DOCUMENT CAPTURED AS RECEIVED

10-23
(May, 1929)

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Hawaii NATIONAL PARK

FILE NO.

This bound volume also contains reports for July to Dec. 1933

~~DECEMBER XXXX 1933~~

SUPERINTENDENT'S REPORT

FISCAL YEAR 1935

IMPORTANT

This file constitutes a part of the official records of the National Park Service and should not be separated or papers withdrawn without express authority of the official in charge.

All Files should be returned promptly to the File Room.

Officials and employees will be held responsible for failure to observe these rules, which are necessary to protect the integrity of the official records.

HORACE M. ALBRIGHT,
Director.

U. S. GOVERNMENT PRINTING OFFICE, 1929 6—7410

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

July 10, 1935

The Director
National Park Service
Washington, DC

Dear Mr. Director:

Following is the report of activities for this park during June.

000 - General

On June 17 the fifth annual Volcano Session of the University of Hawaii summer school commenced. As in the year previous the headquarters of the school and all classes are at the Volcano House. There are six instructors in attendance and nine different courses are offered. The superintendent was particularly pleased to note that the registration of 84 students, while less than last year, considerably exceeded his estimate.

The summer school here in the park operates under many difficulties, principally due to lack of suitable class room, laboratory and library space. A public hotel is hardly an appropriate or desirable place to conduct such work and it is hoped that before another summer comes funds will have been made available for the construction of the proposed Volcano Observatory and naturalist building, which, if built, according to plan, will enable the removal of most of the school's activities from the hotel.

Following the plan inaugurated last year the University of Hawaii is cooperating with the park in conducting a series of weekly evening lectures for the benefit of the public. The park naturalist is in charge of these programs which continue to meet with very enthusiastic public response.

020 - General Weather Conditions

The month of June was reasonably dry, with a total rainfall at headquarters of 3.07 inches and at the summer camp of 1.78 inches, as compared with 8.9 inches and 5.62 inches respectively for this period last year. Minimum and maximum temperatures were 53° and 75°. A more detailed report may be found at the back.

DOCUMENT CAPTURED AS RECEIVED

100 - Administration

110 - Status of Work

Miss Jane Christman entered on duty the 12th as temporary assistant-clerk-telephone operator. Final estimates for 1937 were mailed on the 16th. Considerable progress was made on the files during the last two weeks of the month. Clerk-stenographer Constance Whitney returned from Honolulu on the first.

120 - Park Inspections By:

121 - Superintendent:

While at Kilauea headquarters from the first until the 18th the superintendent made routine inspections of such projects as were in progress and examined the park and hotel buildings for fire hazards. Frequent visits were made to the fire pit of Kilauea Volcano.

On June 19 the superintendent left Kilauea headquarters for an extended inspection of park and CCC activities in the Haleakala section on the island of Maui, where he remained until the end ofthe month. In company with Engineer A.H. Wong, Associate Architect M.S. Sager, District Ranger J.A. Peck and Ranger S.H. Lamb he inspected the new location survey for the Halemau trail. This trail, for which additional funds will probably be needed, will, when completed, be not only spectacular in every respect, but also avoid the constant erosion which makes the present Halemau-u trail for most of the year useless, dangerous and wasteful to repair. Three days were spent in the crater of Haleakala inspecting CCC trail work and various springs which supply water for the camps. One day was spent inspecting the route of a proposed sky-line trail along the south rim of Haleakala. An early morning trip over the Halekala road was made for the purpose of checking on a few complaints to the effect that due to lack of guard rails or other markers along curves in the road, driving was hazardous. Inspection failed to reveal any serious hazard, except to those who exceed the speed regulations, however. District Ranger Peck was requested to have the road cantoneers place boulders along the outside of several curves. These should serve until the surfacing is completed and the center line marked with paint. Three inspections were made of the work in constructing a garage at the site of the proposed ranger station. On the final inspection the garage was completed and the work accepted by the superintendent. While on Maui the superintendent accompanied Mr. J.E. Ryan of the Matson Navigation Company and chamber of commerce officials on a tour of inspection of tourist facilities and roads in central Maui. At a dinner that evening moving pictures were shown of a recent trip through the crater of Haleakala on which Ranger Peck had served as guide. Contacts were made with many residents of Maui and as usual the Maui people were most friendly and anxious to show their interest in the park and its development. While in the crater many silversword were found in bloom and a trip into the crater is worthwhile if for no other reason than to

DOCUMENT CAPTURED AS RECEIVED

see one of these gorgeous blooms. The old rest house was inspected and the ECW camp director was requested to have the interior given a thorough cleaning and the walls given a coat of white paint. This house has been used by the CCC for the last eight months.

122 - Special Field Representatives

Associate Landscape Architect Sager remained in the Kilauea section the greater part of the Month. Between June 12 and 21st he was on Maui inspecting CCC trail work in Haleakala crater and other construction projects.

130 - Finance and Accounts

A detailed report of appropriations for this park is attached.

150 - Equipment and Supplies

Two steel desks and one metal office chair were received during the month in addition to two lauhala mats for the superintendent's residence, and a lawn mower.

170 - Plans, Maps and Surveys

The location survey of the new Halemau-u trail was inspected and some changes suggested if practicable. The work was approximately 80% complete at the end of the month. Two days were spent with Mr. Cannon of the Mutual Telephone Company of Hilo, surveying the land for relocation of the Hilo telephone line.

180 - Circulars, Placards, Publicity Bulletins, etc.

Three press memoranda were prepared and released during June, of which copies are attached.

The park circular of general information was drawn on heavily by the Hilo Tribune-Herald for a special fleet edition which was put out in a rush when two ships from the US Fleet visited Hilo for a few days.

200 - Maintenance, Improvements and New Construction

210 - Maintenance

The rocklining of ditches and riprap of shoulders on Uwekahuna road was completed during June, as was also the oiling of the shoulders on the same road. The usual maintenance of roads, trails, telephone lines, quarters was carried on. The drains on the Halekala road are being lined with flat rocks. The Mauna Loa trail as far as the Giant Koa was cleaned and repaired and the large crack which occurred on the Chain of Craters road at Aloi Crater was repaired.

DOCUMENT CAPTURED AS RECEIVED

230 - New Construction

Construction was completed on the garage at Haleakala on the 26th.

300 - Activities of Other Agencies in the Park

310 - Park Operators

The clubroom addition to the Volcano House has been started and will be completed about the middle of July. The heating system which is being installed at the Volcano House was about 90% complete at the end of the month. This system has been extended to the dining room, making it much more comfortable for the guests.

400 - Flora, Fauna and Natural Phenomena

410 - Ranger, Naturalist and Guide Service

On June 1 Gordon Mackenzie entered on duty as temporary ranger and on June 3 Ranger Waesche was transferred to the Observatory to take up work under Dr. Jaggar.

District Ranger Peck made routine inspections at Haleakala and also a number of trips through the crater including one to Kaupo with a party of visitors and another with the superintendent.

Ranger Lamb spent 21 days in the Haleakala section studying the silversword in that region.

A three-day trip was made to the summit of Mauna Loa by Temporary Ranger Mackenzie, accompanied by three park visitors and Assistant Clerk Jane Christman.

Rangers Murray, Lamb and Waesche each spent some time assisting the park naturalist in contact work, conducting park tours, etc.

420 - Museum Service

During the month two illustrated talks were given to the enrollees at the CCC camp, and educational contacts were made with the men and officers from the USS Memphis, Utah and Tennessee. On June 19 and 26 the park naturalist conducted nature study classes at the Waiakea Social Settlement and Hilo Boarding School.

During the last week of the month a large cache of old Hawaiian slingstones were found by the CCC trail crew on the Steam Bluff which is situated on the north side of Kilauea crater. These were water-worn, round rocks which apparently had been carried inland from the shore of the island, by some Hawaiian warrior who never returned for his ammunition. The park naturalist is preparing a special report concerning this discovery which will be submitted to your office within a short time.

DOCUMENT CAPTURED AS RECEIVED

480 - Natural Phenomena

Following two weeks of relative quiet at the beginning of the month the Hawaiian volcanoes again became a center of considerable disturbance and public and scientific interest and speculation. There were a total of 390 seismic disturbances registered on the Observatory seismographs by weeks as follows: Week ending June 9, 42; week ending June 16, 55; week ending June 23, 139; week ending June 30, 154. These disturbances ranged from tremors to strongish and moderate earthquakes. Distances to and locations of these disturbances would seem to indicate that both Kilauea and Mauna Loa domes were uneasy, and while an increase in seismic activity usually occurs coincident with the summer solstice the number of disturbances registered far exceeds that for similar periods during any recent years.

On June 28 at 9 a.m. a strongish earthquake occurred. It was located under the region somewhere between Kilauea and Hilo, about 14 miles from the Observatory. It was the strongest quake felt on the east side of the island since about 1907 and did some damage as well as causing some alarm in Hilo where its effect was most noticeable. Chinaware, pictures and similar objects were thrown down. Some walls were cracked, and heavy objects, such as refrigerators, were moved an inch or more. A concrete sidewalk was buckled up and a concrete verandah sank an inch. Other small damage was noted. This quake was felt only lightly on the north and west sides of the island.

A moderate quake located beneath Kilauea crater but which did no damage occurred on June 25 at 0:45 a.m. It was especially noted in Hilo, Papaikou, Honokaa and on the northeast rift of Mauna Loa by hikers sleeping in the rest house. The Kona district on the west side of the island was shaken by a quake which did not damage at 8:14 a.m. on June 27.

There were several other quakes reported felt in different sections of the island during the month.

Sliding from the walls of Kilauea fire pit, while frequent throughout the month, was noticeably increased by the earthquakes above mentioned.

Measurement of rim cracks continues to reflect the uneasy condition of Kilauea crater though no particularly interesting or striking movements have been noted. On June 29 fresh cracks were noted in the ash back of the NE and WNW rims of Halemaumau.

The volume of sulphur fume issuing from vents in the floor of the fire pit apparently has increased since the odor of hydrogen sulphide was detected by visitors to the pit on June 28 and also noticed by an observatory party running levels along the west side of the pit on June 21.

DOCUMENT CAPTURED AS RECEIVED

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

There was a total of 19,359 visitors to the Kilauea section during June as compared with 20,187 for the same period in 1934. District Ranger Peck reports that there were 455 visitors to the Haleakala section in June.

530 - Special Visitors

On June 2 the park was visited by officers and men from the USS Utah and Memphis. The ranking officers of these ships were entertained at a luncheon given in their honor by Mr. James Henderson and held at the Volcano House. Among others the guess officers included Admiral Standley, Chief Naval Bureau of Operations, General C.H. Lyman, Marine Corps and Dr. Hornbeck, Chief of the Bureau of Far Eastern Affairs of the Department of State. The superintendent, Dr. T.A. Jaggar, Camp Director B.G. Rivenburgh and Park Naturalist Doerr attended the luncheon. The superintendent made a short address of welcome and Dr. Jaggar and Mr. Rivenburgh also spoke briefly. After luncheon the superintendent conducted Dr. Hornbeck on a leisurely drive through the park, while Mr. Henderson entertained the others at golf.

On June 5 Second Assistant Postmaster General Harllee Branch paid a hurried visit to the park on his inspection tour of postoffices on this island. Those in his party included Mr. Arthur Grantham, Chief Railway Mail Clerk, Honolulu, Mr. W.T. Miller and Mr. Rex Martin of the Bureau of Aeronautics Department of Commerce; Mr. J. Parker Van Zandt of the Pan-American Airways and formerly at Grand Canyon; Hon. John H. Wilson, Postmaster, Honolulu; Mr. J. Walter Doyle, Collector of Customs, Honolulu; Judge Delbert Metzger and Hon. D.A. Devine of Hilo.

On June 3 Mr. Ray Semmes, Associate Director of the Federal Housing Commission visited the park.

On June 12 Mr. and Mrs. Randolph V. Whiting, Grand Master of Masons in the jurisdiction of California and party were overnight guests at the Volcano House. They were given special attention by the superintendent and park naturalist who, with other masons of the Volcano district, entertained Mr. and Mrs. Whiting at dinner.

Mr. William A. Duvall, executive officer of the Eastern Star, with offices in Washington, DC, was also a visitor to the park during the month.

600 - Protection

620 - Fire Protection

Inspections of fire hazards were made at Hilina Pali, Giant Koa and Fire Kipuka. The CCC made rapid progress during June in removing fire

DOCUMENT CAPTURED AS RECEIVED

hazards in the form of staghorn ferns along the trails and highways. Number scheme of buildings and fire regulations were placed in all employees residences.

640 - Destruction of Predatory Animals

Eradication of wild pigs at Kilauea Iki and Puu Huluhulu was commenced, five being killed in June. These animals have been destroying the vegetation at these two places.

660 - Sanitation

Gutters on residentes were cleaned and comfort station pits were refilled.

900 - Miscellaneous

On June 15 between three and four hundred of the alumni of the Hilo High School held their annual reunion dinner and dance at the Volcano House. Guest speakers for the evening were Judge Norman Godbold, Hon. Samuel Spencer, Mr. Ernest Lilley and the superintendent.

The Hilo Federal Business Association had a dinner and meeting at the Volcano House on the 21st, at which time election of officers for the following year was held. Officers elected were James A. Higgins in charge of PWA work on this island, president; R.H. Anderson, local Customs inspector, vice president; and R.H. Bradford, local Naval radioman, secretary.

The regular monthly dance was held at the Volcano House on the 22nd.

Very respectfully

Edward G. Wingate
Superintendent

CW

DOCUMENT CAPTURED AS RECEIVED

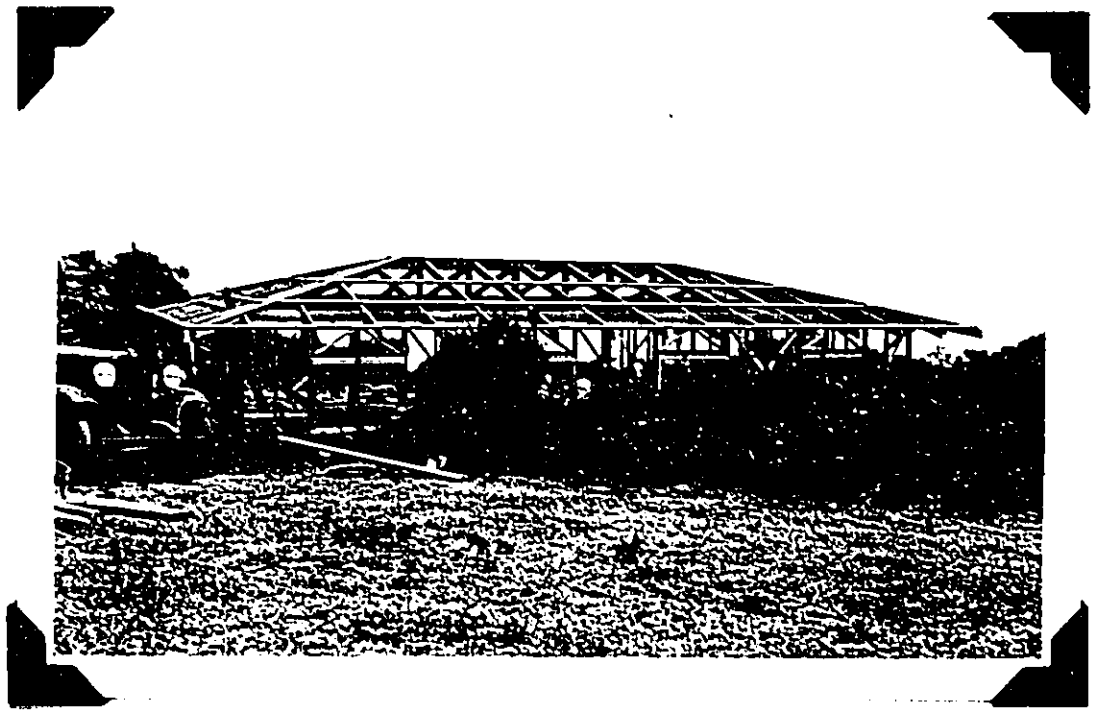
STATISTICAL REPORT NO. 8

FINANCE AND ACCOUNTS

JUNE, 1935

SYMBOL	APPROPRIATION	ALLOTTED	EXPENDED & OBLIGATED	BALANCE
46415	Hawaii National Park, 1936	44,950.00	0.00	44,950.00
45/6406	Forest Prot. & Fire Prevention,	300.00	0.00	300.00
45415/	Hawaii National Park, 1935	36,040.00	35,108.47	931.53
45406	Forest Prot. & Fire Prevention	300.00	299.94	.06
4X391	Roads & Trails, National Parks, Emergency Construction Act 6/19/34	23,525.00	15,388.99	8,136.01
4-03/5640.8	N.I.R., Interior, National Parks, Roads & Trails, 1933-'35	495,538.47	494,887.73	650.74
4-03/5640.14	N.I.R., Interior, National Park Service, 1933-'35:	11,250.00	11,085.34	164.66
44415.3	Hawaii National Park, 1934	31,392.55	29,399.80	1,992.75

DOCUMENT CAPTURED AS RECEIVED



Garage under construction, Haleakala

DOCUMENT CAPTURED AS RECEIVED

CCC Camp, inside crater of Haleakala

DOCUMENT CAPTURED AS RECEIVED

June 1935

DOCUMENT CAPTURED AS RECEIVED

CORRECTION

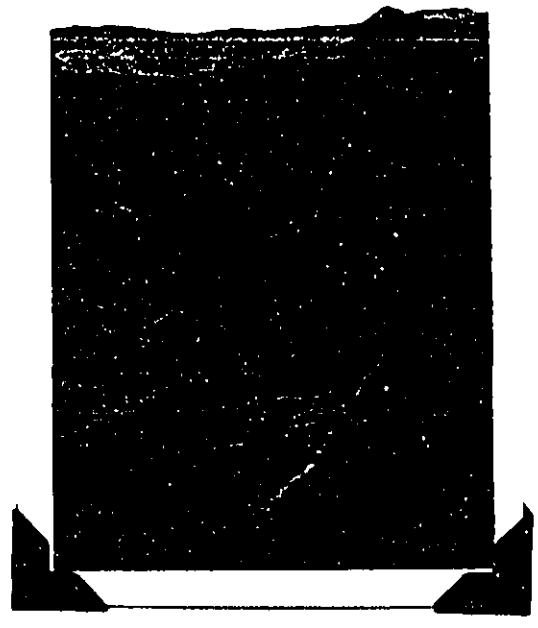
THE PRECEDING DOCUMENT(S) HAS BEEN REPHOTOGRAPHED TO ASSURE LEGIBILITY
SEE FRAME(S) IMMEDIATELY FOLLOWING

DOCUMENT CAPTURED AS RECEIVED

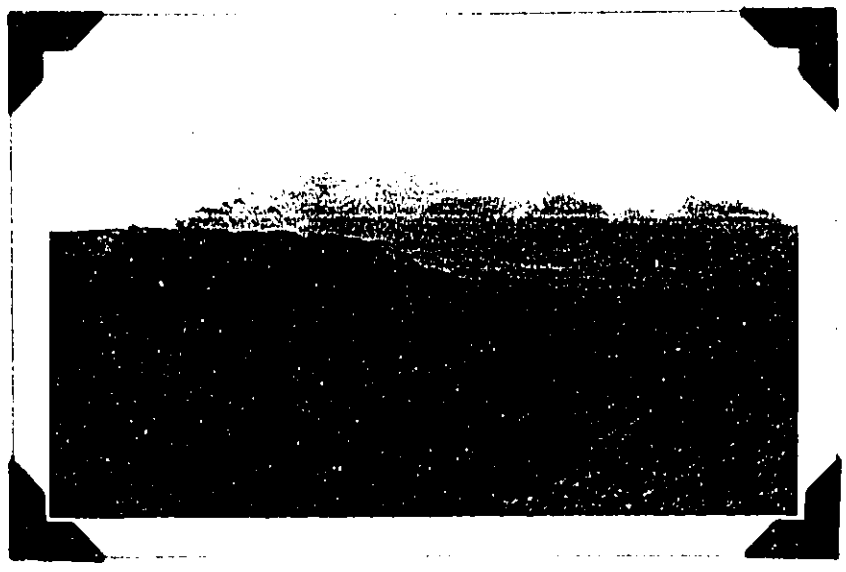
June 1935

Front row, left to right: Chief Ranger J.H. Christ, ECW Camp Director B.G. Rivenburgh, Supt. E.G. Wingate Dr. T.A. Jagger, Principal Volcanologist and Park Naturalist J.E. Doerr. Second Row: Chief Clerk (ECW) C.H. Underwood, ECW Quartermaster John Detor, Clerk-stenographer Constance Whitney, Chief Clerk J.K. Higashida and Associate Landscape Architect M.S. Sager. Back Row: Ranger W.H. Wuesche, Ranger P.F. Murray, Temporary Ranger Gordon Mackenzie, Warehouseman F.T. Fischer and ECW Camp Superintendent W.J. Stephens.

DOCUMENT CAPTURED AS RECEIVED

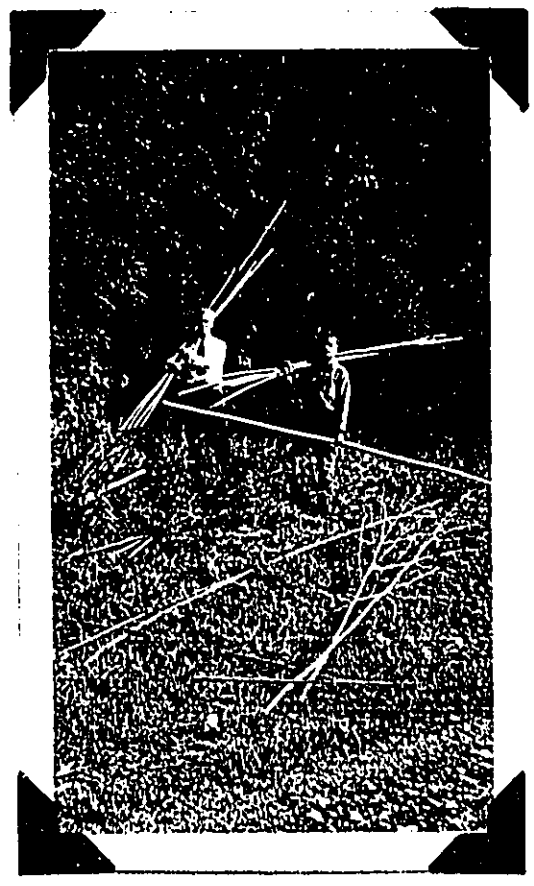


Holua cave and camp taken from near the top of the new Halemau trail location, Haleakala crater. Taken by Ranger Lamb 6/20/35.



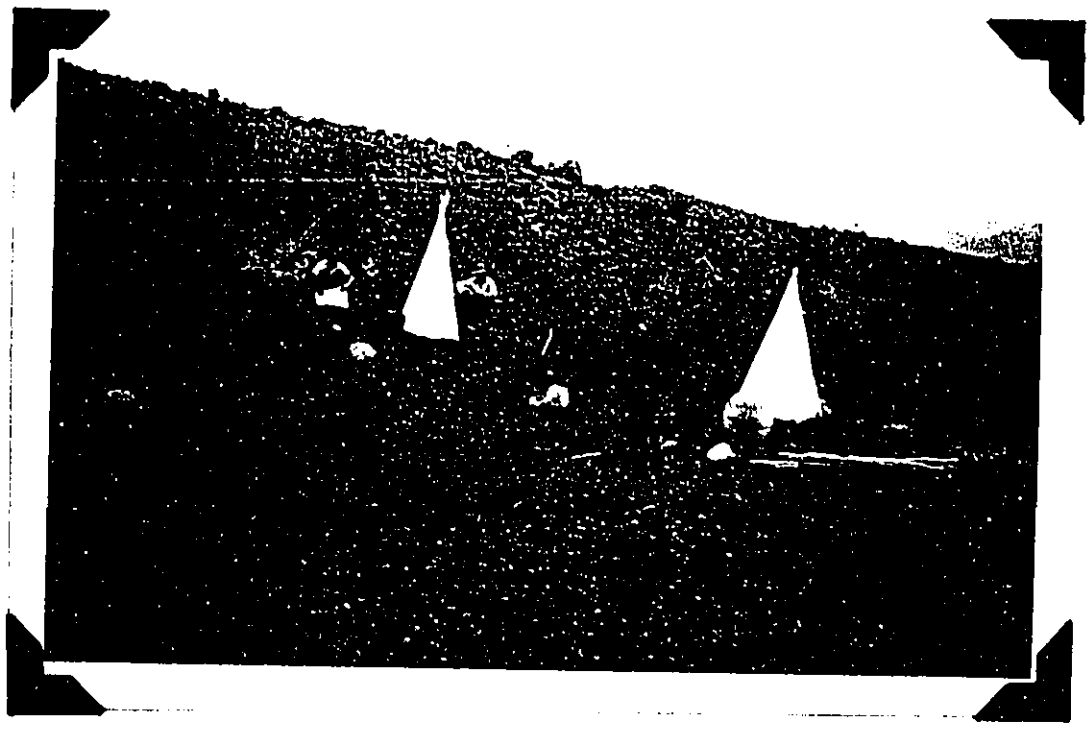
Koolau gap from the rim of Haleakala crater on the new Halemau trail location. Taken by Ranger Lamb 6/20/35.

DOCUMENT CAPTURED AS RECEIVED

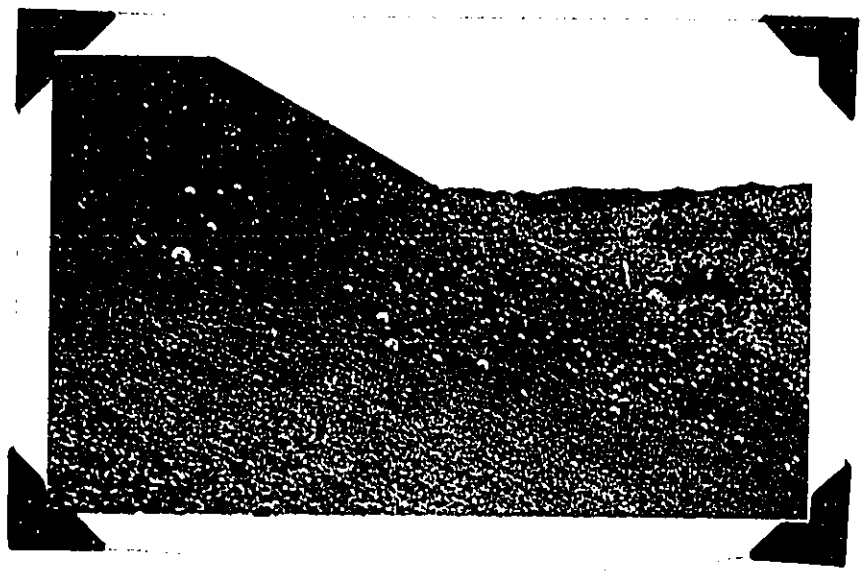


Landscape Architect Sager and Ranger Peck gathering bamboo poles near Kailua, Maui to be used in making tents for silversword plants. Taken by Ranger Lamb 6/19/35.

DOCUMENT CAPTURED AS RECEIVED

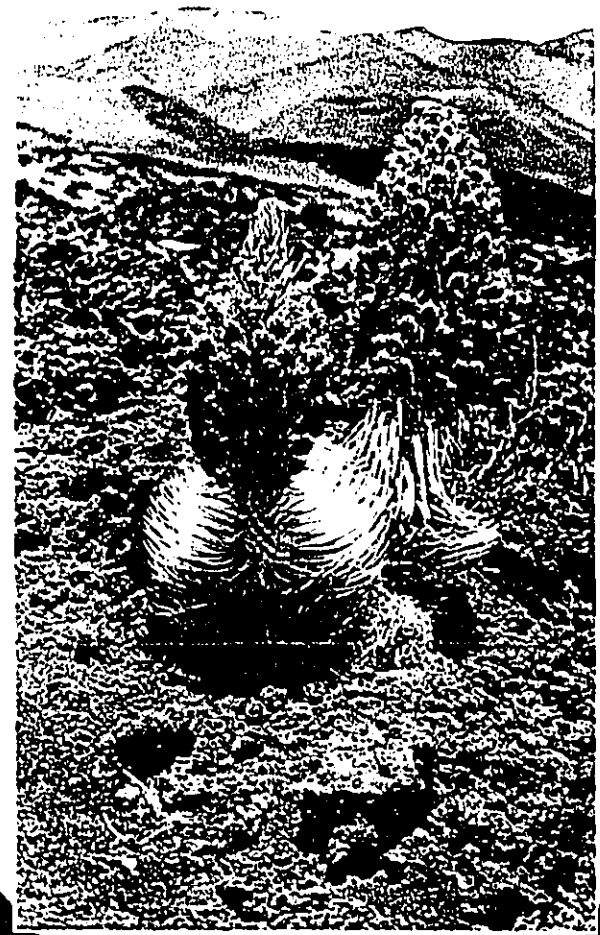


Finished tents over two silversword plants that will bloom soon. Note uncovered check plant near right hand plant. Taken by Ranger Lamb 6/25/35.



Simeona and Butler at the upper corners of a sample plot on Ka Hoa O Pele, Haleakala crater. Taken by Ranger Lamb 6/25/35.

DOCUMENT CAPTURED AS RECEIVED



Two well developed specimens of Silversword, Argyroxiphium macrocephalum, growing in aa lava in the crater of Haleakala. Taken by Ranger Lamb 6/25/35.

DOCUMENT CAPTURED AS RECEIVED

A C.C.C. enrollee standing by a silversword to show relative size. Note juvenile plants at base. Taken by Ranger Lamb 6/25/35.

DOCUMENT CAPTURED AS RECEIVED

10-157
(July, 1929)

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

TRAVEL REPORT

Hawaii National Park for the Month of June, 1935

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	~~Increase~~ for Travel Year ~~DECREASE~~ Number	Percent
PRIVATE TRANSPORTATION:						
Cars first entry,						
Cars reentry,						
Motorcycles,						
Total motor vehicles,						
Persons entering via motor vehicles,	18,372	142,352	19,606	146,547	4,195	.028
Persons entering via other private transportation,	169	1,567	345	2,233	666	.298
Total persons entering via private transportation,	18,541	143,919	19,951	148,780	4,861	.033
OTHER TRANSPORTATION:						
Persons entering via ~~stages~~ Hotel,	818	4,614	336	5,294	680	.128
Persons entering via trains,						
Persons entering otherwise,						
Total other transportation,	818	4,614	336	5,294	680	.128
GRAND TOTAL ALL VISITORS,	19,359	148,533	20,287	154,074	5,541	.036

	This Year	Last Year	Increase Number	Percent
Automobiles in public camps during month,				
Campers in public camps during month,				

DOCUMENT CAPTURED AS RECEIVED

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Hawaii National Park for the Month of June, 1935

	This Year	Last Year
Park revenue on hand beginning of month, ...	0.00	0.00
Received, ...	0.00	25.00
Total, ...	0.00	25.00
Remitted, ...	0.00	25.00
On hand close of month, ...	0.00	0.00

Park revenues received this year to date, ...	475.00
Park revenues received last year to date, ...	500.00
~~XXXXXXXX~~ Decrease.	25.00
Per cent of ~~XXXXXXX~~ Decrease	5%

DOCUMENT CAPTURED AS RECEIVED

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Hawaii National Park for the Month of June, 1935

	This Month				This Month Last Year	
	Appointed		Non-Appointed		Appointed	Non-Appointed
	REG.	P.W.	REG.	P.W.		
Number of employees beginning of month	12	3	0	7	16	2
Number of additions	6	0	1	3	3	18
Total	18	3	1	10	19	20
Number of separations	0	0	0	0	0	11
Number of employees close of month	18	3	1	10	19	9
Number of promotions during month	0	0	0	0	0	0
Aggregate amount of annual leave taken	4	0	0	0	10	0
Aggregate amount of sick leave taken	1	0	0	0	0	0
Aggregate amount of leave without pay	0	0	0	0	0	0

DOCUMENT CAPTURED AS RECEIVED

10-161

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF SALES OF PUBLICATIONS

Hawaii National Park, T. H. **June, 1935**

	Number	Value
GOVERNMENT PUBLICATIONS:		
On hand beginning of month,	848	149.55
Received during month,	0.0	0.00
Total,	848	149.55
Sold during month,	23	19.55
On hand at close of month,	825	130.00
NON-GOVERNMENT PUBLICATIONS:		
On hand beginning of month,		
Received during month,		
Total,		
Sold during month,		
On hand at close of month,		

Cash on hand beginning of month,	10.22
Sales during month,	19.55
Total,	29.77
Remitted during month,	20.75
Balance,	9.02

DOCUMENT CAPTURED AS RECEIVED

10-158

PARTMENT OF THE INTERI(

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Hawaii National Park for the Month of June, 1935

Description of Projects	Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
516 Utility Area Road, Paving (FA)	100	2	3	
517 Location Survey, New Halemau Trail, NPS (FA)	10	8	2	
518 7 Haleakala Road Landscaping (FA)	100	0	0	
520 Haleakala Road, Post Construction (FA)	30	10	12	
521 Post Construction, Uwekahuna-Bird Park Road (FA)	95	15	40	

DOCUMENT CAPTURED AS RECEIVED

DEPARTMENT OF THE INTERIOR
HAWAII NATIONAL PARK
NATIONAL PARK SERVICE

Office of the Superintendent

PRESS BULLETIN--for immediate release

On Thursday evening June 27, at 7:30 at the Volcano House, Mr. A. E. Jones, seismologist of the Volcano Observatory, will give an illustrated talk on the subject of Tidal Waves. The public is invited to attend. Mr. Jones' talk will be the second of a series of evening programs sponsored by the National Park Service in cooperation with the Volcano Session of the University of Hawaii summer school.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Hawaii National Park

JUN 21 1935

PRESS BULLETIN
FOR IMMEDIATE RELEASE

EDWARD G. WINGATE, SUPERINTENDENT

Under the guidance of Park Rangers thoroughly familiar with the mountain the Hawaii National Park is sponsoring several expeditions to the summit of Mauna Loa during the next few months. These expeditions will be three day trips and limited to a maximum of eight persons and a minimum of four.

In cooperation with the park administration Mr. Arthur M. Brown will furnish for these trips riding animals at $5.00 a day each. The park will furnish a guide and packer who will care for the animals and attend to cooking. Two rest houses with sleeping and cooking accomodations are located at suitable points on the mountain, one of which on the edge of the summit crater, Mokuaweoweo, was complated last year from funds donated by the Hui-o-Pele.

On these trips it will be necessary for the visitor to provide his own food, blankets, and such warm clothing as he may desire.

Reservations for these trips should be made throught the office of the Superintendent, Hawaii National Park.

The dates set for these trips are:

July 4,5,6, for members of the Volcano Summer School
July 18,19,20
August 1,2,3

DOCUMENT CAPTURED AS RECEIVED

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK

Office of the Superintendent

PRESS NOTICE -- for immediate release. June 17, 1935

As a feature of the Volcano session of the University of Hawaii Summer School, the National Park Service and the University will cooperate in giving a series of evening lectures at the Volcano House. A similar series of lectures, given during last years summer school attracted a great deal of attention and favorable comment among local people.

This years series of lectures opens Thursday evening, June 20, at 7:30 P.M. at the Volcano House. Dr. T.A. Jaggar will talk on the subject, "Our national parks as a field for scientific research." The public is cordially invited to attend this lecture.

Other numbers in this series of evening programs are as follows: On Thursday evening June 27, Mr. A.E. Jones, Seismologist in the Volcano Observatory will talk on the subject of Tidal Waves. On Wednesday evening July 3, Dr. John W. Coulter, Assistant Professor of Geography at the University of Hawaii, will give an illustrated lecture on Japan. On Thursday evening Jully 11, Dr. W.W. Krauss will give an illustrated lecture on, "The races of Mankind." Thursday, July 18, Mr. Henry H. Rempel, Instructor in Art at the University of Hawaii, will give an illustrated lecture on, "A trip to Europe."

There is no charge made for these lectures. The public is welcome.

DOCUMENT CAPTURED AS RECEIVED

The Volcano Letter

No. 420—Monthly U. S. Geological Survey, Hawaii National Park FEBRUARY, 1935

KILAUEA REPORT FOR FEBRUARY, 1935
Including weekly press reports 1203 to 1206
February 3 to March 3, 1935, midnight
Section of Volcanology, U. S. Geological Survey
T. A. Jaggar, Volcanologist in Charge

VOLCANOLOGY

The month has produced local shakings close to Kilauea, some easterly tilt which suggests tumescence and is abnormal for this season, and small slides from the walls of Halemaumau pit. Many small earthquakes at the Halemaumau seismograph, are mere tremors at the Observatory near Volcano House.

Slides at Halemaumau

February 4, occasional rock falls all day, including one in SW corner of the pit at 5:09 p m. February 5, the scar of this slide was obvious, and rocks were falling there at 9 a. m. Other falls of rock were heard NE, the East wall and talus had been changed. About 7 p. m. a slide was reported. Feb. 6, rocks were heard falling NE and SW. Feb. 9, all the sliding areas appeared freshly disturbed, fallen stones lay on the 1934 floor SE, and the scar of a fresh slide marked the wall halfway up, at the east Feb. 10, at 9:30 a. m. rocks fell at the S wall, and along the swollen monoclinal ridge at the margin of the 1934 lava floor, fallen bowlders lay on the crest of the arched crust in several places. Opposite all the talus slopes there is now fresh fallen debris on the 1934 floor, as result of caving wall matter since the eruption, and at the base of rock walls SE, NE and WNW. Feb. 12, at 9 a. m. a slight rock fall occurred S. After 3:25 p. m. rock slides SE occurred for 30 minutes. At 3:30 a cloud of dust arose from the wall, at 3:40 a larger mass of rock fell from a thin-layered zone near the top, sending a cloud of dust over the floor, and this was followed by rocks slipping for 10 minutes. There were four slides in a half-hour, leaving fresh cracks in the soil back of the edge of the pit, fresh dust on the floor, and a scar on the wall. Feb. 14, about 9 a. m. a tremor and slides were reported, accompanied by the opening of a crack in the floor. Feb. 16, a few rocks fell. Feb. 17, debris had been added to the bases of the east and south taluses, and the eastern floor appeared more swollen and cracked near the east solfatara. Feb. 18, at 9:05 a. m. there was a southern fall of rocks, and at 10:43 a. m. an avalanche fell from half way up the NE wall to the small talus heap. Feb. 25, at 8:52 a m. a fall of rocks occurred NE. Feb. 27, at 11:50 a. m. a small noisy slide fell from the NW buttress. March 1, at 2 a. m. a slide occurred E S E.

Other Phenomena

Feb. 12, there were vaporings at south talus and wall, at west talus and the cascade wall, at the wall west of southwest tunnels; voluminous fume rose from the Yellow Solfatara NW, and there were many small fume jets at the floor edge under the NNW talus. It was a misty forenoon of high humidity after moderate rain, but for no obvious reason the northwest region had suddenly developed excessive vapor and fume, and these had diminished in the east part of the Halemaumau floor. February 17 in cold dry weather hot vapor and fume were very slight, but they had developed at the small NE talus. The vapor and fume certainly fluctuate with the rainfall; during very heavy rains about February 23 deuse clouds of vapor rose from the pit, originating in the symmetrical semi-circle of five fuming talus slopes around the lava-lake oval, or cup, which was the last active pool of lava of October 1934. In the morning light of February 25 the floor cracks around the edges appeared to have increased their gaping, and the crescent of stain in front of the NNW talus—the site of the pumice bank of the largest fountains of September 6, 1934—had definitely become a depression. There is an arc of cracks in front of it, and the floor still farther in front is a plateau; everywhere the floor is a swollen plateau above the wall-valley. The cracks at the edge of the floor plateau are tensional chasms, parallel to the strike of a monoclinal bend which dips down to the floor margin.

Rim Cracks

Weekly measurement of 32 marked rim cracks around the upper edge of Halemaumau resulted as follows:

Week ending forenoon:

Feb. 9, 7 opened, 3 closed, aggregate opening 2.5 mm.
Feb. 16, 10 opened, 2 closed, aggregate opening 5.0 mm.
Feb. 23,* 16 opened, 4 closed, aggregate opening 9.0 mm.
Mar. 2, 9 opened, 4 closed, aggregate opening 3.5 mm.

* Measured partly Feb. 24, because of heavy rains.

Noises

Thudding noises from the bottom of Halemaumau were heard at 8:58 a. m. and 9:02 a. m. February 12, a clanking was heard at the base of east wall at 10:10 a. m. Feb. 17, and a snapping noise NE at 11:05 a. m. that day, and again Feb. 25 at 8:40 a. m. T. A. J.

EARTHQUAKES

Week ending	Minutes of tremor	Very feeble earthquakes	Feeble earthquakes	Slight earthquakes	Distant earthquakes	Local * Seismicity
Feb. 10	28	6	1	0	0	11.00
Feb. 17	15	0	1	0	0	4.50
Feb. 24	46	5	1	0	1	15.00
Mar. 3	67	4	0	1	0	20.75

* For local seismicity index see Volcano Letter 371.

The following successive local disturbances began at the times indicated; the epicenters as shown were located from seismograms; when possible the depth of the source is indicated The location of epicenters is based on three main seismograph stations, Kilauea, Hilo, and Kona. The intensity is that recorded on the Kilauea instruments.

Feb. 4 at 7:45 p. m feeble, occurred under the west wall of Kilauea crater, under Uwekahuna. Reported felt near Kilauea crater.

Feb. 5 at 0.20 a. m. very feeble, occurred under the NE wall of the crater near the Observatory.

Feb. 11 at 3:59 a. m. very feeble, occurred under Mauna Loa, lat. 19° 26′ N long. 155° 28′ W 16 miles deep.

Feb. 15 at 6:12 p. m. very feeble, occurred 2 miles SE of Kilauea crater.

Feb. 20 at 9:27 a. m. feeble, occurred near the junction of the SW rift and the SW crater wall.

Feb. 21 at 1:21 p. m. very feeble, occurred in the crater, east of the Pit.

Feb. 21 at 8:56 p. m. very feeble, occurred outside of Kilauea crater near Keanakakoi crater.

Feb. 26 at 2:10 a. m. slight, occurred 5 miles deep under N rim of Kilauea.

Feb. 27 at 1:11 p. m. very feeble, near Keanakakoi crater.

Feb. 28 at 5:39 p. m. very feeble, reported felt at Naalehu, located on the Mauna Loa SW rift, near 19° 10′ N 155° 45′ W.

Mar. 3 at 11:11 p. m. tremor, near SW wall of Kilauea crater.

Feb. 22 the preliminary waves of a small teleseism began recording at 6:43:58 a. m. the secondary waves began at 6:50:20 a. m.

Microseismic motion was abnormal Feb. 11, 12, 13, 14, 15, 16, 17. normal Feb. 4, 6, 18, 20, 21, 24, 27, 28, Mar. 1 and 2, and subnormal during the other days of the period.

A. E. J.

DOCUMENT CAPTURED AS RECEIVED

TILTING OF THE GROUND

The table shows tilt by weeks from seismograms at Kilauea Observatory, northeast rim of Kilauea crater; and at Halemaumau the readings from each clinoscope and the resultant of radial tilts for the three clinoscopes, towards or from the center of Halemaumau Pit.

At the Observatory the total accumulated tilt for the year ending March 3, 1935 is 3.5″ N and 4.1″ E.

TABLE OF TILT

Week ending	Observatory station	Halemaumau Clinoscope Stations			
		North station	West station	SE station	Resultant
Feb. 10	1.3″ S 38° E	1.7″ S 70° W	2.8″ N 6° E	3.5″ N 43° E	1.7″ toward
Feb. 17	0.9″ S 80° E	3.2″ S 52° W	3.3″ N 81° W	5.9″ N 18° E	9.3″ toward
Feb. 24	0.2″ N 40° E	2.6″ N 68° E	5.1″ N 6° E	19.8″ S 9° E	20.5″ from
March 3	1.8″ S 39° W	2.0″ S 75° E	3.1″ S 86° W	14.7″ S 6° W	8.0″ from

A. E. J.

DOCUMENT CAPTURED AS RECEIVED

The Volcano Letter

No. 419—Monthly U. S. Geological Survey, Hawaii National Park JANUARY, 1935

KILAUEA REPORT FOR JANUARY, 1935

Including weekly press reports 1198 to 1202
December 30, 1934, to February 3, 1935, midnight
Section of Volcanology, U. S. Geological Survey
T. A. Jaggar, Volcanologist in Charge

VOLCANOLOGY

The general situation in the Halemaumau pit bottom for the month of January shows much volcanic motion centering about Kilauea. The lava floor of September, 1934, is hot and uneasy, snapping noises are heard, the tilts about the pit are rather strong and in new places, the hot fume is increasing at the west edge of bottom of pit, and new cracks have appeared near the rim.

Slides at Halemaumau

January 1, forenoon, a few rocks heard falling at the north. January 2, after the strongish earthquake of 6:47 a. m. originating under Kilauea, slides were started, and the pit was watched, but no excessive sliding was reported. January 8, a collapsed rim crack south of Halemaumau indicated recent motion. January 13, at 10 a. m., a slide occurred southwest. January 14, at 9:37 a. m. rocks fell at the east. January 18, at 2:15 p. m., and at 2:30 p. m. lasting a half-minute, slides were reported. January 21, at 9:05 a. m., a fall of rocks occurred near the SW tunnels. January 22, at 9:30 a. m., after a faint booming noise, a few rocks fell, and at 10:09 a. m., a moderate slide occurred south, after other noises. Seven slides occurred in one half hour period. January 26, the excessive sliding on the SSW wall made a streak of dust to the bottom, where fresh debris lay on the south talus and floor; the falls had started 100 feet below the edge. January 27, small slides at the SSW wall occurred twice in the hour 8:40 - 9:40 a. m. January 29, a few rocks fell prior to 10 a. m. January 31, between 9 and 9:20 a. m., a few rocks fell NW and E. A track of a recent slide lay on NW wall through the middle of the 1934 lava cascades. February 3, in the forenoon dust rose from east wall; the slides there were renewed 12:40 p. m., 12:50 p. m., dwindling to 1:05 p. m.; slight sliding occurred continuously 1:30 to 2:30 p. m. The location was above the east talus. There was some sliding at south wall also.

Sounds in Halemaumau

January 1, a clanking noise was heard twice, seeming to come from the 1934 lava lake cup. January 14, at 9:40 a. m. a snap was heard toward the north. January 18, two cracking sounds were heard after 2:30 p. m. January 22, at 9:02 a. m. a loud boom was heard, a faint sound at 9:30, and dull sounds from the east end of the lake cup came at 9:41; at 9:45 a dull sound seemed to come from the bottom of SE wall; again at 9:56 from the SW bay; and from the NW part of the floor at 9:58 a. m.; slides occurred during this half-hour. January 25. One snap was heard NW. January 27, eleven snapping noises were counted between 8:43 and 9:02 a. m., averaging one every 1.7 minutes. The sound is like the blow of an underground hammer. The south wall was sliding slightly. January 31, 9 to 9:20 a. m., some dull thudding noises were noted, and a hissing noise was heard from the SW bay.

Solfataras, at Halemaumau

January 1, five fuming places were noted, at the E, NE, N, and NW taluses, and at the Yellow Solfatara, a vent at the northern base of the west cascades of 1934. January 8, with very heavy rains, there were thousands of steam jets on the hot floor, but not at the lake cup. The heaviest steam jets were at the Yellow Solfatara, and at NW and E taluses. January 10, after more rains, the fume over Halemaumau appeared dense. January 14, after rain, 19 places were steaming or fuming inside the pit. There were hot dry places at the base of talus slopes, which are heaps of broken bowlders extending down under the 1934 lava fill to a depth of 600 feet, and these are porus filters for hot gas. January 17, at noon, with strong southwest wind, the fume from the pit did not show. The vapor jets on the outer floor of Kilauea crater at the north, during such wind, are nucleated by invisible fume from the pit, and show scores of white jets. January 21, the yellow solfatara was strongly fuming. January 25, the heap of sulphur-stained sulphates at the Yellow Solfatara had increased and been washed by rain, and fume was still more voluminous. The solfataric bank on the NW talus showed pink, red, yellow, white and gray salts, with vapors presumably rotting the 1934 pumice, suggesting the Red Solfatara of 1921. January 29, with southwest wind blowing, both fume and vapor were moderate in amount in Halemaumau.

The cracks in the floor of Halemaumau, and elsewhere, were observed as follows:—

January 2, after the earthquake, the cracks and swellings of the floor showed some new features. January 11, new cracks were reported at the tourist stand SE. January 12, cracks were reported newly breaking the curb masonry 450 feet back from the rim of Halemau SE. January 19, this crack in the masonry at the pit measured 3 mm. January 21, the radial cracks on the floor southeast appear widening. One cross-crack has formed in the south floor. The marginal ridge in the floor all around exhibits large gaping cracks. January 25, eleven cracks radial from the cup were counted on the eastern half of the floor, and five or six more are on the western half.

Weekly measurement of 32 marked rim cracks around Halemaumau, resulted as follows:

Week ending forenoon

Jan. 5,	15 opened,	3 closed,	aggregate opening	12 mm.
Jan. 12,	8 opened,	5 closed,	aggregate opening	1.5 mm.
Jan. 19	12 opened,	1 closed,	aggregate opening	7 mm.
Jan. 26,	5 opened,	7 closed,	aggregate closing	0.5 mm.
Feb. 2,	14 opened,	2 closed,	aggregate opening	8 mm.

T. A. J.

EARTHQUAKES

TABLE

Week ending	Minutes of tremor	Very feeble earthquakes	Moderate earthquakes	Distant earthquakes	Local * Seismicity
Jan. 6	72	10	1	2	26.00
Jan. 13	26	3	0	0	8.00
Jan. 20	14	3	0	0	5.00
Jan. 27	18	5	0	1	7.00
Feb. 3	29	4	0	0	9.25

* For local seismicity index see Volcano Letter 371.

The following successive local disturbances began at the times indicated; the epicenters as shown were located from seismograms; when possible the depth of the source is indicated. The location of epicenters is based on three main

DOCUMENT CAPTURED AS RECEIVED

seismograph stations, Kilauea, Hilo and Kona. The intensity is that recorded on the Kilauea instruments.

Dec. 31, 1934, at 10:40 p. m. very feeble, was SW of Kilauea crater lat. 19° 21′ N long. 155° 19′W 12 mi. deep. It was reported felt near Kilauea crater.

Jan. 2, 1935, at 6:47:17 a. m. moderate, was under the Uwekahuna rim of Kilauea crater. 19° 25.5′ N 155° 17′ W. 2 mi. deep. Reports indicated that it was felt generally over the island of Hawaii, objects fell in Hilo, and a landslip was started in Halemaumau.

Jan. 8 at 2:09 p. m. very feeble, was near Kulani cone 19° 31′ N 155° 17′ W.

Jan. 13 at 1:33 p. m. very feeble, was 3 miles ENE of the Observatory 19° 26′ N 155° 13′ W and 4 mi. deep.

Jan. 17 at 11:35 a. m. very feeble, was probably at sea SE of the island, near 19° 15′ N 155° 0′ W.

Jan. 17 at 10:58 p. m. very feeble, was near Wood Valley, 19° 20′ N 155° 30′ W. It was reported felt at Kapapala Ranch near the epicenter.

Jan. 19 at 5:49 a. m. a tremor, was in Kilauea crater, probably near Byron's Ledge.

Jan. 21 at 0:02 a. m. very feeble, occurred 35 miles deep under the east slope of Mauna Kea, 19° 44′ N 155° 22′ W. It was reported felt along the NE coast of Hawaii.

Jan. 27 at 7:23 p. m. very feeble, was 30 miles deep under Puu Ulaula rest house on the Mauna Loa NE rift zone, 19° 31′ N 155° 29′ W.

Jan. 29 at 4:01 p. m. very feeble, was probably under the summit crater of Mauna Loa.

Jan. 29 at 6:41 p. m. a tremor, was probably near the Kealakekua Bay fault. It was felt and well recorded in Kona.

Jan. 30 at 9:51 p. m. very feeble, was probably on the chain of craters 7 miles SE of Kilauea.

Feb. 3 at 4:21 p. m. very feeble, was 2 miles ENE of Kilauea crater, 19° 26′ N 155° 14′ W, near the epicenter of Jan. 13.

The preliminary waves of a teleseism began recording at 8:16:50 a. m. Dec. 31, 1934. The secondary waves were missing, the long waves were missing, the long waves began to record at 8:32:08 a. m. It was about 3,400 statute miles distant.

The preliminary waves of a teleseism began at 2:58:12 a. m. Jan. 1, 1935. The secondary waves began at 3:03:49 a. m. It was about 2,500 miles distant.

The long waves of a poorly recorded teleseism began at 9:08 p. m. Jan. 22. The distance was unknown.

Microseisms were abnormal Jan. 2, 3, 4, 5, and Jan. 17 to Feb. 3. They were normal Jan. 6, 7, 9, 10, 12, 13, 14, 15, and 16; and subnormal the remainder of the time.

A. E. J.

TILTING OF THE GROUND

The table shows tilt by weeks from seismograms at Kilauea Observatory, northeast rim of Kilauea Crater; at Halemaumau, the readings from each clinoscope, and the algebraic sum of radial tilts for the three clinoscope cellars, towards or from the center of the pit.

At the Observatory the total accumulated tilt in the year ending February 3, 1935 is 2.3″ N and 0.2″ W.

TABLE OF TILT

Week Ending	Observatory	Halemaumau Clinoscope Stations			
		North	West	Southeast	Pit Resultant
Jan. 6	0.8″ N 28° E	23.6″ S 28° E	28.1″ S 16° W	160.0″ N 20° W	185.0″ toward*
Jan. 13	1.7″ S 66° W	7.3″ S 71° W	7.7″ N 12° W	3.4″ S 4° E	2.9″ toward
Jan. 20	2.2″ S 52° W	2.3″ S 26° W	2.8″ N 25° W	33.6″ S 17° W	20.4″ from
Jan. 27	1.4″ S 55° W	5.1″ N 86° E	1.9″ N 58° W	4.3″ S 3° E	4.4″ from
Feb. 3	1.0″ S 3° W	0.3″ N 25° E	2.2″ N 23° E	9.2″ N 4° E	5.3″ toward

* Southeast station dismantled by earthquake of January 2, 1935.

A. E. J.

DOCUMENT CAPTURED AS RECEIVED

Form No. 1009—Met'l.

U. S. Department of Agriculture, Weather Bureau.

COOPERATIVE OBSERVERS' METEOROLOGICAL RECORD:

Month of June, 1935; *Station,* Volcano Obsy.; *County,* Hawaii

Hour of Observation, 8 a.m.

State, Hawaii; *Latitude,* ____; *Longitude,* ____; *Time used on this form,* H.S.T.

DATE.	TEMPERATURE. Maximum. 1	Minimum. 2	Range. 3	*Set Max. 4	PRECIPITATION. Time of Beginning. 5	Time of Ending. 6	†Amount. 7	Hum. Shaklell, in Inches. 8	Wind. Depth of Snow on Ground at Time of Observation. 9	Prevailing Wind Direction. 10	Character of Day, Sunrise to Sunset. 11	‡Miscellaneous Phenomena.
1	70.5	55.2	15.3	60.0			.05	92	Lt.	ENE	Cldy a.m.	
2	71.8	55.6	16.2	6.10			.21	88	Lt.	NE	P.C. Pt.sunny	
3	75.0	56.6	18.4	62.2			.02	88	Lt.	WSW	P.C. rainy	
4	73.0	55.8	17.2	64.2			.24	90	Calm	ENE	Clear a.m.	
5	74.9	54.6	20.3	67.2			.03	86	Calm	ENE	Clear a.m.	
6	67.5	60.8	6.7	61.8			.37	92	Lt.	NE	Rainy a.m. foggy	
7	67.2	59.0	8.2	61.4			.43	95	Lt. toMod.	NE		
8	68.0	56.9	11.1	66.1			.04	88	Slt.	SE	P.C. a.m.	
9	73.7	59.2	14.5	62.2			.09	89	Lt.	W	Cldy	
10	71.8	54.7	17.1	66.7			.04	86	Lt.	NE	Clear a.m.	
11	71.9	54.7	17.2	65.3			.01	85	Mod.	ENE	P.C.	
12	72.0	55.2	16.8	61.0			Tr.	84	Mod.	NE	Clear a.m.	
13	71.2	56.0	15.2	59.0			Tr.	95	Mod.	NNE	P.C.	
14	70.2	54.8	15.4	63.2			.00	90	Mod.	NE	P.C.	
15	67.5	56.8	10.7	60.3			.21	92	Mod.	NE	Rain	
16	72.5	53.8	18.7	63.9			.01	85	Str.squally	NE	Clear a.m.	
17	70.5	58.0	12.5	60.7			.06	94	Str.	NE	Cldy a.m.	
18	70.3	58.2	12.1	61.0			Tr.					
19	68.2	55.5	12.7	60.0			Tr.	96	Strong	ENE	Misty	
20	72.5	54.5	18.0	62.2			.02.	85	Lt.	NE	P.C. a.m.	
21	72.0	53.0	19.0	71.5			.02.		Str.	NE	Clear	
22	73.2	53.7	19.5	62.8			.01	92	Calm	NE	P.C.	
23	69.3	55.8	13.5	58.3			.14	89	Lt.	NE	Cldy.Lt.rain	
24	73.4	53.7	19.7	66.0			.02	85	Slt.	NE	Clear a.m.	
25	74.5	55.2	17.3	62.3			.04	85	Mod.	NE	P.C. a.m.	
26	70.8	58.4	14.9	62.2			.07	90	Lt.	NE	P.C. a.m.	
27	70.5 67.3	58.9	11.6	64.5			.28	84	Lt.	NE	P.C. a.m.	
28	70.0	58.0	12.0	63.0			.35	75	Mod.	ENE		
29	67.3	54.6	12.7	60.5			.08	92	Mod.	NE	Cldy. drizzle and fog a.m.	
30	71.4	53.5	17.9	63.2			.23	95	Str.	NE	P.C. a.m.	
31												
Sum	213.3	1681	452	1884			3.07	2487				
Mean	71.1	56.0	150	628			0102	88.8				

*Reading of maximum thermometer immediately after setting.
†Including rain, hail, sleet, and melted snow.
‡Thunderstorms, halos, auroras, etc.

(IN TRIPLICATE.) See cover for instructions. 8—253

E. A. Jaggar, H.H.W., *Cooperative Observer.*

Post-Office Address, Hawaii National Park

MONTHLY SUMMARY.

TEMPERATURE.

Mean maximum, 71.1

Mean minimum, 56.0

Mean, 63.5

Maximum, 75.0; date, 3

Minimum, 53.0; date, 21

Greatest daily range, 20.3 on the 5th

PRECIPITATION.

Total, 3.07 inches.

Greatest in 24 hours, .43; date, 7

SNOW.

Total snowfall, ____ inches; on ground 15th, ____ inches;

at end of month, ____ inches.

NUMBER OF DAYS—

With .01 inch or more precipitation, 25

Clear, 7; partly cloudy, 12; cloudy, 9

DATES OF—

Killing frost, ____

Thunderstorms, ____

Hail, ____

Sleet, ____

Auroras, ____

REMARKS.

Fog - Light - 6,19,25,and 29

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

July 6, 1935

The Superintendent
Hawaii National Park.

Dear Mr. Wingate;

The following is the report of ranger activities during the month of June.

000 General

010 - The ranger department activities during the month covered a wide range: Recreational, educational, protection, maintenance of telephone lines, painting and repairing signs, and surveys.

020 - Weather conditions
The total rainfall at the Summer Camp was 1.78 inches compared to 1.59 inches of last month and at the Volcano Observatory the total rainfall was 3.07 inches compared to 3.13 inches last month.

100 Administration

110 Status of Work
The rocklinging ditches and riprap of shoulders on Uwekahuna road is complete. The oiling of the shoulders on Uwekahuna road is also complete. Clearing, restretching and replacing new poles on the telephone lines was 86% completed at the end of the month.

120 Park Inspections
Routine ganeral park inspections were made and also inspections on all the work in progress.
A three day trip was made to Mauna Loa by Temporary Ranger McKenzie. The purpose of this trip was partially to inspect and haul horse feed for the future chartered parties. He was accompanied by three park visitors and the Temporary Assistant Clerk here in the office.
Trips to Bird Park, Giant Koa, and Mauna Iki were made by Ranger Waesche and Ranger Murray.
District Ranger Peck made routine inspections at Haleakala and also made a number of trips through the crater, one to Kaupo with a party of tourists and another with the Superintendent.
Twenty one days were spent by Ranger Lamb at the Haleakala section on the Silversword project.

CC

DOCUMENT CAPTURED AS RECEIVED

170 Plans, Maps and Surveys

Two days were spent with Mr. Cannon of the Mutual Telephone Company of Hilo, surveying the land for relocation of the Hilo telephone line.

200 Maintenance, Improvements and New Construction

The usual maintenance of roads, trails, telephone lines, trucks and other equipment was carried on during June.

The cantoneers at Haleakala are still improving the road drains by lining them with flat stones. The contractor completed the new garage on Haleakala within the specified time.

Telephone lines were patrolled and repaired.

The Mauna Loa trail as far as the Giant Koa was cleaned and repaired.

Settlement of the road at Aloi Crater, caused by the edge of crater settling on southwest side, formed a large crack opening across the road. This was repaired immediately.

300 Activities of Other Agencies in the Park

310 Park Operators

The usual monthly dance was held at the Volcano House on June 22.

The clubroom addition at the Volcano House which was approved by Washington has been started and is expected to be completed by the twentieth of July.

The steam heat system which is being installed at the Volcano House is about 90% completed. This system has been extended to the dining room making it much more comfortable for the guests.

The squad room at the Kilauea Military Camp has had the walls lined and the ceiling sealed with canex.

400 Flora, Fauna and Natural Phenomena

410 Ranger, Naturalist and guide Service.

Ranger Murray, Lamb, and Waesche each spent some time assisting the Park Naturalist in contact work, conducting trips, etc.

On June 1, Gordon McKenzie entered on duty in this Park as a Temporary Ranger. And On June 3, Ranger Waesche was transferred to the Observatory to take up work under Dr. Jaggar.

500 Use of Park Facilities by the Public

Rev. Skinner, of the Hilo Mission, with two groups of children, were visitors of the park during the month of June and they were conducted on four nature hikes.

Dr. Woodward, of the Veteran Bureau, spent two days in the Park. He was accompanied by the Chief Ranger for a tour of the Park and also for an inspection of the E.C.W. Camp. He remarked that our camp is outstanding in comparison to others on the mainland.

DOCUMENT CAPTURED AS RECEIVED

A group of Y.M.C.A. boys, under the leadership of Mr. Lucas, of the Hilo Boarding School, were conducted on many hikes to various points of interest in the park during their stay at the Westervelt Camp.

Mr. W. E. Kerr, Mr. Gerson, and Dr. Woodward, visitors to the park, were accompanied on a trip through Bird Park by the Chief Ranger.

Mr. Harlee Branch, Assistant Postmaster General, and Acting Honolulu Postmaster John Wilson, were visitors of the park on the fifth of June.

On June 3, 191 R.O.T.C. Cadets off of the U.S.S. Tennessee visited the park.

600 Protection

610 Police Protection

The usual patrols were made of both Kilauea and Haleakala sections.

620 Fire Protection

The C.C.C. made rapid progress during June in removing fire hazards in the form of staghorn ferns, along the trails and highways.

Number scheme of buildings and fire regulations were placed in all employees residences.

Inspection of fire hazards were made to Hilina Pali, Giant Koa, and Fire Kipuka.

630 Accidents

No accidents were reported during the month of June.

640 Destruction of predatory animals

The Chief Ranger deputized Temporary Ranger McKenzie as game warden to eradicate the pigs because they were destroying the vegetation at Kilauea Iki and Puu Huluhulu. Five were captured and killed. It is recommended to keep this in practice until all the pigs have disappeared from these two places.

650 Signs

Signs were repaired and painted as required.

660 Sanitation

Gutters on residents were cleaned and comfort station pits were refilled.

Very respectfully,

Joseph H. Christ

Joseph H. Christ
Chief Ranger

DOCUMENT CAPTURED AS RECEIVED

000 - General

Fifth summer school session, June 17.

020 - Gen. Weather Conditions

Christ - Include Max & Min Temperatures

100 - Administration

110 - Status of Work

Christman eod 12th. Whitney returned Honolulu 1st. Estimates mailed on 16th. - Filing ?? [illegible]

120 - Park Inspections By:

121 - Supt.

122 - Special Field Representative

Sager on Maui 12th to 21st.

130 - Finace and Accounts

A detailed report of appropriations for this park is attached.

~~140 - Labor Situation ????~~ - Nothing to report

~~150 - Equipment and Supplies~~

Christ and Higashida

170 - Plans Maps and Surveys

Christ

180 - Circular, Placards, Publicity Bulletins, etc.

Three press memoranda were prepared and released during June. (are attached) [illegible]

200 - Maintenance, Improvements and New Construction

210 - Maintenance
220 - Improvements
230 - New Construction

} Chief Ranger.

Haleakala garage finished? Yes, completed within contract time.

DOCUMENT CAPTURED AS RECEIVED

300 - Activities of Other Agencies in the Park

310 - Park Operators - Christ

320 - Cooperating Govt. Agencies???

400 - Flora, Fauna, Natural Phonomena

410 - Ranger, Naturalist and Guid Servi ce

Christ & Doerr

420 - Musdum Service

Doerr, including report on slingstones - tuing into actual facts only

480 - Natural Phenomena

Volcanc Reports

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

Hagashida

530 - Special Visitors

Doerr & Christ

600 - Christ

900 - Miscellaneous

Volcano House Dance 6/22

FBA meeting and dinner, selection of officers, 6/21 Meier

Hilo alumni -

elected were James Higgins pres. R A Anderson

v.p. R. A Bradford secy. + treas.

Art Fens exec. Com. aPoha

JBJ.

DOCUMENT CAPTURED AS RECEIVED

000

On June 17 the 5th annual Volcano session of the University of Hawaii Summer School commenced. As in the year previous the headquarters of the school and all classes are at the Volcano House. There are six instructors in attendance and nine different courses are offered. The Superintendent was particularly pleased to note that the registration of 84 students while less than last year considerably exceeded his estimate.

The summer school fare in the park quarters under many difficulties, principally due to lack of suitable class room, ~~and~~ laboratory and library space. A public hotel is hardly an appropriate or desirable place to conduct such work and it is hoped that before another summer comes funds will have been made available for the construction of the proposed Volcano Observatory and Naturalist Building which if built according to plan will enable the removal of most of the school activities from the hotel.

Following the plan inaugurated last year the University of Hawaii is cooperating with the park in conducting a series of weekly evening lectures for the benefit of the public. The Park Naturalist is in charge of these programs which continue to meet with very enthusiastic public response.

DOCUMENT CAPTURED AS RECEIVED

120 Park Inspections
121 - Safety.

While at Kilauea headquarters from the 1st until the 18th the Superintendent made routine inspections of such projects as were in progress, and examined the food and hotel buildings for fire hazards. Frequent visits were made to the fire pit of Kilauea Volcano.

On June 19 the Superintendent left Kilauea Headquarters for an extended inspection of park and CCC activities in the Haleakala Section on the island of Maui. (Not to be removed until the end of the month.) In company with Engineer A. H. Wang, Associate Architect M. S. Boyer, District Ranger J. A. Park and Ranger S. H. Zantt he inspected the new location survey for the Halemauu trail. This trail, for which additional funds will probably be needed, will when completed be not only spectacular in every respect but also avoid the constant erosion which makes the present Halemau-u trail for most of its length unsafe and dangerous, and wasteful to repair. Three days were spent in the crater of Haleakala inspecting CCC trail work and the various springs which supply water for the camps. One day was spent inspecting the route of a proposed sky line trail along the south rim of Haleakala. An early morning trip over the Haleakala road was made for the purpose of checking on a few complaints that due to lack of guard rails or other markers along curves in the road driving was hazardous. Inspection

DOCUMENT CAPTURED AS RECEIVED

120
121

failed to reveal any serious hazard except to those who exceed the speed regulations. However, District Ranger Peck was requested to have the road contractors place shoulders along the outside of several curves. These should serve until the surfacing is completed and the center line marked with paint. Three inspections were made of the work in constructing a garage at the site of the proposed Ranger station. On the final inspection the garage was completed and the work accepted by the Superintendent. While on Maui the Superintendent accompanied Mr. J.E. Ryan of the Matson Navigation Company and Chamber of Commerce officers on a tour of inspection of tourist facilities and roads in central Maui. At a dinner that evening moving pictures were shown of a recent trip through the crater of Haleakala on which Ranger Peck had served as guide. Contacts were made with many residents of Maui and as usual the Maui people were most friendly and anxious to show their interest in the park and its development. While in the crater many silversword were found in flower and a trip into the crater is unthinkable if for no other reason than to see one of these gorgeous flowers. The old rest house was inspected and the E.C.W. Camp Christo was requested to have the interior given a thorough cleaning and the walls given a coat of white paint. This house has been used by the CC for the last eight months.

DOCUMENT CAPTURED AS RECEIVED

42
55
139
154
390

170 Plans Maps Surveys.

The location survey of the new Helemano Trail was inspected and some changes suggested of practicable. The work was approximately 80% complete at the end of the month. — — Chas Christ —

180 Circulars etc

The fourth circular of general information was drawn in Hawaiian by the Hilo Daily Herald for a special fleet edition which was gotten out in a week when two ships from the U.S. fleet visited Hilo for a few days.

480 Natural Phenomena

Following two weeks of relative quiet at the beginning of the month the Hawaiian volcanoes again became a center of considerable disturbance, and popular and scientific interest and speculation. There were a total of 390 seismic disturbances registered on the Observatory seismographs by weeks as follows: week ending June 9, 42; week ending June 16, 55; week ending June 23, 139; week ending June 30, 154. These disturbances ranged from tremors to strongest and weakest earthquakes. Distances to and locations of these disturbances would seem to indicate that both Kilauea and Mauna Loa domes were uneasy and while an increase in seismic activity usually comes coincident with the summer solstice the number of disturbances registered for equals, that for similar periods during any recent years.

DOCUMENT CAPTURED AS RECEIVED

480 cont'd

On June 28 at 9.00 AM a strong earthquake occurred. It was located under the region somewhere between Kilauea and Hilo. (At 14 miles from the Observatory.) It was the strongest quake felt on the east side of the island since about 1907 and did some damage as well as causing some alarm in Hilo where its effect was most noticeable. Chinaware, pictures and similar objects were thrown down. Some walls were cracked. Heavy objects such as refrigerators were moved an inch or more. A concrete sidewalk was buckled up. A concrete verandah sank an inch. Other small damage was noted. This quake was felt only lightly in the North and West sides of the island.

A moderate quake located beneath Kilauea crater but which did no damage occurred on June 25 at 0.45 AM. It was especially noted in Hilo, Papaikou, Honokaa and on the northeast rift of Mauna Loa by hikers sleeping in the rest house. The Kona district on the west side of the island was shaken by a quake which did no damage at 8.14 AM on June 27.

There were several other quakes reported felt in different sections of the island during the month.

Judging from the walls of Kilauea fire pit while frequent throughout the month was noticeably increased by the earthquakes above mentioned.

480 cont'd

Measurement of sun cracks continues to reflect the uneasy condition of Kilauea crater though no particularly interesting or striking movements have been noted. On June 29, fresh cracks were noted in the rock bed of the NE and WNW rims of Halemaumau.

The volume of sulphur fume issuing from vents in the floor of the pit apparently has increased since the odor of hydrogen sulphide was detected by visitors to the pit on June 28. and also noticed by an observing party running levels along the west side of the pit on June 21.

530. Special Visitors

On June 2 the park was visited by officers and men from the U.S.S. Utah and Memphis. The serving officers of these ships were entertained at a luncheon given in their honor by Mr. James Henderson and held at the Volcano House. Among others the guest officers included Admiral Stirling, Chief Naval Bureau of Operations, General — Lyman, — Marine Corps and Dr — Hornbeck Chief of the Bureau of Far Eastern Affairs of the Department of State. The Superintendent, Dr. T.A. Jaggar, Camp Director H.S. Rivatayat and Pat Nollet Hoen attended the luncheon. The Supt made a short address of welcome and Dr. Jaggar and Mr. Rivatayat also spoke briefly. After luncheon the Superintendent conducted Dr. Hornbeck on a leisurely drive through the park while the Mr. Henderson entertained the others at golf.

DOCUMENT CAPTURED AS RECEIVED

On June 5, 2nd Assistant Postmaster General Hesler Beach paid a hurried visit to the park on his inspection tour of post offices on this island. He in his party included Mr. Arthur Grantham, Chief R.R. mail clerk, Honolulu, Mr. W.J. Miller and Mr. Rex Morton, of the Bureau of Accounts Department of Commerce; Mr. J.P. Van Zandt of the Pan American airways and formerly at Grand Canyon, Hon. Jas H. Wilson, Postmaster Honolulu, Mr. J Walter Doyle, Collector of Customs Honolulu; Judge Delbert Metzger and Hon S.A. Devore of Hilo. (See in news clippings for Ray Lemmons Fall Housing Comm.)

On June 12 Mr. and Mrs. Randolph V. Whitney, Grand Master of Masons in the jurisdiction of California and party were overnight guests at the Volcano House. They were given special attention by the Supt and Park Naturalist who with other means of the Volcano Dist entertained Mr. & Mrs Whitney at dinner.

95 On June 15 between three and four hundred of the alumni of the Hilo High School held their annual reunion dinner and dance at the Volcano House. Guest speakers for the evening were, Judge Norman Goldfeld, Hon Secord Spencer, Mr. Earnest Lilley and the superintendent.

DOCUMENT CAPTURED AS RECEIVED

CW
Martin Reynolds

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

July 1, 1935

Memorandum to Mr. Joseph H. Christ,
Acting Superintendent, Hawaii National Park.

Sir:

The following is a report of work accomplished under my direction during the month of June, 1935.

1. Completed repairs to Chain of Craters road at Aloi.
2. Completed road utility area.
3. Built temporary garage 22' X 22' next to Machine Shop.
4. Built partition on back porch at Quarters' #3
5. Painted interior of living-room, 2 bed-rooms bath-room, hall and kitchen, Quarters' #5.
6. Painting interior, Quarters' #13 - not completed.
7. Hauled supplies, built bulletin board and book shelves for Summer School.
8. Filled water tanks, Comfort Stations.
9. Hauled garbage, employees' quarters - 8 times.
10. Loaned one man to ECW three days, asphalted parking spaces, Chain of Craters road.
11. Eight trips to Hilo for material and supplies.
12. Over-hauled and repaired power grader.
13. Cleaned gutters of all buildings in Utility Area.
14. Installed shelves in closet, Quarters' #7.
15. Repaired stove, Quarters' #7.

EW

M R Crain Foreman.

DOCUMENT CAPTURED AS RECEIVED

July I, 1935

The Superintendent,
Hawaii National Park,
Hawaii.

Dear Sir:

Following is the report of my time, by hours for the month of June, 1935.

