; Land Co.</td>
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<tr>
<td>Coyne Furniture Co.</td>
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<td>Pacific Guano &amp; Fertilizer Co.</td>
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<tr>
<td>Curtis' Specialty Shop</td>
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<td>Ramsay, Ltd., W. A.</td>
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<td>Davies &amp; Co., Theo. H., Importers and Com.</td>
<td>9</td>
<td>Rothwell &amp; Lester, Architects</td>
<td>8</td>
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<td>Dimond-Hall Co., Hardware</td>
<td>24</td>
<td>Schuman Carriage Co.</td>
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<td>Eastman Kodak Stores</td>
<td>23</td>
<td>Union Trust Co.</td>
<td>19</td>
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<td>Von Hamm-Young Co., Importers</td>
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<td>Hawaii Meat Co.</td>
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<td>Waldron, Ltd., Fred. L., Commission</td>
<td>back cover</td>
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<td>22</td>
<td>Waterhouse Co., The, Office Equipment</td>
<td>27</td>
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<tr>
<td>Hollister Drug Co., Ltd.</td>
<td>25</td>
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<tr>
<td>Home Insurance Co.</td>
<td>11</td>
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<tr>
<td>Honolulu Construction &amp; Draying Co.</td>
<td>8</td>
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<td>Honolulu Dairymen's Assn.</td>
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<tr>
<td>Honolulu Iron Works Co.</td>
<td>10</td>
<td></td>
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</tr>
<tr>
<td>Honolulu Paper Co., Ltd.</td>
<td>28</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
HAWAII'S OBSERVANCE DAYS FOR 1932

Second half of the thirty-fourth year and first half of the thirty-fifth year since annexation of Hawaii to the United States.
Thirty-seventh year since the downfall of the Monarchy.
The 154th 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. 5
Lincoln's Birthday .... Feb. 12  *Regatta Day (3rd Saturday) Sept. 17
*Washington's Birthday .... Feb. 22 *Decoration Day .......... May 30
*Kamehameha Day ...... June 11 *Victory Day ............ Nov. 11
*Birthday Hawn. Republic July 4 Thanksgiving Day ...... Nov. 26
*Independence Day ...... July 4 *Christmas Day .......... Dec. 25

* 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 5
Ash Wednesday .......... Feb. 10  Whitsunday ............. May 15
First Sunday in Lent .... Feb. 14  Trinity Sunday ........ May 22
Palm Sunday .......... Mar. 20  Corpus Christi .......... May 26
Good Friday .......... Mar. 25  Advent Sunday .......... Nov. 27
Easter Sunday .......... Mar. 27 Christmas .......... Dec. 25

Moon Changes, 1932

<table>
<thead>
<tr>
<th>Month</th>
<th>New Moon Day, Honolulu Time</th>
<th>Full Moon Day, Honolulu Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>January</td>
<td>7 12:59 p.m.</td>
<td>23 3:14 a.m.</td>
</tr>
<tr>
<td>February</td>
<td>6 4:15 a.m.</td>
<td>21 3:37 p.m.</td>
</tr>
<tr>
<td>March</td>
<td>6 9:14 p.m.</td>
<td>22 2:07 a.m.</td>
</tr>
<tr>
<td>April</td>
<td>5 2:51 p.m.</td>
<td>20 10:57 a.m.</td>
</tr>
<tr>
<td>May</td>
<td>5 7:41 a.m.</td>
<td>19 6:39 p.m.</td>
</tr>
<tr>
<td>June</td>
<td>3 10:46 p.m.</td>
<td>18 2:08 a.m.</td>
</tr>
<tr>
<td>July</td>
<td>3 11:50 a.m.</td>
<td>17 10:36 a.m.</td>
</tr>
<tr>
<td>August</td>
<td>1 11:12 p.m.</td>
<td>15 9:12 p.m.</td>
</tr>
<tr>
<td>September</td>
<td>31 9:25 a.m.</td>
<td></td>
</tr>
<tr>
<td>October</td>
<td>29 7:00 p.m.</td>
<td>14 10:36 a.m.</td>
</tr>
<tr>
<td>November</td>
<td>29 4:26 a.m.</td>
<td>14 2:48 a.m.</td>
</tr>
<tr>
<td>December</td>
<td>27 2:13 p.m.</td>
<td>12 8:58 p.m.</td>
</tr>
<tr>
<td></td>
<td>27 0:52 a.m.</td>
<td>12 3:51 p.m.</td>
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</table>
## Resources of Hawaii, 1931

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population, Territory, census 1930</td>
<td>368,336</td>
</tr>
<tr>
<td>Population, Territory, estimate, June, 1931</td>
<td>375,211</td>
</tr>
<tr>
<td>Population, Honolulu, census, 1930</td>
<td>137,584</td>
</tr>
<tr>
<td>Population, Honolulu, estimate, June, 1931</td>
<td>141,713</td>
</tr>
<tr>
<td>Assessed valuation, Territory</td>
<td>$390,516,379</td>
</tr>
<tr>
<td>Assessed valuation, real estate</td>
<td>259,906,606</td>
</tr>
<tr>
<td>Assessed valuation, personal property</td>
<td>130,649,675</td>
</tr>
<tr>
<td>Assessed valuation, Honolulu and Oahu</td>
<td>244,070,206</td>
</tr>
<tr>
<td>Assessed valuation, Honolulu realty</td>
<td>169,901,294</td>
</tr>
<tr>
<td>Assessed valuation, Honolulu personal</td>
<td>74,168,814</td>
</tr>
<tr>
<td>Amount Insurance written, 1930</td>
<td>310,244,240</td>
</tr>
<tr>
<td>Banks have credits</td>
<td>83,805,596</td>
</tr>
<tr>
<td>Banks have commercial accounts</td>
<td>42,217,616</td>
</tr>
<tr>
<td>Banks have savings accounts</td>
<td>41,657,980</td>
</tr>
<tr>
<td>Corporations (904) are capitalized at</td>
<td>347,232,463</td>
</tr>
<tr>
<td>Hawaii's sugar crop, 1931, tons</td>
<td>1,000,390</td>
</tr>
<tr>
<td>Value sugar exports, 1930</td>
<td>56,563,847</td>
</tr>
<tr>
<td>Value pineapple exports, 1930</td>
<td>39,137,817</td>
</tr>
<tr>
<td>Total value all exports</td>
<td>100,915,783</td>
</tr>
<tr>
<td>Total value all imports</td>
<td>91,213,049</td>
</tr>
<tr>
<td>Total value exports over imports</td>
<td>9,702,734</td>
</tr>
<tr>
<td>Amount of public debt</td>
<td>32,600,000</td>
</tr>
<tr>
<td>Total amount of year's revenue</td>
<td>13,594,170</td>
</tr>
</tbody>
</table>

## Hawaii's Bonded Debt, June 30, 1931

<table>
<thead>
<tr>
<th>Description</th>
<th>Value</th>
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</thead>
<tbody>
<tr>
<td>Public Improvement 4% bonds</td>
<td>$7,680,000</td>
</tr>
<tr>
<td>Public Improvement 4 1/2% Bonds</td>
<td>24,920,000</td>
</tr>
<tr>
<td>Total Bonds outstanding</td>
<td>$32,600,000</td>
</tr>
</tbody>
</table>
Overland Distances, Island of Oahu
(By Government Road Only)
Revised by R. D. King, Survey Department

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<th>Distance from New Post Office, Honolulu, to</th>
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<td>Miles</td>
</tr>
<tr>
<td>-------</td>
</tr>
<tr>
<td>Cor. Judd and Nuuanu</td>
</tr>
<tr>
<td>Nuuanu, Country Club Entrance</td>
</tr>
<tr>
<td>Pali</td>
</tr>
<tr>
<td>Waimanalo Fork</td>
</tr>
<tr>
<td>Waimanalo Mill</td>
</tr>
<tr>
<td>Waimanalo Landing</td>
</tr>
<tr>
<td>Kailua Beach</td>
</tr>
<tr>
<td>Kaneohe Court House</td>
</tr>
<tr>
<td>Heeia (Naval Radio Station)</td>
</tr>
<tr>
<td>Kaalae</td>
</tr>
<tr>
<td>Waiahole Bridge</td>
</tr>
<tr>
<td>Waikane Post Office</td>
</tr>
<tr>
<td>Kualoa</td>
</tr>
<tr>
<td>Kahana Bridge</td>
</tr>
<tr>
<td>Punaluu Bridge</td>
</tr>
<tr>
<td>Hauula Bridge</td>
</tr>
<tr>
<td>Laie Middle</td>
</tr>
<tr>
<td>Kahuku Plantation Office</td>
</tr>
<tr>
<td>Moana Hotel</td>
</tr>
<tr>
<td>Kapiolani Park (Entrance)</td>
</tr>
<tr>
<td>Diamond Head Lighthouse</td>
</tr>
<tr>
<td>Kahala and Isenberg Road</td>
</tr>
<tr>
<td>Kaimuki Car Line (Terminus)</td>
</tr>
<tr>
<td>Kaimuki Hill Reservoir</td>
</tr>
<tr>
<td>Waialae</td>
</tr>
<tr>
<td>Wailupe (Naval Radio Station)</td>
</tr>
<tr>
<td>Nu</td>
</tr>
<tr>
<td>Koko Head</td>
</tr>
<tr>
<td>Makapuu</td>
</tr>
<tr>
<td>Naval Station, Pearl Harbor</td>
</tr>
<tr>
<td>Fort Kamehameha</td>
</tr>
<tr>
<td>Fort de Rusey</td>
</tr>
<tr>
<td>Fort Ruger</td>
</tr>
<tr>
<td>Waimea, Kauai</td>
</tr>
</tbody>
</table>

Oahu Railway Distances.—From Honolulu to

<table>
<thead>
<tr>
<th>Miles</th>
<th>Miles</th>
<th>Miles</th>
</tr>
</thead>
<tbody>
<tr>
<td>Puuloa</td>
<td>6.0</td>
<td>Wahiawa</td>
</tr>
<tr>
<td>Aiea</td>
<td>8.0</td>
<td>Hoaena</td>
</tr>
<tr>
<td>Kalaauo</td>
<td>9.0</td>
<td>Honouliuli</td>
</tr>
<tr>
<td>Wai'anae</td>
<td>10.0</td>
<td>Ewa Mill</td>
</tr>
<tr>
<td>Pearl City</td>
<td>11.0</td>
<td>Gilbert</td>
</tr>
<tr>
<td>Waipahu</td>
<td>13.0</td>
<td>Nanakuli</td>
</tr>
<tr>
<td>Wai'anae</td>
<td>13.0</td>
<td>Wai'anae</td>
</tr>
<tr>
<td>Lilehua</td>
<td>26.0</td>
<td>Makaha</td>
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</table>
Total Population by Districts and Islands—1930 and 1920, Comparative

<table>
<thead>
<tr>
<th>Hawaii</th>
<th>1920</th>
<th>1930</th>
<th>Oahu</th>
<th>1920</th>
<th>1930</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hamakua</td>
<td>9,122</td>
<td>8,864</td>
<td>Honolulu</td>
<td>83,327</td>
<td>137,582</td>
</tr>
<tr>
<td>North Hilo</td>
<td>5,644</td>
<td>5,028</td>
<td>Ewa</td>
<td>17,899</td>
<td>25,507</td>
</tr>
<tr>
<td>South Hilo</td>
<td>23,828</td>
<td>29,572</td>
<td>Waianae</td>
<td>1,802</td>
<td>1,923</td>
</tr>
<tr>
<td>Puna</td>
<td>7,282</td>
<td>8,284</td>
<td>Waialua</td>
<td>7,641</td>
<td>8,129</td>
</tr>
<tr>
<td>Kau</td>
<td>4,028</td>
<td>4,751</td>
<td>Wahiawa</td>
<td>4,302</td>
<td>18,103</td>
</tr>
<tr>
<td>North Kona</td>
<td>3,709</td>
<td>4,728</td>
<td>Koolauoa</td>
<td>4,490</td>
<td>5,258</td>
</tr>
<tr>
<td>South Kona</td>
<td>3,703</td>
<td>4,677</td>
<td>Koolaupoko</td>
<td>4,035</td>
<td>6,385</td>
</tr>
<tr>
<td>North Kohala</td>
<td>6,273</td>
<td>6,171</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>South Kohala</td>
<td>1,304</td>
<td>1,250</td>
<td>Midway</td>
<td>31</td>
<td>36</td>
</tr>
<tr>
<td>Maui</td>
<td>64,895</td>
<td>73,325</td>
<td>Waimea</td>
<td>8,672</td>
<td>10,212</td>
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<tr>
<td>Lahaina*</td>
<td>7,142</td>
<td>7,938</td>
<td>Niihau</td>
<td>191</td>
<td>136</td>
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<td>Wailuku</td>
<td>14,941</td>
<td>21,363</td>
<td>Koloa</td>
<td>7,270</td>
<td>8,452</td>
</tr>
<tr>
<td>Hana</td>
<td>3,100</td>
<td>2,436</td>
<td>Kawaihau</td>
<td>4,533</td>
<td>7,441</td>
</tr>
<tr>
<td>Makawao†</td>
<td>10,897</td>
<td>17,019</td>
<td>Hanalei</td>
<td>2,549</td>
<td>2,186</td>
</tr>
<tr>
<td></td>
<td>36,080</td>
<td>48,756</td>
<td>Lihue</td>
<td>6,233</td>
<td>7,515</td>
</tr>
<tr>
<td>Molokai</td>
<td>1,784</td>
<td>5,032</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Lanai</td>
<td>185</td>
<td>2,356</td>
<td>Total whole group</td>
<td>255,912</td>
<td>368,336</td>
</tr>
<tr>
<td>Kahoolawe</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* Not including Lanai. † Not including Kahoolawe.

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

<table>
<thead>
<tr>
<th>Islands</th>
<th>1872</th>
<th>1878</th>
<th>1884</th>
<th>1890</th>
<th>1900</th>
<th>1910</th>
<th>1920</th>
<th>1930</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>16,001</td>
<td>17,034</td>
<td>24,991</td>
<td>26,754</td>
<td>46,843</td>
<td>55,382</td>
<td>64,895</td>
<td>73,325</td>
</tr>
<tr>
<td>Maui</td>
<td>12,334</td>
<td>12,109</td>
<td>15,970</td>
<td>17,357</td>
<td>24,797</td>
<td>28,623</td>
<td>36,080</td>
<td>48,756</td>
</tr>
<tr>
<td>Oahu</td>
<td>20,671</td>
<td>29,236</td>
<td>28,068</td>
<td>31,194</td>
<td>58,504</td>
<td>81,993</td>
<td>123,496</td>
<td>202,887</td>
</tr>
<tr>
<td>Kauai</td>
<td>4,961</td>
<td>5,634</td>
<td>8,935</td>
<td>11,643</td>
<td>20,562</td>
<td>23,744</td>
<td>29,247</td>
<td>35,806</td>
</tr>
<tr>
<td>Molokai</td>
<td>2,349</td>
<td>2,581</td>
<td>2,652</td>
<td>2,504</td>
<td>1,791</td>
<td>1,784</td>
<td>5,032</td>
<td></td>
</tr>
<tr>
<td>Lanai</td>
<td>348</td>
<td>214</td>
<td>2614</td>
<td>174</td>
<td>619</td>
<td>131</td>
<td>185</td>
<td>2,356</td>
</tr>
<tr>
<td>Niihau</td>
<td>233</td>
<td>177</td>
<td>216</td>
<td>172</td>
<td>208</td>
<td>191</td>
<td>136</td>
<td></td>
</tr>
<tr>
<td>Kahoolawe</td>
<td></td>
<td></td>
<td>2</td>
<td>3</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Midway</td>
<td></td>
<td></td>
<td>35</td>
<td>31</td>
<td>36</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>56,897</td>
<td>57,985</td>
<td>80,578</td>
<td>89,900</td>
<td>154,001</td>
<td>191,909</td>
<td>255,912</td>
<td>368,336</td>
</tr>
<tr>
<td>All Foreigners</td>
<td>5,366</td>
<td>10,477</td>
<td>36,436</td>
<td>49,368</td>
<td>116,366</td>
<td>153,362</td>
<td>214,162</td>
<td>317,476</td>
</tr>
<tr>
<td>Hawaiians</td>
<td>51,531</td>
<td>47,508</td>
<td>44,232</td>
<td>40,622</td>
<td>37,636</td>
<td>38,547</td>
<td>41,750</td>
<td>50,860</td>
</tr>
</tbody>
</table>
# Population of Honolulu, 1930, by Race, Sex and Citizenship

<table>
<thead>
<tr>
<th>Race, etc.</th>
<th>1930</th>
<th></th>
<th>1920</th>
<th></th>
<th>% distribution 1930</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total population</td>
<td>137,582</td>
<td>74,456</td>
<td>63,126</td>
<td>83,327</td>
<td>100.0</td>
</tr>
<tr>
<td>Hawaiian</td>
<td>9,675</td>
<td>4,739</td>
<td>4,936</td>
<td>8,459</td>
<td>7.0</td>
</tr>
<tr>
<td>Caucasian-Hawaiian</td>
<td>8,283</td>
<td>4,028</td>
<td>4,255</td>
<td>5,970</td>
<td>6.0</td>
</tr>
<tr>
<td>Asiatic-Hawaiian</td>
<td>5,059</td>
<td>2,885</td>
<td>3,174</td>
<td>3,102</td>
<td>4.3</td>
</tr>
<tr>
<td>Portuguese</td>
<td>12,297</td>
<td>6,081</td>
<td>6,216</td>
<td>9,978</td>
<td>8.9</td>
</tr>
<tr>
<td>Porto Rican</td>
<td>2,311</td>
<td>1,160</td>
<td>1,151</td>
<td>841</td>
<td>1.6</td>
</tr>
<tr>
<td>Spanish</td>
<td>574</td>
<td>272</td>
<td>302</td>
<td>636</td>
<td>0.4</td>
</tr>
<tr>
<td>Other Caucasian</td>
<td>23,961</td>
<td>12,297</td>
<td>11,664</td>
<td>16,677</td>
<td>17.4</td>
</tr>
<tr>
<td>Chinese</td>
<td>19,334</td>
<td>11,146</td>
<td>8,188</td>
<td>13,353</td>
<td>14.1</td>
</tr>
<tr>
<td>Japanese</td>
<td>47,463</td>
<td>24,953</td>
<td>22,515</td>
<td>24,522</td>
<td>34.5</td>
</tr>
<tr>
<td>Korean</td>
<td>2,004</td>
<td>1,442</td>
<td>562</td>
<td>1,319</td>
<td>1.9</td>
</tr>
<tr>
<td>Filipino</td>
<td>4,778</td>
<td>3,337</td>
<td>1,439</td>
<td>2,113</td>
<td>3.1</td>
</tr>
<tr>
<td>Negro and all other</td>
<td>440</td>
<td>242</td>
<td>198</td>
<td>334</td>
<td>0.3</td>
</tr>
<tr>
<td>Native, all races</td>
<td>110,629</td>
<td>58,798</td>
<td>51,831</td>
<td>58,641</td>
<td>80.4</td>
</tr>
<tr>
<td>Native parentage</td>
<td>52,628</td>
<td>28,930</td>
<td>23,678</td>
<td>27,971</td>
<td>33.3</td>
</tr>
<tr>
<td>Foreign or mixed parents.</td>
<td>58,001</td>
<td>29,848</td>
<td>28,153</td>
<td>30,724</td>
<td>42.2</td>
</tr>
<tr>
<td>Foreign born, all races.</td>
<td>26,953</td>
<td>15,658</td>
<td>11,295</td>
<td>24,606</td>
<td>19.6</td>
</tr>
<tr>
<td>Naturalized</td>
<td>3,098</td>
<td>1,808</td>
<td>1,280</td>
<td>2,406</td>
<td>2.2</td>
</tr>
<tr>
<td>First papers</td>
<td>346</td>
<td>269</td>
<td>77</td>
<td>262</td>
<td>0.3</td>
</tr>
<tr>
<td>Alien</td>
<td>23,411</td>
<td>13,527</td>
<td>9,884</td>
<td>21,840</td>
<td>17.0</td>
</tr>
<tr>
<td>Unknown</td>
<td>107</td>
<td>54</td>
<td>53</td>
<td>182</td>
<td>0.1</td>
</tr>
<tr>
<td>Population of, or over 21 years</td>
<td>69,811</td>
<td>39,964</td>
<td>29,847</td>
<td>45,649</td>
<td>100.0</td>
</tr>
<tr>
<td>Hawaiian</td>
<td>5,537</td>
<td>2,706</td>
<td>2,831</td>
<td>5,174</td>
<td>7.2</td>
</tr>
<tr>
<td>Caucasian-Hawaiian</td>
<td>3,152</td>
<td>1,472</td>
<td>1,680</td>
<td>2,278</td>
<td>4.3</td>
</tr>
<tr>
<td>Asiatic-Hawaiian</td>
<td>1,604</td>
<td>731</td>
<td>873</td>
<td>1,061</td>
<td>2.3</td>
</tr>
<tr>
<td>Portuguese</td>
<td>6,228</td>
<td>3,040</td>
<td>3,188</td>
<td>4,379</td>
<td>8.9</td>
</tr>
<tr>
<td>Porto Rican</td>
<td>965</td>
<td>553</td>
<td>412</td>
<td>384</td>
<td>1.4</td>
</tr>
<tr>
<td>Spanish</td>
<td>261</td>
<td>124</td>
<td>137</td>
<td>264</td>
<td>0.4</td>
</tr>
<tr>
<td>Other Caucasian</td>
<td>16,748</td>
<td>10,100</td>
<td>6,648</td>
<td>9,099</td>
<td>24.0</td>
</tr>
<tr>
<td>Chinese</td>
<td>9,352</td>
<td>6,037</td>
<td>3,322</td>
<td>6,984</td>
<td>13.4</td>
</tr>
<tr>
<td>Japanese</td>
<td>21,067</td>
<td>11,902</td>
<td>9,165</td>
<td>13,500</td>
<td>31.0</td>
</tr>
<tr>
<td>Korean</td>
<td>1,200</td>
<td>751</td>
<td>449</td>
<td>782</td>
<td>1.7</td>
</tr>
<tr>
<td>Filipino</td>
<td>2,875</td>
<td>2,352</td>
<td>523</td>
<td>1,560</td>
<td>4.1</td>
</tr>
<tr>
<td>Negro and all other</td>
<td>217</td>
<td>136</td>
<td>81</td>
<td>184</td>
<td>0.3</td>
</tr>
<tr>
<td>Native, all races</td>
<td>43,440</td>
<td>24,640</td>
<td>18,800</td>
<td>22,640</td>
<td>62.2</td>
</tr>
<tr>
<td>Foreign, all races</td>
<td>20,371</td>
<td>15,324</td>
<td>11,047</td>
<td>23,090</td>
<td>37.8</td>
</tr>
<tr>
<td>Naturalized</td>
<td>3,016</td>
<td>1,769</td>
<td>1,247</td>
<td>2,232</td>
<td>4.3</td>
</tr>
<tr>
<td>First papers</td>
<td>334</td>
<td>259</td>
<td>75</td>
<td>257</td>
<td>0.5</td>
</tr>
<tr>
<td>Alien</td>
<td>22,922</td>
<td>13,243</td>
<td>9,679</td>
<td>20,870</td>
<td>32.8</td>
</tr>
<tr>
<td>Unknown</td>
<td>99</td>
<td>53</td>
<td>46</td>
<td>150</td>
<td>0.1</td>
</tr>
</tbody>
</table>
## Population in 1930 by Sex and Race

<table>
<thead>
<tr>
<th>Races</th>
<th>Total (1930)</th>
<th>Male (1930)</th>
<th>Female (1930</th>
<th>Total (1920)</th>
<th>Per Cent Illit.*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaiian</td>
<td>22,336</td>
<td>11,131</td>
<td>11,325</td>
<td>22,723</td>
<td>3.4</td>
</tr>
<tr>
<td>Caucasian-Hawaiian</td>
<td>15,632</td>
<td>7,760</td>
<td>7,872</td>
<td>11,072</td>
<td>0.6</td>
</tr>
<tr>
<td>Asiatic-Hawaiian</td>
<td>12,592</td>
<td>6,282</td>
<td>6,310</td>
<td>6,955</td>
<td>0.9</td>
</tr>
<tr>
<td>Portuguese</td>
<td>27,588</td>
<td>13,870</td>
<td>13,718</td>
<td>27,002</td>
<td>9.7</td>
</tr>
<tr>
<td>Porto Rican</td>
<td>6,671</td>
<td>3,635</td>
<td>3,036</td>
<td>5,602</td>
<td>32.0</td>
</tr>
<tr>
<td>Spanish</td>
<td>1,219</td>
<td>631</td>
<td>588</td>
<td>2,430</td>
<td>16.4</td>
</tr>
<tr>
<td>Other Caucasian</td>
<td>44,895</td>
<td>30,570</td>
<td>14,325</td>
<td>19,708</td>
<td>0.3</td>
</tr>
<tr>
<td>Chinese</td>
<td>27,179</td>
<td>16,561</td>
<td>10,618</td>
<td>23,507</td>
<td>15.7</td>
</tr>
<tr>
<td>Japanese</td>
<td>139,631</td>
<td>75,008</td>
<td>64,623</td>
<td>109,274</td>
<td>12.7</td>
</tr>
<tr>
<td>Korean</td>
<td>6,461</td>
<td>3,999</td>
<td>2,462</td>
<td>4,950</td>
<td>17.6</td>
</tr>
<tr>
<td>Filipino</td>
<td>63,052</td>
<td>52,566</td>
<td>10,486</td>
<td>21,021</td>
<td>38.5</td>
</tr>
<tr>
<td>Negro and all other</td>
<td>780</td>
<td>447</td>
<td>333</td>
<td>658</td>
<td>8.8</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>368,336</td>
<td>222,640</td>
<td>145,696</td>
<td>255,912</td>
<td>15.1</td>
</tr>
</tbody>
</table>

**Native born, all races.**
- Hawaiian: 299,744, 180,593, 119,151, 168,671
- 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, 37,075, 24,361, 81,734
- Unknown: 168, 82, 86, 373

*Per cent illiterate of 16 years and over.

## Comparative Race Population of Hawaii, 1930-1920

<table>
<thead>
<tr>
<th>Race</th>
<th>1930</th>
<th>1920</th>
<th>Increase since 1920</th>
</tr>
</thead>
<tbody>
<tr>
<td>The Territory</td>
<td>368,336</td>
<td>255,912</td>
<td>112,424</td>
</tr>
<tr>
<td>Hawaiian</td>
<td>22,636</td>
<td>23,723</td>
<td>*1,087</td>
</tr>
<tr>
<td>Asiatic-Hawaiian</td>
<td>12,592</td>
<td>6,955</td>
<td>5,637</td>
</tr>
<tr>
<td>Caucasian-Hawaiian</td>
<td>15,632</td>
<td>11,072</td>
<td>5,560</td>
</tr>
<tr>
<td>Portuguese</td>
<td>27,588</td>
<td>27,002</td>
<td>586</td>
</tr>
<tr>
<td>Porto Rican</td>
<td>6,671</td>
<td>5,602</td>
<td>1,069</td>
</tr>
<tr>
<td>Spanish</td>
<td>1,219</td>
<td>2,430</td>
<td>*1,211</td>
</tr>
<tr>
<td>Other Caucasian</td>
<td>44,895</td>
<td>19,708</td>
<td>25,187</td>
</tr>
<tr>
<td>Chinese</td>
<td>27,179</td>
<td>23,507</td>
<td>3,672</td>
</tr>
<tr>
<td>Japanese</td>
<td>139,631</td>
<td>109,274</td>
<td>30,357</td>
</tr>
<tr>
<td>Filipino</td>
<td>63,052</td>
<td>21,031</td>
<td>42,021</td>
</tr>
<tr>
<td>Korean</td>
<td>6,461</td>
<td>4,950</td>
<td>1,511</td>
</tr>
<tr>
<td>Negro and all other</td>
<td>780</td>
<td>658</td>
<td>122</td>
</tr>
</tbody>
</table>

* Decrease.
## Births and Deaths by Nationalities, 1931

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

<table>
<thead>
<tr>
<th>Racial Descent</th>
<th>Deaths</th>
<th>Births</th>
<th>Estimated Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>American, British, German, Russian</td>
<td>338</td>
<td>704</td>
<td>41,068</td>
</tr>
<tr>
<td>Chinese</td>
<td>335</td>
<td>697</td>
<td>27,317</td>
</tr>
<tr>
<td>Filipino</td>
<td>598</td>
<td>1,422</td>
<td>66,049</td>
</tr>
<tr>
<td>Hawaiian</td>
<td>585</td>
<td>391</td>
<td>22,391</td>
</tr>
<tr>
<td>Part-Hawaiian</td>
<td>375</td>
<td>1,826</td>
<td>30,003</td>
</tr>
<tr>
<td>Japanese</td>
<td>1,088</td>
<td>4,572</td>
<td>143,754</td>
</tr>
<tr>
<td>Korean</td>
<td>79</td>
<td>163</td>
<td>6,583</td>
</tr>
<tr>
<td>Portuguese</td>
<td>275</td>
<td>750</td>
<td>28,219</td>
</tr>
<tr>
<td>Porto Rican</td>
<td>103</td>
<td>265</td>
<td>6,886</td>
</tr>
<tr>
<td>Spanish</td>
<td>6</td>
<td>14</td>
<td>1,255</td>
</tr>
<tr>
<td>Other</td>
<td>23</td>
<td>27</td>
<td>786</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>3,805</strong></td>
<td><strong>10,831</strong></td>
<td><strong>375,211</strong></td>
</tr>
</tbody>
</table>

## Vital Statistics by Counties, 1931

<table>
<thead>
<tr>
<th>Islands, etc.</th>
<th>Est. Population</th>
<th>Births</th>
<th>Marriages</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Honolulu City</td>
<td>141,713</td>
<td>4,568</td>
<td>1,357</td>
<td>1,608</td>
</tr>
<tr>
<td>Outer Oahu</td>
<td>63,449</td>
<td>1,574</td>
<td>254</td>
<td>441</td>
</tr>
<tr>
<td>Hilo City</td>
<td>15,211</td>
<td>474</td>
<td>185</td>
<td>218</td>
</tr>
<tr>
<td>Hawaii County (other)</td>
<td>59,864</td>
<td>1,497</td>
<td>189</td>
<td>510</td>
</tr>
<tr>
<td>Maui County</td>
<td>57,525</td>
<td>1,718</td>
<td>344</td>
<td>586</td>
</tr>
<tr>
<td>Kalawao County</td>
<td>532</td>
<td>16</td>
<td>18</td>
<td>52</td>
</tr>
<tr>
<td>Kauai County</td>
<td>36,917</td>
<td>984</td>
<td>160</td>
<td>375</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>375,211</strong></td>
<td><strong>10,831</strong></td>
<td><strong>2,507</strong></td>
<td><strong>3,805</strong></td>
</tr>
</tbody>
</table>

## Nationality of Plantation Labor, June 30, 1931

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

<table>
<thead>
<tr>
<th>Nationality</th>
<th>No.</th>
<th>Nationality</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Americans, Men</td>
<td>925</td>
<td>Japanese, Men</td>
<td>9,062</td>
</tr>
<tr>
<td>Spanish</td>
<td>89</td>
<td>Chinese, &quot;</td>
<td>787</td>
</tr>
<tr>
<td>Portuguese, &quot;</td>
<td>1,987</td>
<td>Koreans, &quot;</td>
<td>468</td>
</tr>
<tr>
<td>Hawaiians, &quot;</td>
<td>639</td>
<td>Filipinos, &quot;</td>
<td>34,301</td>
</tr>
<tr>
<td>Porto Ricans, &quot;</td>
<td>808</td>
<td>Others, &quot;</td>
<td>68</td>
</tr>
<tr>
<td><strong>Total Men</strong></td>
<td></td>
<td><strong>49,134</strong></td>
<td></td>
</tr>
</tbody>
</table>

Women, 1,502. Minors, Regular, 485; School, 5,290.
Grand total—men, women and minors. 56,411
## School Statistics, Territory of Hawaii, 1931
From Report of the Superintendent of Public Instruction

### NUMBER OF SCHOOLS, TEACHERS AND PUPILS.

<table>
<thead>
<tr>
<th>Islands</th>
<th>Total</th>
<th>Teachers</th>
<th>Teachers</th>
<th>Teachers</th>
<th>Pupils</th>
<th>Pupils</th>
<th>Pupils</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>468</td>
<td>M.</td>
<td>F.</td>
<td>Total</td>
<td>M.</td>
<td>F.</td>
<td>Total</td>
</tr>
<tr>
<td>Hawaii</td>
<td>145</td>
<td>428</td>
<td>574</td>
<td>1,002</td>
<td>8,369</td>
<td>7,801</td>
<td>16,170</td>
</tr>
<tr>
<td>Maui</td>
<td>94</td>
<td>295</td>
<td>389</td>
<td>684</td>
<td>5,924</td>
<td>5,457</td>
<td>11,381</td>
</tr>
<tr>
<td>Oahu</td>
<td>165</td>
<td>1,158</td>
<td>1,331</td>
<td>2,499</td>
<td>21,402</td>
<td>20,296</td>
<td>41,698</td>
</tr>
<tr>
<td>Kauai</td>
<td>64</td>
<td>194</td>
<td>258</td>
<td>452</td>
<td>3,735</td>
<td>3,546</td>
<td>7,281</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>468</td>
<td>2,085</td>
<td>2,552</td>
<td>4,637</td>
<td>39,430</td>
<td>37,100</td>
<td>76,530</td>
</tr>
</tbody>
</table>

### PUPILS, ALL AGES, PUBLIC SCHOOLS

<table>
<thead>
<tr>
<th>Islands</th>
<th>6 yrs.</th>
<th>7—10</th>
<th>11—15</th>
<th>Over 15</th>
<th>M.</th>
<th>F.</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaii</td>
<td>1,135</td>
<td>6,911</td>
<td>6,672</td>
<td>1,452</td>
<td>8,369</td>
<td>7,801</td>
<td>16,170</td>
</tr>
<tr>
<td>Maui</td>
<td>693</td>
<td>5,159</td>
<td>4,774</td>
<td>755</td>
<td>5,934</td>
<td>5,457</td>
<td>11,381</td>
</tr>
<tr>
<td>Oahu</td>
<td>2,071</td>
<td>17,769</td>
<td>16,909</td>
<td>4,949</td>
<td>21,402</td>
<td>20,296</td>
<td>41,698</td>
</tr>
<tr>
<td>Kauai</td>
<td>576</td>
<td>3,254</td>
<td>2,972</td>
<td>479</td>
<td>3,735</td>
<td>3,546</td>
<td>7,281</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>4,647</td>
<td>33,093</td>
<td>31,327</td>
<td>7,635</td>
<td>39,430</td>
<td>37,100</td>
<td>76,530</td>
</tr>
</tbody>
</table>

### NATIONALITY PUBLIC SCHOOL PUPILS

<table>
<thead>
<tr>
<th>Race</th>
<th>Pupils</th>
<th>Race</th>
<th>Pupils</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hawaiian</td>
<td>3,206</td>
<td>Chinese</td>
<td>6,826</td>
</tr>
<tr>
<td>Part-Hawaiian</td>
<td>8,073</td>
<td>Japanese</td>
<td>41,251</td>
</tr>
<tr>
<td>Anglo-Saxon</td>
<td>3,210</td>
<td>Korean</td>
<td>1,859</td>
</tr>
<tr>
<td>Portuguese</td>
<td>5,881</td>
<td>Filipino</td>
<td>3,807</td>
</tr>
<tr>
<td>Spanish</td>
<td>253</td>
<td>Others</td>
<td>907</td>
</tr>
<tr>
<td>Porto Rican</td>
<td>1,257</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>76,530</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

### Hawaii’s Annual Federal Revenue

<table>
<thead>
<tr>
<th>Sources</th>
<th>1929</th>
<th>1930</th>
<th>1931</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal Revenue Office</td>
<td>$5,606,515</td>
<td>$5,515,911</td>
<td>$4,816,475</td>
</tr>
<tr>
<td>Custom House Receipts</td>
<td>2,036,681</td>
<td>1,881,262</td>
<td>1,908,382</td>
</tr>
<tr>
<td>Post Office Receipts</td>
<td>521,770</td>
<td>544,938</td>
<td>548,334</td>
</tr>
<tr>
<td>District Court Receipts</td>
<td>40,484</td>
<td>12,860</td>
<td>11,321</td>
</tr>
</tbody>
</table>
## Import Values from United States, Comparative, for Calendar Years 1929 and 1930

Compiled from Monthly Summary of Foreign Commerce, Bureau of Statistics

<table>
<thead>
<tr>
<th>Articles</th>
<th>Domestic Merchandise</th>
<th>1929</th>
<th>1930</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agricultural Implements</td>
<td>$ 374,297</td>
<td>123,607</td>
<td>129,068</td>
</tr>
<tr>
<td>Aluminum manufactures</td>
<td>321,986</td>
<td>208,067</td>
<td></td>
</tr>
<tr>
<td>Animals</td>
<td>5,351,022</td>
<td>4,085,195</td>
<td></td>
</tr>
<tr>
<td>Automobiles and parts of</td>
<td>1,200,508</td>
<td>1,262,154</td>
<td></td>
</tr>
<tr>
<td>Books, Maps, Engravings, etc.</td>
<td>1,061,364</td>
<td>983,329</td>
<td></td>
</tr>
<tr>
<td>Boots and Shoes</td>
<td>531,879</td>
<td>409,231</td>
<td></td>
</tr>
<tr>
<td>Brass, and manufactures of</td>
<td>1,277,184</td>
<td>1,729,806</td>
<td></td>
</tr>
<tr>
<td>Breadstuffs</td>
<td>102,009</td>
<td>95,424</td>
<td></td>
</tr>
<tr>
<td>Books, Maps, Engravings, etc</td>
<td>687,904</td>
<td>679,756</td>
<td></td>
</tr>
<tr>
<td>Chemicals, Drugs, Dyes, etc</td>
<td>1,316,812</td>
<td>1,315,513</td>
<td></td>
</tr>
<tr>
<td>Confectionery</td>
<td>183,640</td>
<td>123,172</td>
<td></td>
</tr>
<tr>
<td>Coal</td>
<td>42,649</td>
<td>16,042</td>
<td></td>
</tr>
<tr>
<td>Cocoa and Chocolate</td>
<td>149,073</td>
<td>209,954</td>
<td></td>
</tr>
<tr>
<td>Coffee</td>
<td>205,558</td>
<td>145,507</td>
<td></td>
</tr>
<tr>
<td>Confectionery</td>
<td>679,854</td>
<td>701,636</td>
<td></td>
</tr>
<tr>
<td>Copper, and manufactures of</td>
<td>451,467</td>
<td>500,610</td>
<td></td>
</tr>
<tr>
<td>Cotton, manufactures of, and clothing</td>
<td>3,501,603</td>
<td>3,302,696</td>
<td></td>
</tr>
<tr>
<td>Earthen, Stone and Chinaware</td>
<td>740,512</td>
<td>310,714</td>
<td></td>
</tr>
<tr>
<td>Eggs</td>
<td>587,075</td>
<td>594,593</td>
<td></td>
</tr>
<tr>
<td>Electrical Machinery and Instruments</td>
<td>2,254,133</td>
<td>2,211,593</td>
<td></td>
</tr>
<tr>
<td>Explosives</td>
<td>126,200</td>
<td>96,806</td>
<td></td>
</tr>
<tr>
<td>Fertilizers</td>
<td>2,284,045</td>
<td>2,521,574</td>
<td></td>
</tr>
<tr>
<td>Fibers, Textile Grasses, manufactures of</td>
<td>619,476</td>
<td>599,725</td>
<td></td>
</tr>
<tr>
<td>Fish</td>
<td>915,607</td>
<td>1,060,671</td>
<td></td>
</tr>
<tr>
<td>Fruits and Nuts</td>
<td>1,523,381</td>
<td>1,529,192</td>
<td></td>
</tr>
<tr>
<td>Furniture of Metal</td>
<td>420,197</td>
<td>280,557</td>
<td></td>
</tr>
<tr>
<td>Glass and Glassware</td>
<td>499,508</td>
<td>417,998</td>
<td></td>
</tr>
<tr>
<td>Hay, Grain and Feed</td>
<td>2,485,180</td>
<td>1,979,424</td>
<td></td>
</tr>
<tr>
<td>Household and Personal Effects</td>
<td>337,859</td>
<td>327,575</td>
<td></td>
</tr>
<tr>
<td>India Rubber, manufactures of</td>
<td>1,866,240</td>
<td>1,769,517</td>
<td></td>
</tr>
<tr>
<td>Instruments, etc., for scientific purposes</td>
<td>179,232</td>
<td>187,778</td>
<td></td>
</tr>
<tr>
<td>Iron and Steel, and manufactures of</td>
<td>1,311,399</td>
<td>1,877,984</td>
<td></td>
</tr>
<tr>
<td>Jewelry and manufactures, Gold and Silver</td>
<td>392,486</td>
<td>314,406</td>
<td></td>
</tr>
<tr>
<td>Lamps, Chandeliers, etc</td>
<td>1,466,331</td>
<td>988,859</td>
<td></td>
</tr>
<tr>
<td>Lard and Compounds, etc</td>
<td>2,071,155</td>
<td>1,620,837</td>
<td></td>
</tr>
<tr>
<td>Lead and manufactures of</td>
<td>505,261</td>
<td>494,388</td>
<td></td>
</tr>
<tr>
<td>Leather and manufactures of</td>
<td>20,904</td>
<td>20,384</td>
<td></td>
</tr>
<tr>
<td>Lard and Compounds, etc</td>
<td>177,321</td>
<td>151,203</td>
<td></td>
</tr>
<tr>
<td>Machinery, Steam Engines, etc</td>
<td>51,256</td>
<td>56,414</td>
<td></td>
</tr>
<tr>
<td>Musical Instruments</td>
<td>382,184</td>
<td>334,158</td>
<td></td>
</tr>
<tr>
<td>Musical Instruments</td>
<td>3,652,641</td>
<td>3,037,891</td>
<td></td>
</tr>
<tr>
<td>Musical Instruments</td>
<td>239,026</td>
<td>236,638</td>
<td></td>
</tr>
</tbody>
</table>
### Import Values from United States for 1929-1930—Continued