Work on cars and trucks	86	Hours
Warehouse	I5	"
Pumping water	I4	"
Repairing tools	I0	"
" Grader	I0	"
Siren	5	"
Check in gasoline	5	"
Clean, repair and paint kerosene cook stoves	5	"
Check in rock crusher and screen equipment	4	"
Uwekahuna light plant	4	"
Dr. Jaggers banana wagon	3	"
Dressing tools	2	"
Check in kerosene	2	"
Patching tubes	2	"
Repair County truck (road roller)	2	"
Clean air compressor for painting	2	"
Repair pump for road oil	2	"
Fill all car batteries	2	"
Assemble fertilizer spreader	2	"
Service cars	2	"
Test and mark new oil torches	2	"
Repair lawn roller	I	"
Clean extra spark plugs	I	"
Dry fire hose	I	"
Make marking pins for suveyors	I	"
Repair batteries	I	"
Make screen for gravel	I	"
Install couplings in new suction hose for E.C.W.	I	"
Transfer motor oil to storage	I	"
Repair sprinkler for E.C.W.	I	"
Repair Tractor	I	"
Change telephone batteries	I	"
Sharpen lawn mower	I	"
Transfer gasoline to storage tank	I	"
Make weed cutters for E.C.W.	I	"
Clean lower garage	I	"
Marking new tools	I	"
Repair Jack on telephone exchange	I	"
Make bolts for telephone poles	I	"
Repair car for Park visitor	I	"
Total	200	Hours.

Submitted by,
F. F. Fischer,
F. F. Fischer
Mechanic.

DOCUMENT CAPTURED AS RECEIVED

Water pumped from the resorvoir during the month of June, 1935.

To the high tank		24,000 Gals.
Lava tube		300 "
Res. # I		5,000 "
Res. # 2		2,000 "
Res. # 6		3,000 "
Res. # 7		3,000 "
Res. # I0		I,000 "
	Total	38,000 Gals.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

June 8, 1935

The Director
National Park Service
Washington, DC

Dear Mr. Director:

Following is the report of activities for this park during May.

000 - General

The month passed without any events of particular importance occurring other than those appearing under the titles below.

020 - General Weather Conditions

The month was very dry until the 23rd, with high northeast winds, the total rainfall at the summer camp being 1.59 inches and at the Volcano Observatory 3.13 inches. The maximum and minimum temperatures were 75 and 49 degrees respectively. A detail report is attached.

100 - Administration

110 - Status of Work

The routine work is current with the exception of filing. Instructions for the preparation of the six-year program, 1937-1942, were received on April 26, and the first two weeks in the month were given to the preparation of this program, which was submitted by mail on May 18. On May 31 instructions were received concerning the preparation and submission of the final estimates which we were directed to submit not later than May 31. This was impossible, but every effort is being made to get the estimates into your office at the earliest possible date.

In accordance with Office Order 265 and a later communication from Mr. Ansel F. Hall, the park naturalist prepared a preliminary museum plan for this park. This was then submitted to Professor T.A. Jaggar for his comment and suggestions. This review has now been made and the plan is on the superintendent's desk. We hope to submit this plan at an early date as we feel it will be of some interest, embodying as it does, we believe, entirely unique features.

DOCUMENT CAPTURED AS RECEIVED

Clerk-stenographer Constance Whitney left on the 26th for Honolulu to confer with the assistant manager in charge of the Civil Service office regarding Civil Service matters.

120 - Park Inspections By:

121 - Superintendent

The usual routine inspection of the various projects in progress at Kilauea headquarters was made during the month as well as daily trips to the Kilauea fire pit. Following up the suggestion made by Dr. E. . Meinecke in his report on this park the superintendent, together with Associate Architect M.S. Sager and Foreman Robert Craik, inspected the Kipuka Puaulu (Bird Park) area on the 20th to locate a suitable spot for a shelter and picnic ground close to but outside of the kipuka. A particularly pleasant spot with sufficient level ground was found and the foreman directed to remove the existing shelter and dry toilets from the interior of the kipuka to the new location.

The cave-in on the Chain of Craters road at Aloi Crater, reported by Camp Superintendent W.J. Stephens, was inspected on the 23rd. It was found necessary to do considerable excavation and then lay a concrete slab over this crack, resting on solid rock on either side, then fill and resurface. The length of crack needing immediate repair was 30 feet.

130 - Finance and Accounts

A detailed statement of appropriations for this park is attached.

140 - Labor Situation

The enlarged ECW program under the Territorial Forestry Department, which is establishing a 300-man camp at Waimea on the north side of this island, is doing much to relieve unemployment among the younger men. However, one or two additional 200-man camps are needed.

150 - Equipment and Supplies

Screens for the rock crusher, one 60-tractor, which was transferred from ECW and to be used as power for the crusher, and one one and one-half ton Ford truck for the Haleakala section were received during May, in addition to miscellaneous items of supplies.

170 - Plans, Maps and Surveys

Ranger Waesche surveyed the proposed boundary of the Kilauea Military Camp for incorporation in the permit for a five-year extension of the present lease to reduce the acreage to comply with Washington orders. Ranger Peck and Engineer Wong are making a reconnaissance survey of the Halemau trail on Maui.

DOCUMENT CAPTURED AS RECEIVED

180 - Circulars, Placards, Publicity Bulletins, etc.

Two press memoranda were issued during May, copies of which are attached. An article written by the superintendent on the park and its volcanoes was published in both the Paradise of the Pacific, a monthly magazine and the special "Fleet" edition of the Honolulu Advertiser. On May 13 10,000 copies of the 1935 edition of the circular of general information for this park were received. This is a great improvement over the previous editions.

200 - Maintenance, Improvements and New Constructin

210 - Maintenance

A large crack which developed on the Chain of Craters road near Aloi Crater was repaired.

The rocklining of ditches and riprap of shoulders on Uwekahuna road is about 80% completed. Clearing, restretching and replacing new poles on the telephone lines was 75% completed at the end of the month.

Sixteen miles of telephone line were patrolled and repaired.
Trucks and cars belonging to the Park Service were overhauled
The cantoneers on Haleakala have finished patching broken spots in the road surface, also improving drainage system as well as keeping the road clean.

220 - Improvements

The shelter at Bird Park was moved from its present location to a new one selected by Associate Architect Sager, Foreman Craik and the superintendent.

230 - New Construction

A contract was let on the 27th for the construction of a garage at Haleakala

300 - Activities of Other Agencies in the Park

310 - Park Operators

Approval was received from Washington for the addition of a clubroom at the Volcano House and it is expected that work will start very shortly. The management also intends to installation a hot water heating system. This will be unique in that it will be the only heating system in existence on the Islands.

320 - Cooperating Governmental Agencies

The park naturalist completed a draft of a new permit to cover the five-year extension of the lease to the Kilauea Military Camp. This draft

DOCUMENT CAPTURED AS RECEIVED

was discussed with the chief ranger, park naturalist and Associate Architect M.S. Sager and after correction and incorporation of various suggestions the park naturalist was requested to take the matter up with the trustees of the Kilauea Military Camp.

Camp Adjutant Lt. C.W. Nist was relieved of duty on May 24 and was replaced by Lt. George Selman.

Numerous improvements are being made on walks, grounds and buildings at the camp by FERA men.

400 - Flora, Fauna and Natural Phenomena

410 - Ranger, Naturalist and Guide Service

Routine inspections have been made of all work in progress by the chief ranger. One trip was made to Mauna Loa by Rangers Waesche and Murray. The chief ranger also made inspection trips to Mauna Iki and Hilina Pali. Conditions at all three places were found to be satisfactory. District Ranger Peck also made routine inspections in the Haleakala section and reports that the silverswords are in bloom.

Considerable time was spent by Ranger Lamb inspecting the removal of exotic plants and of forest conditions in the Bird Park and Lava Tube areas. Rangers Murray, Lamb and Waesche each spent some time assisting the park naturalist in contact work, conducting trips, etc.

420 - Museum Service

On May 14 the park naturalist gave a lecture to the faculty of the Kapiolani School at Hilo on "Nature Study in the Schools," and on the 23rd one was given on "Character" to the PTA of the Hilo Union High School. Special evening lectures were given twice during May at Uwekahuna Museum, the subject being "The Eruption of Krakatoa". This lecture still continues to attract considerable attention.

The cataloging of books and museum materials was continued during the month.

The mapping of the trail at Bird Park has been completed by the park naturalist and an assistant. Twenty three numbered stations have been established along the trail and will be used as reference points. The location of nature trail labels has been indicated and the work of mapping the location of trees and characteristic forest growth back from the trail will be carried on as time permits.

460 - Birds

There has been a noticeable increase in the number of Chinese pheasants seen in the Kilauea section. A small covey of quail have been seen near headquarters on several occasions. These are the first seen in several years in this section of the park.

DOCUMENT CAPTURED AS RECEIVED

480 - Natural Phenomena

There was a total of 217 local seismic disturbances during May. Beginning the second week of the month sliding at the fire pit decreased very materially. On May 13 there were several large avalanches which loosened the block at the western edge of the scar a few feet west of crack #26. This block fell at noon with enough force to shake all the local seismographs, sending up thick dust and making a loud roar which could be heard at considerable distance. This event brought the active working of that part of the rim to a close. The long waves of the destructive earthquake in Baluchistan began to record at the Volcano Observatory at 11:57 a.m., May 30.

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

There was a total of 14,425 visitors to the Kilauea Section during the month as compared with 14,786 for May, 1935. District Ranger J.A. Peck reports from Haleakala that travel was good during the month. No accurate check is kept except on week-ends which he reports as averaging 129 cars and 641 people.

530 - Special Visitors

Among the 300 passengers on the SS Resolute, a German world cruiser, which stopped in Hilo on the first of May for one day, were a number of prominent and titled people, including Madam Agnes Roget deLisle, Prince and Princess Schaumburg-Lippe and Princess Anna Hohenlohe-Langenburg. Princess Hohenloe is a near relative of the former German Emperor and the Duke and Duchess of Bavaria. She seemed much pleased with the park and commented on the fine roads.

On the week-end of May 3-5 a group of boys from the Hilo Boarding School made a trip to the summit of Mauna Loa.

M. Jean Verhoogen of Brussels, who has been studying the volcanoes of this island under the direction of Dr. Jaggar, departed on the 26th. He has been appointed to establish an observatory for the Belgian government in central Africa. Before returning to the mainland he spent a few days on Haleakala. A number of the park staff went to Hilo to bid him "Aloha." While M. Verhoogen was in the park Rangers Murray and Waesche took him on a trip to the summit of Mauna Loa. On this trip Ranger Waesche discovered what he believes to be an old cinder cone which later covered by surrounding lava flows has now become exposed in the walls of Mokuaweoweo Crater by the collapse which formed the caldera and subsequent sliding. A more thorough investigation will be made later on.

DOCUMENT CAPTURED AS RECEIVED

600 - Protection

610 - Police Protection

The usual patrols were made of both Kilauea and Halekala sections.

620 - Fire Protection

The CCC made rapid progress during May in removing fire hazards, in the form of staghorn ferns, along the trails and highways. The chief ranger gave three lectures to the staff and CCC on fire control.

630 - Accidents

May 1 - A CCC truck and a Ford station wagon driven by G. Kodera of Glenwood collided at the bottom of the hill below the Volcano House. Damage sustained by the CCC truck consisted of badly smashed left front fender, bent front axle, left rear axle housing, drive shaft and broken springs. The station wagon was damaged beyond repair. Fortunately none of the occupants were seriously injured, though there were some cuts, bruises, etc. All necessary repairs to the CCC truck were made by Mr. Kodera.

650 - Signs

Ranger Murray reports that most of the month was spent by him in painting and erecting signs. This project is about completed with the exception of a few to be erected along the Crockett trail.

660 - Sanitation

Regular inspections were made of the comfort stations throughout the park.

900 - Miscellaneous

The superintendent gave three talks on the National Park Service at the Lyman Memorial House Museum in Hilo on May 7, 8 and 10.

The regular Volcano House dance was held on the 29th.

Very respectfully

Edward G. Wingate
Superintendent

GW

DOCUMENT CAPTURED AS RECEIVED

STATISTICAL REPORT NO. 8

FINANCE AND ACCOUNTS

MAY, 1935

SYMBOL	APPROPRIATION	ALLOTTED	EXPENDED & OBLIGATED	BALANCE
45415	Hawaii National Park, 1935	35,150.00	33,916.47	1,233.53
45406	Forest Protection and Fire Prevention, 1935	300.00	299.94	.06
44415.3	Hawaii National Park, 1934	31,392.55	29,399.80	1,992.75
4X391	Roads & Trails, Nat'l Parks, Emergency Construction Act June 19, 1934	25,275.00	13,945.20	11,329.80
4-03/5640.8	N.I.R., Int., Natl Parks, Roads & Trails, 1933-'35:	495,538.44	493,137.73	2,400.71
4-03/5640.14	N.I.R., Int., Natl Parks Service, 1933-'35:	11,250.00	11,088.19	161.81

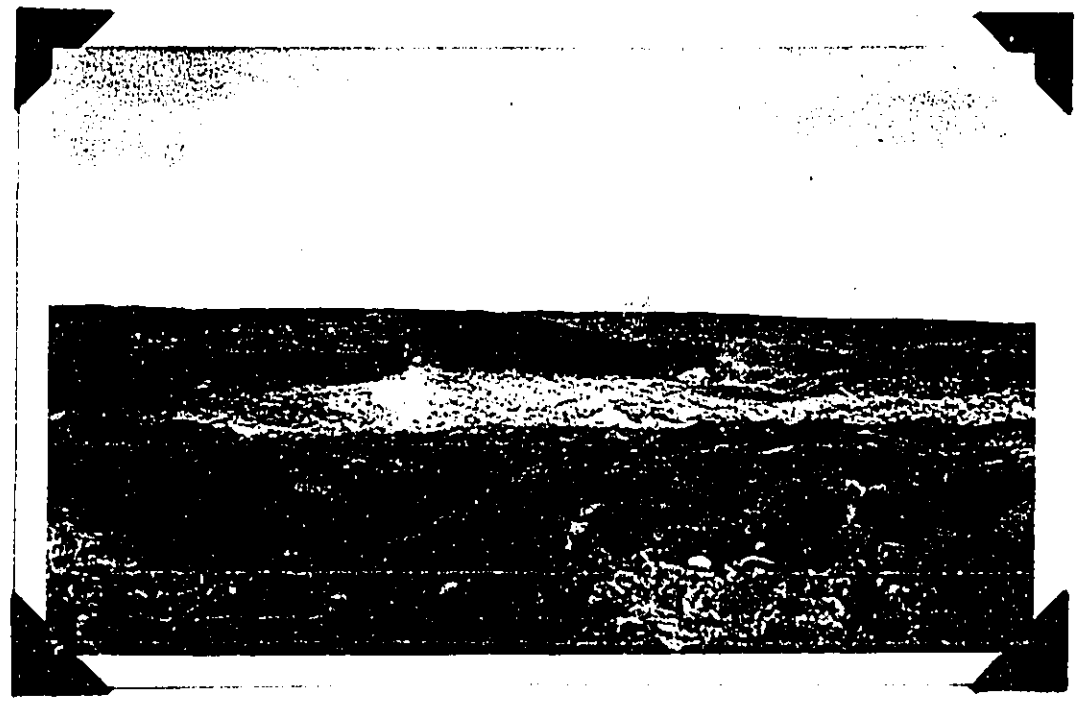
DOCUMENT CAPTURED AS RECEIVED

Views from new Kilauea Iki Trail

DOCUMENT CAPTURED AS RECEIVED

Gas vents on floor of Mokuaweoweo Crater, Mauna Loa. Photograph by Ranger Waesche.

DOCUMENT CAPTURED AS RECEIVED



Cinder cone (1914), floor Mokuaweoweo Crater, Mauna Loa. Photograph by Ranger Waesche.

DOCUMENT CAPTURED AS RECEIVED

CCC truck which was hit by station wagon (shown below) driven by G. Kodera.

Showing damage sustained by station wagon which crashed head-on into a CCC truck

DOCUMENT CAPTURED AS RECEIVED

10-157
(July, 1929)

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

TRAVEL REPORT

Hawaii National Park for the Month of May, 1935

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Decrease for Travel Year Number	Decrease for Travel Year Percent
PRIVATE TRANSPORTATION:						
Cars first entry, ...						
Cars reentry, ...						
Motorcycles, ...						
Total motor vehicles, ...						
Persons entering via motor vehicles, ...	13,530	123,960	13,883	126,941	2,961	.023
Persons entering via other private transportation, ...	244	1,398	293	1,888	490	.259
Total persons entering via private transportation, . . .	13,774	125,378	14,176	128,829	3,451	.282
OTHER TRANSPORTATION:						
Persons entering via Hotel stages, .	652	3,796	610	4,958	1,162	.234
Persons entering via trains, .						
Persons entering otherwise, . .						
Total other transportation, .	652	3,796	610	4,958	1,162	.234
GRAND TOTAL ALL VISITORS, . . .	14,426	129,174	14,786	133,787	4,613	.034

	This Year	Last Year	Increase Number	Increase Percent
Automobiles in public camps during month, ...				
Campers in public camps during month, ...				

DOCUMENT CAPTURED AS RECEIVED

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Kawaii National Park for the Month of Mg, 1935

	This Year	Last Year
Park revenue on hand beginning of month, ...	0.00	0.00
Received, ...	125.00	125.00
Total, ...	125.00	125.00
Remitted, ...	125.00	125.00
On hand close of month, ...	0.00	0.00

Park revenues received this year to date, ...	475.00
Park revenues received last year to date, ...	475.00
Increase, ...	0.00
Per cent of increase, ...	.000

DOCUMENT CAPTURED AS RECEIVED

10-158

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Hawaii National Park for the Month of May, 1935

Description of Projects	Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
516 Utility Area Road, Paving (FA)	98	3	5	
517 Location Survey, New Haleman Trail, HPS (FA)	2	2	0	
518 7 Haleakala Road Landscaping	100	0	0	
520 Haleakala Road, Post Construction (FA)	20	12	8	
521 Post Construction, Uwekahuna-Bird Park Road (FA)	80	40	40	

DOCUMENT CAPTURED AS RECEIVED

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Hawaii National Park for the Month of May, 1935

	This Month				This Month Last Year	
	Appointed		Non-Appointed		Appointed	Non-Appointed
	Reg.	P.W.	Reg.	P.W.		
Number of employees beginning of month	12	2	0	7	16	3
Number of additions	0	1	0	1	0	3
Total	12	3	0	8	16	6
Number of separations	0	0	0	1	0	4
Number of employees close of month	12	3	0	7	16	2
Number of promotions during month	0	0	0	0	0	0
Aggregate amount of annual leave taken	5½	0	0	0	0	0
Aggregate amount of sick leave taken	1-7/8	0	0	0	0	0
Aggregate amount of leave without pay	0	0	0	0	0	0

DOCUMENT CAPTURED AS RECEIVED

10-161

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF SALES OF PUBLICATIONS

Hawaii National Park, T. H. **May, 1935**

	Number	Value
GOVERNMENT PUBLICATIONS:		
On hand beginning of month,	855	150.25
Received during month,	0.00	0.00
Total,	855	150.25
Sold during month,	7	.70
On hand at close of month,	848	149.55
NON-GOVERNMENT PUBLICATIONS:		
On hand beginning of month,		
Received during month,		
Total,		
Sold during month,		
On hand at close of month,		

Cash on hand beginning of month,	11.52
Sales during month,	.70
Total,	12.22
Remitted during month,	2.00
Balance,	10.22

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK

May 1, 1935

PRESS BULLETIN
FOR IMMEDIATE RELEASE

Many of his friends and acquaintances will be pleased to learn of the recent appointment of Joseph H. Christ from District Ranger to the newly established position of Chief Ranger, Hawaii National Park.

Chief Ranger Christ is well known in the Islands, having come here from Mississippi about 23 years ago. He entered the Park Service as a Ranger in March 1929, was promoted to District Ranger in September 1933 and appointed Chief Ranger, March 16, 1935.

Ranger J. A. Peck was appointed District Ranger, March 16, 1935, filling the vacancy left by Chief Ranger Christ.

District Ranger Peck transferred to Hawaii National Park in August, 1933. He has been in the Service nearly eleven years, nine years of which were served in Sequoia and General Grant National Parks.

Immediately after receiving notification of his appointment from Washington, Ranger Peck was transferred to the Island of Maui to take charge of the Haleakala section of the Park.

P.F.M.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
Hawaii National Park

PRESS BULLETIN
FOR IMMEDIATE RELEASE

EDWARD G. WINGATE, SUPERINTENDENT

The office of the superintendent has released the following interesting information pertaining to the ECW camp established in Hawaii National Park, January 24, 1934.

From the time of its inception up to and including March 31, 1935, 295 boys were enrolled in the CCC. Sixty three were discharged for various reasons. Some enrolled for two periods of 6 months each.

The total number of boys enrolled by nationality follows:

Hawaiian	102
Japanese	98
Portuguese	37
Chinese	16
Filipino	13
Puerto Rican	12
Korean	10
American	3
German	2
Polish	2

The total number of boys enrolled by districts:

Hilo	125
Puna	50
Kona	43
Kau	24
Kohala	17
Hamakua	9
Maui	27

Total expenditures by districts:

Hilo	$111,118.96
Puna	36,477.11
Kau	6,429.42
Kona	11,554.83
Kohala	4,275.00
Hamakua	1,171.00
Maui	13,826.92
Honolulu	9,158.73
Mainland	6,045.31
TOTAL	$200,657.28

DOCUMENT CAPTURED AS RECEIVED

It is of interest to the people of Hawaii to note that of the total amount expended all but $6,045 was spent in the Islands.

Salaries for the CCC boys and the supervising personnel claimed a little over one-half of the entire expenditures. Supplies, which include trucks, tools, equipment, etc. claimed about one-third and food about one sixth. Actual figures as follows:

Salaries and wages	$104,662.31
Supplies	72,707.00
Food	33,287.97

The food must have been very good for official statistics show that the boys gained on the average of 9¾ pounds each. Some liked the change from the food they had been used to and some ate more than they needed which possibly was responsible for a number of appendicitis operations. Hospitalization and medical supplies alone amounted to $3,743.07.

It is well known that the expenditure of these funds has been of real benefit to the various communities in the Islands- it has all been "new money." The good done to the boys is no doubt of much more value than the actual money received by them. It has taught them a certain degree of discipline which is essential in all walks of life. It built them up both morally and physically. It taught many of them trades whereby they might secure employment with firms that would pay them more than they received while in the CCC

Many important and useful projects have been completed since the camp was established. Roads and trails were repaired, fences built, fire hazards eliminated, road shoulders rounded and seeded with grass to prevent erosion, general landscaping of the park, telephone lines built and others repaired, firewood cut and hauled, and noxious plants removed.

DOCUMENT CAPTURED AS RECEIVED

The camp will remain until the end of June, 1936, according to information received recently from Washington.

- - - - -

The Civilian Conservation Corps boys in Hawaii National Park have a record of which to be proud. During the recent Community Chest drive they made a 100% donation, 150 of them giving $75 for this worthy cause. Every boy in the camp donated something. The supervisory personnel also contributed generously.

Many business firms request only one day's pay from their employees. The average donation of the CCC boys is equivalent to three days' pay considering that they have only five dollars a month each for spending money.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

May 3, 1935

GENERAL OFFICE ORDER NO. 34

SUBJECT: HOURS OF WORK AND ANNUAL LEAVE

During the past year, I have noticed that the permanent employees of this park have been negligent in the matter of making requests in advance for annual leave and in turning in leave cards for small amounts of leave taken during working hours.

In the future, no leave is to be taken without prior authority and a leave card is expected. This includes all leave of whatever kind taken during the hours of duty as specified in Office Orders No. 14, 15 and 16 and this order is also made applicable to the employees of the Naturalist Division.

Edward G. Wingate

Edward G. Wingate,
Superintendent.

DISTRIBUTION:

Superintendent	1
Chief Clerk	1
Park Naturalist	1
Chief Ranger	1
Bulletin Boards	2
Files	1
Director	2
Monthly Report	7

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

May 3, 1935

GENERAL OFFICE ORDER NO. 33,
REVISING GENERAL OFFICE ORDER NO. 8

SUBJECT: TELEPHONE SERVICE

In order that there shall be no conflict between my Memorandum to the Staff dated March 9, 1935 and General Office Order No. 8 dated August 23, 1932 Paragraph 4 of Office Order No. 8 is hereby rescinded.

Edward G. Wingate

Edward G. Wingate,
Superintendent.

DISTRIBUTION:

Superintendent	1
Chief Clerk	1
Ranger Office	1
Files	1
Bulletin Board	1
Chief Ranger	1
Park Naturalist	1
Director	2
Monthly Report	7

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

March 9, 1935

MEMORANDUM TO THE STAFF:

Subject: Personal Telephone Communications

The use of the park switchboard connections for personal telephone calls outside the park will be discontinued effective March 10. This office will try to have a pay phone installed for the use of employees for such calls. Failing this the telephone at the Volcano House will have to be used for all personal calls.

Edward C. Wingate
Superintendent

ECW/ew
Copies to:
Acting Chief Ranger Christ
Park Naturalist Doerr
Ranger Waesche
" Lamb
" Murray
" Peck
Foreman Craik
Warehouse
ECW office
Mr. Sager

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

May 2, 1935

GENERAL OFFICE ORDER NO 32,
REVISING GENERAL OFFICE ORDER NO. 18

SUBJECT: Designation of Uniform Material of Hawaii National Park.

The second paragraph of General Office Order No. 18 is revised to read as follows: "In accordance with these instructions, the uniform material for Hawaii National Park shall be elastique for both regulation every day use and for dress uniforms. The staff is authorized, if a light-weight uniform is desired, to have this made of tropical worsted. All new uniforms purchased must conform to this order and to National Park Service Office Order No. 258.

Edward G. Wingate

Edward G. Wingate,
Superintendent.

DISTRIBUTION:

Superintendent	1
Park Staff	1 each
Bulletin Board	1
Director	2
Monthly Report	7

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

May 2, 1935

GENERAL OFFICE ORDER NO 31

SUBJECT: ANIMALS OWNED BY PARK EMPLOYEES

Rule 13 of the General Regulations for the Hawaii National Park reads in part as follows: "Provided, however, that employees and others may be authorized by the superintendent to keep dogs in the park administrative areas on condition that they are kept within the confines of these areas, and subject to such further conditions in the interest of good park administration as may be determined by the superintendent".

The policy of previous superintendents has been upon proper application by the employee or other person to issue a permit with the proviso that the animal be kept on leash. I have no intention of departing from this policy, but understand fully that a dog cannot always be kept tied. In order that the animal may have sufficient exercise, there is no objection for it to run loose for an hour or two during the day, or better still, the employee should provide a wire cable to which the dog's leash may be attached and thus provide a means for reasonable amount of exercise.

Employees of this Park are requested to immediately provide the Chief Ranger with a complete description of all animals owned by them, so that a proper permit may be issued. The Chief Ranger is directed to remove from the Park all animals not so reported, or for which, permits have not been previously issued.

Edward G. Wingate
Superintendent

2 Copies Director
7 " Monthly report
1 Copy File
1 " Bulletin Board
1 " Each of Staff

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

May 3, 1935

GENERAL OFFICE ORDER NO. 16 (REVISED)

SUBJECT: HOURS OF DUTY FOR OFFICE FORCE

Please insert this page in your file of General Office Orders in place of Office Order No. 16 which may be destroyed.

1. The hours of duty of the office force of Hawaii National Park will be as follows:

2. 8 a.m. to 12 noon, 4 hours. 1 to 4:30 p.m., 3½ hours. Total per day, 7½ hours.

3. The lunch hour will be from 12 noon to 1 p.m.

4. In order to meet existing mail schedules, the Staff is required to work a full day Saturday and a half day Sunday. Time off on Sunday afternoon, Monday and legal holidays will be granted whenever possible. Work on these days and such overtime on regular working days as may be necessary to keep office work current, or to get reports, or correspondence completed in time to connect with boat mails, will be required.

Edward G. Wingate
Edward G. Wingate,
Superintendent.

DISTRIBUTION:

Director	2
Monthly Report	7
Files	1
Bulletin Board	1
Park Staff	1 each

DOCUMENT CAPTURED AS RECEIVED

Form No. 1009—Met'l.

U. S. Department of Agriculture, Weather Bureau.

COOPERATIVE OBSERVERS' METEOROLOGICAL RECORD:

Month of MAY, 1935, 192 ; *Station,* VOLCANO OBSY. ; *County,* HAWAII

State, HAWAII ; *Latitude,* ; *Longitude,* ; *Time used on this form,* ; *Hour of Observation,* 8:00 A.M. H.S.T.

DATE.	TEMPERATURE. Maximum.	Minimum.	Range.	*Set Max.	PRECIPITATION. Time of Beginning.	Time of Ending.	†Amount.	Depth of Snow in Inches.	WIND. Time of Observation.	Prevailing Wind Direction.	CHARACTER OF DAY, SUNRISE TO SUNSET.	‡ MISCELLANEOUS PHENOMENA.
	1	2	3	4	5	6	7	8	9	10	11	
1	74	54	20	61			.01	91	calm		cloudy	
2	73	55	18	64			.08	85	Lt NE	NE	clear	
3	73	55	18	65			.01	90	Lt	NE	P.C.	
4	70	55	15	58			.35	92	Mod.	ENE	clear	
5	72	49	23	61			Tr.	76	Lt	NE	clear	
6	73	51	22	62			Tr.	88	Lt	ENE	P.C.	
7	67	55	12	61			.26	86	Lt	EnE	cloudy	
8	70	56	14	65			.41	85	calm		P.C.	
9	71	58	13	63			Tr.	85	Sl	NE	cloudy	
10	69	54	15	59			.41	86	Stg	NE	P.C.	
11	68	54	14	59			Tr.	83	Stg	NE	P.C.	
12	68	55	13	63			.07	86	Mod.	NE	P.C.	
13	67	55	12	59			.11	88	Stg	NE	P.C.	
14	62	60	2	65			.13	89	Mod.	NE	cloudy	
15	70	51	19	61			.05	90	Stg	NE	clear	
16	66	58	8	59			.01	91	Stg	NE	P.C.	
17	69	55	14	61			.10	94	Mod.	NE	cloudy	
18	72	58	14	59			.32	98	Lt.	NE	P.C.	
19	73	52	21	69			.02	87	Lt.	NE	clear	
20	72	55	17	60			.02	91	Lt.	NE	P.C.	
21	73	59	14	61			.05	94	Mod.	NE	clear	
22	72	58	14	65			Tr.	80	Lt.	NE	clear	
23	75	53	22	61			.01	86	Stg	ENE	clear	
24	72	53	19	61			.01	84	Mod.	ENE	P.C.	
25	71	52	19	63			Tr.	75	Stg	NE	clear	
26	72	58	14	66			.01	67	Mod.	NE	clear	
27	68	51	17	61			.01	81	Stg	NE	P.C.	
28	67	53	14	62			.16	88	Mod.	NE	P.C.	
29	70	54	16	59			.05	89	Mod.	NE	cloudy	
30	68	55	13	58			.37	95	Mod.	NE	P.C.	
31	71	53	18	59			.08	93	Lt	ENE	P.C.	
Sum	2188	1694	484	1911			3.13	2,693				
Mean	70.6	54.6	15.6	61.7			0.101	87				

*Reading of maximum thermometer immediately after setting.
†Including rain, hail, sleet, and melted snow.
‡Thunderstorms, halos, auroras, etc.

(IN TRIPLICATE.) See cover for instructions.

8—253

/ T. A. Jaggar, *Cooperative Observer.*

Post-Office Address, Hawaii Nat'l. Park Hawaii

MONTHLY SUMMARY.

TEMPERATURE.

Mean maximum, 70.6

Mean minimum, 54.6

Mean, 62.6

Maximum, 75 ; date, 23

Minimum, 49 ; date, 5

Greatest daily range, 23 on the 5th

PRECIPITATION.

Total, 3.13 inches.

Greatest in 24 hours, .41 ; date, 8 & 10

SNOW.

Total snowfall, inches; on ground 15th, inches;

at end of month, inches.

NUMBER OF DAYS—

With .01 inch or more precipitation, 25

Clear, 10 ; partly cloudy, 15 ; cloudy, 6

DATES OF—

Killing frost,

Thunderstorms,

Hail,

Sleet,

Auroras,

REMARKS:

FOG: Light, 18 - 20 - 30 - 31 A.M.

DOCUMENT CAPTURED AS RECEIVED

Director:

Following is the report of activities for this park during May.

000 - General

Wingate

020 - General Weather Conditions

The month was very dry until the 23rd, with high NE winds the total rainfall at the summer camp being 1.59 inches and at the Volcano Observatory 3.13 inches. A detailed report is attached max & min temp -

100 - Administration

110 - Status of Work: Is there anything for this heading? Whitney left on the 26th for Hon. ~~[illegible]~~ to confer with Civ.Ser repr. re CS matters.

120 - Park Inspections By:

121 - Superintendent

Wingate:

122 - Special Field Representatives

Flower Show - Park Exhibit

Associate Architect Sager was at headquarters until May when he left for Maui ~~to stake out a new trail through Haleakala Crater.~~ inspect work projects under the CCC and the location survey for the new Haleakala trail.

130 - Finance and Accounts

A detailed statement of appropriations is attached.

140 - Labor Situation

Is there anything special for this?

150 - Equipment and Supplies

Screens for the rock crusher ~~and~~, one 60-tractor which was transferred from ECW and ~~to~~ be used as power for the crusher, and one one-and one-half ton Ford truck for the Haleakala section were received during May, in addition to miscellaneous items of supplies. ~~and~~

160 - ~~Status of Alienated Lands~~

~~There wasn't anything~~ No of importance in connection with this done wa s there?

170 - Plans, Maps and Surveys

Christ

DOCUMENT CAPTURED AS RECEIVED

180 - Circulars, Placards, Publicity Bulletins, etc.

Two press memoranda were issued during May, copies of which are attached.
Receipt of Park Circular arrangement. This is a great imp. over previous editions.

200 - Maintenance, Improvements and New Construction

210 - Maintenance

Christ & Craik

230 - New Construction

Christ & Craik - Hygiotide — Holcombe garage under contract

300 - Activities of Other Agencies in the Park

310 - Park Operators

Christ — Hot water heating system.

320 — See other sheet

400 - Flora, Fauna and Natural Phenomena

410 - Ranger, Naturalist and Guide Service

Christ

420 - Museum Service

Doerr

460 - Birds

Christ

480 - Natural Phenomena — Write up along line of previous reports

500 - Use of Park Facilities by the Public

510 - Travel

There was a total of 14,456 visitors to the Kelowna Section as compared with 14,786 for May, 1934.

530 - Special Visitors

Christ & Doerr

600 - Protection

610

620

630

CHRIST

650

660

900 - Miscellaneous - Have you any suggestions?

DOCUMENT CAPTURED AS RECEIVED

June 2, 1935

The Superintendent
Hawaii National Park.

Dear Mr. Wingate:

The following is the report of ranger activities during the month of May:

000 - General

The month was marked by extensive work on the five-year estimate program.

The ranger department activities during the month covered a wide range: Recreational, educational, protection, maintenance of telephone lines, painting and repairing of signs, and surveys.

020 - Weather Conditions

The month was very dry until the 23rd, the total rainfall at the summer camp being 1.59 inches and at the Volcano Observatory 3.13 inches.

100 - Administration

110 - Status of Work

The rocklining ditches and riprap of shoulders on Uwekahuna road is about 80% completed. Clearing, restretching and replacing new poles on the telephone lines was 75% completed at the end of the month

120 - Park Inspections by:

121 - Chief Ranger

Routine inspections have been made of all work in progress, also one trip was made by Rangers Waesche and Murray to Mauna Loa, besides a trip to Mauna Ike and Hilina Pali made by myself. Conditions at all three places were found to be satisfactory. District Ranger Peck also made routine inspections in the Haleakala section. He reported that the silverswords are in bloom, and that the pheasants are making fine progress in that area. Considerable time was spent by Ranger Lamb inspecting the removal of exotic plants and of forest conditions in the Bird Park and Lava Tube areas.

all unnecessary

150 - Equipment and Supplies

Rock crusher screens etc ?

One 60 tractor was received this month from ECW allotment. This unit will be used for power for the rock crusher.

170 - Plans, Maps and Surveys

proposed

for inclusion in the permit for a fire year extension of the present lease.

Ranger Waesche surveyed the new boundary of the Kilauea Military Camp to reduce the acreage to comply with Washington orders. Ranger Peck and Engineer Wong

DOCUMENT CAPTURED AS RECEIVED

are making a reconnaissance survey of the Halemau trail on Maui.

200 - Maintenance, Improvements and New Construction

210 - Maintenance

The usual maintenance of roads, trails, telephone lines, trucks and other equipment was carried on during May.

Sixteen miles of telephone line were patrolled and repaired
Trucks and cars belonging to the Park Service were overhauled
All trails which are used for horseback riding were brushed ~~and~~ out repaired.
The cantoneers on Haleakala have finished patching broken spots in the road surface, also improving drainage system as well as keeping the road clean

300 - Activities of Other Agencies in the Park

310 - Park Operators

The usual monthly dance was held at the Volcano House on the 30th.

Approval was received from Washington for the addition of a clubroom at the Volcano House and it is expected that work will start very shortly.

400 - Flora, Fauna and Natural Phenomena

410- Ranger, Naturalist and Guide Service

Rangers Murray, Lamb and Waesche each spent some time assisting the park naturalist in contact work, conducting trips, etc.

Also - Birds

500 - Use of Park Facilities by the Public

520 - Special Visitors

Approximately 300 passengers from the SS Resolute, a German world-cruiser were in the park on the first.

John? Jean?

M. John Verhoogen of Brussels, who has been studying the volcanos of this island under the direction of Dr. Jaggar, departed on the 26th. He expects to spend a few days on Haleakala before returning to the mainland. A number of the park staff went to Hilo to bid him 'Aloha' -

600 - Protection

610 - Police Protection

The usual patrols were made of both Kilauea and Haleakala sections.

620 - Fire Protection

The CCC made rapid progress during May in removing fire hazards, in the form of staghorn ferns, from the trails and highways.

preparatory to establishing an observatory for the Belgian Gov't in central Africa

DOCUMENT CAPTURED AS RECEIVED

I gave three lectures to the staff and CCC on fire control during the month.

630 - Accidents

May 1 - A CCC truck and a Ford station wagon driven by G. Kodera of ~~Mountain-view~~ Glenwood collided at the bottom of the hill below the Volcano House. Damage sustained by the CCC truck consisted of badly smashed left front fender, bent front axle, left rear axle housing, drive shaft and broken springs. The station wagon was damaged beyond repair. Fortunately none of the occupants were seriously injured, though there were some cuts, bruises, etc. All necessary repairs to the CCC truck was made by Mr. Kodera.

650 - Signs

Ranger Murray reports that most of the month was spent by him in painting and erecting signs. This project is about completed with the exception of a few to be erected along the Crockett trail.

660 - Sanitation

Regular inspections weremade of the comfort stations throughout the park.

Very respectfully

Joseph H. Christ
Chief Ranger

Flora, Fauna etc -

There has been a noticeable increase in the number of Chinese pheasants seen in the Kilauea area. A small covey of quail have been seen near headquarters on several occasions. These are the first seen in several years in this section of the park.

DOCUMENT CAPTURED AS RECEIVED

000 General -

The month passed without any event of particular importance occurring other than those appearing under the titles below.

100 Admin

110 Status of Work.

The routine work is current with the exception of filing. Instructions for the preparation of the six year program 1937-1942 were received on April 26 and the first two weeks in the month were given to the preparation of this program which was submitted by mail on May 18. On May 31 instructions were received concerning the preparation & submission of the final estimate which we were directed to submit not later than May 31. This was impossible but every effort is being made to get the estimate into your office at the earliest possible date.

In accordance with Office Order 265 and a later communication for Mr. Ansel Hall, the Park Naturalist prepared a preliminary museum plan for this park. This was then submitted to Prof. J.G. Jaggar for his comment and suggestions. This review has now been made and the plan is on the Superintendent's desk. We hope to submit this plan at an early date as we feel it will be of some interest embodying as it does, we believe, some entirely unique features.

Whitney etc

120 Park Inspections By:

DOCUMENT CAPTURED AS RECEIVED

121 Superintendent

The usual routine inspection of the various projects in progress at Kilauea headquarters was made during the month as well as daily trips to the Kilauea fire pit. Following up the suggestion made by Mr. E. P. Meinecke in his report on this park the Superintendent together with Garrett Architect, M.S. Soper and Foreman R. Cook inspected the Kipuka Puaulu (Bird Park) area on the 20th & located a suitable spot for a shelter and picnic ground close to but outside of the kipuka. A particularly pleasant spot with sufficient level ground was found and the Foreman directed to remove the existing shelter and dry toilets from the interior of the kipuka to the new location.

The cave-in on the Chain of Craters road, at Abi Crater reported by Camp Supt. W. J. Stevens was inspected on the 23rd. It was found necessary to do considerable excavation ~~before~~ and then laying a concrete slab over this arch resting on solid rock on either side, then fill and resurface. The length of arch needing immediate repair was 30 feet.

140 Labor Situation

The enlarged E.C.W. program under the Territorial Forestry Department which is establishing a 7 Civ B.C.R. man camps at Waimea on the north side of this island is doing much to relieve unemployment among the younger men. However, one or two additional 200 man camps are needed

DOCUMENT CAPTURED AS RECEIVED

180 An article written by the Superintendent on the park and its volcanoes was published in both the Paradise of the Pacific monthly magazine and the special "Fleet" edition of the Honolulu Advertiser.

510 - - - - - - -

District Ranger J. A. Peck reports from Halehaola that travel was good during the month. No accurate check is kept except on week-ends which he reports as averaging 129 cars and 641 people.

See last page

530 -

Among the 300 passengers on the S.S. Resolute which stopped in Hilo for one day on a world cruise were a number of prominent and titled people including Princess Hohenloe Tolfel a near relative of the former German Emperor and the Duke and Duchess of Bavaria. The princess seemed much pleased with the park and commented on the fine roads.

There were others but I haven't the names - maybe George Z has.

320 Corp. Cort Agron
Kilauea N.C. -

The Park Naturalist completed a draft of a new permit to cover the five year extension of the lease to the K.M.C. This draft was discussed with the Chief Ranger, Park Naturalist and Assistant Cort M.S. Agron and after correction + incorporation of various suggestions the Park Naturalist was requested to take the matter up with the Trustees of the K.M.C.

Corp Adjt. 2d Lt C.W. Nist was relieved of duty on — and was replaced by —

Numerous improvements on walks, grounds and buildings are being done at the camp by F.E.R.A. men.

DOCUMENT CAPTURED AS RECEIVED

900. -

The Supt gave three talks on the N.P.S at the Lyman Memorial Geol. Museum in Hilo on May 7, 8 and 10.

Evening Hawaiian dance 29th ?

570 Contd —

Boarding School boys hike to Mauna Loa + Verhorgen Murray Waesche trip

on this trip Roger Waesche discovered what he believes to be an old cinder cone which later covered by surrounding lava flows has now become exposed in the walls of Moku'aweoweo crater by the collapse which formed the caldera and subsequent sliding. A more through investigation will be made later on

Thats all Thank you

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

May 11, 1935

The Director
National Park Service
Washington, DC

Dear Mr. Director:

Following is the report of activities for this park during April.

000 - General

The month of April was without any event worthy of special mention other than the receipt on April 13 of radio advice that funds had finally been made available for the continuation of the CCC camp in the park. In anticipation of such notice bids had been solicited for clothing, materials for camp construction, equipment, etc., and upon receipt of the above notice awards were made. We were thus able to hasten enrollment and on the 22nd the new enrollees selected by the FERA office in Hilo commenced to report. There were just 4 vacancies at the end of the month.

During this fifth enrollment period the Maui camp will have 50 boys and that at Kilauea 150. The Maui camp is to be abandoned at the expiration of the period.

The continuation of the CCC and enlargement of the Territorial portion of the program received considerable publicity during the month.

020 - General Weather Conditions

The month was very wet until the 27th, with a total rainfall of 9.5 inches as compared with 9.74 during April, 1934. Maximum and minimum temperatures were 72 and 50 degrees respectively. A detailed report is attached.

120 - Park Inspections By:

April 1 - Inspected the rim road, Chain of Craters road, Uwekahuna-Bird Park roads, the craters along the Chain of Craters road and the fire pit in Kilauea. Evidences of recent sliding from the walls were seen at Makaopuhi and Pauahi.

On the 11th examined the west rim of Kilauea fire pit back of the west wall which had been and was still avalanching.

DOCUMENT CAPTURED AS RECEIVED

Made thorough inspection of CCC camp at Kilauea April 12.

Inspection trips were also made to Pali Hilina and the Mapau Crater section. Routine inspection trips were made daily to the fire pit in Kilauea.

Visited Kalapana village on the 14th and found that the native inhabitants were involving the proposed park extension in a minor political campaign then in progress and in which one resident was a candidate. As a result wired your office to inform Delegate King that the people were not prepared to vote intelligently and that the proposed meeting had been called off.

122 - Special Field Representatives

Associate Architect Sager was at headquarters during the entire month supervising various landscape and ECW projects.

130 - Finance and Accounts

A detailed statement of park appropriations is attached.

140 - Labor Situation

The manager of the local FERA office at Hilo reports that some 600 applications were received for the CCC camps in the park and the Territorial camp at Waimea

Due to a new decision by the FERA office regarding hours of labor, wages, etc., for the workers considerable dissension was apparent among those on the FERA payroll. For a time a strike was threatened. However after an explanation was made by the local FERA administrator at a mass meeting in Hilo dissatisfaction seems to have quieted down.

150 - Equipment and Supplies

A rock crusher, truck and one set of living room furniture for the superintendent's residence were received during the month in addition to various small miscellaneous items.

160 - Status of Alienated Lands

A description of the boundaries of the proposed "footprint" addition to the park was forwarded to Delegate King by the Territorial Land Commissioner. When acceptance for park purposes is authorized by the Congress this 5,730 acre addition may be transferred by Executive Order of the governor as the area already belongs to the territory.

After visiting Kalapana on the 14th (visit referred to under 121) the superintendent requested the Land Commissioner to prepare a new description of the proposed Kalapana extension which would exclude the village

DOCUMENT CAPTURED AS RECEIVED

lands. This was done and forwarded to Delegate King but since certain essential areas were not included a letter was directed to your office requesting the whole matter be held in abeyance for a time.

On April 10 Mrs. Alice Campbell-Blickfelt, one of four beneficiaries of the James Campbell estate, suggested a proposed donation to the park of the land of Kahsuales, which adjoins the Kilauea section and the proposed Kalapana addition (27,000 acres) under certain conditions. This donation was the subject of considerable correspondence and at the date of writing this report it is understood that Mrs. Blickfelt has made her offer in writing to your office.

170 - Plans, Maps and Surveys

During April working drawings were completed by Mr. Sager for the Haleakala Observation Station as well as for a garage and equipment shed for that area and forwarded for approval.

A tracing and map were made of the power line through the park for a right-of-way permit for the Interurban Electric Company and were forwarded to your office on April 20.

180 - Circulars, Placards, Publicity Bulletins, etc.

Two publicity bulletins were issued during April, copies of which are attached. The preparation of all press memoranda has been assigned to Ranger Philip Murray.

200 - Maintenance, Improvements and New Construction

210 - Maintenance

The rock lining and riprap shoulders on the Uwekahuna road is about 60% completed. A total of 812 feet of ditch was completed during the month.

Work was started on clearing, restretching and replacing new poles on the telephone lines and was about 40% completed at the end of April.

230 - New Construction

The tower for the fire siren and house for meter and magnetic switch were built and the equipment installed. A new switch control line was constructed from headquarters to the fire siren tower.

Work was completed on surfacing the road in the utility area, except for asphalting which will require five men for one day. It was impossible to spread asphalt at any time during April, owing to rain every day.

DOCUMENT CAPTURED AS RECEIVED

300 - Activities of Other Agencies in the Park

310 - Park Operators

Plans for a clubroom addition to the Volcano House were submitted for approval.

400 - Flora, Fauna and Natural Phenomena

410 - Ranger, Naturalist & Guide Service

Routine inspections were made by the chief ranger of all work in progress. On the third of the month a patrol and inspection trip was made to the summit of Mauna Loa. Conditions were generally satisfactory.

District Ranger Peck also made routine inspections in the Haleakala section.

Label copy for metal nature trail labels was mailed to the laboratory of the Field Division of Education.

Work on the bibliography of Hawaii National Park was continued during April. This project should be completed before the end of May.

420 - Museum Service

As the first of the month the Inter-Island expressed a desire to shorten the length of their passengers stay in the park, cutting the tour to two hours, which means a much more rapid-fire educational program than before when the time allotted to the park was three hours. The passengers do not always arrive exactly on time and when they are delayed it means a still further shortening of the program.

480 - Natural Phenomena

Throughout the month Kilauea volcano continued to be a source of interest and speculation. The seismographs at the Volcano Observatory recorded a total of 210 local seismic disturbances, the majority of which appeared to be of Kilauea origin. There were seven very feeble earthquakes (just strong enough to be felt under ideal conditions) recorded, all originating within seven miles of the observatory.

Measurement of rim cracks at marked points about the rim of the fire pit reflected the uneasy condition of the crater. Dribbling of rocks, rock slides and avalanches were of daily occurence. On April 20 a series of spectacular slides commenced falling from the west wall above the 1934 eruption cascade. These slides, many of which recorded as quakes on the pit seismograph, fell with a loud roar and sent clouds of dust into the air. Within a few days the black lava veneer of the cascade had been almost entirely torn away and obliterated. A new talus cone nearly 300 feet high was built up overlapping the old sw talus. Measurements have not yet

DOCUMENT CAPTURED AS RECEIVED

been made to determine the area of the rim block which fell into the pit.

After several days of sliding this west wall became quiet and the east wall opposite commenced to break down; at the end of the month the west wall was again mildly active.

Slides from the south wall early in the month built up a small talus cone at the foot and crack measurements at the end of the month indicate probable large slides from this wall before long. The north walls were also frequently, though mildly, active all month.

Blue fume issuing from vents at the solfatara beneath the nw and east walls was plainly visible at all times regardless of weather conditions.

Spirit levels on April 25 indicated a slight uplift of the west and sw walls of the pit.

On April 28 at sunset the Mauna Loa fume cloud was plainly visible rising some 1500 feet above the summit. This is not an unusual sight at this season of the year.

Speculation as to the causes of this long-protracted (4 months) period of uneasiness at the fire pit is intriguing. It may be significant that no earthquakes larger than very feeble ones have been recorded.

(References: Volcano Observatory Bulletins #1211-14 incl., and personal notes).

500 - Use of Park Facilities by the Public

510 - Travel

There was a total of 13,411 visitors as compared with 13,298 for the same period last year. Sunrise on Haleakala calls many visitors to that section of the park. The men in charge of the CCC camp there report early morning visitors daily.

530 - Special Visitors

Mr. and Mrs. Frederick Blickfelt of San Francisco were in the park for a three-weeks stay. The chief ranger accompanied them on a trip to the summit of Mauna Loa.

April 14 - Future Homemakers of Hawaii, consisting of 175 girls from the major islands of the territory.

April 15-20 - Annual Easter Camp of Boy Scouts, consisting of a group of 60 scouts from this island.

April 17- Third Annual Women's Play Festival, approximately 140 women and girls from all the islands.

DOCUMENT CAPTURED AS RECEIVED

April 18 - Jananese Baseball League.

April 27 - Approximately 425 passengers from the Empress of Britain, which was on a round-the-world cruise.

Mr. Litchfield, President of the Goodyear Rubber Company.

600 - Protection

620 - Fire Protection

The fire siren was installed and tested. A Ford pickup was equipped with extinguishers, axes, wrecking bars, extra hose, wrenches and nozzles. All inflammable material on the ground along highways and around buildings is being removed by the CCC. On the afternoon of April 9 a fire drill was held at one of the privately owned residences in the park, and proved quite successful.

630 - Accidents

On April 29 eight CCC men from the Territorial camp on Maui were more or less seriously injured when the half-ton truck in which they were riding overturned on a curve at Kuau. According to police, the truck was going at too great a speed when rounding the curve. Camp Director Rivenburgh of the Park Service CCC camps, happened to be on the island of Maui at the time of the accident and was of great assistance to the Territorial Camp Director, Warren C. Lytle, in straightening out the details of the accident, etc.

650 - Signs

Several new direction signs were erected at the Tree Molds and in the Bird Park area to enable visitors to find their way to Uwekahuna on the circle route.

900 - Miscellaneous

Considerable fear has been expressed locally that the Territorial Board of Agriculture and Forestry may be wrecked through political appointments since the announcement that the governor had appointed former delegate L.L. McCandless to the chairmanship of the board. This appointment was upheld by an 8-7 vote in the Territorial Senate. It is rumored that several minor political supporters of Mr. McCandless have irons in the fire for the territorial forester positions on the different islands.

Ranger Samuel H. Lamb, is now the proud father of a son, George, born April 16. Mrs. Lamb, son George and also Mr. Lamb are doing splendidly.

Very respectfully

Edward G. Wingate
Superintendent

GW

DOCUMENT CAPTURED AS RECEIVED

June 1, 1935

Memo to Mr. E. G. Wingate.

The following is a report of work accomplished under my direction during the month of May, 1935.

1. Moved Bird Park shelter outside of enclosed area.
2. Hauled garbage from employees quarters eight times.
3. Built shelter for switches for fire alarm siren.
4. Repaired break on road of Aloi crater.
5. Trimmed linoleum, office building.

During the greater part of the month all regular park laborers were loaned to E.C.W. reconstructing Camp.

R R Craik

R. R. Craik,
Foreman

Noted
EGW

DOCUMENT CAPTURED AS RECEIVED

Please ok. Fischer

June I, 1935.

The Superintendent,
Hawaii National Park,
Hawaii.

Dear Sir:

Following is the report of my time, by hours for the month of May, 1935.

Work on cars and trucks		III	hours
New tractor, unloading, removing winch, making connections for rock crusher		I4	"
Pumping water as follows,			
High tank	22,000 gal.		
Res. # I	4,000 "		
" # 2	2,500 "		
" # 7	2,500 "		
Total	31,000 gals.	I0	"
Warehouse		9	"
Fire equipment		8	"
Check in gasoline		7	"
Repair bitumul pump and hose		6	"
Take inventory of E.C.W. tools		5	"
Check Park inventory		5	"
Dressing stone tools		4	"
Fill all car batteries		4	"
Install driver fittings to rock crusher		4	"
Repair tool handles		4	"
Repair and paint Portable water pump		4	"
Uwekahuna light plant		2	"
Connect lights in Cottage # 9		I	"
Check in kerosene		I	"
Transfer motor oil to storage tank		I	"
Repair car batteries		4	"
Trim regged cement from pit sides		I	"
Sharpen lawn mower		I	"
Patch tire tubes		I	"
Repair fire pump		I	"
	Total	208	Hours.

Submitted by,
F.F. Fischer
F.F.Fischer,
Mechanic.

DOCUMENT CAPTURED AS RECEIVED

STATISTICAL REPORT NO. 8

FINANCE AND ACCOUNTS

APRIL, 1935

Symbol	Appropriation	Allotted	Expended & Obligated	Balance
45415	Hawaii National Park, 1935	35,150.00	33,451.84	1,698.16
45406	Forest Protection & Fire Prevention, 1935	300.00	296.84	3.16
44415.3	Salaries & Expenses, Office of Nat'l Parks, Bldgs & Reservations, 1934	31,392.55	29,460.32	1,932.23
4X391	Roads & Trails, Nat'l Parks, Emergency Construction Act 6/19/34	25,275.00	13,108.05	12,166.95
4-03/5640.8	N.I.R., Int., Nat'l Parks, Roads & Trails, 1933-1935:	491,800.16	493,137.73	EE 1,337.57
4-03/5640.14	N.I.R., Int., Nat'l Parks, Bldgs & Reservations, 1933-'35:	11,250.00	11,088.19	161.81

DOCUMENT CAPTURED AS RECEIVED

10-157
(July, 1929)

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

TRAVEL REPORT

Hawaii National Park for the Month of April, 1935

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Decrease for Travel Year	
					Number	Percent
PRIVATE TRANSPORTATION:						
Cars first entry, ...						
Cars reentry, ...						
Motorcycles, ...						
Total motor vehicles, ...						
Persons entering via motor vehicles, ...	12,428	110,450	12,678	113,058	2,608	.023
Persons entering via other private transportation, ...	169	1,154	235	1,595	441	.276
Total persons entering via private transportation, . . .	12,597	111,604	12,913	114,653	3,049	.026
OTHER TRANSPORTATION:						
Persons entering via Hotel . .	814	3,144	385	4,348	1,204	.277
Persons entering via trains, .						
Persons entering otherwise, . .						
Total other transportation, .	814	3,144	385	4,348	1,204	.277
GRAND TOTAL ALL VISITORS, . . .	13,411	114,748	13,298	119,001	4,253	.036

	This Year	Last Year	Increase	
			Number	Percent
Automobiles in public camps during month, ...				
Campers in public camps during month, ...				

DOCUMENT CAPTURED AS RECEIVED

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Hawaii National Park for the Month of April, 1935

	This Year	Last Year
Park revenue on hand beginning of month,	0.00	0.00
Received,	0.00	0.00
Total,	0.00	0.00
Remitted,	0.00	0.00
On hand close of month,	0.00	0.00

Park revenues received this year to date,	350.00
Park revenues received last year to date,	350.00
Increase,	0.00
Per cent of increase,	0.00

DOCUMENT CAPTURED AS RECEIVED

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Hawaii National Park for the Month of April, 1935

	This Month		This Month Last Year	
	Appointed	Non-Appointed	Appointed	Non-Appointed
Number of employees beginning of month	16	3	16	5
Number of additions	2	5	0	3
Total	18	8	16	8
Number of separations (*Furlough)	* 4	1	0	5
Number of employees close of month	14	7	16	3
Number of promotions during month	0	0	0	0
Aggregate amount of annual leave taken	2	0	0	0
Aggregate amount of sick leave taken	0	0	13	0
Aggregate amount of leave without pay	0	0	0	0

DOCUMENT CAPTURED AS RECEIVED

10-215
(August 1933)

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of National Parks,
Buildings and Reservations

Hawaii National Park

REPORT OF NON-APPOINTED PERSONNEL
(TEMPORARY)

Changes outside the District of Columbia for the month of April 1935

Total at beginning of month	Additions	Separations	Net Gain or loss (a)	Total at ending of month
3	5	1	4	7

(a) If loss, indicate by minus sign.

DOCUMENT CAPTURED AS RECEIVED

10-158

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Hawaii National Park for the Month of April, 1935

Description of Projects	Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
516 Utility Area Road, Paving (F.A.)	95	5	20	
517 - [illegible]				
520 Haleakala Road, Post Construction (F.A.)	8	8	0	
521 Post Construction, Uwekahuna-Bird Park Road (F.A.)	40	40	0	
518 7 Haleakala Road Landscaping (F.A.)	100	0	0	

DOCUMENT CAPTURED AS RECEIVED

10-161

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF SALES OF PUBLICATIONS

HAWAII NATIONAL PARK, T.H. APRIL, 1935

	Number	Value
GOVERNMENT PUBLICATIONS:		
On hand beginning of month,	857	152.25
Received during month,	0	0.00
Total,	857	152.25
Sold during month,	2	2.00
On hand at close of month,	855	150.25
NON-GOVERNMENT PUBLICATIONS:		
On hand beginning of month,		
Received during month,		
Total,		
Sold during month,		
On hand at close of month,		

Cash on hand beginning of month,	9.52
Sales during month,	2.00
Total,	11.52
Remitted during month,	0.00
Balance,	11.52

DOCUMENT CAPTURED AS RECEIVED

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK, HAWAII

PRESS BULLETIN--for immediate release April 3, 1935

FENCING OF KOA TREES BY THE C.C.C. BOYS

The C.C.C. boys have just finished fencing three separate areas of Koa trees in the grazing area of Hawaii National Park on Mauna Loa about two miles West of Bird Park.

Previous investigations showed that the young plants were not growing in this area because they were being destroyed by cattle and goats eating and trampling them while they were yet very young and tender.

The "Bird Park" area which was fenced several years ago now contains many vigorous small trees which are due to this protection.

The Koa (also called Hawaiian Mahogany) is one of the most useful and beautiful trees in the Hawaiian Islands. Many magnificient specimens are found within the boundaries of the Park itself. The "Giant Koa", a tree of approximately 9 ft. in diameter and possibly the largest tree on the Island is growing near this fenced area.

While there is no fear of the Koa becoming extinct in the Park in the near future, there is fear that they may eventually become so, unless some protection is given the new and tender plants. Thousands of the old trees have already died and thousands more are dying. Without the young trees coming on it would only be a matter of years until one could only see the relics of what once were the proud and mighty monarchs of the Park.

This lesson of protection was forcibly brought to our attention from the study of the history of the destruction of the "Iliahi" or Sandalwood tree as quoted by Degener in his "PLANTS OF HAWAII NATIONAL PARK." The

DOCUMENT CAPTURED AS RECEIVED

Sandalwood tree has become almost extinct in the Islands because the natives when being forced by the Chiefs to carry the cut Sandalwood trees to the coast for market, destroyed all the young trees as they were passing to and from the forests, realizing no doubt that their ardous work would necessarily cease as soon as the mature trees were depleted and there were no growing trees to take their place.

The Koa is peculiar to the Hawaiian Islands although closely related plants are found rather common in Australia. It is known botanically as the ACACIA Koa, A. Gray and belongs to the LEGUMINOSAE or Pea Family.

It closely resembles the true Mahogany and a very thriving business has sprung up in the Islands making the wood into various kinds of beautiful furniture. Many souvenirs are also made out of the wood, it being very durable and taking a very nice polish.

The ancient Hawaiians used it extensively in the making of their canoes, some of which were as much as a hundred feet long. By placing two such canoes along side each other and fastening them together by a frame platform, they were able to carry sufficient provisions to sail for many days and great distances at a time. Fleets of as many as 16 such boats were used on their trips. Their paddles were also made of the Koa wood.

The Koa is peculiar in it having two distinctive sets of leaves. One is sickle shaped and several inches long while the other is more like the leaflets of the Locust tree found in the States.

The young trees grow quite rapidly and in a short time those in the protected area shall have attained sufficient size to "go it on their own." The fence will then be moved to another location for the same purpose.

This program of protecting the koa is a part of the general National Park policy of preserving all the native forest and animal species.

DOCUMENT CAPTURED AS RECEIVED

DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK, HAWAII

PRESS BULLETIN—for immediate release April 3, 1935

BUILDING OF TRAIL AT SUMMIT OF MAUNA LOA BY C.C.C. BOYS

Another project recently completed by the C.C.C. boys in Hawaii National Park was the trail connecting the Ainapo and Kona Trails at the summit of Mauna Loa which is 13.675 ft. above sea level.

One is able now to come up the West side of the mountain either on foot or horseback, cross the summit and go down on the Eastern slope or vice versa.

We believe there is a record of some kind attached to this feat of trail building because 12 of the boys were camped for 4 weeks at an elevation of over 13,000 ft. At least we have never heard of a CCC spur camp being at that elevation for any length of time. Anyway we are sure that none have ever camped right on top of an active volcano.

The site was right at the very edge of Mokuaweoweo crater which was very active in December of 1933. The trip alone up the mountain to the camp tends to give one a very eerie feeling because on the way he is able to look into hundreds of cones and "Pukes" which look as though they had just ceased pouring out their fiery liquid. Hundreds of "frozen" or dead lava streams may be seen all over the sides of the mountain and according to Dr. Jaggar we may see another lava river soon, that is not so dead pouring its liquid rock from some new vent on the mountain.

One of the boys remarked that he knew how to make a trail down the mountain much quicker than they had made the one at the top. When asked for particulars, he replied, "Get big bunch of "Malihinis" at top and let Pele come back very mad and "Malihinis" going down mountain plenty fast would make nice smooth trail clear to bottom of mountain in about one hour."

DOCUMENT CAPTURED AS RECEIVED

There is lots of truth in that too because a Malihini is a "New comer" and in all probability he would smooth out a bit of trail getting down the mountain while the Kamaaina would do just the opposite. He would make dust fly getting up to the activity.

A Kamaaina is an "Old timer" and he would try to be the first one to a new eruption because he knows from experience that he is just as safe at the very edge of Kilauea when it is in eruption as he would be crossing the street in some large city. More so in fact.

At no other place in the entire world is a person able to enjoy the beautiful and awesome spectacle of an active volcano with the perfect safety and closeness that he can at the volcanos in Hawaii National Park. It is a sight of such a magnificient display of natures fire-works that having been fortunate in seeing it once, one will try his utmost to get to the next eruption.

The hardships encountered by these boys in the building of this trail is also well worthy of mention. First, they were up on the summit for four weeks without ever coming down. Water was scarce as their sole supply was what fell on the roof of the shelter. No baths were to be had. The lava is like so much broken glass which resulted in many cut hands. There is no dirt up there and the boys had to crush the lava to fill up the depressions. The unobstructed wind sweeping across thousands of miles of ocean often became so fierce that they could not possibly work. All of them had lived their entire lives at sea level where it is always nice and balmy while at the summit it was bitterly cold every night. They were in snow for the first time in their lives and they could see ice every day up until about noon.

DOCUMENT CAPTURED AS RECEIVED

Although they were naturally quite glad the project was finished and were able to return to lower altitudes, they were uncomplaining and apparently quite happy while up there. They made the best of a bad job.

Superintendent Wingate says he could "write a book" about Mauna Loa. Suiting his words to action, one day he brought out of his desk a topographical map that showed he had spent many months on the Mountain as the official Geographical surveyor of the Mighty Mauna Loa. He no doubt knows more about it than any other person living.

Mauna Loa, by the way, is considered to be the largest single mountain mass in the world. It extends right on down in the oceas just as far as it does above it which if it were on the mainland would make it about 29,000 ft. high. Therefore we do not believe California should boast that they have the highest mountain, when Whitney is only a molehill compared to This one.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

April 13, 1935

OFFICE OF THE SUPERINTENDENT

SPECIAL OFFICE ORDER #12

SUBJECT: Numbering of all buildings in the Park

The Chief Ranger is hereby directed to prepare a map of the Residential area at Kilauea on which every building is to be located and given a number. This map will include the buildings of the Volcano House Company, the Geological Survey and all private residences in the Park.

Copies of this map are to be posted in the Administration Building, the Volcano House, the Volcano Observatory, the Park Warehouse, the Fire Equipment Building, the CCC Camp Office and Recreation Hall, every park employees quarters and at the Kilauea Military Camp Office for their information.

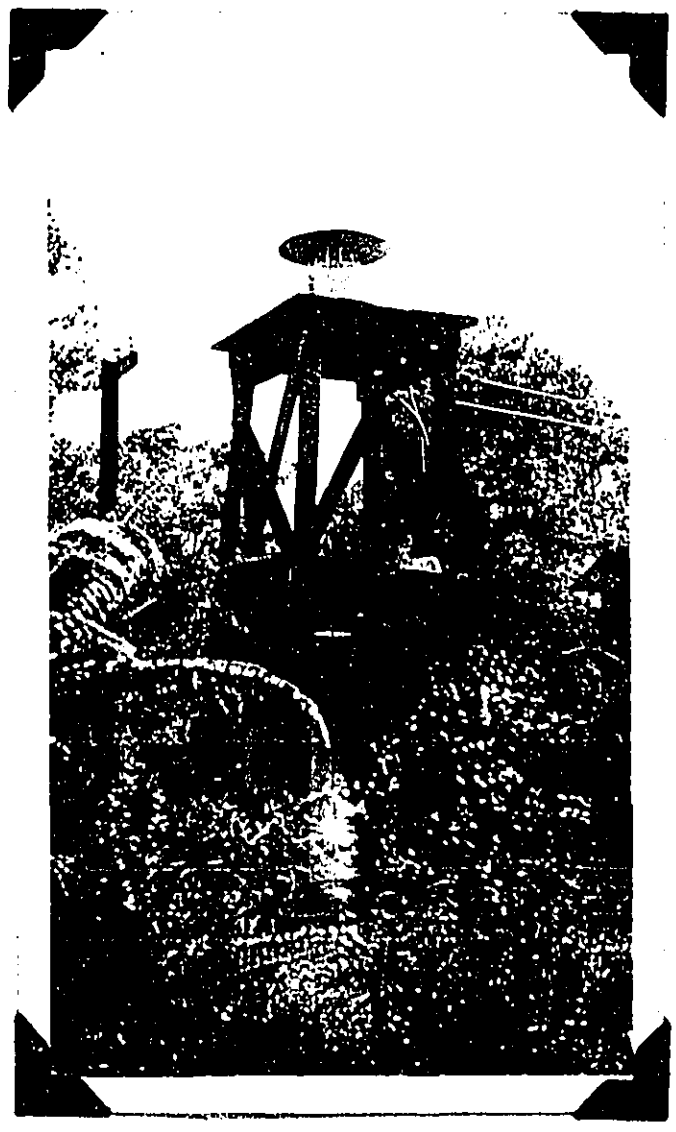
The staff of this park and Supervisory personnel of the CCC are directed to thoroughly familiarize themselves with the numbering and location of all buildings shown and to use the number of any building when referring to it.

Such a numbering system is of importance in giving directions in event of fire or other emergency.

Edward G. Wingate
Superintendent

Copies to each member of Permanent Staff
Copies to each member of CCC Supervisory Personnel
1 Copy Bulletin Board
1 " File
1 " Director
7 Copies Monthly Report

DOCUMENT CAPTURED AS RECEIVED



Tower for fire siren recently constructed at Headquarters.

DOCUMENT CAPTURED AS RECEIVED

Placed in garages and engine for gas and oil fires.

Fire Hydrant, utility area.

DOCUMENT CAPTURED AS RECEIVED

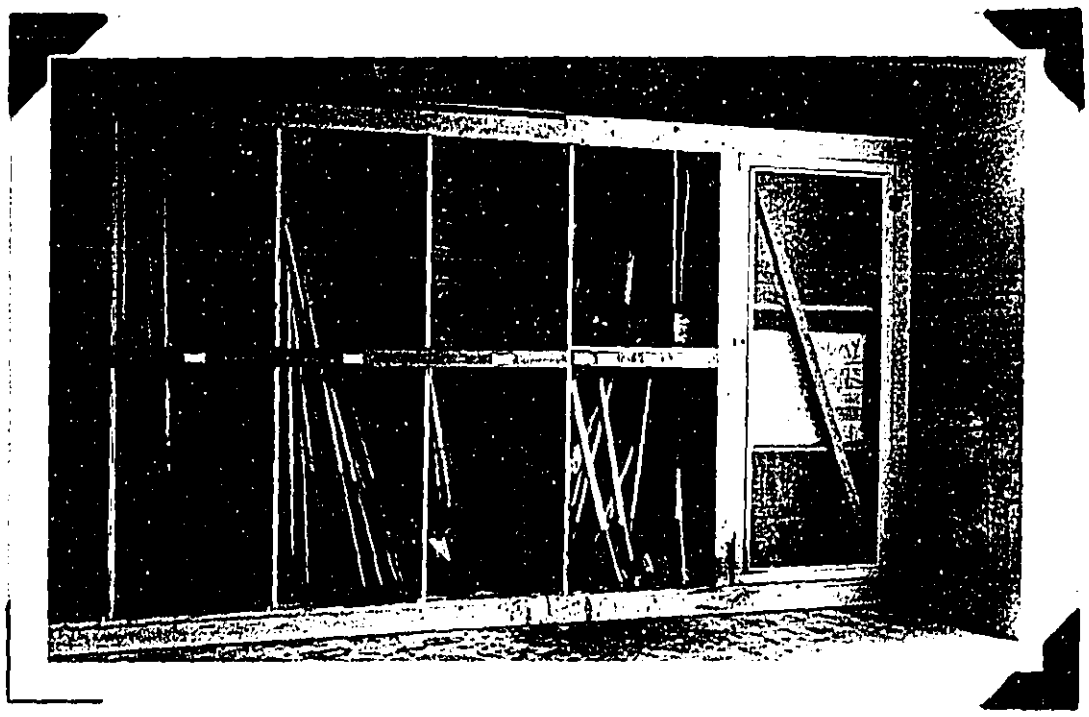
Pumping Plant

B Home House at Headquarters.

DOCUMENT CAPTURED AS RECEIVED

FIRE FIGHTING EQUIPMENT

Fire fighting tools.



Fire fighting tools.

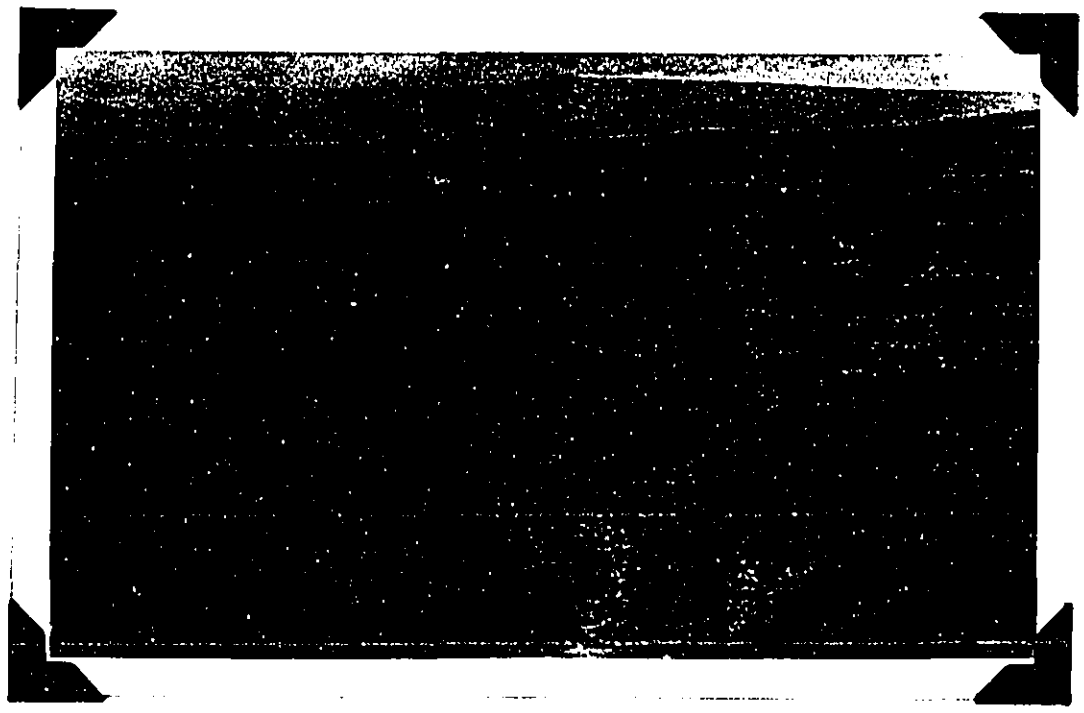
DOCUMENT CAPTURED AS RECEIVED

Testing water pressure
at Volcano House.

Testing water pressure two
lines of hose, utility area.

DOCUMENT CAPTURED AS RECEIVED

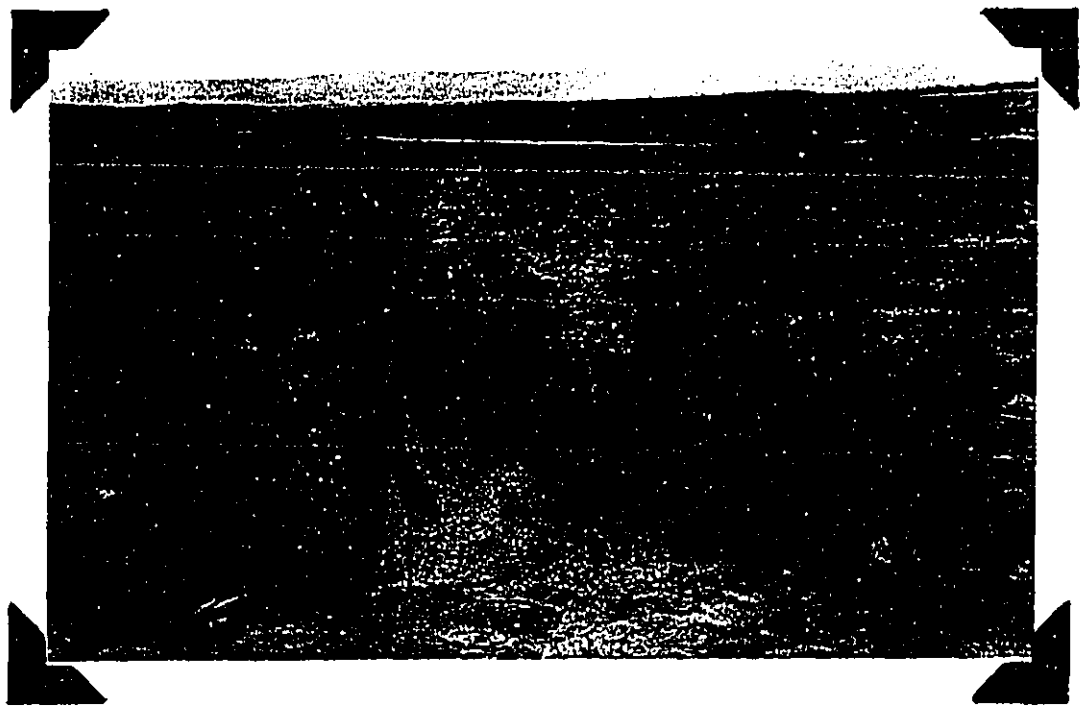
Series of three views of the West Wall and the WSW talus at Halemaumau, showing the changes since 1932.



1. September 1932. After the 1931-1932 eruption - Note steam rising on West rim. Photo Wingate.

DOCUMENT CAPTURED AS RECEIVED

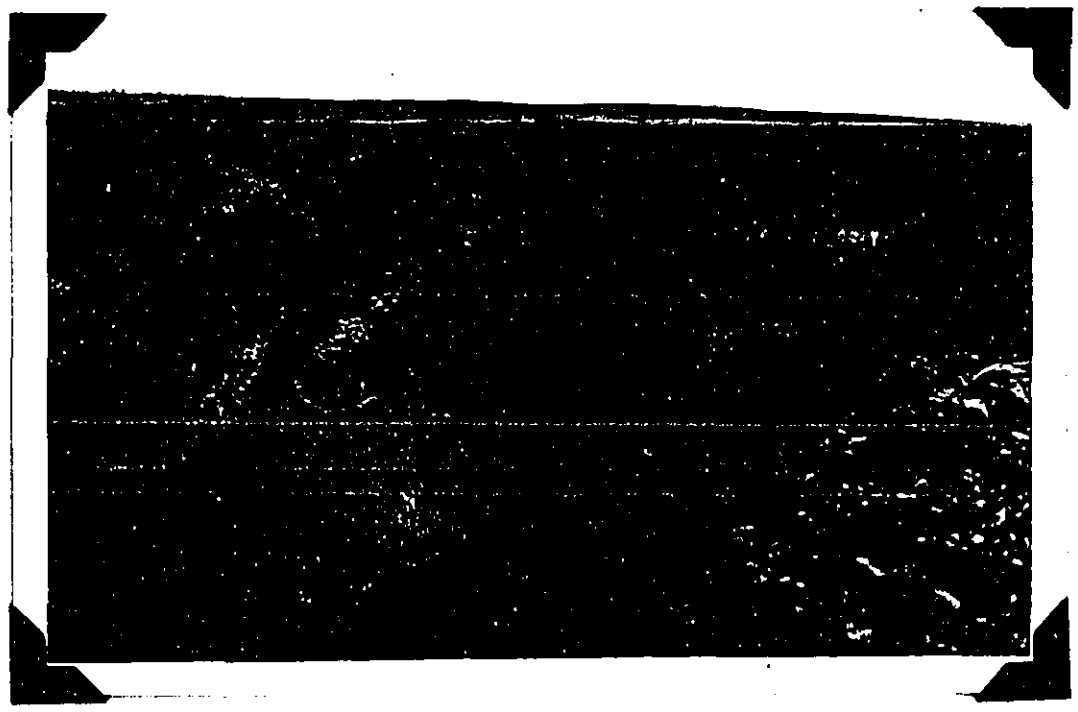
2. October 1934 After the 1934 eruption. Note the black lava veneer left by the cascade, and the decrease in steam, also the rise in floor level. Photo Higashida.



3. After the period of avalanching in March-April 1935. Note the increased size of talus slope and the lava cascade almost obliterated. Note absence of steam. Photo Hasache.

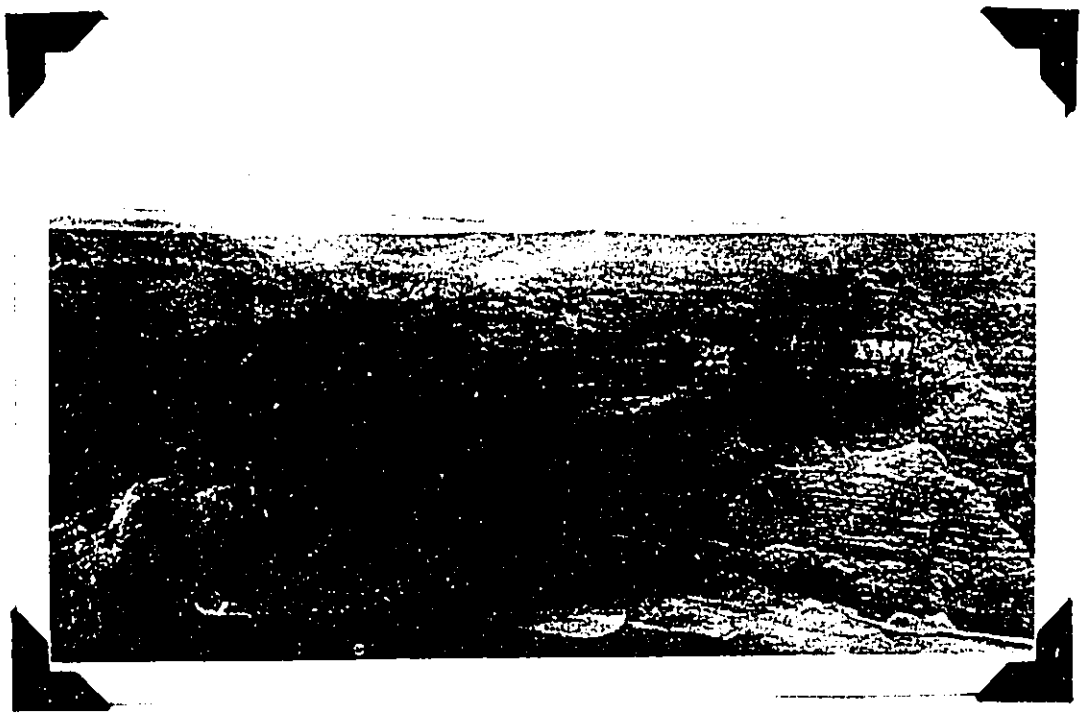
DOCUMENT CAPTURED AS RECEIVED

Series of three views of East Wall, second East talus. Halemaumau, showing the changes since 1932. Note the rise in floor level due to the 1934 eruption and the changes due to avalanches. This East Wall sliding followed that shown in preceding photographs from West Wall. These slides recorded as earthquakes on the seismographs.

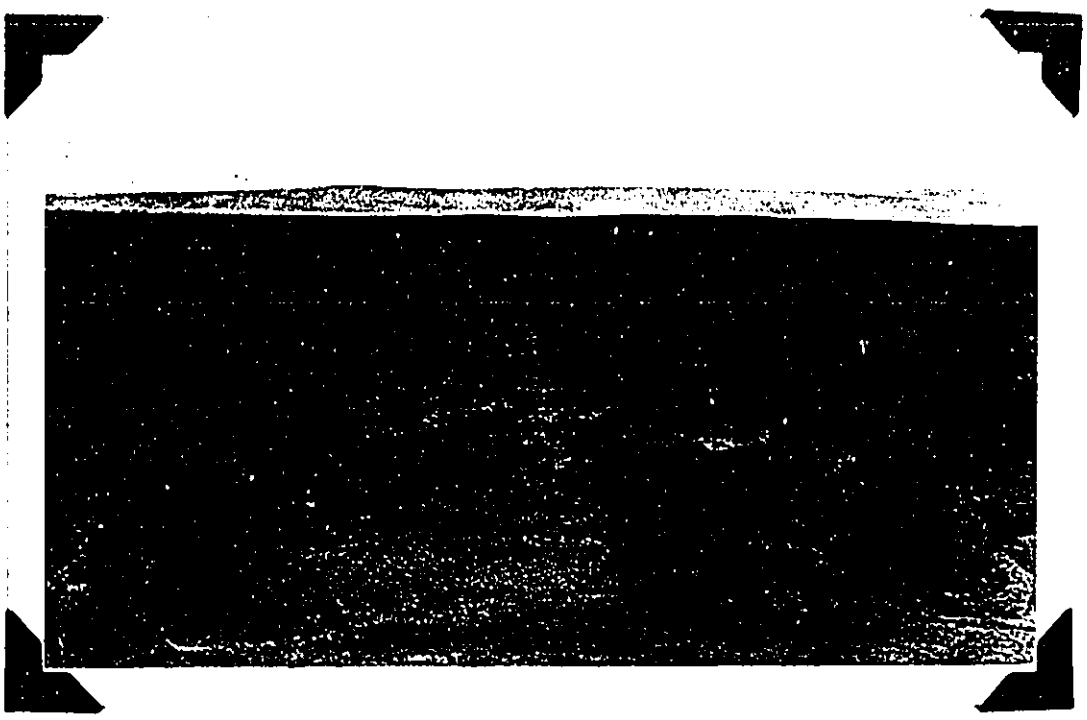


1. September 1932. Photo Wingate.

DOCUMENT CAPTURED AS RECEIVED



2. March 1935. Photo Wasache.



3. May 1935. Photo Wasache.
Double exposure accounts for changing distant landscape.

DOCUMENT CAPTURED AS RECEIVED

Form No. 1009—Met'l.

U. S. Department of Agriculture, Weather Bureau.

COOPERATIVE OBSERVERS' METEOROLOGICAL RECORD:

Month of April, 1935; *Station,* Volcano Observ.; *County,* Hawaii

Hour of Observation, 8 A.M.

State, Hawaii; *Latitude,* ; *Longitude,* ; *Time used on this form,*

DATE.	TEMPERATURE. Maximum. 1	Minimum. 2	Range. 3	*Set Max. 4	PRECIPITATION. Time of Beginning. 5	Time of Ending. 6	†Amount. 7	Hour Snowfall, Melted Equivalent 8	Wind Velocity, Direction, Force Observation. 9	Prevailing Wind Direction. 10	Character of Day, Sunrise to Sunset. 11	‡ Miscellaneous Phenomena.
1	65	51	14	56			.24	93	Lt	NE	Cloudy	
2	65	51	14	57			.03	86	Lt	NE	PC	
3	63	53	10	56			.02	83	Mod	NE	Cloudy	
4	66	52	14	53			.61	84	Calm		Cloudy	
5	63	52	11	59			.19	86	Lt	N	PC	
6	62	52	10	55			.38	86	Mod	NE	PC	
7	61	51	10	54			.03	88	Stg	NE	PC	
8	65	50	15	53			.04	86	Mod	ENE	Cloudy	
9	64	52	12	53			.10	92	Stg	NE	Cloudy	
10	60	53	7	54			.03	83	Stg	ENE	PC	
11	63	52	11	57			.65	85	Mod	ENE	PC	
12	60	54	6	57			.09	93	Mod	NE	PC	
13	58	51	7	52			.23	90	Stg	ENE	PC	
14	57	50	7	50			.29	91	Mod	NE	Cloudy	
15	61	51	10	54			.39	91	Lt	NE	Cloudy	
16	66	53	13	59			.22	94	Lt	NE	Cloudy	
17	63	56	7	59			.45	92	Lt	ENE	Cloudy	
18	66	53	13	60			2.38	89	Mod	NE	PC	
19	66	54	12	55			1.00	93	Stg	NE	Cloudy	Fog
20	63	54	9	59			1.02	89	Stg	NE	Cloudy	
21	64	53	11	59			.29	92	Stg	NE	Cloudy	
22	61	53	8	58			1.32	91	Mod	NE	Cloudy	
23	64	53	11	59			.33	89	Stg	NE	PC	
24	67	52	15	59			.17	85	Lt	NE	Clear	
25	70	52	18	62			.01	89	Lt	NE	PC	
26	68	53	15	57			.20	93	Calm		PC	Fog
27	71	51	20	59			.01	87	Lt	ENE	Clear	
28	69	52	17	55			.02	90	Lt	ENE	PC	
29	68	53	15	56			.13	93	Mod	ENE	PC	
30	72	52	20	61			.02	86	Lt	ENE	PC	
31												
Sum	1941	1569	362	1693			9.50	2675				
Mean	64.6	52.3	12.1	56.4			0.317	89.2				

*Reading of maximum thermometer immediately after setting.
†Including rain, hail, sleet, and melted snow.
‡Thunderstorms, halos, auroras, etc.

(IN TRIPLICATE.) See cover for instructions.

T. A. Jaggar, *Cooperative Observer.*

Post-Office Address, Hawaii National Park

MONTHLY SUMMARY.

TEMPERATURE.

Mean maximum, 64.6

Mean minimum, 52.3

Mean, 58.4

Maximum, 72; date, 30

Minimum, 50; date, 8 & 10

Greatest daily range, 20 27th & 30th

PRECIPITATION.

Total, 9.50 inches.

Greatest in 24 hours, 2.33; date, 18

SNOW.

Total snowfall, inches; on ground 15th, inches;

at end of month, inches.

NUMBER OF DAYS—

With .01 inch or more precipitation, 30

Clear, 2; partly cloudy, 15; cloudy, 13

DATES OF—

Killing frost,

Thunderstorms,

Hail,

Sleet,

Auroras,

REMARKS:

DOCUMENT CAPTURED AS RECEIVED

What's any mich of temperature?

ROUGH DRAFT

000 - General

Wingate, please.

020 - General Weather Conditions

The month was very wet until the 27th, with a total rainfall of inches as compared with 9.74 during April, 1934. Maximum and minimum temperatures were 0 ? ~~inches~~ and 0? ~~inches~~ respectively. A detailed report is attached.

100 - Administration

120 - Park Inspections By:

121 - Superintendent

Chief Ranger - Christ

122 - Special Field Representatives

Associate architect Sager was at headquarters during the entire month supervising various landscape and ECW projects

130 - Finance and Accounts

A detailed tatement of park appropriations is attached

140 - Labor situation

150 - Equipment and Supplies

A rock crusher, truck and one set of living room furniture for the superintendent's residence were received during the month an addition So various small miscellaneious items

160 - Status of Alienated Lands

Very brief statement regarding status of Kalapana during April please.

170 - Plans, Maps and Surveys

During April working drawings were completed for the Haleakala Observation station as well as for a garage and equipment shed for that area, and forwarded for approval.

A tracing and map were made of the power line through the park for a right-of-way permit for the Interurban Electric Company ~~[illegible]~~ Arch. Superv. forwarded your office on April 28

DOCUMENT CAPTURED AS RECEIVED

180 - Circulars, Placards, Publicity Bulletins, etc.

Two publicity bulletins were issued during April, copies of which are attached.
The preparation of all press memoranda has been assigned to Ranger Phil Murray.

200 - Maintenance, Improvements and New Construction

210 - Maintenance

Christ and Craik

230 - New Construction

Christ

300 - Activities of Other Agencies in the Park

310 - Park Operators

Plans for a clubroom addition to the Volcano House were submitted for approval during April

400 - Flora, Fauna and Natural Phenomena

410 - Ranger, Naturalist & Guide Service

Christ

420 - Museum Service

Doerr

480 - Natural Phenomena

Kilauea reports

500 - Use of Park Facilities by the Public

510 - Travel - Sunrise on Haleakala calls many visitors to that section of the park. The men in charge of the CCC camps there report early morning visitors daily.

520 - Special Visitors

600 - Protection

Christ
Lava Accidents - CCC Crash on Maui

900 - Miscallaneous

Lamb's child

DOCUMENT CAPTURED AS RECEIVED

000

The month of April was without any event worthy of special mention other than the receipt on April 13 of radio advice that funds had finally been made available for the continuation of the CCC camps in the park. In anticipation of such notice bids had been solicited for clothing, materials for camp construction, equipment etc., and upon receipt of the above notice awards were made. We were thus able to hasten enrollment and on the 22nd the new enrollees selected by the FERA office in Hilo commenced to report. There were first four vacancies at the end of the month.

During this fifth enrollment period the Maui camp will have fifty boys and that at Kilauea 150. The Maui camp is to be abandoned at the expiration of the period.

The continuation of the CCC and enlargement of the Territorial portion of the program received considerable publicity during the month.

~~In Kilauea fire lift continued to be a factor~~

DOCUMENT CAPTURED AS RECEIVED

120—121

April 1 inspected the Olaa road, Olaa & Cotton Road, Mountain View - Beach Park roads, the cotton along the Olaa & Cotton road and the fire pit in Kilauea. Evidences of recent sliding from the walls were seen at Makapehi and Panahi.

On the 11th examined the west rim of Kilauea fire pit and of the west wall which had been and was still overlooking

Made thorough inspection of CCC camp at Kilauea Apl 12

Inspection trips were also made to Pali Kilioe and the Napau Crater section. Routine inspection trips were made daily to the fire pit in Kilauea.

Visited Kalapana village on the 14th and found the native inhabitants were involving the proposed park extension in a minor political campaign then in progress and in which one resident was a candidate. As a result wired your office to inform delegate King that the people were not prepared to vote intelligently and that the proposed meeting had been called off.

DOCUMENT CAPTURED AS RECEIVED

160 A description of the boundaries of the proposed 'Jostfport' addition to the park was forwarded to Delegate King by the Territorial Land Commissioner. When accepted, to park purposes, it authorized by the Congress this 5730 acre addition may be transferred by executive order of the Governor as the area already belongs to the Territory.

After visiting Kalispell on the 14th (visit referred to in 121) the Sec'y requested the Land Commissioner to prepare a new description of the proposed Kalispell extension which would exclude the college lands. This was done and forwarded to Delegate King but since certain essential areas were not included a letter was directed to your office requesting the whole matter be held in abeyance for a time.

On April 10 Mrs. Alice Campbell Bleckfelt one of four beneficiaries of the James Campbell estate suggested a proposed donation to the park of the land of Kahoolawe, which adjoins the Kilauea section and the proposed Kalispell addition (27,000 acres) under certain conditions. This donation was the subject of considerable correspondence and at the date of writing this report it is understood that Mrs. Bleckfelt has made her offer in writing to your office.

DOCUMENT CAPTURED AS RECEIVED

May 1, 1935

Mr. Edward G. Wingate, Superintendent
Hawaii National Park

Dear Sir:

The following is a report of work accomplished under my supervision during the month of April, 1935.

Completed utility road job 516, except for asphalting which will require five men for one day when roller is available. It was impossible to spread asphalt any time during the month of April, owing to rain every day, except the last three days.

Renewed gutter around quarters #1.

Cleaned water supply tank, quarters #1.

Erected tower for fire alarm

Varnished linoleum, quarters #5.

Cleaned gutters on all buildings supplying reservoir.

Built temporary shed and feed room, Bird Park area, for horses

Repaired steps, Quarters #11.

Placed sign fireequipment building.

Painted parking lines lower garage.

Hauled water and filled vaults, Uwekahuna comfort stations.

Made inspection of all buildings

Cut kindling wood for employees' quarters.

Installed 2 window glass, quarters #15

Placed ceiling in storage room, office building.

Cleaned rubbish utility area.

Repaired water heater, quarters #1.

Repaired tank, foundation quarters #2

Trimmed linoleum, office building.

DOCUMENT CAPTURED AS RECEIVED

Built pipe storage rack.

Repaired floor, garage quarters #1

Made three trips to town for supplies and materials.

Hauled employees garabage seven times

Transferred employees under me to ECW construction, April 15

Made estimate building requirements, 1937-1942.

Respectfully

Robert R. Craik

Robert R. Craik
Foreman

DOCUMENT CAPTURED AS RECEIVED

63
45
16
56
210

480 Natural Phenomena

Throughout the month Kilauea volcano continued to be a source of interest and speculation. The seismograph at the Volcano Observatory recorded a total of 210 local seismic disturbances the majority of which appeared to be of Kilauea origin. There were seven very feeble earthquakes (just strong enough to be felt under ideal conditions) recorded all originating within seven miles of the Observatory.

Measurement of rim cracks at marked points about the rim of the fire pit reflected the uneasy condition of the crater. Slumping of rocks, rock slides and avalanches were of daily occurrence. On April 20 a series of spectacular slides commenced falling from the west wall above the 1934 eruption cascade. These slides, many of which recorded as quakes on the pit seismograph, fell with a loud roar and sent clouds of dust into the air. Within a few days the black lava veneer of the cascade had been almost entirely torn away and obliterated. A new talus cone nearly 300 ft high was built up overlapping the old SW talus. Measurements have not yet been made to determine the ~~amount~~ area of the rim block which fell into the pit. After several days of sliding this West wall became quiet and the east wall opposite commenced to break down though at the

DOCUMENT CAPTURED AS RECEIVED

end of the month the west wall was again mildly active.

Slides from the south wall early in the month built up a small talus cone at the foot and each measurement at the end of the month indicate possible large slides from this wall before long. The north walls were also frequently though mildly active all month.

Blue fume issuing from vents at the solfataras beneath the NW and E walls ~~are~~ was plainly visible at all times regardless of weather conditions.

Spirit levels on April 25 indicated a slight uplift of the W and SW walls of the pit.

On April 28 at sunset the Mauna Loa fume cloud was plainly visible rising some 1500. feet above the summit. This is not an unusual sight at this season of the year.

Speculation as to the causes of this long protracted (4 months) period of uneasiness at the fire pit is intriguing. It may be significant that no ~~eq~~ earthquakes large than very feeble have been recorded. —

References Volcano Observatory Bulletin #s 1211-12-13-14 and personal notes.

DOCUMENT CAPTURED AS RECEIVED

Miscellaneous

Considerable fear has been expressed locally that the Territorial Board of Agriculture and Forestry may be wrecked through political appointments since the announcement that the Governor had appointed former Delegate J. J. McCandless to the Chairmanship of the Board. This appointment was upheld by a 8-7 vote in the Territorial Senate. It is rumored that several minor political supporters of Mr McCandless have eyes on the fine jobs for the Territorial Forester positions on the different islands.

DOCUMENT CAPTURED AS RECEIVED

May 2, 1935

The Superintendent
Hawaii National Park.

Dear Sir:

The following is the report of ranger activities during the month of April:

000 - General

The most outstanding event for the month was the visit of of the excursion parties from the Empress of Britain, on April 27 for a one-day stay in the park.

The ranger department activities during the month covered a wide range of work: Recreational, educational, protection, maintenance of telephone lines, painting and repairing of signs, surveys and mapping.

020 - Weather Conditions

The month was very wet until the 27th. The total rainfall at the summer camp was 5.03 inches and at the Volcano Observatory inches.

100 - Administration

110 - Status of Work

The rock lining and riprap shoulders on Uwekahauna road is about 60% completed. A total of 812 feet of ditch was completed in April.

The numbering of buildings in the residential area at Kilauea section and map was completed. Copies of this map are to be posted in the administration building, Volcano House, CCC camp, Army camp and the Geological Survey office, also all private residences in the park.

Work was started on clearing, restretching, and replacing new poles on the telephone lines and was about 40% complete at the end of the month.

120 - Park Inspections By:

121 - Chief Ranger

Routine inspections have been made of all work in progress. On the 3rd of the month a patrol and inspection trip was made to the summit of Mauna Loa. Conditions were generally satisfactory.

District Ranger Peck also made routine inspections in the Haleakala section.

DOCUMENT CAPTURED AS RECEIVED

150 - Equipment and Supplies

A rock crusher and one truck were received during the month, (also a truck for the Haleakala section.)

The inventory which was started in March was completed. except for final disposal of old and obsolete equipment by the survey board.

170 - Plans, Maps and Surveys

A tracing and map were made of the power line through the park for a right-of-way permit.

200 - Maintenance, Improvements and New Construction

210 - Maintenance

On the ~~15th~~ 1st a crew of seven men was started on rocklining ditches and rip-rap shoulders on Uwekahuna road, PW project 521.

Ranger Waesche with four enrollees from the ECW camp are clearing, restretching and replacing new poles on all park owned telephone lines.

230 - New Construction

The tower for the fire siren and house for meter and magnetic switch were built and the equipment installed. A new switch control line was constructed from headquarters to fire siren tower.

300 - Activities of Other Agencies in the Park

310 - Park Operators

The usual monthly dance was held at the Volcano House

320 - Cooperating Governmental Agencies

The Kilauea Military Camp remodeled the old navy camp building for the showing of motion pictures. The old kitchen and dining room were also remodeled into a day room for the enlisted men.

400 - Flora, Fauna and Natural Phenomena

410 - Ranger, Naturalist and Guide Service

Ranger Lamb's time was spent in preparing material for nature trails, cataloging and laying out plots for controlling exotic plants.

DOCUMENT CAPTURED AS RECEIVED

500 - Use of Park Facilities by the Public

The new camp site at the location of the old prison camp is becoming very popular with tourists

Seventeen men from the military camp made the three-day trip to the summit of Mauna Loa.

520 - Special Visitors

Mr. Litchfield, President of the Goodyear Rubber Company was a visitor on the 27th.

Mr. and Mrs. Frederick Blickfelt of San Francisco were in the park for a three-weeks stay. The chief ranger accompanied them on a trip to the summit of Mauna Loa.

600 - Protection

610 - Police Protection

The usual patrols were made of both Kilauea and Haleakala sections during the month.

620 - Fire Protection

The fire alarm system was installed and tested during the month.

A Ford pickup was equipped with extinguishers, axes, wrecking bars, extra hose, wrenches and nozzles.

All inflammable material on the ground along highways and around buildings is being removed by the ECW.

In the afternoon of April 9 a fire drill was held at one of the privately owned residents in the park. Fourteen minutes after the alarm was sounded water was playing on the fire, 250 feet of hose had been laid from the hydrant to the location. Five minutes was lost in getting extra hose. All defects and lost motion in getting hose is being taken care of by equipping the Ford pickup.

650 - Signs

Several new direction signs were erected at the Tree Molds and in the Bird Park area to enable visitors to find their way to Uwekahuna on the circle route.

It is suggested that Ranger Lamb place signs around the plants at headquarters.

900 - Miscellaneous

On April 27 Mr. E.A. Jones the seismologist at the Volcano Observatory gave a very interesting talk on earthquakes and their origin at the staff meeting.

A three-burner gas stove and extra eating and cooking utensils were purchased and taken to the rest house at 10,000 foot elevation on Mauna Loa

Very respectfully

J.H. Christ

J.H. Christ, Chief Ranger

DOCUMENT CAPTURED AS RECEIVED

May I, 1935.

The Superintendent
Hawaii National Park,
Hawaii.

Dear Sir:

Following is the report of my time, by hours, for the month of April, 1935.

General work on cars and trucks			I04 Hours.
Fire equipment			I6 "
Inventory			I4 "
Warehouse-			I2 "
Pumping water as follows	High tank	I8500 gal.	
	Supt. res.	9000 "	
	Gutters	I000 "	
	Total	28500 gals.	II "
Repairing tools			8 "
Check in gasoline			7 "
Threading pipe for C.C.C. Camp			5 "
Check all fire extinguishers			4 "
Fill all car batteries			4 "
Repair lawn mower			3 "
Clean and repair kerosene storage tank			3 "
Repair portable pump			3 "
Transfer motor oil to storage tank			2 "
Reclaim battery lead			2 "
Solder kerosene cans			2 "
Repair andirons, Doerr			2 "
Transfer kerosene to storage tank			I "
Check in kerosene			I "
Patch tubes			I "
Repair wheelbarrows			I "
Repair lanterns (Oil)			I "
Repair room heater (Res. # I0)			I "
		Total	208 Hours.

Submitted by,

F. F. Fischer

F.F.Fischer,
Mechanic.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

April 11, 1935

The Director
National Park Service
Washington, DC

Dear Mr. Director:

Following is the monthly report for Hawaii National Park for the month of March, 1935.

000 - General

The park was very fortunate in having an 11-day official visit from Chief Accountant E.E. Tillett of the Washington office. The staff informally welcomed him at a party at the superintendent's home on March 2.

While at Kilauea Mr. Tillett discussed accounting procedure with the park disbursing officer and ECW clerical staff. He examined both park and ECW equipment accounts and suggested an inventory. He discussed various park problems with the superintendent, offering several suggestions toward improvement and simplification of procedure. One of Mr. Tillett's suggestions took the form of an office order which is included in this report.

Though the weather was generally rainy Mr. Tillett was able to get in several trips to Halemaumau, also he visited the Chain of Craters, Kau and the Mauna Loa lava flows in South Kona, Kalapana and accompanied the Inter-Island tourists on one of their regularly conducted park tours. He spent one day on Maui visiting Haleakala and the CCC camp at the rest house, also visited the Territorial CCC camp at Keanae.

The superintendent was particularly pleased to have a visit from one of the Washington staff and hopes that this park may continue to receive a fair share of official visits. Mr. Tillett's inspection was the first this park has had in six years by a representative of the Washington office.

020 - General Weather Conditions

Total rainfall for the month was 18.02 inches as compared with 3.91 during the same period in 1934. Maximum and minimum temperatures were 74 and 47 respectively. There was fresh snow on the mountains on the 9th, 12th and 25th, also thunder in the vicinity of Kilauea on the 2nd and 30th. A detailed report is attached.

DOCUMENT CAPTURED AS RECEIVED

100 - Administration

110 - Status of Work

Routine work was current. Forms 1-612 were forwarded recommending the appointments of one ranger-naturalist and one ranger for the summer seasnn.

120 - Park Inspections By:

121 - Park Superintendent

The superintendent accompanied Chief Accountant E.E. Tillett on most of his trips in the Kilauea section, also to Maui and was with him until the 19th in Honolulu.

On the 6th, in company with Camp Director Rivenburgh and Camp Superintendent Stephens of the ECW., Chief Ranger Christ and Mr. Tillett, he laid out the area in the Kapapala grazing lands which was to be fenced under ECW to protect the rapidly disappearing koa groves from complete destruction.

Other inspections were made of the Lava Tube and fern jungle bridges and Bird Park corral on the 7th.

Routine daily trips to Halemaumau for observation of the fire pit and general inspection of roads were made while at headquarters.

On the 14th in company with BPR Engineers E.S. Wheeler and H.L. Handley, Contractor E.E. Black, Associate Architect M.S. Sager and Mr. E.E. Tillett, he made a final inspection of the Haleakala road.

The superintendent was in Honolulu from March 15 to 19, where he conferred with the Governor and Land Commissioner relative to the proposed Kalapana addition, also Princess Kawananokoa on the same matter. On Sunday, the 17th, a trip around the Island of Oahu was made with Chief Accountant Tillett.

On the 31st the Kahaualea beach lands near Kalapana were inspected in company with Mrs. and Mrs. Blickfelt. Mrs. Blickfelt, a sister of Princess Kawananokoa is one of four beneficiaries of the James Campbell Estate and has since suggested a possible donation of the entire 26,000 acres of Kahaualea to the park. This matter is being made the subject of special correspondence with your office.

122 - Special Field Representatives

Associate Architect Sager was in headquarters area of the park until the 11th, when he left for an inspection trip on Maui, returning to Kilauea on the 20th.

DOCUMENT CAPTURED AS RECEIVED

123 - National Park Service Officials

Chief Accountant Tillett, who arrived on February 28, remained in this section of the park until the 13th, when he departed with the superintendent for Maui, remaining there for a day and then continuing on to Honolulu, whe he remained for the balance of the month.

130 - Finance and Accounts

A detailed statement of park appropriations is attached.

150 - Equipment and Supplies

One Ford coupe pickup and two sets of bedroom furniture for the superintendent's residence were received during the month, also miscellaneous small hand tools and supplies.

The inventory which was started during February is approximately 90% complete.

160 - Status of Alienated Lands

During the first two weeks in the month Engineer Murry of the Territory, under instructions from the Commissioner of Public Lands, surveyed the boundaries of the proposed "Footprint" addition to the park. This addition has been the subject of frequent conferences with Territorial and corporate officials for some time.

The area of this proposed addition is 5,730 acres, and will place under our jurisdiction a section of historical importance and scientific interest. The completed survey was in the Land Commissioner's hands on the 17th of the month.

170 - Plans, Maps and Surveys

On March 22 the Territorial Commissioner of Public Lands forwarded to Delegate King descriptions of the proposed Kalapana and Footprint additions to the park.

By the direction of the superintendent, Chief Ranger Christ and Ranger Waesche made a map of the electric light power line within the boundary of the park, also tracing for the land leased to the Volcano House Company, Ltd.

180 - Circulars, Placards, Publicity Bulletins, etc.

The superintendent was requested to prepare an article on Hawaii National Park for a special Fleet edition of the Honolulu Advertiser. A previous article which he had prepared some time ago for the Washington office was used.

DOCUMENT CAPTURED AS RECEIVED

200 - Maintenance, Improvements and New Construction

210 - Maintenance

The enrollees from the CCC camp continued on the shoulders and rock lining ditches on the Uwekahuna road.

A cover was put over the tank at Bird Park during the month.

230 - New Construction

Work was continued on surfacing the road in the utility area. Force account on landscaping the Haleakala road was completed on March 22.

240 - Improvement of Approaches

The approach road from Pahala to the Volcano was approximately 90% complete at the end of the month.

300 - Activities of Other Agencies in the Park

310 - Public Utility Operators

The chief ranger completed arrangements with the Hilo Telephone Company to remove their line within the park from beside the main highway and place it several hundred feet from the road where it will be screened from view.

317 - Status of Authorized Projects of Contractors

Final inspection was made of the Haleakala road project, NR-7, and recommendation for acceptance and final payment to contractor has been submitted.

320 - Cooperative Governmental Agencies

Weekly movies at the Army camp were started during March and much better attendance was shown, due no doubt to the installation of new sound equipment.

400 - Flora, Fauna and Natural Phenomena

410 - Ranger, Naturalist and Guide Service

Ranger J.A. Peck was transferred to Maui on March 17 to take charge of the Haleakala section. A farewell party was given them on the preceding Friday.

Word was received that effective March 16 Ranger Joseph H. Christ, who has been serving in the capacity of acting chief ranger, was promoted to chief ranger and Ranger J.A. Peck, had been promoted to district ranger, Haleakala.

DOCUMENT CAPTURED AS RECEIVED

420 - Museum Service

A number of corrections and additions were made on the relief model of Kilauea and Vicinity, which is on display at Uwekahuna Museum. This brings the map up to date from the standpoint of roads, trails, etc.,

On the evening of March 8 a special illustrated lecture on Hawaiian Volcanoes was given by the park naturalist to the enlisted men of the permanent party of the Kilauea Military Camp. He had been considering giving this lecture for some time. Most of the 60 men who make up the permanent party had never had an opportunity to attend the regular lectures given during the day. The entire permanent party and 22 visiting enlisted men attended this lecture and their reaction was most favorable. From two to four evening lectures each month on the Eruption of Krakatoa are regular activities. Whenever we announce the showing of the film "Krakatoa" we are assured of from 50 to 100 persons in attendance.

480 - Natural Phenomena

Neither Kilauea nor Mauna Loa showed any activity on the surface. However, landslides continued in Halemaumau, which included several particularly large ones. The Volcano Observatory seismograph registered 92 disturbances, most of which were located in Kilauea.

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

There was a total of 14,722 visitors as compared with 15,888 for March, 1934.

530 - Special Visitors

March 14 and 15 - Officers and men from USS Ramsay and USS Gamble, minesweepers.

March 20 - Mr. and Mrs. Lorin Thurston and son, and Mr. and Mrs. Robert Scripps and their children from San Diego, California. They departed on the 21st. Mr. Thurston is the editor of the Honolulu Advertiser and Mr. Scripps is connected with the Scripps-Howard newspapers.

March 24 - Major General George E. Leach, Chief National Guard Bureau, Washington DC, accompanied by Mrs. Leach, Col. P.W. Smoot, Adj. Gen. of Hawaii and Lt. Col. F.E. Overholser. They departed on the 25th. While here they were taken on a park tour by the park naturalist. The superintendent paid an official call on General Leach at the military camp on the 25th and attended a luncheon given in his honor by the Hilo Chamber of Commerce on the 27th.

DOCUMENT CAPTURED AS RECEIVED

600 - Protection

610 - Police Protection

The usual patrol of the park was carried on by the rangers during the month. Assistance was given to six motorists with minor trouble.

630 - Accidents

March 28 - W.J. Stephens, ECW camp superintendent, who was returning from Hilo, where he had been on official business, struck a large rock in the middle of the road at about the 7 mile post, Hilo, which was rather difficult to see from a distance. Damage as follows: smashed right fender, bent front axle, broken right front glass, broken spring shackle and broken steering rod.

640 - Destruction of Predatory Animals

Four permits were issued to parties going through the park with fire arms.

650 - Signs

All signs have been repaired and painted where necessary

The work of drafting label copy for nature trail markers was continued throughout the month.

During the month the park naturalist and Ranger Lamb set out metal nature-trail labels along the Halemaumau, Sandalwood and Steaming Bluff trails. In addition they made a careful study of the Byrons Ledge trail to determine what and where informational signs were needed.

900 - Miscellaneous

The usual Volcano House dance was held on the 16th.

There was a regular meeting of the Federal Business Association on the 11th at Hilo. Due to lack of attendance no new business was brought up. However, an executive committee was appointed in accordance with recent instructions from the Procurement Division. Also a committee to investigate the matter of the present unsatisfactory star route service between Hilo and the Volcano was appointed.

The University of Hawaii Quarterly Bulletin, Summer Session Announcement was received during the month. The bulletin announces nine courses to be offered at the Volcano Session held in the park.

A daughter was born to Mr. and Mrs. Charles Kauhi on the 14th. Mr. Kauhi is a permanent laborer on the park force.

Respectfully submitted

Edward G. Wingate
Superintendent

CW

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

March 21, 1935

GENERAL OFFICE ORDER #30

Subject: Use of Garage Space in Government Owned Garages: Use of Official Cars; Privately Owned Cars in the Park, etc.

The Acting Chief Ranger is directed to immediately assign garage space to each piece of government owned automotive equipment. Such equipment, when not in use, must be housed in the space provided and no other.

On his recent inspection of this park, the Chief Accountant called my attention to the use of government built garages by park personnel for their private cars, stating that the only justification for the use of government funds for erection of garages in the parks is that they are built for government owned equipment. The Chief Accountant has agreed to discuss the problem of housing private cars with the Director and until such time as a definite decision is made the employees of this park are authorized to make use of unassigned garage space for private cars. Under no condition is assigned space to be so used and no private car shall be so parked as to impede or block access to or from any assigned space.

No car, either government or privately owned is to be so parked in the utility area as to impede access to or from the fire equipment storehouse and garage.

There is no authority for the park mechanic or his assistants to make repairs to or service any privately owned vehicle except in the event of accident or similar emergency.

The employees of this park are requested to observe scrupulously the requirement that use of government cars be confined strictly to government business. The use of a government car is not justified when the purpose of the trip is primarily personal, even though some official business may be conducted. Attendance at meetings of non-government organizations to which the employee may belong unless the particular meeting is to transact business directly affecting this or other parks does not warrant the use of government transportation even though membership in these organizations is recognized as being of value to the park

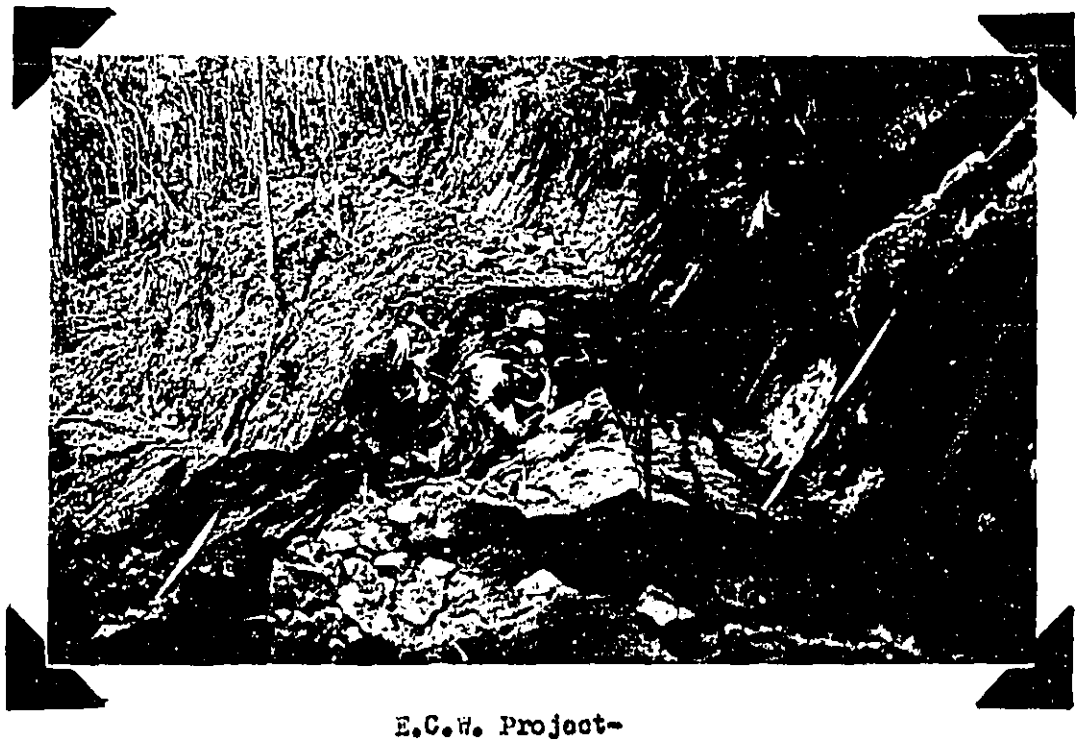
Edward G. Wingate
Superintendent

Distribution:

Staff	1 each
Director	1
Monthly report	7
Supt.	1

DOCUMENT CAPTURED AS RECEIVED

E.C.W. Project-
Kilauea Iki Trail
under construction



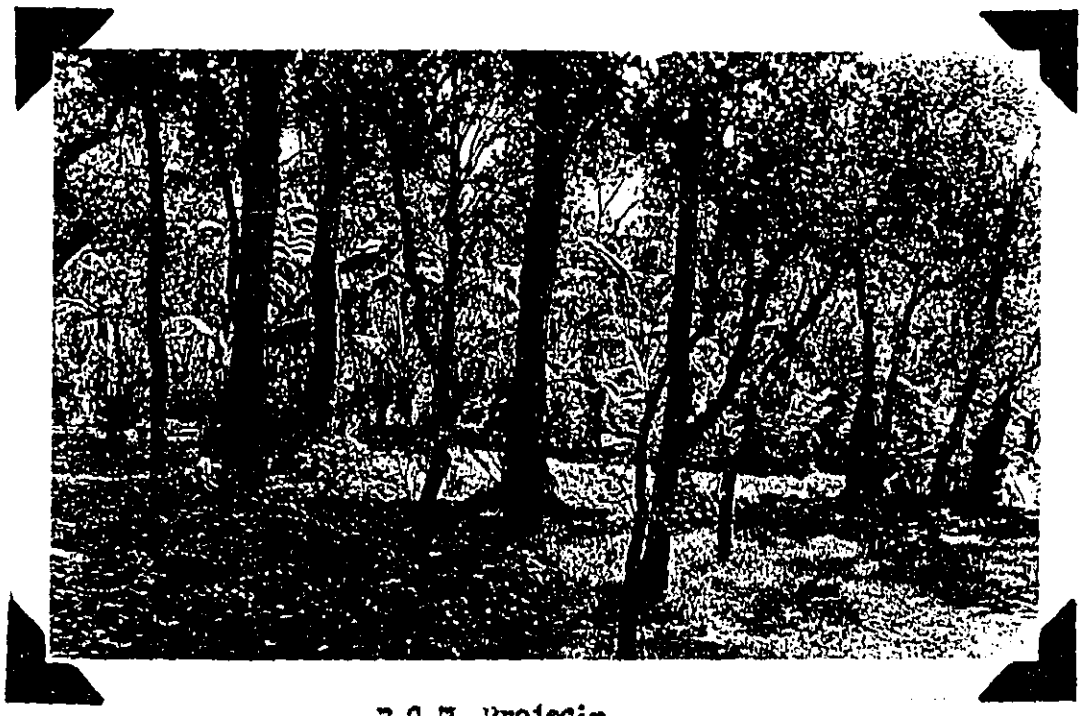
E.C.W. Project-
Kilauea Iki Trail
under construction

DOCUMENT CAPTURED AS RECEIVED

E.C.W. Project - Emergency maintenance
Halemauman-Bird Park Road
Placing hand laid rock on fills to prevent erosion - At this point 2 feet of the surfaced portion of the road had been eaten away by rain.

E.C.W. Project-
Kilauea Iki trail during construction.

DOCUMENT CAPTURED AS RECEIVED



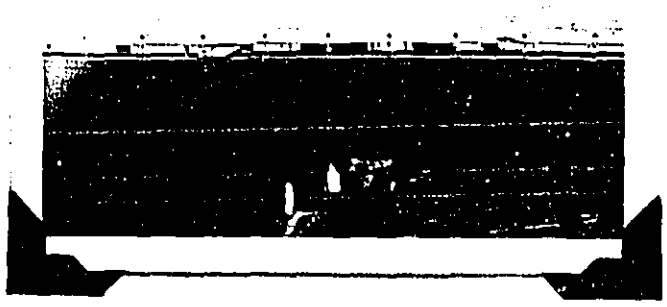
E.C.W. Project-
Planting around government
employees quarters.

E.C.W. Project-
Planting around government
employees quarters with
natural materials.

DOCUMENT CAPTURED AS RECEIVED

Chief Accountant Tillett leaving Hilo for Maui.

ER-ISLAND STEAM



Mrs. Kenneth J. Williams and her son day they left for Maui, where Mr. Williams is now stationed.

DOCUMENT CAPTURED AS RECEIVED

Chief Accountant Tillet and
Charles Kauhi at Kalapana

Chief Accountant
Tillett at Kalapana

DOCUMENT CAPTURED AS RECEIVED

Ranger and Mrs. Peck the day they left for Maui

Group of local people bidding good-bye to the Pecks the day they left for Maui

DOCUMENT CAPTURED AS RECEIVED

STATISTICAL REPORT NO. 8

FINANCE AND ACCOUNTS

MARCH, 1935

Symbol	Appropriation	Allotted	Expended & Obligated	Balance
45415	Hawaii National Park, 1935	35,150.00	32,937.70	2,212.30
45406	Forest Protection & Fire Prevention, 1935	300.00	292.64	7.36
44415.3	Salaries & Expenses, Office of Natl Parks, Bldgs & Reservations, 1934	31,392.55	29,491.56	1,900.99
44405.3	Emergency Reconstruction and Fighting Forest Fires in Natl Parks, '34	239.35	239.35	0.00
4X391	Roads & Trails, Natl Parks, Emergency Construction Act 6/19/34	25,275.00	10,774.62	14,500.38
4-03/5640.8	N.I.R., Int., Natl Parks, Roads & Trails, 1933-'35:	491,000.00	493,095.89	RE 2,095.89
4-03/5640.14	N.I.R., Int., Natl Parks, Bldgs & Reservations, 1933-'35:	11,250.00	11,088.19	161.81

DOCUMENT CAPTURED AS RECEIVED

10-157
(July, 1929)

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

TRAVEL REPORT

Hawaii National Park for the Month of March 1935

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year Number	Increase for Travel Year Percent
PRIVATE TRANSPORTATION:						
Cars first entry, ...						
Cars reentry, ...						
Motorcycles, ...						
Total motor vehicles, ...						
Persons entering via motor vehicles, ...	14,127	98,022	15,255	100,380	-2,358	.023
Persons entering via other private transportation, ...	179	985	292	1,360	-375	.276
Total persons entering via private transportation, . . .	14,306	99,007	15,547	101,740	-2,733	.026
OTHER TRANSPORTATION:						
Persons entering via ~~stages~~ Hotel, .	416	2,330	341	3,963	-1,633	.412
Persons entering via trains, .						
Persons entering otherwise, . .						
Total other transportation, .	416	2,330	341	3,963	-1,633	.412
GRAND TOTAL ALL VISITORS, . . .	14,722	101,337	15,888	105 703	-4,366	.041

	This Year	Last Year	Increase Number	Increase Percent
Automobiles in public camps during month, ...				
Campers in public camps during month, ...				

DOCUMENT CAPTURED AS RECEIVED

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Hawaii National Park for the Month of March, 1935

	This Year	Last Year
Park revenue on hand beginning of month,	0.00	0.00
Received,	25.00	75.00
Total,	25.00	75.00
Remitted,	25.00	75.00
On hand close of month,	0.00	0.00

Park revenues received this year to date, 350.00

Park revenues received last year to date, 350.00

Increase, 0.00

Per cent of increase, 0.00

DOCUMENT CAPTURED AS RECEIVED

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Hawaii National Park for the Month of March 1935

	This Month		This Month Last Year	
	Appointed	Non-Appointed	Appointed	Non-Appointed
Number of employees beginning of month	16	42	16	7
Number of additions	0	3	0	3
Total	16	45	0	10
Number of separations	0	42	0	5
Number of employees close of month	16	3	16	5
Number of promotions during month	0	0	0	0
Aggregate amount of annual leave taken	0	0	0	0
Aggregate amount of sick leave taken	0	0	18½	0
Aggregate amount of leave without pay	0	0	0	0

DOCUMENT CAPTURED AS RECEIVED

10-215
(August 1933)

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of National Parks,
Buildings and Reservations

Hawaii National Park

REPORT OF NON-APPOINTED PERSONNEL
(TEMPORARY)

Changes outside the District of Columbia for the month of March 1938

Total at beginning of month	Additions	Separations	Net Gain or loss (a)	Total at ending of month
42	3	42	-39	3

(a) If loss, indicate by minus sign.

DOCUMENT CAPTURED AS RECEIVED

10-158

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Hawaii National Park for the Month of March 1935

Description of Projects	Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
F.P. 102.8 Parapet Lookouts, Kilauea Iki, etc.-	100	0	0	
F.P. 311.14 Fire-equipment Storehouse & Garage	100	0	0	
F.P. 312.14 Bldg. Reconditioning for elimination of Fire Hazards	100	0	0	
516 Utility Area Road, Paving (F.A.)	90	20	40	
518 7 Haleakala Road, Landscaping (F.A.)	100	40	40	

DOCUMENT CAPTURED AS RECEIVED

10-161

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF SALES OF PUBLICATIONS

Hawaii National Park **March, 1935**

	Number	Value
GOVERNMENT PUBLICATIONS:		
On hand beginning of month,	857	152.25
Received during month,	0	0.00
Total,	857	152.25
Sold during month,	0	0.00
On hand at close of month,	857	152.25

NON-GOVERNMENT PUBLICATIONS:

On hand beginning of month,	
Received during month,	
Total,	
Sold during month,	
On hand at close of month,	

Cash on hand beginning of month,	9.52
Sales during month,	0.00
Total,	9.52
Remitted during month,	0.00
Balance,	9.52

DOCUMENT CAPTURED AS RECEIVED

Form No. 1009—Met'l.

U. S. Department of Agriculture, Weather Bureau.

COOPERATIVE OBSERVERS' METEOROLOGICAL RECORD:

Month of March, 1935; *Station,* Volcano Cty's; *County,* Hawaii

State, ; *Latitude,* ; *Longitude,* ; *Time used on this form,* NST; *Hour of Observation,* 8 a.m.

DATE.	TEMPERATURE. Maximum.	Minimum.	Range.	*Set Max.	PRECIPITATION. Time of Beginning.	Time of Ending.	†Amount.	Snow, Sleet, and Water Equivalent.	Depth of Snow on Ground at Time of Observation.	Prevailing Wind Direction.	Character of Day, Sunrise to Sunset.	‡Miscellaneous Phenomena.
	1	2	3	4	5	6	7	8	9	10	11	
1	65	54	11	60			2.40	93	Lt	SW	Cloudy	
2	63	56	7	58			.04	94	Lt	ENE	Cloudy	Thunder
3	60	54	6	57			1.36	98	Lt	SW	Cloudy	
4	70	54	16	59			2.17	89	Mod	NE	PC	
5	61	57	4	58			1.02	96	Lt	ENE	Cloudy	
6	61	55	6	57			1.50	96	Lt	NE	Cloudy	
7	62	56	6	59			.48	94	Lt	W	Cloudy	
8	71	55	16	60			.06	93	Lt	SW	PC	
9	73	57	16	60			.05	94	Lt	NE	PC	Snow on Mts.
10	71	52	19	61			.06	80	Lt	SW	Clear	
11	74	52	22	58			T	78	Lt	SW, ENE	PC	
12	66	51	15	60			.28	86	Lt	ENE	PC	Snow on Mts.
13	60	48	12	51			.35	85	Stg	NE	Clear	
14	62	47	15	52			T	79	Lt	NE	Clear	
15	61	47	14	53			00	79	Mod	NE	PC	
16	61	47	14	52			.11	87	Calm		PC	
17	61	47	14	52			1.07	87	Lt	SSW	PC	
18	65	48	17	55			.07	86	Mod	SW	PC	
19	68	52	16	55			T	86	Stg	SW	Clear	
20	71	51	20	61			T	76	Lt	NE	Clear	
21	70	53	17	58			T	90	Lt	NE	PC	
22	64	52	12	57			.27	94	Mod	ENE	Cloudy	
23	66	53	13	57			.43	93	Lt	NE	Cloudy	
24	61	55	6	56			.59	94	Lt	SW	Cloudy	
25	58	51	17	55			.43	82	Calm		PC	Snow on Mts.
26	71	52	19	58			.35	83	Lt	SW	Cloudy	
27	66	53	13	58			2.69	88	Lt	SW	Cloudy	
28	67	55	12	57			1.48	90	Lt	ENE	Cloudy	
29	68	51	17	57			.08	89	Calm	NE	PC	
30	63	56	7	58			.03	93	Lt	NE	PC	Thunder
31	67	54	13	57			.07	92	Lt	NE	Cloudy	
Sum	2037	1524	413	1766			18.02	2763				
Mean	66.9	52.4	13.2	57			.58	89				

*Reading of maximum thermometer immediately after setting.
†Including rain, hail, sleet, and melted snow.
‡Thunderstorms, halos, auroras, etc.

(IN TRIPLICATE.) See cover for instructions. 8—253

T. A. Jagger, *Cooperative Observer.*

Post-Office Address, Hawaii National Park

MONTHLY SUMMARY.

TEMPERATURE.

Mean maximum, 65.7

Mean minimum, 52.4

Mean, 59.05

Maximum, 74; date, 11

Minimum, 47; date, 14,15,16 & 17

Greatest daily range, 22

PRECIPITATION.

Total, 18.02 inches.

Greatest in 24 hours, 2.77; date, 4

SNOW.

Total snowfall, inches; on ground 15th, inches;

at end of month, inches.

NUMBER OF DAYS—

With .01 inch or more precipitation, 25

Clear, 5; partly cloudy, 12; cloudy, 14

DATES OF—

Killing frost,

Thunderstorms, 2 - 30

Hail,

Sleet,

Auroras,

REMARKS:

DOCUMENT CAPTURED AS RECEIVED

000 General

The park was very fortunate in having an extra day official visit from Chief Account E.E. Zillett of the Washington office. The staff informally welcomed him at a party at the Superintendent's home on March 2nd.

While at Kelowna Mr. Zillett discussed accounting procedure with the Park Disbursing Officer and E.C.W. clerical staff. He examined both park & ECW equipment accounts and suggested an inventory. He discussed various park problems with the Superintendent offering several suggestions toward improvement and simplification of procedure. One of Mr. Zillet's suggestions took the form of an office order which is included in this report.

Though the weather was generally rainy Mr. Zillet was able to get in several trips to Helena area. Also he visited the Chain of Lakes, Kan and the Waura Ira Nora flows in South Kora, Kalispell, and accompanied the Glacier Island tourists on one of their regularly conducted park tours. He spent one day on Marie visiting Holeporla and the CCC camp at the east home, also visited the Territorial CCC camp at Kearae.

The Superintendent was particularly pleased to have a visit from one of the Washington staff and hopes

that this park may continue to receive a fair share of official visits. Mr. Zillett's inspection was the first this park has had in 6 years by a representative of the Washington office.

Oct 6 1929

121-

The Superintendent accompanied Chief Accountant E.E. Zillett on most of his trips in the Kilauea section, also to Maui and was with him until the 19th in Honolulu.

On the 6th in company with Camp Director Riverbaugh and Camp Superintendent Stevens of the ECW, Chief Ranger Christ and Mr. Zillett he laid out the area in the Kapapala grazing lands which was to be fenced under ECW to protect the rapidly disappearing koa groves from complete destruction.

Other inspections were made of the Lava Tube and Fern jungle bridges and Bird Park corral on the 7th.

Routine daily trips to Holemauwau for observation and general inspection of roads were made while at Headquarters.

7th for fill

On the 14th in company with Bureau Engineers E.S. Wheeler and H.L. Hardley, Contractor E.E. Block

DOCUMENT CAPTURED AS RECEIVED

Associate Architect M.S. Sager, and Mr. E.E. Tillett he made a final inspection of the Kalihiwai Road.

The Superintendent was in Honolulu from March 15th to 19th where he conferred with the Governor and Land Commissioner relative to the proposed Kilauea addition also Princess Kawananakoa on the same matter. On Sunday the 17th a trip around the island of Oahu was made with Chief Accountant Tillett.

On the 31st the Kahuaiea beach lands near Kilauea were inspected in company with Mr. & Mrs. Bliss Bliss. Mrs. Bliss a sister of Princess Kawananakoa is one of your beneficiaries of the James Campbell Estate and has since suggested a possible donation of the entire 26,00 acres of Kahuaiea to the park. This matter is being made the subject of special correspondence with your office.

DOCUMENT CAPTURED AS RECEIVED

Monthly Report Note —

160

During the first two weeks in the month Engineer Murray of the Territory under instructions from the Commissioner of Public Lands surveyed the boundaries of the proposed 'Fortpoint' addition to the ~~National~~ Park. This addition has been the subject of frequent conferences with Territorial and Corporate officials for some time.

The area of the proposed addition is 5,730 acres, and will place under our jurisdiction a section of historical importance and scientific interest —

310. The Chief Ranger completed arrangements with the Bell Telephone Company to remove their line, within the park, from beside the main highway and place it several hundred feet from the road where it will be screened from view.

The completed survey was in the Land Commissioners' hands on the 17th of this month

DOCUMENT CAPTURED AS RECEIVED

000 - General

A short statement from you please.

020 - General Weather Conditions

Total rainfall for the month was 18.02 inches as compared with 3.91 during the same period in 1934. Maximum and minimum temperatures were 74 and 47 respectively. There was fresh snow on the mountains on the 9th, 12th and 25th, also thunder in the vicinity of Kilauea on the 2nd and 30th. A detailed report is attached.

100 - Administration

110 - Status of Work

Routine work was current. Form 1-612 were forwarded recommending the appointments of one ranger-naturalist and one ranger for the summer seaon.

120 - Park Inspections By:

121 - Superintendent

Wingate

122 - Special Field Representatives

Associate Architect Sager was n headquarters area of the park until 11th when he left for an inspection trip on Maui, returning to Kilauea on the 20th.

123 - National Park Service Officials

Chief Accountant Tillett, who arrived on February 28, remained in this section of the park until the 13th, when he departed with the superintendent for Maui, remaining there for a day and then continuing on to Honolulu, where he ~~expects to remain for two or three weeks.~~ remained for the balance of the month.

130 - Finance and Accounts

A detailed statement of park appropriations is attached

150 - Equipment and Supplies

Higashida — ?.?!

The inventory which was started during February is approximately 90% complete.

DOCUMENT CAPTURED AS RECEIVED

160 - Status of Alienated Lands

Copy Wingate's notes

170 - Plans, Maps and Surveys

Christ - On March 22 the Territorial Commissioner of Public Lands forwarded & delegated King description of the proposed Kalapana and Fort Hunt additions to the park.

180 - Circulars, Placards, Publicity Bulletins, etc.

The superintendent was requested to prepare an article on Hawaii National Park for a special Fleet edition of the Honolulu Advertiser. A previous article which he had prepared some time ago for the Washington office was used.

200 - Maintenance, Improvements and New Construction

210 - Maintenance

Christ

Repairs were made to various pices of equipment and the fire equipment was painted, arranged and repaired. - Get note from Christ on creation of fire tree shelters etc

230 - New Construction

Is, or was, there any? — Halehale Free Account - Port Construction — Paving Utility area road — See Jimmy re dates etc

240 - Improvement of Approaches

The approach road from Pahala to the Volcano was approximately 90% complete at the end of the month.

300 - Activities of Other Agencies in the Park

310 - Public Utility Operators

Wingate's notes

317 - Status of Authorized Projects of Contractors

Final inspection was made of the Haleakala road project, NR-7, and recommendation for acceptance and final payment to contractor has been submitted.

320 - Cooperative Governmental Agencies

Movies at the Army camp were started during March and much better attendance was shown, due no doubt to the installation of new sound equipment.

DOCUMENT CAPTURED AS RECEIVED

400 - Flora, Fauna and Natural Phenomena

Ranger J.A. Peck was transferred to Maui on March 17 to take charge of the Haleakala section. A farewell party was given them on the preceding Friday.

Word was received that effective March 16 ~~acting chief~~ Ranger Joseph H. Christ, who has been serving in the capacity of acting chief ranger was promoted to chief ranger and ~~the~~ Ranger J.A. Peck, had been promoted to district ranger. Haleakala

John Doerr

480 - Natural Phenomena

Neither Kilauea nor Mauna Loa showed any activity on the surface. However, landslides continued in Halemaumau, which included several particuarly large ones. The Volcano Observatory seismograph registered 92 disturbances, most of which were located in Kilauea.

500 - Use of Park Facilities by the Public

510 - Increase of Decrease in Travel

There was a total of visitors as compared with 40,497 for March, 1934.

530 - Special Visitors

March 14 and 15 - Officers and men from USS Ramsay and USS Gamble, minesweepers of San Diego, Cal

March 20 - Mr. and Mrs. Lorin Thurston and son and Mr. and Mrs. Robert Scripps and their children. ~~[illegible]~~ They departed on the 21st. Mr. Thurston is the editor of the Honolulu Advertiser and Mr. Scripps is connected with the Scripps-Howard newspapers.

March 24 - Major General George E. Leach, Chief National Guard Bureau, Washington DC, accompanied by Mrs. Leach, Col. (POW.) ?? Smoot, Adj. Gen. of Hawaii and Lt. Col. F.E. Overholser. They departed on the 25th. While here they were taken on a park tour by the park naturalist. The Sqd't paid an official call on Gen Leach at the Military Camp on the 25th and attended a luncheon given in his honor by the Hilo Chamber of Commerce on the 27th

600 - Protection

610 - Police protectio - Christ

630 - Accidents - Stephens, Christ.

DOCUMENT CAPTURED AS RECEIVED

640 - Destruction of Predatory Animals, Christ

650 - Signs - Christ

900 - Miscellaneous

The usual Volcano House dance was held on the 16th.

There was a regular meeting of the Federal Business Association on the 11th. Due to lack of attendance no new business was brought up. However, an executive committee was appointed in accordance with recent instructions from the Procurement Division. Also a committee to investigate the matter of the present unsatisfactory star route service between Hilo and the Volcano was appointed.

When was Charlie's baby born? ~~Col Charlie met me~~ March 14.
Egu

FINIS

Omit from Journal

DOCUMENT CAPTURED AS RECEIVED

The Superintendent
Hawaii National Park,
Hawaii.

Dear sir:

Following is the report of my time, by hours, for the month of March 1935.

General work on cars and trucks-		69	Hours.
Taking inventory		34	"
Repairing tool handles		16	"
Dressing tools		12	"
Painting, repairing and arranging fire equipment		10	"
Check in gasoline		7	"
Pumping water as follows,			
High tank	18,000 gals.		
Lava tube	1,000 "		
Washing grader	1,000 "		
Total	20,000 Gals.	6	"
Repair portable pump		6	"
Warehouse		5	"
Dressing rock drills for C.C.C. Camp		4	"
Repair gasoline lanterns		4	"
Filling all car batteries twice monthly		4	"
Making numbers for, and marking garages		4	"
Repair grader		3	"
" water line		2	"
" Mr. Estes car		2	"
" Gasoline pump in service station		2	"
Set up new emery grinder		2	"
Check tools at C.C.C. Camp		2	"
Repair hand pump for oiling roads		2	"
" Bar for tourist		1	"
" Surveyors chain		1	"
" Wiring in warehouse		1	"
" Concrete shovels		1	"
" Traffic counter Hilo side		1	"
Sort cement sacks		1	"
Repair lawn mower		1	"
" Tire chains		1	"
Clean pump house		1	"
Check and assemble dishes for cottage # 10		1	"
Check in kerosene		1	"
Patch tubes		1	"
Total		208	Hours.

Submitted by
F. F. Fischer
F.F.Fischer
Mechanic.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

March 8, 1935

The Director
National Park Service
Washington, DC

Dear Mr. Director:

Following is the monthly report of activities for February.

000 - General

Except for the dedication of the Haleakala road on Maui, February 23, the month was very uneventful. However, that long awaited event was quite sufficient.

The superintendent, together with Ranger J.A. Peck, who has been assigned to duty in the Haleakala section of the park, flew over to the island of Maui on the 18th, arriving in time to attend a meeting of the Maui Chamber of Commerce Committee handling the Haleakala road opening celebration details. This meeting was also attended by Associate Architect M.S. Sager to whom the superintendent had previously delegated authority to handle the Park Service end of the program. Other members of the park staff who had been requested to attend the opening to assist in handling traffic, police work, information and public contacts arrived by steamer at Lahina, Maui, on the night of the 20th. This party consisted of Acting Chief Ranger J.H. Christ, Chief Clerk J.K. Higashida, Ranger Philip Murray and ECW Camp Director Rivenburgh. On the 22nd Ranger Lamb arrived in company with Dr. Otto Swezey, Entomologist from Honolulu.

On the early morning of the 23rd three ships arrived at Kahului, Maui, bringing several hundred visitors and invited guests to the road opening celebration. Through arrangements made by the committee in charge, those visitors were assigned cars with a local resident as host. The morning was spent in sightseeing with an early luncheon served at the Grand Hotel in Wailuku. Immediately after luncheon the auto caravan, consisting of some 400 or more cars left Wailuku for Haleakala.

In order that there might be no needless delays the Haleakala road, by police order had been closed since 5 p.m. on the preceeding day and all cars making the trip had been required to undergo a severe brake test. Unfortunately no test of climbing power, etc., was made which resulted

DOCUMENT CAPTURED AS RECEIVED

in a number of cars being stalled after the steep climb up the Territorial portion of the road began.

The auto caravan left the Kula road junction at 12:30 p.m. and the first cars arrived at 1:15 p.m. at the Puu Nianian entrance to the national park where the road dedication ceremonies and NBC broadcast were to be held. Police, park rangers and radio technicians had gone ahead and traffic was handled without difficulty.

At Puu Nianian a 15-minute broadcast was given over an NBC hookup with KGU in Honolulu. The program called for short talks by Governor Poindexter of the Territory, Mr. Worth Aiken, a long time resident of Maui, representing the Maui people and the superintendent. Due to illness the governor could not attend but was represented by the Secretary of the Territory. The governor's talk was not given over the NBC broadcast since no advance copy had been prepared and the secretary did not arrive in time for a rehearsel. In fact, Mr. Worth Aiken and the superintendent, who were together, due to traffic delays barely arrived in time to go on. The superintendent was very happy to receive the following radiogram from the Director which was read as an introduction to his talk.

> "Today witnesses the realization of a great dream the completion of a motor road up the slopes of Haleakala This ten ten mile stretch of highway within the park linking with the Territorial highway from Wailuku is a boon to travelers who may now reach the summit of this remarkable dormant crater within two hours after disembarking from the boat. I want to take this opportunity to express my appreciation of the wholehaarted cooperation of those who have made this road an accomplished fact and to extend my congratulations on its successful termination"

Superintendent Leavitt of Mesa Verde also sent a message which, unfortunately due to time requirements could not be worked in over NBC, but was read later on the Island-wide broadcast, and which was greatly appreciated by his many friends in the Islands. Copies of talks given by Associate Architect M.S. Sager and the superintendent are attached.

Following the NBC program the crowd gathered about the flower lei stretched across the new road where numerous photographs were taken and the lei then cut by the Secretary of the Territory, officially opening the road.

After a clear morning the fog and rain then swept in as the caravan proceeded to the summit, where an hour's program of short talks, interspersed with music was given over station KGU The thermometer at the summit stood at 37° F. and a dense fog obscured the view. However, coffee, sandwiches and more potent beverages concealed in car seats and

DOCUMENT CAPTURED AS RECEIVED

overcoat pockets did much to keep the crowd in a good humor. Some 300 cars were counted in the summit parking area, many having turned back after the opening ceremony was finished and the rain came on. The boys of the CCC camp under the direction of the camp director did valiant service in the fog and cold directing parking, finding lost articles, including cars, etc. It is of interest that many people returned to the summit the following morning to see the view they had missed on the day before.

The broadcast finished the caravan returned to Kahului where a luau (dinner) for 1500 persons was served, followed by a dance at the Territorial fair grounds building. A dance, with a hundred or so in attendance, was also given at the Grand Hotel. The excursion steamers sailed homeward at midnight.

Among the thousand odd visitors were the following: Gen. Halsted Dore, Commanding Hawaiian Dept., Adm. Robert E. Yarnell. Commanding Pearl Harbor, Arthur E. Green, Secretary Territory of Hawaii, Col. Walter Dunham, Secretary to Gov. Poindexter, G. Fred Wright, Mayor of Honolulu, George P. Denison, Chairman Hawaii Tourist Bureau, George T. Armitage, Executive Secretary Hawaii Tourist Bureau Hon. Jos. R. Farrington, President Honolulu Star-Bulletin, Lorrin P. Thurston, President Honolulu Advertiser Worth Aiken, Maui Kamaaina, J.H. Foss, President Maui Chamber of Commerce, A.E. Kirk, President Honolulu Chamber of Commerce, E.S. Elmore, President Hilo Chamber of Commerce, Ray M. Allen, President Kauai Chamber of Commerce and Duke Kahanamoku, Sheriff of Honolulu and famous swimmer. Many of these men participated in the Island-wide broadcast.

The superintendent left Maui the following night for Honolulu to meet Chief Accountant Tillett who was to arrive there on the 28th

020 - General Weather Conditions

The total rainfall for the month was 8.56" as compared with 4.63" for February, 1934. There was fresh snow on Mauna Loa on the 24th. Maximum and minimum temperatures were 71 and 45 respectively. A detailed weather report is attached.

100 - Administration

110 - Status of Work

Routine work was current and quite a bit of progress was made on the files. They should be up to date by the middle of March.

The preliminary estimates for 1937 were prepared and submitted to Washington on the 17th.

Miss Constance Whitney, formerly clerk-stenographer at Yellowstone, arrived on the 9th to fill a similar position in this park.

DOCUMENT CAPTURED AS RECEIVED

Mrs. Charles Wilder, Exec. Sec " " " Outdoor Circle
Hon. Herbert Ahuna, Member Terr. Legislature " Island of Hawaii
" Robert Wilhelm " " "
" W.H. Hill " " Senate "
Mr. Harry Hewitt, Former Attorney General. Terr. of Hawaii
Hon. William Pittman, Attorney General " "
Gen. Bryant Wells, retired. Formerly Commanding Hawaiian Dept.

120 - Park Inspections by:

121 - Park Superintendent

Trips were made inside and outside the park as follows:

February 1 - To Hilo in a.m. to confer with James Henderson, Chairman Chamber of Commerce National Park Committee and Senator Hill, relative to the proposed Kalapana extension.

February 8 - Inspected shoulders and ditches on Uwekahuna road with NCW Camp Director Rivenburgh and Associate Landscape Architect Sager. To Hilo in evening to attend Chamber of Commerce banquet for legislative members from this island.

February 18 - Left for Maui to assist in final arrangements for Haleakala road opening on the 23rd.

February 25 - Left Maui for Honolulu to meet Chief Accountant Tillett who arrived on the 28th. Contacts were made in Honolulu for Mr. Tillett with the following:

Governor J.B. Poindexter
Hon. Raymond C. Brown, Member Terr. Legislature, 4th Dist and former Secretary of the Territory.
Capt. Herbert Baldwin, Office Finance Ofcr. Ft. Shafter, in charge NCW disbursements for this park.
Maj. Watrous, Ofcr. in Charge, Office Finance Ofcr. Ft. Shafter
Mrs. and Mr. H.P. Field
Mr. Guy Davenport, Mgr. Moana-Seaside Hotel
Mrs. Theodore Cooke, Chairman Hui-O-Pele Com. Outdoor Circle
Mrs. Charles Wilder, Exec. Sec " " "
Hon. Herbert Ahuna, Member Terr. Legislature from Island of Hawaii
" Robert Wilhelm " " "
" W.H. Hill " " Senate "
Mr. Harry Hewitt, Former Attorney General. Terr. of Hawaii
Hon. William Pittman, Attorney General " "
Gen. Bryant Wells, retired. Formerly Commanding Hawaiian Dept.
Mr. Stafford Austin, Mgr. Wailuku Sugar Co., Maui
Mr. Caleb Burns, Plantation Mgr. Kauai
Mr. J.T. Moir, Jr., Mgr. Pioneer Mill, Lahina, Maui
Hon. J.J. Banks, Assoc. Justice, Terr. Supreme Court
Mr. Geo. T. Armitage, Exec. Sec. Hawaii Tourist Bureau
Mr. Herbert Cullen, Hawaii Tourist Bureau
Mr. Harold Coffin " " "
Mr. Arthur Greene, Sec. of Terr. of Hawaii
Mr. Herbert Shipman, W.H. Shipman, Ltd., Hancher, Hawaii
Hon. James Campsie, Senator, Terr. Legislature from Hawaii and mgr. Pahala Plantation
Mr. Mitchell, Inter-Island SS Co., Honolulu
Mrs. A.O. Burkland, Castle & Cooke, Ltd.
Col. Walter Dunham, Sec. to Gov. Poindexter
Mr. Alvah Scott, Mgr. Aiea Plantation, Oahu
Mr. Max Carson, Asst. Mgr. Inter-Island SS Co., Honolulu

DOCUMENT CAPTURED AS RECEIVED

121 - Special Field Representatives

Associate Architect M.S. Sager was in the headquarters area of the park until the 17th when he left for Maui to attend the dedication of the Haleakala road, returning on the 27th. On the 12th he made a talk to the Hilo Masonic Lodge.