<table>
<thead>
<tr>
<th>Articles</th>
<th>Domestic Merchandise</th>
</tr>
</thead>
<tbody>
<tr>
<td>Naval Stores</td>
<td>$24,325</td>
</tr>
<tr>
<td>Oil Cloth, Etc.</td>
<td>193,661</td>
</tr>
<tr>
<td>Oils: Mineral, Crude</td>
<td></td>
</tr>
<tr>
<td>Refined, and Residuum, etc.</td>
<td>8,298,996</td>
</tr>
<tr>
<td>Vegetable</td>
<td>413,278</td>
</tr>
<tr>
<td>Paints, Pigments and Colors</td>
<td>933,597</td>
</tr>
<tr>
<td>Paper and manufactures of</td>
<td>2,624,739</td>
</tr>
<tr>
<td>Perfumery, etc.</td>
<td>442,544</td>
</tr>
<tr>
<td>Phonographs, etc.</td>
<td>589,156</td>
</tr>
<tr>
<td>Photographic Goods</td>
<td>305,464</td>
</tr>
<tr>
<td>Provisions, etc., Beef Products.</td>
<td>367,817</td>
</tr>
<tr>
<td>Dairy Products</td>
<td>1,626,087</td>
</tr>
<tr>
<td>Rice and Rice Products</td>
<td>3,224,526</td>
</tr>
<tr>
<td>Roofing Felt, etc.</td>
<td>105,865</td>
</tr>
<tr>
<td>Salt</td>
<td>56,885</td>
</tr>
<tr>
<td>Silk and manufactures of, and artificial</td>
<td>1,092,786</td>
</tr>
<tr>
<td>Soap: Toilet and other</td>
<td>749,126</td>
</tr>
<tr>
<td>Starch</td>
<td>25,824</td>
</tr>
<tr>
<td>Sporting Goods</td>
<td>248,628</td>
</tr>
<tr>
<td>Sugar, Molasses and Syrup</td>
<td>238,892</td>
</tr>
<tr>
<td>Tea</td>
<td>28,533</td>
</tr>
<tr>
<td>Tin and manufactures of</td>
<td>3,699,958</td>
</tr>
<tr>
<td>Tobacco, manufactures of</td>
<td>2,707,892</td>
</tr>
<tr>
<td>Toys</td>
<td>205,008</td>
</tr>
<tr>
<td>Vegetables and Vegetable Products</td>
<td>1,722,398</td>
</tr>
<tr>
<td>Vehicles, Cars, and parts of</td>
<td>401,475</td>
</tr>
<tr>
<td>Wood and Manufactures:</td>
<td></td>
</tr>
<tr>
<td>Lumber, Shingles, etc.</td>
<td>2,223,994</td>
</tr>
<tr>
<td>Shooks, box, etc.</td>
<td>521,288</td>
</tr>
<tr>
<td>Doors, Sash, Blinds</td>
<td>174,250</td>
</tr>
<tr>
<td>Furniture</td>
<td>755,941</td>
</tr>
<tr>
<td>Trimmings, Molding and other manuf's.</td>
<td>536,055</td>
</tr>
<tr>
<td>Wool manufactures</td>
<td>902,639</td>
</tr>
<tr>
<td>All other articles</td>
<td>2,478,700</td>
</tr>
<tr>
<td>Total value merchandise shipments</td>
<td>$82,661,424</td>
</tr>
</tbody>
</table>

#### Coin Shipments, Calendar Year 1930

<table>
<thead>
<tr>
<th></th>
<th>Silver</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coin, domestic, import</td>
<td>$1,500</td>
</tr>
<tr>
<td>Coin, domestic, export</td>
<td>10,500</td>
</tr>
</tbody>
</table>
Value Domestic Merchandise Shipments to the United States from Hawaii for Calendar Years 1929 and 1930

Compiled from Monthly Summary of Foreign Commerce and Finance

<table>
<thead>
<tr>
<th>Articles</th>
<th>1929</th>
<th>1930</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animals</td>
<td>$6,532</td>
<td>$35,177</td>
</tr>
<tr>
<td>Bones, hoofs, etc.</td>
<td>6,631</td>
<td>7,753</td>
</tr>
<tr>
<td>Beeswax</td>
<td>9,229</td>
<td>7,339</td>
</tr>
<tr>
<td>Chemicals, drugs, etc.</td>
<td>6,742</td>
<td>14,676</td>
</tr>
<tr>
<td>Coffee</td>
<td>1,323,352</td>
<td>1,003,108</td>
</tr>
<tr>
<td>Fish, canned</td>
<td>219,602</td>
<td>375,698</td>
</tr>
<tr>
<td>Fruits and nuts:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bananas</td>
<td>201,227</td>
<td>118,410</td>
</tr>
<tr>
<td>Pineapples</td>
<td>29,842</td>
<td>26,091</td>
</tr>
<tr>
<td>Canned Pines</td>
<td>38,430,805</td>
<td>37,727,761</td>
</tr>
<tr>
<td>Prepared or preserved.</td>
<td>32,276</td>
<td>17,543</td>
</tr>
<tr>
<td>All other fresh fruits</td>
<td>8,267</td>
<td>8,445</td>
</tr>
<tr>
<td>Nuts</td>
<td>163,907</td>
<td>146,263</td>
</tr>
<tr>
<td>Hides and skins</td>
<td>100,278</td>
<td>43,553</td>
</tr>
<tr>
<td>Honey</td>
<td>105,668</td>
<td>89,820</td>
</tr>
<tr>
<td>Meat products, tallow</td>
<td>1,016,299</td>
<td>1,330,378</td>
</tr>
<tr>
<td>Molasses</td>
<td>5,666</td>
<td>8,438</td>
</tr>
<tr>
<td>Musical Instruments</td>
<td>8,254</td>
<td>2,454</td>
</tr>
<tr>
<td>Paper and manufactures of</td>
<td>21,553</td>
<td>22,300</td>
</tr>
<tr>
<td>Pineapple alcohol</td>
<td>4,301</td>
<td>3,101</td>
</tr>
<tr>
<td>Pineapple stock feed</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Rice and rice products</td>
<td>31,135</td>
<td>15,199</td>
</tr>
<tr>
<td>Straw and palm leaf, manufactures of</td>
<td>2,038</td>
<td>2,221</td>
</tr>
<tr>
<td>Sugar, brown</td>
<td>60,874,069</td>
<td>53,618,849</td>
</tr>
<tr>
<td>Sugar, refined</td>
<td>1,040,634</td>
<td>1,014,620</td>
</tr>
<tr>
<td>Vegetables</td>
<td>52,700</td>
<td>50,512</td>
</tr>
<tr>
<td>Wool, raw</td>
<td>44,302</td>
<td>28,620</td>
</tr>
<tr>
<td>Wood and manufactures of</td>
<td>13,482</td>
<td>8,826</td>
</tr>
<tr>
<td>All other articles</td>
<td>40,853</td>
<td>101,614</td>
</tr>
</tbody>
</table>

Total value shipments Hawaiian products...$103,796,544 $96,518,859
Returned shipments merchandise............$2,474,782  $2,349,411
Total foreign merchandise.................$41,507  $55,467

Total shipments merchandise..............$106,312,833 $98,923,737
### Quantity and Value of Principal Articles of Domestic Produce Shipped for Calendar Year 1930

Compiled from Monthly Summary of Foreign Commerce, and Customs Tables

<table>
<thead>
<tr>
<th>Articles</th>
<th>Quantity</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sugar, raw</td>
<td>1,697,389,285</td>
<td>$53,618,849</td>
</tr>
<tr>
<td>Sugar, refined</td>
<td>84,185,355</td>
<td>1,614,820</td>
</tr>
<tr>
<td>Coffee</td>
<td>7,658,009</td>
<td>1,401,608</td>
</tr>
<tr>
<td>Rice</td>
<td>19,100</td>
<td>1,204</td>
</tr>
<tr>
<td>Fruits: Bananas</td>
<td>119,603</td>
<td>118,110</td>
</tr>
<tr>
<td>Fresh Pineapples</td>
<td></td>
<td>26,091</td>
</tr>
<tr>
<td>Canned Pineapples</td>
<td></td>
<td>37,727,761</td>
</tr>
<tr>
<td>Preserved</td>
<td></td>
<td>17,543</td>
</tr>
<tr>
<td>Nuts</td>
<td></td>
<td>8,496</td>
</tr>
<tr>
<td>F. and N., unspecified</td>
<td>766,358</td>
<td>50,513</td>
</tr>
<tr>
<td>Beeswax</td>
<td>23,526</td>
<td>7,339</td>
</tr>
<tr>
<td>Honey</td>
<td>867,960</td>
<td>43,553</td>
</tr>
<tr>
<td>Molasses</td>
<td>30,059,226</td>
<td>1,330,378</td>
</tr>
<tr>
<td>Hides and Skins</td>
<td>1,473,720</td>
<td>140,263</td>
</tr>
<tr>
<td>Wool, raw</td>
<td>80,901</td>
<td>28,629</td>
</tr>
<tr>
<td>Sugar Machinery</td>
<td>1,675,987</td>
<td></td>
</tr>
<tr>
<td>Vegetables</td>
<td>766,358</td>
<td>50,513</td>
</tr>
</tbody>
</table>

### Hawaiian Imports and Exports for Year Ending December 31, 1930

Courtesy of Collector of Customs

<table>
<thead>
<tr>
<th>Countries</th>
<th>Imports</th>
<th>Exports</th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>$ 227,455</td>
<td>$ 15,367</td>
</tr>
<tr>
<td>Belgium</td>
<td>40,128</td>
<td>12,141</td>
</tr>
<tr>
<td>British India</td>
<td>1,342,421</td>
<td>551</td>
</tr>
<tr>
<td>British Oceania</td>
<td>8,290</td>
<td>14,618</td>
</tr>
<tr>
<td>Canada</td>
<td>53,460</td>
<td>395,037</td>
</tr>
<tr>
<td>Chile</td>
<td>1,691,243</td>
<td>......</td>
</tr>
<tr>
<td>China</td>
<td>186,308</td>
<td>48,437</td>
</tr>
<tr>
<td>Denmark</td>
<td>27</td>
<td>63,752</td>
</tr>
<tr>
<td>France</td>
<td>43,808</td>
<td>......</td>
</tr>
<tr>
<td>French Oceania</td>
<td>257,822</td>
<td>......</td>
</tr>
<tr>
<td>Germany</td>
<td>979,339</td>
<td>27,506</td>
</tr>
<tr>
<td>Hong Kong</td>
<td>435,975</td>
<td>14,740</td>
</tr>
<tr>
<td>Japan</td>
<td>3,129,398</td>
<td>87,320</td>
</tr>
<tr>
<td>New Zealand</td>
<td>499,175</td>
<td>20,362</td>
</tr>
<tr>
<td>Norway</td>
<td>2,155</td>
<td>20,128</td>
</tr>
<tr>
<td>Philippine Islands</td>
<td>439,350</td>
<td>393,251</td>
</tr>
<tr>
<td>Sweden</td>
<td>18,921</td>
<td>81,276</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>69,937</td>
<td>760,934</td>
</tr>
<tr>
<td>Other Countries</td>
<td>61,283</td>
<td>44,626</td>
</tr>
</tbody>
</table>

Totals: $9,486,645 | $1,992,046
Shipments from and to United States: $81,726,404 | 98,923,737

$91,213,049 | $100,915,783
Hawaiian Sugar Export Statistics
For earlier years see Annuals 1896-1920

<table>
<thead>
<tr>
<th>Year</th>
<th>Sugar Pounds</th>
<th>Sugar Value</th>
<th>Molasses Gallons</th>
<th>Molasses Value</th>
<th>Total Export Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1925</td>
<td>1,372,343,019</td>
<td>$64,613,849</td>
<td>19,827,159</td>
<td>$848,203</td>
<td>$65,462,052</td>
</tr>
<tr>
<td>1926</td>
<td>1,752,776,646</td>
<td>68,770,346</td>
<td>16,552,584</td>
<td>763,566</td>
<td>69,533,912</td>
</tr>
<tr>
<td>1926*</td>
<td>1,494,261,515</td>
<td>58,953,423</td>
<td>16,983,594</td>
<td>569,946</td>
<td>59,716,506</td>
</tr>
<tr>
<td>1927*</td>
<td>1,563,071,332</td>
<td>69,827,829</td>
<td>13,867,665</td>
<td>569,946</td>
<td>70,392,067</td>
</tr>
<tr>
<td>1928*</td>
<td>1,757,366,472</td>
<td>80,035,926</td>
<td>21,485,888</td>
<td>900,631</td>
<td>80,936,457</td>
</tr>
<tr>
<td>1929*</td>
<td>1,764,556,039</td>
<td>61,914,504</td>
<td>28,369,599</td>
<td>1,016,299</td>
<td>62,930,803</td>
</tr>
<tr>
<td>1930*</td>
<td>1,731,574,640</td>
<td>55,233,469</td>
<td>30,359,226</td>
<td>1,330,378</td>
<td>56,563,847</td>
</tr>
</tbody>
</table>

Hawaii's Annual Trade Balance

<table>
<thead>
<tr>
<th>Year</th>
<th>Imports</th>
<th>Exports</th>
<th>Excess Export Values</th>
<th>Custom House Receipts</th>
</tr>
</thead>
<tbody>
<tr>
<td>1925</td>
<td>$82,679,058</td>
<td>$102,016,882</td>
<td>$19,337,824</td>
<td>$1,854,403</td>
</tr>
<tr>
<td>1926</td>
<td>82,159,060</td>
<td>110,619,796</td>
<td>28,460,709</td>
<td>1,748,241</td>
</tr>
<tr>
<td>1926*</td>
<td>86,517,189</td>
<td>104,154,059</td>
<td>13,627,831</td>
<td>1,894,254</td>
</tr>
<tr>
<td>1927*</td>
<td>89,037,480</td>
<td>111,504,045</td>
<td>22,466,563</td>
<td>1,881,787</td>
</tr>
<tr>
<td>1928*</td>
<td>88,184,553</td>
<td>119,479,835</td>
<td>31,294,982</td>
<td>2,036,681</td>
</tr>
<tr>
<td>1929*</td>
<td>92,414,934</td>
<td>108,439,103</td>
<td>16,024,169</td>
<td>1,881,262</td>
</tr>
<tr>
<td>1930*</td>
<td>91,213,049</td>
<td>105,915,783</td>
<td>4,702,734</td>
<td>1,908,632</td>
</tr>
</tbody>
</table>

Receipts, Expenditures, and Public Debt of Hawaii
From Official Reports

<table>
<thead>
<tr>
<th>Year</th>
<th>Revenue</th>
<th>Expenditures</th>
<th>Cash Balance In Treasury</th>
<th>Public Debt</th>
</tr>
</thead>
<tbody>
<tr>
<td>1925</td>
<td>$15,847,969.93</td>
<td>$15,610,482.15</td>
<td>$1,220,948.83</td>
<td>$17,990,000.00</td>
</tr>
<tr>
<td>1926</td>
<td>15,847,969.93</td>
<td>8,815,063.47</td>
<td>2,681,460.18</td>
<td>22,070,000.00</td>
</tr>
<tr>
<td>1927</td>
<td>10,511,032.26</td>
<td>12,293,163.52</td>
<td>1,971,804.57</td>
<td>24,210,000.00</td>
</tr>
<tr>
<td>1928</td>
<td>10,405,773.41</td>
<td>12,708,585.21</td>
<td>2,485,744.05</td>
<td>28,585,000.00</td>
</tr>
<tr>
<td>1929</td>
<td>11,749,009.26</td>
<td>12,924,533.84</td>
<td>2,186,537.39</td>
<td>29,760,000.00</td>
</tr>
<tr>
<td>1930</td>
<td>12,359,805.37</td>
<td>12,685,352.71</td>
<td>8,910,220.86</td>
<td>31,705,000.00</td>
</tr>
<tr>
<td>1931</td>
<td>13,594,170.49</td>
<td>12,853,753.23</td>
<td>8,022,391.43</td>
<td>32,600,000.00</td>
</tr>
</tbody>
</table>

Growth of Bank Deposits, Territory of Hawaii

<table>
<thead>
<tr>
<th>Fiscal Year</th>
<th>No. Banks</th>
<th>Commercial Deposits</th>
<th>Savings Deposits</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1925</td>
<td>29</td>
<td>$39,101,344.22</td>
<td>$21,708,371.75</td>
<td>$60,809,715.97</td>
</tr>
<tr>
<td>1926</td>
<td>29</td>
<td>44,861,828.81</td>
<td>22,989,654.24</td>
<td>67,851,483.05</td>
</tr>
<tr>
<td>1927</td>
<td>29</td>
<td>47,922,072.00</td>
<td>27,682,022.00</td>
<td>75,604,094.00</td>
</tr>
<tr>
<td>1928</td>
<td>31</td>
<td>48,931,629.35</td>
<td>31,278,434.34</td>
<td>80,209,063.69</td>
</tr>
<tr>
<td>1929</td>
<td>21</td>
<td>43,611,426.60</td>
<td>35,424,194.59</td>
<td>79,035,621.25</td>
</tr>
<tr>
<td>1930</td>
<td>29</td>
<td>46,232,391.03</td>
<td>33,942,357.47</td>
<td>80,174,748.50</td>
</tr>
<tr>
<td>1931</td>
<td>29</td>
<td>42,217,616.83</td>
<td>41,657,979.74</td>
<td>83,875,596.57</td>
</tr>
</tbody>
</table>

* Calendar year.
## Arrivals and Departures of Shipping, 1931

Compiled from Board of Harbor Commissioners Report

<table>
<thead>
<tr>
<th>Month</th>
<th>Honolulu Steam</th>
<th>Honolulu Sail</th>
<th>Hilo Vessels</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Tons</td>
<td>No.</td>
</tr>
<tr>
<td>July</td>
<td>79</td>
<td>684,366</td>
<td>1</td>
</tr>
<tr>
<td>August</td>
<td>78</td>
<td>653,343</td>
<td>0</td>
</tr>
<tr>
<td>September</td>
<td>69</td>
<td>613,228</td>
<td>0</td>
</tr>
<tr>
<td>October</td>
<td>66</td>
<td>577,616</td>
<td>2</td>
</tr>
<tr>
<td>November</td>
<td>53</td>
<td>481,210</td>
<td>0</td>
</tr>
<tr>
<td>December</td>
<td>61</td>
<td>562,864</td>
<td>0</td>
</tr>
<tr>
<td>January</td>
<td>68</td>
<td>635,912</td>
<td>1</td>
</tr>
<tr>
<td>February</td>
<td>57</td>
<td>509,724</td>
<td>1</td>
</tr>
<tr>
<td>March</td>
<td>65</td>
<td>587,179</td>
<td>0</td>
</tr>
<tr>
<td>April</td>
<td>67</td>
<td>647,950</td>
<td>0</td>
</tr>
<tr>
<td>May</td>
<td>65</td>
<td>611,361</td>
<td>1</td>
</tr>
<tr>
<td>June</td>
<td>68</td>
<td>675,978</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>796</td>
<td>7,240,731</td>
<td>5</td>
</tr>
</tbody>
</table>

Kahului reports 157 vessels of 1,038,970 tons.
Kauai reports 133 vessels of 654,737 tons.

## Domestic Produce to Foreign Countries, Year Ending December 31, 1930

<table>
<thead>
<tr>
<th></th>
<th>Pounds</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coffee, raw</td>
<td>1,769,141</td>
<td>$ 308,500</td>
</tr>
<tr>
<td>Fruits and Nuts</td>
<td>500</td>
<td>$ 24</td>
</tr>
<tr>
<td>Rice</td>
<td>61,367</td>
<td>$ 261,544</td>
</tr>
<tr>
<td>Sugar Machinery</td>
<td>21,553</td>
<td>$ 61,367</td>
</tr>
<tr>
<td>Other</td>
<td></td>
<td>$1,990,060</td>
</tr>
</tbody>
</table>

## Export Value of Pineapple Products

<table>
<thead>
<tr>
<th></th>
<th>1927</th>
<th>1928</th>
<th>1929</th>
<th>1930</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fresh Pineapples</td>
<td>$ 28,735</td>
<td>$ 25,548</td>
<td>$ 29,842</td>
<td>$ 26,091</td>
</tr>
<tr>
<td>Canned Pineapples</td>
<td>34,595,326</td>
<td>40,576,082</td>
<td>38,430,805</td>
<td>39,086,235</td>
</tr>
<tr>
<td>Pineapple Alcohol</td>
<td>93,676</td>
<td>80,259</td>
<td>32,276</td>
<td>22,390</td>
</tr>
<tr>
<td>Preserved</td>
<td>58,603</td>
<td>8,911</td>
<td>1,201</td>
<td>3,101</td>
</tr>
<tr>
<td>Total</td>
<td>$34,595,323</td>
<td>$40,690,800</td>
<td>$38,515,677</td>
<td>$39,137,817</td>
</tr>
</tbody>
</table>
### Summary of Insurance Business, Territory of Hawaii, for 1930

<table>
<thead>
<tr>
<th>Class</th>
<th>Amount Written</th>
<th>Premium Written</th>
<th>Losses and Claims Paid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire</td>
<td>$146,730,264</td>
<td>$1,475,283</td>
<td>$331,566</td>
</tr>
<tr>
<td>Marine</td>
<td>145,825,763</td>
<td>343,822</td>
<td>41,031</td>
</tr>
<tr>
<td>Life</td>
<td>17,688,213</td>
<td>*4,674,160</td>
<td>1,048,786</td>
</tr>
<tr>
<td>Accident and Health</td>
<td></td>
<td>173,633</td>
<td>70,207</td>
</tr>
<tr>
<td>Automobile</td>
<td></td>
<td>507,191</td>
<td>180,312</td>
</tr>
<tr>
<td>Burglary</td>
<td></td>
<td>21,972</td>
<td>2,511</td>
</tr>
<tr>
<td>Employers’ Liability</td>
<td></td>
<td>21,157</td>
<td>263</td>
</tr>
<tr>
<td>Fidelity and Surety</td>
<td></td>
<td>212,417</td>
<td>37,680</td>
</tr>
<tr>
<td>Plate Glass</td>
<td></td>
<td>9,962</td>
<td>1,382</td>
</tr>
<tr>
<td>Property Damage</td>
<td></td>
<td>42,881</td>
<td>12,356</td>
</tr>
<tr>
<td>Workmen’s Compensation</td>
<td></td>
<td>399,743</td>
<td>209,304</td>
</tr>
<tr>
<td>Other Liability</td>
<td></td>
<td>54,496</td>
<td>16,345</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$310,244,240</strong></td>
<td><strong>$8,038,767</strong></td>
<td><strong>$1,951,710</strong></td>
</tr>
</tbody>
</table>

*Life renewal premiums $4,061,587.

### Customs Receipts, Fiscal Year 1931

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total Customs Collections</td>
<td>$1,817,914.39</td>
</tr>
<tr>
<td>Tonnage Taxes</td>
<td>60,185.72</td>
</tr>
<tr>
<td>Commerce Collections</td>
<td>3,657.07</td>
</tr>
<tr>
<td>Head Tax</td>
<td>21,000.00</td>
</tr>
<tr>
<td>All Other Labor Collections</td>
<td>1,140.00</td>
</tr>
<tr>
<td>Public Health Collections</td>
<td>4,835.00</td>
</tr>
<tr>
<td><strong>Total Collections</strong></td>
<td><strong>$1,908,632.18</strong></td>
</tr>
</tbody>
</table>

### Taxes Collected for Fiscal Year 1931

*Courtesy Treasury Department.*

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount</th>
</tr>
</thead>
<tbody>
<tr>
<td>Real Property</td>
<td>$8,889,721.50</td>
</tr>
<tr>
<td>Personal Property</td>
<td>4,745,134.40</td>
</tr>
<tr>
<td>Personal</td>
<td>455,557.91</td>
</tr>
<tr>
<td>Income</td>
<td>1,740,095.21</td>
</tr>
<tr>
<td>Penalties and Costs</td>
<td>75,736.49</td>
</tr>
<tr>
<td>Inheritance</td>
<td>258,671.65</td>
</tr>
<tr>
<td>Insurance</td>
<td>132,508.48</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$16,345,425.02</strong></td>
</tr>
</tbody>
</table>
Building Construction Values, Honolulu
Compiled from Building Inspector's Reports

<table>
<thead>
<tr>
<th>Year</th>
<th>New Dwellings</th>
<th>New Business</th>
<th>Misc. and Repairs</th>
<th>Total All Bldgs.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Permits</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Values</td>
</tr>
<tr>
<td>1921</td>
<td>2,439,059</td>
<td>1,249,800</td>
<td>$1,391,684</td>
<td>2,040</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>$5,080,543</td>
</tr>
<tr>
<td>1922</td>
<td>3,468,464</td>
<td>1,112,129</td>
<td>1,640,864</td>
<td>3,143</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6,221,639</td>
</tr>
<tr>
<td>1923</td>
<td>3,053,302</td>
<td>1,519,592</td>
<td>1,292,964</td>
<td>3,239</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5,865,858</td>
</tr>
<tr>
<td>1924</td>
<td>3,339,995</td>
<td>1,487,325</td>
<td>583,872</td>
<td>3,783</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5,411,192</td>
</tr>
<tr>
<td>1925*</td>
<td>5,095,877</td>
<td>1,698,759</td>
<td>886,919</td>
<td>4,078</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7,681,555</td>
</tr>
<tr>
<td>1926</td>
<td>3,450,077</td>
<td>1,728,641</td>
<td>553,883</td>
<td>3,521</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5,732,601</td>
</tr>
<tr>
<td>1927</td>
<td>3,771,789</td>
<td>2,179,240</td>
<td>446,326</td>
<td>3,637</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6,307,363</td>
</tr>
<tr>
<td>1928</td>
<td>3,777,261</td>
<td>2,241,944</td>
<td>731,281</td>
<td>3,808</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6,750,486</td>
</tr>
<tr>
<td>1929</td>
<td>3,626,291</td>
<td>2,770,882</td>
<td>856,869</td>
<td>3,572</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7,254,042</td>
</tr>
<tr>
<td>1930</td>
<td>2,203,152</td>
<td>1,268,821</td>
<td>2,449,442</td>
<td>8,229</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>6,786,222</td>
</tr>
</tbody>
</table>

* Garages not included in cost.

Hawaiian Corporations, 1931
Tables by Courtesy of Treasury Department

<table>
<thead>
<tr>
<th>Class</th>
<th>Number</th>
<th>Capital</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Before 1898</td>
<td>After 1898</td>
</tr>
<tr>
<td></td>
<td></td>
<td>$112,687,000</td>
<td>$234,545,463</td>
</tr>
</tbody>
</table>

Assessed Values Real and Personal Property for 1931, by Taxation Divisions

<table>
<thead>
<tr>
<th>Taxation Divisions</th>
<th>Real Property</th>
<th>Personal Property</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>First, City &amp; County of Honolulu</td>
<td>$169,901,294</td>
<td>$4,168,814</td>
<td>$244,070,206</td>
</tr>
<tr>
<td>Second, County of Maui</td>
<td>29,680,117</td>
<td>24,326,166</td>
<td>54,006,283</td>
</tr>
<tr>
<td>Third, County of Hawaii</td>
<td>39,742,530</td>
<td>20,791,178</td>
<td>60,533,708</td>
</tr>
<tr>
<td>Fourth, County of Kauai</td>
<td>20,582,665</td>
<td>11,363,017</td>
<td>31,945,682</td>
</tr>
<tr>
<td>Total for Territory</td>
<td>$259,066,606</td>
<td>$130,619,675</td>
<td>$390,686,281</td>
</tr>
</tbody>
</table>
# Pack of Hawaiian Canned Pineapple

Compiled from Official Records

<table>
<thead>
<tr>
<th>Companies</th>
<th>1928</th>
<th>1929</th>
<th>1930</th>
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<td>California Packing Corporation</td>
<td>1,664,478</td>
<td>1,908,919</td>
<td>2,227,566</td>
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<td>3,246,952</td>
<td>3,247,204</td>
<td>4,577,091</td>
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<td>1,947,600</td>
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<td>388,777</td>
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<td>601,179</td>
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<td>341,173</td>
<td>432,903</td>
<td>573,215</td>
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<td>412,406</td>
<td>426,249</td>
<td>434,045</td>
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<td>575,000</td>
<td>530,248</td>
<td>740,700</td>
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<td>Honolulu Fruit Co.</td>
<td>120,000</td>
<td>104,000</td>
<td>148,896</td>
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<td>110,114</td>
<td>80,103</td>
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<tr>
<td><strong>Total Pack (cases, 2 dozen cans each)</strong></td>
<td><strong>8,663,056</strong></td>
<td><strong>9,210,240</strong></td>
<td><strong>12,672,296</strong></td>
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## Pineapple Companies Operating in the Hawaiian Islands

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<tr>
<th>Company</th>
<th>Office Location</th>
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<th>Representatives</th>
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<tbody>
<tr>
<td>Cal. Packing Corporation</td>
<td>Honolulu, Oahu</td>
<td>G. R. Ward</td>
<td>Cal. Packing Corporation, San Francisco</td>
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<tr>
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<td>James D. Dole</td>
<td>Hawaiian Pineapple Co., Ltd., San Francisco</td>
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<tr>
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<td>Albert Horner</td>
<td>American Factors, Ltd., Honolulu</td>
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<tr>
<td>Kauni Fruit &amp; Land Co., Ltd.</td>
<td>Lawai, Kauai</td>
<td>W. D. McBryde</td>
<td>Alexander &amp; Baldwin, Ltd., Honolulu</td>
</tr>
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<td>Baldwin Packers</td>
<td>Lahaina, Maui</td>
<td>D. T. Fleming</td>
<td>Alexander &amp; Baldwin, Ltd., Honolulu</td>
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<tr>
<td>Haiku Fruit &amp; Packing Co., Ltd.</td>
<td>Haiku, Maui</td>
<td>D. C. Lindsay</td>
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### Value of International Money Orders

<table>
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<th>Year</th>
<th>Issued at Honolulu</th>
<th>Paid at Honolulu</th>
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<tr>
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<td>1926</td>
<td>100,036.82</td>
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<tr>
<td>1927</td>
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<tr>
<td>1928</td>
<td>118,898.01</td>
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<td>322,840.32</td>
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<td>1929</td>
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<td>1930</td>
<td>98,594.37</td>
<td>21,346.41</td>
<td>300,377.75</td>
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### Value of Domestic Money Orders

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<td>1,433,836.85</td>
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<td>1928</td>
<td>1,531,069.65</td>
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### Number of Articles Registered and Insured and Sent C. O. D. at Honolulu

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<td>80,016</td>
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## Table of Rainfall, Principal Stations

Compiled from Weather Bureau Reports

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<td>15.09</td>
<td>9.30</td>
<td>18.60</td>
<td>6.84</td>
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<td>6.21</td>
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<tr>
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Throughout the Hawaiian Islands, 1930-1931
J. F. Voorhees, Meteorologist. Continued from last Annual

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**Summary of Meteorological Observations, Honolulu, 1930-1931**

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

(Continued from preceding Annuals.)

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**HAWAIIAN ANNUAL**
HAVING arrived at an era of comfort and safety, with assurance of time schedules in inter-island travel, through the efficiency of our present day steam service by vessels constructed especially for our needs, and manned with such capable and courteous officers as direct the regular liners of deep-sea travel, it may not be amiss to look back over the road we have come, to appreciate fully the progress and gradual development of our coastal service.

The comparative freedom from mishap and attendant loss of life in the prosecution of our coastal trade the past few years, in contrast with what it was when its fleet of "white wings" was in its prime, is worthy of more than passing note, quite deserving a review of local marine enterprise as was given in last Annual on the "Development of our San Francisco-Honolulu Packet Service," for we find several familiar names intimately connected with both branches of our marine history. They are alike also in the progress made for the comfort and convenience of the traveling public in the gradual change from sail to steam, having about obliterated sailing craft from our waters.

In our paper on the coastal trade in the Annals of 1890 and 1891, entitled "Hawaiian Maritime History," we failed to state that it was inaugurated under royal auspices, though it showed quite a number of government owned vessels until in 1846, when, on the purchase of the schooner Kamehameha III, a fine Baltimore clipper of 114 tons, built as a yacht for the king, Dr. Judd changed the policy of government owned vessels and disposed of the others. Some ten years previous, what was known as the "King's fleet" consisted of the bark Kai, brig Harieta, and eight schooners.

A notable increase in the coasting fleet occurred in 1837, for out of a list of 67 Hawaiian owned vessels at the close of the year, there were 61 schooners and three sloops in inter-island trade. Of these additions thirteen were built at Lahaina, ranging in size
from five to fifteen and a half tons, a veritable "mosquito fleet." This class must have been in the majority left for home service during the California "gold rush" period, when quite a number of island vessels participated therein, which naturally took our best craft and most popular commanders, Captains John Paty, Thomas King, C. S. Chadwick, Henry Paty and others, and was the occasion for the introduction from San Francisco of Captains T. H. Hobron, D. P. Penhallow, Frank Molteno and others, who cast their lot to become kamaainas among us.

Activity in the inter-island service in the 'fifties engaged a number of notable vessels, fore-and-aft schooners mostly, not a few of which came from widely distant foreign ports.

The schooner S. S., of 87 tons, built in Java, formerly named the Mary, arrived from China back in the 'forties and for a time was engaged in foreign service from this port under Molteno’s command; then, under Capt. Thos. King, she entered the coasting service and became quite popular with the traveling public on various routes. She was lost at Waialua, Oahu, in 1857, in heavy weather.

The Haalilio, of 75 tons, formerly the British schooner Chinchilla, appears as purchased by the government in 1845, and did faithful service as a windward packet for many years. In its balmy days, under "Admiral" John Hall (a native, of good-natured pomposity as commander of the Kai, representing "the king's navee"), the packet and its commander gained considerable notoriety.

The schooner Warwick, of 18½ tons, an importation per ship Eliza Warwick in 1850, was bought by Capt. Hobron the following year and put in the Molokai and Maui trade with this port. After several changes of ownership she went ashore on the southwest point of Kauai, September 7, 1867. Another vessel of same name took its Molokai route, and gave illustration of some of the discomforts and risks of inter-island travel in those days as follows:

"Left Honolulu for Molokai with Rev. A. O. Forbes as the only passenger on board; neared the bluff of Kapaliokaholo same day; here the wind died away and during the night the vessel drifted out of sight of land. Drifted thus for three days, food
and water getting low, when we fell in with the bark Mauna Loa, with lumber for this port, who aided us and directed us on our course." An almost similar experience befell the same vessel the following year, leaving this port Feb. 6th, and returning "from sea" on the 11th. A namesake was built shortly after this for Capt. Jacob Brown, who continued her as the regular Molokai packet, under native command till, leaving this port in January, 1882, she was nevermore heard from.

Topsail schooner Post Boy, of 44 tons, built in Auckland, N. Z., arrived in 1850. B. Pitman, of Hilo, became its owner the following year and changed its name to Kinoole, to ply as a windward-route packet. She had many owners in her ten years coasting service and was finally wrecked on Niilau August 24, 1860.

The British schooner Wanderer; of 42 tons, was another New Zealand built vessel, arriving here May 6, 1850, and was registered by M. Kekuanaoa as the Pauahi. A year later her name was changed to W. P. Leleiohoku, but on October 4 of the same year she was lost in the Oahu-Kauai channel. Kekuanaoa registered another Pauahi in January, 1851, formerly the British schooner Chas. Wilcox, of 63 tons, built in China. A few years later she was hauled up and enlarged to 74 tons, and on relaunching was named the Kamamalu. Under native command she was one of the regular windward packets. On her last trip she left for Hilo, via Lahaina, March 13, 1857, with a full cargo and some 70 souls aboard, but after leaving the latter port and passing out into the Hawaii channel she was nevermore seen or heard of.

The Nahienaena first appears among our coasters in 1851, the pioneer being the Van Diemen's Land built schooner Victoria, of 42½ tons, but her life here was brief, for she was lost on Kauai the same year. Shortly afterward the American topsail schooner Dart, of 148 tons, is registered as the Harriet Nahienaena to Kamehameha III, and was fitted as a royal yacht and mounted with several guns, under command of A. P. Brickwood. In 1852 she was sent to Sydney and sold. In 1864 Kamehameha V bought the Oldenburg brigantine Haus, of 197 tons, and registered her as Nahienaena, to serve as a royal plaything for awhile under com-
mand of "Admiral" Abe Russell. After several changes she was finally broken up in this port as the brig Blossom.

The schooner Liholiho was the crack Hilo packet of the early 'fifties, touching at Lahaina, as did all the windward packets in those days. She was formerly the American schooner B. F. Allen, then changed to the British schooner Matchless, a fine, broad, roomy vessel of 149 tons. H. S. Halsey was her first registered owner, to be succeeded by T. H. Hobron in 1856. The next year she was chartered by the agent of the American Guano Co. here and, under command of Capt. John Paty, made a trip to Jarves and Bakers Islands, bringing back the first samples of guano that a few years later attracted many famous clippers for its shipment. Abel Harris, F. Swain and J. C. King, the "pulu kings" became owners of the Liholiho later, and for a time Asa G. Thurston was its popular captain, but owing to ill health he relinquished his charge. The vessel left again on a guano search shortly afterward under Capt. J. M. Bush, and was nevermore heard from.

The schooner Manuokawaui, of 51½ tons, was registered to William Beckley in 1850, and under his command had a wide coasting experience in serving various routes. She is credited also with voyages of discovery, once under Capt. Beckley, and later under Capt. John Paty. After several changes of ownership she finally ended her days at Punalu'u, Oahu, in 1880. I think it was an experience of this vessel with a native captain on a trip from Kauai in the 'sixties, that led to a law amendment governing the coasting service. With a goodly number of passengers, among whom was Governor Paul Kanoa, she left Kauai for this port, expecting to reach here in a day or two, as usual, but reaching the channel, the wind died away and she drifted out of sight of land. After several days in the doldrums, not knowing where they were and supplies getting low, the captain in perplexity asked the old governor what they should do? He coolly replied, "Go back and start over again."

The schooner Kekauluohi, of 75 tons, formerly the American schooner Monticello, of Essex, Mass., registered here in 1852 to Chas. Kanaina, and became the regular Kona and Kau packet under Capt. Lorenzo Marchant, a noted popular character of
and name to an island-built vessel, and entered the service of the Inter-Island Steamship Co. as the Marion, on the Kauai route, but finally ended her days at Punaluu, Oahu, June 26, 1885.

We must retrace our narration at this point for other events in their order.

The schooner Kalama, of 85 tons, formerly Queen of the West, arrived here in 1857, and was bought by Capt. John Meek and put in the coasting trade on the windward route in July of that year. Shortly afterward Jas. I. Dowsett secured her and sent her whaling till 1862, when Capt. Frank Molteno bought her and resumed the windward coasting service, later changing to the Kauai route. From this time she had a checkered career, first as a royal yacht of Kamehameha V, with name changed to Kamaile, in command of John Adams; then in foreign service, whaling, and again as coaster she went ashore at Waialua, Oahu, January 14, 1880.

Another venture of Capt. Thos. King was with the schooner Odd Fellow, in the San Francisco trade with these islands, which he registered here April 24, 1860, and put on the Kauai route with Capt. Candace in command, and though various owners followed she continued as the regular Kauai packet till June, 1875, when she was finally lost at Waimea, Kauai.

The coasting service, under sail, may be considered as at its peak during the 'sixties, following which period was the gradual development of the island steamer traffic.

Inter-island steam service dates from the arrival of the side-wheel river boat S. B. Wheeler, from San Francisco, November 12, 1853 (though not the first attempted). On entering local trade her name was changed to Akamai, and put on the Maui route that fall, but she was so old and unfit for the service that she made her last trip September 29, 1854, through the following experience: She left for Lahaina, having on board between four and five hundred passengers—cabin and deck—and nineteen horses. With calm weather she might have made the passage safely, but about 10 p. m. she was struck by a heavy squall. A boisterous sea arising she sprung a leak. She was brought about, fortunately, to return to port, and kept afloat to reach the harbor, much to the relief of all hands, who were justly alarmed from
for a further advance in speed and comfort, and naturally attracted considerable attention. Capt. Chadwick commanded her for some time, with E. Coit Hobron as his mate, on the Lahaina and Kona route. She was withdrawn in August for a trip to Victoria, B. C., conveying Prince Lot Kamehameha, for his health, accompanied by L. Haalelea, D. Kalakaua and J. C. Spalding. On another occasion she was sent whaling for a season under command of Capt. Wilbur, much to the surprise and regret of the general public; then resumed the coasting service on the windward route, still under Wilbur. In January, 1864, she ran ashore at Honoipu, Kohala, in fine weather with a light breeze, under command of Capt. Wm. Berrill.

A formidable rival to this handsome schooner of the Baltimore clipper type coming shortly after her, to compete for popularity and patronage, was the \textit{Nettie Merrill}, of New York pilot-boat model, a schooner of 105 tons, which arrived here April 20, 1860, under command of J. M. Bush, 118 days from New York, built to the order of A. K. Clark, S. L. Austin, L. Severance and R. B. Armstrong, for the Hilo trade and way ports from Honolulu. She was painted white, which, with the pilot-boat model, gave her special attraction. It was said of her at the time, "As she sits on the water, she resembles a thing of life, and is certainly the most beautiful vessel we have ever had here."

The spirit of rivalry between the friends of both vessels early brought about a race for supremacy, first in a given course off this port, and again to Lahaina, in both of which the \textit{Emma Rooke} won by so close a margin as failed to satisfy. The \textit{Emma} was sailed under Capt. Chadwick, and the \textit{Nettie} by Capt. Benjamin Borres.

This new Hilo packet began its service as such, April 26, 1860, with Capt. Borres in command, and E. D. Crane as his mate, and made the run to Lahaina in eleven hours. So successfully was she managed on the Hilo route that for a long period her round trips were accomplished within a week, with remarkable regularity. In course of time there were many changes of ownership, Crane succeeding Borres in command. Subsequent to 1867 she was sold to Campbell & Turton, and was run as the regular packet between Lahaina and this port till, in 1876, she gave place
and name to an island-built vessel, and entered the service of the Inter-Island Steamship Co. as the Marion, on the Kauai route, but finally ended her days at Punaluu, Oahu, June 26, 1885.

We must retrace our narration at this point for other events in their order.

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the fact that the water was over ankle deep on the cabin floor. It was her last trip, for she was condemned as unseaworthy and broken up. This was a San Francisco venture, as was the next attempt, in 1854, when the steamers *Sea Bird* and *West Point* were sent to maintain the franchise that had been granted them that year.

The *Sea Bird*, under command of Capt. Lovett, arrived October 14, 1854, after a 12-day passage from San Francisco, having exhausted her coal, all the steerage bunks and other wood available, besides a supply of scraps obtained en route from the whal­ship *Oregon*, and reached the wharf with barely enough steam from her last keg of butter to turn the wheels.

The *West Point*, under command of Capt. Jones, arrived October 23, after a passage of 21 days, and being the smaller boat was placed on the Kauai route under the name of *Kalama*. The *Sea Bird* was assigned to the principal ports of Maui and Hawaii. Both vessels met with large patronage, especially in passenger traffic, which was at its height for the obsequies of Kamehameha III. Being large side-wheel boats they proved unsuitable for the service. The *Kalama* was lost in a heavy storm January 5, 1856, at Koloa, Kauai. Shortly thereafter the *Sea Bird* was withdrawn and returned to the coast. Thus ended the attempt to conduct inter-island steam service from abroad.

The next attempt was with the *Kilauea*, built to the order of C. A. Williams & Co., of this city, in Boston, a screw wooden steamer of 414 tons, especially for our island service. She arrived here June 28, 1856, after a long passage of 175 days, under sail, under command of Capt. Wm. G. Bush, who inaugurated her island service July 18, 1856, by a trip to Kauai; then put on the windward service to serve Maui and Hawaii. She had a long and varied career, with many changes of captains and owners, aided at times by government subsidies and eventually government-owned. Her history, an interesting one, too long for present use, may be found in the *Annual* for 1889, as also the development of the inter-island steam service, due largely to Wm. L. Green, S. G. Wilder, organizer of the Wilder S. S. Co., and T. R. Foster, organizer of the Inter-Island Steam Navigation Co. up to 1889, at which time the coasting service of these islands en-
gaged 49 vessels, of which 19 were steam, of from 5.87 to 773 tons, and 30 sail, of from 3½ to 147 tons. Following annexation, the Wilder Steamship Co. merged into the Inter-Island Steam Navigation Co., since which time many changes have occurred until the service can now boast of steamers of the world's finest channel service, linking the entire group, some of them of 212 stateroom capacity, all modernly equipped, with electric lights, bells, and staterooms of three grades, and boats classed B and C are further provided with private shower and toilet. The fleet at this writing comprises eleven vessels, four of which are for freight only. Regular schedules are maintained providing two and three sailings per week from Honolulu, according to route.

Mention was made of the comparative freedom of late years of mishaps and loss of life compared with that of earlier days. It is not recalled that the weather has so materially changed, but we have noted how few schedules have been interfered with through heavy weather. This may be partly due to improved landings, to more competent seamanship in the service, and most assuredly to the finer and speedier steamers of our island fleet. Of all the island marine disasters, Kauai has proved the graveyard of more than all the others.

Aviation now has come to serve Hawaii in passenger service supplementary to steamship travel. The Inter-Island Airways, Ltd., a subsidiary of the Inter-Island Steam Navigation Co., with four Sikorsky Amphibion twin-motored, eight-passenger planes, inaugurated commercial inter-island aviation on Armistice Day, 1929, and has maintained a regular service (except Sundays) to Hilo and Maui daily, and three times a week to Kauai.

U. S. Internal Revenue, District of Hawaii.—Total collections for the fiscal year ending June 30, 1931, was $4,816,475, a falling off of $699,436 from that of 1930. Total disbursements for 1931, including salaries, incidental expenses, etc., was $52,855.
EARLY COASTING REMINISCENCES

The following reminiscences of our early coasting days by well-known kamaainas were penned over forty years ago, and furnish much additional interest to the article on Inter-Island Coasting, Past and Present.

Thos. W. Everett, a prominent official of Maui, wrote as follows:

"I am willing to give you all the information I can, but am very busy at present. The account of Capt. Hobron's arrival in the schooner Sovereign, called Ka Moi, is incorrect. Hobron came to Lahaina early in 1850, in the schooner Maria, with his uncle Jack, who owned half of the vessel; took a load of potatoes to San Francisco. He bought his uncle's interest in the schooner and came down in a few weeks with the vessel and went into the coasting trade between Honolulu and Maui, for two years and more only to Lahaina. Had the schooner Ka Moi built in New London, and Capt. Godby brought her out in 1854. Later he had the schooner Emma Rooke built in New London and Capt. Chadwick brought her out. E. Coit Hobron and Chadwick each ran her at different times, and under Berrill she was lost off Kohala.

"E. Coit Hobron came out to the islands in January, 1851, or 1852, and went as mate in Ka Moi and perhaps Maria, and afterward as purser and later mate of the Emma Rooke. Shortly after Ka Moi's arrival in 1854, T. H. Hobron took about 40 shipwrecked passengers to San Francisco, making the passage in 13 days; came back and was kept in the coasting trade until she was lost at Molokai in 1873, Capt. West in charge. Her crew broke open the cargo and the native mate and crew were arrested and tried at Lahaina and were given from two to three years each.

"I knew little of Capt. Thos. King until after he married Maria King, in 1856, at Lahaina, a niece of Mrs. Peter H. Treadway. Molteno and King were interested with P. H. Treadway, C. S. Bartow and others in a whaling brig about 1857, and sent Capt. Abraham Russell in command, which proved a failure. Molteno I first knew as keeping, or having charge of billiard tables in Thos. Cummings lot, in 1852, corner of Fort and Merchant streets, in the rear of S. Roth's present tailor shop. Then I think
he took charge of King's schooner *Rialto*, and for some years he was master of the *Maria* as late as 1860, when he took charge of the steamer *Kilauea* for a few trips and got her on shore off Lahaina. She stuck all that day and got off that night; Molteno resigned on his return to Honolulu.

“My recollection of Capt. Chadwick is, he was master of *Ka Moi* for Hobron for some time, and I think he and Coit Hobron and Capt. T. H. Hobron had the *Emma Rooke* built, under his superintendence.

“More about T. H. Hobron: He had three schooners at one time, the *Ka Moi, Excel* (renamed *Moi Wahine*), and about a year afterward, as he used to say, “it was about time to have a child,” so he bought the pilot boat *Favorite* of Capt. Makee, and named it the *Moi Keiki*. My impression is Capt. Hobron sold the *Excel* (the *Moi Wahine*), to Mr. Wm. Kai, agent for Haalelea for the ahupuaa of Haliimaile, some 2000 acres, now called Grove Ranch, Makawao, and built a dwelling house and moved there to reside, about 1859. In 1864 he built a house at Waiehu, and bought some 400 acres of land and sold it a few years later to the Waihee plantation; it is now called the Wideman place. Hobron returned from Waiehu in or about 1869. He built a sugar mill there which was burned down in August, 1870. He repaired the mill and ran it some years and then sold it to Wm. F. Sharrett and E. Delemar, retaining an interest.”

G. D. Gilman gives the following experience in our small coasting craft:

“On one of these trips I remember having had a four-day calm between Diamond Head and Molokai. My fellow passengers were Drs. R. W. Wood and G. P. Lathrop. It was weary waiting and watching for the long desired trade or other breath that would waft us anywhere from the place of calm. Unfortunately we had no sweeps on board and were obliged to wait till the wind should come to relieve us from the doldrums.

“Coming from windward was a comparatively easy matter, sailing before the wind. A day or two out coming from either Maui or Hawaii could be endured, but it was on the homeward passage when beating up against the strong trade winds, with all the nauseating effluvia that comes from the mixture of molasses
and salt water, with all of the disagreeable adjuncts attending a miscellaneous cargo that the trials began. On board such a craft from twenty-five to fifty feet in length—decks crowded with natives in dress and undress, with pigs and poultry, cattle and horses, so packed together that scarce a place could be found to spread a mattress. Below, a cabin, lighted by an oil lamp, with perhaps two or four bunks and lockers on each side and stifling in its heat and confined air, and you have some idea of the quarters which were then provided.

Warren Goodale, for many years Collector of Customs of this port, contributed the following, under date of October, 1889:

"My acquaintance with coasters and the coasting service dates from October, 1847, and led to my residence in these islands. Arriving here in the ship Montreal, from Boston, I got leave from Capt. Doane to visit Hawaii. Mr. S. N. Castle told me the S. S., Capt. King, was about to leave for Kona and return, which was my opportunity. It was very rough outside and the bobstays parted, off Diamond Head, and returning to port, we could not leave again for a week. So, as I could not go to Kona and be back in time to regain my ship, I asked Capt. Doane for my discharge. 'I thought in Boston you would stop here,' he said; 'go to the Consul tomorrow and he will discharge and pay you off,' which was done.

"Capt. King and the S. S. were favorites with the traveling public for many years.

"Most of the coasters in those days were owned by the chiefs, and had native captains. I remember the discomforts of such as the Haalilio, Hakuleleponi, Hooikaika, and later the Manuokawai, Mary, Kaahumanu, Kamamalu, Kinau, Pauahi and Kekauhuohi. The government-built Kamehameha III was in its prime, and Capt. Antone was well and favorably known. 'Admiral' Hall had been deposed. It must have been as good as a circus to see him in uniform, epaulets, Kamehameha buttons and gold lace, boarding a foreign man-of-war on its arrival, and saying: 'Me Admiral John Hall; see my ship' (pointing to the Kamehameha III. 'Suppose you want clothes wash my wife do it.' It was a treat to hear him tell of his trial by court martial, how he expected to be hung, and the stripping off of his epaulets.
"I recall with pleasure a long passage from Lahaina to Honolulu in the raised boat *Warwick*, with acting Captain Bolles, and another of six days from Lahaina to Kawaihae. Mr. Mellish, owner of the *Josephine*, and myself, were the only passengers, a yachting excursion, as it were, and those who remember 'Old Mellish' can imagine the delights of such an experience. Another notable was Capt. Rye ('Billy' Rye). Was it a joke on me when he begged off and asked an extension as to renewing his coasting license till next trip? He 'hadn't made anything this trip and was one watermelon short.'

"My first acquaintance with Capt. Treadway was thus: His schooner was at anchor at Puako, below Kawaihae, and his passengers were on shore for fun, or liberty, evidently. Ex-sheriff Peter, ex-secretary Singleton, late of the Foreign Office, were having their last Hawaiian lark. Singleton in his shirt tail, bottle in hand, leaning on the fence, was using his most winning, persuasive and diplomatic blandishments to induce Len Ives to take a glass. Capt. Treadway stood off amused, taking mental notes for use in his numerous yarns; he was a famous raconteur."

Rev. S. E. Bishop's reminiscences, referring to an earlier period, relate the following:

"As the time of general meeting approached, such coasting vessels as were available would be chartered to convey the missionaries from the different ports. Nearly all those vessels were small, varying from thirty to fifty tons, schooners or brigs, mostly owned by the king or chiefs, and commanded by white or native skippers. They were usually in very filthy condition, swarming with roaches and reeking of bilge water. We white passengers generally occupied the decks, on which our mattresses were spread, but had to dispute space with a swarming crowd of natives with their calabashes and dogs. The cabins were extremely narrow, and intolerable for stench. I have made a two-day passage on one of the larger of these vessels when the crowd of sitting natives was so dense that the sailors could pass along the vessel only by walking on the gunwales of the bulwarks. Once I remember a drenching rain coming suddenly upon us when all the passengers hastily tumbled down into the noisome cabin. The floor space of this pesthole was about eight feet by six, with a berth
on each side. These spaces were filled by the adults, and the children were distributed among them."

RENAISSANCE OF HAWAIIAN LIFE AND LORE

SOME sixty years ago there was much controversy in the native press on the subject of Hawaiian lore; its antiquities, genealogies, traditions, etc., with an appeal for the recovery and preservation of such as was possible, that was carried on for some time and out of which arose an association of Hawaiians for the study and search along those lines. Under the name of "Hawaiian Institute" it held regular monthly meetings for the presentation of papers and discussions thereon, but unfortunately the spirit of cooperation "pro bono publico" with this race is not a prominent feature, and the effort of G. W. Pilipo, Jos. Nawahi, E. K. Lilikalani, Jas. W. Kaulia, Jos. M. Poepoe and a few others, gradually weakened, and the Institute passed out of existence, and, so far as known, without a journal of its proceedings as evidence of success in rescuing any phase of Hawaiian lore from oblivion. But the period of agitation brought out in the native press some valued contributions.

Fornander welcomed the season of controversy as indicative of a desire for investigation into the history and traditions of the past, hoping that it might lead to further insight toward the origin and migrations of the race. In any event, it encouraged ancestral pride, which carried with it, naturally, love of country.

History repeats itself. Those who have had an ear to the ground for some time past, could not fail to recognize the longings for a revival of the ancient customs and lore of Hawaii. There has been not a little solicitude shown in the press at its decline, caused partly by the rapid modernization of the country in meeting present-day commercial demands. Hence, the favor shown public entertainments in pageantry, pompous, colorful parades, luaus (feasts), hukilaus (seine fishing), song and dance
or other means illustrative of ancient life and practices of Hawai'i nei, much of which has been fostered by the several native societies—Kaahumanu, Sons and Daughters of Hawaiian Warriors, Civic Club, Daughters of Hawaii, and others.

As an aid or means toward this revival, in which "every art, every craft, every practice of the ancients, together with their native tongue, now lost," is presented, as the hope and aim of the recently established Hawaiian Language School by a son of the soil, who, with several assistants, has stepped into the arena for the revivifying work. How much of this is genuine aloha-aina spirit urge, or in response to the call for tourist attractions, time will tell.

Lament is expressed at the inability of the race, in a very large measure, to understand and define many words and terms of their own language, due partly to the diminishing number of patriarchs among them, and the change in the educational system throughout the land to English only in all the public schools, that had its finality in 1890, so that the present generation is unfamiliar to a large extent with the language of their forefathers, which accounts for the variations met with in the definitions given words of every day use. This was clearly shown not long since in the query as to the origin and meaning of the word Haole (a white person), that drew forth several replies, no two of which agreed, and but one referred to its first use in the language, in the "Song for Kualii," ages before the advent of one Howell, erroneously presented as the origin and cause of its adoption into the language, for he was not the first white man to cast in his lot among this people, to cause them to name all white people after him, else they would have given us Ha-o-e-la, not Ha-o-le.

Hopes were entertained that the revision of Andrews' dictionary of the language under government auspices, in 1922, would help solve the problem by including discovered omissions since its issue in 1867, but beyond the improvement of accent and diacritical marks, it yet fails to meet the student's needs.

For the recovery of "their native tongue now lost," the Language school aims to devote earnest attention. "An environment of ancient lore is to give a background to the study of the Hawaiian language. Every instructor and every person connected
with the school must speak the pure Hawaiian language of his forefathers in order to qualify for the faculty."

When we find such admissions in the press, by native scholars, "that a very large percentage of the Hawaiians and Part-Hawaiians of today cannot speak and pronounce pure Hawaiian," we can realize the seriousness of its decadence. Small wonder then that the patient deliver in the ancient lore meets with so many obstacles in his effort to fathom the depth of hidden meanings in the figurative expressions, word paintings, in the early writings, as to cause more than one student to voice his plea for the revelation of the beauties that lie hidden in their poetic effusions of mele (song), kanikau (lamentations), koihonua (creative), pule (prayer), or other form known to them.

Steps are in progress to collate much of the lore that has had publication from time to time in the native press, other than the Fornander collection, and at the recent legislature an Act was introduced to "create a commission to collect, translate and preserve ancient Hawaiian legends, meles and pules, and appropriating $15,000 therefor." But it met its quietus.

In the plea to preserve the customs and lore of old Hawaii, there has been a call from some of the native societies for a new and complete history of Hawaii from the Hawaiian writings and standpoint. They are hungry for a better knowledge of all that pertains to the life and traditions of their ancestors. So say we all of us, but until a better understanding is arrived at on the many obsolete words and phrases of the early bards, it is likely that much of value will forever remain locked up in the veil of mystery.

The appeal to preserve the music of the people to their natural character and sweetness, instead of losing its charm by attempted emulation of foreign popular, or jazz influences, has been long and loud, and is having a respectful hearing. Thanks to the late L. A. Thurston, in protest at the departure from the winsomeness of the music of the Kalakaua and Liliuokalani reigns, and his encouragement to those to hold fast to that which is good, typical of the land and race, that has world-wide recognition, rather than be led away by the shallow plaudits of a fleeting show, we see a turn of the tide. Several names have been men-
tioned as true exponents of Hawaiian singing, most of them are
gifted also with exceptional voices that would have recognition in
broader fields of other lands; witness the triumph of Tandy
Mackenzie now abroad in grand opera, recognized as a second
Caruso, a protege in his European studies of the Hawaiian Civic
Club. And there are others holding high the fame of Hawaiian
music abroad.

In arts and craft some attempt is made for the preservation of
mat weaving or plaiting, and it has had its classes in school work
several years other than in the vocational schools. Kapa making
is almost a lost art and its revival is called for. Its place in the
market to meet demand has been filled by the Samoan product
for several years past. This should not be. A land that was
noted for the variety and quality of her bark-cloth products over
that of all Polynesian lands, as may be seen in the Bishop Museum
exhibit, should not permit the art to pass out of existence so
long as there is a demand and use for it.

HONOLULU YESTERDAYS

SELECTED PARTLY FROM SHELDON'S REMINISCENCES

Honolulu's First Experience in Selling Below Cost

IN THIS era of "selling below cost," "pre-inventory," "re-
moval sale," or other alluring business phrase to inveigle the
"bargain seeker," it may interest some reader to learn its
origin in Honolulu, and to find "John Chinaman" as its pioneer.
Here is the story:

One Saturday evening in November, 1845, Messrs. Hungwa,
Chinese merchants of this city, advertised in the Hawaiian lan-
guage that they were selling off below cost. At sunrise, on Mon-
day following, the native population to whom this species of cus-
tom selling was altogether new, apprehending the stock and trade
was to be sold at prices lower than anything they had ever ex-
experienced before, flocked to the store in such numbers as to completely fill the street with a dense mass of men, women and children, of all ages, and colors, each of whom was striving by dint of shoving and elbowing, to reach the threshold of the trading elysium. As soon as the door was opened a crowd rushed in filling up every available space, while greater numbers were pressing in vain from behind. Hardly, however, had the trading commenced, when the floor of the house, not having been built in anticipation of such a weight of customers at one time, gave way, and precipitated the buyers and sellers into the cellar, about seven feet deep. Those who were near the door at the first crash, struggled to get back much harder than they had struggled to get in, and a scene of confusion ensued, which was curious to behold. However, none were much hurt, and after the fallen had climbed out, the store was closed and the mob, enjoying the mishap of their cheap buying friends most heartily, retired. Thus ended the first experiment at selling below cost in Honolulu. It will cost the Celestials something handsome to get up what is below, without carrying their attempt any further, and we apprehend none will care to follow their example.

EARLY FIRE PRECAUTION

The ordinance by Kamehameha III, December 27, 1850, establishing the Honolulu Fire Department, required each householder to keep at least two buckets hanging handy, for fire use exclusively, and further ordered that they be brought to every fire. The bucket part was probably the most effective, as the only other equipment at that time was a hand engine and 150 feet of homemade canvas hose through which, by constant relays on the pump handles, water could be thrown some sixty feet.

KAHOOLAWE'S NEW OUTLOOK IN 1858

Mention was made recently that the Island of Kahoolawe had been leased and was about to be converted into a sheep station. Everybody here knows that Kahoolawe has hitherto been about as useless a tract of land as can well be imagined. It used to be a penal settlement, and no doubt the convicts there enjoyed as
much ease and freedom from both surveillance and labor as their hearts could wish.

It has been said that the late Kinimaka had a fine time of it. He was a native of some little rank and had his own dependents who used to swim from the shores of Maui and take him what he wanted to make his banishment entirely agreeable.

I have also heard that one George Morgan was the last convict placed there, and that one or two females used to render passable that utter solitude which is never so well enjoyed as in agreeable company. George used to hunt the wild hogs and cultivated a little patch of land. I believe he used also, to back down his drinking water from some considerable distance. He was a shoemaker by trade, and if, as many followers of Crispin have been, of a poetical turn of mind, he must have had a fine opportunity for the indulgence of his fancies. But at this time the island was very unprofitable. It is now for the first time that it is going to yield anything. In the first place the lessees have got to pay every year into the treasury some $505, which of itself is quite an item. But in doing so they hope to make a profit by growing wool, which wool will swell the aggregate of our exports and take the place of so much money exported to square the difference between the sum total of our imports and exports. Besides all which the occupation of that island will give employment to many persons as well as those who tend the flocks, as those who being in the carrying trade must be hired to take the produce to market. The lease lately consummated may be said to have virtually added the available portion of some 25,000 acres of land to these Islands, for land unoccupied is of little more count than no land at all.

Thus we are creeping up and crawling on. There is nothing very brilliant in our career, yet, as the adage has it, “Soft and fairly wins the race.” Whenever I hear of a piece of land being taken up and put in the way of becoming productive I rejoice as much as the Hollanders used to do when they reclaimed another piece of flat from the sea. It was not the scrap of washy land they jubilated in, but what they could make of it. Our lands are ready to hand, but until we make them yield us something they might as well be at the bottom of the ocean.
When I look about and see how many hundreds and thousands of acres are now subservient to useful purposes that only a few years ago produced nothing, or nothing but the trifle that served to maintain the inhabitants in life, I certainly do feel that we as a people are coming up—yes, coming up. Look at this island of Oahu, with its cattle and sheep farmers, and every here and there a little bit of bottom cultivated. Look at Maui with its cattle, its sheep, its wheat, and its sugar. Look at Hawaii where the articles of produce are still more numerous, including amongst other items, coffee, and oranges and pulu. Molokai has done a little, and as I hear, is likely to do more. I have not heard much as yet about Lanai, but Kauai is a thriving place. The islet of Niihau is biding its time; if my recollections of it are correct, it will also do for sheep. And now, last and almost least, Kahoalawe begins to show its head and promises to add its quota to the general fund.

It may be very simple in me to put these thoughts on paper, but I hate stagnation as I hate the Devil, and wherever I see a little sign of progress, one acre cultivated, or depastured (except by horses), I rejoice over it, more than over ninety and nine acres that have been constantly used since the good old times of Kamehameha I and Captain Cook.

That they have begun to grow wheat in the district of Kau, on Hawaii, is something to say, and I hope that the Rev. Mr. Shipman will long be remembered for the zeal with which he has fostered that undertaking. For my part I always did admire a minister who could set an example in the field as well as cultivate the vineyard, which is his more peculiar charge.

**A HAWAIIAN DANDY**

Honolulu had a Hawaiian Beau Brummel along in the '70s who well deserves this has-been story. Known generally as Ioane, he filled the humble position of porter in a wholesale and retail store, where during the week he patiently and laboriously performed the duties of his station in life, clothed in a plain denim suit. But after four o'clock on Saturday afternoons he was quite a different individual. His tall and shapely form was then clothed in whitest and finest of linen suits; with stand-up shirt collar so stiff as to
prevent a turn of the head; a shiny beaver cocked on one side; gloves—sometimes green, yellow or fawn colored—and shoes to match; a neat rattan twirling in his hand; a good cigar, alternately puffed or carried daintily between the fingers. Our Hawaiian dandy, as he majestically walked the streets on Saturday afternoons or Sundays, was the observed of all observers, the envy of his compatriots of less cultured tastes, and an object of admiration of the fair sex. In due time Ioane became master of the hula entertainments of Kalakaua’s coronation festivities, and was soon thereafter lost to public view.

**FIRST SUGAR REFINERY EFFORT**

We once had a sugar refinery in Honolulu. A company was organized, a charter obtained from the government, and the following officers chosen. S. N. Castle, president; Wm. Hillebrand, vice-president; I. Bartlett, secretary and treasurer; G. M. Robertson, director; Samuel Savidge, auditor. This was in the early ’60s. The old custom house—a three-story coral building at the water-front, ewa of Nuuanu street—was leased for a refinery and the capital was put down not to exceed $25,000. This was regarded by many as one of the most hopeful projects undertaken here for a long time. With the gradual increase of plantations and mills, there was (in the then imperfect state of manufacture) an increase of molasses and inferior grade of sugar which hardly paid to export. These, by the operation of a refinery, could be consumed in the production of refined or white sugar, yielding an income to the planters from what before barely paid for the containers to pack for export. Something was also said about the fact that in the West Indies and some other sugar producing countries, distilleries were allowed on plantations, whereby the poorer grades of molasses and sugar were converted into marketable rum, whereas distilleries were prohibited here. The Honolulu Sugar Refinery was a prominent institution while it lasted, but eventually, when greatly improved machinery was introduced on the plantations, its mission was gone, and it became a thing of the past.
January 2d, 1863, a number of copies of an anonymous pamphlet entitled "The Honolulu Merchants' Looking-Glass," were found distributed about the town, some being thrown into the premises of foreign residents, or left at the doors of stores, where they were found in the morning. It had evidently been printed in San Francisco, and brought here on the bark Comet, which arrived on the 1st. The author, in his preface, admitted that his object was to make somebody feel bad but expressed the hope that the wounds inflicted would soon heal, and that the parties mentioned would thereby learn to mind their own business, and not meddle with that of other people. Short biographical sketches were given of some thirty-five of the prominent foreign residents of Honolulu, commencing with R. C. Wyllie, Minister of Foreign Affairs, and concluding with Captain Thomas Spencer. For the most part these sketches were good-humored in tone, the prominent characteristics of each individual being stated, and his supposed money value, with disparaging or eulogistic comments, apparently as the writer's bias dictated. Some of the comments, however, were offensive and libellous. It appeared that some five or six persons were particularly obnoxious to the writer, and his main design was evidently to retaliate in this novel manner for some real or fancied injury. The affair caused a good deal of excitement at the time, and was a "nine days wonder." The author was never discovered, although many surmises were made as to who he might be.

First Sidewalk.—Previous to the year 1857 there could hardly be found a regular sidewalk on any of Honolulu's public streets. Saml. Rawson, watchmaker, whose establishment was a small shop on lower side of Merchant street, midway between Fort and Kaahumanu, was the first one to lay down a brick sidewalk, and his example was followed soon by Messrs. Hackfeld & Co. and Dr. E. Hoffman, on Queen street.
THE HONOLULU FIRE DEPARTMENT

By H. A. Smith, Assistant Chief, H. F. D.
[Continuing the account as given in the ANNUAL for 1880, its first 30 years, wholly of volunteers and hand-drawn apparatus]

In the old days each company had its fire house, held regular meetings, and the department became a powerful factor in the city's activities, even politically, and held its parade in February each year, an imposing procession of red-shirted, helmeted and capped men, dragging their quaint fire-fighting apparatus with hand ropes.

The first great fire in the history of Honolulu broke out July 7, 1855, at 8:30 p.m., starting in the Varieties Theatre, which was located in the area bounded by King, Fort, Merchant and Bethel streets. It destroyed several buildings in the block, including the police station.

Up to 1876 Honolulu was fortunate in having but few seriously disastrous fires, and it is remarkable that the Islands have been the scene of so few destructive conflagrations, considering the inflammable nature of the buildings usually erected and still existent.

On December 12, 1877, what was known as the Esplanade fire, was the greatest conflagration that had occurred up to that time, the loss reaching about $250,000.

On April 18, 1886, Chinatown was almost wiped out by a fire which burned over 60 acres of buildings and involved a loss exceeding $1,455,000. This fire originated in a building near Hotel and Smith streets, occupied by Chinese. A Chinese lottery was supposedly being conducted, and one of the gamblers claiming that cheating was going on, snatched the raffle tickets and thrust them into the fire. Another pulled them out, and in the scramble that ensued, the wall-paper became ignited and due to its flimsy construction, the building was soon a mass of flames. Buildings being erected extremely close together the fire quickly spread in all directions.

Another serious Chinatown fire occurred January 20, 1900, in connection with the effort to stamp out the plague visitation of
that period, by burning all infected premises. In this case the Fire Department applied the torch to buildings on and above Beretania street in the vicinity of Kaumakapili church about 9 a. m., a light wind prevailing. All went well till a rising wind carried sparks to the steeples of the church and a joss house near by, and quickly overcame the firemen's control in its rapid spread toward the stream and waterfront. By nightfall some 38 acres lay a mass of smouldering ruins, and over 4,000 unfortunates were rendered homeless. There were 6,748 claims filed for loss through this plague battle, amounting to $3,175,132.90, on which $1,473,173 was awarded.

Shortly following the 1886 fire, the Honolulu Board of Fire Underwriters was formed and the uniform grading of fire risks inaugurated.

The Advertiser of August 14, 1886, carried an editorial, advocating the use of horses to draw fire apparatus and recommending the purchase of a chemical engine.

Records of the fire department show that horses were used in the department as early as April, 1886, but no provisions were made in the stations for them, they simply being held in readiness in a nearby livery stable.

August 15, 1891, welcomed the arrival of a new steam engine for No. 1 Company. The members of this company had been presented with a pair of horses purchased by the merchants of the town and had them trained for immediate connection to the engine in the event of an alarm. They had also fitted up their house with electrical appliances for the automatic turning on of the lights and release of the horses from their stalls. This station was located on King street between Richards and Alakea, on the approximate site of the present Hawaiian Electric Company building.

September 7, 1891, witnessed the arrival of a Champion Chemical Engine, consisting of two 80-gallon tanks and costing $2,993.60, which was put into service in the Bell Tower, situated on Union street.

Up to this time the volunteer firemen had been paid according to their rank and the number of fires attended. Honolulu's first regular paid fire department was created by an Act of the Legis-
lature of the Provisional Government, March 1, 1893, with Frank Hustace as Chief Engineer.

On May 1, 1893, the Honolulu Fire Department purchased its first pair of horses, which went to No. 1 Engine. The following July 18, saw the purchase of the second pair of horses, which were put to drawing No. 2 Engine. From that time on, horses were purchased until all equipment was horse-drawn, new apparatus being secured and new stations erected as the city expanded.

In December, 1902, water heaters were installed, by which the water in the boilers of the engines was kept at almost a boiling point, lessening the time necessary to raise steam, thus marking another step forward in efficiency. When the engine left the house these heaters were automatically cut off.

It might be a point of interest to the younger generation to know that a fire was always laid in these engines; oil-soaked shavings, kindling and coal being in the fire box ready for instant ignition. Immediately upon leaving the station the engineer broke the fire pot, thus igniting the already laid fire. This fire pot contained "fire powder" composed of chlorate of potash and sugar, which, coming into contact with sulphuric acid, bursts into flames. The pot was swung directly under the fire box and handle pulled, breaking the small bottle, which allowed the sulphuric acid therein contained to come in contact with the fire powder. This was much more effective than the ordinary torch, in that it ignited practically all the kindling instantaneously, it being extremely hard to light a torch in inclement weather.

The first motor apparatus for Honolulu was put into service April 27, 1912, and consisted of two Seagrave Combination Chemical Engines and Hosewagons of the air-cooled type. These were followed in November of the same year, by two additional similar hosewagons and a tractor.

On January 15, 1916, three of the old steam engines (two horse-drawn and one by tractor) were replaced by three 1000-gallon motor combination engines and hosewagons. The tractor was then converted into a chemical engine on which were mounted the two chemical tanks taken from the horse-drawn apparatus. May, 1920, saw the last of the horses, No. 2 (the remaining steam engine) being supplanted by a motor-propelled pump.
The present day fire department is composed of eight engine companies, and one ladder truck company, housed in seven stations. Two engine companies are stationed in Headquarters building, Fort and Beretania streets. This station is built of native stone and wood and was first occupied January 18, 1898. Strong hopes are held for its abandonment in the near future, since plans are under way for the erection of two new stations to separate the two companies, thereby increasing the efficiency of the department in answering alarms.

Each of the other stations house one engine company, except Kakaako where the 75-foot Aerial Ladder Truck is quartered.

Makiki Station, No. 3, corner Piikoi street and Wilder avenue, was first occupied August 1, 1899. This was a two-story wooden building, razed in 1929 and replaced by a two-story reinforced concrete building, into which the company moved September 28, 1929.

No. 4 Company opened Palama Station, King street and Austin lane July 1, 1902. This is a two-story brick and wood building, of Spanish type architecture.

Kaimuki Station, Pahoa and Koko Head avenues, a two-story wooden frame structure, was first opened as Hose Company 5 July 1, 1913. This was torn down and replaced by a two-story reinforced concrete building, and Hose 5 was changed to an engine company October 1, 1924.

These same plans were used for the construction of Kalihi Station, King street near Harvey lane. No. 6 Company moved into this building December 1, 1924.

A one-story bungalow building was erected at Kapahulu road and Leahi avenue to accommodate No. 7 Company, which moved into the station August 2, 1927.

Following the plans of the new Makiki Station, Kakaako Station was erected on the corner of South street and Quinn lane to accommodate No. 9 Engine Company and occupied October 1, 1929. The Ladder Truck Station, built on the same lot, was put into service March 1, 1930.

All stations, but one, have hose towers, Waikiki alone being equipped with a hose rack.
The erection of a modern drill tower is under consideration as is also a shop building, since practically all of the department repair work is done by the firemen, under the direct supervision of the mechanic, together with the painting of apparatus and much construction work.

Arrangements are also under way for the erection of new stations in Nuuanu and Manoa, plans for the former having been drawn and a lot set aside on Wyllie street. It is also hoped to build two suburban stations, one at Waialua and the other at Waipahu.

Each engine company consists of a double combination hosewagon and double combination pumping engine, each motor-propelled, all Seagrave make. The hosewagons carry a minimum of 1500 feet 2½-inch hose, 300 feet 3-inch hose, and 200 feet of 1½-inch hose, siamesed into two leads. Six of the hosewagons each carry two 40-gallon chemical tanks and two are equipped with a 100-gallon water tank with booster pump, all having 200 feet of 1-inch hose. Each hosewagon has a monitor nozzle.

Supplies for salvage work are carried by each company fully equipped with up-to-date tools and appliances.

All engines are rated 1000 gallons per minute; they carry a minimum of 1000 feet 2½-inch hose and are otherwise fully equipped. Four engines in the high value district each carry a portable foam generator with powder and a portable deluge set.

The personnel of the department consists of 144 men, including one chief, first and second assistant chiefs, one drillmaster, ten captains, ten lieutenants, one mechanic, one assistant mechanic, 16 engineers, 26 drivers, 74 hosemen and two-hosemen and watchmen.

Since June 1, 1925, the Honolulu firemen have worked under the two platoon system, shifts beginning and ending at 6:00 p. m. All firemen are allowed an annual vacation of 30 days, after having been in the service one year. This vacation may be accumulated, not to exceed ninety days.

Employment in the Fire Department is obtained by a passing mark of 70% in competitive examinations, conducted by the Civil Service Commission, which was created by an Act of the Legislature of 1913.
All members of the department who entered the service prior to January 1, 1928, may retire after 20 years service on 40% of their salary, while those having served 25 years or longer are allowed 50% on their retirement. This law also makes provision for firemen injured in performance of their duty, allowing a disability pension of from 25% to 75%, as the particular case may warrant, the amount being decided upon by the Pension Board, which consists of the following officials of the City and County, namely, the Mayor, the Auditor and the Treasurer, with the Clerk of the City and County acting as clerk of the Pension Board. In event of his accidental death, a fireman’s widow or orphans are also provided for, by this same Act.

Those entering the service subsequent to January 1, 1928, are provided for under the Employees’ Retirement System. This system is jointly contributory and it is compulsory that all employees of the Territory and its political subdivisions join after six months service, membership the first six months being optional.

The life of each fireman is insured for $2,000, against total and permanent disability and death. The premium on this group policy is met from the proceeds of the Annual Firemen’s Ball, held the week of July 4th. These balls were inaugurated in 1926 by the late Chief Chas. H. Thurston. The public responded most generously to this idea, with the result that each year’s dance has surpassed that of its predecessor. A burial plot in Nuuanu cemetery has been purchased and many other necessary reliefs made.

No money is dispensed from this fund without the majority approval vote of its board of directors, composed of the chief, as chairman, his two assistants and the captain of each company.

Since April 1, 1902, Honolulu has had the Gamewell Fire Alarm System, at which time a six-circuit switchboard and sixty-five boxes were installed. The present system is automatic, consisting of an eight-circuit switchboard, caring for 346 boxes, placed in appropriate locations about the city. Approximately 70% of all alarms are received by telephone, the switchboard being located at headquarters, each sub-station being equipped with a telephone in the captain’s office and an extension in the officers’ quarters.
Honolulu's first water line was laid in the summer of 1847 and was the initial effort of the up-to-date system of today's water distribution. The present water supply comes mainly from artesian wells. Pumping stations in different parts of the city pump from these wells to reservoirs on the higher elevations, whence the water is distributed throughout the city, maintaining an hydrostatic pressure averaging about 55 pounds.

Tappers connected to the Gamewell system are installed in all those pumping stations, which stations are immediately notified in the event of a telephone alarm. Water is then directed toward the fire by closing or partially closing valves leading in other directions, stations pumping direct into the mains.

At present there are 1497 government-owned fire hydrants with standard connection, 37 privately owned, and 52 of the same type in the military reservations within the city limits.

The Fire Department renders protection to an area of approximately 81 square miles, the average distance covered per alarm being about seven-eighths of a mile, although twice this year apparatus has been sent 30 miles, and once made a 15-mile run.

Of the 307 miles of dedicated streets in the city, 239 miles are paved or macadamized, 48 are surfaced, but 20 miles being unimproved.

The survey conducted in 1924 by the National Board of Fire Underwriters placed both the Fire Department and the city in Class 5, while a similar survey at the first of this year (1930) showed the Fire Department to be within one-tenth of one percent in Class 1, and the city in Class 3.

The gross fire loss for the past five years amounted to $823,325, the annual loss varying from $69,469 in 1928 to $381,027 in 1929. The average annual number of fires was 243, with an average loss per fire of $678. Based on an average population of 124,000, the average annual number of fires per thousand population was 1.95 and the average loss per capita $1.32.

Royals.—Flowers of the Kamakahala (Labordea Grayana) were so much prized for leis, or wreaths, in olden time, that they were tabooed to common people, being reserved only for high chiefs. We know not if they are yet to be found.
KE-KUA-NOHU

HONOLULU'S OLD FORT

By Bruce Cartwright

FORT STREET, in Honolulu, received its name from the fact that it once led to the inland entrance of a fort that ran across its foot. This fort, which bore the name "Ke-kua-nohu," was erected in 1816 as the result of a visit of Dr. Schaffer, the representative of Governor Baranoff of Alaska, who had dreams of establishing a Russian colony in the Hawaiian Islands. The Russian ship "Myrtle" anchored in Honolulu harbor in 1815 where the Russians landed, built a block-house, mounted a few guns, and hoisted the Russian flag.

When this news reached Kamehameha I, he sent Kalaimoku, with a large force of armed chiefs and warriors to watch the Russians, and if necessary to resist them. On the night after the arrival of this force the Russians sailed for Kauai where Schaffer erected fortifications and tried to lease the whole island.

In the meantime by the advice and with the help of John Young, Kalaimoku began the erection of a fort to command the harbor of Honolulu. He issued a proclamation (kuauhau) summoning all men and women of Oahu to assemble in Honolulu in January, 1816, to aid in erecting the "papu" (fort).