130 - Finance and Accounts

A detailed statement of park appropriations is attached.

150 - Equipment and Supplies

Equipment received during the month consisted of a number of small hand tools, three electric refrigerators and one 10" bench grinder. Seventeen tons of bitumuls were also received. An inventory is being made of all equipment, also a survey for final disposition of worn equipment.

170 - Plans, Maps and Surveys

By direction of the acting chief ranger, Rangers Waesche, Murray and Peck are making a survey of the residential area and the electric light line. The trail map which was started last month is just about completed.

180 - Circulars, Placards, Publicity Bulletins, etc.

There was almost daily publicity given in connection with the dedication of the Haleakala road. The NBC broadcast a 15-minute program also an Island-wide broadcast of one hour from the summit of Haleakala was given. The superintendent talked during both programs and copies of the speeches as given are attached. Also attached is a copy of the talk made by Associate Architect M.S. Sager during the Island-wide broadcast.

200 - Maintenance, Improvements and New Construction

210 - Maintenance

The crew of men from the ECW are progressing fine on the shoulders and rock lining ditches on the Uwekahuna road. The roads at the Army camp were also graded, guard rails painted at the Fire Pit lookout in addition to the usual maintenance of trails, buildings, etc.

230 - New Construction

A barn, tank and watering trough were built for the park animals at Bird Park out of salvaged material. Rock gravel and asphalt were spread on the utility area road, which is 70% complete.

240 - Improvement of Approaches.

Contractor E.E. Black, ltd. continued work on the Pahala-Volcano road, which was approximately 85% complete at the end of the month.

DOCUMENT CAPTURED AS RECEIVED

300 - Activities of Other Agencies in the Park

310 - Public Utility Operators

The semi-monthly financial reports for the Volcano House, covering the period of October 1 to December 31, 1934, were received and transmitted to Washington.

317 - Status of Authorized Projects of Contractors

Project NR-7, Haleakala road was 99% complete at the end of the month.

320 - Cooperative Governmental Agencies

Major Cyrus B. Woods succeeded Captain Kenneth G. Gould as the surgeon at Kilauea Military Camp. Captain Gould is being transferred to the mainland during the early part of March. Lieutenant D.D. Edison replaced Lieutenant A.F. Barron as supply officer.

In view of the fact that the Kilauea Military Camp has been granted permission to remain in its present location for a period of 5 years after the expiration of its present lease the Director has requested that the Superintendent draft a permit for the camp. The work of making the preliminary draft of the new lease has been assigned to Park Naturalist Doerr. A thorough study of the matter was made during the month and a number of points for the permit were drafted.

400 - Flora, Fauna & Natural Phenomena

410 - Ranger, Naturalist and Guide Service

Ranger Lamb made a trip to Maui and Honolulu during the month to conduct a research regarding the silversword plant in Haleakala Crater. This has been made the subject of a special report.

The naturalist division conducted 8 field trips with an attendance of 139 and 15 auto caravans, with an attendance of 331

There were 20 lectures given during the month, 15 at the museum, 3 at the Lava Tube, 1 at the tree molds and 1 outside the park, with a total attendance of 1,019. The lecture given outside the park was at the Annual Institute of the Hilo Teachers' Union, held at Honokaa, February 1.

480 - Natural Phenomena

Though neither of the active volcanos in the park showed any surface activity in the way of eruptions, Kilauea continued to be very interesting. The seismograph at the Volcano Observatory registered a total of 152 seismic disturbances during the month, most of which were located beneath the Kilauea dome.

DOCUMENT CAPTURED AS RECEIVED

Rim cracks which are measured about Halemaumau continued to show a larger number indicating movement than is normal. There were frequent small slides on the walls of the Fire Pit and the sound of falling rocks could be heard almost continuously.

The following is taken from Dr. Jaggar's report for the week ending February 24, 1935:

"The result of the week's observations is that the local shakings are close to Kilauea, that the tilt at the Observatory is abnormal for the season and is away from Kilauea suggesting Halemaumau swelling, the prolonged tremor suggests lava activity and the unusual amount of crack opening checks with the idea of lifting action under the Kilauea floor. The March equinox should be watched with interest, as 1935 is a culminating year at the end of an 11-year cycle, and the curve of recent intervals in the whole Hawaiian system points to this spring as a critical time. Also the lava flow from Mauna Loa to follow the December 1933 eruption has not yet come."

500 - Use of Park Facilities by the Public

510 - Increase or Decrease in Travel

There was a total of 12,419 visitors as compared with 16,387 for the same period last year.

530 - Special Visitors

February 2 - H.M.S. Franconia, Cunard Liner, with 215 passengers. The naturalist and ranger divisions arranged for short talks at the Lava Tube, Fire Pit, Makaopuhi Crater and an illustrated lecture at Uwekahuna museum.

February 5 - Dr. and Mrs. H.A. Spoehr, Palo Alto, California Left on the 7th.

February 14- Princess Henri XXXIII de Reuss and Comte de Kotzebue, luncheon guests of the superintendent at Volcano House and given special attention. Left for Kona in the afternoon.

600 - Protection

610 - Police Protection

The usual patrol of the park was carried on by the rangers during the month.

620 - Fire Protection

All fire hydrants were tested, shelters for hose reels installed and the usual quarterly individual fire inspection made by the acting chief ranger.

DOCUMENT CAPTURED AS RECEIVED

640 - Destruction of Predatory Animals

In accordance with orders from the Washington office, no permits were issued for hunting.

650 - Signs

All signs have been repaired and painted where necessary

900 - Miscellaneous

The usual monthly dance was held at the Volcano House on the 23rd. Due to the heavy rain the attendance was rather small.

Very respectfully

Edward G. Wingate
Superintendent

GW

DOCUMENT CAPTURED AS RECEIVED

STATIS TICAL REPORT NO. 8

FINANCE AND ACCOUNTS

FEBRUARY, 1935

Symbol	APPropriation	Allotted	Expended & Obligated	Balance
45415	National Park Service, 1935	35,150.00	31,061.90	4,499.74
45406	Forest Protection & Fire Prevention, (N.P.S.) 1935	300.00	287.61	12.39
44415.3	Salaries & Expenses, Office of Nat. Parks, Bldgs, & Reservations, 1934	31,392.55	29,491.56	1,900.99
44405.3	Emergency Reconstruction and Fighting Forest Fires in Nat'l Parks, 1934	339.35	339.35	0.00
4X391	Roads & Trails, Nat'l Parks, Emergency Construction Act June 19, 1934	23,275.00	6,318.54	16,956.46
4-03/5640.8	N.I.R., Int., Nat'l Parks, Rds. and Trails, 1933-'35:	491,000.00	473,104.78	17,895.22
4-03/5640.14	N.I.R., Int., Nat'l Parks, Bldgs & Reservations, 1933-'35:	11,250.00	11,105.25	144.75

DOCUMENT CAPTURED AS RECEIVED

10-157
(July, 1929)

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

TRAVEL REPORT

HAWAII National Park for the Month of FEBRUARY, 1935

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year	
					Number	Percent
PRIVATE TRANSPORTATION:						
Cars first entry, ...						
Cars reentry, ...						
Motorcycles, ...						
Total motor vehicles, ...						
Persons entering via motor vehicles, ...	11,691	83,895	15,175	85,125	-1,230	.014
Persons entering via other private transportation, ...	149	806	200	1,068	- 262	.245
Total persons entering via private transportation, . . .	11,840	84,701	15,375	86,193	-1,492	.017
OTHER TRANSPORTATION:						
Persons entering via ~~stages~~ Hotel, .	579	1,914	1,012	3,622	-1,708	.472
Persons entering via trains, .						
Persons entering otherwise, . .						
Total other transportation, .	579	1,914	1,012	3,622	-1,708	.472
GRAND TOTAL ALL VISITORS, . . .	12,419	86,615	16,387	89,815	-3,200	.035

	This Year	Last Year	Increase	
			Number	Percent
Automobiles in public camps during month, ...				
Campers in public camps during month, ...				

DOCUMENT CAPTURED AS RECEIVED

10-215
(August 1933)

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of National Parks,
Buildings and Reservations

Hawaii National Park

REPORT OF NON-APPOINTED PERSONNEL
(TEMPORARY)

Changes outside the District of Columbia for the month of February 1935

Total at beginning of month	Additions	Separations	Net Gain or loss (a)	Total at ending of month
33	16	7	9	42

(a) If loss, indicate by minus sign.

DOCUMENT CAPTURED AS RECEIVED

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Hawaii National Park for the Month of February, 1935

	This Month		This Month Last Year	
	Appointed	Non-Appointed	Appointed	Non-Appointed
Number of employees beginning of month	16	33	16	11
Number of additions	1	16	0	0
Total	17	49	16	11
Number of separations	1	7	0	4
Number of employees close of month	16	42	16	7
Number of promotions during month	0	0	0	0
Aggregate amount of annual leave taken	0	0	0	0
Aggregate amount of sick leave taken	0	0	3	0
Aggregate amount of leave without pay	0	0	0	0

DOCUMENT CAPTURED AS RECEIVED

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Hawaii National Park for the Month of February, 1935

Description of Projects	Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
FP 102.8 Parapet Lookouts, Kilauea Iki, etc.	100	0	0	
FP 311.14 Fire-equipment Storehouse & Garage	100	0	0	
FP 312.14 Bldg Reconditioning for Elimination of Fire Hazards	100	0	0	
516 Utility Area Road, Paving (F.A.)	70	40	10	
518 & 7 Haleakala Road, Landscaping (F.A.)	60	40	20	

DOCUMENT CAPTURED AS RECEIVED

10-161

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF SALES OF PUBLICATIONS

Hawaii National Park February, 1935

	Number	Value
GOVERNMENT PUBLICATIONS:		
On hand beginning of month,	857	153.25
Received during month,	0	0.00
Total,	857	153.25
Sold during month,	0	0.00
On hand at close of month,	857	153.25

NON-GOVERNMENT PUBLICATIONS:

On hand beginning of month,	
Received during month,	
Total,	
Sold during month,	
On hand at close of month,	

Cash on hand beginning of month,	10.52
Sales during month,	0.00
Total,	10.52
Remitted during month,	1.00
Balance,	9.52

DOCUMENT CAPTURED AS RECEIVED

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

HAWAII National Park for the Month of ~~JANUARY~~ February, 1935

	This Year	Last Year
Park revenue on hand beginning of month,	0.00	0.00
Received,	0.00	0.00
Total,	0.00	0.00
Remitted,	0.00	0.00
On hand close of month,	0.00	0.00

Park revenues received this year to date,	225.00
Park revenues received last year to date,	275.00
Increase,	50.00
Per cent of increase,	.18

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

RADIO TALK, OVER NBC NETWORKS

By Edward G. Wingate, Superintendent
Hawaii National Park

Thank you, Director Cammerer. As a representative of the National Park service, this is indeed a happy day for me and I am glad to be here to join with you in your celebration. The opening of this road today is another big step forward in carrying out the policy of our President, Franklin D. Roosevelt, to make the National Parks of our country a pride and joy for the people. This is only the beginning. The development of all our National Parks is going to continue until they are the wonderland playgrounds of America .. for America's people. Standing here in full view of this remarkable Haleakala Highway, you realize that roads are so much more than mere earth or gravel, concrete or macadam objects. In a sense they are not tangible objects at all, but symbols ... symbols of man's curiosity and desire to look for new horizons. The opening of this highway to Haleakala is a symbol of reward to those men of this territory who had the vision and the will to carry it into effect. It is the symbol of a desire ... a desire to attain to beauty and make that beauty available to all. This same desire has inspired symphonies and painted pictures. It also gave us National Parks. And it is as a representative of that service, dedicated to preserve for all time the most inspiring and most exquisite scenery in this country that I am here today.

DOCUMENT CAPTURED AS RECEIVED

We who have in our charge these National shrines are proud to have worked together with the Territory of Hawaii and the Federal government to establish a National Park on Haleakala. Working together we have built this road. Now we are very happy because we can enjoy the fruits of that labor and share them with our friends. Aloha Nui Kakou!

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

March 5, 1935

RADIO TALK, ISLAND-WIDE BROADCAST

SUMMIT HALEAKALA

By Edward G. Wingate, Superintendent

I have just received this radio message from Superintendent E. P. Leavitt of Mesa Verde National Park, who was formerly Superintendent of Hawaii's park; Quote: "Heartiest congratulations to you as Superintendent of Hawaii National Park and to all good friends of Maui on completion of Haleakala Road to mountain summit Stop The Bureau of Public Roads the contractor and the Territory of Hawaii all deserve praise for their part in building this fine new road. It will mean the development of a new administrative section of the Park and will be the means of making the famous Haleakala section available to thousands to whom it has heretofore been inaccessible Stop To Maui it means the beginning of a splendid tourist business which will increase through the years and be a pleasant and profitable one Stop Wish I could be with you today on the dedication of this new road but take this means to send you all a greeting and best wishes Aloha." For myself - Somehow or other, as I stand here today on the summit of Haleakala and look into this great crater, I do not feel like speech making at all.

DOCUMENT CAPTURED AS RECEIVED

It is too majestic, too thoroughly inspiring for that. Rather, I am reminded of the first time I looked into Haleakala. I was alone then, as I was alone when, for the first time, I stood on the summit of Mauna Loa and saw Moknaweoweo at my feet. That was some years ago, but one never forgets those things.

There was no road then. There is no road on Mauna Loa now. There was no road here, yesterday. But today - dreams have come true. There is a road - thanks to those men of this Territory who have had both vision and will, and we are very happy.

We are happy because now we know that the thrill which we have experienced will no longer be denied to anyone. Sunrise on Haleakala! and sunset - the brocken spectre! - the Silversword! These are for everyone now - and these are yours.

The Territory of Hawaii and my own National Park Service, working together, have built this road for your enjoyment and we hope that you will use it.

Did it ever occur to you that we should be very proud to have a national park in Hawaii? The national parks are a sort of reward you know; a reward for possessing scenery so superb that the federal government is willing to spend millions of dollars in preservation and development so that everyone may always enjoy it.

I think that is very fine - and, I know that Hawaii's park is fine. I have just returned from visits to two of the most famous on the mainland and the superintendents of those parks thought me very foolish when I said I would not care to trade places with them. But then, they had never been in Hawaii you see.

DOCUMENT CAPTURED AS RECEIVED

They had never been to Hanalei or Waimea. They had never been to Puu Wawaa or Puuopelu or Kalapana or Kilauea. They had never seen the Pali or Kahana or Waianae, nor Iao by moonlight or Hana Bay. And - they had never seen Haleakala! Mahalo nui Aloha

DOCUMENT CAPTURED AS RECEIVED

Time 2 min. 35 sec.

RADIO TALK FOR HALEAKALA ROAD OPENING

By Morel S. Sager

National Park Service Landscape Architect

There is nothing more indicative of man's material progress than the means he has developed for transportation. Likewise there is nothing more indicative of man's spiritual progress than his development in ability to appreciate and understand the working of nature.

Through most of the history of America the evolution in means of transportation, including roads, has been motivated by needs of a purely economic or material nature. More recently, however, many roads have been constructed for the sole purpose of making areas of rare natural beauty accessible to the public. A goodly proportion of such scenic highways built with this sole object in mind can be found within the boundaries of our national parks. It is just such a highway we are dedicating today.

The National Park Service, with its chain of scenic jewels, has been charged with a sacred trust of preservation. It likewise has a duty to provide limited accessibility, but when accessibility comes, preservation is jeopardized.

DOCUMENT CAPTURED AS RECEIVED

The National Park Service, through its landscape architects, makes critical study of all proposed road projects, for it is easily seen that an excess of development or the absence of careful planning ultimately destroy the very features which the Service is charged to preserve.

The Haleakala Highway, within the park, has been made unobtrusive in the landscape by location and methods of construction. Road cuts have been flattened and rock fills have been covered with soil permitting vegetation to quickly return and thus harmonize this man-made construction with its surroundings.

Haleakala Crater with its majestic expanse of colorful cones and precipitous walls has much to offer the observer in a spiritual way. It is akin to the Grand Canyon in its power to emotionally direct man's imagination into a realization of the great forces of nature. Here unfolded before him is the vivid story of not only the creation of a great mountain but of the creation of all the islands as well. Here is a panorama of elusive wild beauty which, thus far, the camera and brush have never caught.

Haleakala is truly of national park standard and the National Park Service is proud of its part in making this superb spectacle accessible to all those who will only come and see.

DOCUMENT CAPTURED AS RECEIVED

NBC broadcast shelter Pum Nianian, Haleakala Road opening celebration

DOCUMENT CAPTURED AS RECEIVED

Haleakala road dedication ceremony. Left to right: Edward G. Wingate, Mr. Worth Aiken, Maui Kamaaina, Secretary of the Territory Arthur E. Greene.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

February 14, 1935

GENERAL OFFICE ORDER #29

SUBJECT: Ranger and Naturalist Programs, Lectures, etc.

In order that this office may coordinate the activities of these two divisions to better advantage it is requested that advance copies of weekly and monthly programs be prepared for approval by the superintendent before posting.

Public notices of scheduled activities conducted jointly by these divisions will carry the following title and legend:

Hawaii National Park
Program of Educational and Recreational Activities
Date_____

- - - - - - - - - -

Recommended:

_____
Park Naturalist

_____
Acting Chief Ranger

Approved:

_____
Superintendent

Programs of activities conducted by a single division will carry the title of that division only with the single recommendation by the head of that division.

In this connection activities originating in either division whether conducted by a member of that division or not are considered solely the activity of that division. Activities which have been in effect prior to the establishment of either division are considered

DOCUMENT CAPTURED AS RECEIVED

general and should bear the dual title, i.e. the general and the short park tours given twice weekly and any similar tours given for round-the-world boats, etc.

All programmed nature trail trips - Kipaka, Pusulu, Mauna Iki, Kilauea Iki, Napau crater, Halemaumau trail etc., are properly activities of the naturalist division. On the other hand, extended trips, particularly those over-night journeys requiring camping and the care and packing of animals, fall naturally within the province of the ranger division.

Summing up: Naturalist activities are those in which the particular trips, etc., have for their major incentive the teaching of appreciation for nature through accepted educational methods. Ranger activities are those which are general in character and designed primarily to give the individual a safe and pleasurable trip.

Lectures:

Attention is invited to Washington Office Order #230 requiring an introductory statement regarding the National Park Service to be used at the beginning of all official lecture and guide tours.

All lectures given in connection with park tours, guided trips, etc., should not exceed 15 minutes.

Other special lectures where no field trip is involved, except in the case of lectures given in connection with the University of Hawaii Summer School classes or other similar groups may be as long as the lecturer deems advisable.

General:

No engagements for special lectures, or talks to be given outside of the park are to be made without first obtaining the approval of the superintendent.

Any requests for special service within the park, tours, and for lectures, etc., made to individual staff members are to be referred to the individual member's immediate chief for attention and if circumstances warrant, due to the unusual nature of request, to the superintendent for final approval.

The staffs of these respective divisions are requested to bear in mind that park visitors have come here primarily to see Hawaii National Park. The visitor should not be rushed along madly, neither should he be prevented from seeing all that his time permits by excessive explanation or discourse.

Copy to
Director
Superintendent
Chief Clerk
Park Naturalist
Acting Chief Ranger

Ranger Peck
" Murray
" Lamb
" Waesche
" Williams

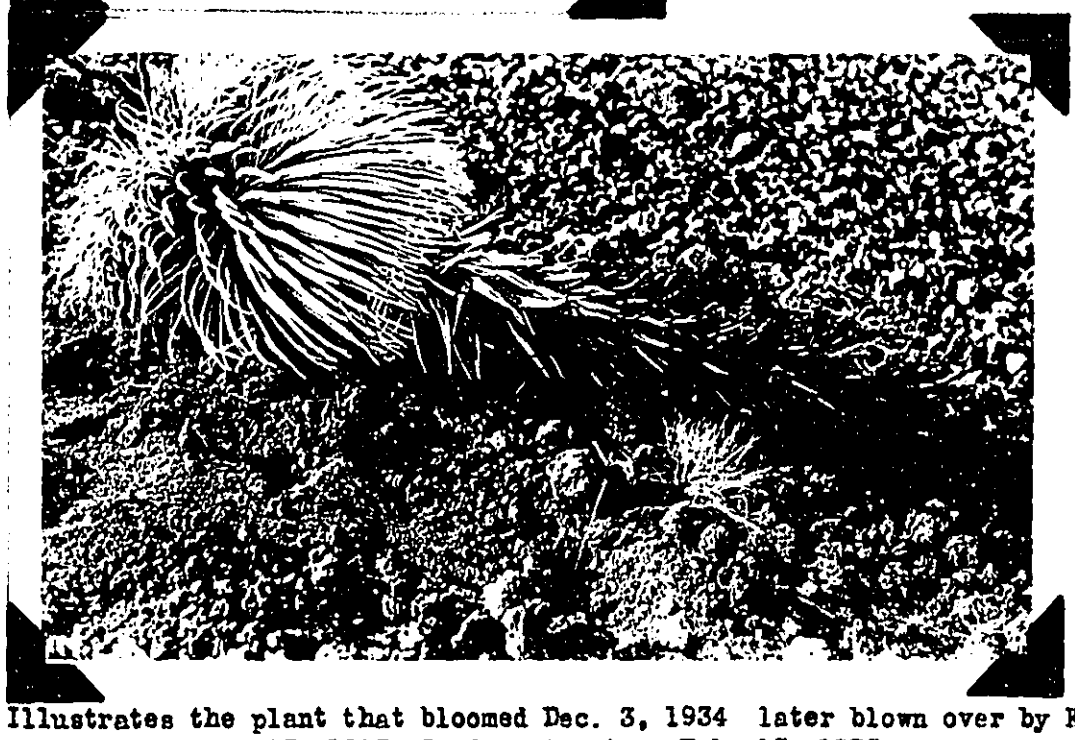
Edward G. Wingate
Superintendent

DOCUMENT CAPTURED AS RECEIVED

Miss Constance Whitney, clerk-stenographer, who was transferred from the Yellowstone to Hawaii National Park.

DOCUMENT CAPTURED AS RECEIVED

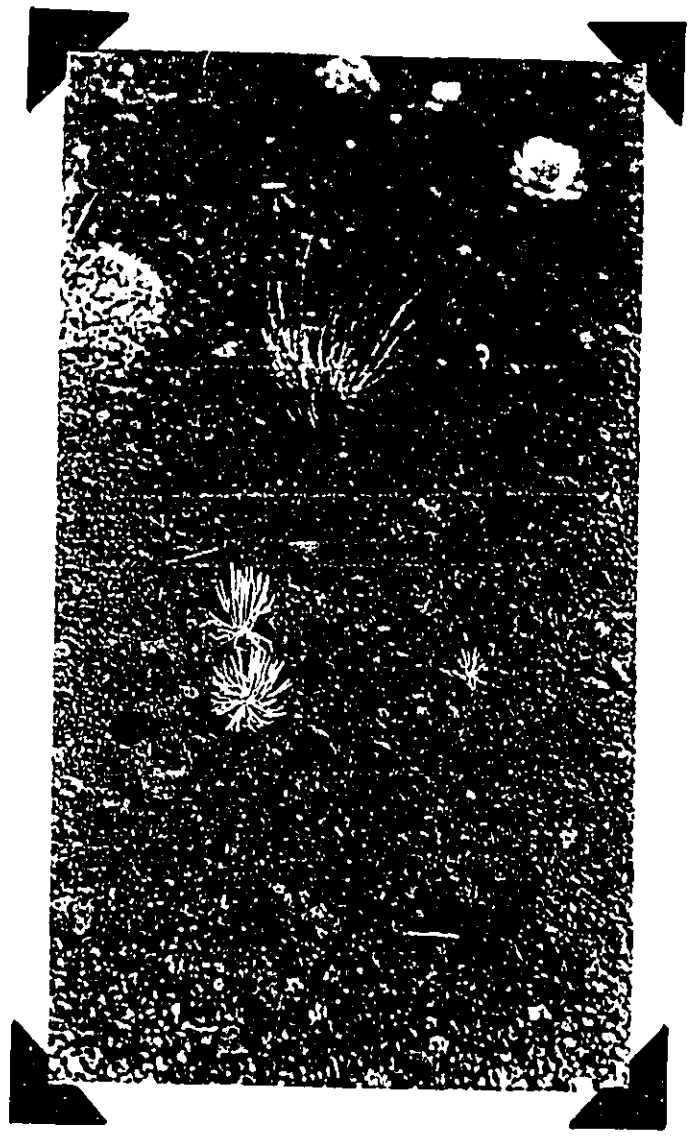
Illustrates one of the large silversword plants 2 ft. in diameter and 18" high, located in the crater of Haleakala



Illustrates the plant that bloomed Dec. 3, 1934 later blown over by Kona storm about Jan. 15, 1935. Seeds not mature Feb. 15, 1935

DOCUMENT CAPTURED AS RECEIVED

Left: Illustrates 3 typical size classes of silversword plants found on the slopes of Ka Moa O Pele in Haleakala crater.



Right: Illustrates the smallest size classes. Small plant right center near pencil 1" in diameter by 1" tall

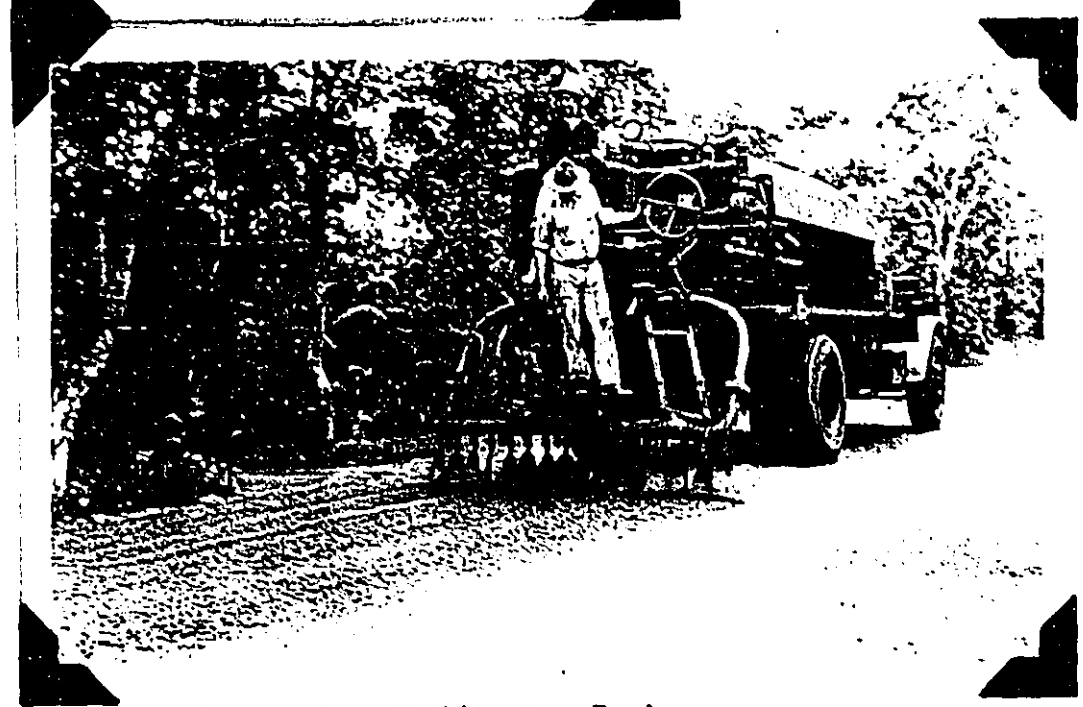
DOCUMENT CAPTURED AS RECEIVED

Illustrates juvenile greensword plant, Argyroxiphium virescens located in a gulch 300 yards below entrance to Haleakala section, Hawaii National Park. Feb. 22, 1935

Illustrates adult greensword plant nearly ready to bloom. This plant is in danger of extinction in this section of the Park with only 5 plants left. Feb. 22, 1935

DOCUMENT CAPTURED AS RECEIVED

Rangers Waesche and Peck, surveying location of buildings in residential area



PW project #516, Oiling Utility Area Road.

DOCUMENT CAPTURED AS RECEIVED

Form No. 1009—Met'l.

U. S. Department of Agriculture, Weather Bureau.

COOPERATIVE OBSERVERS' METEOROLOGICAL RECORD:

Month of February, *1935*; *Station,* Volcano Obsy; *County,* Hawaii

Hour of Observation, 8 a.m.

State, ; *Latitude,* ; *Longitude,* ; *Time used on this form,* HST

DATE.	TEMPERATURE. Maximum.	Minimum.	Range.	*Set Max.	PRECIPITATION. Time of Beginning.	Time of Ending.	†Amount.	WIND. Hourly Velocity, Miles.	Depth of Snow on Ground at Time of Observation.	Prevailing Wind Direction.	Character of Day, Sunrise to Sunset.	‡Miscellaneous Phenomena.
	1	2	3	4	5	6	7	8	9	10	11	
1	63	58	5	58			.02	92	Lt	SW	Cldy	
2	64	49	15	60			.03	90	Stg	NE	PC	
3	71	50	21	56			T	91	Lt	NE	PC	
4	69	56	13	58			.09	95	Calm		PC	
5	69	55	14	56			.08	96	Lt	NE	PC	
6	70	51	19	54			T	94	Calm		PC	
7	64	52	12	59			T	91	Lt	NE	Cldy	
8	69	50	19	58			.16	90	Lt	NE	Cldy	
9	65	51	14	58			.23	92	Lt	NE	PC	
10	67	52	15	56			.12	89	Lt	NE	PC	
11	66	52	14	59			.09	96	Mod	NE	Cldy	
12	65	54	11	57			.23	96	Calm		PC	
13	68	53	15	57			.29	92	Lt	NE	PC	
14	65	49	16	54			.09	90	Lt	NE	Cldy	
15	64	51	13	55			.05	91	Lt	SW	Cldy	
16	66	54	12	55			.16	95	Lt	NE	Cldy	
17	58	45	13	54			.18	86	Stg	NE	PC	
18	60	46	14	48			T	85	Very Stg	NE	Clear	
19	59	47	12	50			.03	83	Stg	NE	PC	
20	59	45	14	51			.06	87	Stg	NE	PC	
21	64	48	16	54			.09	85	Stg	NE	PC	
22	58	51	7	55			.11	94	Mod	NE	Cldy	Snow on Mts.
23	61	53	8	55			.90	89	Mod	NE	Cldy	Thunder and
24	61	54	7	55			3.08	92	Mod	NE	Cldy	Snow on Mts.
25	67	54	13	58			.61	90	Mod	NE	Cldy	
26	62	53	9	57			.31	91	Lt	NNE	Cldy	
27	61	55	6	57			.77	96	Mod	NE	Cldy	New snow on Mts.
28	67	53	14	59			.89	81	Mod	NE	Cldy	Change to SW
29												
30												
31												
Sum	1802	1441	351	1553			8.56	2540				
Mean	64.3	51.5	12.5	55.3			.306	90.7				

*Reading of maximum thermometer immediately after setting.
†Including rain, hail, sleet, and melted snow.
‡Thunderstorms, halos, auroras, etc.

(IN TRIPLICATE.) See cover for instructions.

8—253

T. A. Jaggar, *Cooperative Observer.*

Post-Office Address, Hawaii National Park

MONTHLY SUMMARY.

TEMPERATURE.

Mean maximum, 64.3

Mean minimum, 51.5

Mean, 57.9

Maximum, 71; date, 8

Minimum, 45; date, 17 & 20

Greatest daily range, 21 3rd.

PRECIPITATION.

Total, 8.56 inches.

Greatest in 24 hours, 3.08; date, 24

SNOW.

Total snowfall, none; on ground 1st, none inches; at end of month, Throughout month inches.

NUMBER OF DAYS—

With .01 inch or more precipitation, 24

Clear, 1; partly cloudy, 13; cloudy, 14

DATES OF—

Killing frost,

Thunderstorms, 23

Hail,

Sleet,

Auroras,

REMARKS:

DOCUMENT CAPTURED AS RECEIVED

However, that long awaited event, was quite sufficient.

The Superintendent together with Ranger J.A. Peck who has been assigned to duty in the Haleakala section of the park, flew over to the island of Maui on the 18th arriving in time to attend a meeting of the Maui Chamber of Commerce Committee handling the Haleakala road opening celebration details. This meeting was also attended by Associate Architect W.S. Soga to whom the Supt. had previously delegated authority to handle the Park service end of the program. Other members of the Park staff who had been requested to attend the opening to assist in handling traffic, public work information and public contacts arrived by steamer at Lahaina Maui on the night of the 20th. This party consisted of Acting Chief Ranger J.H. Christ, Chief Clerk J.K. Higashida, Ranger Philip Murray and ECW Camp Director Riverbaugh. On the 22nd Ranger Tarr arrived in company with Dr. Otto Swezey, Entomologist, from Honolulu.

On the early morning of the 23rd three ships arrived at Kahului Maui bringing several hundred visitors and invited guests to the road opening celebration. Through arrangements made by the Committee in charge these visitors were assigned cars with a local resident

DOCUMENT CAPTURED AS RECEIVED

on foot. The morning was spent in sightseeing with an early luncheon served at the Grand Hotel in Wailuku. Immediately after luncheon the auto caravan consisting of some 400 or more cars left Wailuku for Haleakala.

In order that there might be no needless delays the Haleakala Road by Police Order had been closed since 5 P.M. the preceeding day and all cars making the trip had been required to undergo a severe brake test. Unfortunately no test of clutching power etc. was made which resulted in a number of cars being stalled after the steep climb up the Territorial portion of the road began.

The auto caravan left the Kula road junction at 12:30 P.M. and the first cars arrived at 1:15 P.M. at the Pum Nianian entrance to the National Park where the road dedication ceremonies and N.B.C. broadcast were to be held. Police, Park Rangers and order technicians had gone ahead and traffic was handled without difficulty.

At Pum Nianian a fifteen minute broadcast was given over a NBC hookup with K.G.U. in Honolulu. The program called for short talks by Governor Poindexter of the Territory, Mr. Waith Aiken a long time resident of Maui representing the Maui people and the Superintendent. Due to illness the Governor could not attend but was represented by the Secretary of the Territory.

DOCUMENT CAPTURED AS RECEIVED

~~For some reason~~ The Governor's talk was not given over the NBC broadcast since no advance copy had been prepared and the Secretary did not arrive in time for a rehearsal. As fact Mr. Watk Aiken and the Superintendent, who were together, due to traffic delays barely arrived in time to go on. The Superintendent was very happy to receive the following radiogram from the Director which was read as an introduction to his talk. " — — — " Superintendent Jewett of Mesa Verde also sent a message which unfortunately due to time requirements could not be worked in over NBC but was read later on the Island-Wide broadcast and which was greatly appreciated by his many friends in the islands. Copies of talks given by Governor & the Supt are attached

Following the NBC program the crowd gathered at the flower lei stretched across the new road where numerous photographs were taken and the lei then cut by the Secretary of the Territory officially opening the road.

After a clear morning the fog and rain then swept in as the caravan proceeded to the summit where an hours program of short talks, interspersed with music was given over station KGMI. The thermometer at the summit stood at 37° F and a dense fog obscured the view. However coffee, sandwiches and more potent

DOCUMENT CAPTURED AS RECEIVED

Beverages concealed in car seats and overcoat pockets did much to keep the crowd in a good humor. Some three hundred cars were counted in the summit parking area many having turned back after the opening ceremony was finished and the rain came in. The boys of the CCC camp under the direction of Camp Director did valiant service in the fog and cold directing parking, finding lost articles including cars etc. It is of interest that many people returned to the summit the following morning to see the view they had missed on the day before.

The broadcast finished, the caravan returned to Kahului where a luau (dinner) for 1000 persons was served followed by a dance at the Territorial Fair Grounds building. A dance with a hundred or so in attendance was also given at the Grand Hotel. The excursion steamers sailed homeward at midnight.

Among the thousand odd visitors were the following etc etc many of whom participated in the Island-Wide broadcast.

The Superintendent left Maui the following night for Honolulu to meet Chief Accountant Dillett who was to arrive there on the 28th.

DOCUMENT CAPTURED AS RECEIVED

March, I 1935.

The Superintendent
Hawaii National Park,
Hawaii.

Dear Sir:

Folliwing is the report of my time ,by hours, for the month of February 1935.

General work on cars			73 hours.
Dressing stone tools			I5 "
Fire fighting equipment, (checking, painting,transfering)			I2 "
County truck repair, (road roller)			II "
Pumping water as follows			
High tank	23,000	gals.	
Lawns	3,000	"	
Toilets	900	"	
Bird park corral	3000	"	
Total	27,200	Gals.	I0 "
Distill battery water			8 "
Wiring and testing Siren			7 "
Check in gasoline			6 "
Repair washing machine (Supt. res.)			6 "
Repair fire pump (install new piston rings)			5 "
Replace new handles in tools			5 "
Repair portable water pump			4 "
Warehouse duties			4 "
Repair fire line and fire hose			3 "
Sharpen lawn mower			3 "
Fill all car batteries			2 "
Check surplus equipment list for C.C.C.			2 "
Drying tents			I "
Grader repairs			I "
Check in kerosene			I "
Hodges furniture			I "
Change tire for tourist			I "
Repair air compressor			I "
Take gasoline to stalled truck on main highway			I "
Cutting glass for windows			I "
Total			I84 Hours.

Respectfully,
F. F. Fischer
F.F.Fischer
Mechanic.

E.P.N.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

February 28, 1935

Mr. Edward G. Wingate
Superintendent
Hawaii National Park

Sir:

The following is a report of work accomplished under my direction during the month of February, 1935.

1. Spread rock and gravel and asphalt, utility road. 1st coat as far as lower Garage, 3200 square yards; Road 70% completed.

2. Completed moving lower garage and painted roof of same.

3. Installed foundation and framed timbers for siren for fire alarm.

4. Cleaned and refilled toilets, Uwekahuna.

5. Built four shelters for fire hose.

6. Cut fire wood for Park employees.

7. Graded roads, Army Camp.

8. Painted guard rails at lookout, Fire Pit.

9. Repaired waterheater, Qtrs. #6.

10. Repaired locks, Qtrs. #7.

11. Trimmed lenoleum, Office building.

12. Screened all rock for top course, Utility road.

Other odd small jobs.

Respectfully submitted,
R.R. Craik
R.R. Craik, Foreman

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

March 4, 1935

The Superintendent
Hawaii National Park
Hawaii

Dear Sir:

Following is the report of ranger activities during the month of February 1935.

000 General

010 - The most outstanding event for the month was the official opening of the Haleakala road on Maui.

The ranger department conducted the usual routine; recreational, educational, protection, and maintenance of telephone lines, roads, trails, painting and repairing signs.

100 Administration

120 Park Inspection
The usual inspection of roads, trails and projects were carried out during the month.

150 Equipment and Supplies
A Power Grinder was received during the month. An inventory is being made, of all equipment and a survey of worn equipment is been made for final disposition.

170 Plans, Maps, and Survey
By the directions of a/ Chief Ranger, Ranger Waesche, Murray and Peck are making a survey of the residential area and the electric light line in the Park.

The trail map that was started last month is just about completed.

200 Maintenance, Improvements, and New Construction

210 Maintenance
The crew of men from the E.C.W. are progressing fine on the shoulders and rock lining ditches on the Uwekahuna road.

DOCUMENT CAPTURED AS RECEIVED

230 New Construction
A Barn, tank and watering trough was built for the Park animals at Bird Park. No new material was purchased for this project.

300 Activities of other Agencies in the Park

The usual monthly dance was held on the 23rd of February at the Volcano House.

400 Flora, Fauna

An inspection of the Silversword on the island of Maui was made by Ranger Lamb.

530 Visitors
Franconia with 215 visitors, February 2.

600 Protection

610 Police protection
The usual patrol of the Park was carried on by the rangers during the month.

620 Fire protection
All fire hydrants were tested during the month.
Shelters for Hose reels were installed.
The usual quarterly individual fire inspection was made by the a/ Chief Ranger.

640 Destruction of predatory animals
Due to the stopping of hunting in the Park, no permits ~~was~~ were issued.

650 Signs
All signs have been repaired and painted where necessary.

General Remarks

The suggestion Ranger Peck made about a sign at Makaopuhi to explain to the visitors the purpose of the pipe tube centered on the eye of the eel is being made. Also about the compass direction at the Pit that is completed ~~and~~ will be installed this week.

The remark Ranger Murray made about the horses being soft; Ranger Murray was not aware that some of the horses were working every day.

Joseph H. Christ
Acting Chief Ranger

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

February 3, 1935

The Director
National Park Service
Washington, D. C.

Dear Mr. Director

Following is the administrative report for January 1935 including some remarks on and photographs of the proposed Kalapana addition to the Park.

000 General

010 Introduction

January has been an extremely busy month for the entire staff and for the Superintendent particularly so. The most important event in the month of immediate concern to this park was the taking up by the Director with the Delegate to Congress from Hawaii, the matter of the proposed addition to the park. The conferences held in Washington have resulted in the necessity for considerable work in Hawaii.

Remarks Concerning Kalapana Road and Park Extension

Local commercial interests, tourist agencies, and many local people have long been promoting a road from Kalapana, an entirely native Hawaiian village southeast some twenty miles from Kilauea, to connect with the Chain of Craters road in the park. This road is a desirable one from many angles but the Superintendent has always opposed its construction until some means could be found to adequately protect against exploitation and commercial or other intrusion the Hawaiians living in Kalapana.

The fact is only too plainly written in the history of the development of our civilization in Hawaii that whenever a native community is opened up through the building of passable roads, the other races crowd in and the Hawaiian drifts away, generally into Honolulu or Hilo where he lives in more or less disreputable tenements. The Superintendent, in the light of history, feels that it is nothing less than criminal to offer cash to any Hawaiians of the lower classes for their lands.

DOCUMENT CAPTURED AS RECEIVED

Kalapana is one of the few remaining communities of any size entirely native in character. It has some 240 inhabitants who live by fish from the sea, and sweet potatoes, dry land taro, breadfruit, coconuts, mangoes, papaya, bananas, a few other vegetables grown locally and store purchases made from such money as they earn by occasional road work. Their diet and mode of living, while undoubtedly inferior, is but little changed from the days before the white man came to Hawaii. Drunkenness is rather common whenever there is enough cash for the purchase. They exhibit a preference for wine, beer, gin and okolehao to whiskey, etc.

Their homes are frame buildings with galvanized roofs most of them very decent though a number are little better than shanties. The yards surrounding the houses are generally planted to flowers and some vegetables.

The families here, as in most other isolated places, are rather large and infant mortality is apparently low. The principal of the school prepared some data on this which is of interest. The Kahilihiwa family has nine children between the ages of 7 and 21; the Kamelamela family ten, between 4 and 19; the Lee family ten between 9 and 27; the Kaeukai family eleven from 1 to 21; the Pea family nine between111 and 28 etc. These are the largest families. None are without children.

Despite the fact that all the Hawaiians belong to one or another of the Christian churches and the services, sunday schools, etc., are well attended, the Superintendent is of the opinion that Christianity has never replaced the old beliefs. The old beliefs were vital in the lives of everyone. Christianity is not. And, the Hawaiian suspects that we do not think so either. The, to us grotesque, Gods of the Heiau were tangible and the kapu of priest and king something very vital to existance, since infractions of the kapu, frequently resulted in death to the offender. The proffered rewards of Christianity for good behavior are somewhat too vague and its philosophy of giving, which we think so fine, the Polynesian considered a matter of course. Etc., etc.

A discussion of morals would be idle, as it always is, beyond a statement that the Hamalahoa law of Kamehameha I assured a safety for women and children on the highways not seen among other peoples since the days of Genghis Khan.

As a means of providing protection to the native inhabitants of Kalapana, it was suggested that the Park be extended so as to surround Kalapana village but not take in the lands of the Hawaiians. This suggestion was made by the Director in a letter dated June 26, 1934.

Following up this suggestion the Superintendent has found considerable support for it locally. The Hilo Chamber of Commerce and Board of Supervisors have both gone on record as favoring the extension and have had transmitted their recommendations to the Delegate in Washington.

DOCUMENT CAPTURED AS RECEIVED

The Order of Kamehameha, an Hawaiian Order, responded very favorably to a talk given on this matter by the Superintendent. Members of the Superintendents Advisory Board, both on this island and in Honolulu, are favorable, but those having the welfare of the Hawaiians as a personal interest feel strongly that the native lands should be acquired also, and some method worked out whereby they and their descendents might retain undisturbed occupancy. This, of course, has the complete concurrence of the Superintendent.

At the present writing the matter is at rest while the Territorial Land Commissioner works out details of boundaries and ownerships. It is proposed that the Delegate introduce in Congress a bill "to revise the boundaries of Hawaii National Park," empowering the Governor to acquire for park purposes, by exchange or otherwise, all privately owned land within the boundaries, as defined therein. Under consideration is the suggestion that the proposed act place the native lands under the control of the Hawaiian Homes Commission and stipulate, by way of preference, that long term leases be granted the present Hawaiian owners.

This proposed road and park extension has meant a great deal of personal contact work as well as correspondence, but all interesting and eminently worthwhile.

020 General Weather conditions

Rainfall for January amounted to 10.29 inches compared with a total 9.01 inches a year ago. There were eleven clear days during the month. Wind for the first eleven days was from the northeast but for the remainder of the month southwesterly winds prevailed. Snow fell during a Kona (SW) storm on both Mauna Loa and Mauna Kea on the 18th. This storm was preceeded by strong southwest winds on the 17th with thick fog gathering over the Volcano District that night. Sunsets on both the 17th and 18th were spectacularly beautiful. That on the 18th being inspiring beyond words. There was also a small snowfall on Mauna Kea and Mauna Loa on the 13th.

The storm on the 17th and 18th was general throughout the islands. Winds were strong enough to blow down a house at Honokaa and floods swept down the gulches from the Kohala mountains damaging the new and completely washing out the old Kawaihae roads.

The maximum temperature was 73 degrees on the 28th and 30th and the minimum 47 degrees on the 12th.

100 Administration

110 Status of Work

Most of the routine reports were made and forwarded on time. The weekly travel report is frequently delayed due to failure by park operator and Military Camp to have figures available when needed. Despite

DOCUMENT CAPTURED AS RECEIVED

frequent requests, the park operator continually delays submission of his report of gross revenues. The last report was as of November 1st. No report was made on the Fire Atlas since this park has never had one, and forms for the Annual Forest Fire Report were not received until February 1st.

Under instructions from the Superintendent the several divisions of the staff prepared by the 15th, estimates of their needs for fiscal year 1937. To date, no instructions have been received concerning preparation of the Preliminary Estimate.

The Superintendent's ECW quarterly narrative report was mailed on January 15 and a revised Public Works Physical Improvement Program was submitted on January 7.

Beginning the first of February two rangers are to be assigned extra work at night in order to get the files brought up-to-date.

120 Park Inspections
121 Superintendent
On January 5 in company with Camp Superintendent Stevens and Associate Architect, M.S. Sager, progress on the new Kilauea Iki ECW trail project was inspected as was also the trail built under P.W. allotment to Puu Huluhulu. A slight revision in alignment of the latter trail was suggested and carried out since it left no scars and necessitated no new tree cutting.

Work on the Territorial road project between Pahala and the Volcano was inspected on January 6th. On the 7th in company with the seismologist at the Volcano Observatory an examination of the ground north and west of Halemaumau was made to determine whether the twenty odd tremors noted on the seismogram the day previous had caused any surface disturbances.

On January 19th the Superintendent went to Kalapana where he remained overnight spending the next day taking pictures of the region.

On the 24th in company with the Acting Chief Ranger fencing done by the ECW was inspected in the vicinity of Kipaha Pusulu, also the old prison camp site on the government road where it is proposed to establish an auto camp. Damage by recent rains to the Uwekahuna road was examined and the Superintendent requested an emergency crew from the CCC camp be immediately put to work.

On the 26th the CCC camp was given a careful inspection. Other projects were given routine examination and the Superintendent resumed an old practice of visiting Halemaumau daily.

112 Special Field Representative
Associate Architect M.S. Sager was in the Kilauea Section of the Park from January 1st to 28th on which date he left for Maui and the Haleakala Section. At Kilauea he was occupied in preparing

preliminary draw-

DOCUMENT CAPTURED AS RECEIVED

ings for physical improvements under a proposed Public Works program and in connection with the ECW camp there as well as on the Haleakala Road project NR7.

At the request of the Superintendent, Mr. Sager is handling all the details affecting the park in connection with the Haleakala Road opening celebration on February 23rd.

125 Other Government Officers
Resident Engineer, H. L. Handley, on the Haleakala Road project visited the park on January 26 and 27 to confer relative to the landscaping work to be done under his supervision as a minor project, force account, on NR7. He also critically inspected erosion damage on NR4 and made recommendations.

130 Finance and Accounts
A detailed statement showing the status of park appropriations is attached as Statistical Report No. 8.

140 Labor Situation
Nothing to report

150 Equipment and Supplies
The following equipment and supplies were received during the month. One horse purchased from the Keaubou Ranch; one Kodak model C. 3A; three small electric room heaters for the administration building and one set twist drills for machine shop. Orders were placed for three electric refrigerators; one bench grinder, one breast and one chain drill.

160 Status of alienated lands
While in Honolulu on January 20th and 29th the Superintendent conferred with the Territorial Commissioner of Public Lands relative to the acquisition of 1.9 acres of Campbell Estate Land at the Thurston Lava tube entrance. This was the subject of a special letter to your office.

170 Planes, maps and surveys
The Acting Chief Ranger with ranger assistance prepared an appraisal map of park lands, a special information trail map of the Kilauea Section, and gathered considerable data from the Hilo Tax office concerning lands in the proposed Kalapana extension.

With funds allotted by the FERA the County began a survey of the proposed Kalapana road. The route to be surveyed was selected in conference with the Superintendent and Park Naturalist.

On January 2 Associate Architect M. S. Sager forwarded preliminary plans for an Observation Station, Haleakala and on the 18th similar drawings were sent on for the proposed Volcano Observatory and Naturalist Building.

180 Circulars, Placards, Publicity bulletins
Attached is one press memorandum concerning ECW trail work on Mauna Loa prepared during the month, also The Volcano Letter for November, and December.

The Park and Park Activities received an unusual amount of publicity during the month considering that there was no volcanic eruption in progress. The proposed Kalapana road and park extension together with the Haleakala

DOCUMENT CAPTURED AS RECEIVED

road opening celebration commanded the greatest space.

200 Maintenance, Improvement and New Construction

210 Maintenance
A crew of boys from the CCC camp was put to work repairing damage to the Halemaumau-Bird Park road done by recent rains. Erosion on shoulders is a serious problem on this road and will only be remedied by rock lining all ditches and covering all fills with rip-rap masonry.

The usual maintenance of roads, trails, and other public property was carried on during the month.

230 New construction
Work was stopped on the utility road surfacing to allow the subgrade to compact under traffic. Asphalt emulsion will be spread early in February and the job finished up.

240 Improvement of Approaches to the Park
The Hilo Electric Light Company conducted a roadside cleanup removing the unsightly rubbish left along the highway when the electric line to the park was constructed.

Contractor E.E. Black Ltd., continued work on the road project between Pahala and the Volcano.

300 Activities of other agencies in the Park

310 The superior lighting and power facilities now available, continues to give satisfaction and it is of particular interest to note that the first monthly bills for this service averaged four and a half cents a kilowatt hour. This represents a real saving over the old flat rate of seven cents an hour for current received from the Volcano House.

312 Cooperation or lack of cooperation with Superintendent
The park hotel operator continues to be negligent in the matter of making necessary reports despite repeated requests from this office. On the other hand he readily consented to place on sale at the Volcano House native handicrafts and requested the Superintendent to select and purchase the articles for him.

314 Complaints
No complaints were registered at this office during the month.

317 Status of Authorized Projects of Contractors
Project NB-7, Haleakala Road was 95% complete on January 15. The only difficulties encountered were effects of freezing on the thin surface which breaks up and cracks. The .3 gallon asphalt emulsion treatment is not heavy enough to waterproof the roadway. Experiment proved that a heavier treatment of .425 to .45 gallons per square yard would solve this problem.

DOCUMENT CAPTURED AS RECEIVED

Work was started under general supervision of the Resident Engineer on a force account project to cover with soil the unsightly rock fills along the road. This project was the subject of considerable correspondence with your office and the B.P.R. before being finally settled as a Park Service project.

320 Cooperating government agencies

The Kilauea Military Camp continued operation during the month. It is understood that there are to be some changes in the permanent commissioned personnel. At the request of the Superintendent, Lieut. H.A. Meyer, Aide to the Commanding General Hawaiian Department, addressed the prmanent staff of the park at the regularly scheduled evening meeting on January 17.

340 State, County or Municipal Legislation, etc.

On January 17 the Board of Supervisors voted approval of the proposed Kalapana extension of the Park.

400 Flora, Fauna and Natural Phenomena

410 Ranger, Naturalist and Guide Service

After reviewing all the information at hand concerning protection to the Haleakala Silversword, which was to be undertaken a s an ECW project, the Superintendent, feeling that this information was entirely too fragmentary to proceed on, called in the Acting Chief Ranger, Park Naturalist and Ranger Lamb for conference. As a result Ranger Lamb was directed to undertake a systematic and thorough research, including laying out of experimental areas in Haleakala with aid of CCC labor when his studies had advanced far enough. The Superintendent thought and the others agreed that to proceed blindly, might result in irreparable damage to the plant we were trying to preserve.

At the first staff meeting of the year on January 3, the Superintendent outlined plans whereby the entire ranger staff would regularly participate in public contact work alternating in conducting the regular park tours. In the past this work had been done entirely by the Park Naturalist with the result that the morale of the ranger staff had been lowered to a serious degree and the Naturalist did not have time for much serious work. The Superintendent is particularly pleased with the present ranger staff and desires that its morale be maintained by offering equal opportunities to each member.

On January 10, the Park Naturalist addressed the staff on "Objectives in Educational Work in Hawaii National Park" and after Lieut. H.B. Meyers talk on the 17th Ranger Lamb conducted the staff on a "General Park Tour" talk for the benefit of new staff members.

An inspection of the reproduction of the koa trees in the so called "Fire Kipaka" was made by the Acting Chief Ranger. Cattle were removed from this area a couple of years ago and there is now a fine growth of seedling koa. He also made inspection trips to Hilina Pali, lower Mauna Loa trail and the "Six Tanks" area.

DOCUMENT CAPTURED AS RECEIVED

Rangers carried on the usual miscellaneous jobs of maintaining telephone and electric lines, painting signs, patrol, etc.

The Naturalist Division conducted ten field trips to Kipuka Puaulu (Bird Park), Mauna Iki and Kilauea Iki. A total of 213 persons made these trips.

420 Museum Service
Museum attendance was 596 with 13 lectures given to a total of 352 persons.

480 Natural Phenomena
Kilauea was the center of much interest throughout the month. There is considerable evidence that hot lava is not far below the surface and that another outbreak may be expected before long.

A total of 148 seismic disturbances were registered on the seismographs at the Volcano Observatory. There were a larger number of rim cracks showing opening than usual and blue fume definately increased toward the end of the month. The solfataras increased in area and brilliancy of color. Dull "booming" noises were frequently reported heard at the crater. Small slides and rock falls were common.

A strongish quake on January 2 was located beneath Kilauea. It was felt generally over the whole island and was sufficiently strong to crack masonry walls in Hilo, started a landslide at Hakalau which blocked the road, spill water out of tanks at the Volcano, etc. On January 6 there were 20 odd tremors recorded as having originated at Halemaumau.

The staff has been directed to observe Halemaumau closely.

500 Use of park facilities by the public

510 Increase or decrease in travel
Visitors to the park totaled 18,065 which compares with a total of 16,838 a year ago. Both the Hotel and Kilauea Military Camp showed decided decreases. This is probably due to the fact that activity on the crater of Mauna Loa in December 1933 had brought a number of visitors to this island from Honolulu and elsewhere.

530 Visitors
On January 5 the Superintendent received word from Mr. Stanley Kennedy, Manager of the Inter-Island Airways, that on January 6 he was arriving by plane with his guests, Mr. and Mrs. (Amelia Earhart) Putnam and Mr. and Mrs. Paul Mantz. Mr. Kennedy requested that the trip be kept secret to avoid meeting crowds of people with the resulting nervous strain. The party arrived at Headquarters about 11 o'clock and were taken on a very hurried trip, at Mr. Kennedy's request, through the park by the Superintendent and Dr. T.A. Jaggar. Ranger Lamb accompanied the

DOCUMENT CAPTURED AS RECEIVED

party. Mr. Kennedy was afterwards host at luncheon at the Volcano House. While in San Francisco the Superintendent had been informed by an advertising agency of the proposed flight, from Hawaii to the mainland, by Miss Earhart which took place two days after her visit to the Volcano.

On January 9, the park was honored by a visit by the Ambassador to the United States from the Union of Soviet Republics, A.A. Troyanovsky and party, which included his wife and son Oleg (a student at Friends School in Washington) and Attache G. M. Gregorief. The party was met at the airport by the Park Naturalist who conducted the Ambassador on a tour of the park. The Superintendent and Mrs. Wingate were later hosts at an informal luncheon to the Ambassadors party to which were invited a few local people. The Superintendent accompanied the Ambassador on the return trip to the Hilo Airport.

On January 22 Mr. George Armitage, Secretary of the Hawaii Tourist Bureau and Mr. A.E. Kirk, Vice President of the Honolulu Chamber of Commerce were overnight guests at the Volcano House. They were taken on an extended trip through the park by the Superintendent during part of which the park Naturalist accompanied the party.

600 Protection

610 Police protection
The usual park patrols were carried on by park rangers during the month.

630 Accidents
None to report

640 Destruction of predatory animals
Eleven goats and seven wild pigs were killed during the month.

620 Fire protection
All fire extinguishers were re-filled during the month.

A fire drill including a mock fire was held on the 15th. Water under sufficient pressure to reach a height of 50 feet was playing on the fire within 3½ minutes after the alarm was given. This drill indicated the necessity for certain corrections in the fire fighting system which are being carried out.

660 Sanitation
All residence and utility area building gutters were cleaned during the month. One water storage tank was drained and cleaned.

650 Signs
Rangers painted all signs at Kilauea as needed. The CCC camp in Haleakala is preparing signs which will be needed in that section as soon as the road is opened.

DOCUMENT CAPTURED AS RECEIVED

900 Miscellaneous

On January 4 the Superintendent made a short talk at the Hilo Rotary Club luncheon on the proposed extension of the lease to the Kilauea Military Camp. On January 9th he was guest speaker at the Hilo Woman's Club regular meeting. On the 15th he attended the annual Hilo Chamber of Commerce meeting and informally talked on the proposed Kalapana road and park extension. On January 25th he was particularly pleased to be the principal speaker at a Mamalahoa Chapter, Order of Kamehameha social gathering at Haili Hall in Hilo. He spoke on the proposed park extension as a means of preserving both the people and historical remains in that section, also the proposed road. The talk appeared to be well received particularly by the older Hawaiians. It was later translated into Hawaiian.

The Superintendent was in Honolulu on the 28th and 29th where he conferred with the Governor, Territorial Land Commissioner and members of the Superintendent's Advisory Board relative to the Kalapana addition to the park. On this same matter he met with the Hawaii Island Board of Supervisors on the 2nd and the representatives from this island and the Territorial Legislature on the 21st.

On the 16th the Superintendent invited the members of the Federal Business Association to attend a farewell dinner at the Seaside Inn for Mr. and Mrs. G. B. Alverson, who for three years had been in charge of the Naval Radio Station. Fourteen members were present.

The Superintendent, by invitation, occupied a place on the reviewing stand for the Holy Name parade in Hilo on the 13th.

Other members of the staff were also equally busy throughout the month. Associate Architect M. S. Sager continued his series of talks to a class in Landscape Architecture under the auspices of the Hilo Y.W.C.A. and on the 29th was called on for a talk at the luncheon meeting of "Hawaii Unlimited" an organization of hotel men, tourist and advertising agencies. The luncheon was at the Young Hotel in Honolulu.

The President's birthday was celebrated throughout the islands. On this island two dances were held in Hilo, one at Honokaa, one at Kealakekua and one at the Volcano House in the park. The dance at the Volcano was well attended and the ticket sale remarkably large. The CCC boys were given a night off to attend the dance in Hilo and about 130 purchased tickets.

Very respectfully,

Edward G. Wingate
Superintendent

EGW/rk

DOCUMENT CAPTURED AS RECEIVED

RECEIVED AS FOLLOWS

NO PICTURE AT TIME OF MICROFILMING

SEE NEXT PAGE...

DOCUMENT CAPTURED AS RECEIVED

Ambassador to the United States
from the Union of Soviet Republics
A.A. Troyanovsky and party at the Volcano House.

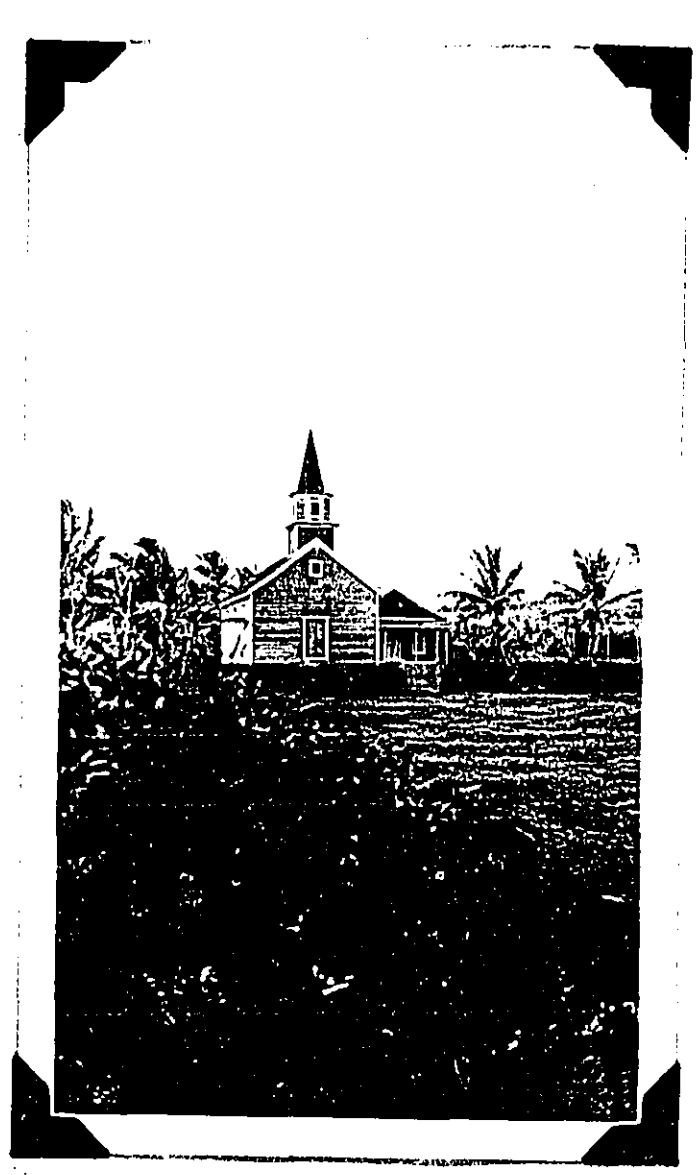
DOCUMENT CAPTURED AS RECEIVED

Lagoon Kalapana Park. The low spreading trees are the Puhala from the leaves of which are woven mats, hats, baskets, etc.

DOCUMENT CAPTURED AS RECEIVED

View along road from
Hilo to Kalapana

DOCUMENT CAPTURED AS RECEIVED



Protestant Church, Kalapana

DOCUMENT CAPTURED AS RECEIVED

The Pea family home Kaimu (Kalapana)
Taken looking inland from the
Black Sand Beach.

DOCUMENT CAPTURED AS RECEIVED

Typical Hawaiian dwelling ,
Kalapana

DOCUMENT CAPTURED AS RECEIVED

Home of one of the poorer
families. Kapaahu (Kalapana)

DOCUMENT CAPTURED AS RECEIVED

Kalapana Hawaiians

DOCUMENT CAPTURED AS RECEIVED

Hawwaiian Girls (mixed blood)
Kalapana

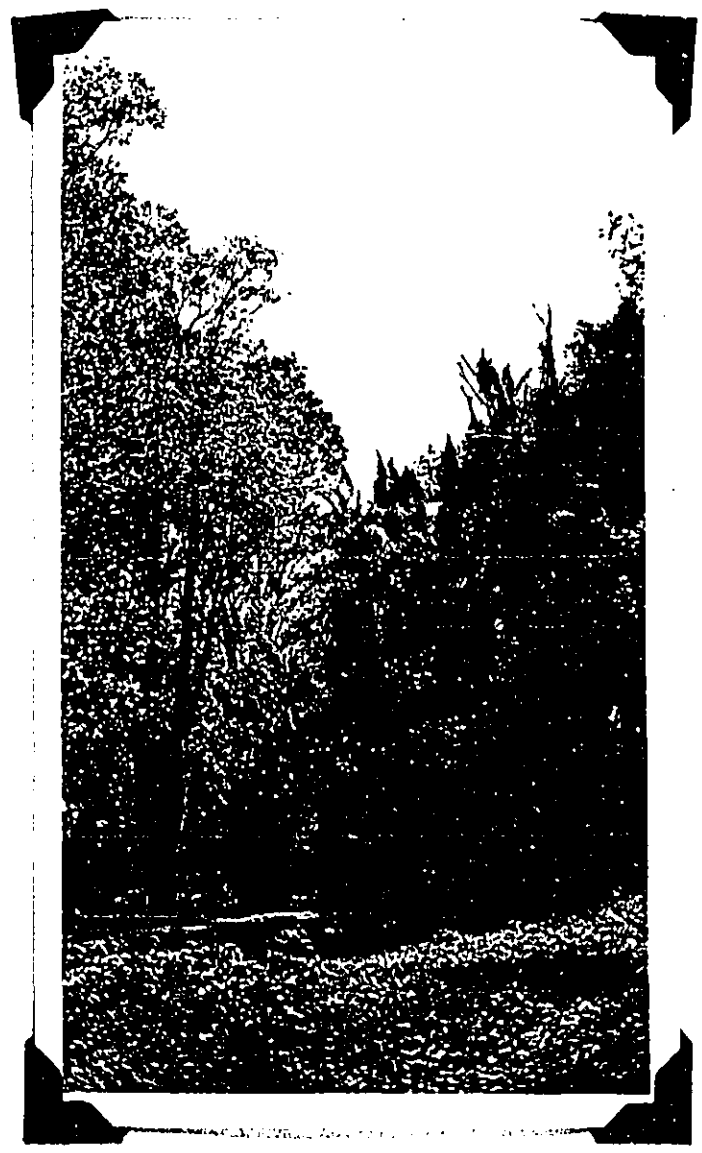
DOCUMENT CAPTURED AS RECEIVED

"Punaluu Wai" swimming
Kapaahu (Kalapana)

DOCUMENT CAPTURED AS RECEIVED

"Punaluu Wai" swimming
Kapaahu (Kalapana)

DOCUMENT CAPTURED AS RECEIVED



View in Kipuka Puaulu taken January 1935 in approximately same spot as proceeding picture CWA & CCC crews have succeeded in killing off the morning glory. Note dead vines in trees.

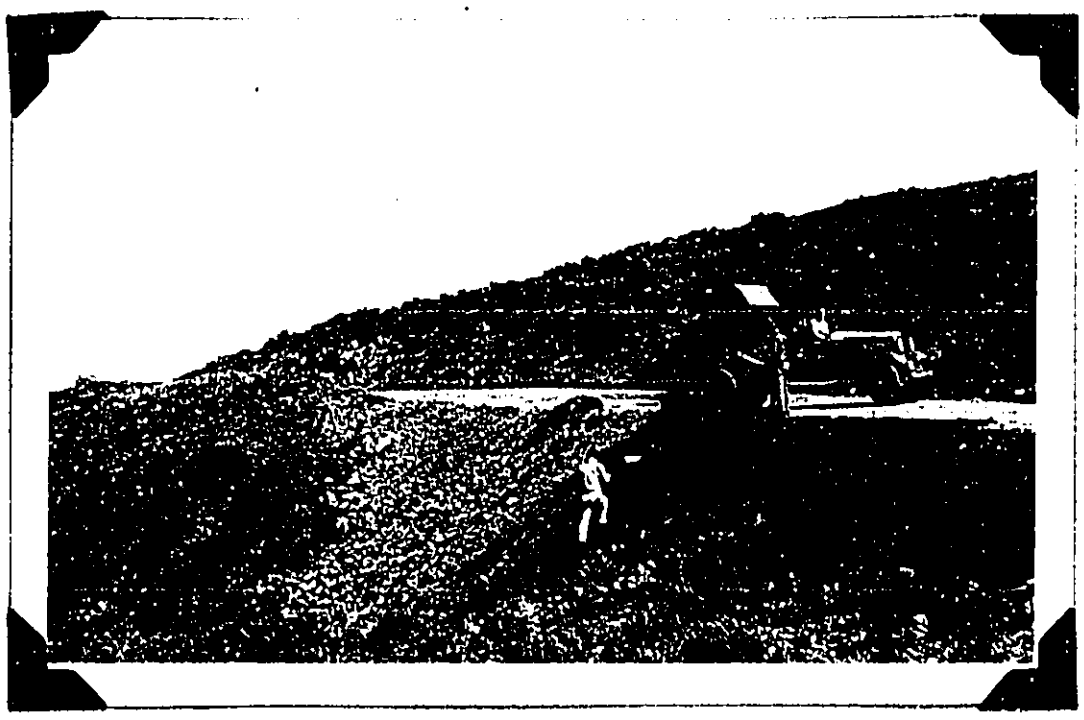
DOCUMENT CAPTURED AS RECEIVED

View taken in Kipuka Puaulu
December 1933 showing exotic morning
glory choking out native forest.

DOCUMENT CAPTURED AS RECEIVED

Visitors at rest house on Haleakala, Maui

DOCUMENT CAPTURED AS RECEIVED



Haleakala Road - Landscaping project -
covering rock fills with earth.

DOCUMENT CAPTURED AS RECEIVED

Form No. 1009—Met'l.

U. S. Department of Agriculture, Weather Bureau.

COOPERATIVE OBSERVERS' METEOROLOGICAL RECORD:

Month of January, 1935 ; *Station,* Hawaiian Volc. Obsy ; *County,* Hawaii

State, Hawaii ; *Latitude,* ; *Longitude,* ; *Time used on this form,* ; *Hour of Observation,*

DATE.	TEMPERATURE. Maximum.	Minimum.	Range.	*Set Max.	PRECIPITATION. Time of Beginning.	Time of Ending.	†Amount.	Snowfall, in Inches.	Depth of Snow on Ground at Time of Observation.	Prevailing Wind Direction.	Character of Day, Sunrise to Sunset.	‡Miscellaneous Phenomena.
	1	2	3	4	5	6	7	8	9	10	11	
1	61	51	10	54			.12	90	Stg	NE	PC	
2	60	50	10	54			.01	91	Stg	NE	PC	
3	59	40	9	53			.24	98	Stg	NE	Cldy	
4	58	50	8	52			.41	94	Stg	NE	Cldy	
5	62	48	14	56			.59	87	Stg	NE	PC	
6	60	48	12	54			.16	92	Mod	NE	PC	
7	63	53	10	54			.15	92	Stg	NE	Cldy	
8	57	50	9	53			2.29	96	Stg	NE	Cldy	
9	59	50	8	53			1.60	92	Mod	NE	Cldy	
10	61	48	13	53			.55	89	Mod	NE	PC	
11	62	50	8	55			.43	91	Lt	NE	Cldy	
12	65	47	18	61			.36	87	Lt	SW	Clear	
13	68	50	18	55			.02	83	Lt	ENE	PC	
14	59	52	7	56			.48	92	Calm		Cldy	
15	66	51	15	56			.17	93	Lt	SW	cldy	
16	66	49	17	54			T	83	Lt	SW	Clear	
17	65	53	12	56			T	85	Stg	SW	Cldy	
18	61	56	5	59			2.33	93	Stg	SW	Cldy	Thunder, Lightning
19	69	52	17	58			.10	79	Lt	SE	Clear	
20	69	53	16	58			.10	79	Lt	SW&NE	PC	
21	66	54	12	54			T	92	Lt	WSW	PC	
22	68	51	17	54			.01	93	Lt	NE	PC	Change to SW
23	71	52	19	59			T	98	Stg	SW	PC	" " NE
24	67	55	12	56			.01	93	Calm		Cldy	
25	69	51	18	54			.11	89	"		PC	
26	67	53	14	55			T	94	Stg	WSW	PC	
27	70	51	19	55			T	92	Lt	NE	Calm	
28	73	50	23	54			T	88	Calm		Clear	
29	68	54	12	55			T	84	Mod	WSW	PC	
30	73	53	20	40			T	87	Lt	NE	PC	
31	71	55	16	63			T	86	Calm		PC	
SUM	2011	1591	416	1726			10.29	2784				
MEAN	64.9	51.3	13.4	55.7			.332	89.8				

*Reading of maximum thermometer immediately after setting.
†Including rain, hail, sleet, and melted snow.
‡Thunderstorms, halos, auroras, etc.

(IN TRIPLICATE.) See cover for instructions.

T. A. Jaggar, *Cooperative Observer.*

Post-Office Address, Hawaii National Park

8—253 GOVERNMENT PRINTING OFFICE

MONTHLY SUMMARY.

TEMPERATURE.

Mean maximum, 64.9

Mean minimum, 51.3

Mean, 58.1

Maximum, 73 ; date, 28 &

Minimum, 47 ; date,

Greatest daily range,

PRECIPITATION.

Total, 10.29 2.33 inches.

Greatest in 24 hours, 18 ; date,

SNOW.

On Mauna Loa & Mauna Kea

Total snowfall, 18 inches; on ground 15th, inches;

at end of month, inches.