Otto von Kotzebue, in charge of a Russian exploring expedition in the Pacific, arrived in Honolulu in November, 1816, at which time the fort was not finished. He describes it as follows:

"... We were now near Hana-rura, where some houses, built in the European style, formed striking contrast to the huts of the natives. In the harbour we descried a fort with Tammeamea's flag hoisted upon it. ... On landing I was received by Mr. Young, an Englishman, who had lived upon these islands for twenty years, and had now been sent to Wahu to build a fort. My intention of seeing the fort was frustrated by a sentinel calling the word 'Taboo!' I afterwards learned that admission is refused to every stranger, especially Europeans. Kareimoku is always in the fort where they are still at work and the natives
not being familiar with the use of cannon, they have appointed an Englishman, named George Beckley, who had formerly served in a merchantman, as commandant. The fort is nothing more than a square, supplied with loop holes, the walls of which are two fathoms high, and built of coral stone.

Mr. W. D. Alexander, the historian, describes the fort as follows:

"... It was nearly square, measuring three hundred to four hundred feet on a side, with walls about twelve feet high and twenty feet thick, built of coral rock with embrasures for cannons. It stood on the seaward side of Queen street, and across the lower
part of Fort street. About forty guns, six, eight and twelve-pounders, were afterward mounted, and it was placed under the command of Captain Beckley.

Dr. N. B. Emerson, in a paper read before the Hawaiian Historical Society in 1900, gives the history of the fort which he saw and examined when a boy, between the years 1849 and 1857. He says that the whitened walls stood prim and square close to the water’s edge, immediately makai of Queen street, and that there were no evidences of embrasures at that time. There may have been embrasures, or what appeared to be embrasures while the fort was being constructed, but afterwards the top of the walls were flat. The cannon were mounted on gun-carriages, on the top of this flat wall in plain view, no attempt being made to conceal or protect them.

The walls of the fort were 20 feet thick and 12 feet high. The sides were built of coral blocks, cut from the reef. They were similar in size and shape to those used in building Kawaiahao church. The space between these coral walls, which formed the inner and outer faces of the fort, was filled with dirt and other material which the natives scraped from the surrounding land. The outer dimensions of the walls were as follows: The wall along the seaward side of Queen street was 300 feet long. About 100 feet from the Waikiki corner there was an entrance about 20 feet wide, with a pointed wooden roof over it. This entrance was directly at the foot of Fort street. It was closed with heavy wooden gates on massive iron hinges. In the half of the gate on the Waikiki side was cut a small wicket through which those having business in the fort were admitted.

The wall on the southern, or Waikiki side was 277 feet long, and ran to the water’s edge. The wall along the water’s edge was curved out, and was 336 feet long. A narrow sandy beach ran along its base. At high tide the waves smashed against it. Beyond it for several hundred feet extended a reef which was partly bare at low tide. About 30 feet from the corner of the Waikiki wall and the sea-wall was a “sally-port” entrance, closed by a heavy wooden gate, in which there was a small wicket. The Ewa wall was 340 feet long, and ran along the inner-harbor up to Queen street. A flag-pole, of two sections resembling a ship’s
mast was erected on the top of the sea-wall, about mid-way of its length. This pole was 80 feet high, and had cross-trees, about two-thirds of the way up. Twelve feet on the Ewa side of it stood a wooden frame from which hung a ship's bell.

The armament at first consisted of about 40 cannons of different makes and sizes which had among them an old Spanish brass cannon mounted "en barbette" not far from the western corner of the fort. It bore elaborate patterns in high relief and the motto "ultima ratio regum" ("the last argument of kings") and is described by Dr. Emerson as having a beautiful rich wine-colored patina.

The only building contained in the fort, other than grass huts and shelters used for homes by the guard, was the powder magazine which was located in the southeast corner. In 1850 there were 6 buildings (see plan). These were all built of coral blocks with wooden floors and shingled roofs, except in the case of the powder-magazine and the two low buildings containing cells. Hau trees were planted on the top of the Waikiki wall to provide shade, for the benefit of those living in the governor's house. Several grass-shelters were erected, in later years, along the top of the walls to provide resting places for the sentries. Flights of wide stone steps led to the top of the wall in the eastern corner and also near the "sally port." These provided the only means of reaching the top from the interior, except from the governor's house, which was built against the Waikiki wall. From it three doors opened from the second story directly to the top of the wall.

For many years the old fort served a useful purpose. Its presence helped the enforcement of the law. The first salute was fired from its guns on December 14, 1816, when salutes were exchanged with the Russian ship "Rurick" of which Captain Otto von Kotzebue was commander. For many years salutes were fired from the fort.

In the winter of 1830, Liliha, the Governess of Oahu, with Kinau, influenced by certain disaffected foreigners purchased guns and ammunition and filled the fort with armed men from Waihanae, thus starting a revolution against the authority of the king, who was absent with his principal chiefs on the other islands.
Hoapili, the father of Liliha, hastened to Oahu and prevailed upon her to abandon her rash undertaking.

On the 20th of October, 1840, the first hanging in the Hawaiian Islands took place in the fort. A chief named Kamanawa was punished for poisoning his wife. The gallows was set up on the Queen street wall of the fort, just east of the main entrance. The hanging was witnessed by an immense throng.

On February 25th, 1843, King Kamehameha III, standing on the Queen street wall of the fort, ceded the Hawaiian Islands to Great Britain by delivering the following speech:

"Where are you, chiefs, people and commoners, of the same blood as myself, and people from foreign lands? Listen: I declare to you that I am perplexed with the difficulties into which I have been brought without just cause. The result has been that I have ceded away the government, the life, of our land; hear ye! But my rule over you, my people, and your privileges will be preserved, for I have confidence that the life of the land will be restored when my action shall be justified."

The act of cession was then read, followed by the reading of Lord Paulet's proclamation, after which the Hawaiian flag was lowered and the British colors were hoisted over the fort. Salutes were then fired from the fort and from the British warship "Carysford." Five months and six days after this the Kingdom was restored by Admiral Thomas, of the British Navy.

In August, 1849, the French Frigate "Poursuivante" and the corvette "Cassendi" arrived in Honolulu, and after making demands that could not be granted, Admiral de Tromelin landed an armed force. Governor Kekuanaoa, in accordance with the policy of non-resistance that had been agreed upon, withdrew his men from the fort and allowed the French to take possession. They occupied it for ten days and during that time thoroughly wrecked and sacked it, destroying all the gun carriages and throwing most of the cannon off the walls. The Hawaiian flag remained flying, as Governor Kekuanaoa refused to lower it when he vacated.

In 1857 the fort, being deemed of no further value, was thoroughly destroyed and the material that was taken from it was used to fill in the shallow reef on its seaward side, thus creating sixteen acres of new land.
The historic old fort "Ke-kua-nohu" has vanished; may its memory be forever perpetuated in the name of Fort street. It would be quite appropriate to name some public park in the vicinity "Ke-kua-nohu."

BOTANICAL BONANZAS

BY C. S. JUDD, Territorial Forester

THE RICH endemicity of the Hawaiian flora is one of the most remarkable botanical features of this island group. Hawaii can rightly boast of a varied flora, brought about mostly by isolation, which is richer in endemic species than that of any other land and can properly lay claim to a remarkable heterogeneity of the distantly related groups of plants, occasioned by the number of sources and climates from which the flora has been derived.

Hillebrand records a total of 705 species of original angiosperms of which 574 or 81 per cent are endemic, and of the 216 species of indigenous trees recorded by Rock, 93 per cent are found only in Hawaii. Antiquity, in addition to isolation, has been largely responsible for this high endemicity and this has been shown by Forest Brown in connection with his microscopic examination of Hawaiian woods when he asserts that the size of the wood vessels in endemic species is exceptionally small as a result of "slow evolution in response to a generally humid climate in which transpiration is relatively slow."

Our flora boasts affinities not only in Malaya and Australasia and the west coast of South and Central America but also in Brazil on the eastern side of that southern continent. The Hawaiian Thistle tree (*Hesperomannia arborescens*), for example, and the four arboreal species of *Nothocestrum*, which have affinities in this distant country bordering on the Atlantic Ocean, must owe their original derivation to a time in the late Eocene age when the Isthmus of Panama, including most of Central America and the Isthmus of Tehuantepec were beneath the sea and the westward flow of the Atlantic equatorial currents carried the seed in ocean
drift into the Pacific and brought it to Hawaii and other Pacific islands.

All of these facts lead botanists to regard our flora as a gold mining region in which rich lodes are followed up, pay streaks accidentally come across and new ore-bearing veins are discovered. It is not only the worked out mines that will be the subject of this paper, the pay streaks that are gradually fading out, but the rich bonanzas that still exist.

First for the worked out mines. It seems a pity that many of our rare endemic species of trees are slowly but surely being lost to science and to the world by their gradual dying off. Evolved in a time when no destructive quadrupeds roamed these shores or pernicious insects buzzed in our soft tropical air, most of our endemic trees, found nowhere else on this globe, did not find it essential to develop any particular defense against the attack of such enemies, hence, when these enemies were brought here by the early immigrants the plants had no resisting armour, spines or other protection to ward off their destructive attacks. Our extremely tender flora has therefore fallen most readily before the onslaught of cattle, horses, goats, sheep and swine, in addition to man's destructive use of fire and the ax.

Let us make a brief inventory of a few of these mines which have been worked out or which still show only a faint trace of rapidly disappearing precious ore. Permit me first to quote from Rock's account of one instance of an exhausted mine, which is given on page 70 of his "Indigenous Trees::"

"The forests spoken of by Hillebrand at Ulupalakua have entirely disappeared and only remnants of them can be found. * * * The species of Cyanea found by Hillebrand are gone forever; and where they once reared their proud palm-like crowns toward the sky, there is now only grassland, with herds of cattle and ugly Eucalypti. The writer was fortunate enough to find a specimen of the long-sought-for, gorgeous Cyanea arborea in that locality in a small gulch, inaccessible to cattle. It was the last of its race. He scoured the country for miles searching for the handsome Cyanea comata, but his searches were in vain; it had vanished forever."

The kou tree, from which calabashes three feet in diameter
could once be made, can now scarcely be induced to attain a
diameter of more than six inches before it succumbs to defolia-
tion caused by a lepidopterous insect. The ohai with its charm-
ing red flower, resembling a large sweet pea, survives now in only
a very few places. A few scrappy plants still persist against the
attacks of insects and cattle near Kaena point on Oahu and, under
protection against stock, it is a flourishing vine on the sands of
Moomomi on Molokai. To see ohai plants of any size one must
make the perilous visit to Nihoa and Necker Island where moth
and rust doth not corrupt nor goats break through and nibble.
On those rocky and lonely islets the flourishing ohai bushes supply
twigs and branches for the frigate-bird to build up its towering
nest.

The original Molokai red cotton tree, visited on its death bed
at Mahana by Rock, is survived by only one flourishing adult, an
offspring of the parent, and this lone descendant may be found at
the Kauluwai ranch house where it was planted by Sophie Cooke
in 1916. In a very commendable manner she has set out a grove
of young plants raised from this lone survivor so that the inter-
esting red cotton may yet have a longer lease on life.

The story of our Brazilian friend, *Hesperomannia arborescens*,
on Lanai, is excitingly romantic. Horace Mann first discovered
it on the highest ridge and met with only one tree. Hillebrand
saw eight trees four years later. Perkins saw two in about 1903.
In his explorations in 1910 Rock "failed to find even a sign of
this tree anywhere on the island." Skottsberg in 1926 extends
little hope of finding any more living specimens and states that
"Probably *Hesperomannia arborescens typica* is extinct." His
requiem, like the retort of Mark Twain that the notice of his de-
mise was greatly exaggerated, was premature, however, for in
1927, my naturalist friend George Munro guided me to a flourish-
ing specimen in the elfin woods near the summit of this island.

Mature specimens of the charming *Nau*, the fragrant native
gardenia named after Dr. Brigham, may be numbered on the
fingers of one's hands. Four discouraged survivors may still be
found at Mahana on Molokai; there are possibly a few on Lanai;
the single specimen on Oahu protected by a special fence grows
fairly vigorously on the slopes of Puu Kuua in Honouliuli; but
the only known tree on Hawaii was unfortunately cut down recently by a linesman brushing out for the telephone wires crossing the land of Puuwaawaa. Here again Sophie Cooke has come to the rescue and has succeeded in raising a number of thrifty seedlings from the seed put forth by the dying trees at Mahana and it is hoped that these will be planted in favorable places and cared for so that the tree may be carried on.

Attempts to preserve the Giffard mountain hau have signally failed and vigorous young seedlings set out first at Waimea and then at Puuwaawaa on Hawaii have suddenly expired. Unless other seedlings, tucked away in someone's yard, have flourished, this odd tree has been lost forever to the world. On April 18, 1931, I visited the spot at Kipuka Puaulu, on Hawaii, where once grew the original Hibiscadelphus giffardianus on which Rock based his description and found that it was dead and the place thereof shall know it no more. The mountain hau of the yellow flower at Auahi, Maui, named after our fellow botanist, Dr. Gerrit P. Wilder, was last seen by him in 1912, but was then in a dying condition. A subsequent visit made in 1920 failed to disclose a vestige of the tree and the land is now overrun with rank pamakani. That Hibiscadelphus, too, has probably been lost to the world. The third species, with green flowers, fortunately is abundant on the slopes of Hualalai and shows no immediate sign of diminution. Most of the fast disappearing species, mentioned above, occur in the drier regions where they are usually subject to the attacks of stock.

There is a brighter side to the situation, however, in respect to some of our indigenous trees, for certain ones which their discoverers thought to be rare have become common by subsequent explorations. I like to think of Chamisso, the pioneer botanist of Hawaii, born in France in 1838, but driven to Germany by the French Revolution, an ex-army officer but also a man of letters, collecting in the indigenous forests on Oahu and presenting the early botanical knowledge of our trees and other plants. The fashion set by Hillebrand of browsing among the plant growths in his favorite collecting grounds at Makaleha and Niu, as recorded in his invaluable "Flora of the Hawaiian Islands," has been followed by every keen botanist who has since visited these
islands. Rock extended botanical explorations to more remote hinterland and did excellent work in widening the range of many of the native trees. More recently the ante has been raised still higher by other botanists and by observant assistant foresters and rangers in our local forest service and certain trees thought at first to be rare are constantly being discovered.

Hillebrand described 58 species of Lobelioideae, but Rock delved into them further and increased this number to 104 with the following remark:

"Nowhere, with the exception of South America, does this tribe reach such a wonderful development as in the Hawaiian Islands. It has the largest number of species of any plant family represented here in these islands." To give full measure, Rock also described 45 additional varieties and forms of the Lobelia tribe, and there are doubtless many other distinct species and varieties lurking modestly in our protected forest reserves which still remain to be discovered and described by some energetic botanist.

Hillebrand apparently overlooked the red cotton tree of Hawaii which Lewton described as Kokia Rockii, and which Rock reported as being exceedingly rare. A ride over the interesting lava flows of Puuwaawaa, not far from the government belt road around the island, discloses this old tree in large numbers.

The Mahoe, which Hillebrand from his modesty or lack of sufficient material hesitated to publish as a new type, was described by Rock as Alectryon macrococcus with the statement that "it is very scarce on Oahu." My forest officers are constantly finding it widely scattered in new localities, particularly in the Waianae range.

Rock never found the kaulu, described by Hillebrand as Vallesia macrocarpa, with bright red fruit and milky juice, but listed it as Pteralyxia macrocarpa. My rangers and I run across it so frequently in both the Waianae and Koolau mountain ranges that we consider it to be almost common. Moreover, the kaulus found by Albert Judd in Waialae, on Oahu, and by Albert Duvel in Kipukai mountains, on Kauai, probably deserve elevation to the rank of distinct species.

For some reason or other, known only to Providence, our rarer and interesting native trees have been concentrated in certain
places where they form a veritable bonanza for the delight of the delving botanist. "It is in these peculiar regions," says Rock, "that the botanical collector will find more in one day collecting than in a week or two in a wet region, and may it be said that it is indeed astonishing that these various places like Puuwaawaa, North Kona, Hawaii, and Kahikinui, Maui, have been entirely neglected by the botanical collectors who have previously visited these islands."

As Makaleha and Niu were the favorite collecting places of Hillebrand, so Rock delighted in Kipuka Puaulu, in Kau, Kapua in South Kona, and Puuwaawaa in North Kona on Hawaii, and in Auahi on Maui.

No botanist can fail to be thrilled by the richness of the flora at the first named place which the tourists call "Bird Park" and where in addition to numerous native birds one may find at least 40 different species of native trees growing in rich concentration in the old, black soil of this park-like spot of 50-odd acres.

Of Auahi, seven miles from Ulupalakua on Maui, Rock says: "Unpromising as it looks from the road, this forest is botanically, nevertheless, one of the richest in the Territory." Unfortunately the pamakani (Eupatorium glandulosum) pest has spread all over this area and has made the examination of the trees there very difficult.

The botanical mines at Kapua and Puuwaawaa are comparatively small in area but their vegetative growth is very similar, though the latter is richer in species. These two places are about 50 miles apart and the intervening country is taken up by more or less uniform vegetation which has little in common with either Kapua or Puuwaawaa.

In Kapua, from the lowlands to 2,000 feet, the vegetative cover belongs to the dry or mixed forest type, and from 2,000 to 4,000 feet the vegetation is of the rain forest type. In the lower section Lania, the Hawaiian ebony, comprises 60 per cent of the stand and is associated with the wiliwili, ohe, alahee, puhala, kukui and maiapilo, the native night-blooming caper which is also found in the Taumotus and on Matia near Tahiti. Above the elevation of 1,000 feet are found the native olive with ebony still abundant and kukui, papala, the two hames, the hoawu, on the walnut-like
fruit of which the native raven used to feed, the kolca, iliahi, halapepe, kopiko, maua and an occasional ka‘uila of the Colubrina genus. Here the ulei of the rose family, a mere ground-crawling vine on Oahu, attains the dignity of a tree 15 feet high and 4 inches through. Malvaceous trees are entirely absent in Kapua, but it was here that Rock, in 1912, discovered the one female and three male Meha‘eha‘e trees.

In the upper section above 2,000 feet, about a mile above the belt road is found the ohia lehua in almost pure stands with trunks festooned with ie-ie vines. One of these trees is said to have a diameter of at least 11 feet. Here the kopiko reaches a height of 40 feet and the maua and ohe 60 feet. Naio is merely a shrub and with it are found pilo, hame, mamaki, alani, olapa and kolca. What a grand assemblage of indigenous trees!

But Puuwaawaa, the richest floral section of any in the whole Territory, according to Rock, was not really explored botanically until as recently as 1909. Its flora is similar to that of Kapua but with the addition of the malvaceous Hibiscadelphus hualalaiensis and the attractive red cotton, as well as the rubber-producing akoko, the haeae and the alani. The fragrant-flowered alahee is the most abundant with Colubrina ka‘uila, alaa, manele, ohe, wiliwili and koa. On the Puuanahulu ridge near by is the koaio, now becoming rather scarce. The Uhiuhi which Hillebrand described as a tall shrub 12 feet high, and failed to record as growing on Hawaii, is abundant here as well as in South Kona in the form of a 30-foot tree with a trunk diameter of over a foot and occurs not only as single trees intermingled with Ka‘uila but in small groves by itself.

Imagine the delight of a botanist delving for the first time in these rich botanical mines! But probably the greatest bonanza of all, fairly crammed with concentrated ore, was recently located on the east side of Makua Valley on Oahu at an elevation of 2,000 feet above sea level. On the way to this small gulch and only one-half mile off is one lone mamani whose nearest and only other neighbors on Oahu lie over the steep ridge to the south in Ohikilolo. Approaching closer to the gulch we are about to visit, there is an uhiuhi hiding behind a clump of orange trees near a mountain spring.
We now approach our precious mine snuggled against the toes of a beetling precipice and overrun by a rapidly diminishing number of wild goats which cause numerous stones to roll down the very steep slope. The easiest approach to this gulch is up the dry stream bed, but the desiccated waterfalls must be overcome by detours. Concentrated within a radius of 150 yards there may be found 42 different species of native Hawaiian trees.

The most unbelievable of all is a tall specimen of the Kalamona \((Cassia gauchicauhdui)\) which Rock omitted from his book, but which Hillebrand described as “a low shrub, 3-4 feet high, with spreading branches.” Our specimen here is an upright tree 38 feet high with a trunk diameter of over 5 inches. Near it are frosted \(kukuis\) and \(aulu\) or Oahu soapberry trees of gigantic size, their roots pouring down the rocky hillside seeking a crevice for nourishment. The common \(ohia lehua\) forms a sheltering fringe on the periphery of this interesting collection. The black-barked \(lama\) and the larger and rough-leafed Hillebrand’s ebony vie for space with the fragrant \(alake\) of the shiny leaf. In addition to the three ahakeas, \(Bobea hookeri, elatior\) and \(sandwicensis\), there is an undescribed fourth with hairy fruit which does not fit any key because it has a long peduncle, toothed calyx limb and 4 to 9 pyrene. The smooth and the hairy leafed \(hame\) rub branches with \(kopiko, maua\) and the fleshly-leafed \(kolea\). Sturdy \(olo\) and two kinds of \(hoawa\) hide one lone \(kauila\) \((Alphtonia ponderosa)\) which is a poor specimen and evidently out of its element. \(Papala\) and \(papala kepau\) keep company with the milky \(holei\) and \(ala\). Here are two good specimens of the rare mountain \(noni\) trees, their muscled trunks a foot in diameter. The heavy, compound leaves of the upland \(ohe\) balance the more delicate and lighter green of the lowland \(ohe\). A \(hao\) has started a group of thrifty youngsters in a rich soil pocket of the gulch but the wild goats have nibbled down the seedlings of the \(naio\). Numerous trees of the \(mahoe\) or native \(litchi\), of ugly foliage are laden with fruit which, upon cracking, shows a beautiful scarlet aril. The shiny leaves of a single \(aiai\) or whalebone tree, found also in Norfolk Island, glisten in the sun; there is an \(alani\) growing in the shade, and a slim \(halapepe\) lifts its feathery head above \(kalia, aalii\) and \(akia\). A few \(nioi\), known in Tahiti as Totoe, hide...
modestly near an aica, and an iliahi keeps symbiotic company with stately koas at the lower end of the gulch. A bright red fruit on the ground is the clue which leads us up the steep slope to two milky kaulu trees hidden among their neighbors. And last but not least, as if to round out this most interesting natural arboretum, are five giant mehamehame which, with the three found since in Makaha Valley, add eight to the four in Kapua which, according to Rock, were the only ones in existence, and which he named after his compatriot Dr. Wawra. Here, as in Kona, these rare giants of the Hawaiian forest are in a generally decadent condition with stag heads and hollow butts, but the thrifty sprouts are very handsome with their scaly reddish-brown bark and smooth, glaucous, phyllanthus-like leaves. The largest of the five is 60 feet high and 11.3 feet in diameter at the ground on the downhill side. Its hollow butt has afforded a shelter for wild goats, and the gulch bottom beneath is strewn with fragments of its exceedingly heavy close grained, hard and handsome brown wood. What is going to be the fate of this unique tree, and will it soon follow the extinct hau to tree heaven? The 30 seedlings which we raised from a cupful of seed gathered last fall were thrifty at first but they are gradually dying off in the nursery before we can plant them out in the field.

By this time you are tired from digging in the bonanzas described above and your ears are ringing with the Hawaiian names of trees which all sound alike. Permit me then to leave you to a quiet contemplation of why the native loulu palms hug the very crest of our mountain ranges, how the kukui with its heavy nut reached its lofty perch hundreds of feet above perpendicular palis, or how the seedless ti plant came to be so widely distributed throughout our wet forests?

PALI DRIVE.—One afternoon's motor travel over the Pali, this summer (1931), showed a total of 4,666 motor cars. Of this number, 2,098 were outward bound, and 2,568 were Honoluluward. This count was from noon to 6 p. m.
OUR LITTLE THEATRE AND DRAMA CULTURE

BY EDNA B. LAWSON

THE DIRECTOR'S CODE

"Make me to be a torch for feet that grope
Down Truth's dim trail; to bear for wistful eyes
Comfort of light; to bid great beacons blaze
And kindle altar fires of sacrifice.
Let me set souls aflame with quenchless zeal
For great endeavour,
So would I live to quicken and inspire;
So would I, thus consumed, burn out and die."

The growth of the Little Theatre movement all over the world during the past decade has been one of mushroom rapidity. The real beginning of the Little Theatre movement was Lady Gregory's visit to New York and the larger cities where she gave her repertory of Irish plays. In Detroit, approximately twenty-five or thirty years ago, was the nucleus of the Little Theatre engendered by the pioneer spirit of Sam J. Hume who later became the dramatic director at the University of California and whose name the reader will find today in any authorized book of the drama. The Provincetown Players, under the direction of Susan Glaspell and George Cram Cooke, had their origin in almost a shanty down on the river front. They worked for the love of the drama. Their place was small, bare, almost primitive; the seats were benches, but as a result, Eugene O'Neill, one of their proteges, has arisen as one of America's most noted playwrights. Today we have thirty thousand Little Theatres that are sponsored by colleges, clubs and various organizations who have realized that drama is an expression of the people for the people.

Honolulu, a city of cosmopolitan culture because to her shores are gathered people from all quarters of the globe and from every station of life, can qualify as a city of the amateur drama. The Footlights Club approaches more nearly to the Little Theatre movement and that idea will undoubtedly be reached when they attain a clubhouse of their own. The Footlights Club was organized in 1915 by seven Honolulu women, the purpose of this or-
Our Drama Culture

Organization being the study of the drama. Their first director was Mrs. F. R. Day, a former pupil and associate of Prof. P. Baker of Yale. Year by year this small group grew until now it has become a club with a membership of approximately 350. Under the guidance of various presidents whose names are among the roster of the city's most influential citizens, the Footlights Club has presented plays which have shown the superiority of the members taking part. The first public appearance of the Footlights Club was in a three-act farce entitled "The Amazons" by Alfred Sutro. Among the many plays produced have been "The Tailor-Made Man," "Hay Fever," "The Last of Mrs. Cheyney," "The Famous Mrs. Fair," "The Torch Bearers," "The Whole Town's Talking," and many others. During the past year they have presented "Arms and the Man," "The Perfect Alibi," "Enter Madame," and "The Little Clay Cart," Honolulu being the fourth city in the United States to produce the last named play.

Pa Hauoli is an ideal Little Theatre building, having recently been built by Mrs. H. M. von Holt on her own property as a means of improving the drama, also as a home for various organizations who wish to use it for performances. It is ideally situated in every respect and its architecture is quite Hawaiian as it is open-air but can be closed at pleasure. The expense of giving a performance here is minimum. The Honolulu Puppet Players, who have attained great success for their performances and the original plays written by some of their group, now make this playhouse their home. Within the last year has been organized the Theatre Guild under the direction of Arthur Wyman, formerly the technical director at the Hoboken Playhouse, sponsored by Christopher Morley. The idea of the Theatre Guild is to produce four big plays a year, one Chinese, one Japanese, one modern and one Hawaiian pageant. These plays will be chosen from the classics and acted by the races dominant in the plays. The idea at the basis of this plan is to engender and keep alive in the hearts of the young Oriental-American students the history and legends of their own countries and also to bring to life the ancient culture that might be forgotten in the busy rush of our present century. Now that stock companies are swiftly declining, and the cost of travel is high from the mainland or via Aus-
tralia, Honolulu has very little to offer in the way of stars and their companies coming to the Islands. So the community realizes that to give the best it is necessary to take of the best and make our own amusement and pleasure.

For the last two years the Wilbur Players have been holding the stage at the Liberty, a legitimate theatre, giving to the public a change of program every week of plays favored on the mainland. The manager, Mr. Richard Wilbur, instituted as a drawing attraction the guest star system which is now in favor on the coast. He presented to Honolulu May Robson, Virginia Valli and Guy Bates Post, the latter coming to us in his quarter century old success "The Masquerader."

The Royal Hawaiian Hotel built for its patrons and visitors an outdoor theatre on which was presented the drama and ceremonies of the Polynesian races. It is surrounded by palm trees, roofed only by the sky, and at night the air is perfumed by sweet-smelling jasmine and gardenia. Here Earl Schenck, who made his reputation in the Islands in his production of the Captain Cook Centennial, has staged a number of Samoan pageants. The Chinese Students Association made itself famous ten and three years ago in its productions of "The Yellow Jacket." Perhaps no other play has drawn more audiences than this spectacular production which combines history, legend, tragedy, pantomime, the make-believe of reality and the use of the ubiquitous "property man," coupled with the gorgeous costumes worn by these young people. The Japanese Students Alliance has had the same success with a number of plays, prominent among them John Masefield's "The Faithful," this year being the first production of the Theatre Guild at the University of Hawaii.

Colleges, schools and educators are learning that by the creative type of work is the young student aided in throwing off his self-consciousness, and the purpose of the drama is recreational, social and aesthetic. It is the purpose of the dramatic coach to educate the taste of the citizens of the future. It is safe to state that character forming is aided by the teaching of the drama. As used in the schools of Hawaii, it is not the purpose of the courses in drama to turn out young actors for the stage in after life, because very seldom is a genius found in that line; but the aim of
the dramatic director in the schools is to aid the individual to speak well in pronunciation and diction, to acquire poise. Drama belongs properly in the English department; so also do the courses on the projection of plays and play writing. It is the vehicle by which better English may be taught. Nearly all individuals are shy or timid in expressing themselves, and shyness, which the psychologists say is fear, can be broken by the study and production of drama. Of especial benefit is the course in drama to our young citizens of Oriental ancestry. The students attending our schools are Chinese, Japanese, Portuguese, Hawaiian, together with a sprinkling of other nationalities and all manner and sorts of mixtures. For these youths, drama is a form of expression and a means of throwing off the nervous impulsive energy of the age; also it breaks down inhibitions that have for centuries been moulded into their various makeups. For instance, the Chinese and Japanese show in their faces little or no expression because, according to the old custom, it would be very out of place and a person would "lose face" if he were to show any feeling. As a consequence their lower jaws and lips have become immobile and stiff, and we who know speech and the use of these organs realize that they should be flexible. Because of the lack of vowel tones, more so in the Japanese than in the Chinese language—as the former has only five vowel tones, and because of a wrong usage of consonant sounds like L which has almost the R manner of producing and "rice" becomes "lice"—the tip of the tongue has become immobile. For good speech, the tongue should have physical development so as to make it easy to produce certain sounds. If one notices the speech of the Oriental, he will discover that the lips are generally in a straight line and speech comes from them in stilted, strained fashion. The Portuguese slur their consonants because of the softness of their tongue; the Hawaiians have only thirteen sounds in their alphabet and soft voices, so the problems of the teacher are manifold.

Today a person's culture and education are judged by the English he uses, so it is the work of accomplishing good speech that is the task of the dramatic director. The teaching of spoken English is a tantalizingly difficult problem, as it must be approached from various angles. A thorough knowledge of the
body, its control, breathing and a keen ear trained to hear correct speech sounds should be the basis of a dramatic teacher's ability. By allowing young people to play in the land of make-believe, their energies may be nicely directed, their imagination stimulated and the English problem more easily handled. "The play's the thing . . . ." It contributes to the growth of the students participating, and the play is the tool by means of which they learn. To train young people to give an artistic production of a play seems at first a tremendous undertaking, but with the young people who are born in these islands of many nations and races, one realizes that they have within themselves keen understanding. This may be attributed to ancient tradition, and through the eyes of these young people the director may be carried back through centuries of culture and conventional living, obedience to ancestors worship, a knowledge of Oriental religions and Polynesian ways of thinking, that will in turn broaden and educate the director. Nothing along dramatic lines in the Islands can be monotonous, as there is such a wealth of material that can be gained through the meeting of the East and West.

HISTORY IN HONOLULU STREETS

HIGHWAY NAMES ARE FULL OF MEANING

As told by C. J. Lyons, in the P. C. Advertiser, March 3, 1902

The apparently outlandish names by which the majority of Honolulu streets are designated have for the older citizens a historic interest which makes every corner a reminder of the good old days of long ago. Street names in Honolulu denote events and people which for the kamaaina and Hawaiian have a peculiar interest. The man who is probably more familiar with street history than any other man in Honolulu is Prof. Curtis J. Lyons, who not only laid out a large number of the streets of the city but gave them also the names by which they are distinguished. Of late real estate promoters have not exercised the same care in laying out streets as did the surveyors of years ago,
The early streets of Honolulu were irregular and there have been many changes from the old titles," said Prof. Lyons yesterday. "Way back in the 'forties King street was known as Kawaiahao street, from the church of that name, but later both Queen and King streets were given their names by the government.

"Nuuanu was then known as 'Fid' street because of the large number of saloons which lined it, but it was changed to Nuuanu because it is a continuation of the valley of that name. Maunakea was named at that time also. Richards was named after W. M. Richards, adviser of the chiefs in the time of Kamehameha III. Alakea, named also about that time, means white, and was formerly known as White street. It goes over white coral rock for a portion of the way, and derived its name from the coral formation. Punchbowl street points towards Punchbowl, and in the 'forties it was one of the limits of the town. Beretania is the native name for British, and was so called because the British consul general had his residence on that street. The old consular residence near Punahou is one of the oldest buildings in Honolulu.

"In 1848 Surveyor Metcalf laid out the lower portion of the Plains. At that time they called that portion of Beretania, Kamehameha street, I think. I suppose the government selected the names of the streets laid out by Metcalf. Young street was named after John Young, the uncle of Queen Emma, who was her premier at that time. Alapai and Piikoi were named after native chiefs. Piikoi had a grove of coconut trees planted at his residence at the end of the street.

"Keaumoku street is named after the father of Kaahumanu, and Kinau was named about the same time, in 1848, for the mother of Kamehameha IV and V. I think it was a mistake to lay out streets without making cross streets, as was done in this district. School street led to the Royal School, and Kukui street derived its name from the grove of kukui trees which grew in the royal grounds. Emma street, of course, derived its name from the Queen. Surveyor Webster laid out that street and also Judd street, which got its name because of the location of Dr.
Judd's residence upon it. Liliha was the name of an ancient chiefess.

"Wyllie street was named for R. C. Wyllie, minister of foreign affairs under Kamehameha III.

"I laid out some of the streets in 1874. Lunalilo was named after the King, or the suburb of that name, and Pensacola from the United States war ship which carried Lunalilo to Hilo in that year. Wilder avenue was first called Stonewall street on account of the Kaahumanu wall located there, but was afterwards changed by the clerks in S. G. Wilder's office.

"The streets on the Esplanade were laid out in 1860 by Webster, but for some reason were not named until 1875 by the survey office. We didn't bother with red tape at that time, but named them without waiting for the government. Allen street was named after W. F. Allen, collector general of customs. Governor Kekuanaoa had his residence on the street which received that name, and Kilauea was the name of the steamer to the wharf of which the street led.

"Halekauwila street has quite an interesting history. There was an old temple at Kona, known as Halekauwila, which was a place of deposit for the high chiefs in olden times. It was built over two hundred years ago of kauwila wood, but about the time of the missionary period the timbers were brought to Honolulu and used in the construction of the first government house on Halekauwila street. In this building the first constitutional business was transacted. It stood on the south part of what is now the Hackfeld premises. The land commission also had its offices there. In the Punahou district some of the streets are named after the presidents of the college: Dole, Alexander and Beckwith. Bingham street is named after the elder missionary of that name. Miller is named after the British consul general, whose house adjoined the street. Pauahi was named at the time of the big fire of 1886, after the mother of Mrs. Bishop, and Kekaulike street for the sister of Queen Kapiolani at the same time. These newer streets that were named by the real estate promoters I know little about—they were just named."
BY-PRODUCTS OF THE PINEAPPLE INDUSTRY

BY D. W. MALOTT,

Vice-President, Hawaiian Pineapple Company, Ltd.

THE HISTORY of canning pineapple in the Hawaiian Islands dates from around the beginning of the present century when a small colony of homesteaders located on the Wahiawa plain, on the Island of Oahu, laid the foundation of what proved to be the first really notable success at preserving in cans the delicious flavor and aroma of the Smooth Cayenne pineapple. The names of Mr. Dole, Mr. Eames and Mr. Thomas are among the more important of these pioneer planters. The popularity of this semi-tropical fruit was almost immediate in the Mainland markets. The crop canned in 1905 totaled about sixteen hundred tons of fruit; the industry grew so rapidly that by 1915 the crop was nearly ninety thousand tons. In 1930 the tonnage canned on the Island of Oahu alone exceeded three hundred thousand tons besides that canned in a number of smaller canneries on the other islands.

In this latter period, roughly from 1915 to 1930, the converting of what was formerly a waste material into a number of important and valuable by-products has grown to be an important phase of the pineapple canning industry.

In essence the story of the utilization of by-products in the pineapple industry is similar to that in other large industries. To the infant industry the presence of a considerable amount of waste material incidental to the manufacturing process does not cause much concern. The disposal of this material is thought of as a nuisance. Later the industry expands and the volume of this waste material grows so that its disposal becomes a larger problem and a considerable expense. It is worth devoting time and thought to this problem and soon it is discovered that by investing in further equipment and research this material can be processed into something which is commercially valuable. This is done and the first by-products appear; later these first by-products
are found to contain by-products themselves and the complexity of the process and the number of valuable recoverable materials increases.

To understand the importance of this waste material to a pineapple cannery one should realize that only about 50% by weight of the whole fruit ever finds its way into the can to be sold as canned pineapple. A pineapple was not designed by nature to fit a cylindrical tin can. It is the wrong shape and it is endowed with a tough core and a thick, rough shell made up of many individual eyes which project deep into the flesh of the fruit.

Before discussing the nature of these by-products it will be necessary to explain the source of the material from which they are manufactured. In the cannery, the pineapples are first put through the Ginaca machine, which, in a series of operations cuts a cylinder of a given diameter from the inner portion of the fruit, at the same time removing the shell or skin, cutting off the ends and removing the core. After passing through this machine the cylinders of fruit are delivered to tables where such trimming is done as is necessary to remove the remaining bits of shell. It is these shells, end nubbins, cores and trimmings which constitute the 50% of the whole fruit which for lack of a better term is called "waste" and is the starting point or source of material for by-product manufacture.

In early years a number of means of disposing of this material were attempted. It was once burned in large incinerators which were fired by an oil blast. The stuff was difficult to burn, however, and the burning was expensive. Later it was hauled back to the fields and spread on the ground. The sugar in the juice, however, caused it to ferment and at best it was a poor sort of fertilizer. At other times the material was loaded onto large scows and towed a good distance out to sea and dumped. All these methods, however, were expensive and unsatisfactory.

The first step of the story of by-product utilization was to take this wet material and put it through heavy rollers, similar to those used in sugar mills. The juice was then clarified by heating and filtering and granulated sugar added to it for the preparation of syrups which went back onto the fruit in the cans. The wet pulp was then disposed of by one of the means mentioned above. This
was a great step forward. At the same time that it provided a large quantity of a naturally sweet juice as a syrup base it reduced the bulk of the wet waste enormously.

The methods of clarifying this natural juice, of neutralizing the citric acid content and of concentrating the juice to capitalize further the fruit sugar value were all later refinements to the syrup making process. Although these developments were the work of no one man the basic method is covered by a patent issued to Mr. Gould and Mr. Ash on January 1, 1916.

At a somewhat later date a method was developed for taking the wet pulp and drying it into a cattle feed known as pineapple bran. The first equipment for doing this was a converted lime kiln, but in later years a much improved dryer has been designed.

The neutralizing of the juice results in the formation of the lime salt of citric acid (calcium citrate). The decomposition of this salt into citric acid, the processing of this acid into the finished crystals and the development of a method of making alcohol from excess pineapple juice are the latest chapters in the story.

The description of the process in its various steps by which this waste material is finally converted into all these products will best serve to indicate the nature of the products as well as their relation to one another.

The waste material, that is the shell, the end nubbins, the cores, and the trimmings as they are discarded at the Ginaca machines and trimming tables are collected together on a belt conveyor which leads to the by-products mill. The first step is to put this material through a "shredder," which is essentially a rotating set of toothed discs which shreds the material into small pieces. This shredder discharges into a press which may be of the continuous screw type or the sugar mill roller type. In either case the function of the press is simply to press out the juice from the pulp. Another shredder that is somewhat similar in design to the first then shreds the pulp into still finer pieces after which it goes through a second and sometimes a third pressing. The pulp on leaving the last pressing still contains approximately 75 per cent moisture.

This pulp is then conveyed to a dryer. One of the best of these dryers, known as the "Buettner" dryer, is simply a large, rotating,
steel drum set at a slight angle from the horizontal. The wet pulp enters at one end and by means of a set of pockets set into the wall of the drum is kept falling through a hot blast of air, gradually working down to the discharge end of the drum by which time the moisture content is reduced to approximately 10 per cent. The hot blast is furnished by an oil-burning furnace which opens directly into the intake end of the dryer. The finished bran is sent through what is known as a "dry separator" which simply separates out any heavy foreign material such as nuts or bolts which might have happened to get into the process and is then bagged.

An analysis of this bran is as follows:

Moisture, 9.6%; ash, 3.2%; protein, 4.2%; fat, 1.0%; fibre, 15.4%; nitrogen-free extract, 66.6%; total, 100%.

This nitrogen-free extract has been shown, by actual determination, to be composed largely of sugars and starches. It will be noted that this bran is comparatively high in carbohydrates and low in proteins. When supplemented with high protein foods such as oil-cake meal, it has been found to be an excellent and economic feed for livestock.

Practically the entire output of the industry is being marketed within the Hawaiian Islands. As an experiment a local bakery has made cookies and muffins from a flour made from this bran. These have been declared excellent.

The raw juice as it runs from the presses contains an average of about 11% fruit sugars and 1% acid—principally citric acid. The juice is first heated to a temperature of about 185° F., then put through a filtration process whereby all the suspended matter—such as fibre, bits of shell, dirt, etc., is removed. It is then pumped into a large tank where milk of lime (calcium hydroxid) is added in an amount which is calculated to reduce the acidity of the juice down to about .1%. The addition of this lime results in the formation of an insoluble salt of citric acid called calcium citrate.

By passing the neutralized juice through filter presses, the insoluble salt is separated from the juice as a wet cake. This clarified and neutralized juice is then sometimes concentrated in large evaporators. The concentration is simply a matter of boiling off
THE ERUPTION CYCLES IN HAWAI'I

BY T. A. JAGGAR

STUDYING twenty years of local earthquakes and of lava gushing and repose on the Island of Hawaii, from 1909 to 1929, the volcano observatory finds about one important crisis a year, after averaging the observations for the three potentially active volcanoes Kilauea, Mauna Loa, and Hualalai. This is treating all three as a single volcanic system.

Kilauea rose remarkably three times between 1910 and 1912. It lowered and slept in 1913. The progress was downward after 1909. The lava levels in Halemaumau pit of Kilauea Volcano are shown as smooth curves in the accompanying diagram. The maxima are the highest risings of each year and the minima are the lowest sinkings. The Halemaumau rim is generalized as standing at 3,700 feet above sea level.

Now let us watch what happened during the next 16 years. Kilauea lava rose, and Mauna Loa broke out at the summit in 1914. Kilauea lowered and rose again, and Mauna Loa broke out in 1916. Kilauea lowered and rose again with increasing vigor, and Mauna Loa made a flow to the ocean in 1919.

Halemaumau was overflowing in 1918 and 1919. We cannot compare the diagram from 1918 to 1923 with what went before. If the pit had extended up into the air as a pipe, and so had prevented overflow, the curve would not have flattened on top. Hence the dotted lines. The flattening is marked by the years "KF," Kilauea flowing. And at the peak of the cycle both Kilauea and Mauna Loa were flowing.

After 1919 the progress is downward again as it was from 1910 to 1913. Kilauea lowered, broke out in 1920 in the Kau Desert, and then the pit lava rose again. It flooded very strenuously in 1921 and broke out in Puna twice in 1922-23. Each time the pit lowered and recovered. Then in 1924 the pit filled with an enormous lake, this sank away, Puna at the east coast cracked open, the coast line lowered and shook, and a month later came
and the resulting water-white pure solution is concentrated by evaporating in a glass-lined vacuum pan. This concentrated liquor is placed in shallow trays in the cold room and it is here that the pure citric acid crystals are formed. After remaining in the cold room for four or five days the mother liquor is drained away, the crystals are dropped into a centrifuge where they are washed with cold water and are finally placed in a long drying tray.

The crystals when dry, are graded into three sizes and packed into wooden boxes. The citric acid plant of the Hawaiian Pineapple Company at Honolulu is the first plant to manufacture citric acid from pineapple juice, although there are several instances where the acid is processed from other citrous fruit juices. By far the largest use of the acid crystals is in the compounding of certain preparations put up by wholesale druggists—principally citrate of magnesia. Soda fountains and confectioners also use large quantities of the acid.

The fresh pineapple is brimful of juice, containing over 95% moisture and sugars in solution. An immense quantity of this juice is squeezed out at the presses and only a portion of this (perhaps from 30% to 40%) is used in making the syrup; the balance is sent to the alcohol plant. The process of making alcohol is essentially that of fermenting the sugars in the juice and then distillation. A portion of this alcohol is sold as pure ethyl or grain alcohol, a portion is denatured and sold as denatured alcohol, while a smaller portion is used in the subsequent manufacture of vinegar. The carbon dioxide gas given off during fermentation is compressed into large cylinders and sold, principally to soda fountains for use in carbonated beverages.

Thus it is that the pineapple companies are able to turn into a source of revenue a great quantity of waste material the disposal of which would otherwise be a matter of considerable expense. Only one-half of the raw fruit is sold as the familiar ring-shaped slices, or juicy crushed pineapple. From the other half—the shell, the cores, the butts and the miscellaneous waste trimmings—is produced the by-products: pineapple syrup, pineapple bran, gypsum, citric acid crystals, alcohol and carbon dioxide gas.
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the great steam-blast eruption of 1924. Halemaumau collapsed, enlarged and slept. There is certainly a complete cycle between 1913 and 1924.

The lava came back in the bottom of the great pit later in 1924, and again in 1927, 1928, twice in 1929, and in 1930. Mauna Loa broke out in 1926 and Hualalai started shaking in 1929. The diagram shows Halemaumau filling more rapidly after 1928.

What can be made out of the sequence to suggest a definite cycle of accumulation and release of lava gas? Green and Wood have commented on possible periodicities of seven years, nine years, 18.6 years, 65 years, and 130 years, and Wood has also suggested a semi-annual variation, or a possible variation during a term of about 14 months. Astronomical causes have been suggested. The possibility of a 9-year period, or roughly a decade, involving both Mauna Loa and Kilauea, became more and more plain after the Hawaiian Volcano Observatory was founded. The history of a century and a quarter from the end of the 18th century to 1925 strongly suggested a long term between explosive eruptions, here recorded about 1790 and in 1924, and a maximum volume of lava flowing (1855) in the middle of the term.

When we talk about cycles it is well to have a definite idea of what we mean. We may think of the weight of the mountain bearing on one body of lava, of the weight of crust blocks of the earth bearing on a substratum of lava, and of the globe as a whole warping under the pull of the sun and moon, and this involves at least three possible units of volume to heave and sink, to be compressed and be released, and so to produce three different orders of magnitude of eruptive cycles at the same group of vents. It is thus entirely possible at the Hawaiian volcanic system, involving both Mauna Loa and Kilauea, to have a shorter cycle of puffs of the engine, so to speak, about 11 years long; and this superimposed upon a much longer cycle about 132 years long, at the end of which the engine opens its safety valve and produces a prolonged steam blast. Just this, to put the matter in round numbers, is the theory of cycles on which we are working at present, and if it is true, then the 12 episodes of 11 years each from 1792 to 1924 should approximately cover 12 similar
eruptive periods of Mauna Loa and Kilauea combined. And if the 132-year cycle is itself made up of prolonged accumulation and release, then its first half for 66 years might well be expected to show increasing lava flow with perhaps some logical geographical sequence from Kilauea to Mauna Loa, and its last half should show decreasing lava flow with a progress to lower levels from the top of Mauna Loa downward past Kilauea to the east. It is also conceivable that the quarter period of 33 years may have some significance, for it happens that 1823, 1855, and 1894 produced extraordinary crises of eruption, the first and last on Kilauea, and the middle one on Mauna Loa.

Now let us examine the individual 11-year cycles:

For the cycle 1781-1792 we know only that a lava flow in Puna east of Kilauea is reported for 1788, and that a major steam-blast eruption killing natives occurred at Kilauea about 1789-90, marking the end of one of our assumed supercycles approximately 132 years long. We thus begin a new supercycle.

The cycle 1792-1803 (end of each year named) involves report of a Puna lava flow 1793, and the very exceptional events which occurred on the west side of the island, two lava flows from Hualalai Volcano about 1800 and 1801, one at Huehue and the other at Kaupulehu.

The cycle 1803-1814 we know nothing about, except that mariners reported fume continuing at Hualalai, and it is even said that fume was seen near Molokini west of Haleakala. Kilauea was presumably piling lava into its crater.

The cycle 1814-1824 was certainly a time of construction by lava up-building in Kilauea Crater, for the early missionaries after 1823 found a black ledge around the crater not covered with the debris of 1790. Therefore this was post-1790 lava. The year 1823 produced a tremendous breakdown in Kilauea, with the Keaiwa flow into the ocean below Pahala and low crater levels for two years thereafter.

The cycle 1825-1836 was a time of great activity and rising in Kilauea, a remarkable eruption on Byron's Ledge with lava flowing into Kilauea Iki and over the cliff into Kilauea Crater in 1832, a flow for three weeks on the top of Mauna Loa the same year, and a Halemaumau breakdown followed by recovery. Here
is our first mention of Mauna Loa since 1790, and it will be seen that for 40 years the outpouring of lava had been from low levels in Kilauea and Hualalai.

The cycle 1836-1847 begins with Kilauea dull and unmentioned, then follows a rising to "terrific" effervescence there in 1840 and a breakdown with outflow far to the east in Puna, the lava reaching the sea at Nanawale. Kilauea pit recovered but slightly when Mauna Loa again took part, making a big northern flow piling a huge volume of lava in the saddle between Mauna Loa and Mauna Kea.

The cycle 1847-1858 involves the most tremendous flooding of lava which occurred in the nineteenth century. There were over 400 days of lava flow from Mauna Loa between 1851 and 1855. This was led up to by a dome forming over Halemaumau 1848, fluctuations of Kilauea activity until 1854, excessive flooding of Kilauea Crater in 1855, and lowering thereafter. Mauna Loa had outbreaks in 1849, 1851, 1852, and 1855, the last flowing for 13 months toward Hilo.

The cycle 1858-1869 is the beginning of the decline, showing 307 days of flowing lava, but is still characterized by enormous flooding from Mauna Loa. Kilauea was quiet, but Mauna Loa in 1859 made a big flow for seven months into the ocean in North Kona. Then Kilauea revived, the lava in Halemaumau rose and overflowed, the summit crater of Mauna Loa broke out for four months 1865-66, and in 1868 came a startling crisis with flows into Kilauea Iki, a world-shaking earthquake, a big breakdown of the Kilauea floor, and outflows for the first time from the southwest flank of Mauna Loa, with a small outflow southwest from Kilauea. These events were accompanied by landslips, tidal waves, and shore lowering.

The cycle 1869-1880 was distinguished by great flooding of Mokuaweoweo, the summit crater of Mauna Loa, at the very top of the volcanic system. Kilauea recovered to low levels, then Mokuaweoweo was reported active in 1871, 1872, 1873, 1874, 1875, and 1876. Kilauea came to an overflowing with great activity in 1874, broke down and recovered in 1875, fluctuated and erupted at the small pit Keanakakoi in 1877. In that year Mauna Loa produced a submarine eruption in Kealakekua Bay
on the west side of Hawaii. Then Kilauea built up crags and lakes and overflows with a collapse in 1879 followed by recovery.

The cycle 1880-1891 like the preceding produced more than 200 days of lava flowing, with Kilauea hard at work building up its floor until 1886, when it reached a crisis of breakdown. Mauna Loa in 1880-1881 produced the great flow that almost destroyed Hilo. Again in 1887 Mauna Loa had a short-lived but voluminous southern flow, Kilauea recovered and reached a breakdown in 1891.

The cycle 1891-1902 was distinguished by a great decline in numbers of flow days (only 37), yet there was activity in Mokuaweoweo in 1892 and 1896 and a northern flow from Mauna Loa in 1899. Kilauea increased its crateral activity to immense floods in 1894, when it broke down completely and remained dormant or very dull for 13 years. There is good reason to think that Kilauea had an outflow under the ocean.

The cycle 1902-1913 was marked by summit crater activity of Mauna Loa in 1903 and a flow to the southwest in 1907, only 28 flow days in all. Kilauea revived in 1905, reached very high effervescence in 1910 and 1912, and then lowered to a dormant year.

The last cycle 1913-1924 had somewhat higher flow duration, 71 days, and was the concluding cycle of the supercycle that led to the Kilauea explosive eruption of 1924. The lava pressure was marked by a steady climb of the lava in Kilauea fire pit from 1914 to 1919, and a pulsating subsidence with outflow from 1919 to 1924. Meanwhile Mauna Loa was active on the summit in 1914, and on the southwest flank with increasing floods in 1916 and 1919, but all small as compared with 1855. Kilauea exhibited increasing breakdowns until the grand crisis of 1924 when the east point of the island sank, Halemaumau exploded and probably there was submarine outflow.

There is a general similarity between curves of frequency of sunspots and of frequency of volcanic eruptions. Students of this subject who have taken the volcanic eruptions of the whole earth have published contradictory results, some finding more eruptions and some finding less eruptions for the time of sunspot maxima. Sapper found that gigantic volcanic explosions sometimes corre-
ERUPTION CYCLES IN HAWAII

spond with either high or low numbers of sunspots, but his curve shows a number of good correspondences between eruption frequency maxima and sunspot minima. For the period between 1790 and 1825, when sunspots were notably infrequent, volcanic eruptions were unusually inconspicuous. Confusion in attempting to compare statistics is bound to result if such a word as "eruption" remains undefined. To take the great lava-flooding cycle of Kilauea 1913-1924 as an example, the peak of the lava pressure was 1919 when both Mauna Loa and Kilauea were vomiting floods of slag. This was also a time near sunspot maximum of frequency. To the laymen, however, or to the ordinary geological traveler, the crisis of "eruption" was 1924 when Kilauea made tremendous steam explosions. And this was the time of sunspot minima. Which was the "eruption" of the decade for the statistician of the textbooks?

This leads us to examine critically the list of 11-year cycles for Hawaii and to ask, "What are the distinguishing features of a cycle?" Probably Mercalli in his Italian book on "Active Volcanoes," and with his many years of experience as an observer of Vesuvius, hit the nail on the head when he said that the most distinctive feature of a volcanic cycle is the short repose period at its end. And this repose is often initiated by explosion, so as to be called "eruption" popularly. It is only on volcanoes such as Vesuvius and Kilauea, where the magma is visible most of the time, that these repose periods become striking. It is only when we can see the repose period in contrast to a high pressure period that has preceded, that we recognize its existence. If the high pressure has asserted itself by intrusion under a dormant volcano, seemingly always in repose except for a sudden explosion which goes unexplained, nobody will know about it. There may be a tide of flux and flow in the underground magma which has lifted the mountain and let it down again, but nobody has measured it. The sudden explosion may be the let down, as it certainly was at Kilauea in 1924. It is clear that even for the well recorded century of Hawaiian events, the only cycles that will bear intimate analysis are the recent ones where the descriptions are full.

The first reason for adopting 11 years is that this figure exactly fits the carefully observed cycle between two times of complete
repose in 1913 and 1924 at Kilauea. The second reason for approving 11 years is by trial and error; if we apply 9, 10, 12, or 13 years as possible cycles for the events between 1790, the last great explosive eruption, and 1924, the newest one, none fits so well the division based on recorded repose periods as the number 11. The third reason for approving 11 years as a cycle is that if we divide the 134 years from 1790 to 1924 into 12 cycles, we get 11.1 years as the average for each cycle, and each group of about three cycles leads to an unusually big crisis of lava breakdown or subsidence. And a reason for taking an interest in the sunspot analogy is that 11.1 years have been found by astronomers to stand for the average interval between sunspot maxima.

If we take the cycles at Kilauea and Mauna Loa immediately preceding the 1913-1924 period, we find 1902-1913 beginning and ending with complete repose, exhibiting Mauna Loa lava first in the summit crater and four years later pouring out of the south flank, and Kilauea lava rising to repeated maxima with effervescence and then sinking away. We find 1891-1902 beginning and ending with complete repose, exhibiting Mauna Loa lava twice in the summit crater and finally pouring out of the north flank, and Kilauea lava rising to a tremendous maximum so as to break the mountain and drain off. We find 1880-1891 following a repose in 1879 and leading to one at the end, exhibiting Mauna Loa lava twice in the summit crater and then pouring out of both the north and the south flanks in discharges six years apart; Kilauea builds up its floor with one of the greatest pressures of its history and then executes a series of breakdowns. These histories accord with the 11-year cycle as a time of stress followed by a time of release, and with the conception that this cycle commonly involves both Mauna Loa and Kilauea as outlets for the same lava column. The details of sequence vary to such extent as the breakage of the island varies in yielding to the internal stress. The remarkable feature of these histories is that in spite of the incompleteness of the observations, there is such striking accord in showing two repose periods separated by an intervening high pressure period for both Mauna Loa and Kilauea.

Now when it comes to sunspots, let us keep in mind Mercalli's
ERUPTION CYCLES IN HAWAII 93

tions. Finally, if volcanic emanations on the earth are a last
remnant of solar processes here, those processes by unknown
means may be sympathetic with the sun.

Anyone who has followed attentively the indications exhibited
in these pages to the effect that 11, 66, and 132 years may rep-
resent for Hawaii important and verifiable cycles and supercycles
of "eruption," may wish to ask, "What next?" What about the
cycles that began in 1924, where do we stand now, and what is
going to happen?

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which would yield another explosive eruption about 2056. By
analogy with the nineteenth century, the greatest lava flooding
should come 66 years after 1924, or during the decades on each
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so appears to be the cycle 1924-1935 at Halemaumau. The peak
of this minor cycle should be reached during 1931-33; it has
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this coupled with the Hualalai crisis of 1929 makes the right-
hand side of our diagram a mild edition of the events of 1914-
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Loa.

HONOLULU'S RETAIL BUSINESS.—A recent official report shows
the amount of retail business in Honolulu approximates $50,000,-
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<table>
<thead>
<tr>
<th>Years</th>
<th>Event Description</th>
<th>Sunspot Maxima</th>
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<td>Kilauea and Mauna Loa flooding</td>
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<td>Two flows Mauna Loa and Kilauea rising</td>
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<td>Three flows Mauna Loa, Kilauea 1894 maximum</td>
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<td>1851-55</td>
<td>Mauna Loa maximum, Kilauea maximum</td>
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<td>Kilauea flood 1840, Mauna flood 1843</td>
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<td>1814-25</td>
<td>Kilauea flood 1823, Mauna Loa unknown</td>
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<td>1803-14</td>
<td>Unknown, but Hualalai floods 1800-01</td>
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<tr>
<td>1788-93</td>
<td>Probable Kilauea floods preceding 1790 explosions, and two flows reported in Puna</td>
<td>1787</td>
</tr>
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The sunspot maximum exhibited a very long interval between 1787 and 1804, and this was a turning point from high numbers to low numbers of sunspots for the maximum years. It was also the turning point at Kilauea for the supercycle that ended with the explosive eruption of 1790.

Referring to the low numbers of sunspots for some sunspot cycles and high numbers for others, the Humphreys curve (Sapper, Vulkankunde, page 272) shows low values 1790-1820, increasing values 1820-30, very high values 1830-80, declining values 1880-1920. The Hawaii number of flow days roughly figured from existing descriptions was very few 1790-1820, about seven 1820-30, 132 1832-43, 411 1852-55, and then for six eruptive periods from 1859 to 1923 the figures 307, 207, 247, 37, 28, and 71. In other words, the flooding of lava in Hawaii to the high maximum in the middle of the supercycle about the year 1855 corresponded to the higher maxima of sunspots in the nineteenth century.

If the reader asks why sunspots should have anything to do with volcanoes, the answer is that nobody knows. Times of maximum sunspots affect radio reception on the earth, magnetism on the earth, and auroras in the arctic regions. Sunspots are accompanied by gigantic eruptions of gas on the sun and collossal electrical phenomena in the solar system. If earth magnetism and electricity are in some way associated with gravity, volcanism may be affected. If heat by the earth's radio activity affects volcanism, the sun may in turn affect the earth's radia-
tions. Finally, if volcanic emanations on the earth are a last remnant of solar processes here, those processes by unknown means may be sympathetic with the sun.

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CHANGES IN THE KAMEHAMEHA SCHOOLS

BY FRANK E. MIDKIFF, President

THE above title is taken as it is thought advisable squarely to consider what changes have taken place in The Kamehameha Schools since the original founding thereof, and to show that these changes have been but superficial and in no way fundamental, but always evolutionary, gradual adjustments to changing conditions in the Islands. The Schools are essentially today what they were planned to be at the beginning and what the Founder, the Honorable Bernice Pauahi Bishop, had in mind they should be when she directed that her Trustees maintain these two schools for boarding and day pupils to turn out “good and industrious” men and women.

The sailing orders for the Trustees are in Mrs. Bishop’s Will, and the Trustees have adhered to these directions throughout the entire life of the Schools since 1887. The practical application of the principles as laid down in Mrs. Bishop’s Will in the first instance, was very largely determined by the original Trustees who were Mrs. Bishop’s close friends and who knew her wishes; namely, Dr. C. M. Hyde, Mr. C. R. Bishop, husband of the Princess; Mr. C. Montague Cooke, Mr. Samuel M. Damon, and Mr. W. O. Smith. Of these five, Dr. Hyde was a trained educator, and the statement of the policies of the Trustees, as expressed in the original prospectus of this group, published before the Schools were founded, was the work of Dr. Hyde. In this statement all the Trustees concurred.

The administration of the Schools, at the first, was under Rev. William B. Oleson. Mr. Oleson came from many years of experience at the Hilo Boarding School and brought with him from that school a fine experience in boarding school management and in dealing with the Hawaiian youth; he brought along with him also on that occasion, as a nucleus for the new Kamehameha Schools, nine boys well trained in the traditions of the Hilo School and excellent material with which to enthuse the other new members of Kamehameha. Among these boys were John
The early curriculum is very well described by one of the first teachers in the following paragraph:

"... which included written and mental drill in arithmetic, algebra, and geometry; language exercises in dictation, original composition, oral and written use of idioms, synonyms, business forms, orders, bills, accounts; freehand drawing and designing; mechanical drawing, including patterns, plans, projections, elevations, and details; physical geography; laws of health; source and manufacture of useful articles; machinery; strength of materials, bookkeeping; historical narratives; reading, penmanship; and moral instruction."

The work done by the girls in the first year of the Schools was similarly a combination of the practical and theoretical, being designed to enable the girls to establish fine homes throughout the Territory. At first there was but a three years course and the work as offered was very elementary in nature. In 1889 the course was expanded to cover four years and studies suitable to the advanced ability of the students were introduced. Since that time changes have been made in the curriculum, all of which changes have been planned to challenge young men and women, keeping them developing from youth up to maturity or, at any rate, up to a point where they are able to go forth from school and take their own places in the community.

These changes are illustrated by certain adjustments which we have made during the past few months for the school year 1931-32. It will be seen that the Schools are merely adjusting themselves and their program to the life of the Islands so that their graduates will fit into the demands of the Territory in this modern day. For boys we have placed agriculture on a very firm basis in the Hahaione Farm School. This school now, though a Department of the School for Boys, is a separate boarding unit where the boys receive their academic as well as theoretical and practical agricultural education while in residence on this model farm. We have introduced also a course in Marine Occupations, in which students are trained for work above deck, pointing toward mateships and officers' rank, and below deck, pointing toward engineering papers. Commercial courses have been added for boys; these courses will give sufficient theory and ample
practice to enable graduates to become placed in desirable clerical positions in the Islands. The Marine Occupations training is carried on with the Matson Navigation Company, Limited, on our Co-operative Part-Time Educational plan, as also are the commercial subjects and other special vocational courses in the School for Boys. In the School for Girls we have introduced special courses in leathercraft and bookbinding in addition to the many already established academic and practical courses there.

As greater competition and greater strain in daily life has appeared, it has been found necessary to require a higher development on the part of students and to establish a more exacting course of training for them. During this past year all standards of performance in the academic as well as the practical arts have been raised and students are required to do a better grade of work in order to prepare themselves for the demands of the life they will enter upon graduation.

Just as much of the training in the early days came through clearing off lantana and rocks and the erection of buildings for the boys, and through the manufacture of rugs and curtains and the preparation of meals for the girls, all this being tied in with the classroom work, so today Kamehameha plans to use life experiences and situations as the vehicles for learning of all sorts. With such an extensive plant and with the contacts that are established with local firms, etc., Kamehameha is in an exceptionally fortunate position to route students through a wide range of actual life experiences and to instruct the students in the arts, sciences, and skills that are naturally connected with these actual living experiences. In this way the Schools’ program seems to the student to be a part of real life and there is less waste motion in developing the student so he can do well “the things he would do anyway.”

Gradually through the years there has been an increase in the amount of responsibility placed upon the individual student and step by step students are caused actually to participate in government of themselves and fellows. This has not been a change in theory but a gradual change in practice as the students have increased in age and ability at the Schools.
Mrs. Bishop provided that a portion of the income of her estate should be expended upon orphans and others in indigent circumstances, preference being given in this line of charitable work to Hawaiians. The Supreme Court has declared that such expenditures should be made in connection with the Schools and from the beginning the Trustees have been very generous with scholarships for needy students. In the beginning, the charge for board, room, and tuition for a year was $40.00; at the present time the charge for the same items is only $50.00 for a year. Nevertheless there are many families who are unable to raise this required nominal amount and the Trustees, each year, grant scholarships to a large number of boys and girls.

All through the years there has been emphasis placed upon such important factors of the student life and growth as health, social adjustments in the home, training for a vocation and training in academic subjects; there has been a well rounded training in the ordinary crafts which men and women find not only very useful but also very stimulating and interesting. Along with such training has always gone and is being carried on at present a careful balance of supervised play, and training in music, art, and religion.

An article for this Annual would not be adequate unless some description were given of the new buildings to house the School for Girls. There have been erected seven large buildings on the Heights of Kapalama, which area constitutes a portion of the extensive campus which originally reached from the sea to the ridge of the Koolau Mountains and on the lower portion of which the early buildings were erected. These seven buildings, constructed in beautiful Mediterranean mission design of lavas stone, quarried from the campus, and reinforced concrete, are the library, the dining hall, three large dormitories, a girls' gymnasium, and a senior practice cottage; the first two named are built to serve the girls now and in later years to house both boys and girls. Furthermore, there has been installed all of the underground systems of water and sewerage, electric light, power, and telephone, and the excavating and leveling have been completed for the boys' area. A large, comfortable, winding road leads through the campus, adequate to serve the present Girls' School and the
later buildings for the boys. These buildings have been named for places and persons prominently connected with Mrs. Bishop's royal lineage, the Kamehameha family. Their names are as follows:

Dining hall, Haleakala; library, William Owen Smith Library; dormitory L, Kinau Hale; dormitory M, Kekauluohi Hale; dormitory K, Kapiolani nui Hale; girls' gymnasium, Kaahumanu Hale; senior practice cottage, Keouliolani Hale.

Possibly a little insight into the Trustees' policy for the future would be in order and would serve to show the conservative way in which they are building upon the foundation laid by Mrs. Bishop. The erection of the new plant is in Honolulu, where it is accessible to the children of the Islands but situated as it is upon the heights, it is where it has control over the situation and thus can withstand encroachments and trespass. As to the size of the school of the future, it is planned to increase the boarding students to 600 in number and not to take in to exceed 400 day students, thus making the enrollment a maximum of 1,000.

At the present time the curriculum covers the secondary grades or those usually comprised in the junior and senior high school years. It is hoped that in due time, when funds will permit, to have the elementary school from kindergarten up to and including the sixth grade. As conditions change in the Territory, new academic subjects will be introduced as needed, and special subjects, including possibly new vocational branches, will be introduced when the need occurs. At all times the original idea of providing intimate social contacts between mature, well selected, fine men and women on the teaching staff and the growing, immature boys and girls is kept carefully in mind and the buildings are so constructed now that married housemasters and their wives live with the students, eat at the tables with them, and thus furnish social contacts similar to what students would have if they were in their own homes.

The foregoing article reveals the fact that the changes that have been made at Kamehameha during the past year and ever since the Schools were founded have simply been a part of the normal evolution and growth of a well established and useful school.
A NOTABLE event in the marine history of our port marked the closing of the year 1930 at the departure, December 28, of the full-rigged ship Tusitala, of 1624 net tons, Captain James P. Barker, for New York, via the Panama Canal, with a full cargo of sugar. Many famous clipper ships in years gone by have loaded here for eastern ports and sailed away with no more ado than the singing of chanteys by the crew. Among these the records show the Young America, Sovereign of the Seas, N. B. Palmer, Dreadnaught, Kathay, Blue Jacket, and many others, in the whaling era; others of like fame in the guano trade period, as also the crack ships that formed the Eastern sugar fleet, led by the Kenilworth, a four-masted ship, in 1895, and attracted among many other notable ships, the largest American sailing vessel built, the Roanoak. But those were in the days when "white-wings" were aplenty; nowadays they are a rarity.

Apart from that fact, the annual visits of the Tusitala for some time past enhanced public interest in her, credited as about the last full-rigged ship in the American carrying trade, owned by James A. Farrell, head of the United States Steel Corporation. Furthermore, being named after the site in Samoa chosen by
Robert Louis Stevenson as his last home and resting place, his identity with Hawaii gives us a special kuleana in her, a sense of endearment, a "tie that binds." Hence, a natural impulse seemed to lend itself to the suggestion of giving her a memorable sendoff, which led in turn to including all of her crew in the farewell lei decorations, and a flotilla of sea craft and airplanes to convoy her out of the harbor in a bon voyage demonstration, as has been said, "the like of which has never before been accorded a cargo vessel."

The day opened clear and bright, and a freshening trade breeze was auspicious of an ideal start, homeward bound. Toward 9 o'clock, the time set for departure, from pier 18, a large group of Honolulu's prominent citizens for participation, with hundreds of others for observation, gathered to tender aloha to the captain and crew; the Hawaiian band was also present rendering their musical bon voyage.

Among those at the pier to bid aloha were: John Mason Young, president of the Chamber of Commerce; John M. Hamilton, its manager, and W. H. Popert of the chamber, W. R. Farrington, of the Star-Bulletin, Lieut. Chas. W Scribner, naval aide to Gov. Lawrence M. Judd, Raymond Coll, of the Advertiser, Riley H. Allen, president of the Ad Club, Chas. R. Welsh, president of the Rotary Club, and Lyman H. Bigelow, territorial superintendent of public works.

As spokesman of the occasion, the president of the Chamber of Commerce, in bidding Captain Barker a farewell and bon voyage said, that "the aloha ceremony was extended to him in behalf of the business interests of Hawaii, and as an advance greeting to the owner of the Tusitala, James A. Farrell, who is to be here for the Foreign Trade convention in 1932, and also in honor of those ancient mariners, brave souls and men good and true, who dared to overcome the seas to plant the flags of progress and civilization throughout the seven seas."

Just before the lines were cast off and the vessel was taken in tow by the tug Mikimiki, the officers and members of the Tusitala's crew were decorated with leis, and motion pictures of the event were taken under the direction of Clarke Irvine and Ray J. Baker.
The vessel once under way was accompanied to sea by a flotilla of small craft and also the coast guard cutter *Itasca* which took a large party of local citizens to watch the vessel spread her sails, with some to kodak the changing scene of a rare occasion. A submarine from Pearl Harbor was also an attendant in the farewell party, many of which found it difficult to keep up with the speeding ship as her spread of canvas increased. She presented a beautiful picture with all sails set as they bellied to the breeze, loaded so trimly, and cutting the water at a lively pace. After making several miles southerly her course was changed to head out through the Oahu and Kauai channel and she speedily disappeared from view. She had an auspicious sendoff; two days later a wireless message from her reported making good progress with a stiff and steady breeze.

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**HONORS TO THE ANNUAL AND ITS EDITOR**

**ITS HISTORIC VALUE RECOGNIZED**

**W**e are not given to self-laudation, nor to undue claim for recognition of services rendered in the performance of duty, but an event has transpired that to pass in silence would be ungrateful.

In the courteous act of the University of Hawaii, at its Commencement exercises June 1st, in designating the writer for degree honors, and to the *Honolulu Advertiser* for its recognition of the honor bestowed, it behooves the *Annual* to make acknowledgment in appreciation, and give place here for both its kindly notice of the event (which speaks for itself), and the editorial congratulation thereon which followed a few days later. To all of which we gratefully and humbly bow.

"Thomas George Thrum has been awarded an honorary degree of Master of Arts by the University of Hawaii, and has been so notified by President D. L. Crawford. The honor was bestowed in recognition of the historian's many years service to the people of
HONOR TO ANNUAL'S EDITOR

Hawaii in the preservation through his Annual of facts and events relating to the Islands.

"In conferring the degree, President Crawford paid the following tribute to the recipient:

"'Thomas George Thrum is now compiling his 58th volume of the Hawaiian Annual, which is almost an inseparable part of Hawaii. History is soon lost in a maze of vague memories fading out into legends and myths if someone does not make a permanent record of events from time to time. Mr. Thrum is one who has served this Territory well in giving us a permanent record of many events in his annual volume. More than that, he has performed invaluable service in gathering and recording historical data concerning over 500 heiaus, sacred in the memory of the Hawaiian people.

"'It is with real pleasure that this University confers now upon Thomas G. Thrum the degree of Master of Arts, in honoris causa, and admits him to all its rights, privileges, and honors.'"

"HONORS FOR THOMAS THRUM

"The degree of M. A. conferred upon Thomas G. Thrum recently by the University of Hawaii brings forward as perhaps no other event could have done the historic past of these Islands. Mr. Thrum is inseparably linked with the progress that has wrought industrial and political changes here without in any great degree disturbing the romantic elements that are keeping Hawaii in the eye of the world.

"Mr. Thrum for nearly sixty years has edited and published Thrum's Annual, in which may be found recorded the social, political, religious and esthetic items upon which the future historians must, in a large measure, found their records. He is now 89 years of age. He is still carrying on, a familiar figure in the city's activities, still possessed of energy and ability which would be admirable in many of our younger executives. His mental reactions are not of the past, but of the ever active present and the interesting future. He is a link that time has failed to tarnish or weaken. His distinctive figure with his marked characteristics may be seen almost any day about the streets. He takes part in
many community activities, and year after year the Annual appears with unfailing excellence and regularity.

“Thomas G. Thrum has learned how to grow old gracefully. The honor conferred upon him by the University, so well deserved and so modestly accepted, should be an inspiration to both old and young. His attitude toward life is a genial criticism of the suggestion that retirement is due to one who wears the crown of years. He is an epitome of the storied past, closely connected with the native life of the ancient regimes as well as of the present activities of the whole people here. He is as certain as can be of a place in the territory’s future development.”

HAWAIIAN ANTIQUITIES

CUSTOMS AT DEATH

NOTABLE TRADITIONAL BURIAL CAVES

Translated from S. M. Kamakau, Historian

ONE CUSTOM in the mourning for royalty was the suicide of chiefs and commoners at the place of the royal corpse.

Grief was indicated by nakedness, by men girding on a short malo about the loins to dangle in front. So also the women, a simple fringe in front and the body bare from top to bottom. Many shameful practices were indulged in, without being able to give a reason for such conduct, during the period of sorrow for the dead king of the land he loved. There was one exception in this mourning custom: The heir to the government, his wives and daughters and their attendants, for the heir was removed from the district while it was polluted by death. The heir to the kingdom could return only after fifteen days, when the bones had been embalmed and the decaying flesh cast into the ocean. When the purifying priest had purified it from pollution, then is the land and the habitation of the deceased cleansed.

So also with the dead of commoners: all clothing is polluted, all mats adjacent to the corpse, water gourds, calabashes, etc., of
the deceased. When the body has been taken away for burial, then all things are taken and burned in the fire together with all rubbish. Those who buried the dead body are all defiled. When the burial is over and after bathing, the first cleansing from their pollution is to sprinkle themselves with tumeric water till it is overcome, and after several days separation and the defilement overcome then they may mingle with others of the household.

On removal of the body for burial, it is not taken through the doorway of the house else the whole house be polluted, it is better to open a different passage way at the gable end for the emergence of the body, lest the house becomes an ill-omen for the death of another. If it is a new house and improper to tear an opening, a new doorway may be constructed outside of the old one, and when the corpse is removed then it is torn down. In this way the house is cleansed of the ill-omens of a corpse.

Here is something to remember of the deceased. If when a person dies and the eyes close well, and after several hours should reopen, then the relatives will know it is looking again upon those living. And if some of his people should afterward die, it would be attributed to the reopened eyes. Other such like signs are also observed.

Upon the death of a person and tears should flow after the body had been laid out, that is thought by all to be tears of affection; a discharge from the mouth of food, or other substance meant very deep affection of the deceased for the living, and such emissions would be cared for. A lock of hair, finger-nails, teeth, or other parts of the body of the beloved are preserved as pillars of regard of the dead more than the living.

Many were the modes of burial. In very ancient times interment of the dead was in a burial place, and those burial places were found on all the islands. The bodies at death were laid straight, and buried in an oblong receptacle, hollowed tree trunk or canoe. That was in the time of quietness and peace throughout the land; those were days of proper burial of the dead. In the days of wicked kings, with their betrayals and reproach, the bones of the dead in burial places were dug up for arrow heads to shoot rats with and for fish-hooks.
The bones and recent buried corpses were all dug up as attractive bait for sharks, and was the cause of excitement and anxiety in the mind of this and that family that led to seek a place of concealment for the bones of ancestors, parents, children, chiefs, and their relatives; therefore they sought deep pits of the mountains, hiding pits, hiding caves in the deep ravines, in the smooth cliffs of the koae's (boson bird) flight, there was placed the precious bones of the dearly beloved, without regard to the toil and the weight and possible death in doing so, the voice of instruction was to be obeyed. For instance: a person dies on Hawaii who has charged Lahonua, upon his death, to convey his bones to the Hakaloa cliff, on Kauai, or Napalikalakala, Nihiu. A person dies on Oahu, the charge is to Hawaii, or Maui, therefore it is best to obey.

These bequests, these hiding places, are the burial caves of ancestors, some of which are entirely lost to the eyes of man. No wizard of the night can reveal them; there within them are precious things hidden.

Oahu has one famous hidden cavern, named Pohukaina; it is in the Kanehoalani cliff between Kualoa and Kaawua, the entrance to which is thought to be in the cliff of Kaoio looking toward Kaawua. Another opening is in the Kaahuula spring. This is a royal hiding cave, with many valuables hidden within with the ancient kings. Kailikulamanu is another entrance, close below the Kaheana cave in Moanalua at Kalihi, and at Puiwa. Those are the three entrances of Pohukaina in the Kona district. At Waipahu, in Ewa, and at Kahuku, in Koolauola, are others. The edge and ridge of this hidden cavern is the Konahuanui mountain range descending at Kahuku. According to the stories of men, many people have traversed within by aid of kukui torches from Kona to emerge at Kahuku.

Within this cavern are a number of lakes, and streams of ancient origin, and in other places are broad flat lands. It is the tradition of some people that Oahu was originally a floating island, with a wide opening on the Kahuku side; that is why the opening is called Kahipo and Nawaiolewa. The place of closing was at Kahuku, and the hooks Kilou and Polou closed the end of the cave of Pohukaina.
Iao has the famous hidden cave of Maui. It is at Hapio, joining the side next to Kakae at Kalakahí. Its place of entrance is said to be in the water. A second opening is in the smooth cliff on the south side of the valleys. It is a very noted cave from ancient time, wherein are all the famous kings, those of supernatural power, men of strength, wizards and all experts belonging to the kings who practiced wizardry. Kapawa, the famous king of Waialua, Oahu, was the first of the noted kings to be interred, and Kalanikuihonoikamoku was the last king who closed the notable burial cave of Iao. Some hundred of celebrities are there interred. In the year 1736 was the last famous death. There is no man left of those who know Iao's burial cave.

Waiuli was a death pit wherein the dead bodies of commoners were thrown. It is right above Honokohau and Honolua, and from Lahaina to Kahakuloa those are the burial places. If the dead are of Molokai, or of Lanai, they too are sent there. Waiuli's death pit is large, of perhaps a mile in depth, the bottom of which reaches water. Its landmark is a hill called Waiuli (dark water), the mouth of which is broad and open, and is used by people of one place and another to throw the dead bodies of their relatives. The time of taking the corpse is at dawn, men, women, children and all beloved friends and companions traveling together in funeral procession, the body being borne in a palanquin. The ancestral spirit priest of the pit is one who offers the interceding prayer for the corpse and for the related guardian spirits to take care of those who are thrown in the death pit.

There is a tradition told of Waiuli that at the preparation of a certain father's corpse to be thrown in, all were gathered to mourn except the daughter, who was out in the lehua, the maile, and like places of wild growth. The multitude exclaimed: "A daughter without love for her parent." When the body was thrown into the pit, the daughter came running to the edge of the cliff and leaped into the bottomless pit.

A pit for the throwing in of dead bodies is that of Kaaawa, in the crater of Haleakala, it is on the top of a certain knoll within a large pit beside a hill, on the right hand side adjoining Wai-aleale and the stony land and the east corner of the gap whose length opens on Keanae.
A cavern, or death pit, perhaps a volcanic lava tube, with sea water below, of maybe a mile in depth, called by some people the water of Waio and Waipu, at Kaupo, Maui. It has its source at Kaluaokaaawa, for lack of sweetness of the water, and for some burial places above Puumaneoneo. This pit is like that of Waipu, for the throwing in of dead bodies of commoners, of Makawao, Kula and Kaupo, places to be served at noontide, for the defilers and slanderers could not obtain the bones if sought. Such were the caverns and bottomless pits, places the mischievous could not reach.

Many are the caves and pits of hiding from Hawaii to Niihau; bottomless pits, and many beloved women are hidden there, as also wonderful wizards of the ancients, and watchers to care for them. Those who charged that their remains should be taken to certain places of hiding by certain ones it would be improper for another to execute, or he would be killed with him; that was for one's very own, the father, the first born son, an elder brother, not a brother-in-law nor those of adoption, or they were liable to death. If it is the corpse of a chief being taken for hiding, the dying charge was: "Conceal you my bones." These words mean a death penalty. Only those of first relationship should conceal them; one or two only should do so. One of them would take the body secretly to preserve the other, and lay it down in the hidden cave or pit of darkness, with food, and fish, mat and other things for bodily comfort. When dead bodies are carried into the hidden cave there is no wailing, lest night watchers hear, and finding the burial place will desecrate the bones of the dead. Some are taken secretly on a canoe for a distant interment. If Honolulu is the place of death and the place of hiding is there, then the body is taken to Waikiki, thence to the plains, and return to Oloku at Honolulu here and inter it in the cave. People of the canoe saw it at Kahala, but behold it was behind here. In the morning there was loud lamentation indeed, burial had been done in secret; such were the subterfuges practiced.