NUMBER OF DAYS 21

With .01 inch or more precipitation, 15

Clear, 11 ; partly cloudy, ; cloudy,

DATES OF—

Killing frost,

Thunderstorms, 18th

Hail { Light, Moderate, Heavy,

Sleet,

Auroras,

REMARKS:

DOCUMENT CAPTURED AS RECEIVED

10-157
(July, 1929)

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

TRAVEL REPORT

Hawaii National Park for the Month of January 1935

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year	
					Number	Percent
PRIVATE TRANSPORTATION:						
Cars first entry, ...						
Cars reentry, ...						
Motorcycles, ...						
Total motor vehicles, ...						
Persons entering via motor vehicles, ...	17,615	72,204	16,212	69,950	2,254	.032
Persons entering via other private transportation, ...	139	657	228	868	- 211	.243
Total persons entering via private transportation, . . .	17,754	72,861	16,440	70,818	2,043	.029
OTHER TRANSPORTATION:						
Persons entering Hotel .	302	1,335	398	2,610	-1,275	.489
Persons entering via trains, .						
Persons entering otherwise, . .						
Total other transportation, .	302	1,335	398	2,610	- 1,275	.489
GRAND TOTAL ALL VISITORS, . . .	18,056	74,196	16,838	73,428	768	.01

	This Year	Last Year	Increase	
			Number	Percent
Automobiles in public camps during month, ...				
Campers in public camps during month, ...				

DOCUMENT CAPTURED AS RECEIVED

10-158

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Hawaii National Park for the Month of January, 1935

Description of Projects	Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
FP 102.8 Parapet Lookouts, Kilauea Ikd, etc.	99	0	0	
FP 311.14 Fire-equipment Storehouse & Garage	100	0	0	
FP 312.14 Bldg Reconditioning for Elimination of Fire Hazards	100	0	0	
516 Utility Area Road, Paving (F.A.)	30	10	15	
518 M 7 Haleakala Road, Landscaping (F.A.)	20	20	0	

DOCUMENT CAPTURED AS RECEIVED

10-215
(August 1933)

UNITED STATES
DEPARTMENT OF THE INTERIOR
Office of National Parks,
Buildings and Reservations

.....Ecoli..... National Park

REPORT OF NON-APPOINTED PERSONNEL
(TEMPORARY)

Changes outside the District of Columbia for the month of ..... 19.....

Total at beginning of month	Additions	Separations	Net Gain or loss (a)	Total at ending of month
4	30	1	29	33

(a) If loss, indicate by minus sign.

DOCUMENT CAPTURED AS RECEIVED

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Hawaii National Park for the Month of January 1935

	This Month		This Month Last Year	
	Appointed	Non-Appointed	Appointed	Non-Appointed
Number of employees beginning of month	17	4	16	7
Number of additions	0	30	0	5
Total	17	34	16	12
Number of separations	1	1	0	1
Number of employees close of month	16	33	16	11
Number of promotions during month	0	0	0	0
Aggregate amount of annual leave taken	18	0	0	0
Aggregate amount of sick leave taken	0	0	0	0
Aggregate amount of leave without pay	0	0	0	0

DOCUMENT CAPTURED AS RECEIVED

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Hawaii National Park for the Month of January, 1935

	This Year	Last Year
Park revenue on hand beginning of month,	0.00	0.00
Received,	75.00	25.00
Total,	75.00	25.00
Remitted,	75.00	25.00
On hand close of month,	0.00	0.00

Park revenues received this year to date,	325.00
Park revenues received last year to date,	275.00
Increase,	50.00
Per cent of increase,	.18

DOCUMENT CAPTURED AS RECEIVED

10-161

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF SALES OF PUBLICATIONS

Hawaii National Park **January, 1935**

	Number	Value
GOVERNMENT PUBLICATIONS:		
On hand beginning of month,	861	153.55
Received during month,	0	0.00
Total,	861	153.55
Sold during month,	4	1.30
On hand at close of month,	857	152.25
NON-GOVERNMENT PUBLICATIONS:		
On hand beginning of month,		
Received during month,		
Total,		
Sold during month,		
On hand at close of month,		

Cash on hand beginning of month,	9.22
Sales during month,	1.30
Total,	10.52
Remitted during month,	0.00
Balance,	10.52

DOCUMENT CAPTURED AS RECEIVED

STATISTICAL REPORT NO. 8

FINANCE AND ACCOUNTS

JANAURY, 1935

Symbol	Appropriation	Allotted	Expended & Obligated	Balance
45415	~~Salaries & Expenses~~, National Park Service, 1935	35,150.00	30,650.26	4,499.74
45406	Forest Protection & Fire Prevention, (N. P. S.) 1935	300.00	256.29	43.71
44415.3	Salaries & Expenses, Office of Nat'l Parks, Bldgs. & Reservations, 1934	31,392.55	29,491.16	1,901.39
4X391	Roads & Trails, Nat'l Parks, Emergency Construction Act June 19, 1934	16,165.00	3,529.34	12,635.66
4-03/5640.8	N.I.R., Int., Nat'l Parks, Roads and Trails, 1933-'35:	491,000.00	473,104.78	17,895.22
4-03/5640.14	N.I.R., Int., Nat'l Parks, Bldgs and Reservations, 1933-'35:	11,250.00	11,105.25	144.75

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

January 4, 1935

MEMORANDUM FOR THE PRESS

IMMEDIATE RELEASE

HAWAII NATIONAL PARK, January _____. Perhaps the most interesting work done in Hawaii National Park during 1934 by the CCC boys was completed just before the holidays: Interesting to both the boys themselves and to the public as well as of genuine value.

The new rest house erected at the summit of Mauna Loa on the rim of Mokuaweoweo Crater is now connected with the important trails leading up the mountain from Kona and Kau as well as that from Kilauea.

A group of fourteen CCC boys under Foreman Jesse Enos lived on the mountain for more than a month during which time they smoothed and marked a trail from the end of the Ainapo trail which leads up from the Kau side past the historic Wilkes Camp to the new rest house. Also, a similar job was done connecting the Kona trail. About 7 miles of trail were constructed in these two jobs.

Now hikers going up Mauna Loa by way of either of these trails will find a well defined trail marked to shelter, also, it is now possible to take riding or pack animals across to the summit of Mauna Loa by way of the North Rim of Mokuaweoweo.

DOCUMENT CAPTURED AS RECEIVED

The boys returned to the main Camp at Kilauea fat and rosy cheeked reporting the best of times. The morning ice in the bucket and the biting wind and snow squalls during their work made them more eager to be off on their Xmas leave and an interview with Old St. Nick.

In connection with this work it is of interest to note that so far as can be determined Territorial Forester L. W. Bryan is the only man, known, who has taken horses up by any of these trails across the summit and down by another route. Now such a circuit trip is possible for anyone.

Edward G. Wingate
Superintendent

DOCUMENT CAPTURED AS RECEIVED

The Volcano Letter

No. 417—Monthly U. S. Geological Survey, Hawaii National Park NOVEMBER, 1934

KILAUEA REPORT FOR NOVEMBER, 1934

Including weekly press reports 1189 to 1193
October 28 to December 2, midnight

Section of Volcanology, U. S. Geological Survey
T. A. Jaggar, Volcanologist in Charge

VOLCANOLOGY

Slides in Halemaumau during the month had the following characters:

At 9:50 a. m. October 29 a block fell noisily southeast.
Pebbles fell at the new lava cascades November 1.
Between 8:30 and 10 a. m. November 3, intermittent sliding north.

November 4 this continued.

Week ending November 11, sliding at the west end of the Canoe sill north, notching the wall and making a sandy talus below; the buttress east of the SW tunnels caved away. This made pink dust on the floor.

11 a. m. November 13, a slide northeast sent up dust.
November 20 the sandy top of the north talus, after many slides recently, had changed its shape.

Fume in the pit was noted as follows:—

October 30, 9 fume places and 3 sulphur spots.

November 4, fume from pit as whole rose in thin bluish clouds.

November 11 fume had increased north.
November 12 solfatara at East Talus had lengthened southward. Ten places were fuming.

November 20, a dry day, the central fume patches of the 1934 lava lake area could not be seen; only 7 places counted.

November 22, after more than 1 inch of rainfall, 20 places showed vapor, but none at the lava lake site. On the Kilauea floor southwest over the rift belt, noisy purring at the vapor vents.

December 2, after 3.66 inches rain at Halemaumau gauge, pit was full of vapor, hundreds of steam plumes on the bottom, clockwise whirls indicated small tornadoes.

November 3 fresh hair cracks in soil appeared at pit rim NNE. Cracks of the intrusion ridges around edge of 1934 floor had widened November 11. Stain at the southeast ridge was increasing. Hot dry belts marked the bases of the talus cones, and bright yellow sulphurous stain was increasing at base of WNW wall. The stained area of pumice on top of northwest talus changed from yellow to white under rain washing; it was probably alum. The talus ESE and SSW steams after rainfall.

It is remarkable on the Kilauea floor southwest and northwest of Halemaumau how by condensation the puffing vapor vents have made areas green with tufty grass in the 1924 sand and gravel.

Weekly measurement of opening and closing of 32 marked rim crack points, around the edges of Halemaumau, showed the following changes Saturday forenoons:—

Nov. 3, 9 opened, 3 closed, aggregate opening 4 mm
Nov. 10, 7 opened, 7 closed, aggregate opening 0.5 mm
Nov. 17, 12 opened, 3 closed, aggregate opening 5 mm
Nov. 24, 7 opened, 3 closed, aggregate opening 3 mm
Dec. 1, 5 opened, 4 closed, aggregate opening 0.5 mm

T. A. J.

EARTHQUAKES

TABLE

Week ending	Minutes of tremor	Very feeble earthquakes	Distant earthquakes	Local * Seismicity
Nov. 4	9	1	0	2.75
Nov. 11	11	0	0	2.75
Nov. 18	29	1	0	7.75
Nov. 25	15	2	0	4.75
Dec. 2	11	2	1	3.75

* For local seismicity index see Volcano Letter 371.

During the five weeks period, only one shock has been approximately located. The Hilo and Kona records of the other shocks were too small to be of value in making a location. The very feeble shock at 5:53 a. m. November 12 was on the Kilauea SW rift. 19° 13′ N. 155° 24′ W.

The preliminary waves of a teleseism began to record about 3:43:54 p. m.; what may have been either secondary or long waves began to record at 3:54:47 p. m. The maximum waves at 3:58 p. m. were very large.

Microseismic motion of the ground was normal November 1, 2, 4, 11, 13, 14, 22, 25, 27, 28, and abnormal October 29, 30, 31, November 3, 5, 6, 12, 21, 23, 29 30, December 1, 2, and subnormal the other days of the month.

A. E. J.

TILTING OF THE GROUND

The table shows tilt by weeks from seismograms at Kilauea Observatory, northeast rim of Kilauea crater; and at Halemaumau the algebraic sum of radial tilts for the three clinoscope cellars, towards or from the center of the pit.

At the Observatory the total accumulated tilt in the year ending December 2, 1934 is 1.9″ N and 1.1″ E.

TABLE OF TILT

Date 1934	Observatory	Halemaumau
Oct. 28 to Nov. 4	0.5″ N by W	10.9″ toward.
Nov. 5 to Nov. 11	0.4″ N	2.5″ from
Nov. 12 to Nov. 18	0.7″ E	2.0″ from
Nov. 19 to Nov. 25	0.5″ ENE	4.9″ from
Nov. 26 to Dec. 2	0.5″ WSW	18.7″ from.

A. E. J.

DOCUMENT CAPTURED AS RECEIVED

The Volcano Letter

No. 418—Monthly U. S. Geological Survey, Hawaii National Park DECEMBER, 1934

KILAUEA REPORT FOR DECEMBER, 1934

Including weekly press reports 1194 to 1197
December 2 to December 30, midnight

Section of Volcanology, U. S. Geological Survey
T. A. Jaggar, Volcanologist in Charge

VOLCANOLOGY

Slides in Halemaumau were as follows:—

December 16, 9:25 a. m., a fall of rocks at west lava cascade

December 30 about 10 a. m., rocks fell occasionally northeast

Fume in the pit was noted as follows:—

December 10, 9 a. m., 7 places fuming around northern edges of floor. The place of densest fuming was at base of east talus.

December 16, dry sunny day, about 9:30 a. m., vapor visible only at east talus.

Week ending December 23. Fume continues moderately dense at east talus.

Week ending December 30, blue fume from the four northern and eastern talus slopes, where they make contact with the new lava floor. The solfatara making densest steam and fume was at the base of the east talus, where there was in September the largest swelling in the floor due to intrusion. The fume separates itself from the steam and rises to fill the air in the upper part of the pit, while the water vapor dissipates. This fume shows best when the sunlight is behind it; it is thin. December 17 strong northeast wind was blowing clouds of dust over the Kau desert, and making whirls counterclockwise on the western edge of the pit. Thirteen places around the floor showed vapor after rain, but the bases of the taluses showed dryness due to excessive heat below. Vapor rose from high cracks in the western wall.

December 30 six fuming places were counted as visible.

December 10 stain had begun to appear at the wall-crack extrusion against the talus SSE, and the slope showed wet streaks steaming. A snapping noise was heard from the floor. December 16 the base of the WNW cascade had been growing increasingly bright yellow, probably with sulphur stained sulphates, and had extended its stain out on the floor. December 22 new rocks had fallen on the floor east. December 30 during the visit one snap in the floor like a detonation was heard about 9:50 a. m.

Weekly measurements of 32 rim cracks about Halemaumau, for changes of opening and closing as exhibited Saturday forenoons, resulted as follows:—

Dec. 8, 8 opened, 5 closed, aggregate opening 2.5 mm
Dec. 15, 9 opened, 6 closed, aggregate opening 2.5 mm
Dec. 22, 16 opened, none closed, aggregate opening 11.0 mm
Dec. 29, 3 opened, 3 closed, aggregate opening 0.5 mm

The general situation in the Halemaumau bottom is a pause in hot lava deeply crusted since the eruption of September, which had filled in over the 1931-32 floor by something over 90 feet for an average. The yellow sulphates and hot fume around the border, the swollen and cracked floor, the hot dry bases of the talus slopes, and the cracking noises, all indicate that the mobile paste is still there.

T. A. J.

EARTHQUAKES

TABLE

Week ending	Minutes of tremor	Very feeble earthquakes	Feeble earthquakes	Distant earthquakes	Local * Seismicity
Dec. 9	8	2	0	0	4.50
Dec. 16	19	7	0	0	8.25
Dec. 23	12	6	1	0	8.00
Dec. 30	15	2	0	1	4.75

* For local seismicity index see Volcano Letter 371.

The following successive local disturbances began at the times indicated; no epicenters could be found. The intensity is that recorded on the Kilauea instruments.

December 22, 1:55 a. m. very feeble, was felt lightly near Kilauea crater.

December 22, 0:46 p. m. feeble, was felt lightly near Kilauea crater. It was reported as stronger at Kapapala Ranch.

December 24, 9:27 a. m. very feeble, was felt at Hakalau.

The long waves of a teleseism began recording at 3:39 a. m. Dec. 30.

Microseisms were subnormal December 14, 29, and 30; they were normal December 13, 15, 22, 24, 25, and 26; and they were abnormal the rest of the period.

TILTING OF THE GROUND

The table shows tilt by weeks from seismograms at Kilauea Observatory, northeast rim of Kilauea crater; and at Halemaumau the algebraic sum of radial tilts for the three clinoscope cellars, towards or from the center of the pit.

At the Observatory the total accumulated tilt in the year ending December 30, 1934 is 1.3″ N and 2.8″ E.

TABLE OF TILT

Date 1934	Observatory	Halemaumau
Dec. 3 to Dec. 9	0.7″ NE by N	8.2″ toward
Dec. 10 to Dec. 16	0.6″ NE by E	0.2″ from
Dec. 17 to Dec. 23	1.4″ E	10.1″ from
Dec. 24 to Dec. 30	1.0″ E	6.3″ toward

A. E. J.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

January 5, 1934.

The Director,
Office of National Parks, Buildings and Reservations,
Washington, D. C.

Dear Mr. Director:

The following is the administrative report of Hawaii National Park for the month of December 1933.

000 GENERAL

The month has been an extremely busy one for Hawaii National Park. The most important event was the eruption of Mauna Loa, which began about 6 a.m. December 2 and closed about 11 a.m. December 18. Almost of equal importance, and far more reaching in effect so far as the park is concerned, was the assignment of 46 CWA workers, including two clerks, to work in the park. Authority for a 200-man ECW camp and an allotment of $2500 Hui o Pele funds for a shelter on the summit of Mauna Loa, were also received during the month.

Mauna Loa Eruption. During October, a number of earthquakes on the Island of Hawaii gave rise to the more or less general feeling that an eruption from one or another of the volcanoes was imminent. On the 24th of that month, the Volcano Observatory requested assistance of the public by reporting felt shocks, cautioning those who make reports to use their adjectives gently. This was because a double shock at 9:10 a.m. October 21 had been variously described as moderate, very strong, and "terrific." A press memorandum prepared at that time by the Superintendent, who was then assistant to Dr. T. A. Jaggar, is attached.

Although the evidence available did not warrant any definite prediction of a Mauna Loa eruption beyond the statement that this volcano was long overdue, the position of the eruption was predicted almost perfectly by Dr. Jaggar on several occasions during the past two years. The prediction was to the effect that the next eruption from Mauna Loa would probably be higher up the mountain than the 1926 eruption, which broke out a short distance southwest of the summit crater, and might even be on the northeast rift. As it turned out, the eruption was in the summit crater, about a mile higher up than the source of the 1926 flow. The prediction was based on the action during the last several eruptions

DOCUMENT CAPTURED AS RECEIVED

from Mauna Loa and the apparent shift of magma beneath the mountain as shown by the Hualalai earthquakes of 1929. Dr. Jaggar is now of the opinion that the next eruption from Mauna Loa, which should occur within three years, will be from the northeast rift. The quakes during the December eruption were not felt in the Kau District, except at Kapapala. They were felt in Hilo, at Kilauea, and slightly in Kona on the west side. This also seems to indicate a shift in the magma beneath the mountain to the northeast.

The eruption broke out approximately at 5:42 a.m. December 2, preceded by several slight quakes felt locally. There was no damage from the quakes. The scientific expedition from the Hawaii National Park and the Geological Survey was started on its way as soon as animals could be shod and scientific equipment and packs prepared. The party was in charge of Park Naturalist Doerr. The other members were Dr. Jaggar, Ranger Vernon Lowery, K. Machara, photographer, Gilbert Lee, guide, and Levi Kaiako, packer. This party spent one night in the crater, taking photographs, making specimens from hot lava, and making observations. On returning, the Park Naturalist remarked that he had learned more geology in those few hours than in several years of school.

Through the courtesy of the Inter-Island Airways, Ltd., the Superintendent was enabled to make a flight to the scene of the eruption. The personnel of the flight was arranged by James Henderson, manager of the Hilo Electric Light Company, and Herbert Shipman, owner of Puu Oo Ranch. This was the first of a number of flights made by Inter-Island planes over the active crater. The persons making this first trip were George Lowson, vice president of the Bank of Hawaii, Hilo branch; Albert Pung, photographer of Hilo Photo Supply, Ltd.; Herbert Shipman, James Henderson, "Sonny" Henderson, and the Superintendent. The flight lasted 65 minutes. The extent of the flows was mapped on this flight and the approximate number of fountains obtained. At the request of the Superintendent, the Inter-Island Airways officials granted similar courtesy to Landscape Architect Sager.

During the eruption, the first during which planes carried tourist visitors, a total of 229 saw the activity from the air; 163 from Hilo and 66 from other parts of the Territory, mainly Honolulu. The charge for the flight over the summit was $15 per person. There was not a noticeable increase of visitors at the Volcano House due to the fact that the eruption was so far away from the park headquarters. When clear weather prevailed, however, the view of the glow at the summit of the mountain at night, and of the fume clouds in daylight, was excellent.

One of the first persons to discover that Mauna Loa was in eruption on the morning of December 2 was A. M. Brown, manager of Keauhou Ranch, who watched the development of the column of fume which rose. He immediately called Ranger Christ. The morning was very clear, and this phenomenon was also observed from Hilo and other points on the island. By the middle of the forenoon there were three different columns rising from the top of the mountain. They were an inspiring sight as seen from headquarters, in an air-line distance of about 23 miles.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

The pilot of the Inter-Island plane which came over that morning reported that the column of fume could be seen almost from the time that the plane left Honolulu. He said that it rose straight upwards several thousand feet, and then bent southwestward and extended beyond the limits of the island on that side.

The activity was most intense during the first day, gradually diminishing first to five fountains on the 3rd, with two cones forming on a crack near the cones of 1903; to three fountains on the 6th, two on the 9th, and one fountain thereafter continuing to build a cone greater than the other cones in the crater. All fountain action ceased on the 18th, making 16 days of activity, all confined to the crater after the first day.

The extent and depth of the new flows will be mapped at a later date. While indications are that active fountaining ceased December 18, it is entirely probable, and thought by Dr. Jaggar, that sluggish lava may still be running beneath the crust. This would account for the unusual amount of blue fume seen by visitors at the rest house and the summit since the eruption supposedly ended.

Two temporary rangers were hired in order to handle the unusual pressure of work, one of them (R. F. Lueck) being a former seasonal ranger at Crater Lake, who proved to be a very valuable man in this emergency; the other (W. J. Stephens) being a local man who, through his knowledge of the mountain and the handling of various island races, was also particularly useful in this emergency. On December 20, Ranger Lueck made a record climb from the Halfway House on Mauna Loa to the summit in 2 hours, 48 minutes, a distance of about 10 miles; and the return in 2 hours, 35 minutes, the same day.

The trip to Mauna Loa summit by trail became very popular due to the fact that many persons wished to view the eruption from a closer point of view than is possible by air. The trip in this manner requires three days. During the first five days of the eruption, the Halfway House was closed to visitors due to its being reserved for the use of the crew laying the telephone line to the summit, though several semi-official parties, including personnel from the Kilauea Military Camp, were allowed to make the trip. There were 85 visitors allowed to make the trip during the month. Each party had to make use of the Halfway House for two nights, thus reducing by half those who might have witnessed the eruption. Because of an acute scarcity of water, all parties given passes were requested to carry their own supply, but the length of time consumed for the trip made it almost impossible for most parties to carry a sufficient quantity.

Throughout the eruption, which ceased December 18, the park kept in constant touch with the press, with several nightly telephone conversations with Radio Station KGU, Honolulu. The press handled the eruption material in excellent style, without use of "yellow journalism."

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

Mauna Loa Telephone Line. About 9 a.m. December 2, the day of the outbreak of lava, Captain Waine Archer, Commanding Officer of the Kilauea Military Camp, called at park headquarters and presented a plan for the erection of a telephone line to the summit with the use of Army Signal Corps materials and enlisted men. On receiving the approval of the Superintendent, he radioed Army headquarters at Fort Shafter for the necessary materials. The following day, 10 miles of telephone wire were delivered at Hilo by the U. S. Coast Guard Cutter Itasca, Commander J. S. Baylis commanding.

A crew of 16 enlisted men, in charge of Park Rangers Williams and Peck, did the work of laying the wire over the lava fields from the Halfway House to the "Hotel de Jaggar," a cavern at the northeast edge of Mokuaweoweo Crater. The work was accomplished under the most trying conditions of limited shelter at the Halfway House, of severe cold, and poor cooking. Seventeen mules to pack the wire were borrowed from the Keauhou and Kapapala ranches and the Hawaiian Agricultural Company. The telephone line was put into use at 11 a.m. December 9.

Emergency Advisory Committee. On December 3, at the call of the Superintendent, a luncheon meeting of various organizations was held at the Volcano House to form an Emergency Advisory Committee to function in the event that any danger should develop from the activity. The representatives attending the meeting were the guests of Mr. George Lycurgus, hotel manager, and the Superintendent. Attached is a press memorandum, issued under date December 6, covering this meeting.

A second meeting was held at the Hilo Yacht Club on December 11, at which Dr. Jaggar gave an absorbingly interesting talk outlining the general trend of the activities of Mauna Loa during the period when its history has been known to the white man, and discussed deductions that might be drawn from the recent activity in the light of that trend. There was some discussion of emergency plans for the entire island in the event of any situation arising which involved a general danger to life or property in any section.

The Superintendent spoke briefly of the problems connected with the activity of Mauna Loa, especially with reference to the flood of applications to visit the summit, so many of which it was necessary to refuse because of lack of accommodations for the trip. He also took occasion to announce plans for building a summit rest house with Hui o Pele funds.

Hui o Pele Summit Shelter. Shortly after the outbreak of activity on Mauna Loa on December 2, steps were taken to secure an allotment of Hui o Pele funds for use in building a shelter at the summit, and $2500 was obtained. The Hui o Pele (Society of Pele) is an organization sponsored by the Honolulu Advertising Club. The Certificate of Membership states that anyone "having visited the Volcano Kilauea, in Hawaii National Park on the Island of Hawaii, Hawaiian Islands, Territory of the United States of America, and having made offering acceptable to Pele, Goddess of Volcanoes, at her fiery palace Halemaumau, which is called House of

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

Everlasting Fire, is entitled to full active life membership in the Hui o Pele Hawaii, and is hereby granted all rights, privileges and benefits appertaining thereto." The revenues of the Hui o Pele are for the sole purpose of providing improvements in the park for the benefit of visitors, and the Uwekahuna lecture hall and several trail shelters have been provided by this means.

Assistant Landscape Architect Sager drew plans, which were submitted for approval. As soon as approval is received, pack trains will be organized to take the necessary materials to the summit, and construction commenced.

Mauna Loa Road. Shortly after the outbreak of Mauna Loa, agitation began throughout the Territory for construction of the long proposed Mauna Loa road. The movement was initiated by Representative Thomas Sakakihara, of Hilo, by the introduction to the Territorial Legislature of a concurrent resolution memorializing the Administrator of the Federal NRA to allot $1,000,000 for the purpose. The resolution was adopted. Similar resolutions were adopted by the Board of Supervisors of the County of Hawaii, the Chamber of Commerce of Hilo, the City Planning Commission of Honolulu, The Hawaiian Volcano Research Association, the Order of Kamehameha, etc.

The situation will be the subject of a later report.

CWA Projects. Following the receipt of authorization December 9 to employ 50 workers under the Civil Works Administration, there was some delay in getting projects started. On the 14th actual start was made when these men reported at the park and were lodged in the employees' dormitory at the Volcano House. Of 46 men employed, two were assigned to the office as clerks. The projects under way during the month were clearing Bird Park of dead and down timber, exotic plants and shrubs, and painting roofs of buildings in the residential area and at Uwekahuna. Other projects are contemplated, but the work at Bird Park, although progress is entirely satisfactory, is likely to extend for the full period during which these men will be employed.

The work at Bird Park is accomplishing a great deal of benefit, and in addition is furnishing a large quantity of firewood for use in employees' quarters and public camp grounds.

Emergency Conservation Work. On December 21 word was received by radio of approval of a 200-man ECW camp for Hawaii National Park. Landscape Architect Sager immediately drew plans for buildings to make up the camp, which were submitted. The Superintendent attended a conference called by Governor Lawrence M. Judd, at Honolulu, for discussion of the ECW program approved by the Secretary of the Interior. The conference was held at 9 to 11 a.m. December 28 at the Governor's office. Those present, in addition to the Governor and the Superintendent, were Charles S. Judd, Territorial Forester, who is in charge of the conservation work; H. A. Mountain, Director of Civil Works of the Territory; George H Brown,

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

President of the Territorial Board of Agriculture and Forestry; and Col. Edward D. Powers and Capt. Herbert Baldwin, of the finance office of the Hawaiian Department of the Army, which will account and disburse the funds allotted for the conservation program.

The Superintendent had lunch with the Governor at Washington Place 12 to 1 p.m. During the afternoon details of the ECW program were worked out with Territorial Forester Judd at his office, and a conference was had with Civil Works Director Mountain.

The Superintendent took advantage of being in Honolulu on December 29 by calling on Robert King, Territorial Surveyor; F. C. Atherton, President-Manager of Castle & Cooke, Ltd.; Stanley C. Kennedy, General Manager of the Inter-Island Steam Navigation Co., Ltd., and Inter-Island Airways, Ltd.; Charles S. Judd; Mrs. C. J. McCarthy, wife of former governor McCarthy; Riley H. Allen, Editor and Manager of the Honolulu Star-Bulletin; Raymond Coll, Editor of the Honolulu Advertiser; L. W. de Vis-Norton, Secretary-Treasurer of the Hawaiian Volcano Research Association; and P. L. Murphey, President of the Honolulu Advertising Club. All these officials, particularly the Inter-Island officers, were very willing and desirous to cooperate in every way possible, though topics under discussion were general.

020 General Weather Conditions

021 in the park

Dry weather has prevailed, with only 1.34 inches of rainfall during the month. The normal for December is 12.46 inches. The total rainfall for the year was 85.15 inches, which compares with a normal of 98.83. The last six months of 1933 were abnormally deficient in rainfall; 67.04 inches fell during the first six months.

The maximum temperature for the month was 75 degrees on the 26th and 31st; the minimum was 46 on the 29th. The mean for the month was 61.31 degrees. (See Weather Bureau form attached for complete details.)

100 ADMINISTRATION

110 Status of Work

Progress is being made on filing. Other work is current, though the small office staff is forced to work overtime continually.

120 Park Inspections

121 By the Superintendent

The 1790 foot-prints area near the Kau boundary, which it is hoped will eventually be added to the park, was visited with Charles Merriam, Manager of the Land Department of C. Brewer & Co., Ltd., and Bradford M. Sumner, Manager of Kapapala Ranch, on December 5.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

On the 16th, inspection was made of Project NR-4, Halemaumau-Bird Park road, in company with Senior Engineer H. L. Handley and Resident Engineer Nathan Gordon, both of the Bureau of Public Roads. Two later inspections were also made.

One inspection was made of the parapet walls under construction, and two inspections of the projects under the CWA.

122 Special Field Representative

Landscape Architect Sager kept in close contact with projects under way, and did considerable office work drawing plans for proposed projects, including a new observatory for the Geological Survey. He was in the Haleakala Section of the park twice during the month.

130 Finance and Accounts

A statement of the park appropriations, showing the status of each, is attached as Statistical Report No. 8.

140 Labor Situation

The labor situation was greatly relieved by the establishment of the CWA and the rapidity with which projects in the Territory got under way. This has relieved considerable financial burden on the County of Hawaii and the Territory through the taking over of relief work.

150 Equipment and Supplies

On December 18, one office chair and a two-draw file cabinet were received. In addition there were some miscellaneous items of stationery.

170 Plans, Maps and Surveys

In addition to plans drawn for the Hui o Pele shelter for the summit of Mauna Loa and the ECW camp, Landscape Architect Sager drew plans for a proposed observatory for the Geological Survey to be constructed from Public Works funds.

180 Circulars, Placards, Publicity Bulletins, etc.

Attached are copies of circulars and press memoranda issued during the month and of Volcano Letter 405, November 1933.

200 MAINTENANCE, IMPROVEMENT AND NEW CONSTRUCTION

210 Maintenance

The usual routine maintenance of water and electric systems, buildings, and motor equipment was carried on during the month.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

220 Improvements

Front and back porch additions and some painting greatly improved Quarters No. 2, occupied by the Chief Clerk. Superintendent's quarters No. 1 was painted inside, floors planed and varnished, basement excavated for a room which was built and fitted for use as servant's quarters. Other minor improvements were made to various buildings.

230 New Construction

The new employee's quarters, No. 16, was completed during the month, and Ranger and Mrs. Barnett moved in on December 23, vacating bachelor's quarters No. 9.

FP-4, Halemaumau-Uwekahuna-Bird Park road was 33 per cent complete at the close of the month. The work has progressed marvelously with the good weather. FP-7, Haleakala road, was 9.9 per cent complete.

300 ACTIVITIES OF OTHER AGENCIES IN THE PARK

310 Public Service Contractors

314 Complaints

The CWA workers boarded at the Volcano House have complained of the quantity, not quality, of meals served them, and this matter is under the observation of park officials.

320 Cooperating Government Agencies

The War Department and the Coast Guard cooperated in extending the Mauna Loa telephone line from the Halfway House to the edge of Mokuaweoweo Crater, the Army furnishing the material and labor and the Coast Guard transporting the wire from Honolulu to Hilo. Credit for initiating this project is due to Captain Waine Archer, commanding Hilauea Military Camp.

The Navy Health and Recreation Camp cooperated, on December 9, by lending a truck for use in transporting Y.M.C.A. delegates on a tour of the park.

330 Cooperating Non-Government Agencies

The Keauhou and Kapapala ranches and the Hawaiian Agricultural Co. cooperated in the loan of 17 mules for carrying 10 miles of telephone wire up the Mauna Loa trail and distributing it at proper intervals above the Halfway House.

350 Donations and Accessions of all Kinds

Donation by the Army of 10 miles of telephone wire and of the services of 16 enlisted men has enabled us to establish direct communication with the summit of Mauna Loa. This service was of great value in keeping up changes in phases of activity in the crater during the month.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

400 FLORA, FAUNA AND NATURAL PHENOMENA

410 Ranger, Naturalist and Guide Service

The rangers during the month carried on regular routine jobs of maintaining telephone and electric lines, water systems, roads, and trails, giving service to the public, operating ranger office and the switchboard, etc. On December 21, the warehouse ranger was transferred to the office to assist in filing, and Mechanic Fischer was placed in charge of the warehouse, in addition to his regular work of maintaining automotive equipment. The rangers were particularly busy during the month because of the Mauna Loa eruption and the inauguration of projects under the Civil Works Administration. Two temporary rangers were added to the staff for a part of the month to meet the emergency.

The Park Naturalist made two trips to the summit of Mauna Loa to study the crater eruption, December 2-4 (when a night was spent in the crater) and December 8-10 (when a night was spent at the summit). Landscape Architect Sager and Ranger Eaton were members of the second expedition. While at the summit on the night of December 9, Mr. Doerr talked with Radio Station KGU in Honolulu over the recently installed Mauna Loa telephone line.

Ranger R. F. Lueck made three trips to the summit during the month, the first time with R. B. Hodges of the clerical force, and the other two times with civilians and Army personnel. On the first and third visits, a night was spent in the crater. Although fountaining activity had ceased prior to the third visit, this party found there was lively quaking near the source vents, where they spent the night.

420 Museum Service

Museum attendance was 630. There were 10 lectures to 277 persons at Uwekahuna, 3 extension course lectures (at Hilo) to 71 persons, 10 auto caravans with 41 cars and 258 persons, and 4 field trips with 39 in attendance. Total contacts were 1,275.

Considerable time was spent by the Park Naturalist in preparing an issue of Nature Notes.

480 Natural Phenomena

At Kilauea Volcano there was no apparent sympathy with the Mauna Loa eruption. Cracks were measured, but movements were small. A number of tremors were recorded, not separable, during the first two days of eruption. The first shock of the outbreak came at 5:42 a.m. December 2 as very feeble in intensity, followed at 5:55 by a slight earthquake, and two feeble shocks at 5:56 and 5:58 and two slight shocks at 6:02 and 6:07. One of the slight shocks was felt at Kilauea and in Hilo. Another feeble shock came at 6:09, and a series of six very feeble shocks followed, the last being recorded at 7:01 a.m. Two of the larger ones were reported by soldiers at the

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

Halfway House on Mauna Loa as alarming. Continuous volcanic tremor began immediately after the first shocks: it was smaller than usual in amplitude, and continued until about midnight December 2, with some spells December 3.

The first ground party to visit the summit found five fountains of the usual spraying jet type in a line, beginning to make cones along the bottom of Mokuaweoweo on the southwest side, just east of the 1914 cone. The activity was much like 1914, with large streams flowing over the east floor north and south. The fountains sprayed up from two to four hundred feet. A large fountain against the southwest wall was on an extension of the floor crack, and this crack extended a mile south outside the crater. The outside crack was steaming vigorously, but the day before it had been fountaining and making lava cascades into the south Mokuaweoweo pit. An offset of the crack eastward had made lava cascades into Lua Hohonu, the second pit. On that day there had been a continuous line of fountains approximately two miles long, with three fume columns. The southwest wall fountain went out of action the night of December 3.

As the eruption progressed, flows on the Mokuaweoweo floor thickened until at the close of the eruption the thickness at the north edge was about 10 feet. There was considerable glow at night all during the eruption.

Halemaumau fire pit was kept under close observation. A new series of level observations were repeated over the old line established on Kilauea floor near the pit, and the angle across the pit, as measured from the Observatory, was measured twice. Neither of these two measurements indicated premonitory movement of the crater floor.

A party visiting the summit of Mauna Loa over night December 17 observed the fountaining locality in action in Mokuaweoweo at midnight, dying out to inaction about 2 a.m. December 18, reviving slightly after daylight, and going out of action altogether about 11 a.m. Visitors since that time have seen glowing cracks during the week. Probably the lava continued to flow sluggishly under the crust. Fume was no longer seen over the mountain, and the seismographs at Kilauea registered no more of the spells of continuous tremor. No sympathetic movement appeared at Kilauea to mark the close of the Mauna Loa eruption.

A storm of strong gusty southwest wind, accompanied by little rain, occurred December 21, 22, and 23, and produced much wind tremor of 0.3 second period. There were also strong microseisms.

There is no evidence to locate a coming flank lava flow from Mauna Loa, but past history of this volcano, in the cases of summit eruptions of this sort, shows them to be followed by outflow eventually after a term of years. Halemaumau may, of course, start eruption at any time, as its average interval of repose is already exceeded by more than a year.

(Note: All of this section is briefed from the weekly Kilauea Reports of the Section of Volcanology, U. S. Geological Survey.)

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

500 USE OF PARK FACILITIES BY THE PUBLIC

510 Increase or Decrease in Travel

There was a grand total of 41,453 visitors during the month, which brings the total of the travel year to date to 126,643. This represents an increase of 48.93 per cent over the same period last year. Had the eruption occurred at Kilauea Volcano, the increase would have been materially greater.

530 Visitors

Dec. 4-7, Maj. General Briant H. Wells, commanding the Hawaiian Department, and his son, Lieutenant Wells, of Fort Shafter.
" 8-10, D. L. Crawford, President of the University of Hawaii, Honolulu.
" 9-10, F. C. Atherton, President-Manager, Castle & Cooke, Ltd., Honolulu.
" 4-5, Commander J. S. Baylis, U. S. Coast Guard Cutter Itasca.
" 16, H. L. Handley, Senior Engineer, B.P.R., Maui.
" 24, Dr. Walter Dexter, President of Whittier College, California, and Governor of Fourth District Lions International. He was given special attention, and he promised to return with a delegation of Lions from Honolulu. He was particularly impressed with the park and the treatment he received.

A delegation of 140 Hi-Y boys and their leaders were at the Volcano House and held conferences on December 8, 9, and 10. The group included delegates from all over the Territory, and the management gave them special rates. They were given special attention by the park. At the opening session of the group at 2 p.m. December 8, the Superintendent welcomed them to the park on behalf of the Park Service.

600 PROTECTION

620 Fire Protection

On the evening of December 24, because of a glow in the sky, there were rumors of another volcanic eruption. It was caused by the burning of a house in the 29 Mile section, back in an isolated subdivision, and owned by F. K. Aona, of Kealakekua. The property was completely destroyed before the Superintendent and a group of rangers could reach the scene after learning of the fire.

640 Destruction of Predatory Animals

There were 21 wild goats and 16 wild pigs killed during the month.

900 MISCELLANEOUS

The children of Keakealani School, the school attended by children of park employees, had a very interesting Christmas program the evening of December 21. The exercises were well attended by members of the community, including the CWA workers, one of whom played the part of Santa Claus.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

The road contractor, E. E. Black, cooperated in the event by lending a small electric light plant for lighting the school on this occasion.

The Superintendent addressed the group briefly, stating that Christmas was a particularly cheerful one this year for many families because the Government at Washington was doing its utmost to provide employment for everyone without work, and in this way provided a much pleasanter holiday season for thousands of families.

Very respectfully,

Edward G. Wingate,
Superintendent.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

Form No. 1009—Met'l.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

COOPERATIVE OBSERVERS' METEROLOGICAL RECORD:

Month of December, 193 ; *Station* Volcano Observatory; *County,* Hawaii

State, Hawaii; *Latitude,* ; *Longitude,* ; *Time used on this form,* ; *Hour of Observation,*

DATE	TEMPERATURE Maximum	Minimum	Range	*Set max.	PRECIPITATION Time of Beginning	Time of Ending	†Amount	Humidity	Wind Depth of Snow on Ground at Observation	Prevailing Wind Direction	Character of Day, Sunrise to Sunset	‡Miscellaneous Phenomena
	1	2	3	4	5	6	7	8	9	10	11	
1	73	54	19	60			.01	94	Lt.	NE	PC	
2	72	55	17	61			T	93	"	"	"	M.Loa lava outbreak 6 a.m.
3	64	56	8	61			.14	97	"	"	"	
4	67	48	19	58			.14	94	"	"	"	
5	68	51	17	61			.01	89	"	"	"	
6	67	55	12	60			.04	89	"	"	"	
7	69	58	11	59			T	87	"	SW	Clear	
8	66	50	16	58			T	77	"	"	"	
9	70	51	19	58			.03	88	"	NE	PC	
10	68	49	19	56			.14	93	"	"	"	
11	69	51	18	62			.02	91	"	"	"	
12	68	58	10	60			.29	89	"	"	"	
13	69	56	13	60			.01	89	"	"	"	
14	69	54	15	61			.02	89	"	"	"	
15	63	52	11	59			T	89	"	"	"	
16	70	53	17	60			T	87	"	"	"	
17	71	51	20	56			T	83	"	SW	Clear	
18	72	54	18	61			.01	89	"	NE	"	M.Loa action ceased.
19	65	58	7	63			T	95	"	"	PC	
20	69	50	19	57			0	88	"	SW	"	
21	67	55	12	63			0	76	Str.	"	"	
22	63	57	6	60			.05	98	"	"	"	
23	72	55	17	63			.16	79	"	"	"	Wind storm, light damage.
24	75	56	19	61			.02	91	Mod.	NE	Clear	
25	71	54	17	67			T	84	Lt.	"	PC	
26	75	55	20	63			T	82	S	S	Clear	
27	72	55	17	64			T	75	"	NE	"	
28	66	55	11	58			.25	93	Str.	"	PC	
29	70	46	24	61			T	43	Lt.	"	Clear	
30	68	55	13	64			T	68	Str.	"	"	
31	75	51	24	62			T	69	Lt.	E	"	
Sum	2143	1658	485	1876			1.34	2647				
Mean	69.13	53.49	15.65	60.53			.043	85				

* Reading of maximum thermometer immediately after setting.
† Including rain, hail, sleet, and melted snow.
‡ Thunderstorms, halos, auroras, etc.

(IN TRIPLICATE) See cover for instructions.

8—253
U. S. GOVERNMENT PRINTING OFFICE: 1930

, *Cooperative Observer.*

Post Office Address,

MONTHLY SUMMARY

TEMPERATURE

Mean maximum, 69.13

Mean minimum, 53.49

Mean, 61.31

Maximum, 75; date, 26 & 31

Minimum, 46; date, 29

Greatest daily range, 24

PRECIPITATION

Total, 6 a.m.; inches 1.34; greatest in 24 hours 0.29

Date,

SNOW

Total snowfall, inches

On ground 15th, inches

At end of month, inches

NUMBER OF DAYS—

With .01 inch or more precipitation, 16

Clear, 10; partly cloudy, 21

Cloudy, 0

DATES OF—

Fog: Light, Dense,

Killing frost,

Thunderstorms,

Hail: Light, Moderate, Heavy,

Sleet,

Auroras,

REMARKS:

Snow fell on mountains 23d

DOCUMENT CAPTURED AS RECEIVED

10-157
(July, 1929)

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

TRAVEL REPORT

Hawaii National Park for the month of December 1933

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year	
					Number	Percent
PRIVATE TRANSPORTATION:						
Cars first entry, ...						
Cars reentry, ...						
Motorcycles, ...						
Total motor vehicles, ...						
Persons entering via motor vehicles, ...	39,878	123,791	45,296	83,913	39,878	47.52
Persons entering via other private transportation, ...	246	640	228	394	246	62.43
Total persons entering via private transportation, . . .	40,124	124,431	45,524	84,307	40,124	47.72
OTHER TRANSPORTATION:						
Persons entering via ~~stages~~ hotel, .	1,329	2,212	263	731	1,481	202.59
Persons entering via trains, .						
Persons entering otherwise, . .						
Total other transportation, .	1,329	2,212	263	731	1,481	202.59
GRAND TOTAL ALL VISITORS, . . .	41,453	126,643	45,787	85,038	41,605	48.93

	This Year	Last Year	Increase	
			Number	Percent
Automobiles in public camps during month, ...				
Campers in public camps during month, ...				

DOCUMENT CAPTURED AS RECEIVED

10-158

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Hawaii National Park for the Month of December 1933

Description of Projects		Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
507.13	Road repair over earthquake crack	85	0	0	
FP 101.8	Puu Huluhulu Trail	98	0	0	
FP 102.8	Parapet Lookouts, Kilauea Iki, etc.	30 50	10	20	
FP 161.14	Employees Quarters (1)	98	13	10	

DOCUMENT CAPTURED AS RECEIVED

45334

10-215
(July, 1928)

UNITED STATES
DEPARTMENT OF THE INTERIOR
National Park Service

Hawaii National Park

REPORT OF NON-APPOINTED PERSONNEL
(TEMPORARY)

Changes outside the District of Columbia for the month of Dec 19 28

Total at beginning of month	Additions	Separations	Net Gain or loss (a)	Total at ending of month
(Reg.) 5	2	5	-5	0
(EEA) 8	4	5	-1	7
No dismissals by reason of (a) reduced appropriations or (b) retirement.				
(a) If loss, indicate by minus sign.	No female employees.			

DOCUMENT CAPTURED AS RECEIVED

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Hawaii National Park for the Month of December 1932

	This Month		This Month Last Year	
	Appointed	Non-Appointed	Appointed	Non-Appointed
Number of employees beginning of month	16	11	15	7
Number of additions	0	6	0	0
Total	16	17	15	7
Number of separations	0	10	0	1
Number of employees close of month	16	7	15	6
Number of promotions during month	0	0	0	0
Aggregate amount of annual leave taken	10	0	0	0
Aggregate amount of sick leave taken	6	0	18	0
Aggregate amount of ~~leave~~ furlough without pay	0	0	13	0

No women employees.

DOCUMENT CAPTURED AS RECEIVED

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

.....Hawaii..... National Park for the Month of .....December 1933.....

	This Year	Last Year
Park revenue on hand beginning of month, ...	0.00	0,00
Received, ...	0.00	85.17
Total, ...	0.00	85.17
Remitted, ...	0.00	85.17
On hand close of month, ...	0.00	0.00 ~~85.17~~

Park revenues received this year to date, ...	250.00
Park revenues received last year to date, ...	647.83
~~Increase~~, Decrease	397.83
Per cent of increase, ...	61

DOCUMENT CAPTURED AS RECEIVED

10-161

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF SALES OF PUBLICATIONS

	Number	Value
GOVERNMENT PUBLICATIONS:		
On hand beginning of month,	924	126.00
Received during month,	0	0.00
Total,	924	126.00
Sold during month,	20	9.80
On hand at close of month,	904	135.80

NON-GOVERNMENT PUBLICATIONS:

On hand beginning of month,	
Received during month,	
Total,	
Sold during month,	
On hand at close of month,	

Cash on hand beginning of month,	11.93
Sales during month,	9.80
Total,	21.73
Remitted during month,	4.85
Balance,	16.88

DOCUMENT CAPTURED AS RECEIVED

DEC 1933

STATISTICAL REPORT NO. 8

HAWAII NATIONAL PARK

FINANCE AND ACCOUNTS

Symbol	Appropriation	Allotted	Expended & Obligated	Balance
44415.3	Salaries & Expenses, Hawaii National Park, 1934:	23,600.00	24,558.48	RE 958.48
44406.3	Forest Prot. and Fire Prevention, Office of N. P. B. & R. 1934:	520.00	136.14	383.86
4X436.3	Roads & Trails, Office of Natl Parks, Buildings and Reservations	4,382.85	3,313.99	1,068.86
44415	Hawaii National Park, 1934:	2,859.72	2,859.72	0.00
4X436	Roads & Trails, Natl Parks, no yr:	21,862.49	21,862.49	0.00
42/3415	Hawaii National Park, 1932-'33:	49,350.00	49,337.53	12.47
4-03/5640.8	N.I.R., Interior, National Parks, Roads & Trails, 1933-'35:	480,000.00	60,965.59	419,034.41
4-03/5640.14	N.I.R., Interior, National Parks, Buildings & Reservations, 1933-'35	11,250.00	4,210.34	7,039.66

DOCUMENT CAPTURED AS RECEIVED

Photo No. 1, December 2, 1933. Approaching summit eruption of Mauna Loa from the east. Note fume columns.

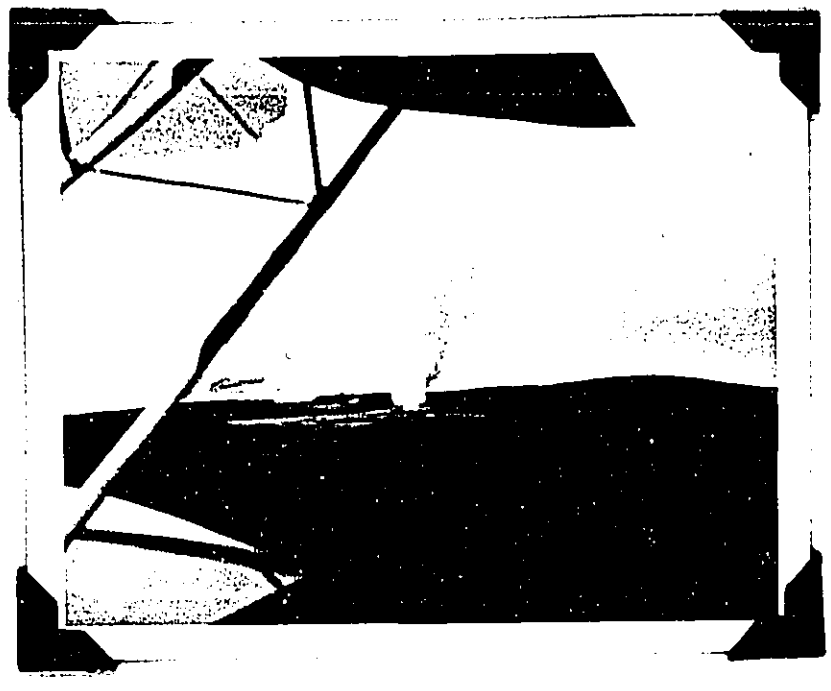


Photo No. 2, December 2, 1933. Looking southwesterly through Crater of Mokuaweoweo, the new, silvery, pahoehoe flows plainly shown.

DOCUMENT CAPTURED AS RECEIVED

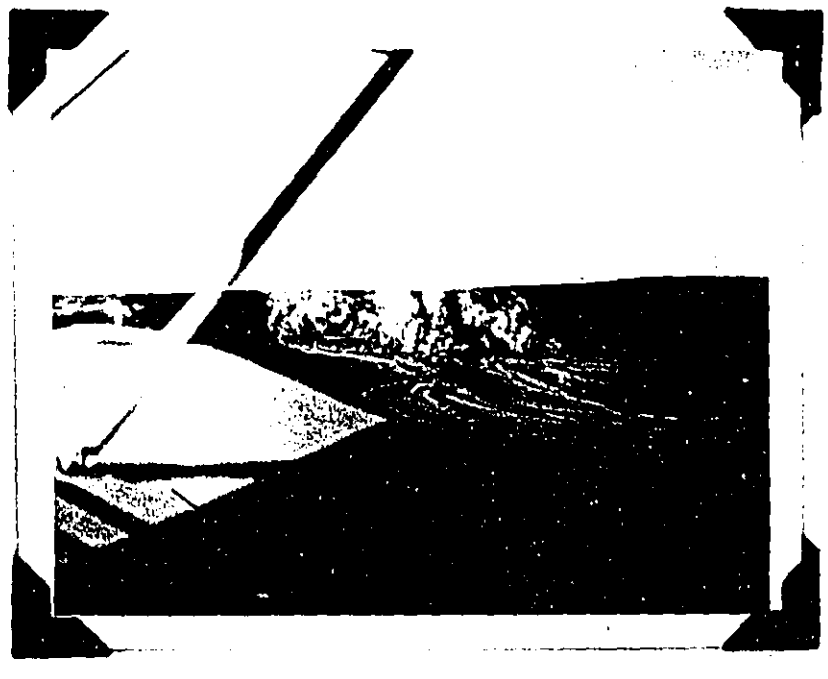


Photo No. 3, December 2, 1933. View in main crater, looking west. Note line of fountains at the source of the flows.

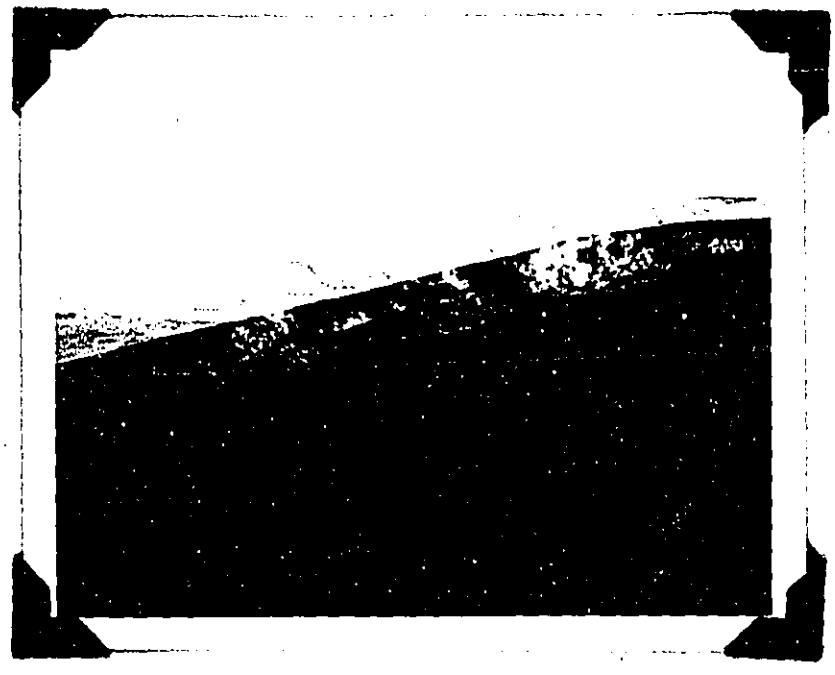


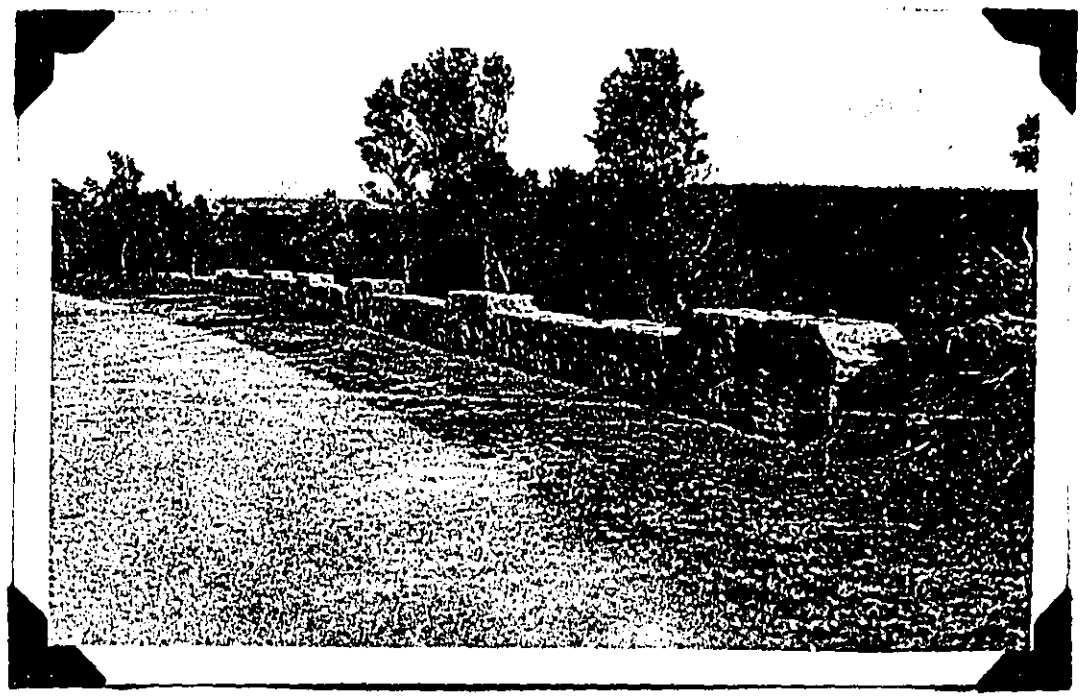
Photo No. 4, December 2, 1933. Showing line of fountains making cascades into south pit of Mokuaweoweo and Lua Hohonu on the left. At the extreme right, the fountains in the main crater can be seen. The black area in left foreground is the 1926 lava flow. (All four photos by Hilo Photo Supply, Ltd., from an elevation of about 14,000 feet.)

DOCUMENT CAPTURED AS RECEIVED

Mokuaweoweo Crater, looking southwest from north pit.
Photo December 16 by Temporary Ranger R. F. Lueck.

Looking southwest from top of a cone of 1903--one of the group showing in background of upper picture--toward cone of 1933. Photo December 20 by Ranger Lueck.

DOCUMENT CAPTURED AS RECEIVED



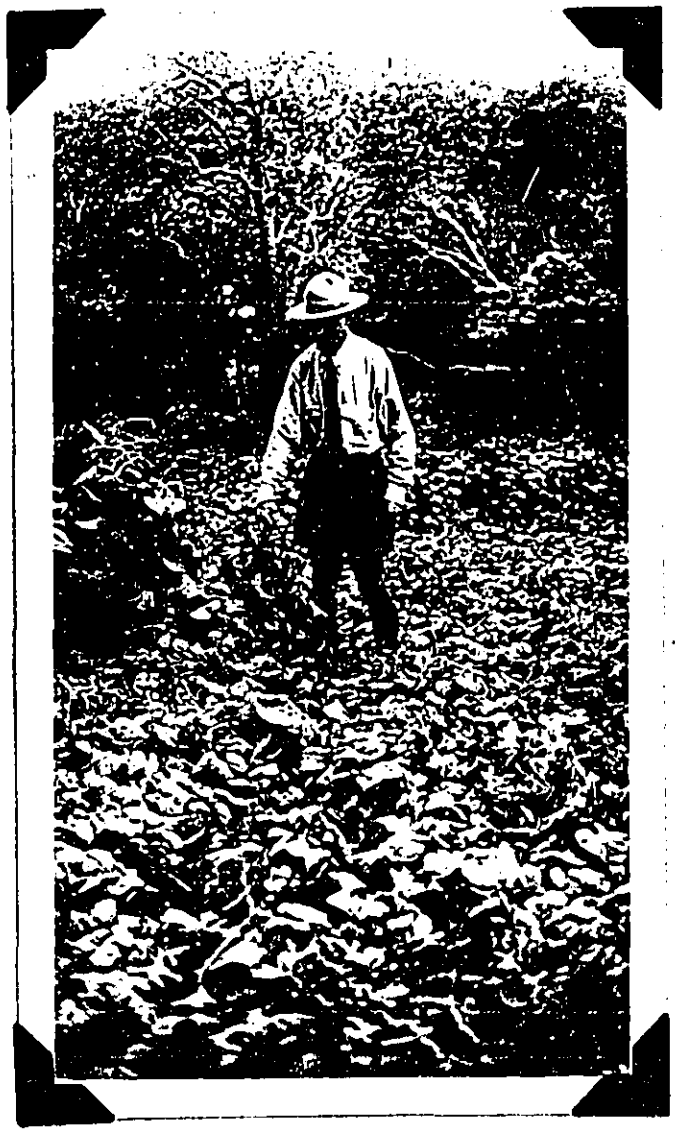
Kilauea Iki lookout (south).

Keanakakoi lookout.

DOCUMENT CAPTURED AS RECEIVED

Upper: Superintendent Wingate examining Puu Huluhulu Trail. Puu Huluhulu (Blanket Hill) in background.
Lower: Switchback on trail. An excellent view of the surrounding country is obtained from Puu Huluhulu.

DOCUMENT CAPTURED AS RECEIVED



Ranger Fordyce examining morning glory in Bird Park.

Superintendent Wingate and Park Naturalist Doerr inspect-Bird Park just before CWA workers began clearing dead and down timber and exotics.

DOCUMENT CAPTURED AS RECEIVED

Two views showing same meadow, in Bird Park,
before and after clearing by CWA workers.

DOCUMENT CAPTURED AS RECEIVED

Memorandum for the Press

Hawaiian Volcano Observatory
October 24, 1933.

Recent earthquakes on the island of Hawaii have given rise to the more or less general feeling that an eruption from one or another of the volcanoes is imminent. Such a widespread apprehension seems to have a tendency to cause the more imaginative of us to deal in unintended exaggeration.

The workers at the Volcano Observatory are more than anxious to receive reports of any quakes felt, crackings of the ground, smoke, steam, rumbling noises etc. and will endeavor to make such investigations as time and limited funds permit. One of the most reliable means of locating the origin of an earthquake is through such reports and the Observatory has a small supply of cards, prepared for this purpose, which may be had by any one who wishes them and which may be posted free of charge. The Observatory also welcomes reports by telephone or other means. The writer wishes here only to caution those who makes reports, either to the Observatory or to others, to use their adjectives gently. In the English language there is a limit to the superlative, but to nature no such limit, other than annihilation, is known. On the other hand no worthwhile end is achieved by minimizing the observed facts.

The manner in which an earthquake is felt is influenced greatly by the kind of structure the observer is in as well as the kind of ground beneath; his position, whether in motion or at rest, sitting, standing, lying, etc. An observer lying down on the second floor of a dwelling receives a much greater sensation from a quake than one walking across a room on the first floor of the same house. How a quake was felt, whether weakly or strongly, is not so important as what the quake did; for it is by the latter that the intensity of a quake in different localities may best be judged. Were the windows or dishes rattled? Were hanging objects set in motion? Was any object displaced? Did chimneys twist or fall? Was it felt while riding in a car? Were any buildings partially or totally destroyed? and so on.

The double shock at 9:10 AM on October 21 has been very thoroughly reported from all sections of the island where it was felt, being variously described as moderate, very stong and terrific. During the quake the maximum horizontal movement of the ground at the Observatory was about one-fifth inch. At Long Beach, California the ground moved about two and one-quarter inches during the destructive earthquake on March 10, 1933 and this quake by no means approaches the maximum of earthquake intensity.

The possibility of forecasting an eruption is always intriguing. Past experience; the location, character and number, of earthquakes; tilting of the ground; measured uplift or depression of the mountain; cracking of the ground; etc. are vital to any prediction worthy of the name. The workers at the Volcano Observatory make such measurements and observations continuously of Kilauea. Mauna Loa, however, at present due to its inaccessability is studied only throug the earthquakes located beneath the dome and estimates based on the frequency of historic eruptions. As Dr. T. A. Jagger has pointed out on several recent occasions Mauna Loa is overdue in repsect to this time element. A review of all activity on that mountain since 1832 shows that there has been an outbreak, varying from a few hours to eighteen months in duration, once every four years. It has now been over seven years since the last lava flow and only once has this period been exceeded, between the years 1832 and 1843.

DOCUMENT CAPTURED AS RECEIVED

Memo. for the Press.

H. V. O.
October 24, 1933

However, the relation of the 1929 earthquake swarms to Mauna Loa is not clear. A number of these quakes have been located very close to the fissure of 1877 at which time there was a submarine eruption in Kealakekua bay.

At present the evidence available does not warrant any definate prediction beyond the statement that Mauna Loa is being watched with particular interest and the northeast, Puna, rift of Kilauea less so. Halemaumau appears to remain dormant.

E. G. Wingate
Ass't. Engineer, H. V. O.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

Office of National Parks,
Buildings and Reservations.

December 6, 1933.

MEMORANDUM FOR THE PRESS

By Edward G. Wingate

Edward G. Wingate,
Superintendent.

HAWAII NATIONAL PARK, Dec.____ (Special). A luncheon meeting, sponsored by the National Park Service, was held at the Volcano House at noon Sunday, December 3, to form an Emergency Advisory Committee to function in the event that any danger should develop from the present Mauna Loa eruption, and to ascertain just what organizations could be called upon for any needed purpose.

Those present, and the organizations they represented, were:

Edward G. Wingate	Superintendent, Hawaii National Park
Col. A. T. Spalding	Hawaii National Guard
A. M. Brown	Keauhou Ranch
L. W. Branch,	Hawaii Telephone System
C. G. Bockus	Hilo Tribune Herald
Lt. H. S. Leon	Navy Health and Recreation Camp
Gunichi Kuwahara	Japanese Chamber of Commerce of Hilo
R. J. Williams	Superintendent, S. E. Black, Ltd.
A. B. Alverson	Navy Radio Station
L. W. Bryan	Board of Commissioners of Agriculture and Forestry

DOCUMENT CAPTURED AS RECEIVED

George Lycurgus	Kilauea Volcano House
Austin E. Jones	Volcano Observatory
R. B. Hodges	Secretary to Park Superintendent

Mr. Jones explained the scheme of using explosives to cause a lava flow to spread, rather than to continue toward Hilo or any other point where it threatens to do great damage, the idea being to cause the clogging of the main channel of the flow.

Mr. Branch explained how his company is organized to function in the event of any large scale destruction of the systems of communication. There are certain key men in the company with instructions as to how to proceed to repair damage by enlisting whatever facilities can be secured.

Colonel Spalding told how the National Guard would take care of the wounded and render aid to the homeless.

Mr. Alverson read a message from Commandant C. H. Ingraham, Wailupe, stating that in case of emergency the Navy would extend all possible aid, and that for communication the Naval radio service would extend every effort to cooperate to the fullest extent. Mr. Alverson spoke of how a Naval vessel could supply electric light service to a town, in the event of destruction of the municipal lighting system, by making connections with the power lines. He also spoke of the ability of the Navy Radio Station to keep informed of the progress of an eruption by communicating with airplanes.

Superintendent Wingate said he had planned, since taking office, to form committees among island residents to cooperate with him in park administration. He said that the Mauna Loa eruption had hastened the formation of the Emergency Advisory Committee. He was advised by the members that they would endeavor to cooperate in every way possible.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

December 6, 1923.

MEMORANDUM FOR THE PRESS

IMMEDIATE RELEASE

HAWAII NATIONAL PARK, Dec. ____. Park Superintendent Edward C. Wingate has been in radio communication with former Park Superintendent Leavitt, who is en route to San Francisco on the Army Transport Chateau Thierry.

On Saturday, shortly after the summit outbreak of Mauna Loa, Mr. Wingate sent a message to Mr. Leavitt notifying him of the fact. Mr. Leavitt replied with congratulations, stating that everybody on board was interested and would appreciate further reports.

On Wednesday the following message was transmitted to the Chateau Thierry:

"M auna Loa eruption continues fourth day in summit crater stop. Park Naturalist Doerr and Gilbert Lee explored extent of flows in crater, obtained specimens and mapped part of area covered stop. Lava a heavy, viscous pahoehoe unlike that of the summit rift eruptions, but similar to nineteen fourteen flow in crater stop. Am swamped with appeals to make the climb on foot, mule or whatnot stop. Fountaining cones in central crater are now one hundred fifty feet high (signed) Wingate."

Park Naturalist Doerr also sent a message, telling of a day and a night spent in Mokuaweoweo Crater with Messrs. Gilbert Lee and K. Nashara.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

December 10, 1933

MEMORANDUM FOR THE PRESS - IMMEDIATE RELEASE

HAWAII NATIONAL PARK, Dec. ___. One of several official parties from the park left Tuesday morning for the summit of Mauna Loa. The party was in charge of Ranger Theodore W. Barnett. The other members of the party were Dr. Harold T. Stearns of the U. S. Geological Survey, Maui; Capt. A. W. Shutter, Fort Shafter, Major J. H. Hills, Fort Shafter, Lt. E. J. Wells, and Lt. H. W. Shull, 3d Engineers.

Tuesday night was spent at the rest house at Puu Ulaula, and the start for the summit was made at 1:30 a.m. Wednesday. After seven hours of hiking over aa lava flows and in cold which no amount of clothing could entirely keep out, three of the party reached the top at 8:30. Those reaching the crater were Major Hills, Captain Shutter, and Ranger Barnett.

About one and a half hours were spent examining the activity and taking pictures. There were three fountains, one large and two small ones, in the southwest area of Mokuaweoweo. The largest, a fan-shaped fountain, threw lava between 300 and 400 feet into the air in practically a continuous stream. The two smaller fountains were playing to a height estimated at 50 feet. An increase in the activity was noted during the stay at the crater. A conservative estimate of the area covered by new lava Wednesday morning was at least one-half of the main crater floor.

A large increase in the smoke issuing from the crater was noted Thursday morning from the ~~summit~~ rest house (10,000 feet elevation), indicating an increase in activity over the previous day and night.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

December 11, 1933.

MEMORANDUM FOR THE PRESS IMMEDIATE RELEASE

HAWAII NATIONAL PARK, Dec. ___. The telephone line to the summit of Mauna Loa is now a fact. Since 11 a.m. December 9, it has been possible for those at the scene of activity to have immediate communication with civilization. It is now possible for the whole public to be as well informed of the activity in Mokuaweoweo, 13,000 feet above sea level, as they are of similar eruptions in Kilauea. More than this, the line makes the sending out of rescue parties for persons in distress on the mountain a matter of moments instead of hours or days. The completion of this telephone line is an achievement in which our whole community may well take pride. It has again proven the value and great possibilities of cooperative action.

A few hours after the outbreak on Saturday, December 2, Captain Waine Archer, of the Kilauea Military Camp, had broached his plan for the construction of the line, and that afternoon the Commanding Officer of the Hawaiian Department had not only authorized the use of Army materials, but had moved with customary rapidity, and 10 miles of wire was on its way from Honolulu. The wire was transported to Hilo by the Coast Guard Cutter Itasca, Commander Baylis in charge.

DOCUMENT CAPTURED AS RECEIVED

In the meanwhile, Ranger Christ of the Hawaii National Park, to whom had been detailed the construction of the line, had completed his plans. He had been readily granted the use of 17 miles for his pack train by the Manager James Campsie, of the Hawaiian Agricultural Company; Bradford Sumner, manager of Kapapala Ranch; and A. M. Brown, manager of Keauhou Ranch.

By the morning of December 4, the cooperative labors of these various groups had placed the wire on the ground at Chaikea at the foot of the Mauna Loa Trail. In charge of actual construction was Ranger Williams, assisted by Ranger Peck and a volunteer detail of 15 men from the Kilauea Military Camp.

The story of the next several days is simply that of a job well done. There were twenty men in the rest house built to accommodate eight. There was cold. There were sleepless nights. The work was at high altitude. The water supply had to be conserved. Meals had to be prepared. Visitors made comfortable. Morale kept up. But the work went on.

It is now finished and the job marked completed. In a few months it will all be forgotten. But the line will be there, ready to serve when wanted as each organization and individual concerned in its construction has been ready and willing in this emergency to serve.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

Office of National Parks,
Buildings and Reservations.

December 21, 1933

MEMORANDUM FOR THE PRESS

IMMEDIATE RELEASE

HAWAII NATIONAL PARK, Dec._____. Park Superintendent Edward C. Wingate is in receipt of the following information, from the Washington office, which may be of interest to the residents of Hawaii:

"Establishment of a branch of Forestery in the Office of National Parks, Buildings, and Reservations, in the Department of the Interior, was announced today by Arno B. Cammerer, Director of that bureau. John D. Coffman was appointed Chief Forester, with headquarters in Washington.

"Mr. Coffman has had long experience in forest protection and administrative work. For the past five years he has been fire control expert of the National Park Service, with headquarters in Berkeley, California. For 19 years previous to that he was a member of the U. S. Forest Service, the last 12 years of that time serving as supervisor of the California National Forest, now named the Mendocino National Forest. Mr. Coffman has been in Washington since early last April, assisting former Director Horace M. Albright and later Director Cammerer in the administration of the Emergency conservation program in the national parks and monuments from the start of

DOCUMENT CAPTURED AS RECEIVED

that program.

" He is a native of Pennsylvania. He began his college work at Cornell, changing to Yale when he decided upon forestry as his life work and graduating with the class of 1909 with the degree of Master of Forestry.

" Protection of the forests from fire, destructive insects, and tree diseases is constantly becoming of more importance with the increasing use and development of these national playgrounds.

" Whereas a few years ago this need was largely confined to the national parks of the West, demand for expert forest supervision now is even greater in the East, with the transfer to the Office of National Parks, Buildings, and Reservations of 46 reservations east of the Mississippi from the War Department, and of the National Capital Parks System from the old Office of Public Buildings and Public Parks.

" These, added to the eastern Acadia, Great Smoky Mountains, and Hot Springs National Parks, the Morristown National Historical Park, the Colonial and George Washington Birthplace National Monuments, and the proposed Shenandoah, Mammoth Cave, and Isle Royale National Parks, influenced the establishment of the forestry branch in the Washington Office."

DOCUMENT CAPTURED AS RECEIVED

The Volcano Letter

No. 405—Monthly | U. S. Geological Survey, Hawaii National Park | NOVEMBER, 1933

KILAUEA REPORT FOR NOVEMBER, 1933

Including weekly press reports 1137 to 1140 October 29 midnight to November 26 midnight

Section of Volcanology, U. S. Geological Survey
T. A. Jaggar, Volcanologist in Charge

Volcanology:—Kilauea

Halemaumau pit of Kilauea volcano produced a rock slide at the west end of the north sill 9:35 a. m. November 4, and another small one was heard at 10:43 a. m. Fragments of rock dribbled down the south wall 10:44 a. m. November 6. There were very heavy rains November 8-9 amounting to 6.75 inches. Pools of water remained all over the Kilauea crater floor, being lakes at the southwest valley and at the upper bench southwest. November 9 a slide occurred at noon on the south side of the pit. November 11 several hundred tons of rock had fallen from above the lowest part of the canoe sill northeast. The pieces had rolled 150 feet down the talus; at 10:07 a. m. Nov. 11 rocks fell at the northeast. About 10 a. m. Nov. 13 rocks were heard falling from the north, west and south walls; at the same hour November 16 a small slide was heard at the east, and there was fresh debris on the talus. The week ending November 26 was notably quiet.

Weekly rim-crack measurements around the Halemaumau border were as follows:—

November 4. Out of 32 points, 7 opened 1 mm. or less, 4 closed very slightly, 1 northeast crack moved laterally 1 mm.

November 11 Out of 32 points, 10 opened slightly, 4 closed slightly, aggregate result for all, an opening of 3 mm.

November 18. Out of 32 points, 9 opened, 3 closed, aggregate movement an opening of 4 mm.

November 25. Out of 32 points, 11 opened and 3 closed, aggregate opening 5.5 mm.
It will be seen that the aggregate opening gradually increased during the month.