Here was one practice: when the watchers fall asleep, and those in care of the dead body adroitly, by use of the watchword of the house, it will be taken by those originally charged before the approach of death. If the corpse was that of a chief, a man resem-
bling him would be killed and substituted, and the body of the chief secretly taken away, and in the morning lo and behold, a different man!

Hidden caves are very good places wherein the bodies of the dead are placed as if sleeping; mats are spread, with pillows, and well covered with kapa, not wrapped as a corpse, and the food and all things he desired in life are spread out, and the space so occupied curtained off. Such was the placement of dead bodies in the hiding caves, pits and caverns, some of which were closed with fitted stones and made secure, miles in length, requiring torches on entering.

The hidden cave where the bones of Wahieloa, a famous king of ancient time were laid, and the canoes of Laa, who went to Punalu'u, Kau, Hawaii, for the bones of Wahieloa and the notable chiefs of that voyage, with the bodies of little men stripped, their place of interment is at Papauluana, Kipahulu, Maui, a famous burial cave near to the village, though not found from early days to the present time.

The hiding cave of the bones of Paao, the famous priest who built the Mookini temple, in Kohala, who in his long life constructed fifteen up to the time of his death, is that of Puwepa, Kohala. It is said of this cave that its entrance is at the seashore and extends up into the mountain, and that people traversed it to gather the ieie vine, the pala and palai ferns.

Kailikii is another famous burial cavern. It is situated in the precipice of Molilale, in Kau, and is noted for the number of kings and high chiefs interred from ancient time. Kaloko, also at a place of that name, on Hawaii, is noted as secreting the bones of Kahekili, king of Maui, with his sister Kalola, and her daughter Kekuiapoiwa, the grandmother of Kamehameha III. There in this cave is Kamehameha I. Kameiamoku and Hoapili were the directors of his complete loss. As already stated, owing to the number of hiding caves and pits, I cannot specify the numerous hidings of the ancient people; not one smart man in a thousand is able to find them; they are blessed by the god.

Of caverns: They are some of the hiding pits of great length and depth, some of 60 and 70 feet depth, with sheer walls all around, where lighted torches are required to enter them. By
lowering ropes people were enabled to take dead bodies of men and women to their final rest. Outside of Waimea, Hawaii, is a large cavern for chiefs, and a separate one for the people. It is said that a foreigner, a Dr. Pelham, knew of this chief’s cavern which he learned of in this way: a certain chief’s man of Waimea, who was old and enfeebled, and had been struck by a pololu on top of the fold of the stomach by the ribs on the right side, where it glanced and the point broke off, to be left imbedded. When Dr. Pelham examined him for treatment for his recovery, it was decided to be a doubtful case, therefore Dr. Pelham said to him, “When you die let me have your body, and I will provide you a good coffin, thus you will be laid till the body decays and the wood will define your place of rest.”

The man consented and in the course of a few years died. The doctor went to those to whom the body belonged, but it was denied him by the daughter. He offered to buy the body but could not obtain it. This refusal he very much regretted, so he watched from a secluded spot night after night till finally, near midnight, the body was taken away secretly by its kinsfolk. Jealously Dr. Pelham followed till reaching the plain well outside of Waimea, when he distinctly saw the cavern wherein the man was placed, and the whole company descended by a rope. This he saw clearly, and noting the landmarks he went at daylight to the place he had seen, and with rope and lamp and conch shell, together with his man they lowered themselves, lit the lamp and went inside. They were astonished at the number of cloaks, helmets, capes, war implements, kahilis, mats and goods of various kinds, bewildering.

They searched around till identifying their body among the confusion, and after some six months revisited the place, finding the coffin, but the body not sufficiently decomposed for removal. After a year passed Dr. Pelham was prepared with a box to stand the body in, word having been received from Honolulu for a complete skeleton, which in due time was sent to Lahaina by way of Kailua, but mistakenly perhaps he took a body he had no right to. Lahainaluna folks may remember the human skeleton experience of 1835 or 1836. That was the skeleton from Dr. Pelham. The box had been falsely marked “Glass, handle carefully.”
Kuihelani and Amala were the ones who carried it, at night, from lower to upper Lahaina, and put it for the time being in the carpenter's shop. When the true contents became known, they were much chagrined. * * *

But Dr. Pelham was thwarted. Several days had hardly elapsed when a great fire broke forth from the Waimea cavern, raging with its black smoke for several days, licking up the goods within, and the bones of its dead. The people of Waimea and the mission families there are certain of the time of its destruction.

The precious property was desired by Dr. Pelham to exhibit in England, the land of his birth, with the view of its great value, among which were rare ancient royal articles; the famous pololus of Makakuikalani and Kanaloakuaana Puapuakea that figured on the battle field of Puoamaka, and the club of Kamalalawalu and Lonoikamakahiki, but the Doctor was greatly disappointed. And how about the skeleton taken to Lahainaluna? It too shared a like fate at the burning of the seminary some years later.

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SOMETIMES after the battle of Iao valley, Wailuku, Maui, Kamehameha returned to Hawaii from his planned raid on Oahu, and above at Waimea, Hawaii, he gave a great feast of rejoicing with his officers and soldiers. Fat pigs were baked, and lehua-eating birds of the forest, with other things of the shore, and when all things were ready a lanai was erected, in which the food was spread, and Kamehameha indulged in festivities with his weary channel-wave companions and spearmen. On the third day of his celebration a trading vessel arrived at Kawaihae. At once the shore people went on board of her, whereon they met a native Hawaiian. On his meeting with these people he asked them the news of the land, and they told him of the changes, and the feast of the king being given above at Waimea. He then said: "Mine perhaps is the food when I may reach there and
those who may accompany me, we may eat till satiated, and drink
awa till overcome, because he is my elder brother and I am his
youngest.”

When these people heard this claim they proceeded above to
Waimea and told Kamehameha of the same, and when he and
the chiefs under him, and his warriors, heard it, it caused them
to be very angry, whereupon Kamehameha asked his parents,
and princes, the chiefs, the astrologers, councillors and priests,
if this was really so, was this indeed a young brother of mine?
a chief of all the people?”

“The god grant long life to the king, till creeping feebly in
extreme old age, to infirmity,” said they, “there is no one, none
indeed beside you, O King. You, you only, and that one who is
claiming you as an elder brother and he a younger brother is a
presumptuous rebel, therefore, O King, consent that we bring
him here to bake him as a relish for the god.”

Here is Kamehameha’s order to his marshals: “Go and bring
him before me, and if he is guilty, then he dies.”

Immediately the messengers of the king went forth and found
this man on the vessel and seized him and brought him before
Kamehameha, who asked him if the haughty assertion was true,
“that I was your elder brother, and you my younger brother.”

This was the reply of the man before Kamehameha:
“In the name of the god Kalaipahoa who united this entire
group under your protection, and with your sacred kapu, O King,
long life to you, Yes, I said so.”

At that time the chiefs and the assembly became very angry,
and lighted the oven fire, and the multitude was about ready to
seize him, but in the slowness of the chief’s manner, Kamene-
meha asked him: “By whom are you related to me? Who are
our parents connecting us whereby I am an elder brother and
you a younger?”

Here is the man’s answer: “Continuous glory be thine till
extreme old age and ever after, and fortunate be your reign in
peace. Here only is my relationship to you, whereby I became
a younger brother to you, O King. In the battle at Kaawaloa I
was one there, and in the battle at Aaalaloloa, and the battle at
lao, where you exclaimed: ‘Be strong of breath, O children,’
therefore, by those words of yours, O King, 'Be strong of breath, O children,' I then became a brother of yours, that is, a young brother."

When this explanation was made in the presence of Kamehameha, very different was his demeanor and affection, he quickly leaped forward and seized the man and released him of all kapu restrictions, awa was chewed and they drank cups thereof together; he was considered by the high chiefs of the land a steward of the king, joining in all festivities. Pigs were again cooked, and birds, with poi also, and sent down with him to Kawaihæ.

I arrived with my grandfather as they were conveying the food of this man, and after pushing forward our canoe and placing it ashore, my grandfather, Kāihumua, seized the long calabash and shouldered it; above at Waimea was the goal. Therefore, through the great cunning of this man in talking he was greatly benefited, considering that it was in the time of Hawaii's darkness.

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THE ADVERTISER'S 75th ANNIVERSARY

IT IS again the pleasure and privilege of the ANNUAL to join in the community congratulations that poured in upon the Advertiser, July 2, 1931, which marked its seventy-fifth birthday. We did like duty on its fiftieth anniversary. We have traveled along time's highway another quarter century together, sharing in the progressive trend of our beloved isles; the ANNUAL as a recorder of events, but the Advertiser as promoter, advocate and staunch defender of projects for the public weal and advancement.

A 60-page anniversary edition marked its celebration of the occasion, devoted naturally to its historic changes; its first fifty years reviewed (including a facsimile of its first issue, a five-column four-page weekly), and the next more active and aggressive twenty-five years, written up by the various staff and other contributors in reminiscent vein, indicative of the paper's
identity with the progress and spirit of the age, and freely illustrated.

One section of the issue was devoted as a memorial to the late Lorrin A. Thurston, comprising twenty pages, which bore the tributes of many beyond the circle of co-laborers with him in the upbuilding of the Advertiser and its plant. It carried many illustrations of the worthy man and his famed ancestors, also incidents in his public career.

Concise tributes were from:

Governor Lawrence M. Judd, Henry Davis, Geo. R. Carter, Ed. Towse, John R. Galt, Gilbert J. Waller, Bruce Cartwright, J. Howard Ellis, Judge Antonio Perry, Dr. T. A. Jaggar, Dr. Chas. B. Cooper, W. F. Frear, Victor S. K. Houston, Jas. D. Dole, Gerrit P. Wilder, Thos. G. Thrum, John H. Soper, Dr. E. S. Goodhue, Tuitele (of Samoa), Chas. A. Rice, A. G. M. Robertson, Mrs. J. J. Swanzy, Rt. Rev. H. B. Restarick, C. P. Iaukea, E. D. Tenney, E. A. Mott-Smith, W. F. Dillingham, Alexander Hume Ford, E. P. Low, Dr. N. P. Larsen, Rev. W. D. Westervelt and Chas. Eugene Banks, followed by a commendable paper as a "Master Builder of the Advertiser, with remarkable career in law, statecraft, business and science," by Arthur A. Greene, also articles by other staff contributors, fitting memorials indicative of the high esteem in which Mr. Thurston was held, and the loss felt in his death.

Besides the regular daily issue and the memorial section was the Anniversary section proper, of twenty-four pages, representing pictorially and graphically the various changes in the paper's life history, its personnel in ownership, in editorial staff and corps of employees, in its development to the $500,000 home but last year established at Advertiser Square. Intimately related to the various activities that have transpired for Hawaii's commercial progress and advancement, interesting and important articles by authoritative writers contribute considerable valuable history that otherwise might have become lost in the business activities of the present era.

An important part of this seventy-fifth birthday celebration was the open-house evening entertainment at its home, from 7 to 11 o'clock, to which a generous invitation had been extended the
public to attend and participate in the radio broadcasting attraction of the occasion, and inspection of the various departments of this Mid-Pacific enterprise. And it was made a gala fete; floral tributes and congratulations poured in from business firms and friends, and visitors by the hundred crowded all three stories of the building, showing their interest in the event.

The Hawaiian band opened the evening program from the roof of the building, with Hawaiian airs which were carried by KGU near and far, and during the evening the 64th Coast Artillery band played in the KGU studio for entertainment and broadcasting.

Governor L. M. Judd, Mayor Fred Wright and a number of others spoke over KGU their felicitations and testified to Hawaii's benefit in being blessed above most communities with a fair press. Among other broadcasting entertainers, Henry Smith, an apprentice under H. M. Whitney, its first owner, gave a running sketch of its five changes up to his graduating to a government position in the Gibson era. Chas. S. Crane, executive vice-president of the Advertiser, spoke of its steady progress from his 34 years in growing up with it, and Raymond Coll, managing editor, voiced the gratitude of the company and of the paper's staff for the community cooperation in response to public service call. Many were the congratulatory radio messages received, proving the wide interest in the event of the day.

In Ancient Time.—Limaloa, the god of Mana, Kauai, once human, was believed to manifest himself to believers by signs in the heavens at certain seasons, to observe which, it was not an uncommon sight for groups of people in dozens or more, even from the other islands, to flock to the Mana vicinity and camp out to watch the clouds for the signs of his presence and his message thereby.
LORRIN A. THURSTON: A TRIBUTE

BY THOMAS G. THRUM

From the Memorial issue of the Advertiser, July 2, 1931

A

OTHER good strong man has been called from our midst. The ever ready advocate for the best interests in the advancement of Hawaii, and staunch supporter of all measures for its uplift and progress has gone to his reward. People in all walks of life throughout the Territory lament the death of Lorrin A. Thurston as few if any sons of the soil have been mourned, for he was a brave defender of their rights against all aggression, political, civil or commercial. He was jealous for the good name and fame of Hawaii and Hawaiians, and with voice and pen, decried in unmeasured terms the undermining influences that would rob them of the charm they held.

Others may speak of Hawaii's debt to him for his share in saving it from the turmoils of monarchial misrule, that has placed her in the enviable line of industrial and commercial progress and mutual community interests we are enjoying today. I like to think of my friend as champion of the cause, however humble its advocate, that was right in principle, as he was the foe also of all measures or steps inimical to the public weal. He was large-hearted, and gifted with broad visionary powers. His services in promotion of commerce and travel are marked by larger harbor facilities and improved highways throughout the islands. As a lover of the outdoors, his aid in Hawaii's National Park movement, the volcano and other scenic attractions, is bearing fruit for the enjoyment alike of resident and stranger within our gates. And this consideration for others, in many ways, are flowers that will bloom and fruit with passing years, to mark the paths he trod while with us.
THE Hawaii National Park, Territory of Hawaii, was created by act of Congress August 1, 1916, and placed under the control of the National Park Service of the Interior Department. It is unique in that it consists of two separate tracts of land lying on different islands. The Kilauea and Mauna Loa areas of 219 square miles, with connecting strip of land, are located on the island of Hawaii, and the Haleakala section, of 26 square miles, is on the island of Maui.

The park was created to conserve the most representative area of volcanic interest in the United States. Its craters, both active and dormant, are among the most important in the entire world and are probably the only volcanoes which can be visited with reasonable safety.

Each section of the park is named after the volcano that is its outstanding feature. The Hawaiian volcanoes are world famous and are known as the most continuously, variously, and harmlessly active volcanoes on earth. Kilauea crater has been nearly continuously active, with a lake or lakes of molten lava, for a century. Mauna Loa is the largest active volcano and mountain mass in the world, with eruptions about once a decade, and has poured out more lava during the last century than any other volcano on the globe. Haleakala, a dormant volcano, is a mountain mass 10,000 feet high, with a tremendous crater rift in its summit 5 miles across and 3,000 feet deep, containing many high lava cones.

LUXURIANT TROPICAL VEGETATION

The park is also noted for its luxuriant tropical vegetation, which forms a striking contrast to the volcanic craters and barren lava flows. Gorgeous tree ferns, sandalwood, koa or Hawaiian mahogany, vie with the flowering ohia trees in making the park forests unusually interesting to the visitor.
Kilauea Section

The most spectacular portion of the park is that including the volcano of Kilauea, usually the most active. This volcano, probably older than towering Mauna Loa, its neighbor, creates the impression of being a crater in the side of the higher mountain, although in reality it is itself a mountain with an elevation of 4,000 feet. This illusion is the result of the broad depression at its top and of its gentle slopes, caused by lava flows from many lateral vents. Within the depression is a vast pit, known as Halemaumau, the “House of Everlasting Fire,” which for years has drawn travelers from the four quarters of the earth. This inner crater often contains a boiling, bubbling mass of molten lava whose surface fluctuates from bottom to rim. Its risings are accompanied by brilliant fountains and flows of liquid lava, and its lowerings by tremendous avalanches which send up enormous dust clouds.

Common Trees and Shrubs

Animal life in Hawaii National Park is scarce, but faunal famine is more than offset by floral abundance, and the student of botany will find much to interest him from the coconut groves of the coast to the stunted ohia trees near the timber line of Mauna Loa. Bird Park, with an area of less than 60 acres, contains many extremely interesting plants and trees. Particular attention is directed to the tropical vegetation in the Fern Jungle through which the road to the volcano passes; many of the giant ferns are 40 feet high, with single fronds 25 feet long arching gracefully over the highway. By walking only a few yards back into this jungle one easily gets the impression of being back in a prehistoric era when the entire earth was covered with plants of similar appearance. Thimbleberries and ohelo berries are plentiful along Cockett's Trail and on Byron Ledge. To the amateur botanist the following list will be interesting:

Alani (Pelea clusiaeefolia).—A small tree dedicated to Pele, the goddess of volcanoes.

Hapuu, tree fern (Cibotium Chamiisoi).—Distinguished by its soft, yellow, glossy hair, or pulu.
Hapuu Ii, tree fern (Cibotium Menziesii).—The larger tree fern with stiff, long black hair on the leaf stems.

Iliahi, sandalwood (Santalum paniculatum).—Attains a height of 25 feet; thin leaves overcast with a whitish bloom.

Koa, Hawaiian mahogany (Acacia koa).—The stateliest tree in Hawaii; readily recognized by its sickle-shaped leaves and large symmetrical crown when growing in the open.

Manaki, paper mulberry (Pipturus albidus).—A small tree with rough leaves, usually with red veins and stalks.

Mamani (Sophora chrysophylla).—A sturdy tree with compound leaves belonging to the pea family; bright yellow pea-like blossoms.

Ohelo, native huckleberry (Vaccinium penduliflorum).—Small shrub with inconspicuous flowers and red and yellow berries.

Olheia, Ohia Lehua (Metrosideros collina polymorpha).—The most plentiful tree in the islands, varying greatly in size and character of its leaves. Easily identified by its brilliant scarlet pompon blossoms.

Wawaeiole, Rats Foot (Lycopodium).—An interesting low-growing fernlike plant which has taken its common name from the manner in which its leaves resemble the grouped toes of rat.

Ulule, Staghorn Fern.—A comparatively small leaf fern of vine and bush character found generally as a tangled mass.

BIRD PARK

Bird Park, a beautiful natural park also known as Kipuka Puaulu, is an interesting feature of the Kilauea area. This kipuka or oasis has escaped encircling lava flows, and its rich black soil supports a marvelous variety of vegetation. As many as 40 species of trees grow here, including the Hibiscadelphus, a unique relative of the hibiscus. This favored spot of 56 acres is the haunt of many beautiful and rare native birds.

VOLCANO OBSERVATORY

A volcano observatory is maintained at Kilauea by the Geological Survey of the Department of the Interior, and much valuable scientific data is obtained here concerning earthquakes and volcanoes. Dr. T. A. Jaggar is the volcanologist in charge.
The National Park Service operates an exhibition room and lecture system at Uwekahuna Observatory, located on the high point of Uwekahuna Bluff, where it overlooks the entire Kilauea Crater region and Kau Desert. Through the medium of lectures by a ranger naturalist, demonstration maps and charts, motion pictures, lantern slides, exhibits of volcanic rock and formations, and an actually operating seismograph the visitor is enabled to secure a comprehensive knowledge of volcanic action and its history in this particular area. These observatory buildings, together with their scientific equipment, were donated by the Hawaiian Volcano Research Association.

ROADS AND TRAILS

Twenty-five miles of highways lie within the park, one of the roads leading to the very brink of Halemaumau, the fire pit, a fact that establishes Kilauea as the most convenient and popular volcano in the world. The new Chain-of-Craters Road, 7 miles in length, passes by nine craters that lie on the great Puna rift, and will eventually be met by a new territorial road from Kalapana on the Puna coast. Bird Park, the great 1920 chasm, Cone and Pit Craters, and other important sections, although remote from the highway, may be reached by the venturesome motorist by means of auto trails.

Several interesting trails are available in the Kilauea section. One of the most interesting is known as the "World's weirdest walk," and leads from the hotel to the rim of the crater. Its first half mile winds through rich tropical vegetation; then for a mile it takes its way through fantastic lava formations, the result of the Kau flow of 1919, when Kilauea's lava overflowed. Another mile crosses the area bombarded by huge boulders and fragments of lava during the 1924 eruptions.

Other trail trips include Byron Ledge and Kilauea Iki from the hotel, Napau Crater and the sea-coast trails from the Chain-of-Craters Road. All trails are well marked, with points of interest identified.
MAUNA LOA SECTION

Not far from Kilauea is the Mauna Loa section, with its great volcano rising to an altitude of 13,675 feet. So closely connected are Mauna Loa and Kilauea that the latter appears to be a portion of the taller mountain's eastern slope. Mauna Loa is not only the second highest mountain in the islands but it is one of the world's greatest volcanoes, steadily increasing its size as volcanic outbursts every 5 or 10 years add huge masses of new lava to its bulk.

Its summit crater, Mokuaweoweo, is almost as spectacular in action as Kilauea, although entirely different. Jets of steam continually rise from its great pit, 3 miles long and 1½ miles wide.

The last great flow from Mauna Loa occurred in the spring of 1926, after a period of dormancy of seven years. The flow, which came from a rift about 5,000 feet below the summit, lasted for nearly two weeks.

KILAUEA-MAUNA LOA TRIP

From the Kilauea section to the crater of Mauna Loa and return is a distance of about 75 miles, and the trip can be made in three days, either riding or hiking. It is customary to leave the hotel at Kilauea on horseback in the morning, riding about 25 miles over the lava to a rest house set in a tiny cinder cone on Mauna Loa at the 10,000-foot elevation. The night is spent here and the next day the 25-mile walk to the top and back is made. The second night is spent at the rest house and the next day the return to Kilauea is made. On the journey the air is rare and cool, the view superb and unrestricted for miles around. Wild goats are encountered on the trip. Beautiful lava specimens, with the sparkle of gold and silver and varicolored brilliants, may be seen on the way.

HALEAKALA SECTION

The Haleakala section of the Hawaii National Park contains one of the largest extinct volcanoes in the world, within the crater of which could be placed an entire city. The crater covers an area of 19 square miles and has a circumference of 21 miles. In places it is several thousand feet deep. Inside the crater are
Hundreds of cinder cones and lava flows, and at the southeast and northwest sections of the crater wall there are low gaps out of which great rivers of lava once poured. Near each gap is a beautiful meadow with plenty of grass and mamani or sandalwood trees which furnish shade for camping parties. The play of light and shadow in the old burned-out crater as the sunlight appears and floods the depths is impressive beyond words. At sunset also the views are superb.

**Administration**

The park is administered by the Department of the Interior through the National Park Service, with a superintendent, E. P. Leavitt, in immediate charge. The administrative center is in the Kilauea section.

All complaints, suggestions, and requests for information should be addressed to the superintendent, whose post office address is Hawaii National Park, Hawaii.

**Accommodations for Visitors**

The Kilauea Volcano House Co. operates the Volcano House on the outer rim of the crater. This is a modern hotel of 100 rooms. The hotel provides steam and sulphur baths, using live steam and heat from the volcano. Arrangements may be made at the hotel for golfing, picnic or hikers’ lunches, automobiles, horseback trips in the vicinity of the crater and the 3-day trip to the summit of Mauna Loa, and motor trips around the island. A camp is also maintained by the company in the Kilauea section, consisting of cottages and a central building, about 5 miles by road to the south of the crater rim, and is operated from June 30 to September 15.

**Army and Navy Recreation Camps**

In the Kilauea section also are two recreation camps established for the use of the officers and enlisted men of the United States Army and Navy. Each year thousands of service men spend their vacation at the Kilauea Military Camp or the Navy Recreation Camp.
THREE honorary Master of Arts degrees were conferred upon citizens of Honolulu by the University of Hawaii at its twentieth annual commencement June 1, 1931, in recognition of their services to the community. The recipients of the degrees are Miss Ethel Mosely Damon, Mrs. Anna Charlotte Cooke and Mr. Thomas G. Thrum.

"Honorary degrees have been given to but few persons by this University," President Crawford told the quiet throng who had come to witness the commencement program. "Some institutions use the honorary degree as a sort of medium of trade, bartering it for some benefaction given or hoped for. The real purpose of it, however, is to recognize outstanding contributions to social advancement, as in the sciences or arts, or in education or government."

Only nine honorary degrees have been conferred by the University of Hawaii. In 1923, the Doctor of Science degree was conferred upon Mr. Frederick G. Krauss, whose life has been devoted to the betterment of local agriculture, and in 1928 it was granted to Mr. Frederick Muir, for his valuable investigations in biological science. In 1924, the Master of Science degree was conferred upon Mr. Gerrit P. Wilder, in recognition of his contributions to the botanical knowledge of the Pacific islands. At the same time, the degree of Master of Arts was conferred upon Mr. Howard Hitchcock, whose paintings of Hawaiian subjects have become a cultural asset of the Islands.

From 1928 to 1931, no honorary degrees were granted by the university.

"Ethel Mosely Damon, since her graduation from Wellesley College, has contributed much to the intellectual progress of Hawaii, immortalizing some of our historical figures and creating pageants which have pictured our island history as no book could have done," said President Crawford, in conferring the degree. Miss Damon, the grand-daughter of a minister who founded and
was for forty-two years editor of "The Friend," is the author of several books, pageants and magazine articles of both popular and historical interest. Among her writings are the "Punahou Seventy-Fifth Anniversary Pageant," "Early Hawaiian Churches and Their Manner of Building," "Father Bond of Kohala," and "Fragments of Real Missionary Life," the last written in collaboration with Miss Mary Porter. Miss Damon wrote the historical pageant and play celebrating the Hawaiian Mission Centennial in 1920.

After graduating from Punahou and the Territorial Normal School, Miss Damon attended Wellesley College, where she was granted the Bachelor of Arts degree in 1909. From 1912 to 1917 she was a member of the faculty of Punahou Academy. In 1917 she enlisted in the service of the American Red Cross and did notable work among the Belgian and French refugee children, for which she was decorated by the mayor of Le Havre and the Queen of Belgium.

In conferring the degree upon Mrs. Cooke, President Crawford remarked, "Anna Charlotte Cooke, founder and builder of and moving spirit of the Honolulu Academy of Arts, is enriching the daily lives of thousands of our people; her contribution to the education of old and young in the fine arts is far greater than perhaps she realizes."

Mrs. Cooke, whose generosity gave to Honolulu the Academy in 1927, is, by birth and marriage, a member of two of the oldest American families in Hawaii. Her parents came to Hawaii as missionaries in 1840. She was educated at Punahou Academy and Mills College, Oakland, California, and has lived to see Honolulu change from a struggling town to a city which boasts many of the cultural advantages of the larger mainland centers, a change in which she has played a conspicuous part.

"Mr. Thrum is one of those who have served this community well in giving us a permanent record of many events and he has performed an invaluable service in gathering and recording historical data concerning more than 500 heiaus, sacred to the memory of the Hawaiian people," declared the president of the university. "He is now compiling his fifty-eighth volume of Thrum's Annual, which is almost an inseparable part of Hawaii."
In addition to editing and publishing Thrum's Annual, Mr. Thrum has written a number of books on Hawaii, among which are "Ancient Hawaiian Mythology," "Hawaiian Folk Tales," "Stories of the Menehunes" the "Brownies of Hawaii." He revised and edited the "Fornander Collection of Hawaiian Antiquities" for the Bishop Museum, was an organizer of the Honolulu library and reading room in 1879 and, with J. J. Williams, launched the "Paradise of the Pacific" magazine in 1888. Coming to Honolulu from Australia in the 'fifties, finding employment as a store clerk, whaler, sugar plantation luna, stationer, publisher, research investigator and author, Mr. Thrum has been intimately associated with the development of the territory during the past fourscore years.

FLOWER SHOW

A most picturesque event occurred May 15, by the varied flower show and garden party of the Outdoor Circle, held in the spacious grounds of the Geo. R. Carter residence, Nuuanu valley. The exhibit was large and varied to include about all the flowers known to Hawaii and many others new to our soil. The party was given for the benefit of the Outdoor Circle treasury in their work for the beautification of the city, and was well attended and thoroughly enjoyed. It was given the Hawaiian air in the gowns of the ladies in attendance, the strains of the band, the lei women, and hula dancing by a bevy of school children for the entertainment of visitors, and all together proved a most picturesque and financial success.

PUBLIC LANDS VALUE.—The public lands of the Territory, estimated now at 1,590,500 acres, are valued at $113,913,758.20, divided as follows:

Cane, pineapple, rice and other agricultural lands, comprising 75,000 acres, valued at $22,500,000.
Pasture lands, 600,000 acres, valued at $9,000.
Homestead lands, 25,000 acres, valued at $625,000.
Town lots, home and business sites, valued at $1,600,000.
Fishponds, 300 acres, valued at $300,000.
Reservations, public and forest, valued at $79,870,180.00.
Waste lands, 185,782 acres, valued at $18,578.20.
NEW HAWAIIANA, 1931


"Songs of the Seven Senses," by Don Blanding, with illus. and decorations by the author, a collection of some fifty largely Hawaiian poetic inspirations," the freshness and vigor of which bid fair to surpass his other works. 12mo. 120 pages. Dodd, Mead & Co.


In the Bishop Museum Bulletin Series, 8vo. paper: "Samoa Material Culture," by Te Rangi Hiroa (P. T. Buck), 724 pages, freely illus., No. 75. A monumental work.

"Social Organization of Manua," by Margaret Mead, 218 pages, No. 76.


"History and Culture in the Society Islands," by E. S. C. Handy, 116 pages, illus., No. 79.

"Archaeology of Kauai," by W. C. Bennett, 156 pages, with maps and diagrams, and 15 plates. No. 80.

ODD EXPORTS.—An interesting item is shown in the Customs tables of 1850, that among our exports for that year was 28½ tons of hay, and 3,000 coral blocks for building. Somebody showed venturesome enterprise.
RETROSPECT FOR 1931

A LL the world is akin, the business depression felt so seriously abroad so long, has not left Hawaii unscathed, though fortunately we have not been called to share the severity prevailing in other lands, and in addition to our envied condition, commercially and financially, wage earners have not suffered, nor have our equable climate or health conditions been aught but near ideal; storms and floods and excessive heat in many sections have not prevailed here, nor have epidemics entered to claim toll.

Our fields have yielded well, but the continued low rate ruling the world's market is the key of our depression. The customs tables for 1930 show the value of sugar exports decreased by some $6,677,035, though of larger crop by nearly 8,360 tons. Hence the continued reduction or absence of dividend returns to the army of investors that naturally affect trade, causing business inactivity, mergers, curtailments, retirements, bankruptcies and general depression. Pineapple exports show a slight gain in value of $622,140, yet far under that of 1928.

Our total commerce for the year 1930 shows a value of $192,128,832, a decline of $4,082,566 from that of 1929, though not so bad as that of the preceding year. The value of all exports for the year is given as $100,915,783, and all imports are shown as $91,213,049, thus showing, as in previous years, we are yet in good financial standing, the exports exceeding imports by $9,702,734, though the decline in exports was $7,389,096, and in imports $925,020.

Shipping for Honolulu shows a decline for 1931 from the previous year of 99 vessels—steam and sail—of 358,302 tons. Hilo also shows a slight falling off, but other ports have a light gain.

Notwithstanding this condition of trade shrinkage, it is notable that bank deposits present the large gain of $3,630,868 for the year, nearly triple that of 1930, more particularly in the savings accounts, as given on page 18. This indicates caution in a
period of uncertainty as to stock investments, as also a favorable condition of the laboring classes.

**Weather**

Following the wet spell of October and November of 1930, dry weather set in to result in a far below normal rainfall till April altered the record, though unevenly, Maui and Hawaii only being favored above normal, in sections. January was the driest since 1905, and February was unusually windy. May was nearly normal in all points, a delightful month. Summer showers, though light, have been fairly distributed, while temperature has ranged higher than normal. October closed with an unusual, dry thunder storm that was not followed by rain till several hours later.

**Legislative**

The Territory's 16th legislative session was certainly a remarkable one; it made itself a record of self will, disappointment of public expectation and party pledge, that will be a death-knell to straight ticket voting hereafter. With the groaning of taxpayers at the increased burden they are called upon to bear, to which a plank of the party pledged relief, and the governor in his message urged economy, yet these were flagrantly ignored. Among its first acts—of senate and house—was to increase further the already liberal allowances to their clerks and employees; in due time Acts for circuit and district courts received generous treatment; 16 claims were awarded $3,650; three pension acts favoring 82 beneficiaries for $38,928 per annum was another generous impulse, and a general school fund bill that called for $1,190,000, for the biennial term, carried. And as a matter of spite, twelve bills were passed over the governor's veto, four of which awarded claims amounting to $25,414.32. The appropriation bill called for $8,693,733. Of this, the senate sought to increase salaries therein some $344,800. Surely they played ducks and drakes with public funds.

This session is credited as having been a hard working one with more constructive legislation than usual, but it is to be borne
in mind that a number of important acts dealt with were lay-over measures of the previous session, from special appointed committees for consideration and report, not all of which met with courteous treatment. Hence, with the appropriation bill held up in a deadlock between house and senate at the close of its 60-day period, the governor extended it for 30 days. To break the deadlock most of the house members left for their homes till the senate agreed to confer amicably on the subjects of controversy. A flag of truce was waved in course of time and the three controversial measures dealt with, and the appropriation bill put back to about its origin, whereupon the session came to an end, adjourning sine die on its 81st day.

ROYAL VISITORS

Among the many distinguished visitors during the year is to be noted that of Prince and Princess Takamatsu, of Japan, for a day (June 2) en route home from their honeymoon trip abroad. They were accorded high official honors, being welcomed by a vast fleet of airplanes and royal salutes on arrival, and bedecked with leis on landing. What with a luncheon reception at Governor Judd's, Washington Place, and the forenoon and afternoon receptions at the Japanese consulate, visit to Fort Shafter, and sightseeing, the day was made memorable in the annals of their tour.

The Maharaja of Jind, overlord of a vast portion of India's territory, and party, per Empress of Japan, June 5th was another day's visitor, en route to his Scotland estate for its sporting season.

The king and queen of Siam, and party, were here Sept. 17-18, per Empress of Canada, returning home from their tour of the States and Canada, and were accorded a demonstrative airplane welcome and sightseeing entertainment. In the evening Princess Kawananakoa gave an old time luau in their honor that won her the king's personal crest, in appreciation.

CITY BEAUTIFUL

After years of gradual improvement in the appearance of the city, largely the reward of our Outdoor Circle efforts, it is grati-
fying to learn that the movement is receiving official aid and support by sundry departments of the City and County authorities with which the Territory in its planned improvements conform. The favorable impression of Honolulu's waterfront, in marked contrast to that of many other seaports, will soon be enhanced by the laying out of the Irwin Park, all buildings and constructions in its block and vicinity being cleared and ornamentation in progress. Unkempt premises are to be put in order, and all accumulations of junk and debris must be relegated to other than city street proximity. Garbage collection, too, comes in for a modification of its objectionable features. To this end the City Planning Commission, the city fathers, and police department will strengthen the hands of the Outdoor Circle for a clean and beautiful city, not only for the admiration of visitors, but for our own enjoyment. And the edict goes forth that all public schools must take pride in beautifying their grounds.

MALOLO, SHIP OF JOY

The arrival of the Malolo, July 16th, as the "Shell Ship of Joy," with its crew of Happytimers of Captain Dobbs, alias Dobbsie, and special artists outfitted with radio equipment, to broadcast their program of joy en route, was a memorable event. There have been royal welcomes on other occasions, but nothing to approach the enthusiastic aloha greeting accorded Captain Dobbsie and his group of joy makers. The party was met off the port by a welcome committee and Mayor Fred Wright, who presented Captain Dobbs with the "Key of the City," and a bevy of fair maids decorated the party with floral leis throughout. At the dock a record breaking crowd, and music by the Hawaiian band, greeted them with unfeigned pleasure.

Upon landing, the party was escorted to the executive building where they were greeted by Governor Judd, thence to the Royal Hawaiian hotel for luncheon, at which speeches and goodwill linked the occasion memorably. A special Hawaiian entertainment of music and dance was here provided them throughout the evening, which was made notable and broadcast far and wide, for, local artists joined with the coast stars in a program of joy that was sent forth to all the world. Thus it was during their
short visit up to the time of their departure at noon on the 18th, which was likewise made a non-forgetable event.

Welcoming the President Hoover

Another notable greeting was that accorded the new Dollar liner President Hoover on her maiden voyage arrival, Sept. 3rd. She was met off port by a squadron of airplanes; welcomed by an official Aloha committee, its officers and passengers lei decorated by a bevy of Hawaiian maids as she came into port, entertained en route with music by the band. The dock was crowded with welcomers. Unfortunately the day was more liquid than sunshine. The vessel in due time was open to invitational inspection and for two hours a steady stream of visitors admired the latest and largest provision for Pacific ocean voyage comfort.

A Chamber of Commerce luncheon was tendered J. Robert Dollar, and Capt. Anderson and party at the Royal Hawaiian hotel, at which Governor Judd and Stanley Kennedy extended congratulations at this evidence of success of the Dollar enterprise.

Memorials

A memorial bench on Punchbowl, in honor of Johnnie Martin, father of the Easter Morning sunrise service idea of our city that has been observed with increasing attendance and interest for many years past, was unveiled the morning of April 4, 1931, with appropriate ceremonies, comprising brief addresses, the poetic tribute by Dr. Capp, a prayer and musical selections. A goodly attendance gathered for this honor service to the memory of the lowly man, termed "friend of the friendless."

June 20, 1931, at Hilo, the Lyman House Memorial was formally opened as a museum of relics of missionary pioneering days in the life and labors of Rev. and Mrs. David B. Lyman at this station, the gift of Mrs. S. W. Wilcox and daughters. The building (the old homestead) and grounds have been turned over to a board of trustees for a public museum, and beside family relics hold much of historic interest to keep their memories green.

With appropriate services, bronze memorial tablets marked the graves of two Hawaiian celebrities of bygone days, this past
summer, that of David Malo, at Mt. Ball, the eminent authority on Hawaiian lore and early graduate of Lahainaluna, and that of Rev. James Kekela, at Kawaiahao cemetery, a pioneer in missionary labors in the Marquesas, where his rescue of a ship’s officer from a death edict had recognition and reward by President Lincoln.

A memorial of service is that planned in the erection of a spacious dormitory for University of Hawaii students on property in its vicinity, now in progress, to the memory of the late Chas. H. Atherton. The building is of concrete, three stories in height, to accommodate 50 students, and will cost about $85,000.

**Glider Success**

A glider plane, an army product, designed by Lt. W. A. Cocke, Jr., and built by Lts. Crain and W. J. Scott, after several trial tests was successfully flown at the Kaneohe experimental grounds, July 26th, taking off at 2:34 p. m., by Lt. John C. Crain, amid fog and rain. Search lights were set to guide him during the night, as he planned to establish a record. Large crowds gathered at the Pali and vicinity to view the maneuvers, which carried through till 7:12 a. m. the next morning, after sixteen and a half hours, to the credit of all concerned.

**Lei Day**

More than ever May Day in Honolulu was overshadowed this year by the floral lei competitive exhibit as Lei Day, with its queen and courtly attendants and pageantry, as was presented at the City Hall, its patio being given over by the city fathers for the day’s celebration, sponsored as was last year’s by the Daughters of Hawaii Society. All of its features were on a more elaborate scale, the exhibit much larger from individuals, professionals, florists, societies, and schools, that occupied three sides of the patio in a bewilderment of beauty and variety, as also skill of execution, that rendered the task of judging most difficult. The Lei Queen, Princess Kapiolani, sat enthroned on the north side of the patio attended by her maids and pages, in pomp and style of ancient days.
Special music for the day, both by the band, and by four groups of singers relieved now and then by an old-time chanter, enlivened the occasion. An immense throng crowded the exhibit throughout the day.

Prizes were awarded as follows: Lunalilo school won the grand prize, $50.00, with a marigold lei.

Most beautiful lei by individuals, prize of $25.00, won by Philip Wax.

Most typically Hawaiian lei by individuals, prize of $25.00, won by Miss E. McGuire, a marigold lei.

Most original lei, individual, $25.00, won by Mrs. M. King, ti leaf and thistle.

Most beautiful lei, by lei women or men, $25.00, won by Miss R. Kailiuli, candle flower.

Most beautiful lei by florists, $25.00, won by The Rose Shop, pink roses.

Most beautiful lei by societies, etc., $25.00, won by Daughters of Hawaii, stephanotis.

School entries: Most typically Hawaiian, $15.00, won by Kaiulani school, papaia.

Most beautiful, $15.00, won by Waikiki.

Most original, $15.00, won by August Ahrens school.

Another Lei Queen crowning ceremony and pageant, in connection with a floral lei contest, was enacted at the University of Hawaii, beginning at 4 p. m., which drew a large gathering in appreciation of a delightful entertainment of pageantry, written for the occasion by Mrs. W. F. Frear, and directed by Prof. A. E. Wyman.

Many schools of the city participated in the day’s observance, notable of which was the display of their trophies at the Bishop First National Bank.

Holiday Observances

Washington’s birthday was again left to the Boy Scouts for their annual exhibit, and Memorial Day took on a new form of observance, officially, by a large parade of army and navy divisions that formed at Aala Park and marched to Thomas Square
for the patriotic exercises, Rear Admiral Yates Stirling, Jr., delivering the address. Floral tributes to the departed at the cemeteries were profuse as usual, indicating the appropriateness of this annual memorial observance.

Kamehameha Day was celebrated with the customary colorful parade of the native societies at 9 a.m. from Aala Park to the Kamehameha statue and executive grounds, for the literary exercises. Various sport events and luauas were the order of the day, and quite a Hawaiian musical program was carried out in the evening at the executive grounds.

The one time "Glorious Fourth" has been given over to sports and individual observance of the day for auto riding, or hiking into the country. There is no need for the customary patriotic literary exercises, folks that do not know the declaration of independence by this time don't deserve it, and there's no use harping on that old Boston tea party racket.

Labor-Regatta Day was wisely merged for business reasons (the former never presents anything as an excuse for being), and as the Regatta's 40th Anniversary, moved to Sept. 7th, the harbor was given over to an exciting day of boat and canoe races, comprising seven events. Highest honors were won by the Navy, with Hilo second, Myrtle third and Healani next. The canoe race, in which were three entries, was won by the Outriggers.

Armistice Day was observed with even more military impressiveness than last year, as it included the memorial ceremonies attending the unveiling, at the War Memorial, Waikiki, of the roster tablet of Hawaii's sacrificed sons.

Hillebrand Gardens

Hillebrand gardens, on Nuuanu avenue, for years past the Mary E. Foster homestead, bequeathed by her to the city and county under certain restrictions, as also $10,000 with which to put the grounds and residence in order for the purpose designated, has been accepted by the city fathers to be maintained as a public botanical garden.
Building

Building interests have not shared to much extent in the general depression. The completing of last year engagements with the new work entered upon this year, which, while of lesser value, has maintained a continuous activity in the trade that has kept our army of skilled mechanics and their attendants fairly well employed.

This year’s new projects have been confined largely to residential and government contracts, federal and territorial. Other than these, the more notable is the Austin estate building on Fort street, replacing two that stood between Hall & Son’s and the Cummings’ block; Sumitomo Bank, and Liberty Bank alterations; Halekulani Hotel at Waikiki; extensive Apartment structures opposite the Royal Hawaiian hotel; Williams’ Mortuary; new buildings adjoining St. Andrew’s Cathedral (which includes the site of the old Armstrong home), at an expenditure of $125,000; Nurses home at Queen’s Hospital, to cost $203,125; Love’s Bakery enlargement at Iwilei, costing $279,000; Experiment Station at University of Hawaii; Atherton Memorial Dormitory adjacent, to cost $85,000; Men’s Industrial Center, of Salvation Army, on Vineyard street.

Hilo also reports a year of activity in the erection of eleven new buildings at an estimated cost of $468,878, among which are the Memorial Hospital, Armory, Telephone system, Stoddard, Ltd., building, and the Hawaiian Cane Products structures.

The new Baldwin Bank at Kahului, nearing completion, attracts attention for its absence of business aspect, its pleasant surroundings, and beautiful architectural design. On Molokai, the Shingle Memorial Hospital is in progress.

Real Estate

Due partly to the general depression of business and partly to the higher tax problems, the condition of the real estate market continues lethargic. While several important transactions are recorded of sales at apparently full figures, they were for specially desirable parcels for special purposes.
Changes contemplated by the Franciscan Sisters account for the purchase of a ten-acre Manoa tract, for the erection of a home, and two prominent Nuuanu properties for early Convent change, which will release its Fort street site for business purposes.

Of outside properties, one farm land tract of some 700 acres, near the Ewa beach, has been secured by a hui from the Dowsett Estate, for subdivision, and the Kaimuki Land Co. obtains a Mokapu (Koolau) tract, with a like prospect, for $75,000, having an eye to the future.

An important recent foreclosure sale of improved, well located, business and other properties, for liens amounting to $618,000, fell short in some instances of realizing assessed values.

Public Improvements

The period under review will show much in the line of public improvement, completed or in progress. Early in the year the widening and deepening of the Kalihi channel, so long desired in the Honolulu harbor enlargement project, was entered upon. By midsummer the Kapalama basin accommodated the fruit barges with their supplies from the other islands for the local canneries.

Wharf and other harbor work, here and on the other islands, has called for an expenditure of some $797,000. Piers 13 and 14, of our waterfront, are said to be the latest and best in harbor construction work; a credit to any port.

The new road work by way of Koko Head to Waimanalo, thus circuiting the island, is drawing to a close and will open up a fine scenic drive for popular interest.

The Kalaupapa and Kalihi hospital and home project is well under way for completion early in 1932, to cost some $252,000.

Nawiliwili, Kauai's new port, is provided with a flash light of 1,280,000 candle power, one of the most powerful in the islands.

Plantation Changes

Following the merger, latter part of last year, of the Hawi and Puakea Plantations with the Kohala Sugar Co., several other changes have taken place this year, as follows:
Controlling interest in the Waianae Plantation has been secured by American Factors, Ltd., who thereby assume its agency.

Niulii Plantation and Mill, Kohala, has been purchased by its long time agents, T. H. Davies & Co., Ltd., at $55,000.00. Its merger with Union Mill Co. is in prospect.

Olowalu Plantation merged with the Pioneer Mill Co. for the sum of $400,000, and will lose its identity to the larger and older Lahaina concern.

Kahuku Plantation, Oahu, has secured on long lease all the Laie Plantation cane lands, of approximately 3,000 tons production.

**Sugar Experimentation**

The Kahuku sugar mill and factory, for the coming crop, is converted into a research laboratory for commercial experiments, by technical experts, of new theories on clarification of raw sugar juices; the production of white sugar by carbonation process, together with trials of other methods, to test out in a practical manner and scale many new ideas evolved through laboratory investigations. The step is an important one of large promise, and the first in such magnitude in any country. Thus again Hawaii is leading the world in sugar culture and manufacture.

Tests for the recovery of commercial sugar from waste molasses by the "Olivarious" process, at the Honolulu Plantation, during September, is reported to have obtained a very satisfactory result of 40 per cent gained.

**New Industry to Start**

With the opening of 1932 will begin the operations of the Hawaiian Cane Products, Ltd., factory at Hilo, for the manufacture of fiber board from the bagasse of several of Hilo's sugar plantations. All its buildings are completed and most of the machinery here and in place at this writing, the enterprise representing an outlay of $1,850,000.
BUSINESS CHANGES

Among the business changes transpiring during the year is to be noted the merger of Hall & Son, Ltd., with W. W. Dimond & Co., thus uniting interests to become virtually the Hall & Dimond concern that originated here eighty years ago.

The H. Waterhouse Trust Co. has retired, its business interests being largely taken over by the Bishop Trust Co. The Home of Linens, as also the Honolulu Music Co., have closed out their affairs; Wall & Dougherty, jewelers, are selling off their stock and retiring, as are also the Model Clothiers, Sterling Furniture Co. and a few other lesser concerns.

WORLD TOURS

Five world cruisers took in Hawaii in their schedule this year, as follows:

Red Star liner Belgenland, Capt. Wm. A. Morehouse, arrived January 10, from San Francisco via Hilo, with 340 passengers, and spent two days in port, then left for Japan.

Canadian-Pacific liner Empress of Australia, Capt. E. Griffiths, arrived March 21, from Yokohama, with some 350 passengers, a number of whom laid over for a leisurely visit. Three days were spent here, when she left for a day at Hilo en route to San Francisco.

North German liner Columbus, Capt. A. Ahrens, from Japan, arrived April 19, for a brief day's stay, en route for Hilo and San Francisco. She had 233 tourists.

Hamburg-American liner Resolute, Capt. F. Kruse, arrived from the Orient, April 30, with nearly 200 passengers for a two days' visit, then left for Hilo and the coast.

Cunard liner Franconia, Capt. R. B. Irving, arrived from the Orient May 4, with some 300 tourists. A day and a half was spent here, when she left for Hilo and Los Angeles, en route to New York.

NEW SPEED RECORDS

The Canadian-Pacific liner Empress of Canada, Capt. A. J. Hailey, inaugurating their new schedule from the Orient to Van-
couver via this port, arrived May 8, in 6 days and 11 hours from Yokohama, a new record. From Honolulu to Victoria the trip was made in 4 days 12 hours and 21 minutes, credited as being 30 hours faster than the previous record.

June 5th the Empress of Japan, of the same line, arrived here in 6 days, 9 hours and 11 minutes from Yokohama, a gain of 1 hour and 49 minutes.

Seven and one-half days from New York city to Honolulu, was the record of a party arriving by the Malolo on her January trip.

Aviation Mishaps

The largely increased aviation activities of this year has been attended by the following unfortunate events:

An A-3 attack plane from Wheeler Field, January 5, crashed at south end of Waianae range, at 10:30 a. m., in which was Lt. L. W. Strieber and Pvt. M. Stearns, both of whom were seriously injured and unconscious as they were taken from the wreck by eye-witnesses of the mishap and hurried to the hospital, but death to both soon followed.

Another plane crash occurred January 8; a torpedo plane, shortly after taking off for practice at Pearl Harbor, in which was pilot S. F. Garner and mate F. Bascom. In its fall the right wing of the plant caught on a derrick and then sank a wreck in the water. Early aid was rendered and Bascom rescued, but Garner was trapped in the cockpit, and lifeless when reached.

A privately owned plane in which were two fliers from Luke Field, was forced down in the mud flat off John Rodgers airport, January 15, through motor trouble, the plane suffering damage, but the occupants escaped injury.

Practicing in a glider at Rodgers airport, early in February, Adner G. Clarke, Jr., suffered serious injury in the crash of his machine. Though unconscious for several days he fortunately recovered.

As Lt. Geo. C. Baker, of the Wheeler Field corps was farewelling the transport Cambrai, March 21, in a pursuit plane, he failed to “come out” of a power dive and crashed into the ocean, and was drowned. His body was eventually recovered.
A Sikorsky plane with nine passengers from Kauai, through motor trouble, was forced to a gentle water landing near Pearl Harbor entrance, April 18, and was towed to Luke Field by an army tug.

Another Sikorsky plane met serious damage to a lower right wing in making a landing on Lanai May 25, and was brought home for repairs.

Two fliers from Luke Field narrowly escaped serious injury July 1, when the plane in which they were practicing crashed into a sand hill at Waimanalo and was wrecked. On 28th an army glider in practice by pilot Lt. W. A. Cooke, Jr., fell among the bush of Kaneohe without injury to the pilot; the glider not so fortunate.

A bomber in plane formation over the Waianae range, August 10, in rainy weather, got into difficulty and was falling rapidly from a 600 or more feet height when its two occupants saved themselves by aid of parachutes, one sustaining some injury. The plane fell near Kolekole and was wrecked. A few days later, in making a landing at the emergency field, Waimanalo range, an F-12c pursuit plane crashed to the ground, the flyer fortunately escaping injury; not so the plane.

September 25th an Amphibian plane came to grief near the same locality, crashing into the water and rolling over. The flier managed to get on the bottom of the craft, and was rescued by a motor boat from shore an hour later, whereupon the plane sank.

**Maritime Notes**

February 7, the Spanish four-masted brktn. naval training ship *Juan Sebastian de Elcano* arrived from Yokohama, under command of Capt. Laudio de Lanzos y Diaz, for a two days visit. This is said to be the first naval vessel of that nation to have visited here. Continuing her world cruise she left here for San Diego.

A small schnr., the *Coquet*, Capt. Geo. Waard, put in here in distress, March 6, 83 days from Hongkong, en route to Victoria, with water and provisions at low ebb. Another lone voyager, Edward Miles, of Memphis, Tenn., in his 37-foot sail boat,
Sturdy II, arrived Sept. 9, 56 days from Yokohama, on his voyage around the world, from New York, with the object of making the circuit single handed.

Young Brothers new tug Mamo, built at San Francisco, said to be the largest of her kind in the world, arrived April 8, in 10 days, 15 hours and 10 minutes from San Francisco, with two huge steel barges in tow; Capt. Wm. Purdy in command. She is a steel hull craft, costing approximately $200,000.

The O. & O. freighter Golden Cloud, en route from Sydney, arrived July 16 in tow of the navy tug Sunnaduin, sent to her aid 236 miles west of this port in response to an SOS call, as she was drifting aimlessly, through loss of her propeller.

Fires

Of the many calls upon the fire department since our last issue, the following are the more serious:

McKinley High school athletic building and contents had a Christmas eve loss, by fire, valued at $4500.

Three buildings of the Mun Lun Chinese school, and three adjoining tenement houses, were gutted by fire January 2, with loss of some $50,000, that called for the services of the entire department to prevent its wider spread.

A King street cottage, in Pawaa section, unoccupied, suffered an early morning blaze, January 10, estimated loss placed at $4000. On 13th the Kalihi station ought to save a Pearl City cottage, but recently vacated, from destruction, but the long run of 14 miles proved futile. Partly insured.

Fort Armstrong had a noon blaze, January 19, in one of the barracks buildings, at an estimated loss of $1500.

An afternoon incendiary fire, February 28, destroyed the Locey storehouse and contents, Ala Moana; loss estimated at $3500.

The home of David Thompson, Kaimuki, was destroyed by fire the afternoon of March .........., loss estimated at $4000.

A Makiki home was partially destroyed by fire, March 8, and its inmate of the time, a Chinese, was burned to death.

A fire of apparent incendiary origin, destroyed the home of
P. D. Gray, Kapiolani street, March 21, from which two sleeping children were rescued timely. Estimated loss of building and furnishings placed at $8,000.

March 30, the Kaimuki home of J. W. Asch was destroyed by fire, loss estimated at $5,000.

Schofield had a blaze June 2, badly damaging one house and its furnishings, and on 15th, Luke Field lost its 23rd Bombardment Squadron barracks, estimated at $38,000, with damage to adjacent buildings placed at $2,000. Personal losses also severe.

Fire destroyed three of a group of buildings at Pearl Harbor Sub Base, September 21, with their contents of valuable instruments, causing a loss of over $100,000.

**A Premiere Steamship**

The new S. S. Mariposa, built at the Bethlehem shipyards, Quincy, Mass., for the Matson Oceanic San Francisco-Australasia service (to be followed by sister ships Monterey and Lurline), is receiving her finishing touches at this writing, a vessel 632 feet in length, of 25,885 tons displacement, costing $8,000,000, of 20 knots speed, 9 decks and accommodations for 800 passengers. She will leave New York on her maiden voyage to San Francisco via the Panama Canal January 16, 1932, and will be due here February 8, on her South Seas-Orient cruise.

**Brevities**

The Mutual Telephone Co., after many years of careful preparation and experiment, inaugurated very successfully, on November 2, 1931, their new inter-island radio telephone system with the islands of Hawaii, Maui, and Kauai for daily service from 8 a. m. to 11 p. m.

County fairs and exhibits held as last year with unabated interest and enthusiasm, Honolulu's Local Products Exhibit giving promise of becoming an annual affair.

Honolulu's United Welfare Campaign, the last week of October, to secure $450,000 for the various benevolent agencies of the city for 1932, on completion of their task reported the sum of $534,776.89 as the result.
Two fishermen of Kailua, Hawaii, in April last, set out for the best grounds in search of big game, and in due time were rewarded, first with a 270-pound swordfish, and on second, trailing for some time, after a battle of two hours they hauled in another that weighed 490 pounds.

**NECROLOGY**

Among the "grim reaper's" toll from our midst during the year are the following well known, or early residents:

J. G. Muirhead (79); Mrs. M. E. Foster (86); John Lucas (73); Mrs. J. McCorriston (82); Mrs. L. Haley (65); Miss M. J. Woodward (80); H. Cobb-Adams (71); Mrs. G. J. Waller, S. F. (73); A. P. Taylor (58); M. H. Webb (51); W. E. Scott (56); Mrs. E. Macfarlane (78); W. H. Lewers (62); Miss E. Ladd (64); J. R. Kellett (47); C. P. McAvoy (67); Sister Mary C. Crecentia (84); Dr. H. Bicknell (55); W. H. Nichols (90); Mrs. E. Y. Mackenzie (75); Cyril O. Smith (61); J. K. P. Morelock (86); J. R. Bergstrom (55); Rev. B. T. Sheeley (85); Ira Dutton (88); P. T. Phillips (56); L. A. Thurston (73); Mrs. A. Eldredge (86); Miss M. T. Scott (68); E. W. Bull (74); Mrs. F. H. Foster (55); S. Chapman (37); Mrs. B. Newcomb, S. F. (42); Ed. Henriques (66); Mrs. D. A. Berry (56); L. C. Howland (59); Mrs. A. Guild (64); S. I. Shaw (78); Mrs. E. C. Luquiens (77); J. C. Cohen, S. F. (69); Mrs. H. J. Bushnell (42); H. R. Erdman (26); Mrs. A. F. Clark (62); E. W. Peterson (77); Mrs. M. A. Sutherland (69); L. E. Edgeworth (62); Ed. Farmer (63); Maj. J. W. Short (67); R. G. Moore (72); A. Baird (57); Mother Marie Bernadette (50); W. A. Greenwell (52); A. F. Cooke (80).

On other islands: Hilo: J. W. Russell (48); R. W. Filler (60); E. K. Lyman (60); H. V. Patten; Mrs. W. H. Shipman; N. C. Willfong (78). Maui: H. R. Duncan; Mrs. C. P. Dowsen; W. A. McKay (88). Molokai: H. R. Hitchcock (70). Kauai: C. B. Hofgaard (71).
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, 1929.)

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Manager</th>
<th>Agents</th>
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<tbody>
<tr>
<td>Apokaa Sugar Co.*</td>
<td>Ewa, Oahu</td>
<td>G. F. Renton</td>
<td>Castle &amp; Cooke, Ltd.</td>
</tr>
<tr>
<td>Ewa Plantation Co.</td>
<td>Ewa, Oahu</td>
<td>J. F. Renton</td>
<td>Castle &amp; Cooke, Ltd.</td>
</tr>
<tr>
<td>Gay &amp; Robinson*</td>
<td>Makaweli, Kauai</td>
<td>S. Robinson</td>
<td>H. Waterhouse Trust Co., Ltd.</td>
</tr>
<tr>
<td>Grove Farm*</td>
<td>Nawiliwili, Kauai</td>
<td>Edwin Broadbent</td>
<td>American Factors, Ltd.</td>
</tr>
<tr>
<td>Hawaiian Commercial &amp; Sugar Co.</td>
<td>Puunene, Maui</td>
<td>F. F. Baldwin</td>
<td>Alexander &amp; Baldwin, Ltd.</td>
</tr>
<tr>
<td>Hawaiian Sugar Co.</td>
<td>Makaweli, Kauai</td>
<td>D. E. Baldwin</td>
<td>Alexander &amp; Baldwin, Ltd.</td>
</tr>
<tr>
<td>Hilo Sugar Co.</td>
<td>Hilo, Hawaii</td>
<td>Alexr. Fraser</td>
<td>C. Brewer &amp; Co., Ltd.</td>
</tr>
<tr>
<td>Honolulu Plantation Co.</td>
<td>Halawa, Oahu</td>
<td>Alvah Scott</td>
<td>C. Brewer &amp; Co., Ltd.</td>
</tr>
<tr>
<td>Kaeleku Sugar Co.</td>
<td>Hana, Maui</td>
<td>Jos. Herrscher</td>
<td>Jos. Herrscher</td>
</tr>
<tr>
<td>Kahuku Plantation</td>
<td>Kahuku, Oahu</td>
<td>T. G. S. Walker</td>
<td>Alexander &amp; Baldwin, Ltd.</td>
</tr>
<tr>
<td>Kekaha Sugar Co.</td>
<td>Kekaha, Kauai</td>
<td>Wm. Danford</td>
<td>American Factors, Ltd.</td>
</tr>
<tr>
<td>Kipu Plantation</td>
<td>Lihue, Kauai</td>
<td>C. A. Rice</td>
<td>American Factors, Ltd.</td>
</tr>
<tr>
<td>Kohala Sugar Co.</td>
<td>Kohala, Hawaii</td>
<td>Geo. C. Watt</td>
<td>Castle &amp; Cooke, Ltd.</td>
</tr>
</tbody>
</table>
List of Sugar Plantations, Mills and Cane Growers Throughout the Islands—Continued

<table>
<thead>
<tr>
<th>Name</th>
<th>Location</th>
<th>Manager</th>
<th>Agents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Koloa Sugar Co</td>
<td>Koloa, Kauai</td>
<td>J. T. Moir, Jr</td>
<td>American Factors, Ltd.</td>
</tr>
<tr>
<td>Lihue Plantation Co</td>
<td>Lihue, Kauai</td>
<td>R. D. Moler</td>
<td>American Factors, Ltd.</td>
</tr>
<tr>
<td>Makee Sugar Co</td>
<td>Kealia, Kauai</td>
<td>H. Wolters</td>
<td>American Factors, Ltd.</td>
</tr>
<tr>
<td>Maui Agricultural Co., Ltd.</td>
<td>Paia, Maui</td>
<td>H. A. Baldwin</td>
<td>Alexander &amp; Baldwin, Ltd.</td>
</tr>
<tr>
<td>McBryde Sugar Co., Ltd.</td>
<td>Wahiawa, Kauai</td>
<td>F. A. Alexander</td>
<td>Alexander &amp; Baldwin, Ltd.</td>
</tr>
<tr>
<td>Oahu Sugar Co</td>
<td>Waipahu, Oahu</td>
<td>E. W. Greene</td>
<td>American Factors, Ltd.</td>
</tr>
<tr>
<td>Olaa Sugar Co</td>
<td>Olaa, Hawa</td>
<td>A. J. Watt</td>
<td>American Factors, Ltd.</td>
</tr>
<tr>
<td>Olowalu Co.*</td>
<td>Olowalu, Maui</td>
<td>E. Haneberg</td>
<td>American Factors, Ltd.</td>
</tr>
<tr>
<td>Onomea Sugar Co</td>
<td>Hilo, Hawaii</td>
<td>John T. Moir</td>
<td>C. Brewer &amp; Co., Ltd.</td>
</tr>
<tr>
<td>Pepeekoe Sugar Co</td>
<td>Hilo, Hawaii</td>
<td>Jas. Webster</td>
<td>C. Brewer &amp; Co., Ltd.</td>
</tr>
<tr>
<td>Pioneer Mill Co., Ltd.</td>
<td>Lahaina, Maui</td>
<td>C. E. S. Burns</td>
<td>American Factors, Ltd.</td>
</tr>
<tr>
<td>Waialua Agricultural Co., Ltd.</td>
<td>Waialua, Oahu</td>
<td>J. B. Thomson</td>
<td>Castle &amp; Cooke, Ltd.</td>
</tr>
<tr>
<td>Waianae Plantation</td>
<td>Waianae, Oahu</td>
<td>Robt. Fricke</td>
<td>American Factors, Ltd.</td>
</tr>
<tr>
<td>Wailea Milling Co.*</td>
<td>Hilo, Hawaii</td>
<td>A. S. Costa</td>
<td>Fred. L. Waldron, Ltd.</td>
</tr>
<tr>
<td>Wailuku Sugar Co</td>
<td>Wailuku, Maui</td>
<td>H. B. Penhallow</td>
<td>C. Brewer &amp; Co., Ltd.</td>
</tr>
<tr>
<td>Waimanalo Sugar Co</td>
<td>Waimanalo, Oahu</td>
<td>Geo. Chalmers, Jr.</td>
<td>C. Brewer &amp; Co., Ltd.</td>
</tr>
<tr>
<td>Waimea Sugar Mill Co</td>
<td>Waimea, Kauai</td>
<td>L. A. Faye</td>
<td>Americans Factors, Ltd.</td>
</tr>
</tbody>
</table>
HAWAIIAN SUGAR CROPS, IN TONS, 1927-1931

From Hawaiian Planters' Association Tables

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

<table>
<thead>
<tr>
<th>Islands</th>
<th>1927</th>
<th>1928</th>
<th>1929</th>
<th>1930</th>
<th>1931</th>
</tr>
</thead>
<tbody>
<tr>
<td>Production of Hawaii</td>
<td>261,971</td>
<td>299,623</td>
<td>308,132</td>
<td>290,331</td>
<td>336,760</td>
</tr>
<tr>
<td>Production of Maui</td>
<td>172,043</td>
<td>192,113</td>
<td>198,300</td>
<td>191,474</td>
<td>201,906</td>
</tr>
<tr>
<td>Production of Oahu</td>
<td>224,004</td>
<td>249,069</td>
<td>236,955</td>
<td>248,152</td>
<td>248,510</td>
</tr>
<tr>
<td>Production of Kauai</td>
<td>153,315</td>
<td>163,233</td>
<td>170,283</td>
<td>194,506</td>
<td>206,611</td>
</tr>
<tr>
<td>Grand Total</td>
<td>811,333</td>
<td>904,040</td>
<td>913,670</td>
<td>924,463</td>
<td>993,787</td>
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</tbody>
</table>

Hawaii Plantations.

<table>
<thead>
<tr>
<th>Plantation</th>
<th>1927</th>
<th>1928</th>
<th>1929</th>
<th>1930</th>
<th>1931</th>
</tr>
</thead>
<tbody>
<tr>
<td>Waiakea Mill Co.</td>
<td>11,489</td>
<td>13,550</td>
<td>14,659</td>
<td>14,280</td>
<td>18,104</td>
</tr>
<tr>
<td>Hilo Sugar Co.</td>
<td>21,839</td>
<td>25,154</td>
<td>23,046</td>
<td>26,487</td>
<td>27,878</td>
</tr>
<tr>
<td>Onomea Sugar Co.</td>
<td>23,829</td>
<td>24,927</td>
<td>28,470</td>
<td>25,146</td>
<td>29,749</td>
</tr>
<tr>
<td>Pepekeko Sugar Co.</td>
<td>12,218</td>
<td>11,917</td>
<td>18,038</td>
<td>13,988</td>
<td>12,683</td>
</tr>
<tr>
<td>Honomu Sugar Co.</td>
<td>9,556</td>
<td>10,335</td>
<td>9,334</td>
<td>10,146</td>
<td>10,683</td>
</tr>
<tr>
<td>Hakalau Plantation Co.</td>
<td>19,882</td>
<td>19,590</td>
<td>17,687</td>
<td>18,576</td>
<td>19,217</td>
</tr>
<tr>
<td>Laupahoehoe Sugar Co.</td>
<td>16,925</td>
<td>16,471</td>
<td>16,754</td>
<td>16,533</td>
<td>19,388</td>
</tr>
<tr>
<td>Kawaiwiki Sugar Co.</td>
<td>8,506</td>
<td>10,177</td>
<td>9,024</td>
<td>8,395</td>
<td>10,351</td>
</tr>
<tr>
<td>Hamakua Mill Co.</td>
<td>12,800</td>
<td>13,937</td>
<td>14,058</td>
<td>8,993</td>
<td>15,144</td>
</tr>
<tr>
<td>Paauhau S. Plant. Co.</td>
<td>11,643</td>
<td>13,545</td>
<td>12,227</td>
<td>11,197</td>
<td>13,776</td>
</tr>
<tr>
<td>Honokaa Sugar Co.</td>
<td>10,853</td>
<td>23,486</td>
<td>23,268</td>
<td>19,826</td>
<td>27,133</td>
</tr>
<tr>
<td>Pacific Sugar Mill</td>
<td>7,171</td>
<td></td>
<td>23,486</td>
<td>23,268</td>
<td></td>
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<tr>
<td>Niulii Mill and Plant.</td>
<td>2,234</td>
<td>3,664</td>
<td>3,659</td>
<td>3,602</td>
<td>3,902</td>
</tr>
<tr>
<td>Halawa Plantation</td>
<td>2,241</td>
<td>3,213</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kohala Sugar Co.</td>
<td>7,940</td>
<td>8,436</td>
<td>12,010</td>
<td>9,793</td>
<td>28,600</td>
</tr>
<tr>
<td>Union Mill Co.</td>
<td>3,517</td>
<td>5,983</td>
<td>5,326</td>
<td>4,363</td>
<td>7,505</td>
</tr>
<tr>
<td>Hawi Sugar Co.</td>
<td>6,257</td>
<td>7,567</td>
<td>7,760</td>
<td>8,458</td>
<td></td>
</tr>
<tr>
<td>Hutchinson S. Plant. Co.</td>
<td>9,262</td>
<td>12,781</td>
<td>15,728</td>
<td>13,196</td>
<td>12,832</td>
</tr>
<tr>
<td>Hawaiian Agricul. Co.</td>
<td>21,242</td>
<td>26,674</td>
<td>31,040</td>
<td>29,630</td>
<td>27,124</td>
</tr>
<tr>
<td>Puakea Plantation</td>
<td>934</td>
<td>1,546</td>
<td>1,503</td>
<td>1,281</td>
<td></td>
</tr>
<tr>
<td>Olaa Sugar Co.</td>
<td>34,382</td>
<td>40,027</td>
<td>38,299</td>
<td>39,550</td>
<td>46,686</td>
</tr>
<tr>
<td>Wailea Milling Co.</td>
<td>6,214</td>
<td>4,309</td>
<td>5,541</td>
<td>4,467</td>
<td>6,005</td>
</tr>
<tr>
<td>Homestead Pltn. Co.</td>
<td>1,537</td>
<td>2,334</td>
<td>2,427</td>
<td>2,121</td>
<td></td>
</tr>
</tbody>
</table>

| Total          | 261,971| 299,623| 308,132| 290,331| 336,760|
### HAWAIIAN SUGAR CROPS, 1927-1931—Continued

<table>
<thead>
<tr>
<th>Plantations</th>
<th>1927</th>
<th>1928</th>
<th>1929</th>
<th>1930</th>
<th>1931</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Maui</strong> Plantations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kaeleku Plantation Co.</td>
<td>5,289</td>
<td>6,007</td>
<td>6,062</td>
<td>5,352</td>
<td>5,239</td>
</tr>
<tr>
<td>Maui Agricultural Co.</td>
<td>41,920</td>
<td>45,326</td>
<td>48,503</td>
<td>46,011</td>
<td>49,253</td>
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<tr>
<td>Hawaiian Com. &amp; S. Co.</td>
<td>63,518</td>
<td>71,720</td>
<td>74,697</td>
<td>72,500</td>
<td>77,050</td>
</tr>
<tr>
<td>Wailuku Sugar Co.</td>
<td>19,988</td>
<td>22,011</td>
<td>20,947</td>
<td>18,24</td>
<td>20,356</td>
</tr>
<tr>
<td>Olowalu Co.</td>
<td>2,437</td>
<td>2,588</td>
<td>2,728</td>
<td>2,96</td>
<td>2,969</td>
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<td>Pioneer Mill Co., Ltd.</td>
<td>38,891</td>
<td>44,461</td>
<td>45,363</td>
<td>46,391</td>
<td>47,039</td>
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<td><strong>Total</strong></td>
<td>172,943</td>
<td>192,113</td>
<td>198,300</td>
<td>191,472</td>
<td>201,906</td>
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<tr>
<td><strong>Oahu</strong> Plantations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Waimanalo Sugar Co.</td>
<td>8,241</td>
<td>9,548</td>
<td>8,324</td>
<td>8,81</td>
<td>10,320</td>
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<tr>
<td>Laie Plantation</td>
<td>3,032</td>
<td>4,078</td>
<td>3,249</td>
<td>4,78</td>
<td>54,003</td>
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<tr>
<td>Kahuku Plantation Co.</td>
<td>12,447</td>
<td>12,574</td>
<td>11,386</td>
<td>14,92</td>
<td>20,073</td>
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<tr>
<td>Waialua Agricul. Co.</td>
<td>45,161</td>
<td>50,386</td>
<td>54,924</td>
<td>53,11</td>
<td>52,423</td>
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<tr>
<td>Waimanoe Co.</td>
<td>5,014</td>
<td>5,709</td>
<td>5,965</td>
<td>7,20</td>
<td>6,773</td>
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<tr>
<td>Ewa Plantation Co.</td>
<td>50,518</td>
<td>54,369</td>
<td>50,806</td>
<td>52,15</td>
<td>54,003</td>
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<td>Apokaa Sugar Co.</td>
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<td>1,091</td>
<td>1,355</td>
<td>1,01</td>
<td>1,307</td>
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<tr>
<td>Oahu Sugar Co.</td>
<td>65,417</td>
<td>74,643</td>
<td>70,136</td>
<td>72,87</td>
<td>72,993</td>
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<tr>
<td>Honolulu Plantation Co.</td>
<td>32,671</td>
<td>36,552</td>
<td>30,810</td>
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<td>30,618</td>
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<tr>
<td>Hawaiian Pineapple Co.</td>
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<td>119</td>
<td>70</td>
<td>119</td>
<td></td>
</tr>
<tr>
<td>California Packing Co.</td>
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<td>222</td>
<td>222</td>
<td>222</td>
<td>222</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>224,004</td>
<td>249,069</td>
<td>236,955</td>
<td>248,152</td>
<td>248,510</td>
</tr>
<tr>
<td><strong>Kauai</strong> Plantations.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Kiluea S. Plant. Co.</td>
<td>6,712</td>
<td>6,634</td>
<td>6,801</td>
<td>7,430</td>
<td>8,132</td>
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<tr>
<td>Makee Sugar Co.</td>
<td>19,008</td>
<td>22,190</td>
<td>20,707</td>
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<td>23,568</td>
</tr>
<tr>
<td>Lihue Plantation Co.</td>
<td>20,781</td>
<td>28,354</td>
<td>29,391</td>
<td>36,501</td>
<td>37,079</td>
</tr>
<tr>
<td>Grove Farm Plantation</td>
<td>6,067</td>
<td>5,949</td>
<td>6,079</td>
<td>7,64</td>
<td>8,241</td>
</tr>
<tr>
<td>Koloa Sugar Co.</td>
<td>11,812</td>
<td>13,381</td>
<td>13,123</td>
<td>16,91</td>
<td>17,256</td>
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<tr>
<td>McBryde Sugar Co.</td>
<td>16,457</td>
<td>20,120</td>
<td>20,073</td>
<td>22,192</td>
<td>24,694</td>
</tr>
<tr>
<td>Hawaiian Sugar Co.</td>
<td>25,990</td>
<td>26,878</td>
<td>30,349</td>
<td>31,81</td>
<td>34,010</td>
</tr>
<tr>
<td>Gay &amp; Robinson</td>
<td>4,260</td>
<td>4,642</td>
<td>5,031</td>
<td>5,24</td>
<td>5,175</td>
</tr>
<tr>
<td>Waimea Sugar Mill Co.</td>
<td>2,632</td>
<td>3,066</td>
<td>2,827</td>
<td>3,172</td>
<td>3,281</td>
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<tr>
<td>Kekaha Sugar Co.</td>
<td>28,710</td>
<td>29,770</td>
<td>33,503</td>
<td>35,75</td>
<td>42,603</td>
</tr>
<tr>
<td>Kipu Plantation</td>
<td>1,886</td>
<td>2,243</td>
<td>2,397</td>
<td>2,62</td>
<td>2,572</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>153,315</td>
<td>163,235</td>
<td>170,283</td>
<td>194,506</td>
<td>206,611</td>
</tr>
</tbody>
</table>
TERRITORIAL REGISTER AND DIRECTORY
FOR 1932
CORRECTED TO DECEMBER 1, 1931

TERRITORIAL OFFICIALS.

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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
Thos. Treadway.......... Auditor
Robt. D. King............ Surveyor
Geo. T. Brown............ Pres. Board of Agriculture and Forestry
John C. Lane............. High Sheriff
Florence F. Thomas...... Secretary to the Governor

V. S. Houston.........Delegate to Congress

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Sr., Robert Hind, W. K. Kauau
Maui—G. P. Cooke, A. P. Low, H. W.
Rice
Oahu—P. H. II Brown, C. H. Cooke, W.
H. Heen, J. K. Jarrett, R. W. Shingle,
Jos. L. Sylva.

Representatives.
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W. J. Kimi, Evan da Silva, P. K. Aono,
G. K. Kawaha, J. R. Smith
Maui—J. W. Cameron, W. H. Engle, M.
K. Makekan, Samuel A. Sniffen, M. G.
Pascohol, H. P. Robinson, Jr.
Oahu—E. H. Beebe, H. T. Mills, Ray J.
O'Brien, J. H. Werrall, E. B. Laws,
Roy A. Vitonek, A. K. Akana, Nolle
R. Smith, R. N. Mossman, A. M. Yama-
shira, W. K. Isaacs, Jr.
Kauai—C. Gomes, A. Q. Marcellino, F.
W. Wichman.

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Col. W. A. Andersen......

Asst. Adjutant General
Capt. Earl R. McGhee.... Quartermaster
Capt. Joseph J. deVille....Chief Clerk
Capt. James T. M. Chang....Personnel
Capt. Hamilton Merrill ......Training
Capt. Francis Xavier ..........Supply
Hazel R. Samson......... Stenographer

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Chief Justice............ Antonio Perry
Associate Justice....... James J. Banks
Associate Justice....... Chas. F. Parsons

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

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Assistant Clerk Supreme Court.

Clerk, First Circuit.
Chief Clerk and Cashier

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First Asst. Chief Clerk Sibyl Davis
2nd Asst. Chief Clerk D. K. Sherwood
3rd Asst. Chief Clerk J. Lee Kawai
Asst. Cashier and Bookkeeper Hilda Smith
Asst. Cashier & Bookkeeper

Veteran Court.

1st Judge

H. A. Wilder, Anne R. Whitmore
2nd Judge

Lawrence R. Holt, Dorothy M. Feder
3rd Judge

M. M. Wond, A. Cummings

Clerks

A. V. Hogan, Ellen D. Smythe

Court Reporters

J. L. Horner, H. K. Jordan, G. D. Bell,
Wm. S. Chillingworth

Typist and Indexer

Chas. K. Buchanan
Messenger and Bailiff

H. Ewing Tann

Clerk, 2nd Circuit

Manuel Aue

Clerk, 3rd Circuit, Kauai.

Thomas C. White

Clerk, 4th Circuit, Hawaii

A. K. Aono

Clerk, 5th Circuit, Kauai

J. C. Cullen

Land Court

A. E. Steadman

Judge

Registrar

P. H. Mulholland

Assistant Registrar

W. Akana

Court Interpreters.

Hawaiian

J. H. Hakuole

Japanese

Filipino

Alfred O'Campo

District Magistrates.

Oahu.

Harry Steiner, F. M. Brooks

Honolulu

Ferdinand Schnack, Second Judge

Honolulu

H. E. M. Crabbe

Geo. K. Kekauoha

Wm. K. Rathburn

Koolaupoko

P. W. Carter

Wai'anae

Henry H. Wahiawa

P. D. Kellett

Ko'olaupoko
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First Depty. Atty General: Harold T. Kay
Second Depty. Atty. General:

third Depty. Atty General: C. N. Tavares
Stenographers:
Flora Stevens, Marion Cochrane
Chief Clerk and Steno: Aileen Jarrett
Office Clerk: Antone Manuel

**BOARD OF PRISON DIRECTORS**

Oahu—L. J. Warren, Chairman; Mrs. Bernice D. Spitz, James B. Mann, E. W. Carden, P. S. Pratt.

**PRISON INSPECTORS**

Maui—A. D. Furtado, M. F. Calmes, H. H. Holt.

**TREASURY DEPARTMENT.**

Treasurer: E. S. Smith Registrar Public Accounts: Henry A. Nye

Howard Adams
Dep. Bank Examiner: Henry A. Ach
Assts. Dep't Bank Ex:

George Theurer, J. D. Reid,
F. H. A. Smith, Alex. Perkins, T. Lyons
Clerks: Stephen Ka·
hoopii, R. Lee, A. D. Morton.
Stenographers:

Mrs. Alex. Perkins, Lillian Mark·
ham, Louis Wills
Dep. Fire Marshal: E. P. Fogarty

**BUREAU OF CONVEYANCES.**

Registrar of Conveyances: Carl Wikander
Deputy Registrar: Geo. C. Kopa
Chief Clerk: W. T. Lee Kawai

**ASSESSORS AND COLLECTIONS.**

First Division.