Volcanology:—Mauna Loa

The cluster of earthquakes of October about Mauna Loa, felt especially at Kapapala ranch on the east side of that volcano, led E. G. Wingate and A. E. Jones to visit the summit crater, camping there the night of November 1-2. At Puu Ulaula resthouse the night October 31 the outdoor temperature was 31 degrees Fahrenheit. The northeast end of Mokuaweoweo was reached at 1:30 p. m. November 1.

The main crater showed puffing vapor from the 1914 cone, fume was dense at times from the solfataras of the sunken area adjacent to the 1914 cone, and the central cones of 1903 were about as usual. The summit camp was in a cavern, and ice from cracks was melted for drinking water. The east rim was explored the forenoon of Nov. 2 as far as the Wilkes Camp. The northwest and southwest walls of the crater were dusty showing some fresh scars. There was little blue fume at the central region, and possibly slightly more at the 1914 cone than in July. The Resthouse thermometer recorded 28 degrees F. at 6:10 a. m. Nov. 3. Later events proved that the dense fume and puffing vapor near 1914 cone heralded coming eruption of December 2.

T.A.J.

Earthquakes

TABLE

Number of minutes of tremor; numbers of very feeble earthquakes; teleseisms or distant earthquakes; and local seismicity index as described in Volcano Letter 371.

Week ending	tr.	v. f.	tel.	seis.
November 5	18	2	00	5.50
November 12	35	5	00	11.25
November 19	30	0	00	7.50
November 26	56	3	1	15.50

This is the only month of the year 1933 to date registering at the Observatory no felt earthquakes of the intensities "feeble," "slight" or "moderate" for the Kilauea locality.

During the four weeks local shocks that were well recorded on more than one instrument (for location of origin) were rare.

An earthquake reported by Lincoln and Hale in Hookena district, South Kona, was felt at 7:44 p. m. November 10 It was very feeble on the seismograms, and from them appeared to be on the southwest rift of Mauna Loa in Latitude 19 degrees, 16 minutes North; Longitude 155 degrees, 43 minutes West.

A shock reported by Buzzard and registered on his seismogram at Waikii on the west slope of Mauna Kea 9:49 a. m. November 13, appeared to originate deep under that district.

A seismic movement recorded at the Kilauea observatory as a tremor, at 0:52 a. m. November 25, was reported by Archdeacon Walker as felt sharply in Kohala. The distance from the Observatory record would place it in North Kohala.

A very feeble shock registered at 5:15 p. m. November 25 was located under a point northeast of Wood Valley on the east slope of Mauna Loa, about five miles deep. Latitude 19° 22′ North, Longitude 155° 26′ West.

A very feeble shock registered 9:10 a. m. November 26, was located as near the surface of Mauna Loa about five miles north of the 1868 lava source on the southwest rift, Lat. 19° 12′ North, Longitude 155° 41′ West.

Microseisms of the month were light or subnormal October 31 and November, 16 and 21: they were strong or abnormal November 3, 25, 26. The remainder of the month they were normal.

A.E.J.

Tilting of the ground

In the Table of Tilt below, the first column shows the net tilt by weeks, as computed from seismograms at the Kilauea Observatory, which is on the northeast rim of Kilauea crater, 2.2 miles from Halemaumau.

The second column shows the algebraic sum of the readings at three clinoscope cellars around Halemaumau pit, reduced each to its radial direction, outward away from, and inward in the direction of, the center of Halemaumau.

The Table represents the tipping of the ground, in seconds of arc, in the direction given.

At the Observatory, a northeast reading is away from the crater, a southwest reading is in the direction of the crater.

At the Observatory the total accumulated tilt in the year since November 26, 1932 is 2.2″ West and 2.9″ South, or 3.6″ SW by S.

TABLE OF TILT

Date	Observatory	Halemaumau
Oct. 30 - Nov. 5	0.9″ S by E	4.5″ from
Nov. 6 - Nov. 12	1.3″ S by W	2.5″ from
Nov. 13 - Nov. 19	0.6″ E by S	9.0″ towards
Nov. 20 - Nov. 26	1.9″ NE by E	7.0″ towards

E.G.W. and A.E.J.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

December 19, 1933.

GENERAL OFFICE ORDER NO. 21 (REVISED)

SUBJECT: PERMIT TO PICK FRUIT IN PARK

1. Paragraph 3 of Rule 17 of the General Rules and Regulations governing Hawaii National Park reads as follows:

"Visitors may pick and eat any fruit found in the park, but may not carry it away unless they have a permit from the Park Superintendent."

2. Under this rule, visitors may pick and eat any of the following fruits found growing on park lands:

(a) Blackberries
(b) Thimble berries
(c) Ohelo berries
(d) Guavas

3. If fruit grows in sufficient quantities to warrant the granting of permits to carry it away in amounts exceeding one gallon per family, application for such permit must be made to the office of the Park Superintendent.

4. A form of combined application and permit is attached to and made a part of this order.

5. Care must be exercised not to trample or break any of the bushes or other park vegetation in gathering berries or fruit.

6. Permits will be made out in duplicate, one copy being given to the permittee, and the other copy kept for park files.

7. Permits will be numbered consecutively.

8. Rangers must invariably ask to see the permit of all fruit or berry pickers noted in the park, who are gathering fruit with the apparent intention of carrying it away.

9. The permittee must return his permit to the park office when he leaves the park, showing the quantity of fruit gathered.

10. This order applies to park employees as well as to park visitors.

11. Each permit expires on day of issue.

Edward G. Wingate

Edward G. Wingate,
Superintendent.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

December 19, 1933.

GENERAL OFFICE ORDER NO. 26

SUBJECT: ROUTING AND SIGNING CORRESPONDENCE OF THE NATURALIST DIVISION

1. The Park Naturalist has charge of the development of the Naturalist Division of Hawaii National Park. In extending the usefulness and the service of the Naturalist Division, in securing museum exhibits, in securing names for the mailing list for Nature Notes, in securing information and data on natural sciences, history, legends; in answering questions on the natural features of the park, sciences, etc., he will have occasion from time to time to correspond directly with individuals and organizations interested in these matters.

2. In much of this work his individuality, personality, and name are important. He is therefore authorized to conduct correspondence of this type over his own name, but through official channels, under the following conditions:

3. All official reports or correspondence relating to the Naturalist Division prepared by the Park Naturalist for the Director, Chief Park Naturalist, or to any Government Department, official, or employee should be routed through the Superintendent of the park for his information and approval, and be so indicated on his letter, with a carbon copy for the Superintendent.

4. Correspondence with those not in Government service relating to the business of the Naturalist Division that is official in character, but personal as to the Park Naturalist, may be sent direct, but a copy of each letter should be provided for the files of the Park Superintendent's office.

5. All other correspondence of whatever kind or character handled by the Naturalist Division should be prepared for the signature of the Park Superintendent.

6. All incoming official mail for the Naturalist Division which may be addressed personally to the Park Naturalist should be referred to the Superintendent's office for stamping thereon the date of receipt, and for the information of the Superintendent. Such mail will then be referred to the Park Naturalist for attention or filing in his own department.

7. The filing system used in the Park Naturalist's office will be a part of the standard filing system of the park, to which it will conform in all respects.

Edward G. Wingate,
Superintendent.

DISTRIBUTION:

Superintendent	1
Monthly Report	7
Director	1
Park Naturalist	1
Chief Clerk	1

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

December 31, 1933

MEMORANDUM TO THE STAFF

SUBJECT: THE NEW YEAR

We are now entering the new year. It will be the first under the "new deal." The old year has been one of change, of reorganization, and of reconstruction. In it we parted company with many of our old customs and old ways of thought. In it we parted company with that fear of economic and spiritual disaster which for so long was with us. Our leaders have taught us to meet our difficulties with smiling faces and unafraid.

We enter this new year gladly, for it promises us much. It promises us an opportunity for all to labor, and for all who labor a just reward. And this I take it is the real meaning of the "new deal." So far as it is humanly possible to do so, work will be given to all of us, and to us all is also given the obligation to labor and to labor gladly. There will be no room for those who shirk. And because the fondest hope of all honest men is to be given that opportunity and obligation of service, which is now given to us, I wish you all a happy new year.

Edward G. Wingate

Edward G. Wingate,
Superintendent.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

December 7, 1933.

The Director,
Office of National Parks, Buildings and Reservations,
Washington, D. C.

Dear Mr. Director:

The following is the administrative report for Hawaii National Park for the month of November 1933.

000 General

The major event of the month was the announcement of the change in superintendents, effective on the 16th. Mr. Leavitt remained in the park until the 29th to assist me in learning park administration. All employees were excused from work that afternoon on radio authority from the Washington office, and nearly all made the trip to Hilo to bid Aloha to Mr. and Mrs. Leavitt at the steamer.

Many farewell parties consisting of dinners and luncheons were given the Leavitts, including Chamber of Commerce, park staff at Volcano House (as guests of the management), Hilo Federal Business Association, Postmasters' Association, and numerous private gatherings. On November 15, the last day of Mr. Leavitt's service as Superintendent of Hawaii National Park, he was presented with a pewter tea service by the members of the staff. Mrs Leavitt was also present. The little gathering was quite touching.

020 General Weather Conditions
Total rainfall for November was 9.03 inches, which compares with a normal of 10.40 inches and 1.67 inches for October. There were 6.75 inches precipitation on the 9th, which did much toward replenishing depleted water supplies. Rainfall to date is 83.81 inches (normal is 86.37 inches).

The maximum temperature for the month was 76 degrees, the minimum 44 degrees, and the mean for the month was 61 degrees. Heavy frost was noted on the 28th and 29th.

100 Administration

110 Status of work
All work is current, except filing. Prior to his departure, Mr. Leavitt spent much time, with ranger assistants, in installing a new system which, when completed, will be highly efficient.

DOCUMENT CAPTURED AS RECEIVED

120 Park Inspections by
121 Superintendent
Superintendent Wingate made three inspections of the progress of work on the Pun Hulubulu Trail and two inspections of the Uwekahuna-Bird Park Road. He also was in a party including Assistant Territorial Forester L. W. Bryan, Manager Bradford Sumner of Kapapala Ranch, and Acting Chief Ranger Christ, which visited the forested areas above Biru Park for the purpose of determining the extent of damage done by cattle on lands leased to the Hawaiian Agricultural Company.

Several general inspections were made of new buildings and repairs to old ranger cottages in the residential area. The proposed site for the new laboratory and office building to house Dr. Jaggar and his staff was studied. Parapet walls under construction at Kilauea Iki were inspected twice, and the proposed parking area at Keanakakoi Crater was inspected once. Officials at the Military and Navy Camps were called on to exchange courtesies.

An inspection trip, with Landscape Architect Sager, was made to Kalapana and the Puna coast villages.

122 Special field representative
Landscape Architect Merel S. Sager has kept in close touch with park projects and has given considerable assistance in planning for ECW and CWA work through his experience in Lassen and Grand Canyon parks. On the 29th he accompanied Mr. Leavitt to Honolulu.

125 Other Governmental officers
E. S. Wheeler, Principal Highway Engineer of the Bureau of Public Roads, Honolulu, was in the park November 11 and 12 inspecting progress made by the contractor on the Halemaumau-Uwekahuna-Bird Park Road.

140 Labor situation
Plans have been submitted for a 200-man ECW camp and for CWA projects employing 50 men.

200 Maintenance, Improvement and New Construction

210 Maintenance
The usual maintenance of electric, telephone, and water systems was carried on, as well as other routine maintenance.

220 Improvements
Work was begun on front and back porch additions on Quarters No. 2, occupied by Chief Clerk Higashida. These additions provide an immense improvement for this little cottage.

DOCUMENT CAPTURED AS RECEIVED

230 New Construction

The Federal projects in the park are making satisfactory progress. Project FP-161.14, Employee's Quarters (1) was held up when near completion due to lack of funds to build fireplace and chimney, and the cooperation of the Kilauea Military Camp was solicited to secure the services of an enlisted man who was a stone mason. The man was assigned to this job, and he is assisted by Laborer Elderts, who has had considerable experience in the park in fitting lava rock.

In connection with Civil Works projects in Hawaii, a local newspaper is suggesting using some of the funds to build the Kalapana road to connect with the Chain of Craters Road. There is considerable local interest in this matter.

300 Activities of Other Agencies in the Park

320 Cooperating Government Agencies

I have mentioned above that the Army has donated the services of a stone mason for building a fireplace and chimney in the new employees quarters. This will enable the completion of this building without exceeding the allotment.

400 Flora, Fauna and Natural Phenomena

410 Ranger, Naturalist and Guide Service

The ranger service conducted routine maintenance, trucking supplies, service to visitors, operation of warehouse and ranger office at headquarters, etc. The household furnishings of Superintendent Leavitt were packed and marked at the warehouse.

The Park Naturalist continued extension course lectures, four lectures having been given to 100 persons. There were six auto caravans with 16 cars and an attendance of 141.

Total contacts were: Rangers, 195; Park Naturalist, 851; total, 1,046.

420 Museum Service

There were 537 visitors at the museum. Eight lectures were given to 261.

480 Natural Phenomena

During a trip to the summit of Mauna Loa on November 1, a party under the guidance of Ranger K. J. Williams noticed strong puffs of fume. This was one of a number of incidents which preceded the outbreak of Mauna Loa December 2, which will be fully covered in the December report.

DOCUMENT CAPTURED AS RECEIVED

The volcanic phenomena of the month described below is taken from the weekly reports issued by Dr. T. A. Jaggar:

Messrs. E. G. Wingate and A. E. Jones visited Mokuaweoweo November 1 and 2, using supplies packed to the summit by Ranger K. J. Williams. Camp was made on the summit in a cavern. Puffing vapor from the 1914 cone was seen, with fume dense at times from the solfataras of the sunken area. Fresh scars from slides showed on the northwest and southwest crater walls, and there was little blue fume in the central region.

Crack measurements at the Halemaumau fissures showed normal motion, and there were no unusual slides. Blue fume was noted in shaded portions of the pit. Seismic activity was quiet, no local earthquakes being recorded during the week ended November 19.

500 Use of Park Facilities by the Public

530 Visitors

Guy Davenport, manager of Moana-Seaside Hotel and Bungalows, Waikiki, and party. They were given special attention.

E. S. Wheeler, Bureau of Public Roads.

L. F. S. Bader, and family, of Boston. Owners of Hilo Electric Light Company. After an extended visit, Mr. Bader sold his stock to local interests.

540 Public Camps

Visitors at public camp grounds were 2 for 2 nights; at Hilina Pali shelter, 2 for 2 nights; at Mauna Loa rest house, 61 for 2 nights.

600 Protection

640 Destruction of Predatory Animals

There were 52 wild goats and 17 wild pigs killed during the month.

900 Miscellaneous

Word was received during the month that park employees who were placed on temporary status on October 1 were restored to permanent status on November 1.

At a meeting held on the evening of November 13, the Hawaii Natural History Association was formed and the constitution, drawn up by former Superintendent Leavitt, was adopted. Election of officers was held, as follows: President, John E. Doerr, Jr.; Secretary, Richmond B. Hodges; Treasurer, Mrs. John E. Doerr, Jr.

DOCUMENT CAPTURED AS RECEIVED

The death of John T. Moir, November 17, age 74 years, and a resident of Hawaii since 1888, is recorded with regret. Mr. Moir, who was manager of the Onomea Sugar Company, was a very prominent citizen and a public benefactor. During the visit of Secretary of the Navy Claude A. Swanson, he donated the use of his car with driver for the official party.

On November 18 a number of native plants were taken from the park to the Hulehee Palace at Kailua by Ranger Christ as a matter of cooperation.

At a meeting of the Honolulu Advertising Club early in the month, the Park Superintendent was made an honorary member of the club and an advisory member of the Hui o Pele Committee. This is an important appointment because all funds of the Hui o Pele are used for the benefit of the park.

At the quarterly meeting of the Hilo Federal Business Association, held at the Volcano House November 25, Mr. E. P. Leavitt tendered his resignation as President of the Association. Captain Waine Archer, who was Vice President, was elected President, and E. G. Wingate was elected to succeed Captain Archer as Vice President.

Following the business meeting, there was a dinner given jointly by the Hilo Federal Business Association, the Postmasters' Association, the members of the park staff, residents of the community, and officials of the County of Hawaii, in honor of Mr. and Mrs. Leavitt and Mr. and Mrs. Wingate. Mr. Bert D. Chilson, Hilo postmaster and past president of the Hilo Federal Business Association, was toastmaster for the occasion. Following a number of talks commending Mr. Leavitt's service in Hawaii, gifts were presented to the departing Superintendent and his wife by the two associations mentioned.

Very respectfully,

Edward G. Wingate,
Superintendent.

Inclosures.

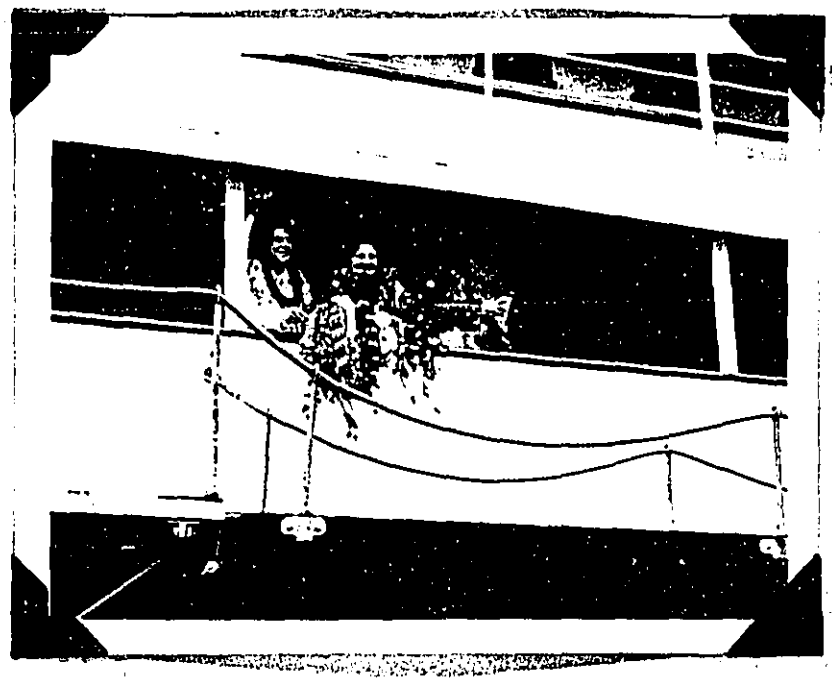
DOCUMENT CAPTURED AS RECEIVED

Superintendent and Mrs. E. P. Leavitt at Hilo, Hawaii, en route from Hawaii National Park to Mesa Verde National Park, November 29, 1933. Photo by Ranger T. W. Barnett.

DOCUMENT CAPTURED AS RECEIVED

Above: Part of group which gathered at the dock in Hilo to bid Aloha to Superintendent and Mrs. Leavitt at their departure for Mesa Verde National Park. Below: Landscape Architect M. S. Sager, who accompanied Mr. and Mrs. Leavitt as far as Honolulu.

Supt. and Mrs. Wingate stand at the extreme right of the group.



DOCUMENT CAPTURED AS RECEIVED

Form No. 1009—Met'l.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

COOPERATIVE OBSERVERS' METEROLOGICAL RECORD:

Month of November, *193* 3; *Station,* Volcano Obs'ty; *County,* Hawaii

State, Hawaii; *Latitude,* ; *Longitude,* ; *Time used on this form,* ; *Hour of Observation,*

DATE	TEMPERATURE Maximum 1	Minimum 2	Range 3	*Set Max. 4	PRECIPITATION Time of Beginning 5	Time of Ending 6	†Amount 7	Snowfall in Inches 8	Depth of Snow on Ground at Time of Observation 9	Wind Prevailing Wind Direction 10	Character of Day, Sunrise to Sunset 11	‡ Miscellaneous Phenomena
1	72	48	24	64			T	75	Lt.	NE	PC	
2	66	53	13	62			.01	91	"	"	"	
3	68	60	6	61			.27	94	"	"	"	
4	65	51	14	58			.05	89	"	"	"	
5	70	51	19	60			.06	89	"	SW	"	
6	66	55	11	61			.03	92	–	–	Cloudy	
7	69	54	15	68			.29	86	–	–	PC	
8	66	58	8	62			.02	94	Lt.	SW	"	
9	62	56	6	60			6.75	94	–	–	Cloudy	
10	69	57	12	59			.05	93	Lt.	NE	PC	
11	65	56	9	61			.30	90	"	SW	"	
12	71	56	15	60			.04	95	"	"	"	
13	71	54	17	59			.01	90	"	"	"	
14	76	54	22	68			T	68	"	"	"	
15	72	58	14	61			.10	98	"	"	"	
16	71	55	16	69			.01	73	"	NE	"	
17	69	52	17	61			.01	88	Mod.	"	Clear	
18	71	51	20	61			.01	80	Lt.	"	"	
19	69	53	16	59			.04	86	"	"	"	
20	73	52	21	65			.01	79	"	SW	PC	
21	72	54	18	68			.03	84	"	SE	"	
22	70	57	13	63			.27	89	"	NE	"	
23	69	53	16	63			.01	91	"	"	Clear	
24	67	52	15	61			T	88	Str.	"	PC	
25	65	52	13	58			T	90	"	"	"	
26	57	55	2	56			.60	94	"	"	Cloudy	
27	63	46	17	51			.06	87	Mod.	"	Clear	
28	68	44	24	55			T	96	"	SW	"	Frost vic. Park
29	73	45	28	57			T	54	Lt.	"	"	do
30	72	50	22	58			T	85	"	NE	"	
31												
Sum	2055	1592	463	1818			9.03	2602				
Mean	68.5	53.06	15.43	60.60			.30	86.6				

*Reading of maximum thermometer immediately after setting.
†Including rain, hail, sleet, and melted snow.
‡Thunderstorms, halos, auroras, etc.

(IN TRIPLICATE) See cover for instructions.

8—253
U. S. GOVERNMENT PRINTING OFFICE: 1930

, *Cooperative Observer.*

Post Office Address,

MONTHLY SUMMARY

TEMPERATURE

Mean maximum, 68.50

Mean minimum, 53.06

Mean, 60.78

Maximum, 76; date, 14

Minimum, 44; date, 28

Greatest daily range, 28; date, 29

PRECIPITATION

Total, 9.03; inches ; greatest in 24 hours 6.75

Date, 9

SNOW

Total snowfall, inches

On ground 15th, inches

At end of month, inches

NUMBER OF DAYS—

With .01 inch or more precipitation, 23

Clear, 8; partly cloudy, 19

Cloudy, 3

DATES OF—

Fog { Light, Dense,

Killing frost, 28, 29

Thunderstorms,

Hail { Light, Moderate, Heavy,

Sleet,

Auroras,

REMARKS:

DOCUMENT CAPTURED AS RECEIVED

10-157
(July, 1929)

I PARTMENT OF THE INTERIC

NATIONAL PARK SERVICE

TRAVEL REPORT

Hawaii National Park for the month of November 19333

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year	
					Number	Percent
PRIVATE TRANSPORTATION:						
Cars first entry, ...						
Cars reentry, ...						
Motorcycles, ...						
Total motor vehicles, ...						
Persons entering via motor vehicles, ...	45,296	83,913	6,837	14,377	69,536	483.66
Persons entering via other private transportation, ...	228	394	131	375	- 19	- 5.07
Total persons entering via private transportation, . . .	45,524	84,307	6,968	14,752	69,555	471.49
OTHER TRANSPORTATION:						
Persons entering via hotel buses, .	407	883	221	468	425	90.81
Persons entering via trains, .						
Persons entering otherwise, . .						
Total other transportation, .	407	883	221	468	425	90.81
GRAND TOTAL ALL VISITORS, . . .	45,931	85,190	7,189	15,220	69,970	459.78

	This Year	Last Year	Increase	
			Number	Percent
Automobiles in public camps during month, ...				
Campers in public camps during month, ...	2	0		
Visitors at Hilina Pali shelter	2			
" " Mauna Loa "	61			

DOCUMENT CAPTURED AS RECEIVED

10-158

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Hawaii National Park for the Month of November 1933

Description of Projects		Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
507.13	Road repair over earthquake crack	85	0	0	
FP 101.8	Puu Huluhulu Trail	98	48	50	
FP 102.8	Parapet Lookouts, Kilauea Iki, etc.	20	20	0	
FP 161.14	Employees Quarters (1)	85	10	60	

98

DOCUMENT CAPTURED AS RECEIVED

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Hawaii National Park for the Month of November 1933

	This Month		This Month Last Year	
	Appointed	Non-Appointed	Appointed	Non-Appointed
Number of employees beginning of month	16	8	12	8
Number of additions	1	8	3	2
Total	17	16	15	10
Number of separations	1	5	0	3
Number of employees close of month	16	11	15	7
Number of promotions during month	0	0	0	0
Aggregate amount of annual leave taken	0	0	0	0
Aggregate amount of sick leave taken	1	0	0	0
Aggregate amount of leave without pay	0	0	0	0

Furlough leave 20

DOCUMENT CAPTURED AS RECEIVED

45334

10-215
(July, 1928)

UNITED STATES
DEPARTMENT OF THE INTERIOR
National Park Service

Hawaii National Park

REPORT OF NON-APPOINTED PERSONNEL
(TEMPORARY)

Changes outside the District of Columbia for the month of November 1933

Total at beginning of month	Additions	Separations	Net Gain or loss (a)	Total at ending of month
(Reg.) 0	4	1	3	3
NRA 8	4	4	0	8
(NOTE) No dismissals by reason of (a) reduced appropriations or (b) retirement.				

(a) If loss, indicate by minus sign.

DOCUMENT CAPTURED AS RECEIVED

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Hawaii National Park for the Month of November 1933

	This Year	Last Year
Park revenue on hand beginning of month,	0.00	0.00
Received,	125.00	126.33
Total,	125.00	126.33
Remitted,	125.00	126.33
On hand close of month,	0.00	0.00

Park revenues received this year to date,	250.00
Park revenues received last year to date,	562.66
Increase,	-312.66
Per cent of ~~increase~~, decrease	55.56

DOCUMENT CAPTURED AS RECEIVED

10-161

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF SALES OF PUBLICATIONS

NOVEMBER 1933

	Number	Value
GOVERNMENT PUBLICATIONS:		
On hand beginning of month,	930	130.95
Received during month,	0	0.00
Total,	930	130.95
Sold during month,	20 6	9.80 4.95
On hand at close of month,	924	126.00

NON-GOVERNMENT PUBLICATIONS:

On hand beginning of month,		
Received during month,		
Total,		
Sold during month,		
On hand at close of month,		

Cash on hand beginning of month,		$1.38	
Sales during month,		4.95	
Total,		$6.33	
Remitted during month,	485	4.40	
Balance,		$1.93	16.88

DOCUMENT CAPTURED AS RECEIVED

STATISTICAL REPORT NO. M 8

HAWAII NATIONAL PARK

FINANCE AND ACCOUNTS

Symbol	Appropriation	Allotted	Expended & Obligated	Balance
44415.3	Salaries and Expenses, Hawaii National Park, 1934:	23,600.00	24,061.43	RE 461.43
44406.3	Forest Protection and Fire Prevention, Office of Natl Parks, B. & R.	520.00	134.61	385.39
4X436.3	Roads & Trails, Office of Nat'l Parks, Buildings and Reservations	26,245.34	25,216.27	1,029.07
44415	Hawaii National Park, 1934:	2,859.72	2,859.72	0.00
42/3415	Hawaii National Park, 1932-'33:	49,350.00	49,337.53	12.47
4-03/5640.8	National Industrial Recovery, Interior, Nat'l Parks, Roads & Trails, 1933-35	480,000.00	14,428.17	465,571.83
4-03/5640.14	National Industrial Recovery, Interior, Nat'l Parks, Buildings & Reservations	11,250.00	3,850.92	7,399.08

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

Office of National Parks,
Buildings and Reservations.

November 3, 1933.

MEMORANDUM TO THE PRESS

By _____
John E. Scott, Jr., Acting Sup't

HAWAII NATIONAL PARK, November ___. (Special). Advice has just been received by E. P. Leavitt of his transfer to the superintendency of Mesa Verde National Park in southwestern Colorado, and the appointment of R. G. Wingate, Engineer of the U. S. Geological Survey in the park under Dr. T. A. Jaggar, to the superintendency of Hawaii National Park.

The transfer takes effect November 15. Mr. Leavitt's orders call for him to sail from Honolulu on the USAT Chateau Thierry on December 2.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

Office of National Parks,
Buildings and Reservations.

November 21, 1933.

GENERAL OFFICE ORDER NO. 25

SUBJECT: RANGER DUTIES AT ADMINISTRATION BUILDING (PARTIALLY REVISING GENERAL OFFICE ORDERS NOS. 4 OF JULY 20, 1932, AND 23, OF OCTOBER 26, 1933)

1. Commencing December 1, 1933, the Office Ranger will be relieved of the duties specified in Section 3 of each of the above General Office Orders. On that date and thereafter these janitor duties will be performed by the permanent laborer.

2. The hours of duty specified in Section 1 of General Office Order No. 4 are at the same time changed to be from 7:30 a.m. to 4:30 p.m.

(Signed) EDWARD G. WINGATE
Superintendent.

DISTRIBUTION:

Rangers	6
Monthly Report	7
Director	1
Superintendent	1
Chief Clerk	1
Park Naturalist	1
Foreman	1
Files	1

DOCUMENT CAPTURED AS RECEIVED

The Volcano Letter

No. 404—Monthly U. S. Geological Survey, Hawaii National Park OCTOBER, 1933

KILAUEA REPORT FOR OCTOBER, 1933

Including weekly press reports 1133 to 1136, October 1 midnight to October 29 midnight.

Section of Volcanology, U. S. Geological Survey
T. A. Jaggar, Volcanologist in Charge

Volcanology

Slides from the walls of Halemaumau pit have occurred as follows for the short periods under observation daily in the forenoons, and occasional observation at other times. Slide during day preceding 10 a. m. October 6 left a scar near top of east wall, and fresh dust and small rocks scattered over the east bay of the lava floor. The southeast pit seismograph had registered the vibrations. October 6 at 9:50 a. m. a few rocks were heard falling. October 7 at 8:58 a. m. and 10:07 a. m. small slides at east corner of pit. October 9 *forenoon*, rocks fell infrequently. October 13 at 3:38 p. m. dust arose at east corner. October 14 new dusty appearances were seen at east talus and south wall. October 24 and 25 in the forenoons, a few rocks were heard falling. October 26 at 10:15 a. m. a small slide fell from the south wall, and one caused dust at 10:35 a. m.

Slides occurred on the west wall of Kilauea crater, about three quarters of a mile south of the museum at 4:38 p. m. October 2, and on October 8 at 10:50 a. m. and at 10:58 a. m. October 23 numerous showers caused vapor to rise from Halemaumau, mixed with some blue fume, and October 26 strong northeast wind raised clouds of dust in Kau desert. A very fresh avalanche scar was located by Wingate October 24 at the north end of the west platform inside of Alealea crater along the Chain of Craters road, with another scar nearby. This was believed related to a shock at 10:32 a. m. October 20, accompanied by a booming noise and a low rumble, felt by a construction crew near Puu Hulahula, and by others heard at 28-miles and at Halemaumau.

Weekly rim crack measurements around the Halemaumau border are reported by E. G. Wingate as follows:—

October 7. Seven crack points out of 32 opened very slightly, two closed very slightly.

October 14. Eleven points out of 32 opened, two points closed, very slightly.

October 21. Three points opened out of 32, one closed, very slightly.

October 28. Out of 32 points, four opened one-half millimeter each. Seven closed one-half millimeter each. One crack northeast showed one-half millimeter lateral movement. The closing cracks were south and southeast, the opening ones were east and northeast. The west rim showed no movement.

T.A.J.

Earthquakes

TABLE

Number of minutes of tremor; numbers of very feeble; slight; and moderate earthquakes; teleseisms or distant earthquakes; and local seismicity index as described in Volcano Letter 371.

Week ending	tr.	v. f.	sl.	mod.	tel.	seis.
October 8	24	3	0	0	1	10.00
October 15	29	1	0	1	1	11.75
October 22	46	8	1	2	0	25.50
October 29	42	8	0	0	0	15.00

The indicated origin of the moderate earthquake at 3:01 a. m. October 13 was at sea, about 30 statute miles southeast of Cape Kumukahi, in Lat. 19° 15'N; Long. 154° 23'W. It was lightly felt.

The slight earthquake of October 19 at 5:37 a. m. could not be well located. It probably occurred a few miles north of the Mauna Loa northeast rift. It was felt in Hilo and Honomu.

The two earthquakes at 9:10 and 9:11 a. m. October 21 occurred at places about eight miles apart, under the southeast flank of Mauna Loa. The first at Lat. 19° 21'.5N; Long. 155° 31'.5W; and about two miles deep. The second at Lat. 19° 25'N, Long. 155° 30'W and about nine miles deep. The second could not be as accurately located as the first, owing to confusion of its waves with the waves of the first earthquake. Both were reported felt generally on Hawaii.

Six small earthquakes were felt at Kapapala ranch during the month, the observatory records were too small to indicate a distance for any of them. The same was true for an earthquake felt at Pahala and one felt at Kapulani.

The record of the teleseism beginning at 5:11:16 a. m. October 5 was fair, showing a few phases. Only the long waves of the teleseism of October 14 were recorded.

The microseisms were light on October 10, 12, 15, 16, 17, 18, 19, 20, & 29. The microseisms were moderate or normal October 2, 3, 5, 6, 7, 8, 9, 11, 13, 14, & 21. The microseisms were strong or abnormal October 4, 22, 23, 24, 25, 26, 27,& 28.

A.E.J.

Tilting of the ground

In the Table of Tilt below, the first column shows the net tilt by weeks, as computed from seismograms at the Kilauea Observatory, which is on the northeast rim of Kilauea crater, 2.2 miles from Halemaumau.

The second column shows the algebraic sum of the readings at three clinoscope cellars around Halemaumau pit, reduced each to its radial direction, outwards from and inwards toward the center of Halemaumau.

The Table represents the tipping of the ground, in seconds of arc, in the direction given.

At the Observatory, a NE reading is outward, a SW reading is inward.

The total accumulated tilt in the year since October 29, 1932 at the Observatory is 1.1" south and 0.8" west.

TABLE OF TILT

Date	Observatory	Halemaumau
Oct. 2 - Oct. 8	0.7" E	2.8" inward
Oct. 9 - Oct. 15	0.3" NE	11.0" inward
Oct. 16 - Oct. 22	0.3" SW	1.3" outward
Oct. 23 - Oct. 29	2.0" NE	10.6" inward

E.G.W.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

Office of National Parks,
Buildings and Reservations.

November 8, 1933.

The Director,
Office of National Parks, Buildings and Reservations,
Washington, D. C.

Dear Mr. Director:

The following is the administrative report for Hawaii National Park for the month of October 1933.

000 General

On request, plans were submitted to Territorial Forester Charles S. Judd for a 50-man ECW camp in Hawaii National Park. On the recommendation of Mr. Merel Sager, Assistant Landscape Engineer, the plans were revised for a 200-man camp. The Territory plans to establish camps in the forest reserves of the various islands.

020 General Weather Conditions

021 In the Park
Weather has continued to be excellent and dry. Rainfall for the month was 1.67 inches, compared with 3.40 for September and 1.80 for a year ago.

The maximumttemperature was 78 degrees, minimum 51 degrees. Details will be found on Weather Bureau form attached.

100 Administration

120 Park inspections by
121 Superintendent
Routine inspections were made of all projects. Our office work is in good shape, with the exception of the filing. Rangers are assisting the office force in establishing a new system of filing, which it is hoped will greatly improve the system formerly in use.

122 Special field representative
In response to my request that a landscape engineer be assigned to Hawaii National Park during road construction work, Mr. Merel Sager, Assistant Landscape Engineer, arrived in Honolulu from San Francisco on October 23. After remaining a few days in that city to confer with Principal Highway Engineer E. S. Wheeler and others, he proceeded to Kilauea headquarters, arriving on the 28th.

DOCUMENT CAPTURED AS RECEIVED

124 Other Governmental Officers

Honorable Claude A. Swanson, Secretary of the Navy, was in the park October 7 and 8. He made inspections of park areas, including the Kilauea Military Camp and the Navy Health and Recreation Camp.

Secretary Swanson and his official staff were invited to the park as the guests of the Park Service and the Volcano House management. On the afternoon of the 7th the heads of the Federal agencies in the park accompanied the party on a general park tour. In the evening an informal dinner at the Volcano House, with Mr. and Mrs. George Lycurgus as host and hostess and the Secretary and his party the honored guests, was attended by Mr. and Mrs. Leavitt, Mr. and Mrs. Doerr, Dr. and Mrs. Thomas A. Jaggar, Capt. and Mrs. Waine Archer, Lieut. Stevens, and others.

After spending the night at the Volcano House in the "Congressional" cottage, the Secretary's party visited Dr. Jaggar's laboratories, the Uwekahuna Museum, the military and Navy camps, and other park areas. In the afternoon they returned to the USS Indianapolis, the battle cruiser on which the Secretary was traveling. That evening the members of the official party at the park who could accept were the guests of Secretary Swanson on board ship. These were Mr. and Mrs. Leavitt, Mr. and Mrs. Doerr, Dr. and Mrs. Jaggar, Mr. and Mrs. Lycurgus, their son Leo, and Mrs. John Detor. The cruiser steamed out of Hilo Harbor at 10 p.m.

The following day Secretary Swanson sent messages of thanks to shore officials in which he expressed the hope that he could some day return.

130 Finance and Accounts

A statement of the park appropriations is attached as Statistical Report No. 8.

A memorandum was distributed to the press stating that Hawaii National Park effected a saving of $5,243.40 during the preceding fiscal year out of an appropriation of $49,860, made up from furlough and compensation deductions from salaries and wages.

150 Equipment and Supplies

A portable trail compressor with drills, and sign material were received during the month.

180 Circulars, Placards, Publicity Bulletins, etc.

The 1934 circular of general information for Hawaii National Park was transmitted under date October 15. There were very few corrections to bring it up to date, and in the interests of economy few changes were made in the set up.

After getting in touch with the agencies operating Pacific and around-the-world cruises which bring visitors to the park early in 1934, we sent copies of the 1933 circular of general information on the park for distribution to the passengers while at sea, in the hope that they could create greater interest and increased travel to the park.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

200 Maintenance, Improvement and New Construction

210 Maintenance

A caved-in earthquake crack on the crater rim road on Waldron Ledge necessitated repairs. For this an allotment of $300 from roads and trails: post construction was secured.

230 New Construction

Project FP-161.14, Employee's Quarters (1), begun on August 9, was 75 per cent complete at the close of the month.

Project FP-101.8, Trail to Puu Huluhulu, was started October 16 and was 50 per cent complete at the close of the month. Six men are employed, two of whom are regular employees. They are worked 8 hours a day, 5 days a week. The new men are paid 45 cents per hour, foreman 55 cents per hour; no deductions.

Project NR-7, Halemauman-Uwekahuna-Bird Park Road, was begun by the contractor October 24. The Bureau of Public Roads resident engineer for this job, Mr. Nathan Gordon, and his levelman, Mr. T. A. Tatterson, arrived October 11 with Mr. H. L. Handley to stake out the job.

Project NR-7, Haleakala Road, was begun by the same contractor (E. E. Black, Ltd.) at approximately the same time. Engineer Handley, accompanied by Levelman Harry H. Hayakawa and Rodman Sam Makua, Jr., left here October 18 for that job, taking with them NPS Car #1134.

300 Activities of Other Agencies in the Park

310 Public Service Contractors

On October 17 a conference was held at a luncheon at the Volcano House on the subject of an electric power plant to supply current to the various establishments in Hawaii National Park. The heads of the Kilauea Military Camp, Geological Survey, and Park Service attended as the guests of Mr. George Lycurgus.

313 Schedule of Rates

Both Kilauea Volcano House and the Volcano Photo Studio requested no changes for the season of 1934, and this information has been forwarded to your office. The Inter-Island Steam Navigation Company submitted a schedule of rates, slightly lower than last year, for tourist trips to Hawaii National Park.

320 Cooperating Government Agencies

The Bureau of Prohibition on October 25 transferred confiscated property as follows: 5 copper pipes, 1 copper boiler, 2 five-gallon empty bottles, 1 one-gallon empty bottle.

330 Cooperating Non-Government Agencies

Arrangements were made with the Standard Oil Company to provide the Bureau of Public Roads engineering party on the Haleakala project with gasoline at the Government rate; namely, $0.0604 per gallon in 50-gallon barrels f.o.b. Kahului.

DOCUMENT CAPTURED AS RECEIVED

400 Flora, Fauna and Natural Phenomena

410 Ranger, Naturalist and Guide Service

Rangers Lowery and Peck measured the lengths, widths, and depths of the various craters in the Kilauea Section during the month. On October 24 Ranger Lowery conducted a survey of koa conditions in Bird Park and submitted a very interesting illustrated report. The ranger force did the usual routine duties, and in addition painted traffic lines and signs and tested fire equipment.

In addition to 3,621 contacts in the park, Park Naturalist Doerr contacted more than 2,000 persons in seven lectures given outside the park during the month. During the visit of Secretary Swanson an illustrated lecture on volcanoes was given on board the Indianapolis to 650 officers and enlisted men; on October 13 a lecture on Hilo lawns and gardents was given to about 1,200 persons; on October 14 he was the guest speaker of the Hilo post of the American Legion, speaking on "The Life of President James Monroe"; and he gave lectures four times to his extension class in Hilo.

440 Insect Control

A report on insect conditions in Hawaii National Park was sent to the Chief of Division of Education and Forestry.

480 Natural Phenomena

Slides and rock falls continued intermittently at Halemaumau fire pit, although there was no other visible indication of movement. Crack measurements showed normal motion in the rim fissures. There was much discussion in the press about a coming eruption.

Considerable excitement was created October 20 when, at 10:32 a.m., a construction crew on the Pun Huluhulu Trail felt a small shock and heard a booming noise to the east, accompanied by a low rumble as of ground movement. Reconnaissance of the ground by E. G. Wingate and A. E. Jones disclosed no changes between Makaopuhi and Napau craters. Wingate later found two recent slides in Alealea Crater. The recorded distance of a tremor registered at this time at the Observatory corresponds with the distance to this crater. The blast-like sound was heard by Mr. Albert MacKenzie, near the 28-mile post, and by H. Yasunaka at Halemaumau at the time mentioned.

On October 7 strong southwest tilt began at the southwest clinoscope.

The Observatory instruments recorded seismic motion as follows:

Tremors,	146
Very Feeble earthquakes,	20
Slight,	1
Moderate,	3
Distant,	2

Microseismic motion varied from light to strong; tilt was slight NE to N, SE, E, and NE, by weeks.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

500 Use of Park Facilities by the Public

510 Increase or Decrease in Travel

The total travel for October was 39,259, compared with 8,031 for a year ago. This represents an increase of 388.84 per cent.

520 Conditions which affect travel

The Kilauea Military Camp has obtained several pieces of new transportation equipment and is now able to offer trips about the park and the island, to military personnel, at less cost than trips could previously be made by camp visitors. This has resulted in increased numbers of visitors at the camp to enjoy the facilities offered.

530 Visitors

Hon. Claude A. Swanson, Secretary of the Navy, October 7 and 8. With him were Capt. H. R. Stark, USN, Aide to the Secretary; Capt. E. L. Woods, USN, medical officer.

George Herman "Babe" Ruth, Mrs. Ruth, and their daughter, Judy, Oct. 29.

Mrs. D'Arcy Northwood (Shirland Quinn, author).

Lorrin A. Thurston, president and manager, Honolulu Advertiser.

Mr. and Mrs. Chandler, of the Scripps-Boothe news syndicate.

Guy Davenport, manager, Moana Hotel, Honolulu.

Edna Best (actress--Mrs. Marshall), of Cecille B. DeMille motion picture party, producing "Four Frightened People," all scenes of which were taken on this island.

Rear Admiral J. N. Greenslade, commander of submarine force of the United States fleet.

Capt. H. W. Osterhaus, commander of Submarine Squadron No. 4, of Pearl Harbor navy base.

E. S. Wheeler, principal highway engineer, Bureau of Public Roads.

A. T. Bidwell, Commander, USS Bushnell, submarine flagship.

Capt. and Mrs. T. Withers, chief of staff.

Cristy Brothers Circus personnel. Given special attention, and in return invited park staff to attend circus as their guests.

600 Protection

620 Fire Protection

At Haleakala, Maui, a brush fire burned during a large part of October on the west side of Kaupo Gap. Citizens have been fighting the fire, but are handicapped because of the water situation. It is understood that the fire has crossed the park boundary, and investigation is being made to ascertain just what the situation is.

A fire drill was held at the power plant of the Volcano House to test all equipment, October 10. Later the Park Service equipment was tested.

640 Destruction of Predatory Animals

Hunting in the park was closed until October 21, when a hunt for goat meat for the unemployed was conducted by County officials, assisted by Army riflemen. Five wild pigs and 37 wild goats were destroyed.

HAWAII NATIONAL PARK

DOCUMENT CAPTURED AS RECEIVED

900 Miscellaneous

The death of former Governor Wallace Rider Farrington on October 6 was a distinct loss to the Park Service. Governor Farrington was always willing and anxious to serve the interest of the park, and through his paper, the Honolulu Star-Bulletin, much favorable publicity has been received. Governor Lawrence M. Judd, who had expected to visit the park with Secretary Swanson's party, was obliged to return to Honolulu by plane because of Mr. Farrington's death after the Indianapolis had left Honolulu. Governor Farrington visited the park many times in recent years. He was a member of the Board of Directors of the Hawaiian Volcano Research Association.

Mrs. John E. Doerr, Jr., wife of Park Naturalist Doerr, who is conducting, for the University of Hawaii, an extension class at Pahala in the principles of design and theory of color, gave a lecture October 11 to the Hilo Woman's Club on "Textiles in Home Decoration." Her lecture was illustrated with beautiful exhibits of draperies and upholsteries supplied by Honolulu and Hilo merchants.

The financial situation of the Territory of Hawaii is causing considerable worry to the citizens of the Territory. In Honolulu there have been meetings of the Taxpayers' Association to discuss the problem.

In response to the request of your office, 17 oaths of office were transmitted under date October 31 for the appointive personnel of this park, to cover the period of reorganization not to exceed three months from October 1, 1933. Just at this writing a radiogram was received stating that permanent status was restored effective November 1.

Mr. Frank F. Fischer entered on duty October 9 in the position of Senior Laborer (Mechanic), vice Fred A. Waltjen, who had been temporarily appointed pending establishment of a register. Mr. Fischer has had long service as a mechanic in the commercial world, having started when a boy in the stock room of the Packard Motor Car Company.

Mr. Sadaichi Kawasaki entered on permanent appointment September 16 as Senior Laborer (Carpenter), a position he had been occupying under temporary appointment prior to that time,

Park Naturalist John E. Doerr, Jr., served through the season of 1933 as a member of the Board of Judges in the City-Wide Yard and Garden Contest of Hilo.

Efforts are being made by the Superintendent, with the cooperation of Hilo civic organizations, to beautify the Volcano Road, which connects Hilo and the park.

At the close of the month word was received of my transfer as Superintendent of Mesa Verde National Park, effective November 16, to be succeeded here by Edward G. Wingate, Associate Engineer of the Geological Survey on Dr. Jaggar's staff.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

This will, therefore, be my final report as Superintendent of Hawaii National Park. My three years here in charge of this park have been very interesting ones. I have enjoyed the work, and I have a sense of satisfaction in the realization that the park has made more progress in the last three years than at any other time in its history. I know that this has been due to the wonderful support that I have received from the Director and everyone in the Service. The foundations have been laid now for a satisfactory and successful administration and development.

Perhaps more important than anything is the fine, friendly feeling that has been developed for the National Park Service and the staff here. Expressions of regret at my leaving have been voiced on every side. The Hilo Tribune-Herald of November 4 carried an editorial of which I am very proud, and I am attaching a copy to this report.

Very respectfully,

E. P. Leavitt

E. P. Leavitt,
Superintendent.

Inclosures.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

A WORTHY RECORD

The passing of our friends to distant parts is an occasion of sadness somewhat mollified by its recurrent frequency; but the entire island is anticipating with sincere regret the departure of Ernest P. Leavitt, superintendent of Hawaii National Park, and Mrs. Leavitt.

We have come to know Mr. Leavitt as a man of friendly spirit and noble character, whose shrewd insight into the policies of the park service, based on 20 years of instructive experience, has transformed Hawaii National Park into one of the great scenic meccas of the world.

Hawaii was fortunate in getting such a man to come here; and in three years he has lived among us his activities in securing federal appropriations for improvements in the park have won the admiration of all.

Prior to Mr. Leavitt's arrivel, the park had not received any appreciabl national appropriations. Since then, purely through his efforts, it has obtained 16 miles of paved road on this island, and two projects are now on the way, one planning four and one half miles of road here and one calling for twelve miles of paving on Maui.

These three projects brought from the federal government an appropriatio of $580,000, in round numbers. The funds were obtained only because Mr. Leavitt had anticipated in advance the releasing of federal money, and had completed and filed his plans for improvement in time to be first on the list.

Mr. Leavitt has added 50 miles of trail in the park, has built six house for permanent employees, constructed an administration building, machine shop, light plant and reservoir on this island. He has also caused expenditure of money for many minor improvements.

The staff of permanent employees he increased from six permanent civil service, to 16. He added three resident highway engineers, and maintained a per diem staff of five to 50 men working constantly on trails, roads and buildings.

Speaking with intrinsic modesty, Mr. Leavitt expressed his convictions that his success here was due in great part to the sincere cooperation of his staff and the community; and feels that anyone in such a position can succeed with similar cooperation.

He displayed a quality of fairmindedness in interest in community affairs, wherein he took an active part, that impressed all his fellow citizens. He has been an inspiration to the staff in his efficient method of handling the matters at his disposal; his influence was felt not only in the National park but throughout the whole chain of islands.

Mr. Leavitt's personal honors, achived in Hawaii, are many and varied. He has been president during the past year of the Federal Business Men's association for the island of Hawaii.

He is an honorary member of the Hilo Chamber of Commerce and the Chamber of Commerce of Maui. He is at present vice president of the Hilo Rotary club, and has taken great interest in Masonic affairs on this island.

His staff was visibly moved when notified of his orders to leave next month for Mesa Verde National Park in Colorado. It is possible that the residents in and near the Colorado park do not appreciate at present the calibre of the man who is to be the new superintendent; but the finest compliment we can pay Mr. Leavitt is our assurance that it will not be

DOCUMENT CAPTURED AS RECEIVED

long before the Coloradans will be as happy in his friendship as we have been for the last three years.

And ever the old order changeth, yeilding place to new. Thus we find ourselves heartily welcoming as the new park superintendent, E. G. Wingate, who has up to the present time been topographical engineer at the volcano observatory; and wishing him, in the future, all the success that has attended Mr. Leavitt's regime. Mr. Wingate's worth has been recognised by the federal government, and we congratulate him upon his appointment.

--------o--------

DOCUMENT CAPTURED AS RECEIVED

Form No. 1009—Met'l.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

COOPERATIVE OBSERVERS' METEROLOGICAL RECORD:

Month of October, *193*3; *Station,* Hawaii Nat'l Park; *County,* Hawaii

State, Hawaii; *Latitude,* ; *Longitude,* ; *Time used on this form,* ; *Hour of Observation,*

DATE	TEMPERATURE: Maximum (1)	Minimum (2)	Range (3)	* Set Max. (4)	PRECIPITATION: Time of Beginning (5)	Time of Ending (6)	†Amount (7)	Snowfall, in Inches (8)	Depth of Snow on Ground at Time of Observation (9)	Prevailing Wind Direction (10)	Character of Day, Sunrise to Sunset (11)	‡ Miscellaneous Phenomena
1	71	51	20	64			T	83	Lt.	NE	Clear	
2	71	53	18	64			.01	73	"	"	"	
3	69	-	-	60			.07	91	"	"	"	
4	70	53	17	58			.00	89	Mod.	"	"	
5	70	52	18	64			.02	80	"	"	"	
6	66	52	14	60			T	83	"	"	"	
7	71	51	20	63			.01	70	"	"	"	
8	63	54	9	57			.01	88	Lt.	"	Pc	
9	62	54	8	59			.13	90	"	"	Cloudy	
10	69	53	16	61			.06	84	"	"	PC	
11	73	58	15	63			.09	79	"	SW	Cloudy	
12	68	57	11	60			.18	91	"	NE	PC	
13	67	51	16	59			.02	86	Str.	"	"	
14	67	52	15	56			.05	94	Lt.	"	"	
15	71	51	20	63			T	78	"	"	Clear	
16	72	54	18	60			T	89	"	"	PC	
17	70	54	16	63			.01	85	"	SE	"	
18	72	60	12	61			.01	93	"	NE	"	
19	78	54	24	67			T	90	"	"	"	
20	74	62	12	65			.05	92	"	"	"	
21	76	54	22	73			.01	89	Lt.	"	Clear	
22	74	59	15	65			001	95	"	"	PC	
23	67	61	6	63			.47	91	"	"	Cloudy	
24	75	56	19	62			.03	87	"	SW	"	
25	72	54	18	70			T	75	"	NE	PC	
26	67	51	16	60			.19	84	Mod.	"	Clear	
27	66	53	13	62			T	89	"	"	PC	
28	70	51	19	64			.01	82	Lt.	"	"	
29	65	53	12	60			T	89	Mod.	"	Cloudy	
30	73	57	16	61			.01	90	"	"	"	
31	70	55	15	62			.22	89	Lt.	"	PC	
Sum	2169	1630	470	1929			1.67	2668				
Mean	72.30	54.33	15.67	62.23			.05	88.66				

* Reading of maximum thermometer immediately after setting.
† Including rain, hail, sleet, and melted snow.
‡ Thunderstorms, halos, auroras, etc.

(IN TRIPLICATE) See cover for instructions.

8—252
U. S. GOVERNMENT PRINTING OFFICE: 1930

, *Cooperative Observer.*

Post Office Address,

MONTHLY SUMMARY

TEMPERATURE

Mean maximum, 72.30

Mean minimum, 54.33

Mean, 63.31

Maximum, 78 ; date, 19 Dates: 1,7,13,15,26,28

Minimum, 51 ; date,

Greatest daily range, 24 ; date, 19

PRECIPITATION

Total, 1.67 ; inches ; greatest in 24 hours .47

Date, 23

SNOW

Total snowfall, inches

On ground 15th, inches

At end of month, inches

NUMBER OF DAYS—

With .01 inch or more precipitation, 22

Clear, 10 ; partly cloudy, 15

Cloudy, 6

DATES OF—

Fog: Light, ; Dense,

Killing frost,

Thunderstorms,

Hail: Light, ; Moderate, ; Heavy,

Sleet,

Auroras,

REMARKS:

Oct. 3 minimum temp. not recorded.

DOCUMENT CAPTURED AS RECEIVED

10-157
(July, 1929)

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

TRAVEL REPORT

Hawaii National Park for the month of October 1933

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year	
					Number	Percent
FRIVATE TRANSPORTATION:						
Cars first entry, ...						
Cars reentry, ...						
Motorcycles, ...						
Total motor vehicles, ...						
Persons entering via motor vehicles, ...	38,617	38,617	7,540	7,540	31,077	412.16
Persons entering via other private transportation, ...	166	166	244	244	78	3197
Total persons entering via private transportation, . . .	38,783	38,783	7,784	7,784	31,001	398.27
OTHER TRANSPORTATION:						
Persons entering via hotels, .	476	476	247	247	229	93.93
Persons entering via trains, .						
Persons entering otherwise, . .						
Total other transportation, .	476	476	247	247	229	93.93
GRAND TOTAL ALL VISITORS, . . .	39,259	39,259	8,031	8,031	31,228	388.84

	This Year	Last Year	Increase	
			Number	Percent
Automobiles in public camps during month, ...	0	2		
Campers in public camps during month, ...	0	14		

Visitors at Hilina Pali shelter, 20
" " Mauna Loa " 12

DOCUMENT CAPTURED AS RECEIVED

10-158

'PARTMENT OF THE INTERI

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Hawaii National Park for the Month of October 1933

Description of Projects		Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
502.8	Auto Trail to Kipuka Kulalio Water Tanks	95	0	0	
507.9	Shoulders on roads, and parapet walls	98	0	3	
507.11	Bird Park Road	100	5	95	
507.12	Hilina Pali Road	95	0	0	
507.13	Road repair over Earthquake Crack	85	85	0	
FP 161.14	Employee's Quarters	75 85	60	10	
FP 101.8	Puu Huluhulu Trail	50 98	50	0	
102.8		20			

DOCUMENT CAPTURED AS RECEIVED

45334

10-215
(July, 1928)

UNITED STATES
DEPARTMENT OF THE INTERIOR
National Park Service

Hawaii National Park

REPORT OF NON-APPOINTED PERSONNEL
(TEMPORARY)

Changes outside the District of Columbia for the month of October 1933

Total at beginning of month	Additions	Separations	Net Gain or loss (a)	Total at ending of month
0	8	0	8	8
NOTE: No reductions.				

(a) If loss, indicate by minus sign.

DOCUMENT CAPTURED AS RECEIVED

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Hawaii National Park for the Month of October 1933

	This Month		This Month Last Year	
	Appointed	Non-Appointed	Appointed	Non-Appointed
Number of employees beginning of month	16	0	12	10
Number of additions	1	8	0	1
Total	17	8	12	11
Number of separations	1	0	0	3
Number of employees close of month	16	8	12	8
Number of promotions during month	0	0	0	0
Aggregate amount of annual leave taken	0	0	0	0
Aggregate amount of sick leave taken	0	0	0	0
Aggregate amount furlough without pay	0	0	15½	0

DOCUMENT CAPTURED AS RECEIVED

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

.....Hawaii..... National Park for the Month of ...October 1933.....

	This Year	Last Year
Park revenue on hand beginning of month, ...	0.00	0.00
Received, ...	0.00	41.35
Total, ...	0.00	41.35
Remitted, ...	0.00	41.35
On hand close of month, ...	0.00	0.00

Park revenues received this year to date, ...	125.00
Park revenues received last year to date, ...	436.33
~~Increase~~, ...	~~311.33~~
Per cent of increase, ...	~~71.34~~

DOCUMENT CAPTURED AS RECEIVED

10-161

:PARTMENT OF THE INTERI

NATIONAL PARK SERVICE

REPORT OF SALES OF PUBLICATIONS

	Number	Value
GOVERNMENT PUBLICATIONS:		
On hand beginning of month,	939	136.65
Received during month,	0	0.00
Total,	939	136.65
Sold during month,	9	5.70
On hand at close of month,	930	130.95
NON-GOVERNMENT PUBLICATIONS:		
On hand beginning of month,		
Received during month,		
Total,		
Sold during month,		
On hand at close of month,		

Cash on hand beginning of month,	14.94
Sales during month,	5.70
Total,	20.64
Remitted during month,	9.26
Balance,	$11.38

HAWAII NATIONAL PARK

DOCUMENT CAPTURED AS RECEIVED

STATISTICAL REPORT NO. 8

HAWAII NATIONAL PARK

Finance and Accounts

Symbol	Appropriation	Allotted	Expended & Obligated	Balance
44415.3	Salaries & Expenses, Hawaii National Park, 1934:	11,000.00	23,451.80	RE 12,451.80
44406.3	Forest Protection and Fire Prevention, Office of Natl Parks, B. & R.	520.00	134.61	385.39
4X436.3	Roads & Trails, Office of Nat'l Parks, Buildings & Reservations	27,745.34	26,708.30	1,037.04
44415	Hawaii National Park, 1934:	2,859.72	2,859.72	0.00
42/3415	Hawaii National Park, 1932-'33:	49,350.00	49,337.53	12.47
42/3405	Emergency Reconstruction and Fighting Forest Fires, Nat'l Parks, 1932-33	97.05	97.05	0.00
42/3406	Forest Protection and Fire Prevention	430.00	430.00	0.00
4-03/5640.8	National Industrial Recovery, Int., National Parks Roads & Trails, 1933-'35	480,000.00	1,694.43	478,305.57
4-03/5640.14	National Industrial Recovery, Int., National Parks, Bldgs & Reservations	11,250.00	3,432.41	7,817.59

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

Office of National Parks, Buildings and Reservations.

October 5, 1933.

MEMORANDUM FOR THE PRESS
By E P Leavitt

HAWAII NATIONAL PARK, OCTOBER __ The Hawaii National Park saved $5,273.40 from its annual appropriation of $49,860 for the fiscal year ended June 30, 1933, and returned it to the Treasury. This was the contribution of the park towards economy in operation and efforts to balance the Federal budget. The amount was made up of 15 per cent deductions from salaries and wages paid to park employees, and by letting certain regular and seasonal positions remain unfilled.

Although tourist travel to the park has been light, local travel has been heavier than ever before with a total of 70,221 cars and 237,590 persons for the travel year ended September 30, 1933. This compares with 32,204 cars and 139,663 persons in 1932. The per cent of increase is 70.19.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

Office of National Parks,
Buildings and Reservations.

October 15, 1933.

MEMORANDUM TO THE PRESS

By E. P. Leavitt

E. P. Leavitt, Superintendent.

HAWAII NATIONAL PARK, October _____ (Special). The Secretary of the Interior approved the contract with E. E. Black, Ltd., for the construction of Hawaii National Park Project NR-4, Halemaumau-Uwekahuna-Bird Park Road, on September 30, and the contractor has been called upon to commence work in accordance with contract, plans, and specifications. The amount involved is $93,855.31.

On October 10 the Secretary of the Interior approved the proposal of E. E. Black, Ltd., for the construction of Hawaii National Park Project NR-7, Haleakala Road, Island of Maui, and the contractor has been given notice to commence work in accordance with the contract, plans, and specifications. The amount involved is $367,068.32.

Resident Engineer Nathan Gordon will be in charge of the Halemaumau-Bird Park Road engineering as the representative of the Bureau of Public Roads. He is already on the job with a crew staking out the work. Resident Engineer H.L.Handley will be on the Haleakala project, and has already staked out sufficient work to enable the contractor to commence operations.

E. S. Wheeler, Principal Highway Engineer of the Bureau of Public Roads has given official notice to the contractor of the approval of his contracts, and has directed him to start operations within 10 days.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

Office of National Parks,
Buildings and Reservations.

October 15, 1933.

MEMORANDUM TO THE PRESS

By E. P. Leavitt
E. P. Leavitt, Superintendent.

HAWAII NATIONAL PARK, October ____ (Special). A radio message just received by Superintendent E. P. Leavitt from Thomas C. Vint, Chief Landscape Architect of the National Park Service, San Francisco, advises that Assistant Landscape Architect Merel S. Sager has been detailed to Hawaii National Park to supervise the landscape features on the road construction jobs at Haleakala and at Kilauea, for which Mr. E.E.Black has the contracts.

Mr. Sager will arrive in Honolulu on the Monterey on October 23. He will spend a day or two with Mr. E. S. Wheeler, Principal Highway Engineer of the Bureau of Public Roads, and will then proceed to Hilo.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
OFFICE OF NATIONAL PARKS, BUILDINGS AND RESERVATIONS
HARAII NATIONAL PARK
HAWAII

October 26, 1933.

GENERAL OFFICE ORDER NO. 23

SUBJECT: RANGER DUTIES AT ADMINISTRATION BUILDING (AUGMENTING AND PARTIALLY REVISING GENERAL OFFICE ORDER NO. 4

The ranger assigned for duty at the Administration Building will perform the following routine in addition to duties outlined in General Office Order No. 4 of July 20, 1932.

1. At 12 noon read automatic traffic counter and record on form provided.

2. If judged necessary on days unusually chilly or damp, light oil heater in clerical office.

3. In addition to routine sweeping and dusting, mop floors periodically.

4. Issue permits, in accordance with existing regulations, to persons making application for permission to hunt, pick berries, and use rest houses or campgrounds at Mauna Loa, Kipuka Nene, Hilina Pali, and Public Campgrounds.

5. Keep special record of wild animals destroyed, number of persons given hunting or camping permits, daily weather, and lost and found articles.

6. Keep notes of any events that might be required for monthly reports.

7. Upon arrival of A rmy or Navy transports, ascertain the number of enlisted men brought as visitors, and take to Camp Librarian sufficient park information circulars for distribution to each man. (Use 1933 as we have a surplus.)

8. Issue Rui o Pele membership certificates and pins. Turn in receipts or membership fees to Chief Clerk.

9. Attend to visitors, see that they register, and make proper display of publications for sale, turning in receipts as directed above. Make appropriate distribution of free literature.

10. Compile motor vehicle cost data monthly.

11. Do plain copying on typewriter as required.

12. On Saturdays, wind office clock and check time with Hilo telephone operator.

DOCUMENT CAPTURED AS RECEIVED

13. Search newspapers for references to the park, or to matters of interest to the park, then clip, mount, and assemble in a bound monthly file.

E. P. Leavitt,
Superintendent.

DISTRIBUTION:

Rangers	6 copies
Monthly Report	7 "
Director	1 copy
Superintendent	1 "
Chief Clerk	1 "
Park Naturalist	1 "
Foreman	1 "
Files	1 "

DOCUMENT CAPTURED AS RECEIVED

The Volcano Letter

No. 403—Monthly U. S. Geological Survey, Hawaii National Park SEPTEMBER, 1933

KILAUEA REPORT FOR SEPTEMBER, 1933

Including weekly press reports 1128 to 1132, August 27 to October 1, midnight.

Section of Volcanology, U. S. Geological Survey
T. A. Jaggar, Volcanologist in Charge

Volcanology

In Halemaumau September 1 there had been a slide from the east corner. At 10:59 a. m. September 23, rocks fell from the north wall, and the dusty track of a moderate slide southsouthwest was seen. The northeast wall of the greater crater Kilauea showed a yellowish-orange scar from a slide, about a half mile west of the Hawaiian Volcano Observatory. On September 26 all-day inspection of the pit recorded sliding at 10:09 a. m. from the south-southwest wall, making a voluminous dust cloud and much noise. On September 30, sliding was reported as beginning in the pit between 6 and 7 a. m. Dust from slides rising from the pit was noted at the Observatory at 8:12 a. m. and 8:30 a. m. and between 8:37 and 8:45 a. m. the pit as seen from Uwekahuna was full of dusty air.

Weekly rim crack measurements around the Halemaumau border by E. G. Wingate gave:—

September 2. Six crack points out of 29 showed slight widening, two were very slightly closed.

September 9. Six points out of 29 very slightly opened, two points very slightly closed.

September 16. Twelve points widened, out of 29, one point closed. Widening not confined to any one sector.

September 23. Six scattered points widened out of 29, one point closed very slightly.

September 30. Marking nails for crack measurement had been set at three new points on September 26, on the east and northeast rim of Halemaumau.

Measurement for the week showed very slight opening of six scattered points out of 32, and very slight closing occurred at 4 points.

Mr. Wingate reports transit measurement of the horizontal angle from the Hawaiian Volcano Observatory triangulation station, to the two stations representing the southeast-northwest diameter of Halemaumau, as follows, the figures being the change of angle since the last date. Minus is a closing of the angle, or an approaching of the two walls of the pit. Plus is an opening of the angle, or a widening of the pit.

August 29 to September 5, 7 days, 0.6 second minus
September 5 to September 18, 13 days, 1.5 seconds plus
September 18 to September 27, 9 days, 0.4 second minus

T.A.J.

Earthquakes

TABLE

Number of minutes of tremor; numbers of very feeble, feeble, and slight earthquakes; teleseisms or distant earthquakes; and local seismicity index as described in Volcano Letter 371.

Week ending	tr.	v. f.	f	sl.	tel.	seis.
September 3	42	3	1	0	1	13.00
September 10	49	1	0	1	2	14.75
September 17	19	6	0	0	0	7.75
September 24	58	5	0	1	1	19.00
October 1	44	3	2	0	1	14.50

Periods of continuous tremor occurred during four weeks out of the five. This vibration has a frequency of about 100 times a minute and is indistinguishable from the tremor found on the seismograph records during the times of lava fountaining in the pit of Halemaumau.

A very feeble shock, on August 31, occurred about 10 statute miles northwest of Hilo. Lat 19 48'N, Long. 155 12'W 24 miles deep.

A feeble shock, September 2, occurred 5 miles under Pali O Mamalu. Lat. 19 2'N, Long. 155 40'W, it was not reported felt.

A slight earthquake, Sepember 7, occurred about 27 miles deep, under Wood Valley. Lat 19 18'N, Long. 155 27'W it was reported felt at Uwekahuna by Doerr, and in Hilo by M. Campbell.

A tremor, 6:13 a. m. September 11, occurred at sea a short distance off of the west coast of Hawaii, and close to the possible extension of the Mauna Loa southwest rift line. Lat. 19 02'N, Long. 155 58'W.

A very feeble shock, 7 a m. September 11, was reported felt by Mair in Pahala. It occurred 7 miles north-northeast of Wood Valley, and about 7 miles deep. Lat 19 23'N, Long. 155 28'W.

A very feeble shock. Sept. 14 probably occurred under the sea a short distance of the Puna coast and south west of Kalapana.

A very feeble shock registered September 16, originated 10 miles west of Humuula.

A very feeble shock September 20, originated on the Mauna Loa northeast rift. It may have been one of many reported felt at Kapapala.

A slight earthquake September 21 apparently originated a short distance away from the Observatory, probably under the Kilauea southeast rift. It was not reported felt.

A feeble earthquake was recorded September 26, the location found was 8 miles east of Humuula, Lat. 19 42'N, Long. 155 23'W and 7 miles deep. It was felt in Papaikou, Honomu, Hakalau, Hilo, Olaa and Pahala according to reports sent in by H. Milne; J. B. Oliver; Hakalau Plantation; M. Campbell; and W. Mair.

A feeble shock was reported felt in Pahala by W. Mair September 28. It was located 7 mi. northeast of Kapapala, Lat. 19 22'N, Long. 155 27'W and about 9 miles deep.

A very feeble shock on September 30 was approximately located under the saddle between Mauna Loa and Mauna Kea.

A fair record of a teleseism began at 11:46:11 a. m September 6, and continued for 20 minutes. It was 2,934 statute miles away from he Observatory. The other teleseisms were partial, showing only the maximum or long waves.

The microseisms were moderate September 5, 9, 16, 18, 21 22, 23, 24, and October 1; they were light or subnormal during the remaining days of the month.

A.E.J.

Tilting of the ground

In the Table of Tilt below, the first column shows the net tilt by weeks, as computed from seismograms at the Kilauea Observatory, which is on the northeast rim of Kilauea crater, 2.2 miles from Halemaumau.

The second column shows the algebraic sum of the readings at three clinoscope cellars around Halemaumau pit, reduced each to its radial direction, outwards from and inwards toward the center of Halemaumau.

The Table represents the tipping of the ground, in seconds of arc, in the direction given.

At the Observatory, a NE reading is outward, a SW reading is inward.

The total accumulated tilt in the year since October 1, 1932 at the Observatory is 1.5" north and 0.7" west.

TABLE OF TILT

Date	Observatory	Halemaumau
Aug. 28 - Sept. 3	0.9" NE	1.3" outward
Sept. 4 - Sept. 10	0.7" NE	2.6" inward
Sept. 11 - Sept. 17	1.3" NNE	0.4" inward
Sept. 18 - Sept. 24	1.1" NNE	2.6" inward
Sept. 25 - Oct. 1	1.0" NNE	0.1" inward

E.G.W.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

Office of National Parks,
Buildings and Reservations.

October 7, 1933.

The Director,
Office of National Parks, Buildings and Reservations,
Washington, D. C.

Dear Mr. Director:

The following is the administrative report for Hawaii National Park for the month of September 1933.

000 General

Bids were opened on September 7 for construction of the Halemaumau-Uwekahuna-Bird Park Road, and on September 14 for construction of the Haleakala Road. E. E. Black, contractor, of Honolulu, was low bidder on both jobs and is making preparations to begin work.

Because of a radiogram received September 18 from the Director, stating that there was likelihood that the available balance in the roads and trails allotment would be impounded on September 30, and advising that it be expended, 34 unemployed laborers were hired, including three carpenters. Most of these were Hawaiians from Kurtistown who are occasionally hired by the County of Hawaii for road work.

The travel year closed on September 30 with a total of 237,690 visitors, representing an increase of 70.19 per cent. This may be the greatest increase shown by any park.

The University of Hawaii began nine extension courses during the month, four in Hilo, two in Honokaa, two in Kohala, and one in Pahala. The largest class, in General Geology, numbers 27 and is being instructed by Park Naturalist Doerr. Mrs. Doerr's class in Art at Pahala numbers 14. The registration of the extension course students was handled at Hilo by Mr. Doerr and Chief Clerk Higashida, the latter acting as bursar.

020 General Weather Conditions:
021 In the Park:
Weather in the park has been excellent, although a little too dry, and further increasing the fire hazard. Rainfall for the month totaled 3.40 inches, which compares with 1.65 inches for August and 6.74 inches normal. Maximum temperature was 74 degrees, minimum 52 degrees, with a mean of 61.64 degrees for the month. The greatest daily range was 21 degrees. Details are given on official Weather Bureau form attached.

DOCUMENT CAPTURED AS RECEIVED

100 Administration

110 Status of work

All work is up to date. Office work, however, is constantly increasing in volume, necessitating hard work and overtime.

120 Park inspections

121 By the Superintendent

The Superintendent kept in close touch with all park work during the month and made the following inspections: Mauna Loa Trail as far as the Six Tanks, Hilina Pali Road improvements, Bird Park landscaping, road and trail sign layout, and building of new employee's quarters.

While on a trip to Honolulu September 21-26 in connection with special confidential work for the Secretary of the Interior and the Assistant Secretary, contacts were made with Principal Highway Engineer E. S. Wheeler, Bureau of Public Roads, with whom was discussed the Haleakala and Halemaumau-Bird Park road projects, the survey crews, and the matter of accommodations on the Haleakala job; with Governor Lawrence M. Judd, with whom was discussed the matter of grazing on park lands, the right for which was reserved when the land was turned over to the Federal Government; the matter of adding the foot-prints area to the park and the plan that had been now worked out for handling cases to be taken before United States Commissioners, and plans for entertaining four Congressmen who were to fly over to the park on the 26th. A visit was made to Major Stanley L. Scott, NRA Administrator for the Territory for other than Federal projects, with whom was discussed rates of wages, hours of labor, and the adoption of a code. Contact was made with the Hawaii Tourist Bureau in connection with distribution of park circulars and the prospects of tourist travel.. A call was made on the Honolulu Chamber of Commerce in connection with the NRA codes, rates of wages, hours of service, etc., discussion being with a special committee. A visit was made to the office of Mr. Spud Murphy, recently elected President of the Honolulu Ad Club, to confer on the matter of new appointments to the Hui o Pele Committee. (The recent resignation of Mr. L. W. de Vis-Horton, chairman, and the sudden death of Mr. Henry Bredhoff, treasurer, leaves me the only remaining member of the committee. Request was made of Mr. Murphy to appoint me chairman of the committee, which he indicated he was willing to do, but he plans to enlarge the committee from three to five members.)