Harold C. Hill: Assessor
P. J. Jarrett: Deputy, 1st Division

E. J. Souza, A. K. Aka, Deputy, Earl
W. Fase: Waihula and Wahiawa
D. H. Kinoshita

Koolau and Koolaupoko

**Bureau of Income Tax, Honolulu.**

Henry Glass: Assessor
G. Norrie, E. K Woodward: Field Deputies
F. L. W. Patterson: Island deputy
J. I. Nishikawa: Japanese deputy
C. C. Quon: Chinese deputy

---

**DEPARTMENT OF SECRETARY.**

Secretary to Governor: L. M. Judd
Secretary to Secretary: Mrs. F. F. Thomas
Stenographer: Eleanor Prendergast
Clerk: Carl M. Machado
Aide: Lieut. Col. W. R. Dunham
Aide: Major R. A. Osmun

---

**DEPARTMENT OF GOVERNOR.**

Governor: L. M. Judd
Secretary to Governor: Mrs. F. F. Thomas
Stenographer: Eleanor Prendergast
Clerk: Carl M. Machado
Aide: Lieut.-Col. W. R. Dunham
Aide: Major R. A. Osmun

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**FOREIGN REPRESENTATIVES.**

Belgium—Consul: Victor H. Lappe
Brazil—Consul: Antonio D. Castro
Chile—Consul: J. W. Waldron
China—Consul: K. C. Mai
Cuba—Consul: Dr. Luis R. Gaspar
Denmark—Consul General: C. Hedemann
Spain—Consul: Prof. J. O. Pecker
Great Britain—Acting Consul:

W. J. Denies
Japan—Consul General: Y. Iwate
Latvia—Consul: Max H. Linder
The Netherlands—Consul:

A. C. Mackintosh
Norway—Consul: S. Schoenberg
Panama—Consul: F. P. Kaonola
Peru—Acting Consul: Antonio D. Castro
Portugal—Consul General:

Julio Brandao Paes
Portugal at Wailuku—Consul: J. A. M. Osorio
Portugal at Wailuku—Vice Consul: Enos Vincent

Russia—Vice Consul: Valter

---

**REGISTER AND DIRECTORY**

Maui:
C. C. Conradt: Wailuku
Antonio Garcia: Second Judge, Wailuku
Jack P. Kano: Makawao
Duncan B. Murdock: Makawao
G. K. Kunuk, Second Judge, Makawao
John W. Kawakoa: Hana
Edward McConnell: Nalolo
C. S. Nascimento: Kalawao
A. W. Carlson: Lanai

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

Kauai:
C. K. Holokahi: Lihue
J. S. Chandler: Koloa
Wm. P. Aaron: Hanalei
James K. Burgess, J. W. Waima
Joe Carreira: Kawaihau
H. van Giese: Second Judge, Kawaihau

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**DIRECTORY**

DEPARTMENT OF GOVERNOR.

Secretary to Governor: L. M. Judd
Secretary to Secretary to Governor: Mrs. F. F. Thomas
Stenographer: Eleanor Prendergast
Clerk: Carl M. Machado
Aide: Lieut.-Col. W. R. Dunham
Aide: Major R. A. Osmun

DEPARTMENT OF SECRETARY.

Secretary: Raymond C. Brown
Chief Clerk: Henry Paia
Stenographer: Mary C. Meek

---

ASSESSORS AND COLLECTIONS.

First Division.

Harold C. Hill: Assessor
P. J. Jarrett: Deputy, 1st Division

E. J. Souza, A. K. Aka, Deputy, Earl
W. Fase: Waihula and Wahiawa
D. H. Kinoshita

Koolau and Koolaupoko

Bureau of Income Tax, Honolulu.

Henry Glass: Assessor
G. Norrie, E. K Woodward: Field Deputies
F. L. W. Patterson: Island deputy
J. I. Nishikawa: Japanese deputy
C. C. Quon: Chinese deputy

---
Second Division, Maui.

J. H. Kunewa, Assessor
W. E. Cockett, M. C. Ross, H. Yangi, deputies
W. A. Almeda (deputy) Lahaina
F. H. Foster, Molokai
Yuta K. Mar, Makawao, Jr.
J. A. Medeiros (deputy) Hana

Assisting Harbor Master, Honolulu
Capt. F. J. Untermann

Third Division, Hawaii.

O. A. Pickerill, Assessor
E. K. Kaia, North Hilo
W. J. Stone (deputy) South Hilo
H. J. Lyman (deputy) Puna
Robert Wilhelm (deputy) Kaua
W. D. Ackerman (deputy) Kona
Julian R. Yates (deputy) S. Kona
J. K. Netley (deputy) Hamakua
Samuel P. Woods (deputy) Kohala
S. Parker (deputy) Kohala
E. M. Desha (deputy) Hilo

Fourth Division, Kauai.

J. M. Lydgate, Assessor
W. K. Wainalea (deputy) Koloa
W. O. Crowell (deputy) Niilau and Waimae
Wm. Mahikea (deputy) Kawaihau
L. A. Walamau (deputy) Lihue
W. F. Hanalei (deputy) Hanalei
S. Yamane, Clerk Waimae
Ed Kanoho, Clerk Niilau and Waimae

AUDITING DEPARTMENT

Auditor, J. W. Treadway, Deputy Auditor, J. W. Vannatta
Chief Accountant, Alexander May
Statistician and Accountant, L. Y. K. Fong

Assistant Accountant John Bal, Stewart Ah Nin, A. G.
Patten, Paul Thurston, Jas. Ah Chong
Clerks, Jones (chief), David Kamakahi, L. K.
Luna, Benjamin Kong, Mrs. E. Asam
Snographers, Mrs. T. Kahanu, Miss M. Patten
Field Auditor, Albert F. Lee

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John R. Gaif, Chairman; J. C. Walker, Herman V. von Holt

BANKING COMMISSION

A. Lewis, Jr., Chairman; C. G. Heiser

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Asst. Superintendent, B. F. Rush
Snographer, Mrs. Anna K. H. Vannatta
Bookkeeper, Sol. K. Kane
Clerk, Mary Prendergast

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Members, Earle Thacker, C. W.
Scribner, S. M. Lowrey, James Winne
Chief Clerk, H. N. Browne
Snographer, Mrs. P. Widemann

Acting Harbor Master, Honolulu, Capt. F. J. Untermann

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Herbert E. Newton, Deputy Surveyor
Chief Asst., E. W. Hockley
Asst. Surveyors, Thos. J. K. Evans, Jas. M.
Dunn, F. H., Kanehele, Chas. Murray
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Miss M. T. Kelly, Chief Clerk

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G. W. Ross, Asst. Supt. of Forestry
W. W. Holt, Forest Nurseryman
L. W. Bryan, Asst. Forester, Hawaii
Wm. Crosby, Asst. Forester, Maui
A. W. Duval, Asst. Forester, Kauai

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D. T. Fullaway, Entomologist

Division of Plant Inspection.

L. A. Whitney, Asst. Plant Inspector
Q. E. Cheek, Chief Termite Inspector
Robert Pahau, Fruit and Plant Inspector, Hilo, Hawaii
Louis Gillin, Fruit and Plant Inspector, Kahului, Maui

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L. C. Koss, Asst. Veterinarian
B. A. Gilchrist, Asst. Veterinarian
Dr. J. C. Fitzgerald, Asst. Veterinarian

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I. H. Wilson, J. Tavares, H. Kanae
G. T. Tenny, J. N. Perez, Asst. Wardens, Oahu
G. T. Tenny, J. N. Perez, Asst. Wardens, Maui
E. K. Montgomery, Asst. Warden, Maui
R. E. Israel, Asst. Warden, Kauai

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Hoolehua ........................................... W. J. Richardson
South Kona ...........................................
A. K. Halli, E. K. Kauaa, L. P. Lincoln
South Kohala ........................................
........................................ J. S. Lemon, J. K. Kanehaku
Sau .................................................... A. J. Wil-
jamson, A. M. Desha, Thos. E. Cook
Kau ..................................................... Geo. Campbell, J. T. Nakai
North Kohala .......................................
........................................ E. K. Kanehaku, W. S. May
Puna ................................................... H. J. Lyman, G. D. Supa
Makawao ............................................. J. G. Freitas, Robt. von Tempsky
Molokai ................................................ Sol.
Fuller, Samuel G. Wight, Jas. G. Munro
Koloa ................................................. J. I. Silva
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Kawaihau ............................................. George S. Raymond

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O. K. Stillman ....................................... Asst. Treasurer
Rachel Sullivan, A. S. Grinnell, Geo.
Awa ...................................................... Sol.
Beers, Caroline Doyle, Rosamond Fernandez, Bernard Aka-
na, K. Ching, Ching .... Clerks
Sub-agents.
South 

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Wm. Wong, Clerks, Hawaiian
Antone Garcia ...........................................
Maui
C. Abrams .............................................. Kauai

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Max H. Carson ........................................ Chief Hydrographer and Engineer
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ell, Albert L. Hough, Herbert C. Shipman .... Members

Hawaiian Homes Commission.

Gov. L. M. Judd, chairman; J. F. Wool-
ley, exec. secretary; Mrs. J. Frank
Woods, Akaiko Akana, James W.
Dwright.

J. Jorgensen .......................................... Engineer
C. A. Stohle .......................................... Assistant
James G. Munro ...................................... Accountant
Kenneth Lee, Wm. Bell ................................... Clerks
Harriet Beamer ....................................... Stenographer

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J. W. Waldron, chairman; Hugh How-
ell, Albert L. Hough, Herbert C. Shipman .... Members

Hawaiian Homes Commission.

Gov. L. M. Judd, chairman; J. F. Wool-
ley, exec. secretary; Mrs. J. Frank
Woods, Akaiko Akana, James W.
Dwright.

J. Jorgensen .......................................... Engineer
C. A. Stohle .......................................... Assistant
James G. Munro ...................................... Accountant
Kenneth Lee, Wm. Bell ................................... Clerks
Harriet Beamer ....................................... Stenographer

BOARD OF COMMISSIONERS OF PUBLIC ARCHIVES.

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Librarian
Manuel Jones
Edmund Hart ......................................... Chief Clerk
Valentine Richards .................................... Clerks
Mrs. Agnes Altiero ................................... Clerk

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Deputy Superintendent ............................. O. E. Long

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A. Phillips (Oahu), J. M. Ross, A.
J. Stillman (Hawaii), D. G. Lindsay,
W. A. Clark (Maui), Elsie H. Wilcox
(Kauai).

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Eugene Horner .................................... East Hawaii
Miss B. E. L. Hundley ............................. Kauai
W. Harold Loper .................................. West Hawaii
R. E. Meyer ........................................ East Maui
Robert M. Faulkner ................................ West Maui
Orrin W. Robinson ................................ Rural Oahu
Gus. H. Webing ................................... Honolulu
Secretary ........................................... C. B. Luce
Assist. Secretary ................................... Mrs. E. H. Desha
Accountant .................................... Dr. Ross B. Wiley

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W. McClunkey, Jas. A. Wilson, O. W.
Robinson.

BOARD OF HEALTH.

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Harry Hewitt (ex-officio), D. S. Bow-
man, J. Platt Cooke, Mark A. Robin-
son, J. Ordeneast.

Miss E. Johnson .................................... Secretary

Mae R. Weir, Public Health Officer.

Dr. Jas. T. Wayson
Division Supervisor, Oahu, A. K. Arolds
Registrar General Births, Deaths and
Marriages ............................... Miss M. Hester Lemon
Chief Clerk .................................. J. M. Asing
Food Commissioner and Analyst ....

M. B. Bairos
Supt. Insane Asylum. Dr. A. B. Eckerdt
Supt. Leper Settlement .......................... R. L. Cooke
Resident Physician .............................. Dr. A. H. Luckie

Health Officer, Hawaii ...................................
Division Officer, Maui ................................
Division Supervisor, Kauai .................... A. P. Christian

Government Physicians.

Oahu.
Dr. A. L. Davis ................................. Wailuku
Dr. R. J. Wilkins ................................. Wahiawa
Dr. R. J. Mermod ................................. Ewa and Aiea
Dr. H. T. Rothwell ............................... Kaaawa
Dr. C. Coffin ................................. Kookauloa
Dr. J. A. Keefe ................................. Waialua

Dr. W. T. Dunn ................................. Lahaina
Dr. A. C. Rothrock ............................... Makawao
Dr. M. L. Madsen (1) ............................... Hana
Dr. G. H. Lightner ............................... Kahului
Dr. Wm. Osmers ................................. Wailuku
Dr. H. McCoy ......................... Puunene and Kihei
Dr. H. W. Chamberlain .......................... Kula
Dr. F. A. St. Sure ................................. Hana
Dr. A. K. Hancock ............................... Leward Molokai

Hawaii.

Dr. H. S. Dickson ................. N. and S. Kona
<table>
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<tr>
<th>Division</th>
<th>Name</th>
<th>Chairperson</th>
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<tr>
<td>First</td>
<td>W. L. Morgan, chairman</td>
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<td>J. L. Whitmore, V. Fernandez, Jr., F. W. Law, J. F. Child, M. C.</td>
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<td>Pacheco, C. H. Clark, F. E. Steere</td>
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<td>Second</td>
<td>W. A. Clark, chairman</td>
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<td>Geo. C. Munro, A. P. Tavares, J. A. Templeton, D. F. Fleming, H.</td>
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<td>H. Holt, Jose. Herrscher, Chas. Savage, J. G. Munro</td>
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<td>Third</td>
<td>W. Eklund, chairman</td>
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<td>A. J. Porter, D. E. Metzger, H. A. Wessel, W. L. S. Williams, Frank</td>
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<td>Greenwell, M. P. de Spindel, W. H. Hayeselden, L. W. Wishard</td>
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<td>Fourth</td>
<td>A. Englehard, chairman</td>
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<td>Sylva, E. H. W. Broadbent, N. Miyaka, W. M. Gorham</td>
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<td>Territory</td>
<td>Chas. T. Wilder, chairman</td>
<td>J. J. Walsh, Andrew Adams</td>
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<td>W. McKay, chairman</td>
<td>A. J. Spitzer, H. R. Macfarlane</td>
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<td>H. J. Foss, chairman</td>
<td>R. F. Shaw, G. N. Weight</td>
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<td>Third</td>
<td>Stanley Elmore, chairman</td>
<td>T. E. M. Osorio, George S. Wong</td>
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<td>Division</td>
<td>C. H. Gates, chairman</td>
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<td>Paul Townsley, J. B. Corrington</td>
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<td>Boards of Examiners</td>
<td>Medical—Dr. Harry L. Arnold, Dr. James A. Morgan, Dr. Paul Withington.</td>
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<td>Dental—Dr. F. M. Branch, F. K. Sylva, J. J. Kahamuu</td>
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<td>Veterinary—Dr. L. E. Case, Dr. B. A. Gallagher, Dr. J. C. Fitzgerald.</td>
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<td>Optometry—Dr. A. M. Glover, Dr. R. S. Koneakana, Dr. Paul W. Rushforth.</td>
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<td>Osteopathy—Dr. lra T. Lane, Dr. Kathrym I. Morelock, Dr. Emily Dole.</td>
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<td>Pharmacy—E. A. Burford, P. F. Jachmison, A. W. Meyer.</td>
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<td>Nursing—Janet M. Dewar, Albertine T. Sinclair, Dr. James A. Morgan,</td>
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<td>Dr. R. B. Faus, Mabel L. Smyth</td>
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<td>Commissioners of Insanity</td>
<td>Dr. C. D. Pratt, Dr. M. F. Chang, Dr. W. H. Wynn.</td>
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<td>Hawaii—Judge J. W. Thompson, Judge Homer L. Ross (ex-officio),</td>
<td>James Walker, Father Louis, Rev. E. G. Silva, Kate S. Lowson, Mrs. Aileen A. Stillman.</td>
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<td>Maui—Judge H. Case, Judge Daniel (ex-officio), Mrs. E. S. Baldwin,</td>
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<td>Dr. W. M. Baldwin, F. B. Cameron, May B. Murdock, W. H. Hutton</td>
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<td>Kauai—Judge W. C. Achi (ex-officio), A. Englehard, Miss Ebbie Wilcox,</td>
<td>Mrs. A. C. Ghaisyer, Charles Ishii, Mrs. William Danford.</td>
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<td>PUBLIC UTILITIES.</td>
<td>Established 1913.</td>
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<td>Chairman</td>
<td>A. J. Gignoux, F. O. Boyer, Harry S. Hayward</td>
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<td>Secretary</td>
<td>J. R. Kenny</td>
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<td>COMMISSIONERS OF DEEDS.</td>
<td>Adolph Michelson, W. P. Durall in the Province of Quebec, Canada.</td>
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<td>Louisville, in the state of Kentucky.</td>
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<td>L. T. Ball, in the state of California.</td>
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<td>M. M. Campbell, District of Montana for Hawaii.</td>
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<td>G. S. Grossman, in Washington, D. C.</td>
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<td>G. S. Wicker for New York.</td>
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<td>Antonio F. Bradford, Azores Islands, Dorothy H. McMinnis, California.</td>
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<td>BOARD OF COMMISSIONERS FOR THE HOME FOR FEEBLE-MINDED.</td>
<td>Mrs. N. L. D. Fraser, John Effinger, Mrs. R. R. Tigner, Dr. A. L. Andrews, Mary E. White.</td>
<td></td>
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<tr>
<td>HISTORICAL COMMISSION</td>
<td>G. R. Carter, H. S. Palmer, Mrs. Emma Taylor.</td>
<td></td>
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</tbody>
</table>
TERRITORIAL BOARD OF ACCOUNTANCE.
Matthew M. Graham, E. R. Cameron, H. D. Young.

BUREAU OF THE BUDGET.
James W. Lloyd ........ Director
R. A. Kmiot ... Special Investigator
Mary A. Hart ......... Principal Clerk

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Henry P. O'Sullivan .. Executive Secretary
J. F. Markham ...... Chief Clerk
Bina Mossman ....... Stenographer
J. Thomas ......... Clerk
C. C. Lowrey, Abigail Meheula .......
H. L. Markham .... Sten-Typist

HAWAII TOURIST BUREAU.
Organized 1902.
Ralph E. Woolley, chairman.
A. G. Budgo (Honolulu), W. H. Hussman (Hawaii), William H. Rice (Kauai), Alfred Martinson (Mau), C. R. Frazier, Territory at Large.
Geo. T. Armitage, secretary; Representative, H. K. McCann Co., 114 Sansome Street, San Francisco, Cal.

ASSOCIATED CHAMBERS OF COMMERCE.
Organized Nov. 24, 1923.
C. M. Gates ............ President
John A. Hamilton .... Secretary

CHAMBER OF COMMERCE OF HONOLULU.
President ............. D. C. Rattray
Vice-President ...... W. H. Ewing
Secretary ........... A. E. Jenkins
Treasurer ............ H. H. Alexander

MAUI CHAMBER OF COMMERCE.
Organized 1913.
President ............ C. H. Gates
Vice-President ...... A. H. Case
Secretary ............ Andrew Gross
Treasurer ............. J. L. Silva

KAUA'I CHAMBER OF COMMERCE.
Organized 1917.
President ............. W. R. Farrington
Vice-Presidents . Hon. Walter F. Frear, W. R. Castle, F. C. Atherton, Chung K. Ai
Director ............ A. Hume Ford

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Incorporated 1917.
President ............. W. R. Farrington
Vice-Presidents . Hon. Walter F. Frear, W. R. Castle, F. C. Atherton, Chung K. Ai
Director ............ A. Hume Ford

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Organized August 8, 1898.
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Vice-President ...... R. W. Kellett

SECRETARY ............ John T. Fisher
Assistant Secretary .... D. B. Fisher
Treasurer ............ Bishop Trust Co.

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Reorganized Nov. 18, 1895.
President ............. J. W. Waldron
Vice-President ...... J. W. Russell
Vice-President ...... J. Waterhouse
Treasurer ............. R. D. Mead
Secretary-Treasurer .. J. K. Butler
Assistant Treasurer ... S. O. Halls
Assistant Secretary ... J. T. Phillips
Auditor ............... R. A. Cooke
Asst. Director, Labor Bureau .. V. Pfugler

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H. P. Agee ............ Director
R. C. L. Perkins .. Consulting Entomologist
Otto H. Swezy ........ Entomologist
E. C. Pemberton .. Associate Entomologist
F. X. Williams, R. H. Van Zwaluenburg, G. H. Cassidy (Assistant Nematologist), F. C. Hadden, F. A. Bianchi
Asst. Entomologists .... H. L. Lyon .... Botany and Forestry
L. W. Bryan (Hawaii), George A. McEldowney (Oahu), Albert Duvel (Kauai), Forest Stewards
E. L. Caum, S. E. Assts. in Forestry
Joseph E. Wist .......... Supt. Vineyard St. Nursery
Hugh W. Brodie, Colin Potter .......... Assts. in Forestry
W. R. McAllep .. Sugar Technologist
W. L. McCreary .... Associate Sugar Technologist
Raymond Ellotit, Asst. Sugar Technologist
A. Brodie .......... Technical Chemist
W. T. McGeorge, F. E. Hanco, Fred Hansson .......... Associate Chemists
J. A. Verret, A. J. Mangelsdorff .......... Genetist
J. F. Martin, Clyde C. Barnum, C. W. Carpenter .......... Asst. Pathologists
D. M. Weller .......... Histologist
W. Twige-Smith .......... Illustrator
Darrell Meek .......... Chief Clerk
Mabel Fraser .......... Librarian

ASSOCIATION OF HAWAIIAN PINE-APPLE CANNERS.
Organized 1917.
R. N. Chapman .. Executive Secretary
J. D. Dole . President
William P. Tuttle .... Vice-President
A. L. Dean .... Secretary-Treasurer
Auditor ...... Young, Lamberton & Pearson

HAWAIIAN SUGAR TECHNOLOGISTS.
R. W. Broadbent ........ President
S. S. Peck, H. E. Haight ........ Vice-Presidents
J. H. Pratt .......... Secretary-Treasurer
Irvin Spalding .......... Auditor
ENGINEERING ASSOCIATION OF HAWAII
Organized April 25, 1920.
President .................. B. H. Eveleth
Vice-President ............ W. C. Furer, L. C. Bush
Secretary-Treasurer ...........

BOARD OF MARINE UNDERWRITERS
AGENCIES.
Boston .................. Miss Brewer & Co.
Philadelphia ............. Miss Brewer & Co.
New York .................. Bruce Cartwright
San Francisco .......... Bishop Ins. Agency

BOARD OF FIRE UNDERWRITERS OF
TERRITORY OF HAWAII.
Jno. Waterhouse .......... President
J. M. Macomel .......... Vice-President
H. Frosieht .......... Sec.-Treas.
R. E. Clark .......... Auditor

QUEEN'S HOSPITAL
Erected in 1860.
President .................. E. F. Bishop
Vice-President ............ J. R. Galt
Secretary .................. B. Cartwright
Treasurer ............... Hawaiian Trust Co.
Auditor .................. Audit Co. of Hawaii
Medical Director ....... Dr. N. P. Larsen
Superintendent ........ Miss G. G. Potter
Bookkeeper ............. E. J. Rego
Head Nurse ............. Miss H. B. Delamere
Trustees ................. E. F. Bishop, P. E. Spalding,
B. Cartwright, Geo. I. Brown, Dr. C.
B. Wood, F. D. Lowrey

LEAHU HOME
Organized April 4, 1900.
President .................. A. W. T. Bottomley
Vice-Presidents ...........
Father Valentin, C. R. Hemenway
Secretary .................. P. E. Spalding
Auditor .................. Young, Lambert & Pearson
Director .................. Cameron & Johnson
Resident Physicians .... Dr. H. H. Walker,
Dr. V. D. Sedelavsky, Dr. R. N. Terlstein
Superintendent ........ Miss A. Sinclair
Statistician ............. Mrs. M. Piltz
Pharmacist ............... F. R. Nugent
Dietitian ................ Miss Olsen
Work Supervisor ....... A. DeVries
Occupational Therapy Director .... Miss C. Pughe

CHILDREN'S HOSPITAL
Opened Nov. 24, 1909.
President .................. H. G. Dillingham
Vice-President ............ M. B. Henshaw
Vice-President ............ Mrs. Robert Mist
Secretary ................. G. H. Buttolph
Treasurer .................. John Waterhouse
Auditor .................. E. J. Greaney
Superintendent .......... Miss Elizabeth McKay

SHRINERS' HOSPITAL FOR
CRIPPLED CHILDREN
Chief Surgeon .............. Dr. A. L. Craig
Superintendent ........... G. Shaw, R. N.
HOSPITAL FLOWER SERVICE ASSN.
Organized February, 1890.
President .................. Mrs. E. J. Lowrey
Vice-President ............ Mrs. Cyril Damon

SECRETARY .......................... Mrs. R. C. Bell
Treasurer .................. Miss M. Williams

SEAMEN'S INSTITUTE.
Established 1902.
Wm. H. Popen ................... Chairman
J. L. Cockburn .......... Vice-Chairman
A. H. Armitage .......... Secretary
Carl Maier .......... Treasurer

DAUGHTERS OF HAWAI'I.
Organized Dec. 1, 1903.
Regent ..................... Mrs. F. M. Swanz
Vice-Regents ............
Mrs. W. F. Frear, Mrs. F. E. Thompson
Historian .................. Mrs. C. W. Lucas
Asst. Historian .......... Lahilahi Webb
Secretary ................. Mrs. Guy Rothwell
Treasurer ................. Mrs. M. Pfluger

UNIVERSITY OF HAWAI'I
Board of Regents.
C. R. Hemenway .......... Chairman
David L. Crawford .......... Secretary
Regents—Dr. C. B. Cooper, Mrs. Mary D.
Frear, A. G. Smith, Akaiko Akana, Geo.
J. Brown

LIBRARY OF HAWAI'I
Board of Trustees.
Rt. Rev. H. B. Restarick .......... President
Mrs. A. L. Castle .......... Vice-President
A. Lewis, Jr. .......... Treasurer
A. C. Alexander .......... Secretary
F. E. Blake, Bruce Cartwright, W.
W. Thayer

Library Staff
Margaret E. Newman .......... Librarian
Caroline P. Green .......... Asst. Librarian
Myrtle Coleman .......... Head Circulation Dept.
Eva Blood, Alice P. Bailey, Isabel La-
sar, Theresa C. Knox, Helen M. Par-
ker ............. Assistants
Alma S. Jonson .......... Head Reference Dept.
Christal Fox, Virginia Atkins, Alice
Simpson .......... Assistants
Mary S. Lawrence .......... Head Teachers' Dept.
Ruth E. Lee .......... Assistant
Ellen A. Shope .......... Head Children's Dept.
Katherine D. McDole .......... Assistant
Florence A. Klammer, H. D. Catalog Dept.
Juanita Simmons, Louise B. Harrison
Assistant
Alice E. Burnham .......... Head Bindery Dept.
Laura R. Sutherland, Head Stations Dept.
Dorothy Tilley, Grace D. Noble, Mrs.
C. P. Wilsie .......... Assistants

HAWAIIAN HISTORICAL SOCIETY.
Organized Jan. 11, 1892.
President .................. Rev. H. B. Restarick
Vice-President .......... W. F. Frear
Recording Secretary ....... R. S. Kuykendall
Corresponding Secretary .. Jas. T. Phillips
Treasurer ................. S. W. King
Librarian ................. Miss C. P. Green

KAUAI HISTORICAL SOCIETY.
President ..................
Vice-President ..........
Sec.-Treas. ............ Miss E. H. Wilcox
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. Monague 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
Erling Christensen ......................... Botanist
C. M. Cooke, Jr. ..................... Malacologist
Paul T. Diefenderfer ..................... Associate in Ethnology
Charles H. Edmondson .................. Zoologist
Kenneth P. Emory .......................... Ethnologist
Henry W. Fowler ........................... Consulting Ichthyologist
E. S. O. Handy ........................... Ethnologist
Willowdean Handy ........................ Associate in Polynesian Folkways
J. P. Illingworth ......................... Research Associate in Entomology
Robert P. Lewis ........................ Associate in Ethnology
Elmer D. Merrill ...................... Consulting Botanist
E. P. Mumford ..................... Entomologist
George C. Munro .................... Associate in Ornithology
Marie C. Neal .......................... Botanist
Harold St. John .................... Botanist
J. Henry Stimson .................. Research Associate in Botany
A. M. Trick .................................. Associate in Linguistics
Otto H. Swezey .......................... Associate in Ethnology
Thomas G. Thrum ........................ Associate in Hawaiian Folklore
Margaret Tiohub ......................... Librarian
Lahilahi Webb ......................... Guide to Exhibits d'Alte Welch
Assistant Malacologist
Gerrit W. Wilder ...................... Botanist
Clarck Wissler .......................... Consulting Anthropologist

BAR ASSOCIATION OF HAWAII.

Organized June 28, 1889.

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

HAWAIIAN SOCIETY SONS OF THE AMERICAN REVOLUTION.

Organized June 17, 1895.

President ................. Geo. R. Carter
Vice-President ............ M. M. Johnson
Secretary-Treas. .............. Jared G. Smith
Registrar .................. D. S. Bowman

DAUGHTERS OF THE AMERICAN REVOLUTION, ALOHA CHAPTER

Organized March 5, 1897.

Regent ......................... Mrs. J. L. Robertson
Vice-Regent.................. Mrs. Jessie P. Cameron
Recording Secretary .......... Mrs. L. P. Miller
Corresp. Secretary .... Mrs. L. P. Miller
Treasurer ........................ Miss Charlotte Hall
Historian ..................... Miss Harriet Chapell
Chaplain .......................... Miss Laura A. Haley

HAWAIIAN EVANGELICAL ASSOCIATION.


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

WOMAN'S BOARD OF MISSIONS.

Organized 1871.

President ...................... Mrs. Wm. J. Forbes
Vice-President ........................ Mrs. T. M. Talman
Recording Secretary ............... Mrs. Peter Huyler
Home Cor. Secretary ........... Miss A. E. Judd
Foreign Cor. Secretary .... Miss A. E. Judd
Auditor ............................ Otto A. Berndt

MISSION CHILDREN'S SOCIETY.

Organized 1852.

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

YOUNG MEN'S CHRISTIAN ASSOCIATION.

Organized 1869.

President .......... Rolla K. Thomas
Vice-President ........................ Mrs. W. W. Chamberlain
Secretary ............... Geo. P. Denison, Norman T. Booth
Treasurer ...................... Chas. A. Wong
General Secretary .......... Stanley Livingston

ARMY & NAVY Y. M. C. A.

Executive Committee
Chairman .................... Dr. J. A. Morgan
Vice-Chairman ............... John Waterhouse
Treasurer ...................... Chas. G. Heiser, Jr.
Secretary ................. E. O. Andrews
Asst. Business Secretary .... W. Y. Fong

YOUNG WOMEN'S CHRISTIAN ASSOCIATION.

Organized 1900.

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

FREE KINDERGARTEN AND CHILDREN'S AID ASSOCIATION.

Organized 1895.

President ...................... Mrs. F. M. Swanz
Vice-Presidents-Mrs. F. W. Damon,
Mrs. G. P. Castle, Mrs. W. McKay
Recording Secretary .... Miss Nina Adams
Treasurer ...................... Mrs. R. C. Moore
Assistant Treasurer .......... Mrs. W. J. Forbes
SOCIAL SERVICE BUREAU  
Organized June 7, 1889.  
President............. J. R. Galt  
Vice-President........ R. A. Cooke, Mrs.  
F. M. Swanzy, Mrs. A. C. Alexander  
Treasurer............. Hawn. Trust Co., Ltd.  
Executive Secretary..... Nell Findley  
Auditor................ Audit Co. of Hawaii

STRANGERS' FRIEND SOCIETY  
Organized 1832. Annual Meeting June  
President.................. Mrs. A. Fuller  
Vice-President.......... Mrs. A. A. Young  
Secretary............... Mrs. H. F. Damon  
Treasurer............... Mrs. E. W. Jordan

BRITISH BENEVOLENT SOCIETY  
Organized 1869.  
President (ex-officio)..... H.B.M.'s Consul  
Vice-President......... Rev. Wm. Auld  
Secretary............... W. C. Shields  
Treasurer............... H. B. Sinclair

HAWAIIAN HUMANE SOCIETY  
President............... Mrs. H. M. Damon  
Hon. President.......... Mrs. S. M. Damo  
Secretary............... Mrs. M. B. Carson  
Treasurer............... Bishop Trust Co.  
Executive Officer...... Miss Lucy K. Ward  
Agent................... J. Dassel

OAHU CEMETERY ASSOCIATION  
Organized 1844.  
President............. F. J. Lowrey  
Vice-President.......... S. G. Wilder  
Secretary............... F. W. Jamieson  
Treasurer............... Hawaiian Trust Co.

THE OUTDOOR CIRCLE  
(For the beautifying of Honolulu.)  
Organized May, 1912.  
President............. Mrs. Walter F. Dillingham  
1st Vice-President...... Mrs. P. Withington  
2nd Vice-President..... Mrs. S. Kennedy  
3rd Vice-President..... Mrs. Cyril Damon  
Secretary............... Mrs. Ralph Johnstone  
Librarian............... Mrs. H. Douglas Young  
Librarian............... Mrs. F. D. Lowrey

PACIFIC CLUB  
Organized 1852. Premises on Emma Street.  
President............... A. W. T. Bottomley  
Vice-President......... W. F. Frear  
Secretary............... C. A. Mackintosh  
Treasurer............... O. N. Tyler

HAWAIIAN VOLCANO RESEARCH ASSOCIATION  
Organized October, 1911.  
President............... W. F. Dillingham  
Vice-President......... L. T. Peck  
Secretary............... L. W. de Vis-Norton  
Observatory Director.... Dr. T. A. Jaggar, Jr.

HONOLULU SYMPHONY SOCIETY  
Reorganized May 29, 1924.  
President............. R. Alex. Anderson  
Vice-President......... Mrs. C. F. Damon  
Secretary............... W. Twigg-Smith  
Treasurer............... Chas. F. Webster  
Directors (with above officers)—Mrs. G. P. Cooke, Mrs. D. L. Crawford  
Conductor................ Fritz Hart

PHILHARMONIC SOCIETY  
(Specializing in Chamber Music Concerts)  
President............... L. T. Peck  
Secretary............... Mrs. Theo. Richards  
Treasurer............... Arthur F. Thayer

COMMERCIAL CLUB OF HONOLULU  
President............... C. C. Pittam  
Vice-President......... J. T. Camp  
Secretary............... H. W. Camp  
Treasurer............... E. S. Smith

ROTARY CLUB OF HONOLULU  
Organized March 4, 1915.  
President............... J. H. Ellis  
Secretary............... Irwin Spalding  
Treasurer............... W. C. T. U.

OAHU COUNTRY CLUB  
Organized 1906.  
President............... Horace Johnson  
Vice-President......... M. B. Carson, J. A. Good  
Secretary............... G. H. Buttolph  
Treasurer............... R. McCorriston  
Treasurer............... Mrs. E. W. Maier

ANTI-SALOON LEAGUE  
President (acting)....... Rev. John Heiley  
Vice-President......... Theo. Richards  
Secretary............... Paul Marvin  
Treasurer............... W. C. Furer  
Superintendent......... Edgar Henschaw

ULUNIU WOMEN'S SWIMMING CLUB  
Organized March, 1909.  
Hon. President.......... Mrs. F. M. Swanzy  
President............... Mrs. A. L. Castle  
Vice- Presidents......... Mrs. A. Fuller, Mrs. A. Greenwell  
Treasurer............... Mrs. W. J. MacNeill  
Secretary............... Mrs. W. A. Wall

CITY PLANNING COMMISSION  
The Mayor (ex-officio),  
Chief Eng., Dept. Public Works.  
HONOLULU AUTOMOBILE CLUB.
Organized Feb. 5, 1915.
President ..................... John F. Stone
Vice-President ................ G. S. Waterhouse
Secretary .................... C. F. Welsh
Treasurer ..................... Stanley Livingston
Manager ...................... LeRoy Blessing

HONOLULU AD CLUB.
Organized Feb. 6, 1912.
President ...................... Riley H. Allen
Vice-President ................ Mrs. M. H. Perkins
Secretary-Treasurer .......... H. F. Cooper
Auditor ....................... E. S. Smith

HAWAIIAN CIVIC CLUB.
Organized 1918.
President ..................... F. L. Akana
Vice-President ................ Mary Espinda
Secretary ..................... Lillian Markham
Treasurer ..................... Eva Hart

HONOLULU REALTY BOARD
Organized 1922.
President ...................... Percy Nottage
Vice-President ................ Charles R. Fraiser
Secretary ..................... Percy M. Pond
Treasurer ..................... Chester Livingston
Executive Secretary .......... J. E. Hoch

PRINCIPAL PUBLICATIONS.
The Honolulu Advertiser, issued by the
Advertiser Pub. Co. every morning.
Manager: E. Hoch.
The Honolulu Star-Bulletin, issued every
weekend, by the Honolulu Star-Bulletin, Ltd. Riley H.
Allen, Editor.
The Weekly Times, issued every Saturday.
Edw. P. Irwin, Editor and Publisher.
The Guide, issued every Tuesday and Fri-
day morning by the Guide Pub. Co.
New Freedom, issued every Friday. Thos.
McVeigh, Editor-Publisher.
The Friend, Organ of the Hawaiian Board,
issued monthly. Miss E. V. Warriner,
Business Manager.
The Hawaiian Church Chronicle, issued on
the first Saturday of every month.
Rt. Rev. 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. Alex. Hume Ford,
Editor and Publisher.
The Hawaiian Forester and Agriculturist,
issued monthly under direction of Board
of Com. Agr. and Forestry.
The Pacific Affairs, monthly, published by
Institute of Pacific Relations. Eliza-
thabeth Green, Editor.
The Hawaiian Educational Review, issued month-
ly. E. V. Sayers, Editor.
Ke Alakai o Hawaii (native), weekly,
issued every Thursday. Jonah Kuma-
lae, Editor.

Hilo Tribune-Herald, issued daily at Hilo
by the Tribune-Herald, Ltd. F. J. Cody,
Manager; E. P. White, Editor.
The Hawaii News (Hilo), weekly, Friday.
H. C. Davies, Editor.
The Maui News, issued daily at Wailuku,
Maui. J. A. Morrow, Editor.
The Garden Island, issued weekly at Li-
hue, Kauai, C. J. Fern, Managing
Editor.

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, Sun-
day services at 11 a. m. and 5 p. m.
Sunday school at 9:30. Prayer meeting Wednesday evenings at 7:30.
Kalili Union Church, King street, Kalili;
Rev. A. S. Baker, pastor. Sunday
school at 9:45 a. m. Gospel services at
11 a.m.
Methodist Episcopal Church, corner Ber-
etania 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 Wednes-
days at 7:30 p.m.
The Christian Church, Kewalo street, Rev.
F. L. Purnell, pastor. Sunday ser-
dices at 11 a.m. and 7:30 p.m. Sun-
day school at 9:45 a.m. Prayer meeting
Wednesday evenings, at 7:30.
Salvation Army, services held nightly at
hall, 69 Beretania street, with Sunday
services at the usual hour.
Roman Catholic Church, Fort street, near
Beretania; Rt. Rev. P. Alencastre,
Bishop of Arabissus, Services every Sun-
day 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 Epis-
copal; 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 Sun-
days, Holy Communion 7 a.m. Morning
prayer, 11 a.m. Rev. E. T. Brown,
Rector.
Epiphany Mission, Kaimuki, Rev. J. Lamb Doty, priest in charge. Sunday services at 7:30 and 10 a.m. Sunday school at 10.

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

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

Christian Chinese Church, King street; Rev. Chiu Tsz Chang, 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. McEll, 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, Keauhou street. Sabbath school Saturdays at 10 a.m.; preaching at 11. Wednesday prayer meeting at 7:30 p.m.

Japanese Union Church (connected with Hawaiian Board Missions); Rev. 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. O. 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 Kinan 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.

Kawaiaha'o Church, corner King and Punchbowl streets; Rev. Akiko 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.

CITY AND COUNTY OFFICIALS

CITY OF HONOLULU.

Mayor ............................................ Geo. F. Wright
Sheriff ............................................ Patrick Gleason
Deputy Sheriffs, David Hao, Wm. Hoopai
Clerk ............................................. D. Kalaaukalani
Auditor .......................................... Jas. Bicknell
Treasurer ......................................... D. L. Conkling
City and County Attorney ........................ James F. Guibland

Chief Engineer, Dept. Public Works ......................... H. A. R. Austin
Chief Engineer Fire Department ................................. Wm. W. Blaisdell
1st Asst. Engineer Fire Department ............................. H. A. Smith
2nd Asst. Engineer Fire Department .............................. E. P. Boyle

Deputy County Attorneys: Griffith Wight, W. C. Teukiyama, Hoon W. Wong, Leslie P. Scott.

Prosecuting Attorney, Police Court ............................... Geo. L. Hanneburg

Bandmaster Hawaiian Band .................................... Chas. E. King

Chairman Parks Board .......................... Lester McCoy

CITY OF MAUI.

Sheriff ............................................. Clement C. Crowell
Attorney .......................................... E. B. Beavan
Auditor ............................................ Samuel Alo, Sr.
Treasurer .......................................... J. P. Cockett

CITY OF MAUI.

Sheriff ............................................. Henry K. Martin
Attorney .......................................... H. K. Brown
Auditor ............................................ Archibald Hapai
Treasurer .......................................... W. H. Beers

CITY OF MAUI.

Sheriff ............................................. W. H. Rice, Jr.
Auditor ............................................ J. M. Kamekua
Clerk ............................................... J. M. Kanukou

CITY OF KAUAI.

Sheriff ............................................. K. C. Ahana
Auditor ............................................ A. G. Kaulukou
Clerk ............................................... K. C. Ahana
FEDERAL OFFICIALS

DEPARTMENT OF JUSTICE, U. S. DISTRICT COURT.


H. W. F. Miller, Second Engineer.


Reg. Terms: - At Honolulu on the second Monday in April and October.

Deputy Collectors: - May be held at such times and places in the district as the Judge may deem expedient.

Ofa Oswald, U. S. Court Reporter.

U. S. Jury Commissioners.

Wm. F. Thompson, Jr., Lester Petrie.

TREASURY DEPARTMENT, CUSTOMS DIVISION.

Jeanette A. Hyde, Collector.

Rose F. Tait, Asst. Collector.

F. L. Beringer, Acting Appraiser.


W. de la Porte, Referee, Kahului.

Manuel Asue, U. S. Com. Waialua.


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.

DEPARTMENT OF COMMERCE.

LIGHTHOUSE SERVICE.

Fredk. A. Edgecomb, Superintendent.

C. N. Elliot, Asst. Superintendent.

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Neil W. Wetherby, Asst. Lighthouse Engineer.

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