Contact was made with Major General Briant H. Wells, Commander of the Hawaiian Department, U. S. Army, regarding the visit of the four Congressmen who were to fly from Honolulu to Hilo in an Army plane. A call was made on Mr. B. Heflebower, Assistant Manager in Charge, Twelfth U. S. Civil Service District, Honolulu, and Civil Service matters discussed, especially the matter of new appointments that were pending. A brief call was made at the Inter-Island Steam Navigation Company's offices, and tourist business was discussed with Mr. W. M. Mitchell, General Passenger Agent. Likewise calls were made at the office of the Matson Navigation Company. (Four articles on Hawaii National Park by the Superintendent, for use in the "Polynesian", distributed daily on their liners, were prepared, and will appear in print at an early date.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

Contacts were made with the editors of the Honolulu Advertiser and the Honolulu Star-Bulletin. With Judge William B. Lymer was discussed the proposal to make use of the services of the nearest United States Commissioners when misdemeanors are committed in the park. This matter was also discussed with United States Attorney Sanford B. D. Wood. Both gentlemen were agreeable to the plan. Several other valuable contacts were made.

126 Congressional Committees
On September 26 Senator Edward P. Costigan, of Colorado, Senator James P. Pope, of Indiana, and Representative J. G. Schrugam, of Nevada, made an inspection of the Kilauea Section of the park by air. They arrived that morning in Honolulu on the Transport Republic. They made the trip and returned to Honolulu without landing.

130 Finance and Accounts
A statement of the park appropriations is attached as Statistical Report No. 8.

140 Labor Situation
Mr. H. A. Mountain, executive secretary of the Territorial Unemployment Relief Committee, reported September 20 that unemployment in Hawaii was increasing. For the Island of Hawaii expenditures for relief climbed in August from $1,688.25 to $4,186.25, an increase of $2,498. Expenditures decreased for the other islands.

150 Equipment and Supplies
During September the park acquired 800 feet of 1½-inch fire hose, miscellaneous hand tools, and miscellaneous building supplies.

170 Plans, Maps, and Surveys
A corner of the park located in the Kau Desert near the Halfway House on the Kau road was surveyed and marked. This boundary has always been indefinite.

The proposed Pun Huluhulu Trail was surveyed.

180 Circulars, Placards, Publicity Bulletins, etc.
Attached are copies of the Volcano Letter, press memoranda, and a General Office Order issued during September.

<u>200 Maintenance, Improvement and New Construction</u>

210 Maintenance
Considerable work was carried on, in addition to routine maintenance work, during the last part of the month in improving road shoulders by weeding and rebuilding where necessary.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

230 New Construction

Bids opened September 7 on construction of the Halemaumau-Uwekahuna-Bird Park Road were as follows:

E. E. Black, Honolulu,	$ 93,855.31
Peter Arioli, Hilo,	114,938.75
Charles H. Will, Hilo,	131,193.90
Hawaiian Contracting Co., Honolulu,	139,356.25

Bids opened September 14 for construction of the Haleakala Road were as follows:

E. E. Black, Honolulu,	$367,068.32
Charles H. Will, Hilo,	371,084.82
Hawaiian Contracting Co., Honolulu,	443,892.78

Continuing publicity on the Mauna Loa road project, the Honolulu Advertiser on September 16 carried another article, with maps and pictures, urging construction.

A camp house, stable, and feed room was constructed at Six Tanks on the Mauna Loa Trail, utilizing the rain shed as roof.

260 Landscape Work

Extermination of exotic plants was continued, as well as general weeding and clean-up around headquarters.

300 Activities of other Agencies in the Park

310 Public Service Contractors

311 Character of service rendered to the public

Two dances were held at the Volcano House, one on September 16 and the other on September 30. The first, attended by a small group of about 100 persons, was well behaved, but the second dance, with a larger group, showed some evidence of drinking.

A schedule of special rates at the Volcano House was submitted September 9, as follows:

Commercial rate, per day,	$5.00
Week-end rate, Sat. dinner, to Mon. breakfast,	8.00
Weekly Rate, minimum,	21.00
Monthly " "	75.00
Summer School rate (6 weeks),	90.00
Transient meals:	
Breakfast,	1.00
Lunch,	.75
Dinner,	1.25
Riding horses,	
Per hour,	1.00
" day,	3.00
Automobile rental, per mile,	.10

DOCUMENT CAPTURED AS RECEIVED

320 Cooperating Government Agencies

The USAT Royal T. Frank began a new schedule of fewer trips between Honolulu and Hilo, only six being planned for the quarter ending December 31. The Kilauea Military Camp and Army authorities have worked out a plan with the Navy people by which supplementary trips will be made by Navy ships. This service is of great value to the people of the Island of Hawaii because of supplementing the regular semi-weekly mail service, and to the park because of transportation facilities offered to visitors at the Kilauea Military Camp and Navy Health and Recreation Camp.

After negotiations extending over a period of several weeks, the park has been able to work out a plan with the Kilauea Military Camp by which the Park Service and the Geological Survey obtain kerosene on the Army contract (in Honolulu). By this method we are able to obtain this fuel delivered at the park at a saving slightly above 6 cents per gallon, the best local price available being 17 cents per gallon. The first shipment under the new scheme arrived September 20.

330 Cooperating Non-Government Agencies

After being addressed by the Hawaii Tourist Bureau stencils in Honolulu, 1,226 envelopes containing circulars of general information on Hawaii National Park were mailed to tourist agencies in the United States, Canada, Cuba, Mexico, and the Philippines.

In a report made public by the Hawaii Tourist Bureau during the month, the statement is made that despite the fact that travel throughout the world was at its lowest ebb, more than 27,000 cabin passengers visited Hawaii during the year 1932. It is estimated that these visitors brought over $4,000,000 into the Territory, contributing materially to alleviate effects of the depression in Hawaii. The report indicates that the Bureau appropriated $8,000 of its funds to defray expenses of the Foreign Trade Conferences, $5,000 to assist in unemployment relief, established a new visitors' club for the convenience and recreation of tourists, and rendered to local residents at home or traveling abroad services too numerous to mention. The Bureau made considerable effort to stimulate travel to the other islands by visitors usually remaining at Waikiki.

340 State, County, or Municipal Legislation affecting Parks

The park is endeavoring to stimulate the interest of motorists and pedestrians of Hawaii in the new traffic code for the Island of Hawaii (because this code applies to Hawaii National Park), particularly two rules which require pedestrians to walk on the left-hand side of paved highways so as to face fast traffic, and which require automobiles to be parked off the paved sections of highways whenever it is possible to do so. The assistance of the local press and civic organizations has been obtained.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

400 Flora, Fauna and Natural Phenomena

410 Ranger, Naturalist and Guide Service:

There were 9 lectures to 266 persons at Uwekahuna, 2 extension course lectures to 56 persons, 14 park tours with 33 cars and 258 persons, and 8 field trips with an attendance of 72. The total contacts made was 1,074.

420 Museum Service:

Museum attendance was 422.

480 Natural Phenomena:

The Volcano Observatory of the Geological Survey reports the usual sliding at Halemaumau fire pit, with small slides the latter part of the month confined to the south-southwest side. Two additional crack points were marked, bringing the total of marked measuring points to 32. Cracks recently marked have three measuring points each so as to be able to measure movement parallel, horizontal, and vertical, as well as opening and closing. Light blue fume is visible at times. Sulphur stain is slowly increasing.

The instruments recorded seismic motion as follows:

Tremors,		116
Very Feeble Earthquakes,		13
Feeble	"	8
Slight	"	2
Distant	"	3
		142

There were also numerous spells of continuous tremor, one being of 19 minutes duration.

Microseismic motion was largely light. Tilting of the ground was mainly slight for the month and northeast in direction.

500 Use of Park Facilities by the Public

510 Increase or Decrease in Travel:

Total travel for the month of September was 37,597, compared with 44,845 for August and 7,154 for September 1932. The total for the travel year ended September 30 was 237,690, which is 98,027 greater than last year, or an increase of 70.19 per cent.

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

530 Visitors

Mr. and Mrs. Charles Goodall, Young Hotel, Honolulu. As an exchange of courtesies, they were given special attention.

Brig. Gen. John F. Madden, Schofield Barracks, accompanied by five other Army officers.

600 Protection

620 Fire Protection

Nine fire hydrants were installed at strategic points along our water supply system.

An allotment of $3,000 was received for fire prevention and fire fighting work, and $1,000 for elimination of fire hazards in buildings.

630 Accidents

There were two cases of assistance to motorists with minor trouble.

On the evening of September 16, Ranger Eaton was called by a visiting soldier at the Military Camp, who was all out of breath from running from the top of the old trail into Kilauea Iki, a distance of about a mile and a half, who informed Mr. Eaton that two other soldiers were marooned below the edge of the cliff because one of them was so stout he could not crawl over an overhanging rock, and because darkness had overtaken them, they could not go either way.

Ranger Eaton got a rope and accompanied the soldier to the scene. He crawled down the rope with a flashlight, and was able to assist both men in getting up the cliff. Both Ranger Eaton and one of the soldiers he rescued received a few minor cuts and bruises from dislodged stones falling on them.

There was formerly a long chain to enable visitors to negotiate the cliff above the steep talus slope, but the support of the chain had rusted so badly that the chain was removed, operating to close the trail from above. But the soldiers had entered Kilauea Iki Crater by what is known as the new trail, and had seen the shorter way out of the crater by the steep old trail.

640 Destruction of Predatory Animals

There were 160 wild goats, 13 wild pigs, and 2 wild donkeys killed.

650 Signs

A number of signs were repainted or renewed. An order was placed with an Oakland firm for several enamel signs of standard dimensions.

HAWAII NATIONAL PARK

DOCUMENT CAPTURED AS RECEIVED

900 Miscellaneous

The regular quarterly meeting of the Hilo Federal Business Association, of which the Superintendent is president, was held on September 1 at the Federal Building in Hilo. Business discussed included savings to the Government through Federal coordination, possible abolition of the Federal coordinating service, change in quorum from 10 to 5 because of decrease in membership, etc. The members voted to continue activities, whether or not the coordinating service was abolished.

A son was born September 10 to Mr. and Mrs. Austin E. Jones. Mr. Jones is seismologist at the Geological Survey's observatory in the park. This is the Jones' fourth child, three being boys.

Suspension of Ranger Everett Brumaghim from duty and pay was approved by Washington subject to investigation of charges. Charges were accordingly formally placed against Ranger Brumaghim and were admitted by him to be true.

On September 12 you were advised that no changes were suggested in the rules and regulations for Hawaii National Park.

The capital stock of the Hilo Electric Light Co., Hilo Gas Co., and Inter-urban Electric Co., which amounts to $775,000, was sold by mainland interests to other mainland interests, although it had been hoped that local interests would be able to gain control. As you know from correspondence, we were hoping for local control of the Hilo Electric Light Company because the management of that company was desirous of extending their power lines to the park, but was not able to do so under the former ownership. The attitude of the new owners has not yet been learned.

Ten silversword plants, each about two inches in height, which were raised by Ranger Everett Brumaghim of Hawaii National Park through a germinating process discovered by him after much careful study, were sent to the Imperial Botanical Museum in Japan via the training ship Taisei Maru, which left Hilo for Yokohama on September 3. The plants were previously presented to Dr. E. Yoshimura, of Hilo, with the permission of the Superintendent. This is believed to be the first time the rare silversword has been sent outside of Hawaii.

Very respectfully,

E. P. Leavitt

E. P. Leavitt,
Superintendent.

Inclosures.
RH

HAWAII NATIONAL PARK
HAWAII

DOCUMENT CAPTURED AS RECEIVED

Form No. 1009—Met'l.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

COOPERATIVE OBSERVERS' METEROLOGICAL RECORD:

Month of September, 193[illegible]; *Station,* Hawaii Nat'l Park; *County,* Hawaii

State, Hawaii; *Latitude,* ; *Longitude,* ; *Time used on this form,* ; *Hour of Observation,*

DATE	TEMPERATURE Maximum 1	Minimum 2	Range 3	* Set Max. 4	PRECIPITATION Time of Beginning 5	Time of Ending 6	†Amount 7	Snowfall in Inches 8	Depth of Snow on Ground at Time of Observation 9	Wind Prevailing Wind Direction 10	Character of Day, Sunrise to Sunset 11	‡ Miscellaneous Phenomena
1	72	54	18	18			.01	75	Mod.	NE	PC	
2	70	55	15	66			.14	82	Lt.	"	"	
3	67	54	13	56			.23	91	Mod.	"	Cloudy	
4	63	52	11	55			.01	88	Lt.	"	PC	
5	71	53	18	63			.11	85	"	"	"	
6	70	55	15	63			.03	94	Str.	"	"	
7	66	57	9	62			.14	95	Lt.	"	"	
8	67	56	11	59			.17	92	"	"	"	
9	70	53	17	63			.02	86	"	"	"	
10	73	58	15	65			.02	85	"	"	"	
11	69	52	17	58			T	96	Str.	"	"	
12	69	54	15	63			T	86	"	"	"	
13	65	57	8	59			.88	96	Lt.	"	Cloudy	
14	65	55	10	57			.99	95	"	"	"	
15	68	54	14	59			.06	91	Str.	"	PC	
16	68	56	12	59			.18	95	"	"	"	
17	71	54	17	62			.01	81	Lt.	"	Clear	
18	70	53	17	66			.01	82	Str.	"	"	
19	71	54	17	65			T.	80	"	"	"	
20	71	52	19	63			T	80	Lt.	"	"	
21	65	58	7	62			.02	87	"	"	PC	
22	68	53	15	62			.01	86	"	"	"	
23	69	55	14	69			.11	90	"	"	"	
24	67	55	12	62			.16	88	"	"	Clear	
25	70	52	18	64			.01	89	"	"	PC	
26	65	55	10	68			.04	92	Str.	"	"	
27	68	52	16	63			.01	84	Lt.	"	"	
28	67	58	9	60			.01	88	"	"	"	
29	73	58	15	66			.02	81	"	"	Clear	
30	74	53	21	66			T	93	"	"	PC	
31												
Sum	2062	1637	425	1846			3.40	2633				
Mean	68.73	54.56	14.16	61.53			.116	87.76				

* Reading of maximum thermometer immediately after setting.
† Including rain, hail, sleet, and melted snow.
‡ Thunderstorms, halos, auroras, etc.

, *Cooperative Observer.*

(IN TRIPLICATE) See cover for instructions.

8—253
U. S. GOVERNMENT PRINTING OFFICE: 1939

Post Office Address,

MONTHLY SUMMARY

TEMPERATURE

Mean maximum, 68.73

Mean minimum, 54.56

Mean, 61.645

Maximum, 74; date, 30

Minimum, 52; date, 4, 11, 20, 25, 27

Greatest daily range, 21 (Sep. 30)

PRECIPITATION

Total, 3.40 inches; greatest in 24 hours .99

Date, 14th

SNOW

Total snowfall, inches

On ground 15th, inches

At end of month, inches

NUMBER OF DAYS—

With .01 inch or more precipitation, 25

Clear, 6; partly cloudy, 21

Cloudy,

DATES OF—

Fog { Light, Dense,

Killing frost,

Thunderstorms,

Hail { Light, Moderate, Heavy,

Sleet,

Auroras,

REMARKS:

Too dry. West of hdqrs (on Mauna Loa) fire hazard is great. Dust is bad in Kau and toward Hilina Pali.

DOCUMENT CAPTURED AS RECEIVED

10-157
(July, 1929)

'PARTMENT OF THE INTERI(

NATIONAL PARK SERVICE

TRAVEL REPORT

Hawaii National Park for the month of September 1933

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year Number	Increase for Travel Year Percent
PRIVATE TRANSPORTATION:						
Cars first entry, ...						
Cars reentry, ...						
Motorcycles, ...						
Total motor vehicles, ...						
Persons entering via motor vehicles, ...	36,947	231,721	6,503	129,772	101,949	78.56
Persons entering via other private transportation, ...	218	1,635	416	3,690	2,055	55.72
Total persons entering via private transportation, . . .	37,165	233,356	6,919	133,462	199,894	74.85
OTHER TRANSPORTATION:						
Persons entering via ~~hotels~~ ~~inns~~, .	432	4,334	235	6,028	1,694	28.10
Persons entering via ~~trains~~ ~~xxxx~~ Summer Camp	--	--	--	173		
Persons entering otherwise, . .						
Total other transportation, .	432	4,334	235	6,201	1,867	30.11
GRAND TOTAL ALL VISITORS, . . .	37,597	237,690	7,154	139,663	98,027	70.19

	This Year	Last Year	Increase Number	Increase Percent
Automobiles in public camps during month, ...				
Campers in public camps during month, ...				
Visitors at Hilina Pali shelter	32			
" " Mauna Loa shelter	12			

DOCUMENT CAPTURED AS RECEIVED

10-158

.PARTMENT OF THE INTERI(

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Hawaii National Park for the Month of September 1933

Description of Projects		Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
502.5	Mauna Loa Trail	100	2	0	
502.8	Auto Trail to Kipuka Kulalio Water Tanks	95	0	0	
502.90	Shoulders on roads, and parapet walls	98	3	0	
507.11	Bird Park Road	95	95	0	
507.12	Hilina Pali Road	95	95	0	
507.18	Paving Hotel Roads	0	0	0	
FP 161.14	Employee's Quarters	15	10	5	
FP 161.8	Pum Halehale Trail	50			
507.13	Rd. repair over eq. crack	85			

DOCUMENT CAPTURED AS RECEIVED

45334

10-215
(July, 1928)

UNITED STATES
DEPARTMENT OF THE INTERIOR
National Park Service

Hawaii National Park

REPORT OF NON-APPOINTED PERSONNEL
(TEMPORARY)

Changes outside the District of Columbia for the month of September 1933

Total at beginning of month	Additions	Separations	Net Gain or loss (a)	Total at ending of month
2	34	36	-36	0

(a) If loss, indicate by minus sign.

NOTE: None reduced by reason of retirement. All reduced by reason of reduced appropriation.

DOCUMENT CAPTURED AS RECEIVED

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Hawaii National Park for the Month of September 1933

	This Month		This Month Last Year	
	Appointed	Non-Appointed	Appointed	Non-Appointed
Number of employees beginning of month	17	2	12	13
Number of additions	0	34	0	1
Total	17	36	12	14
Number of separations	1	36	0	4
Number of employees close of month	16	0	12	10
Number of promotions during month	0	0	0	0
Aggregate amount of annual leave taken	1	0	0	0
Aggregate amount of sick leave taken	2	0	0	0
Aggregate amount of furlough leave without pay	0	0	17	0

DOCUMENT CAPTURED AS RECEIVED

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Hawaii National Park for the Month of September 1933

	This Year	Last Year
Park revenue on hand beginning of month,	0.00	0.00
Received,	75.00	246.81
Total,	75.00	246.81
Remitted,	75.00	246.81
On hand close of month,	0.00	0.00

Park revenues received this year to date,	125.00
Park revenues received last year to date,	394.98
~~Increase~~, Decrease	169.98
Per cent of ~~increase~~ decrease,	43.04

DOCUMENT CAPTURED AS RECEIVED

10-161

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF SALES OF PUBLICATIONS

	Number	Value
GOVERNMENT PUBLICATIONS:		
On hand beginning of month,	953	141.35
Received during month,	0	0.00
Total,	953	141.35
Sold during month,	14	4.70
On hand at close of month,	939	136.65

NON-GOVERNMENT PUBLICATIONS:

On hand beginning of month,	
Received during month,	
Total,	
Sold during month,	
On hand at close of month,	

Cash on hand beginning of month,	10.24
Sales during month,	4.70
Total,	14.94
Remitted during month,	0.00
Balance,	14.94

DOCUMENT CAPTURED AS RECEIVED

STATISTICAL REPORT NO. 8

HAWAII NATIONAL PARK

Finance and Accounts

Symbol	Appropriation	Allotted	Expended & Obligated	Balance
44415.3	Salaries & Expenses, Hawaii National Park, 1934:	33,690.00	8,040.85	25,649.15
44406.3	Forest Protection and Fire Prevention, Office of Natl Parks, B. & R.	520.00	133.08	386.92
4X436.3	Roads & Trails, Office of National Parks, Buildings and Reservations	27,745.34	26,468.91	1,276.43
42/3415	Hawaii National Park, 1932-'33:	49,350.00	49,317.36	32.64
42/3406	Forest Protection and Fire Prevention, 1932-'33:	430.00	430.00	0.00
42/3405	Emergency Reconstruction and Fighting Forest Fires, NatB Parks, 1932-'33:	97.05	97.05	0.00
4-03/5640.8	National Industrial Recovery, Int., Nat'l Parks, Roads & Trails, 1933-'35:	480,000.00	0.00	480,000.00
4-03/5640.14	National Industrial Recovery, Int., Nat'l Parks, Bldgs & Reservations	8,550.00	2,680.90	8,550.00

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

September 14, 1933.

GENERAL OFFICE ORDER NO. 21.

SUBJECT: PERMIT TO PICK FRUIT IN PARK.

1. Paragraph 3 of Rule 17 of the General Rules and Regulations governing Hawaii National Park, reads as follows:

"Visitors may pick and eat any fruit found in the park, but may not carry it away unless they have a permit from the park Superintendent."

2. Under this rule, visitors may pick and eat any of the following fruits found growing on Park lands:

a. Blackberries
b. Thimbleberries
c. Ohelo berries
d. Guavas.

3. If fruit grows in sufficient quantities to warrant the granting of permits to carry it away, application for such permit must be made to the office of the Park Superintendent.

4. A form of combined application and permit is attached to and made a part of this office order.

5. Care must be exercised not to trample or break any of the bushes, or other park vegetation in gathering berries or fruit.

6. Permits will be made out in duplicate, one copy being given to the permittee, and the other copy kept for Park Office.

7. Permits will be numbered consecutively.

8. Rangers must invariably ask to see the permit of all fruit or berry pickers noted in the Park, who are gathering fruit with the apparent intention of carrying it away.

9. The permittee must return his permit to the park office when he leaves the park, showing the quantity of fruit gathered.

10. This order applies to park employees as well as to park visitors.

11. Each permit expires on day of issue.

E. P. LEAVITT

E. P. Leavitt
Superintendent

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

No._____

Date_____

APPLICATION AND PERMIT TO GATHER BERRIES OR FRUIT GROWING IN HAWAII NATIONAL PARK.

1. Name of applicant_____

2. Address:_____
Number - Street - ~~Sikyx~~ City

3. Automobile_____

4. Number of helpers in party_____

5. Kind of fruit desired_____

6. Quantity desired_____

7. Under the fruit trees from which fruit is gathered, fruits found growing on Park lands:

8. Use to be made of fruit_____

a. Blackberries

b. Guavas.

I hereby make application for permission to gather berries and/or fruit in Hawaii National Park for home use, in accordance with Rule No. 17 of Park Regulations.

I agree to abide by all Park laws and regulations while in the park and to comply with the terms of permits to carry it away, application for such permit may be made to the office of the Park Superintendent.

Applicant_____

A form of combined application and permit is attached to and made a part of this office order.

PERMIT.

Care must be exercised not to trample or break any of the bushes.

Permission is hereby granted to gather and carry away from the park the quantity of berries or fruit requested in the above application.

Permits will be made out in duplicate, one copy being given to the permittee, and the other copy kept for park records.

Quantity authorized_____

Superintendent

Permits will be numbered consecutively.

Quantity actually gathered_____

Rangers must invariably ask to see the permit of all fruit or berry pickers noted in the Park, who are gathering fruit with the apparent intention of carrying it away.

The permittee must return his permit to the park office when he leaves the park, showing the quantity of fruit gathered.

This order applies to park employees as well as to park visitors.

Each permit expires on day of issue.

E. P. LEAVITT

E. P. Leavitt
Superintendent

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

September 1, 1933

MEMORANDUM FOR THE PRESS
By E. P. Leavitt
E. P. Leavitt, Supt.

HAWAII NATIONAL PARK, September _____ (Special). Following is the program of Naturalist-Recreational activities in Hawaii National Park during the week September 4 to 11. This program includes illustrated lectures on the natural features of the park and vicinity and conducted hikes and auto tours to many interesting places in the park. The public is invited to attend these activities.

Tuesday, September 5

8:15 a.m. Conducted auto tour and hike to Bird Park. Party leaves the Volcano House at 8:15 a.m., the Officers Club of the Kilauea Military Camp at 8:25 a.m. This trip includes a visit to the koa grove and area of large tree molds in the Volcano Golf Course, as well as a 1½-mile hike in the famous Kipuka Puaulu, or Bird Park. 3-hour trip.

Wednesday, September 6

11 a.m. Illustrated lecture on Volcanoes. Uwekahuna Museum.

Thursday, September 7

8 a.m. Conducted auto tour and hike to Napau Crater. The party hikes from the end of the Chain of Craters road through luxuriant fern jungle, across the 1840 flow containing tree molds and lava trees, past the re-

DOCUMENT CAPTURED AS RECEIVED

mains of an old Hawaiian heiau (temple) and pulu factory, over sulphur beds to Napau Crater. This trip offers an opportunity to see interesting volcanic formations as well as interesting types of native vegetation. Party leaves the Officers Club of the Kilauea Military Camp at 8 a.m., the Volcano House at 8:15 a.m. 4-hour trip. Hiking distance 5 miles.

Saturday, September 9

8:25 a.m. Conducted short auto tour of the park. Arranged particularly for Inter-Island passengers making the two-day tour of the island.

10 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. This trip covers 30 miles of roads including stops at the Thurston Lava Tube, Fern Jungle, Kilauea Iki, several of the craters along the Chain of Craters, Kilauea Crater and fire pit Halemaumau, and the earthquake cracks in the Kau Desert. Party leaves the Officers Club of the Kilauea Military Camp at 1:00, the Volcano House at 1:15. 3½-hour trip.

On the above scheduled auto tours the park can furnish transportation for a limited number of people.

The park is eager to have just as many island people as possible attend the programs of the naturalist service. The programs vary from week to week.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

Office of National Parks, Buildings and Reservations.

September 16, 1933

MEMORANDUM FOR THE PRESS

BY E. P. Leavitt
E. P. LEAVITT, SUPT.

HAWAII NATIONAL PARK, September ____. (Special) What is believed to be the most complete recreation map of the United States ever prepared has recently been issued by the Office of National Parks, Buildings, and Reservations of the Department of the Interior. A limited number has been sent to the Superintendent, Hawaii National Park, for free distribution to interested persons.

The map is 31 by 48 inches in size; the sale is 75 miles to the inch.

In addition to the superscenic regions that constitute the 23 national parks of the nation, the new map shows the location of all the national forests, the most important Indian reservations, the national military parks, the national monuments, and state forests, monuments, and picnic grounds.

On the back of the map are brief descriptions of all the places shown except the national forests and the Indian reservations. The Federal reservations are listed under the executive departments having jurisdiction over them, and the other reservations are grouped according to the states in which they are located.

Park Superintendent Leavitt states that he will be glad to distribute copies of the map as long as the supply lasts.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES DEPARTMENT OF THE INTERIOR
OFFICE OF NATIONAL PARKS, BUILDINGS AND RESERVATIONS

Hawaii National Park,
September 26, 1933.

MEMORANDUM FOR THE PRESS

By E. P. Leavitt
Superintendent

HAWAII NATIONAL PARK, SEPTEMBER ___ (Special). From Washington comes a memorandum giving some interesting side lights on the work of the Civilian Conservation Corps in Gettysburg Battlefield, which place is now administered by the Director of the Office of National Parks, Buildings and Reservations. The memorandum is as follows:

"The removal of trees killed by the hickory borer or by storms in the Gettysburg National Military Park by the Civilian Conservation Corps is bringing to light many evidences of the terrific fighting that occurred on the famous old battleground about 70 years ago, according to Arno B. Cammerer, Director of the Office of National Parks, Buildings and Reservations.

'One particularly interesting segment of a hickory tree recently on display in the National Parks Office had ingrained in it what was probably a Confederate bullet. The tree had greater resistance than the humans hit by such bullets, and for seventy years it continued to live and defy this attack of mere man, only to succumb at last to the attacks of the hickory borer. It is impossible to tell from the bullet itself from which of the opposing armies it came, since the blunt end containing the rings is still covered with wood. But from its position behind the Union lines it must have come from the Confederates in front.

DOCUMENT CAPTURED AS RECEIVED

"Unfortunately many of the old hickories that stood as silent observers of the bloody encounters at Gettysburg are now dead or dying from the insect attacks and are being removed as fire hazards and to improve the appearance of the park. Only such hickories are removed as are beyond all possibility of recovery.

"From some of the dead trees removed during this conservation work, especially those with rot in the center, a cigar box full of bullets each has been obtained.

"The C.C.C. boys at Gettysburg are constantly finding bullets lying in the cornfields. Most of these, however, are unused, apparently having fallen from the pockets of the soldiers or been dropped in loading.

"While carrying on these conservation activities the remains of two men were recently located. Mingled with the bones were bullets and buttons, some of each Confederate and some Union, leading to the supposition that ~~there~~ here a soldier from the South and one from the North died in mortal combat.

"The bullets of the two armies were the same in size and shape, the only distinguishing mark being that the Confederate bullets had two rings around the base and the Union bullets three rings. Such was the shortage of bullets as the battle raged that it is said the living took from the pockets of the dead, Union and Confederate alike, all the bullets they could find, so that bullets alone are not a means of identification. The buttons, however, are a comparatively sure means of identification."

DOCUMENT CAPTURED AS RECEIVED

The Volcano Letter

No. 402—Monthly U. S. Geological Survey, Hawaii National Park AUGUST, 1933

KILAUEA REPORT FOR AUGUST, 1933

Including weekly press reports 1124 to 1127, July 30 midnight to August 27 midnight.

Section of Volcanology, U. S. Geological Survey
T. A. Jaggar, Volcanologist in Charge

Volcanology

Two slides at Halemaumau were noticed during the first week of the month, and on one occasion some trickling of pebbles. On August 7 a small slide had left a dusty track at the top of the west wall at the big steam crack. One or two rocks were heard falling about 10 a. m. Cracks at the east platform, recently filled in, had shown dribbling in of the sand for some weeks. At 10:24 a. m. August 10 a few rocks fell from the wall at the south corner of the pit, and raised a small cloud of dust. On August 26 a somewhat fresh crack in the ash NE and N of the pit was discovered about 400 feet back from the rim.

Cracks measured at the edge of Halemaumau weekly, showed on August 5 very slight opening at 8 points out of 27, confined to the south and southeast rim area: on August 12 only 3 points had opened and 4 had closed, making the aggregate movement zero, the quietest week by measurement and observation since July, 1931: on August 19 seven rim cracks scattered along the southeast, south and southwest rims of the caldron had widened slightly, the largest amount being 1.5 mm. Two points indicated a very slight closing.

E. G. Wingate, topographic engineer, reports the horizontal angle representing the SE-NW diameter of Halemaumau, July 28—August 21, to have closed 1.7 seconds in 24 days; the angle opened 2.5 seconds August 21—August 29, in 8 days. This angle, measured from the Observatory on the northeast edge of Kilauea crater, is between Stations "NW Pit" and "Seis."

The horizontal angle representing the SSE—NNW diameter of Kilauea crater, measured from "Obsy," between "Uwekahuna" and "Spit," closed 2.5 seconds July 28—August 21, 24 days: and opened in 8 days August 21—29 by 0.3 second.

The combined tilt at Halemaumau, computed for the three clinoscope cellars, and resolved for each cellar into one component to or away from the center of the pit, shows inward tilting of 22.2 seconds July 31—August 27, a period of 27 days. This combined tilt has been computed for each day since October 11, 1932 and on August 27 showed an accumulation of inward tilt amounting to 53 seconds, for this interval 320 days.

It was shown in Volcano Letter 399 that Sta. Seis, the SE clinoscope cellar at Halemaumau had risen by spirit levelling relative to Sta. Spit outside of the Kilauea floor south by 0.02 foot on June 12,1933 relative to December 31, 1932. Levels run August 14, 1933 show that Sta. Tourist east of Halemaumau had lowered 0.13 foot relative to Sta. Seis since September 27, 1932. The distance between these bench marks is 440 feet. "Tourist" is on the rim of the pit, and "Seis" is about 400 feet back. "Tourist" is not greatly off from the line of the computed clinoscope tilt at "Seis" (to and from the center of Halemaumau). An angular depression of 53 seconds as above would at this distance give a change in elevation of minus 0.11 foot. This indicates a close agreement between measured and computed changes in elevation. In approximately this same period the horizontal angle across Halemaumau has closed 3.44 seconds.

The indication from all results is that the pit as a whole is lowering slightly at the present time. This is in agreement with the tilting of the ground for a year past, as recorded in Engineer Wingate's monthly report for the cellar of the Hawaiian Volcano Observatory on the northeast edge of Kilauea crater, the record for the preceding year each month, showing an accumulation of tilt to the southward, or in the general direction of the crater.

Measurement of vapor temperatures at eight vents of the Sulphur Bank near Volcano House with mercurial maximum thermometer, made by Wingate and Jones, on August 16, gave degrees Centigrade as follows:— 85.5, 80.0 79.0 77.0, 89.0, 94.5, 94.7, 94.6. These vents were not at the borings, where the maximum temperatures as measured several years ago were rather constant at 96.0 degrees Centigrade, or 204 degrees Fahrenheit. This temperature happens to be the boiling point of water for this elevation.

T.A.J.

Earthquakes

TABLE

Number of minutes of tremor; numbers of very feeble, feeble and slight earthquakes; teleseisms or distant earthquakes; local seismicity index as described in Volcano Letter 371.

Week ending	tr.	v. f.	f	sl.	tel.	seis.
August 6	45	5	0	1	0	14.50
August 13	28	4	0	0	0	10.00
August 20	22	2	0	0	0	06.50
August 27	37	3	0	0	1	10.75

A slight earthquake was felt by Pritchard in Honokaa, by Sumner in Kapapala, Pahala, by Hutchinson Sugar Co. in Naalehu, by L. P. Lincoln in Hookena, by Fabius Paauilo, and by Hodges and others in Hawaii National Park at 11:56 a. m. July 31. It was located 19° 20′ N 155° 30′ W and 10 miles deep; nearly under Kapapala Ranch where it was felt sharply.

A small shock was felt by Mr. Sumner and others at Ohaikea, August 4.

A shock was felt at Naalehu at 4:08 a. m. Aug. 7. It recorded as very feeble on the Observatory seismographs. It was located from the records of two stations as being 2 miles northwest of Naalehu, 19° 05′ N 155° 39′ W and close to the surface.

The teleseism began recording at 9:33:25 p. m. H.S. T. Aug. 24. The secondary waves arrived at 9:44:07 p. m. The direction was Northwest and the distance 5,965 statute miles. According to press dispatches it was destructive in central China.

Microseismic motion of the ground was moderate or normal on July 31 and August 2, 3, 4, 8, 12, 14, 15, 16; it was light or subnormal on the other days of the month.

A.E.J.

Tilting of the ground

The Table of Tilt shows the net tilt by weeks, as computed from seismograms at the Kilauea Observatory, and from clinoscope readings at Halemaumau southeast. The table represents the tipping of the ground, in seconds of arc, in the direction given; the total accumulated tilt in the year since August 27, 1932 at the Observatory is 1.5″ south and 1.3″ west.

TABLE OF TILT

Date	Observatory	Halemaumau
July 31 - Aug. 6	1.3″ N	6.5″ NNW
Aug. 7 - Aug. 13	0.4″ NNW	2.6″ NW
Aug. 14 - Aug. 20	1.2″ NNW	1.9″ N
Aug. 21 - Aug. 27	0.7″ NE	6.6″ NW

E.G.W.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

September 7, 1933.

The Director,
Office of National Parks, Buildings and Reservations,
Washington, D. C.

Dear Mr. Director:

The following is the administrative report for Hawaii National Park for the month of August 1933.

000 General

010 Matters of importance--travel

The figures recording travel to Hawaii National Park continue to grow. The total for the month was 44,845, compared with 8,294 a year ago and 37,214 for the preceding month. The total to date shows an increase of 51.76 per cent over one year ago.

020 General weather conditions

021 In the park

Weather conditions have been practically ideal and conducive to local travel. A prolonged dry spell was broken by an all-day light rain on August 3, replenishing water supplies, and there were occasional nightly rains thereafter. The total rainfall for the month, as measured at the meteorological station operated by the Volcano Observatory, was 1.65 inches, compared with a normal of 6.74 and with 1.02 inches for July. Rainfall to date is 69.71, which is 6.89 inches in excess of normal. During the month more than 10,000 gallons of water were deposited in the reservoir from light rains and mist. A total of 20,000 gallons was drawn from the reservoir to fill the various tanks in the residential area and to supply the administration building and Park Naturalist Doerr's quarters, both of which get their water from a single high tank.

The mean maximum temperature for the month was 69.32, the mean minimum 53.16, giving a mean of 61.24 degrees. The mean daily range of temperature was 16.16 degrees. Full details will be found on Weather Bureau form attached.

Due to lack of water on Keauhou Ranch, which adjourns the park north of the Kilauea Military Camp, the manager, Arthur M. ("Buster") Brown found it necessary to move his cattle to the Shipman pasture at 27 Miles, about three miles east of the Hilo entrance. The northeasterly trade winds water this area much more freely than the areas to the west.

DOCUMENT CAPTURED AS RECEIVED

100 Administration

110 Status of work
We are keeping office work current, but only at the expense of putting in a great deal of overtime, often working over the week end to catch the Sunday mail boat as the next mail boat is on Wednesday.

120 Park inspections by
121 Superintendent
Routine inspections were made of all jobs and of conditions in the residential and utility areas, at the camps and hotel, and elsewhere.

130 Finance and accounts
A statement of the park appropriations is attached as Statistical Report No. 8.

On August 9 we returned by radio all unexpended balances in appropriations, and on August 22 we received the new appropriations.

140 Labor situation
An examination was announced by the Civil Service Commission for the position of Stone Mason in Hawaii National Park, salary $5.50 per day.

160 Status of alienated lands
The Commissioner of Public Lands for the Territory reports that on June 9 the Attorney General was requested to institute condemnation proceedings for the acquisition of the 1.9 acres of Campbell Estate land, on which part of the Thurston Lava Tube is situated.

170 Plans, maps, and surveys
Halemaumau-Bird Park Road
Project NR-4, Halemaumau-Uwekahuna-Bird Park road was advertised for bids on August 21, bids to be opened September 7. This road will be 4.67 miles long, with parking areas at the three places mentioned. The section between the main around-the-island road and Bird Park will constitute the first short link in the proposed Mauna Loa road.

Mauna Loa Road
The Honolulu Advertiser, on August 28, published an interview with Dr. Thomas A. Jaggar, Volcanologist, part of which was as follows:

"Dr. Thomas A. Jaggar, volcanologist at the Kilauea observatory, is an ardent advocate of the project to construct an automobile road to the summit of Mauna Loa, both from a scientific standpoint and as a scenic highway that would prove a great attraction to residents as well as visitors to the islands. He believes that if the summit of Hawaii's great 14,000-foot peak were made accessible and a permanent year-round station established there 'some discoveries would be made such as the world has never dreamed of.'

DOCUMENT CAPTURED AS RECEIVED

"Aside from the importance of such a station as a base for study of the volcanoes of Hawaii, he sees great possibilities in obtaining upper-air data for the Weather Bureau which are needed for radio, telephony, for aviation and other purposes.

"In a statement to The Advertiser recently Dr. Jaggar expressed himself as follows concerning the plan, which was fathered by the late Lorrin A. Thurston:

"'From the scientific viewpoint the Mauna Loa road stands for the very core and hub of our activities in exploring the underground processes of Hawaiian volcanoes. Mauna Loa is the vital center of the volcano group. For engineering purposes, in case of an earthquake or a dangerous lava flow such as went to Hilo in 1881, to get at Mauna Loa is of utmost importance. The view of the late L. A. Thurston that a Hilo flow might be stopped when it threatened the city is entirely correct, for a pahoehoe flow progresses in tunnels, with a single cource tunnel far up the mountain. If this source tunnel is accessible to engineers *after many months of flowing*, it can be blasted artificially and forced to start surface flowing. This would make a new stream of lava fifty miles from the city. The menacing flow close to the city would of course be robbed of its supply and stop. All the Hilo flows have started at the northeast rift where it is proposed to build the road. The source tunnels could easily be reached and blasted from the proposed road.

"'Now as to the earthquake question, there was one big earthquake in Hawaii in 1868, and two in September-October, 1929, all three disastrous. They were on opposite sides of Mauna Loa with evidence of migration of centers (sources) accompanying underground migration of lava from Kahuku (southwest rift) vents to Hualalai (northwest) vents. This migration in 1929 to threaten North Kona was like a migration in the opposite direction towards Kahuku in 1868, when hundreds of earthquakes shifted the scene of new flows from the north side to the south side of Mauna Loa. Now the shift is from the south side to the north side, since 1929, and no one knows where the outbreak will come next. It may quite possibly be on the Hilo side, or it may come from the Hualalai side as in 1801. In any case the earthquake evidence points to the desirability of opening to scientific investigation the north side of Mauna Loa. The greater earthquakes have circled around Mauna Loa from the southwest side to the northwest side, and perhaps the next time will be the east side threatening the larger town, Hilo. Accordingly science wants to know about earthquake centers under Mauna Loa, and the only way to know conclusively is to have the summit region observed continuously with resident observers and instruments.

"'The third scientific interest is the tilting of the ground. This is a fundamental volcanologic investigation. We have come to know from twenty years of observation that the craters rise and fall. The surrounding country tilts away when the craters are rising and outbreak is approaching. The surrounding country tilts inward towards the center when the craters are sinking and a crisis of lava lowering is bringing a cycle to a close.

DOCUMENT CAPTURED AS RECEIVED

All this has been proved for Kilauea crater. But we know nothing about Mokuaweoweo crater of Mauna Loa because it is inaccessible. Probably the movements there are bigger and more sensational than on Kilauea.'"

The article continues convincingly to indicate the great desirability of being able to establish tilt stations on Mauna Loa similar to those situated about the fire pit Halemaumau. Dr. Jaggar refers to Mauna Loa as "the most active volcano . .on the bulkiest island mountain on earth, and all we need is a road to get there." He stresses the advisability of being able to obtain information, for the Weather Bureau, needed by the future dirigibles from Los Angeles to Hawaii. "Mauna Kea and Mauna Loa are the only two places where this information can be obtained." As of interest concerning upper air currents, Dr. Jaggar has frequently observed, during summit eruptions of Mauna Loa, that while a strong trade wind may be blowing from the northeast at Kilauea headquarters, the fume from such eruptions drifts in exactly the opposite direction.

Haleakala Road

Project NR-7, Haleakala road, is soon to be advertised for bids. The road is expected to be completed within two years. The cost of construction is estimated at $376,000, and 550 days are allotted for the job. Specifications require an eight-foot road surface with three-foot paved shoulders. The road will be 10.6 miles long and will make the climb from the boundary to the summit, at 9,744 feet elevation, in nine legs of a switchback. The road will be of the bituminus macadam emulsified type.

Puu Huluhulu Trail

The proposed Puu Huluhulu trail, connecting the Chain of Craters road with the beautiful forested cinder cone by that name, was surveyed in August. A sketch map was made of the Thurston Lava Tube parking area, to be used in determining the location for the proposed comfort stations and for a trail-side museum.

200 Maintenance, improvements and new construction

210 Maintenance

The usual maintenance of roads, trails, bridges, culverts, buildings, and telephone, water, sewer, and electric systems was carried on. Patching of sections of the main around-the-island road, the Chain of Craters road, and other roads was completed.

220 Improvements

The telephone line to Mauna Loa rest house, built from salvaged materials donated by the Army, was fully completed and the first test made from the rest house to park headquarters at 4 p.m. August 8, with complete success.

230 New construction

Construction of a new employees quarters was begun, the work progressing as far as installation of joist studs and plates and cutting of rafters before being stopped due to question of being able to continue under the public works funds.

DOCUMENT CAPTURED AS RECEIVED

300 Activities of other agencies in the park

320 Cooperating Government agencies

Due to greatly decreased funds for military operations, the Army plans to eliminate to some extent operation of the transport Royal T. Frank, plying weekly between Hilo and Honolulu, and Army and Navy officials are negotiating to coordinate their respective transport schedules so that service will continue. Heretofore the Navy has not attempted to maintain any regular service between these two ports. Inasmuch as any decrease in the service of the Frank will affect not only the Kilauea Military Camp and the Navy Health and Recreation Camp in the park, but will also decrease mail service and transportation of supplies for other Government agencies, this proposed coordination will be of considerable advantage.

A detachment of engineers from headquarters, Hawaiian Department, U.S.A., Fort Shafter, conducted experiments in the park in the use of radio beacons. For communication service the engineers made use of the park telephone lines. As much of their work was done around midnight and later, park residents for a while were greatly mystified by the strange telephone signals during serie hours.

330 Cooperating non-government agencies

Arrangements have been made with the Hawaii Tourist Bureau for stenciling a large quantity of Park Service envelopes with the addresses of tourist agencies on the mainland United States and in Canada. The envelopes will be returned to the park for insertion of our information circular and mailing. This action is hoped to obtain a great deal of publicity for Hawaii National Park. Two thousand addresses will be reached. The Tourist Bureau will pay postage on the Canadian sendings.

350 Donations and accessions

The University of Hawaii has sent a 1500-watt, 110-volt, Kohler automatic electric plant for use at the Uwekahuna Museum and Lecture Hall. This was formerly at the Waimanalo School, Oahu, where the Honolulu electric power company now extends its service. The school has been abondoned due to lack of funds, and the plant is no longer needed by the University of Hawaii, which operated the school. During the first week of the Kilauea Summer School, it was found that the National Park Service makeshift, 32-volt system at Uwekahuna was wholly inadequate, and the classes were obliged to move to the conference room in the basement of the administration building. Dean Benjamin O. Wist, in charge of the summer school, conceived the idea of obtaining the Waimanalo plant for the use of the summer school at Uwekahuna, and of course it serves the park as well at that point. Park Naturalist Doerr in his current report states, "What a relief and joy it is to turn on a light in the museum and lecture hall and know that 110 volts of electricity are available!"

The Polk-Husted Directory Company, Honolulu, donated a 1932-33 directory for the official use of the park. This is a very useful acquisition. Heretofore the park has been borrowing the directory of the Kilauea Volcano House.

DOCUMENT CAPTURED AS RECEIVED

400 Flora, fauna and natural phenomena

410 Ranger, naturalist and guide service

Ranger and Mrs. J. A. Peck arrived August 12 from General Grant National Park vice J. B. Fordyce, who has taken Ranger Peck's position at Grant.

On August 3 Rangers Brumaghim and Williams escorted a party of 13 persons to the Hawaiian petroglyphs in Puna. Although this area is outside of the park boundaries, it has considerable of interest historically, but is quite inaccessible, the petroglyphs being about eight miles from the end of the road at Kalapana. (See pictures attached to this report.)

Park Ranger Everett Brumaghim was suspended from duty and pay effective at the close of August 30 on charges of being intoxicated and disorderly. Suspension was later confirmed effective close of August 31 pending investigation of charges.

As the result of a high wind, the only true Sandalwood tree (Santalum paniculum) in Bird Park was knocked down. The trunk and larger branches were moved to the museum to be worked up and used as an exhibit. The Sandalwood trees formerly abundant in Hawaii were once the source of a thriving trade with China.

Twelve field trips with 203 persons were taken under the guidance of Park Naturalist Doerr. There were also 17 auto caravans with 114 cars and 623 persons. Total contacts made by the naturalist division was 3,052, while travel to the park was 44,845.

420 Museum service

Museum attendance totaled 1,095. There were 19 lectures to 1,001 persons.

480 Natural phenomena

There is some amusement to be found in the attention given by the press to non-scientific predictions of volcanic activity. Three items were published during August. One in the Honolulu Star-Bulletin, but dated from Hilo, gave prominence to "volcano weather," claiming that the "kamainas" (old-timers) stated that the current bright, sunny days, with cloudless skies, meant volcanic eruptions. Another was an interview with Professor Zander, who claims to be a graphologist, who visited Hilo, as follows: "I will have a visit with Madam Pele as I did on my trip here in 1926. We are good friends. We are in tune with each other and I have a strong feeling that before the end of October the volcano goddess will return. While the eruption will not be dangerous it will be one of the most spectacular ever seen here. I feel it coming. Even though Dr. Jaggar does not expect action soon I must contradict science by disagreeing with him." Every once in a while the press publishes an account of someone having an interview with the Goddess Pele. Pele always appears disguised as an old lady needing assistance.

DOCUMENT CAPTURED AS RECEIVED

The following is a summary of the Geological Survey weekly Kilauea reports for August:

Slides and rock trickles were observed in the fire pit Halemaumau. Measurements denoted opening and closing of rim fissures, but not in unusual amounts. A filled crack near the tourist lookout became noticeable due to draining away of the fine material, but measurements disclosed no movement at this point. Fresh cracks were noted 400 feet back from the rim.

By leveling over the Halemaumau region on August 14, Topographic Engineer Wingate found that the east rim of the pit, relative to the triangulation station named "Spit" at the south end of Kilauea Crater, had lowered a tenth of a foot since June 12, 1933. The angle measured from the Observatory across the pit NW-SE horizontally showed on July 28 a closing of 1.2 seconds since June 20, 1933. Radial tilt at the clinograph stations SE and SW of Halemaumau showed about August 1 a tendency to tipping inward toward the pit center in the course of the last half year. These three sets of measurements agree in showing that the pit as a whole is lowering slightly.

Measurement of vapor temperatures at eight vents of the Sulphur Banks August 16, with mercurial maximum thermometer, by Messrs. Wingate and Jones, gave degrees Centigrade 85.5, 80, 79, 77, 89, 94.5, 94.7, and 94.6. These vents were not at the borings, where the maximum temperatures measured several years ago were rather constant at 96° C. This temperature happens also to be the boiling point of water for this elevation (204° F).

The instruments recorded seismic motion as follows:

Tremors,	113	
Very feeble earthquakes,	11	(1 felt)
Feeble "	5	(1 ")
Slight "	1	(felt)
Distant "	1	
	131	

Similar movements in July totaled 313.

Microseismic motion was moderate, declining toward the end of the month to subnormal. Tilt by weeks was moderate north, slight north by west, slight northwest by north, and slight north by east.

500 Use of park facilities by the public

510 Increase or decrease in travel

Travel to Hawaii National Park is increasing by leaps and bounds. The total for the month was 44,845, compared with 8,294 for a year ago. The total to date (200,093) represents an increase of 51.76 per cent.

DOCUMENT CAPTURED AS RECEIVED

520 Conditions which affect travel

In analyzing conditions which have caused an increase in travel to Hawaii National Park, three factors may be suggested:

1. The depression, which has kept people in the Territory who would ordinarily take trips to the mainland.
2. The advertising campaign of the Volcano House, combined with the very excellent weather.
3. The automatic traffic counter, which has enabled the keeping of an accurate check on day and night through traffic using our roads.

530 Visitors

Penrose C. Morris, Honolulu attorney. Spent about two months in the park, taking particular interest in naturalist activities.
John Snell, staff writer for the Honolulu Advertiser, to whom we are greatly indebted for appreciative publicity.
Amarnath Sandana, of India; spent one week at Volcano House while visiting Hawaii to study the sugar industry.
E. E. Bodge, vice-President, the von Hamm-Young Co., Honolulu; spent 2 weeks.
Dr. and Mrs. L. E. Bassett, Stanford University, Calif.
Mr. and Mrs. Frank Wilbur Mixter, Grand Master of the Grand Lodge of Masons of California, which jurisdiction includes Hawaii.

540 Public camps

Nine persons made use of the public camp grounds at the summer camp. There were 11 campers at Hilina Pali. The Mauna Loa rest house was visited by 18 persons.

550 Visiting groups

Hawaii National Park has had several visiting groups during the summer. These included in August 700 officers and enlisted men of the minecraft battle force from Pearl Harbor, 250 delegates of the Young Men's Buddhist Association, 130 officers and cadets from the Japanese training ship, Taisei Maru, of the Tokyo Higher Nautical College, and large groups visiting the Kilauea Military Camp.

Attendance at the Volcano Golf Course, by members of the club or players paying green fees, was as follows for the 12 months just ended:

1932			
Sep.	212	Mar.	228
Oct.	255	Apr.	244
Nov.	282	May	330
Dec.	278	June	592
1933		July	608
Jan.	226	Aug.	769
Feb.	216		
		Total	4240

DOCUMENT CAPTURED AS RECEIVED

Word was received through the Inter-Island Steam Navigation Company, Honolulu, of the proposed visits of three ships in 1934, as follows:

January 31,	SS Franconia, Southern Hemisphere World Cruise.
February 26,	Arandora Star, England direct to Hilo.
April 9,	Lurline, Pacific cruise.

600 Protection

610 Police protection
U. S. Commissioner
Arrangements have been made with Judge Stephen L. Desha, Jr., U. S. Commissioner, Hilo, to handle violations of park rules and regulations in accordance with suggestions made in Service letter of April 10, 1933. Judge Desha has agreed to give preferred attention to any such cases as it may be necessary to bring before him, and where occasion demands, to come into the park to hold hearings.

The plan is now receiving the consideration of U. S. District Court Judge Lymer and U. S. Attorney Sanford B. D. Wood. If approved, a similar plan will be worked out through the U. S. Commissioner at Wailuku, Maui, for the Haleakala Section of the park.

620 Fire protection
On August 15 there was transmitted to Washington the Superintendent's annual statistical report of fire protection improvements for Hawaii National Park.

630 Accidents
On August 13 Richard H. Fujimoto, en route from Hilo to Waiohinu, was badly injured when his Ford roadster left the road just after passing out of the park at the Kau entrance. He was picked up by Acting Chief Ranger Christ while on patrol and taken to Kilauea Military Camp hospital. The cause of the accident may have been due to loss of control of the car while traveling fast and leaving the fine, wide road inside the park to pass onto the narrow road built by the county outside the park boundary, with a curve in the road just at this point.

640 Destruction of predatory animals
Animals killed included 89 wild goats and 35 wild pigs. Hunting permits were issued to 102 persons.

600 Miscellaneous

Of 22 extension courses to be offered this fall by the University of Hawaii, four are to be given in Hilo. One of these, general geology, will be given by Park Naturalist Doerr. Mrs. Doerr will give a course, in Pahala, in the principles of design and the theory of color.

DOCUMENT CAPTURED AS RECEIVED

Approval of the Secretary of the Interior was received August 10 to change in rate of compensation paid Mr. Richmond B. Hodges, Clerk, Position 17, from when actually employed to full time, effective August 3, 1933.

On August 22, Mr. and Mrs. George Lycurgus, entertain the appointive personnel of Hawaii National Park with a delightful dinner at the Hilo Hotel, following by a theater party. Those attending were Superintendent and Mrs. E. P. Leavitt, Ranger and Mrs. Everett Brumaghim, Ranger and Mrs. J. A. Peck, Ranger and Mrs. D. H. Eaton, Ranger and Mrs. T. W. Barnett, Ranger Vernon Lowery, Mr. and Mrs. R. B. Hodges, Mr. and Mrs. J. K. Higashida, and Mr. R. E. Craik. In addition were Leo Lycurgus and Mrs. George Geracimos, members of the family of the host and hostess.

The Hawaii Tourist Bureau conducted a special trip from Honolulu to Maui early in August which included the summit of Haleakala. From this trip a great deal of publicity resulted for that section of the park.

The position of Senior Laborer (Carpenter), filled temporarily by Mr. Sadaichi Kawasaki, was filled through Civil Service certification during the month. Negotiations for the filling of the position of Senior Laborer (Mechanic), temporarily held by Mr. Fred A. Waltjen, were nearing completion by the end of the month.

Examinations for carpenters, auto mechanics, stone masons, truck drivers, and trail foremen have been held by the Civil Service Commission, and eligible lists are now available.

The visit to the park of Mr. Frank Wilbur Mixter, Grand Master of Masons of the jurisdiction of California, while on his annual inspection to the Territory, was a very pleasant one. I was associated with Mr. Mixter for several years on the Conservation Committee of the State Chamber of Commerce, and it was very pleasant to renew old associations. Mr. and Mrs. Mixter, with officers from the local Masonic lodge, were the special guests of the Hawaii National Park and the park Masons (which included the Superintendent, Park Naturalist Doerr, and Ranger Donald H. Eaton).

The President's Reemployment Agreement and the National Industrial Recovery Administration program were enthusiastically received in the Territory, and the writing of codes was promptly begun. There are a few businesses which will require some special consideration in the code, but the number or percentage is not any greater on the mainland. Hawaii felt gratified to be included in the benefits of the NRA program.

After the program had been about 75 per cent completed, the sudden announcement that the program would not be enforced in the Territory brought consternation to official and business groups. Public meetings of protest were held in Honolulu and Hilo, and the situation has been the subject of much discussion and many radio messages. The Territory of Hawaii has every

DOCUMENT CAPTURED AS RECEIVED

right to be, and must be, included with the mainland in the enforcement of this program. It will never be successful if operated only voluntarily. The park is following the policies of the administration with reference to rates of pay, hours of service, and the patronizing of dealers subscribing to the NRA program.

The annual report of the park was sent in during the month, and also an annual report to Governor Judd to be incorporated in his report.

Just as this report is closing, word was received that the low bidder on the Kalemaumau-Bird Park road, bids for which were opened September 7, was E. E. Black, whose bid was $93,855.31. This amount is slightly lower than the engineer's estimate.

Very respectfully,

E. P. Leavitt

E. P. Leavitt,
Superintendent.

DOCUMENT CAPTURED AS RECEIVED

Form No. 1009—Met'l.

U. S. DEPARTMENT OF AGRICULTURE, WEATHER BUREAU

COOPERATIVE OBSERVERS' METEROLOGICAL RECORD:

Month of August, *193* 3; *Station,* Hawaii Nat'l Park; *County,* Hawaii

State, T. H.; *Latitude,* ; *Longitude,* ; *Time used on this form,* ; *Hour of Observation,*

DATE	TEMPERATURE: Maximum	Minimum	Range	*Set max.	PRECIPITATION: Time of Beginning	Time of Ending	†Amount	Snowfall, in Inches	Wind: Depth of Snow on Ground at Time of Observation	Prevailing Wind Direction	Character of Day, Sunrise to Sunset	‡Miscellaneous Phenomena
	1	2	3	4	5	6	7	8	9	10	11	
1	73	55	18	63			.01	90	Mod.	NE	Clear	
2	69	53	16	58			.01	96	Str.	"	Cloudy	
3	63	58	5	61			.05	90	Mod.	"	"	
4	69	55	14	63			.28	90	"	"	PC	
5	69	58	11	61			.01	71	"	"	"	
6	67	53	14	66			T	92	Lt.	ENE	"	
7	70	52	18	62			.06	90	"	NE	"	
8	69	56	13	60			.04	92	Str.	"	"	
9	69	52	17	56			.35	97	Lt.	"	Cloudy	
10	69	53	16	62			.11	85	"	"	Clear	
11	66	53	13	60			T	87	"	"	Cloudy	
12	67	53	14	60			.15	96	"	"	PC	
13	67	52	15	60			.02	93	"	"	"	
14	65	52	13	62			.02	90	"	"	"	
15	70	51	19	62			.03	80	Str.	"	Clear	
16	69	52	17	62			.04	90	Lt.	"	PC	
17	72	52	20	61			.02	83	"	"	"	
18	71	55	16	61			.07	89	"	"	Clear	
19	72	53	19	64			T	80	Lt. "	"	"	
20	69	54	15	63			.01	90	"	"	"	
21	71	53	18	59			.02	92	"	"	"	
22	74	52	23	70			T	85	"	SE	"	
23	74	51	23	66			01	78	"	NE	"	
24	72	52	20	67			.00	71	Mod.	"	"	
25	73	52	21	—			T	—	Lt.	"	PC	(Data from Hal.sta.)
26	69	53	16	63			.21	85	"	"	"	
27	67	55	12	58			.01	88	Mod.	"	Cloudy	
28	67	53	14	58			.11	85	"	"	"	
29	70	51	19	61			T	70	"	"	PC	
30	69	53	16	62			.00	70	"	"	"	
31	68	52	16	61			.01	80	"	"	"	
Sum	2149	1648	501	1849			1.65	2515				
Mean	69.32	53.16	16.16	61.60			.053	85.83				

*Reading of maximum thermometer immediately after setting.
†Including rain, hail, sleet, and melted snow.
‡Thunderstorms, halos, auroras, etc.

, *Cooperative Observer.*

Post Office Address,

(IN TRIPLICATE) See cover for instructions.

8—253

U. S. GOVERNMENT PRINTING OFFICE: 1930

MONTHLY SUMMARY

TEMPERATURE

Mean maximum, 69.32

Mean minimum, 53.16

Mean, 61.24

Maximum, 74; date, 22, 23

Minimum, 51; date, 15,22,23,29

Greatest daily range, 23; date, 22, 23

PRECIPITATION

Total, 1.65; inches ; greatest in 24 hours .35

Date, 9

SNOW

Total snowfall, inches

On ground 15th, inches

At end of month, inches

NUMBER OF DAYS—

With .01 inch or more precipitation, 23

Clear, 10; partly cloudy, 15

Cloudy, 6

DATES OF—

Fog { Light, Dense,

Killing frost,

Thunderstorms,

Hail { Light, Moderate, Heavy,

Sleet,

Auroras,

REMARKS:

Aug.25 instruments not read. Data averaged from instruments at Halemaumau.
Rain Aug. 3 broke long dry spell.

DOCUMENT CAPTURED AS RECEIVED

10-157
(July, 1929)

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

TRAVEL REPORT

Hawaii National Park for the month of August 1933

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year Number	Increase for Travel Year Percent
PRIVATE TRANSPORTATION:						
Cars first entry, ...						
Cars reentry, ...						
Motorcycles, ...						
Total motor vehicles, ...						
Persons entering via motor vehicles, ...	44,005	194,774	7,602	123,269	71,505	58.01
Persons entering via other private transportation, ...	326	1,417	314	3,274	- 1,857	-56.72
Total persons entering via private transportation, . . .	44,331	196,191	7,916	126,543	69,648	54.25
OTHER TRANSPORTATION:						
Persons entering via ~~stages~~ Hotel .	514	3,902	378	5,793	- 1,891	-31.61
Persons entering via ~~trains~~ Summer Camp .				173		
Persons entering otherwise, . .						
Total other transportation, . .	~~514~~	~~3,902~~	~~378~~	~~5,966~~	~~-2,064~~	~~-34.59~~
GRAND TOTAL ALL VISITORS, . . .	~~44,845~~	~~200,093~~	~~8,294~~	~~132,509~~	~~68,584~~	~~51.76~~

	This Year	Last Year	Increase Number	Increase Percent
Automobiles in public camps during month, ...				
Campers in public camps during month, ...	20			

DOCUMENT CAPTURED AS RECEIVED

10-158

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

Hawaii National Park for the Month of August 1933

Description of Projects		Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
452	Telephone Line, Bird Park to Mauna Loa Rest House	100	05	45	
502.5	Mauna Loa Trail	98 100	0	0	
502.8	Auto Trail to Kipuka Kulalio Water Tanks	95	0	0	
502.10	Paving Lava Tube Trail	100	5	5	
507.18	Paving Hotel Roads	0	0	0	
507.9	Shoulders on roads, and parapet walls	95 98	0	0	
507.10	Road Repair, Kau Section	100	20	80	
514.3	Landscaping and planting, roads, general	01 10	01	0	
FP161	Employee's Quarters	05 15 20	05	0	
507.11	Bird Park Road	95			
507.12	Hilina Pali road	95			

DOCUMENT CAPTURED AS RECEIVED

45334

10-215
(July, 1928)

UNITED STATES
DEPARTMENT OF THE INTERIOR
National Park Service

Hawaii National Park

REPORT OF NON-APPOINTED PERSONNEL
(TEMPORARY)

Changes outside the District of Columbia for the month of August 1933

Total at beginning of month	Additions	Separations	Net Gain or loss (a)	Total at ending of month
4	3	5	-2	2

(a) If loss, indicate by minus sign. NOTE: None reduced by reason of retirement; 2 reduced by reason of reduced appropriations.

DOCUMENT CAPTURED AS RECEIVED

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Hawaii National Park for the Month of August 1933

	This Month		This Month Last Year	
	Appointed	Non-Appointed	Appointed	Non-Appointed
Number of employees beginning of month	17	4	12	15
Number of additions	0	3 34	0	2
Total	17	7	12	17
Number of separations	0	5 36	0	4
Number of employees close of month	17	2	12	13
Number of promotions during month	0	0	0	0
Aggregate amount of annual leave taken	1/2 0	0	0	0
Aggregate amount of sick leave taken	2 1½	0	0	0
Aggregate amount of furlough leave without pay	0 0	0	15	0

DOCUMENT CAPTURED AS RECEIVED

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Hawaii National Park for the Month of August 1933

	This Year	Last Year
Park revenue on hand beginning of month,	0.00	0.00
Received,	25.00	.28
Total,	25.00	0.28
Remitted,	25.00	0.28
On hand close of month,	0.00	0.00

Park revenues received this year to date,	50.00
Park revenues received last year to date,	148.17
~~Increase~~ Decrease	98.17
Per cent of ~~increase~~,	66.26

DOCUMENT CAPTURED AS RECEIVED

10-161

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF SALES OF PUBLICATIONS

	Number	Value
GOVERNMENT PUBLICATIONS:		
On hand beginning of month,	978	144.15
Received during month,	0	0.00
Total,	978	144.15
Sold during month,	~~25~~ 14	~~3.80~~
On hand at close of month,	~~953~~	~~141.35~~
NON-GOVERNMENT PUBLICATIONS:		
On hand beginning of month,		
Received during month,		
Total,		
Sold during month,		
On hand at close of month,		
Cash on hand beginning of month,	20.33	
Sales during month,	~~2.80~~	4.70
Total,	23.13	
Remitted during month,	~~12.89~~	
Balance,	~~10.24~~	

DOCUMENT CAPTURED AS RECEIVED

STATISTICAL REPORT No. 8

HAWAII NATIONAL PARK

Finance and Accounts

Symbol	Appropriation	Allotted	Expended & Obligated	Balance
44415	Hawaii National Park, 1934	30,340.00	5,656.55	24,683.45
43/4415	Hawaii Nat'l Park 1933-34	3,350.00	--	3,350.00
43/4406	Forest Protection and Fire Prevention 1933-34	520.00	135.09	384.91
4X436	Roads & Trails in National Parks, no year	27,745.34	23,780.86	3,964.48
42/3415	Hawaii Nat'l Park 1932-33	49,350.00	49,320.52	29.48
42/3406	Forest Protection and Fire Prevention 1932-33	430.00	429.49	0.51
42/3405	Emergency Reconstruction and Fighting Forest Fires, N.P. 1932-33	97.05	97.05	0.00
4-03/5640.8	N.I.R., Interior Nat'l Parks Roads & Trails 1933-35	9,000.00	--	9,000.00
4-03/5640.14	N.I.R., Int. Nat'l Parks, Bldgs. and Reservations 1933-35	8,550.00	2,446.18	6,103.82

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

August 5, 1933.

MEMORANDUM TO THE PRESS

By _____
E. P. Leavitt, Supt.

Hawaii National Park, August ____ (Special). Following is the program of educational-recreation activities in Hawaii National Park during the week August 7 to 14. This program includes illustrated lectures on the ~~natural~~ natural features of the park and vicinity, and conducted hikes and auto tours to many interesting places in the park. The public is invited to attend these activities.

Monday, August 7

9 a.m. Illustrated lecture on volcanoes. For enlisted men visiting at the Kilauea Military Camp. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. For enlisted men at Kilauea Military Camp.

Wednesday, August 9

8:15 a.m. Conducted hike across the floor of Kilauea Crater (World's Weirdest Walk). Party leaves the Volcano House at 8:15, arrives at the fire pit Halemaumau at 10:15. 3-mile hike. Those making this trip should arrange to have return transportation meet them at the fire pit.

11 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

Thursday, August 10

8 a.m. Conducted auto tour and hike to Napau Crater. The party hikes from the end of the Chain of Craters Road through luxuriant fern jungle, across the 1840 flow containing tree molds and lava trees, past the remains

DOCUMENT CAPTURED AS RECEIVED

of an old Hawaiian heiau (temple) and pulu factory, over sulphur beds to Napau Crater. This trip offers an opportunity to see interesting volcanic formations as well as interesting types of native vegetation. Party leaves the Officers' Club of the Kilauea Military Camp at 8:00 a.m., the Volcano House at 8:10 a.m. 4-hour trip. Hiking distance 5 miles.

Saturday, August 12

8:25 a.m. Conducted short auto tour of the park. This tour is arranged particularly for Inter-Island passengers making the two-day tour of the island.

10 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. This trip covers 30 miles of roads including stops at the Thurston Lava Tube, Fern Jungle, Kilauea Iki, several of the craters along the Chain of Craters, Kilauea Crater and fire pit Halemaumau, and the earthquake cracks in the Kau Desert. Party leaves the Officers' Club of the Kilauea Military Camp at 1:00, the Volcano House at 1:15. 3½-hour trip.

On the above scheduled auto tours the park can furnish transportation for a limited number of people.

The park is eager to have just as many island people as possible attend these programs of educational recreation. The program varies from week to week.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

August 10, 1933

MEMORANDUM FOR THE PRESS

BY E. P. Leavitt
E. P. Leavitt, Supt.

HAWAII NATIONAL PARK, August _____ (Special). Following is the program of educational-recreation activities in Hawaii National Park during the week August 14 to 21. This program includes illustrated lectures on the natural features of the park and vicinity, and conducted hikes and auto tours to many interesting places in the park. The public is invited to attend these activities.

Monday, August 14

9 a.m. Illustrated lecture on volcanoes. For enlisted men visiting at the Kilauea Military Camp and at Navy Health and Recreation Camp. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. For enlisted men at Kilauea Military Camp and Navy Health and Recreation Camp.

Wednesday, August 16

8:15 a.m. Conducted hike across the floor of Kilauea Crater (World's Weirdest Walk). Party leaves the Volcano House at 8:15, arrives at the fire pit Halemaumau at 10:15. 3-mile hike. Those making this trip should arrange to have transportation meet them at the fire pit.

11 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

7:15 p.m. If clear weather prevails, a small telescope will be set up in front of the Volcano House for the use of park visitors interested in seeing

DOCUMENT CAPTURED AS RECEIVED

the planets Jupiter and Venus, which will appear very close together in the western sky.

Thursday, August 17

8:15 a.m. Conducted auto tour and hike to Mauna Iki and the 1790 footprints in the Kau Desert. 4½-mile hike. Party leaves the Volcano House at 8:15, the Officers' Club of the Kilauea Military Camp at 8:20. 3½-hour trip.

Saturday, August 19

8:25 a.m. Conducted short auto tour of the park. Arranged particularly for Inter-Island passengers making the two-day tour of the island.

10 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. This trip covers 30 miles of roads including stops at the Thurston Lava Tube, Fern Jungle, Kilauea Iki, several of the craters along the Chain of Craters, Kilauea Crater and fire pit Halemaumau, and the earthquake cracks in the Kau Desert. Party leaves the Officers' Club of the Kilauea Military Camp at 1:00, the Volcano House at 1:15. 3½-hour trip.

On the above scheduled auto tours the park can furnish transportation for a limited number of people.

The park is eager to have just as many island people as possible attend these programs of educational recreation. The program varies from week to week.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

MEMORANDUM FOR THE PRESS
By
E. P. Leavitt, Supt.

August 17, 1933

HAWAII NATIONAL PARK, August ____ (Special) Following is the program of educational-recreation activities in Hawaii National Park during the week August 21 to 28. This program includes illustrated lectures on the natural features of the park and vicinity, and conducted hikes and auto tours to many interesting places in the park. The public is invited to attend these activities.

Monday, August 21

9 a.m. Illustrated lecture on volcanoes. For enlisted men visiting Kilauea Military Camp and Navy Health and Recreation Camp. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. For enlisted men at Kilauea Military Camp and Navy Health and Recreation Camp.

Wednesday, August 23

8:15 a.m. Conducted hike across the floor of Kilauea Crater (World's Weirdest Walk). Party leaves the Volcano House at 8:15, arrives at the fire pit Halemaumau at 10:15. 3-mile hike. Those making this trip should arrange to have return transportation meet them at the fire pit.

11 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

DOCUMENT CAPTURED AS RECEIVED

Thursday, August 24

8:15 a.m. Conducted auto tour and hike to Bird Park. Party leaves the Volcano House at 8:15 a.m., the Officers' Club of the Kilauea Military Camp at 8:25 a.m. This trip includes a visit to the koa grove and area of large tree-molds in the Volcano Golf Course, as well as a 1½-mile hike in the famous Kipuka Puaulu, or Bird Park. 3-hour trip.

Saturday, August 26

8:25 a.m. Conducted short auto tour of the park. This tour is arranged particularly for Inter-Island passengers making the two-day tour of the island.

10 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. This trip covers 30 miles of roads including stops at the Thurston Lava Tube, Fern Jungle, Kilauea Iki, several of the craters along the Chain of Craters, Kilauea Crater and fire pit Halemaumau, and the earthquake cracks in the Kau Desert. Party leaves the Officers' Club of the Kilauea Military Camp at 1:00, the Volcano House at 1:15. 3½-hour trip.

On the above scheduled auto tours, the park can furnish transportation for a limited number of people.

The park is eager to have just as many island people as possible attend these programs of educational recreation. The program varies from week to week.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

August 25, 1933.

MEMORANDUM FOR THE PRESS

By E. P. Leavitt
E. P. Leavitt, Supt.

HAWAII NATIONAL PARK, August _____. Following is the program of educational-recreation activities in Hawaii National Park during the week August 28 to September 4. This program includes illustrated lectures on the natural features of the park and vicinity, and conducted hikes and auto tours to many interesting places in the park. The public is invited to attend these activities.

Monday, August 28

9 a.m. Illustrated lecture on volcanoes. For enlisted men visiting at the Kilauea Military Camp and at Navy Health and Recreation Camp. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. For enlisted men at Kilauea Military Camp and Navy Health and Recreation Camp.

Wednesday, August 30

8:15 a.m. Conducted hike across the floor of Kilauea Crater (World's Weirdest Walk). Party leaves the Volcano House at 8:15, arrives at the fire pit Halemaumau at 10:15. 3-mile hike. Those making this trip should arrange to have transportation meet them at the fire pit.

11 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

DOCUMENT CAPTURED AS RECEIVED

Thursday, August 31

8 a.m. Conducted auto tour and hike to Mauna Iki. This trip includes a visit to the 1790 foot-prints and the hot cracks in the Mauna Iki flow of 1920. Party leaves the Volcano House at 8 a.m.; the Officers Club of the Kilauea Military Camp at 8:15. Hiking distance 5 miles. 4-hour trip.

Saturday, September 3

8:25 a.m. Conducted short auto tour of the park. Arranged particularly for Inter-Island passengers making the two-day tour of the island.

10 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. This trip covers 30 miles of roads, including stops at the Thurston Lava Tube, Fern Jungle, Kilauea Iki, several of the craters along the Chain of Craters, Kilauea Crater and fire pit Halemaumau, and the earthquake cracks in the Kau Desert. Party leaves the Officers Club of the Kilauea Military Camp at 1:00; the Volcano House at 1:15. 3½-hour trip.

On the above scheduled auto tours the park can furnish transportation for a limited number of people.

The park is eager to have just as many island people as possible attend these programs of educational recreation. The program varies from week to week.

DOCUMENT CAPTURED AS RECEIVED

The Volcano Letter

No. 401—Monthly | U. S. Geological Survey, Hawaii National Park | JULY, 1933

KILAUEA REPORT FOR JULY, 1933

Including weekly press reports 1120 to 1123, July 2 to July 30, midnight.

Section of Volcanology, U. S. Geological Survey
T. A. Jaggar, Volcanologist in Charge

Volcanology

The data about the crater of Kilauea, in the absence of lava activity at the inner pit Halemaumau, concern observation of slides from the inner pit wall, other changes if any at the pit, measurement of rim cracks about the upper rim of the pit, measurement of horizontal angle right to left across the pit for pit rim monuments, and tilt of the ground at the pit edge in the clinoscope cellars platted with reference to one component only, the line of direction connecting the center of the pit with each cellar; this is to find out whether the ring of ground around the pit is tilting inward or outward. These measurements are under the direction of topographic engineer E. G. Wingate.

On the outer Kilauea Crater wall (Uwekahuna) about three fourths of a mile south from the summit trig station west of the crater, a small slide left a scar which was detected July 15. There were recent slides on the west wall of the summit crater of Mauna Loa discovered at about the same time. In the early part of the month gales of wind from the northeast blew clouds of dust about the lee side of Kilauea crater into the southwestern country. The age-long persistence of the trade wind is a geologic force to be reckoned with in the transport of loose ash on the island of Hawaii.

In Halemaumau July 9 a few rocks had fallen from the south wall of the pit leaving a small dusty track, and a dark red patch on the northeast wall had appeared. On July 26 there were wall slides at 11:50 a. m., and at 0:50 p. m. The pit seismograph had shown four small quakes July 24, one of them accompanied with NNE tilt, but the walls showed no new scars from avalanches.

Measurement of rim cracks gave the following:—Out of 27 points, 8 showed no movement. 6 opened slightly, and 2 closed a half millimeter each, the area of movement being the rim southeast and south, the date July 8 for the previous week. The following week, date July 15, 12 points out of 27 had widened, 2 of them one half millimeter each, one 1 mm. Five cracks showed slight opening July 22, and 2 points on one crack showed slight closing. On July 29, six crack points showed very slight widening, two showed slight closing, the aggregate opening being 3 mm. One of the opened cracks is far back from the rim, half way between the sand spit south and Halemaumau.

The horizontal angle representing the SE-NW diameter of Halemaumau, as measured from the Observatory on the northeast edge of Kilauea crater, showed on July 28 a closing of 1.2 second since the last measurement on June 20, 1933, a period of 38 days. T.A.J.

LASSEN REPORT NO. 33.

During the first five days of July 1933, 53 earthquakes were recorded on the seismographs at Mineral. The distribution of the earthquakes by days was as follows:

July 1	3	shakes
2	5	"
3	4	"
4	39	"
5	2	"

Things had quieted down by July 8th. Several of the shakes were of sufficient intensity to be perceptible at Mineral, though more were felt in the eastern part of Lassen Park. The indicated distance from Mineral was about 10 miles.

R.H.F.

Earthquakes

TABLE

Number of minutes of tremor; very feeble, feeble and slight earthquakes; teleseisms or distant earthquakes; local seismicity index as described in Volcano Letter 371.

Week ending	tr.	v. f.	f	sl.	tel.	seis.
July 9	54	8	0	0	1	17.50
July 16	82	9	1	0	0	26.00
July 23	74	13	2	1	1	29.00
July 30	51	9	0	0	0	17.25

A feeble earthquake was felt at the Volcano House at 0:45 a. m. July 14. It was about one statute mile from the observatory.

A feeble earthquake was felt in Hilo at 3:17 p. m. July 19; as located from the records of three stations it was 25 miles deep under the Kilauea southwest rift zone, near 19° 20'N; 155° 20'W.

A slight earthquake was felt by several near Kilauea crater at 0:39 p. m. July 20. It was less than four miles from the observatory and probably under the crater.

A feeble earthquake was recorded—not reported felt—at 5:59 p. m. July 22. It was about two miles away and under the crater of Kilauea.

During the period covered by this report 25 very *feeble shocks and ten tremors have been located at shallow* depths, under Kilauea crater. The greater number occurred during the third week when the seismicity figure was the greatest.

The first teleseism was poorly recorded, the second was fair showing several wave arrivals.

The microseisms or ground motion was moderate or normal July 6, 10, 11, 26, 27, 28, and 29, on the other days of the month it was light or subnormal. A.E.J.

Tilting of the ground

The Table of Tilt shows the net tilt by weeks, as computed from seismograms at the Kilauea Observatory, and from clinoscope readings at Halemaumau southeast. The table represents the tipping of the ground, in seconds of arc, in the direction given; the total accumulated tilt in the year since July 30, 1932 at the Observatory is 2.9" south and 2.1" west.

TABLE OF TILT

Date	Observatory	Halemaumau
July 3 - July 9	1.9" N	2.9" NW
July 10 - July 16	0.8" NNW	9.2" N
July 17 - July 23	0.1" WSW	2.9" WNW
July 24 - July 30	0.7" NNW	3.2" N

E.G.W.

Mauna Loa

For Mauna Loa on July 18 Messrs. Doerr and Wingate report steam seen chiefly in afternoon hours on the northeast rift 3 to 7 miles below Mokuaweoweo; no steam noticed in the north embayment of crater. A moderate amount of fume and steam came from sulphur cracks NNW of the cones of 1903. The 1914 cone was steaming strongly at the top, moderate fume issued from its vicinity, and sulphur patches were visible on the northern slopes of the cone. No fume or steam was observed at the south lunate platform. The west and northwest wall of the crater showed scars of recent rock slides, and at 12:55 p. m. a considerable slide occurred making streams of dust, with the wind blowing lightly from SW. Under clear weather conditions in still air Mr. Doerr notes that such dust might be seen from Kilauea, and it happens that on that same evening at Volcano House the volcanologist saw what looked like a faint fume cloud start above Mokuaweoweo and move slowly north, while the wind below at Volcano House was strong NE. Wingate reports that sulphur stain was seen from the east points of view at the base of, and on, the north wall of Mokuaweoweo about one half mile east of the summit trig station. The water holes examined had much less ice than during 1925-26. There was a small tremor on the Observatory seismogram about the time of the 12:55 avalanche in Mokuaweoweo.

DOCUMENT CAPTURED AS RECEIVED

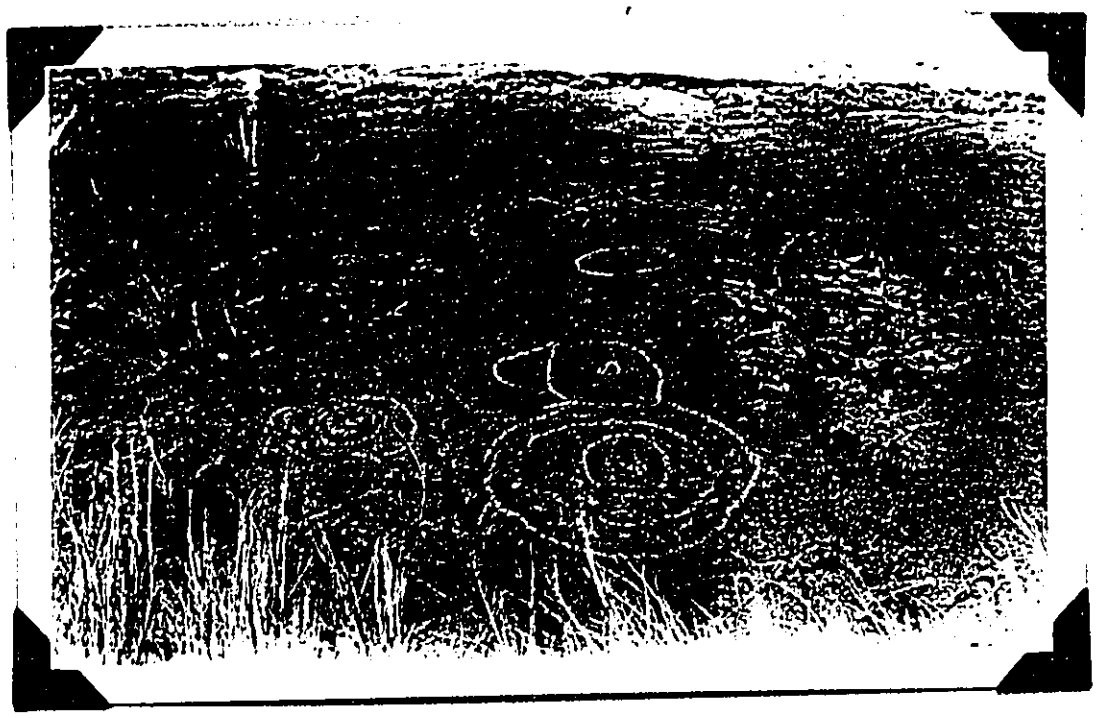
August 3, 1933. Part of group of 13 persons who hiked along Puna coast 8 miles west of Kalapana to visit area of petroglyphs. The party was under the guidance of Park Rangers Everett Brumaghim and K. J. Williams, and included Messrs Clarence and J. P. Homan, Raymond Squire, Tomi Tasaki, Frank Minato, Masaru Sakai, H. V. Lucas. Lieut. S. R. Hinds, Rev. W. J. Rooke, and Rev. and Mrs. R. P. Snider. Photo by Mr. Rooke. Note rock drawings.

DOCUMENT CAPTURED AS RECEIVED

Park Ranger Brumaghim and Harold V. Lucas, Y.M.C.A. secretary, examining petroglyphs. Photo by Raymond Squire. August 3, 1933.

Readings (by Ranger Brumaghim): Na lo na kino i ke ana o ka Olohe. Translation: Hidden are the bodies in the cave of the Olohe. Meaning: The persons killed by Olohe (robber on the Puna-Kau trail) were hidden in his cave. (This cave was located by Ranger Brumaghim one-half mile from here.)

DOCUMENT CAPTURED AS RECEIVED



Section of petroglyphs in Puna District. Photo August 3, 1933, by Ranger Everett Brumaghim.

Readings (by Ranger Brumaghim): Ku ka hoe o kane i na au puni. Translation: Stands the paddle of Kane who has power over all islands. (Kane, an Hawaiian god who once had much power.)
Note paddle drawn in upper part of picture.

DOCUMENT CAPTURED AS RECEIVED

Petroglyphs in Puna District. Photo August 3, 1933, by Ranger Everett Brumaghim.

Readings (by Ranger Brumaghim): U a pepehi i na kahuna me ko la kou laau kapu a ka nu pu i Holei. Translation: They have killed the kahunas with their tabu sticks and buried them at Holei. Meaning: About five kahunas (priests) were put to death with their own tabu sticks and then buried somewhere on the cliff (Holei).

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

Aug. 8, 1933.

The Director,
National Park Service,
Washington, D. C.

Dear Mr. Director:

The following is the administrative report for Hawaii National Park for the month of July 1933.

000 General

010 Matters of importance--radio broadcasts

Two broadcasts were made during the month from Kilauea Volcano House. The first was on the evening of July 4, in conjunction with the visit to the park of the Pentathlon champions; and the second on July 23, in conjunction with the completion of the road paving job. The broadcasts were accomplished by remote control through Station KGU, Honolulu, owned by the Advertiser Publishing Company.

Kilauea Summer School

The six weeks session of the Kilauea Summer School came to an end on July 28. The expanded work of this year was such a complete success that even greater expansion is planned for next year. The official report on the 1933 session is in preparation by Dean Benjamin O. Wist. He desires to submit a definite plan for development of the Kilauea Summer School, and his ideas include taking over the Kilauea Summer Camp buildings, installing improved bathing and toilet facilities and an electric lighting plant, building a two-room school building for holding classes, adding a library, etc. He states that while the plan for development is under way, covering such period of time as the University of Hawaii elects, the Kilauea Summer School will continue to make use of the facilities offered by the National Park Service in the way of class room space in the administration building and the projection apparatus at Uwekahuna.

The students of the Kilauea Summer School held a banquet and dance at the Volcano House on July 8, to which the Superintendent and certain members of the park staff were invited, as well as Dr. and Mrs. T. A. Jaggar. An informal get-together was held on the afternoon of July 26 at the Kilauea Summer Camp and Public Camp Grounds, with a sports program and picnic luncheon. Members of the park staff attended.

A questionnaire was submitted to the students by Dean Wist and the Park Superintendent seeking expressions of opinion regarding plans for future expansion. A copy of this questionnaire is attached to this report. Attention is also invited to the list of Polynesian dye plants and dyes and book references compiled by the instructor in botany in the Summer School.

DOCUMENT CAPTURED AS RECEIVED

Dean Wist is greatly enthused over the success of the Summer School and its future prospects. He realizes the national park setting on a live volcano is extremely unique in its attraction. He envisages a steady growth, year after year, in the popularity of the school. There is certainly an excellent opportunity to study live geology here.

Extension Courses

The University of Hawaii has requested the cooperation of the National Park Service in extension work during the coming fall and spring semesters. Park Naturalist Doerr has outlined a course in general and historical geology to extend through the entire school year. The plan is to have the lectures once a week in Hilo.

020 General weather conditions

021 In the Park

The weather in Hawaii National Park during July has been unusually dry and bright. The total rainfall for the month was only 1.02 inches, compared with a normal of 6.48 inches. As a result our new reservoir was called upon to supply 28,000 gallons of water. The total capacity of the reservoir is 65,000 gallons, and it was completely filled at the beginning of the dry season. Probably the use of our office toilets by the Summer School students increased materially the consumption of water. Private cottages in and near the park have been unusually popular this season as reduced incomes have cut down the summer migration to the mainland, and the consequent increased use of water at these cottages has reduced the tank supplies very materially. The Kilauea Military Camp obtained permission from the management of the Kilauea Volcano House to use some of the ample water storage at the hotel.

The mean maximum temperature in the park during July was 69.45 degrees, the mean minimum 53.32 degrees, giving a mean of 61.38 degrees for the month. The maximum temperature was 75 on July 18, the minimum 49 on July 13, and the greatest daily range was 24 degrees on July 18. There were no cloudy days. Full details will be found in the meteorological record attached.

100 Administration

120 Park inspections by Superintendent

Routine inspections were made of jobs in the park and on conditions in office and utility area. Contact was maintained with operations of public utilities in the park, and public relations work was carried on in and out of the park. Inspection was made of the section of the around-the-island (Mamalohoa) road at Puuwaawaa and Puu Anahulu, the last section of this road to be paved.

Acting Chief Ranger

Inspections and supervision were given to park jobs, including completion of the paving work at the Thurston Lava Tube, installation of the telephone line to Mauna Loa rest house in cooperation with the Army, patching of worn spots in the Kau Section of the main road through the park, etc. A trip was made with Park Naturalist Doerr and Engineer Wingate of the Observatory staff to Mauna Loa summit to escort Dr. Karl Krejci, paleontologist. Escort was also provided the Pentathlon champions to Kalapana.

DOCUMENT CAPTURED AS RECEIVED

124 Other Governmental Officers

Hon. Edward T. Taylor, of Colorado, Chairman of the Interior Department Appropriations Committee of the House, made a brief trip to Hawaii with four other Congressmen and Senators. They were passengers on the U. S. Army Transport Republic from San Francisco to Honolulu and return. This vessel arrived in Honolulu on Tuesday, July 18, and departed Friday, July 21, so it will be seen that their visit was extremely brief.

A radiogram arrived the previous week from Engineer Kittredge advising of the prospective visit of Mr. Taylor. We therefore directed correspondence to him in care of the Hawaii Tourist Bureau to be delivered on the ship's arrival. I also arranged with the Tourist Bureau to present Mr. Taylor with a lei (garland of flowers). The mail sent to Mr. Taylor was designed to acquaint him with matters of importance relating to the park for discussion on his arrival, and to ascertain what his plans were, particularly the time to be spent in Hawaii National Park. Mr. Kittredge's radio message had already informed us that Colonel Dougherty, in command of the Republic, would fly over to Hilo with Mr. Taylor.

Congressman Taylor and his party were met at the Hilo airport just before noon on Thursday, July 20. The party was conducted to the park in two official cars. In the Superintendent's sedan rode the Congressman and Colonel Dougherty, the car being in charge of Park Naturalist Doerr with Colonel Dougherty on the front seat. The Superintendent and Mr. Taylor rode on the back seat. The entire party, including Army pilots and mechanics, and Captain and Mrs. Waine Archer of Kilauea Military Camp, were entertained by Mr. and Mrs. Leavitt at lunch.

As the party's plans called for their return to Honolulu the same day, they had only about two hours in the park, but I was with them the full time, including the trip to and from the park, and so had excellent opportunity to discuss the master plans of the park and other matters with Mr. Taylor.

Mr. Taylor was very much pleased with what he was able to see in the time at his disposal. In addition to discussing park affairs I later sent him a memorandum containing facts and figures for his study.

He was able to give Dr. Jaggar about 5 minutes of his time.

Captain Archer's son and daughter were passengers on the Republic on the trip to San Francisco as they were to enter the University of California. The contact with Colonel Dougherty was therefore a very pleasing one.

Mr. Taylor invited me to write him at any time on matters concerning the park appropriations or on other matters, and assured us that he would do all he could to help out in our programs.

DOCUMENT CAPTURED AS RECEIVED

Park Naturalist

In addition to regular field trips were trips to Mauna Loa summit with Dr. Krejci and a descent on July 4 into Makaopuhi ("Eye of the Eel"), the largest crater on the Chain of Craters Road.

130 Finance and accounts

A statement of the park appropriations is attached as Statistical Report No. 8.

150 Equipment and supplies

Six reels of 35 mm motion picture film taken by Merl LaVoy were received for editing and titling.

Two rain gages were transferred to the park by the Weather Bureau to be placed at various locations, and a third is to arrive. One is planned for Haleakala, one for Mauna Loa, and the third for Uwekahuna or some other section of the park where it seems desirable to have rainfall data.

A portable automatic traffic counter was received and was installed on July 25 near the administration building. This is an important acquisition as it counts accurately our main road traffic and makes known the great amount of night traffic.

A bitumuls pump was purchased; also a gasoline range for employees quarters No. 13, occupied by Ranger K. J. Williams, at the Hilo entrance.

170 Plans, maps, and surveys

The Kau boundary line was checked with Engineer Wingate and was definitely found to be about 1,500 feet inside the line heretofore presumed to be the Kau line on the main road. This matter is the subject of correspondence with your office.

180 Circulars, placards, publicity bulletins, etc.

The Honolulu Star-Bulletin on July 15 published seven pictures, secured from us, of scenes in the park accompanying an article under the heading, "'Big Island' attractions lure vacation visitors; Crater of Kilauea inspires awe; is easily accessible; social center of National Park is Volcano House; nearby country abounds in natural attractions." The article was unsigned, so is presumed to be by a member of that newspaper's editorial staff.

The same issue carried a special article by the Superintendent (National Parks in Conservation and Land Use) under the heading, "Hawaii National Park backed by National Policy; Principles of Park Service as told by Superintendent Leavitt; vast and striking domain under Federal control, for benefit of all the people all the time. This article contained about 2,300 words and was sent to and used by all the prominent local newspapers. All local newspapers have been extremely courteous in giving desirable publicity to the park . The weekly press memoranda on activities of the educational department are attached.

DOCUMENT CAPTURED AS RECEIVED

Following dedication of the Mamalahoa Highway, Mr. George T. Armitage, Executive Secretary of the Hawaii Tourist Bureau, and the Bureau's photographer, Arthur Robinson, spent a few days in and near the park taking pictures for publicity purposes on the mainland and in magazines and press syndicates. On July 25 a picture was taken of the uniformed personnel of the park.

Copies of the May and June issues of the Volcano Letter are attached to this report because the May issue was delayed and received too late to accompany the June report.

200 Maintenance, improvement and new construction

210 Maintenance

Considerable maintenance work has been carried on at employees' quarters during the month in the way of repainting, scraping old paint, repairing, etc. Two rotted casement windows were replaced in quarters occupied by Acting Chief Ranger Christ. The quarters formerly occupied by Ranger Fordyce have been completely renovated in preparation for the coming of Ranger J. A. Peck from General Grant National Park. All park cars were washed, polished, and repaired as necessary. Additional janitor work was required at the administration building and at Uwekahuna due to use made of these buildings by the classes of the Kilauea Summer School.

220 Improvements

On July 15 the Honolulu Star-Bulletin published an appreciative item lauding the improvements made to the Haleakala Trail from the park boundary to the summit rest house. The trail was cleaned, graded, and well marked during the preceding month. E. J. Walsh, who superintendent the job and who has charge of the rest house under the Maui Chamber of Commerce, cleaned and renovated that building and installed new tables. He reported 86 guests registered there during June.

230 New construction

We learned from the newspapers on July 29 that $9,500 was allotted to Hawaii National Park by the public works administration, representing a return of a portion of the regular appropriation held up until the reforestation program was started. This sum covers the following items:

1 Employees Quarters,	$4,400
2 Comfort stations (Thurston Lava Tube),	2,400
1 Electric Plant, Kilauea,	2,700
	$9,500

On the 15th a radio message was received from the Director stating the public works program allocated sixteen million dollars for park roads, of which $400,000 was for construction of the Haleakala road and $101,000 for the Halemaumau-Uwekahuna-Bird Park road, with $15,000 for miscellaneous minor projects. An Associated Press dispatch concerning this received prominent attention in all local newspapers. It was welcome news all around.

DOCUMENT CAPTURED AS RECEIVED

On July 24 a radiogram was sent to the Branch of Engineering, San Francisco, inquiring when the Haleakala and Uwekahuna road jobs could be advertised, as we were anxious to start both jobs as soon as practicable. A reply the following day stated that the Bureau of Public Roads were making minor changes in the plans and could probably mail the copies to the park the following week for final review. Mr. Vint suggested that after review a clearance radio authority to approve the plans for me in San Francisco might be sent in in order to save delay. This will be done

250 Improvement of nearby transcontinantal highways
Mamalahoa (around-the-island) Highway
The last link of the paved Mamalahoa Highway was completed during the month. This was the Puuwaawaa and Puu Anahulu section on the west side of the island. It is 15.3 miles of bitumuls, costing $425,000. The paved surface is 10 feet in width, but the graded surface is 22 feet wide and will be completely paved when necessary. It is an excellent stretch of road, straight and fast. On July 22 the Hilo Tribune-Herald had an extensive article on the Mamalahoa Highway, including prominent mention of the 38 miles of roads in Hawaii National Park. The same edition, published in connection with the celebration held in Kona dedicating the road, also contained a great deal of descriptive matter on Kilauea and Mauna Loa volcanoes.

The total length of the Mamalahoa Highway is 230 miles. Construction work covered 20 years and cost 7½ million dollars.

The celebration on July 22 in Kona in conjunction with completion of paving the Mamalahoa Highway consisted of outrigger canoe races on historic Kealakekua Bay, the participants including clubs from Kona and Honolulu, and dedicatory speeches at Puu Anahulu, the participants including the Governor of Hawaii, Bureau of Public Roads Engineer E. S. Wheeler, Road Contractor E. E. Black, Judge S. L. Desha, Jr., and others. As many of the staff as could be spared from the park attended the celebration. The main party left the park at 5 a.m. and returned about 9 o'clock that night. The trip included a complete circuit of the island. The celebration drew a very large crowd, probably the largest ever to be in Kona. The Inter-Island Steam Navigation Company ran an excursion steamer from Honolulu to Kealakekua Bay and Kailua. The celebration included a luau (feast) and dance at Kailua.

On the following evening (July 23) a broadcast was made from the Kilauea Volcano House, also in conjunction with the celebration. Speakers included the Park Superintendent, Park Naturalist, Dr. T. A. Jaggar, Lieut. Paul K. Porch of the Kilauea Military Camp, Judge S. L. Desha, Jr., Senator W. H. Hill, Mr. George Lycurgus of the Volcano House, and others.

The program of races, dedicatory speeches, and speaking and music at the Volcano House was broadcast by Station KGU by remote control. The speaking at the Volcano House, which included music by the Beamer singers and by a military band from Kilauea Military Camp, was sponsored by the Hawaii Tourist Bureau.

260 Landscape work
Ranger Barnett continued work of exterminating primroses. Ranger Brumaghim devoted spare time to his usual landscape work.

DOCUMENT CAPTURED AS RECEIVED

300 Activities of other agencies in the park

310 Public service contractors

Two dances were held at the Volcano House during the month, and two at the Kilauea Military Camp.

320 Cooperating government agencies

The park cooperated with officials of the Territorial Fish and Game Commission in a goat drive on July 16 to provide additional meat to needy families. The drive was conducted in charge of Ranger T. W. Barnett.

330 Cooperating non-government agencies

The cooperation with the University of Hawaii in conducting the Kilauea Summer School has been covered in the introduction. Ranger Brumaghim gave almost continuous service to the botany class of the school. He took particular precaution to avoid fires starting from the plant-specimen-drying apparatus, such as occurred in previous years.

The Hawaii Telephone System granted permission to us to carry our Mauna Loa telephone lines on the cross arms of their line poles from the point where our lines join theirs to where the lines diverge to connect with the switchboard.

350 Donations and accessions

Thirteen books, distributed through the Civilian Conservation Corps, were received from the Engineer Supply Officer, New York General Depot, and will be useful in engineering work. One steel tape repair kit also was received.

At the suggestion of Dean Wist, the park is to receive a used Kohler electric plant from the University of Hawaii. This plant was formerly in use at a school at Waimanalo, Oahu, which has been discontinued by the University and for which they have no further use. He quickly realized the need for such a plant at Uwekahuna when our makeshift outfit failed with the first three hours of continuous service. This plant is being transferred to the park for the use of the Kilauea Summer School, but of course will be kept in service and used by the Park Service.

400 Flora, fauna and natural phenomena

410 Ranger, naturalist and guide service.

As a routine measure the park is now escorting, once a week, the enlisted men visiting at the Kilauea Military Camp on a tour of the park. This contact of the rangers and the park naturalist with the soldiers is considered valuable in teaching them park policies.

Ranger Brumaghim was of untold value to the summer school botany class in escorting them to places where plant specimens could be collected. Where possible, collecting was made outside the park in places where permission to collect was previously secured.

DOCUMENT CAPTURED AS RECEIVED

420 Museum service

Museum attendance totaled 592. There were 11 lectures to 455 persons.

425 Educational activities

Educational activities, covering field trips of the Park Naturalist, conducted park tours, radio talks, etc., consumed a great deal of the time of the Park Naturalist. There were 10 field trips with 102 persons; 18 auto caravans with 62 cars and 479 persons, and a total of 1,628 contacts.

480 Natural phenomena

Hawaiian Volcano Observatory

Volcanic conditions in Hawaii National Park remain unchanged. Measurements conducted by the Geological Survey staff indicate an increase in the total number of seismic disturbances from 262 for June to 313 for July, as follows:

Tremors,		261
Very feeble	earthquakes,	48
Feeble	"	3
Slight	"	1
Distant	"	3
		313

Tremors and very feeble earthquakes are very rarely perceptible. Distant shocks are never felt.

Cracks in the area around the fire pit Halemaumau were measured as usual and found to be normal in amount or degree of opening and closing.

Tilting of the ground by weeks was moderate N by E, moderate N, slight W by S, and slight N by W. Microseismic motion was generally light.

Dr. Jaggar calls attention in Volcano Letter No. 400 for June (attached) to the lowered level of the rim of Halemaumau between January 1 and June 12, 1933, by about 0.1 foot. The total accumulated tilting of the ground at the Observatory in a year ending July 2 was about 5 seconds south and 2 seconds west; this checks with the notion of a lowering of the crater. He further states that the intensity of shaking, or "local seismicity," increased from the figure 8.00 to the figure 25.00 during June.

An article with map by Engineer Wingate in this number describes laying off a net of trigonometric stations in Puna between Kalapana and the 1840 flow. Two towers 30 and 40 feet high were built for this work by the Hawaiian Volcano Research Association so that the surveyor could get above the forest to observe flagged hills. The object of this precise survey is to makr a number of points with brass plates and measure the triangular figures between them so that by trigonometry in the future any movement on the cracks and craters can be determined with accuracy.

DOCUMENT CAPTURED AS RECEIVED

This section of the island, in Puna, had much movement in 1823, 1840, 1868, and 1924. It is recalled that the movement there in 1924 accompanied the draining of Halemaumau and was particularly intense following the explosive eruptions of May of that year. As proof of the future of Mr. Wingate's work it should be stated that no similar surveys have been made of this country, so that there is no record of the extent of faulting and sinking which took place. Mr. Wingate mapped this country topographically in 1922 for the Geological Survey, but no similar mapping work has since been done to indicate the precise extent of changes which took place in the collapse of 1924. About four square miles were affected, two or three square miles to the extent of 10 feet, plus or minus, in the Kapoho district. An unknown area was covered by water and some shore line changes occurred. Former Superintendent Thomas Boles did some leveling in a part of this section at the time.

Engineer Wingate accompanied Park Naturalist Doerr and Acting Chief Ranger Christ to the summit of Mauna Loa on July 17-18. They report steam seen chiefly in the afternoon hours on the northeast rift 3 to 7 miles below Mokuaweoweo and no steam noticed in the north embayment of the crater. A moderate amount of fume and steam came from sulphur cracks NNW of the cones of 1903. The 1914 cone was steaming strongly at the top, moderate fume issued from its vicinity, and sulphur patches were visible on the northern slopes of the cone. No fume or steam was observed at the south lunate platform. The west and northwest wall of the crater showed scars of recent rock slides, and at 12:53 p.m. July 18 a considerable slide occurred making streams of dust. A tremor recorded on the Observatory seismogram at this time. Later that day the Volcanologist saw, from Kilauea, what looked like a faint fume cloud start above Mokuaweoweo and move slowly north, while the wind at Kilauea was strong NE. These phenomena may be considered as evidences of future volcanic activity on Mauna Loa.

Mr. Wingate reported sulphur stain seen on the north wall of Mokuaweoweo about one-half mile east of the summit trig station, and that the water holes examined had much less ice than during 1925-26.

490 Miscellaneous

A circular, "Polynesian Plants and Dyes," mimeographed for Mr. Theo. C. Zschokke, instructor in botany in the Kilauea Summer School, is attached.

500 Use of park facilities by the public

510 Increase or decrease in travel

The total number of visitors in the park during July was 37,218, compared with 31,182 for June and 9,709 for July 1932. The figure for this travel year to date is 155,248, compared with 124,215 for a year ago, representing an increase of 24.98 per cent.

520 Conditions which affect travel

Probably the universal depression has materially added travel to Hawaii National Park. This is, however, at the expense of steamer travel to the mainland. The new automatic traffic counter is, of course, an important factor.

DOCUMENT CAPTURED AS RECEIVED

530 Visitors

Hon. Edward T. Taylor, of Colorado, Chairman, Interior Department Appropriations.
Dr. Karl Krejci, Sun Yatsen University, Hongkong. En route to his home in Austria.
L. P. Thurston, General Manager, Honolulu Advertiser and Radio Station KGU.
John Mason Young, President, Pacific Engineering Company, Honolulu.
E. S. Wheeler, Principal Highway Engineer, Bureau of Public Roads, Honolulu.
W. W. Beers, Department Supervisor, Department of Public Instruction, Honolulu.
Senator W. H. Hill (Territorial Legislature), Hilo.
Senator Henry Freitas do Honolulu
J. W. Vandercook, journalist, New York City.
George Armitage, Executive Secretary, Hawaii Tourist Bureau.

540 Public camps

More use is being made of public camp grounds, just as on the mainland. Increased use may make necessary improved camp grounds facilities.

550 Visiting groups

On July 20 sixteen Y.M.C.A. boys from Honolulu stopped en route to the general camp meeting at Keauhou, Kona.

600 Protection

620 Fire protection

A forest fire broke out in the Kapapala Ranch lands adjacent to the park and burned from July 26 to 30. Park rangers assisted in getting the fire under control and extinguishing it. It is thought to have been started by careless hunters, but occurred during a cattle drive. The location was in an area about two miles above the Ohaikea houses on the Kau side of the 1881 lava flow.

630 Accidents

There were two cases of lost parties. The first was July 2 when two soldiers were missed over a day and a party under Ranger Brumaghim made a search of the Mauna Iki country. They were later picked up on the other side of the park on the Chain of Craters road, so must have done considerable wandering. On July 25 Mr. and Mrs. E. A. Taylor and I. V. King, of the Navy Health and Recreation Camp, while pig hunting near Napau Crater, wandered too far to return to their car on the Chain of Craters road before nightfall and remained in the open until morning. They were missed, but while a searching party was looking for them they returned safely to the camp. Rifle fire later brought back the searching party.

On July 14 Master Akira Yamamoto, 8 or 9-year old son of S. Yamamoto, former steward at the Volcano House, fell out of the rear of his father's sedan just after the car came into the park at the Hilo entrance. The child hit the pavement with force enough to cut his scalp to the extent of requiring four stitches and knocking him unconscious. First aid was given at the hospital of the Kilauea Military Camp, after which he was taken to Olaa Hospital for X-ray to ascertain whether the skull was fractured.

DOCUMENT CAPTURED AS RECEIVED

640 Destruction of predatory animals
Nine wild pigs and 51 wild goats were killed.

900 Miscellaneous

The members of the staff learned with regret of the resignation of Director Albright, but are pleased to learn his position was filled by promotion within the Service. Copies of the press memorandum by the Secretary of the Interior announcing this matter were sent to Honolulu and Hilo newspapers.

The Standard Oil Company of California was the low bidder in the Navy contract for supplying gasoline to Hawaii National Park. The rate was $0.0704 including the Federal tax of 1½ cents. We understand that the same company was low on the lubricating oil contract, but have not yet received copies of the papers in the matter. There has also been some delay in completion of the kerosene contract papers, necessitating purchases in the open market.

Ranger and Mrs. Joseph B. Fordyce and their children, Mildoss and Jack, were given a banquet by the park staff in the conference room of the administration building on the evening of July 13. This was a last get-together in their honor prior to their leaving the park on July 18 en route to a new assignment in General Grant National Park. The park staff regret to lose these fine people, but have full sympathy with their desire to return to the mainland for the improved educational facilities obtainable for their children.

Advise was recently received from Superintendent Hopping of General Grant that Fordyce entered on duty August 1 and that Ranger and Mrs. J. A. Peck were en route to Hawaii National Park and due to arrive in Honolulu August 10. We look forward to welcoming them to our little community.

On July 27 the press announced that the Civil Service had extended the closing date for the Junior Park Naturalist examination for residents of the Territory of Hawaii to August 28.

A resume' was submitted to the Governor of Hawaii on activities of the park for the fiscal year 1933 covering park improvements, appropriations, road and trail work, Kilauea Summer School, sale of the Volcano House, number of authorized positions, travel figures, etc. Various other reports as required were prepared and submitted to Washington.

Very respectfully,

E. P. Leavitt,
Superintendent.

DOCUMENT CAPTURED AS RECEIVED

Form No. 1009—Met'l.

U. S. Department of Agriculture, Weather Bureau.

COOPERATIVE OBSERVERS' METEOROLOGICAL RECORD:

Month of July 1933, *192* ; *Station,* Volcano Observatory *County,* Hawaii Nat'l Park

Hour of Observation, _____

State, Hawaii; *Latitude,* _____; *Longitude,* _____; *Time used on this form,* _____

DATE.	TEMPERATURE. Maximum. 1	Minimum. 2	Range. 3	*Set Max. 4	PRECIPITATION. Time of Beginning. 5	Time of Ending. 6	†Amount. 7	Snowfall, in Inches. 8	Wind: Depth of Snow on Ground at Time of Observation. 9	Prevailing Wind Direction. 10	Character of Day, Sunrise to Sunset. 11	‡ Miscellaneous Phenomena.
1	70	52	18	52			.07	85	Lt.	NE	Clear	
2	70	53	17	64			.28	--	"	"	PC	
3	66	53	13	65			.02	84	Str.	"	"	
4	67	53	14	59			.02	89	"	"	"	
5	63	54	9	60			.07	94	"	"	"	
6	66	53	13	62			.13	83	"	"	"	
7	69	53	16	59			.03	91	Lt.	"	Clear	
8	72	55	17	65			.01	83	"	"	PC	
9	67	53	14	62			.03	83	"	"	Clear	
10	68	56	10	59			.13	90	Str.	"	PC	
11	66	53	13	69			T	89	"	"	"	
12	67	50	17	60			T	88	Lt.	"	"	
13	68	49	19	59			.05	94	"	"	"	
14	67	52	15	61			.05	89	Str.	"	"	
15	67	53	14	59			T	90	Lt.	"	"	
16	70	53	17	62			T	90	"	"	Clear	
17	74	52	22	64			T	83	"	"	"	
18	75	51	24	73			T	--	"	"	"	
19	74	53	21	69			T	83	"	"	"	
20	67	57	10	61			.01	87	Str.	"	PC	
21	68	53	15	60			.03	91	"	"	"	
22	73	53	20	65			T	81	Lt.	"	"	
23	72	56	16	66			T	80	"	"	"	
24	67	54	13	63			.03	94	Str.	"	"	
25	70	53	17	64			T	87	"	"	Clear	
26	73	57	16	63			T	85	"	"	"	
27	73	55	18	64			.01	84	Lt.	"	"	
28	71	54	17	62			.01	85	Str.	"	PC	
29	70	53	17	64			T	90	Lt.	"	"	
30	73	52	21	63			.04	90	"	"	"	
31	70	53	17	61			.02	85	Mod.	"	"	
Sum	2153	1653	500	1928			1.03	3527				
Mean	69.45	53.32	16.13	62.19			.03	87.14				

*Reading of maximum thermometer immediately after setting.
†Including rain, hail, sleet, and melted snow.
‡Thunderstorms, halos, auroras, etc.

(IN TRIPLICATE.) See cover for instructions.

_____, *Cooperative Observer.*

Post-Office Address, _____

8—253 GOVERNMENT PRINTING OFFICE

MONTHLY SUMMARY.

TEMPERATURE.

Mean maximum, 69.45

Mean minimum, 53.32

Mean, 61.38

Maximum, 75; date, 18

Minimum, 49; date, 13

Greatest daily range, 24 July 18

PRECIPITATION.

Total, 1.02 inches.

Greatest in 24 hours, .28; date, 2

SNOW.

Total snowfall, ____ inches; on ground 15th, ____ inches;

at end of month, ____ inches.

NUMBER OF DAYS—

With .01 inch or more precipitation, 19

Clear, 10; partly cloudy, 21; cloudy, 0

DATES OF—

Killing frost, ____

Thunderstorms, ____

Hail { Light, ____ / Moderate, ____ / Heavy, ____

Sleet, ____

Auroras, ____

REMARKS:

Water supplies are running short at many nearby private cottages.

DOCUMENT CAPTURED AS RECEIVED

10-157
(July, 1929)

PARTMENT OF THE INTERI

NATIONAL PARK SERVICE

TRAVEL REPORT

Hawaii National Park for the month of July 1933

	This Month	This Travel Year To Date	This Month Last Year	Last Travel Year To Date	Increase for Travel Year	
					Number	Percent
PRIVATE TRANSPORTATION:						
Cars first entry, ...						
Cars reentry, ...						
Motorcycles, ...						
Total motor vehicles, ...						
Persons entering via motor vehicles, ...	36,110	150,769	8,550	115,667	35,102	30.35
Persons entering via other private transportation, ...	489	1,091	423	2,960	1,869	-63.14
Total persons entering via private transportation, . . .	36,599	151,860	8,973	118,627	33,233	28.02
OTHER TRANSPORTATION:						
Persons entering via ~~stages~~ Hotel .	615	3,388	563	5,415	2,027	37.43
Persons entering via ~~trains~~ Summer Camp*			173	173		
Persons entering otherwise, . . .						
Total other transportation, .	615	3,388	736	5,588	2,200	39.37
GRAND TOTAL ALL VISITORS, . . .	37,214	155,248	9,709	124,215	31,029	24.98

*Summer Camp not operating in season 1933.

	This Year	Last Year	Increase	
			Number	Percent
Automobiles in public camps during month, ...				
Campers in public camps during month, ...				

DOCUMENT CAPTURED AS RECEIVED

10-158

PARTMENT OF THE INTERI

NATIONAL PARK SERVICE

STATUS OF AUTHORIZED PROJECTS

.....Hawaii..... National Park for the Month of .....July 1933.....

Description of Projects		Percent Constructed To Date	Percent Constructed This Month	Percent Constructed Last Month	Probable Date of Completion
452	Telephone Line Bird Park to Mauna Loa Rest House	95 100	45	45	
502.5	Mauna Loa Trail	98	0	0	
502.8	Auto trail to Kipuka Kulalio water tanks	95	0	0	
502.10	Paving Lava Tube Trail	95 100	5	30	
507.8	Paving hotel road	0	0	0	
507.9	Shoulders on roads, and parapet walls (post construction)	95	0	5	
507.10	Road Repair, Kau Section	80 100	80	0	
FP 161	[illegible]	05			
514.3	[illegible]	01			

DOCUMENT CAPTURED AS RECEIVED

10-159
(May, 1931)

UNITED STATES

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

STATUS OF PERSONNEL

Hawaii National Park for the Month of July 1933

	This Month		This Month Last Year	
	Appointed	Non-Appointed	Appointed	Non-Appointed
Number of employees beginning of month	17	4	12	15
Number of additions	0	0	1	9
Total	17	4	13	24
Number of separations	0	0	1	9
Number of employees close of month	17	4	12	15
Number of promotions during month	0	0	0	0
Aggregate amount of annual leave taken	11	0	0	0
Aggregate amount of sick leave taken	3	0	8	0
Aggregate amount of leave without pay	0	0	0	0

DOCUMENT CAPTURED AS RECEIVED

45334

10-215
(July, 1928)

UNITED STATES
DEPARTMENT OF THE INTERIOR
National Park Service

Hawaii National Park

REPORT OF NON-APPOINTED PERSONNEL
(TEMPORARY)

Changes outside the District of Columbia for the month of July 1933

Total at beginning of month	Additions	Separations	Net Gain or loss (a)	Total at ending of month
4	0	0	0	4

(a) If loss, indicate by minus sign. Note: None dismissed by reason of (a) reduced appropriations, or (b) retirement.

DOCUMENT CAPTURED AS RECEIVED

10-160

DEPARTMENT OF THE INTERIOR

NATIONAL PARK SERVICE

REPORT OF PARK REVENUES

Hawaii National Park for the Month of July 1933

	This Year	Last Year
Park revenue on hand beginning of month,	0.00	0.00
Received,	25.00	147.89
Total,	25.00	147.89
Remitted,	25.00	147.89
On hand close of month,	0.00	0.00
Park revenues received this year to date,	25.00	
Park revenues received last year to date,	147.89	
~~Increase~~, Decrease	122.89	
Per cent of ~~increase~~, decrease	83.08%	

DOCUMENT CAPTURED AS RECEIVED

10-161

:PARTMENT OF THE INTERI(

NATIONAL PARK SERVICE

REPORT OF SALES OF PUBLICATIONS

	Number	Value
GOVERNMENT PUBLICATIONS:		
On hand beginning of month,	1,011	160.30
Received during month,	0	0.00
Total,	1,011	160.30
Sold during month,	33	~~16.15~~ 12.15
On hand at close of month,	978	148.15

NON-GOVERNMENT PUBLICATIONS:

On hand beginning of month,	
Received during month,	
Total,	
Sold during month,	
On hand at close of month,	

Cash on hand beginning of month,	4.18
Sales during month,	16.15
Total,	20.33
Remitted during month,	0.00
Balance,	20.33

DOCUMENT CAPTURED AS RECEIVED

STATISTICAL REPORT NO. 8

HAWAII NATIONAL PARK

Finance and Accounts

Symbol	Appropriation	Allotted	Expended & Obligated	Balance
44415	Hawaii National Park, 1934:	30,340.00	2,423.09	27,916.91
43/4415	Hawaii National Park, 1933-'34:	3,350.00	0.00	3,350.00
43/4406	Forest Protection and Fire Prevention, 1933-'34:	520.00	135.09	384.91
42/3415	Hawaii National Park, 1932-'33:	49,350.00	49,344.51	5.49
42/3405	Emergency Reconstruction and Fighting Forest Fires, National Parks, 1932-'33:	97.05	97.05	0.00
42/3406	Forest Protection and Fire Prevention, 1932-'33:	430.00	429.49	.51
4X436	Roads and Trails in National Parks, no year:	27,745.34	23,472.74	4,272.60

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

July 6, 1933.

MEMORANDUM FOR THE PRESS

BY
E. P. LEAVITT, SUPERINTENDENT

HAWAII NATIONAL PARK, July ____. During the summer months the educational department of Hawaii National Park is conducting a program of educational-recreational activities for park visitors. The activity program includes illustrated lectures on the natural features of the park and vicinity, and conducted auto tours and hikes to various interesting places in the park. Park Naturalist John E. Doerr, Jr., will be in charge of the program and will personally conduct many of the hikes and tours.

Local people vacationing in the park and vicinity are invited to participate in the educational-recreational activities.

The schedule of activities for the week July 10 to 17 is as follows:

Monday, July 10

9 a.m. Illustrated lecture on volcanoes. For enlisted men visiting at Kilauea Military Camp. At Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. For enlisted men at the Kilauea Military Camp.

DOCUMENT CAPTURED AS RECEIVED

Wednesday, July 12

8:15 a.m. Conducted hike across the floor of Kilauea Crater (World's Weirdest Walk). Party leaves the Volcano House at 8:15, arrives at the fire pit Halemaumau at 10:15. Distance 3 miles. Persons making this hike should arrange to have transportation meet them at the fire pit.

11 a.m. Illustrated lecture on volcanoes. At Uwekahuna Museum.

Thursday, July 13

8 a.m. Conducted auto tour and hike to Mapau Crater. Party hikes from end of the Chain of Craters Road, through luxuriant fern jungle, across 1840 flow containing lava trees, past the remains of an old hoiau and pulu factory, across sulphur beds to the rim of Mapau Crater. Hiking distance 5 miles. Party leaves the Officers' Club of the Kilauea Military Camp at 8 a.m., the Volcano House at 8:10 a.m. 4-hour trip.

Saturday, July 15

8:25 a.m. Conducted auto tour of the park. This short trip is arranged especially for steamer tourists on their way around the island Party leaves the Volcano House at 8:25 a.m. Local people interested in making a tour of the park should refer to the afternoon program below.

10 a.m. Illustrated lecture on volcanoes. At Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. This tour covers 30 miles of road in the park and includes stops at the Thurston Lava Tube, Fern Jungle, Kilauea Iki lookout, several of the craters along the Chain of Craters, Kilauea Crater, and the earthquake cracks in the Kau Desert. Party leaves the Officers' Club of the Kilauea Military Camp at 1 p.m., the Volcano House at 1:15 p.m. 3½-hour trip.

In making auto tours the park can supply transportation to a limited number of people.

The program of educational-recreational activities for the following week will include conducted trips to places other than those listed in the above schedule.

DOCUMENT CAPTURED AS RECEIVED

U. S. DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE

HAWAII NATIONAL PARK

July 13, 1933.

MEMORANDUM FOR THE PRESS

BY

Superintendent.

HAWAII NATIONAL PARK (Special), July ____. During the summer months the educational department of Hawaii National Park is conducting a program of educational-recreational activities for people vacationing in and near the park. The activity program includes illustrated lectures on the natural features of the park and vicinity, and conducted auto tours and hikes to various interesting places in the park. Park Naturalist John E. Doerr, Jr., has charge of the activities and will personally conduct many of the hikes and tours.

The park staff is very eager to have island people vacationing in the vicinity of the park participate in these activities.

The schedule of activities for the week July 17 to 24 is as follows:

Monday, July 17

9 a.m. Illustrated lecture on volcanoes. For enlisted men visiting at the Kilauea Military Camp. At Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. For enlisted men at the Kilauea Military Camp.

DOCUMENT CAPTURED AS RECEIVED

Wednesday, July 19

8:15 a.m. Conducted hike across the floor of Kilauea Crater (World's Weirdest Walk). Party leaves the Volcano House at 8:15; arrives at the fire pit at 10:15. Distance 3 miles. Persons making this hike should arrange to have transportation meet them at the fire pit.

11 a.m. Illustrated lecture on volcanoes. At Uwekahuna Museum.

Thursday, July 20

8:15 a.m. Conducted auto tour and hike to Bird Park. This trip includes a visit to the koa grove and area of tree molds in the Volcano Golf Course, and a 1½-mile hike in the famous Kipuka Puaulu (Bird Park). Party leaves the Volcano House at 8:15 a.m., the Officer's Club of the Kilauea Military Camp at 8:25. 3-hour trip.

Friday, July 21

1 p.m. Conducted auto tour of the park. This tour covers 30 miles of road in the park and includes stops at the Thurston Lava Tube, Fern Jungle, Kilauea Iki lookout, several of the craters along the chain of craters, Kilauea Crater, and the earthquake cracks in the Kau Desert. Party leaves the Officer's Club of the Kilauea Military Camp at 1 p.m., the Volcano House at 1:15 p.m. 3½-hour trip.

In making auto tours the park can supply transportation for a limited number of people.

The program of educational-recreational activities for the following week will include conducted trips to places other than those listed in the above schedule.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

July 24, 1933.

MEMORANDUM FOR THE PRESS

By E. P. Leavitt
E. P. Leavitt, Supt.

HAWAII NATIONAL PARK, July ___. Following is the program of educational activities in Hawaii National Park during the week July 24-30. This program includes illustrated lectures on the natural features of the park and vicinity, and conducted hikes and auto tours to many interesting places in the park. The public is invited to attend the activities.

Monday, July 24

9 a.m. Illustrated lecture on volcanoes. For enlisted men visiting at the Kilauea Military Camp. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. For enlisted men at Kilauea Military Camp.

Wednesday, July 26

8:15 a.m. Conducted hike across the floor of Kilauea Crater (World's Weirdest Walk). Party leaves the Volcano House at 8:15, arrives at the fire pit at 10:15. 3-mile hike. Those making this trip should arrange to have return transportation meet them at the fire pit.

11 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

DOCUMENT CAPTURED AS RECEIVED

Thursday, July 27

8:15 a.m. Conducted auto tour and hike to Hauna Iki and the 1790 foot-prints in the Kau Desert. 4½-mile hike. Party leaves the Volcano House at 8:15, the Officers' Club of the Kilauea Military Camp at 8:20. 3½-hour trip.

Saturday, July 29

8:25 a.m. Conducted short auto tour of the park. This tour is arranged particularly for Inter-Island passengers making the two-day tour of the island.

10 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. This trip covers 30 miles of roads including stops at the Thurston Lava Tube, Fern Jungle, Kilauea Iki, several of the craters along the Chain of Craters, Kilauea Crater and fire pit, and the earthquake cracks in the Kau Desert. Party leaves the Officers' Club of the Kilauea Military Camp at 1:00, the Volcano House at 1:15. 3½-hour trip.

On the above scheduled auto tours the park can furnish transportation for a limited number of people.

The park is eager to have just as many island people as possible attend these programs of educational recreation. The program varies from week to week.

DOCUMENT CAPTURED AS RECEIVED

UNITED STATES
DEPARTMENT OF THE INTERIOR
NATIONAL PARK SERVICE
HAWAII NATIONAL PARK
HAWAII

OFFICE OF THE SUPERINTENDENT

July 26, 1933

MEMORANDUM FOR THE PRESS

By _____
E. P. Leavitt, Supt.

HAWAII NATIONAL PARK, July ___ (Special). Following is the program of educational-recreation activities in Hawaii National Park during the week July 31 to August 6. This program includes illustrated lectures on the natural features of the park and vicinity and conducted hikes and auto tours to many interesting places in the park. The public is invited to attend these activities.

Monday, July 31

9 a.m. Illustrated lecture on volcanoes. For enlisted men visiting at the Kilauea Military Camp. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. For enlisted men at Kilauea Military Camp.

Wednesday, August 2

8:15 a.m. Conducted hike across the floor of Kilauea Crater (World's Weirdest Walk). Party leaves the Volcano House at 8:15, arrives at the fire pit Halemaumau at 10:15. 3-mile hike. Those making this trip should arrange to have return transportation meet them at the fire pit.

11 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

DOCUMENT CAPTURED AS RECEIVED

Thursday, August 3

8:15 a.m. Conducted auto tour and hike to Bird Park (Kipuka Puaulu). This trip includes a visit to the grove of koa trees and the area of large tree molds in the Volcano Golf course, as well as a 1½-mile hike through Bird Park. Party leaves the Volcano House at 8:15, the Officers' Club of the Kilauea Military Camp at 8:30. 3-hour trip.

Saturday, August 5

8:25 a.m. Conducted short auto tour of the park. This tour is arranged particularly for Inter-Island passengers making the two-day tour of the island.

10 a.m. Illustrated lecture on volcanoes. Uwekahuna Museum.

1 p.m. Conducted auto tour of the park. This trip covers 30 miles of roads, including stops at the Thurston Lava Tube, Fern Jungle, Kilauea Iki, several of the craters along the Chain of Craters, Kilauea Crater and fire pit Halemaumau, and the earthquake cracks in the Kau Desert. Party leaves the Officers' Club of the Kilauea Military Camp at 1:00, the Volcano House at 1:15. 3½-hour trip.

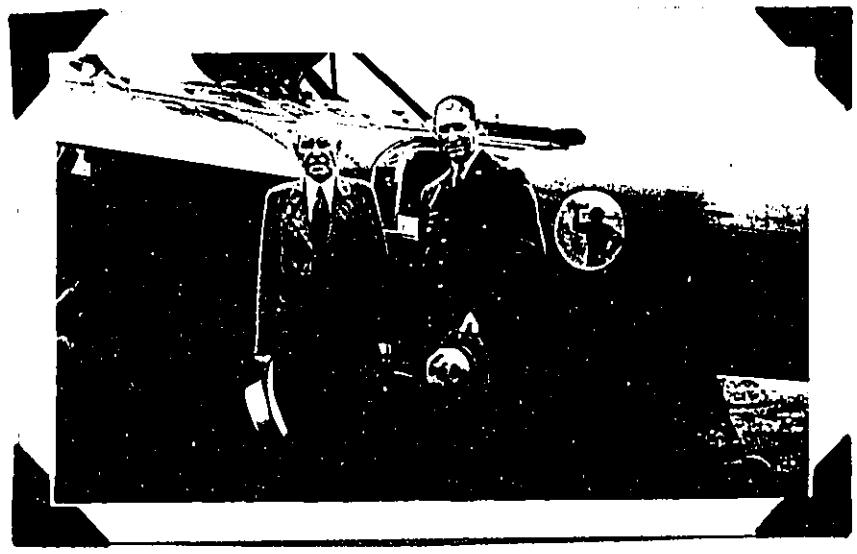
On the above scheduled auto tours the park can furnish transportation for a limited number of people.

The park is eager to have just as many island people as possible attend these programs of educational recreation. The program varies from week to week.

DOCUMENT CAPTURED AS RECEIVED

Ranger J. B. Fordyce and family just prior to boarding the Army Transport Frank at Hilo for Honolulu, en route to new assignment at General Grant National Park. Left to right: Jack, Mildoss, Mrs. Fordyce, Ranger Fordyce. Photo by Clk.-Sten.Hodges July 18, 1933.

DOCUMENT CAPTURED AS RECEIVED



Above: Hon. Edward T. Taylor, of Colorado, Chairman of Interior Department Appropriation Committee, at Hilo Airport, with Superintendent Leavitt.

Below: Left to right: Gordon Scruton, executive secretary of Chamber of Commerce of Hilo; Col. Dougherty, commanding Army Transport Republic, on which Congressional party traveled to Honolulu; Superintendent E. P. Leavitt; Congressman Taylor; Delbert E. Metzger, candidate for Governor of Hawaii; D. A. Devine, member of Territorial Legislature.

Photos by Park Naturalist Doerr, July 20, 1933.

DOCUMENT CAPTURED AS RECEIVED

Kilauea Summer School faculty and students. Dean B. O. Wist, in charge, on extreme left end second row; Miss Jarrett, geography instructor, in front of him (with spectacles); Austin E. Jones, geology instructor, left end of back row; Theo. C. Zschokke, botany instructor, squatting; Dr. Coale, English instructor, second from right end front row. Photo by Volcano Photo Studio. July 1933.

DOCUMENT CAPTURED AS RECEIVED

DOCUMENT CAPTURED AS RECEIVED

The Volcano Letter

No. 399—Monthly U. S. Geological Survey, Hawaii National Park MAY, 1933

KILAUEA REPORT FOR MAY, 1933

Including weekly press reports 1111 to 1115, April 30 to June 4, midnight.

Section of Volcanology, U. S. Geological Survey
T. A. Jaggar, Volcanologist in Charge

Volcanology

No renewed lava outpouring has appeared in Hawaii. The last such activity was in Halemaumau pit in January 1932. At this pit within Kilauea crater at 8 a. m. May 6 there was trickling of rock fragments down the inner walls. On May 10 fresh scars from a slide were found on the east wall. The fall of rocks had occurred during the preceding night, and at the ends of old rim cracks on top, fresh hair cracks had developed in the soil. One rock was heard to fall in the morning. During the third week a slide fell from the west wall, where there had been little motion for several months past. Slight slides continued. June opened with only the promise based on statistics, that activities during this century have averaged once a year, and now a year and a half of quiet have gone by.

Weekly measurement of twenty-seven rim cracks around Halemaumau yielded the following results: May 6, 5 cracks opened slightly, 1 closed a half-millimeter, net aggregate opening 3 mm, mostly southeast; May 13, 10 opened and three closed, aggregate opening 4.5 mm; May 20, 15 opened and 4 closed, aggregate opening 12 mm; May 27, 8 opened and 2 closed, aggregate opening 4 mm; on May 30 a crack on the northeast rim had opened ½ mm in three days; June 3 the weekly measurement showed 15 opened and 3 closed, making net opening 9.5 mm. All this work is directed by Engineer Wingate.

T.A.J.

Earthquakes Recorded.

TABLE

Number of minutes of tremors; very feeble and feeble local earthquakes; teleseisms or distant earthquakes; local seismicity index described in Volcano Letter 371.

Week ending	tr.	v. f.	f.	tel.	seis.
May 7	32	4	0	2	10.00
May 14	39	3	2	0	13.25
May 21	27	5	0	0	9.25
May 28	33	6	1	0	8.00

Hawaiian Standard Time is 10h. 30m. slower than Greenwich.

The following locations of earthquake origins were derived seismometrically from measured seismograms of the four principal stations on Hawaii, Kilauea, Kona, Waikii and Hilo; 3:50 p. m. May 2 under the divide between Mauna Loa and Hualalai; 7:30 p. m. May 9, felt moderately at Puu Ulaula rest house on northeast rift of Mauna Loa, 5 to 12 statute miles deep under that part of the mountain; 6:54 p. m. May 17 a shock felt at Hakalau, on the northeast coast of Hawaii, under a point about 1 mile out to sea from that village, and 15 miles deep. A very feeble shock May 20 was located under the northeast rift of Mauna Loa. A shock 0:21 a. m. May 24, felt at Honokaa, was located on the west shoulder of Mauna Kea, Lat. 19 degrees 49 minutes N., Long. 155 degrees 37 minutes W.

Other local earthquake centers were as follows: 7:31 a. m. May 24, felt at Honokaa, Lat 20 02 N. Long 155 31 W, 3 miles deep, halfway between Mauna Kea and the ocean to the north; 7:48 a. m. May 25, very feeble, Lat 19 55 N, Long 155 35 W, under the northwest shoulder of Mauna Kea, and not over 5 miles deep; 11:38 a. m. May 27, feeble and felt at Kilauea Observatory, Lat 19 27.5 N, Long 155 27.5 W. under a point half way between Kilauea Crater and the Mauna Loa crater, 7 miles deep; 1:47 a. m. May 28, felt at Holualoa in North Kona, approximately at sea off Keauhou Bay.

The distant earthquakes, only partially recorded, beginning 8:37 a.m. May 1, and 6:00 p. m. May 4, were from unknown locations. Microseismic motion was mostly subnormally light for the month, becoming normal at the beginning of the second, and throughout the third week in May.

A.E.J.

Tilting of the ground

The Table of Tilt shows the net tilt by weeks, as computed from seismograms at the Kilauea Observatory, and from clinoscope readings at Halemaumau southeast. The table represents the tipping of the ground, in seconds of arc, in the direction given; the total accumulated tilt in the year since May 28, 1932 at the Observatory has been 7.8" south, and 4.0" west.

TABLE OF TILT

Date	Observatory	Halemaumau
May 1 - May 7	1.0" WSW	1.3" NNE
May 8 - May 14	0.3" SW	0.9" SSE
May 15 - May 21	1.8" NE	4.9" NW
May 22 - May 28	0.8" WNW	0.0

Halemaumau readings for May show exceptional quiet as compared with other months; the following is a comparison of net tilt by months at Halemaumau southeast, and average rim crack openings by months for the whole 27 marked crack points. If these figures show anything, it is that the crack widening lags behind the tilts. The tilt movements notably alternate between northerly and southerly.

Average crack opening	Halemaumau	Tilt by months
Jan. 0.0160 Cm	8.3 seconds	NNE
Feb. 0.0170	23.2	SW
Mar. 0.0310	18.1	NE
Apr. 0.0260	6.0	SW
May 0.0235	5.0	SW

Spirit Level Changes at Halemaumau

Levelling executed June 12, 1933 for comparison with similar measurements December 31, 1932, giving differences of elevation of points near Halemaumau relative to the datum station Spit southeast of Kilauea Crater resulted as follows; elevation of Spit 3646.93 feet:—

BM Seis June 12	plus (up)	0.02	foot
BM No. 1, Tourist June 12	minus (down)	0.05	"
BM Beggar " "	"	0.03	"
BM NE Pit " "	"	0.08	"
Crack point No. 18 " "	"	0.33	"

The accumulated tilt at the clinoscope of Halemaumau SE (BM Seis above) between December 31 and May 31 was 4.2 seconds of arc SW.

Triangulation in Puna

Field observations over the Puna Triangulation net were completed May 28th. Favorable weather aided the work, and seventeen stations were occupied between May 16 and May 28. Unchecked notes indicate a triangle closure of about 2.1 seconds for 39 triangles. A complete report on the survey will be prepared for June Volcano Letter.

E.G.W.

DOCUMENT CAPTURED AS RECEIVED

The Volcano Letter

No. 400—Monthly U. S. Geological Survey, Hawaii National Park JUNE, 1933

KILAUEA REPORT FOR JUNE, 1933

Including weekly press reports 1116 to 1119, June 4 to July 2, midnight

Section of Volcanology, U. S. Geological Survey
T. A. Jaggar, Volcanologist in Charge

Volcanology

Levels run about northeast rim of Halemaumau June 12 showed that the rim had generally lowered, less than one-tenth foot, since December 31, 1932. Weekly measurement of the 27 rim cracks at Halemaumau gave the following:—June 10, 7 points not more than ½ mm each. Two cracks forming a crescent block on the rim south and southwest, about 500 and 800 feet long, showed fresh hair fissures in the soil. June 12 similar cracks were found 100 to 150 feet back from the east and northeast rim. June 17 eleven points showed widening of 1½ mm or less, nine of these being at the east. Aggregate opening for all cracks was 7 mm. June 24 eight cracks had widened 1½ mm or less, mostly southeast, aggregate opening 5 mm. July 1 six points opened only a half millimeter each.

T.A.J.

Earthquakes

TABLE

Number of minutes of tremor, very feeble, feeble, and slight earthquakes; teleseisms or distant earthquakes; local seismicity index as described in Volcano Letter 371.

Week ending,	tr.	v. f.	f	sl.	tel.	seis.
June 4	26	3	0	0	0	8.00
June 11	56	4	1	0	0	17.00
June 18	49	3	0	0	1	13.75
June 25	32	3	2	0	1	11.50
July 2	78	2	0	2	1	25.00

Hawaiian Standard Time is 10h. 30m. slower than Greenwich.

The teleseisms were only partly recorded.

Tilting of the ground

The Table of Tilt shows the net tilt by weeks, as computed from seismograms at the Kilauea Observatory, and from clinoscope readings at Halemaumau southeast. The table represents the tipping of the ground, in seconds of arc, in the direction given; the total accumulated tilt in the year since July 2, 1932 at the Observatory is 4.9" south and 2.2" west.

TABLE OF TILT

Date	Observatory	Halemaumau
May 29 - June 4	0.3" NE	1.4" N
June 5 - June 11	0.4" NW	2.7" S
June 12 - June 18	0.8" NNE	11.0" N
June 19 - June 25	1.0" NNE	10.8" NNE
June 26 - July 2	0.9" N	6.4" NNE

E.G.W.

PUNA TRIANGULATION

Prof. C. Tsuboi, writing in the 'Bulletin of the Earthquake Research Institute, Tokyo Imperial University, Vol. VI, March 1929 an 'Interpretion of the Results of Repeated Precise Levellings in the Tango District', remarks in the beginning, "In the country of Japan, from which a world-shaking earthquake originates not rarely, the scope of seismology naturally goes further beyond the study of propagation of purely elastic seismic waves and is extended to the investigation of those geophysical phenomena that are characteristic to the localities of the earthquake origin."

Similar studies were initiated by Dr. T. A. Jaggar in 1920, here in Hawaii, when he directed the work of Mr. R. M. Wilson in laying out and measuring the net of triangulation and levels about Kilauea Crater. This net was later re-surveyed by Mr. Wilson and the actual ground movements detected by this survey showed the value of applying engineering methods to the study of volcanic and seismic phenomena.

An expansion, by means of similar surveys, into known seismic belts on this island had been long contemplated, only a shortage of funds preventing an earlier beginning. The northeast rift of Kilauea, at its eastern end, was selected for the initial expansion. This section has had volcanic and seismic activity upon four occasons within the last hundred years. On the accompanying map the localities affected are shown by the date of occurrence.

The northeast rift of Kilauea is not a ridge but is a

The following locations are of local earthquakes well recorded at three or more seismograph stations on the Island or Hawaii.

Date	time	lat. N.	long. W.	depth	remarks
June 7	10;38 a.m.	19°;53'	155°;17'.5	10 mi.	not reported felt. S. of Ookala, W. of Hakalau.
June 9	4;55 p.m.	19°;26'.5	155°;42'.5	0 mi.	sharply felt. M. Loa, SW of summit, under 1851 lava flow.
June 15	6;26 p.m.	19°;36'	155°;16'	2 mi.	not reported felt. M. Loa NE rift.
June 19	7:33 p.m.	19°;12'.5	155°;25'	5 mi.	not reported felt. Kilauea SW rift.
June 20	0;32 p.m.	19°;26'	155°;16'.5	2 mi.	not reported felt. under Kilauea.
June 22	8;33 p.m.	20°;03'	155°;33'	7 mi.	felt by several. Mana, SW of Honokaa
June 25	1;15 a.m.	19°;24'	155°;15'	1 mi.	not reported felt. SE of Kilauea.
June 29	0;44 a.m.	19°;40'	155°;48'	0 mi.	moved furniture damaged stone wall. Hualalai shock.
July 2	7;47 a.m.	under Kilauea			not reported felt.

Depths are in statute miles below sea level. The microseismic motion was normal June 30 being subnormal or light during the remainder of the time covered by this report.

DOCUMENT CAPTURED AS RECEIVED

series of earthquake cracks, cinder cones, and pit craters, extending along the shoulder of a slope to the south and seaward, which begins at Kapoho and gradually becomes steeper to the west. Faulted cliffs appear to the westward of Kalapana. To inland, or north, there is but little slope away from the rift. The whole area is more or less densely covered with a low-level semitropical forest. At Pahoa, Kapoho, and Kaueleau are cane fields of the Olaa Sugar Co. The lava flow of 1840 followed a course eastward roughly paralleling the rift on the north. North from this flow the country rapidly changes to a grass-covered pahoehoe plain, with a thin growth of Ohia Lehua.

Reconnaissance was begun in January and together with the clearing of trails and lines of sight, the marking of stations, and the erecting of signals, consumed about four-fifths of the working time.

Existing triangulation, in this section of the Puna District, was fragmentary, being confined to four stations on the rift, with some six additional points along the shore, none of which had been determined through figures of any great strength.

The problem in laying out the new net was to get at least two stations, to the north of the rift and the last known cracks, so located as to serve, in a future re-survey, as a probably undisturbed base for computations. All of the stations along the rift, as well as those on the shore, are considered subject to change through volcanic and seismic causes. It was also desirable, with the instruments available, to hold the length of sights to a maximum of ten and a minimum of two miles. Two suitable points were finally found and are represented by the stations 'Makuu' and 'Kokoolau'.

Of the existing stations, listed in U. S. C. & G. S. Special Publication No. 156, only two were found unsuitable for use. The station 'Kamaili' was so located that no sight of sufficient length could be taken to the east, and 'Sand Hill', a cinder cone at the sea end of the 1840 lava flow, is gradually peeling off into the sea.

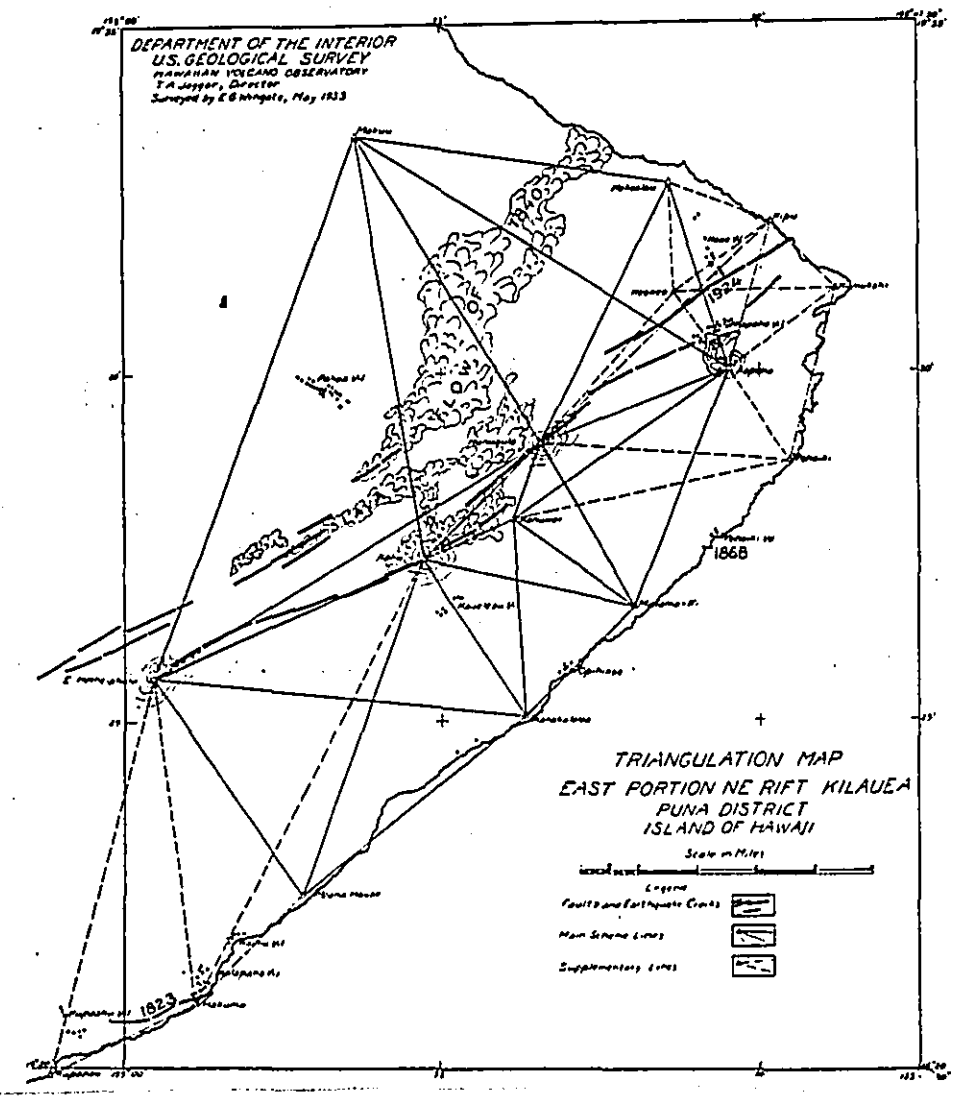
Two towers, of thirty and forty feet in height and of permanent construction, were erected under contract at stations 'Kanakaloloa' and 'Kokoolau' respectively. The observers' platform and scaffold were built around a separate, inner tripod to support the instrument.

The signals at E. Heiheiahulu, Kaliu, and Kapoho were of the new type adopted by the Hawaiian Territorial Survey and are described in 'Special Pub. No. 156' above. All other signals were 2x2 inch poles surmounted by cross targets of light weight galvanized iron, two feet square, painted in two colors, yellow and red. The signals were carefully centered by plumb line and all were erected within five days of the first observations.

The area surveyed was approximately ninety-five sq. miles and due to very favorable weather conditions all observations were completed in eleven days. A 'Berger' direction-transit graduated to 20 seconds, was used and the angles were read by repetition, six repetitions with the telescope direct, and six reversed. The horizon angle was similarly observed.

Twenty triangles in the main scheme had an average closure of 01.8 seconds, plus or minus and eighteen supplementary triangles closed with an error of 02.3 seconds, plus or minus.

The line, of existing triangulation, E. Heiheiahulu-Kaliu was adopted as a base for the present work as it appeared to be the line least subject to disturbance since last measured in 1914.



Computation of the length through the main scheme by two separate chains of triangles adjusted only within themselves gives a closure in in the order of one part in 40,000. Every line, however, in the present survey is subject to the same errors inherent in the line of older triangulation chosen as a base, which was probably of third order accuracy.

Limited funds prohibited the measurement of a base and for the same reason the existing figures about Hakuma and Kupapau were not strengthened. The total field work cost an average of $73.00 a station.

The work was greatly facilitated by the courteous cooperation of officials of The First Trust Co. of Hilo and the Bernice P. Bishop Estate of Honolulu in permitting the erection of permanent towers on their property, and of Mr. Richard Lyman of the Olaa Sugar Co., in allowing the clearing of trees from certain lines of sight. Funds for the erection of the two towers were voted by the Board of Directors, Hawaiian Volcano Research Association, without which the survey as completed would have been impossible.

Complete records of the field observations have been furnished the Hawaiian Territorial Survey and the engineer of the Bernice P. Bishop Estate.

E.G.W.

DOCUMENT CAPTURED AS RECEIVED

VOLCANO SUMMER SESSION, 1933

STUDENT QUESTIONNAIRE

The University of Hawaii and the National Park Service are much encouraged over their joint endeavor to provide educational opportunity for teachers and others by means of the Volcano Summer Session. It is the desire of both that this project will grow and become increasingly worth-while. The policy is to interest persons not only in this vicinity but also from the other islands and the mainland. In order to formulate plans for future expansion, it is desirable to have expressions of opinion from the student personnel. This questionnaire is designed to serve this purpose. Each registrant is requested to fill out this form fully and frankly. Space is provided for suplementary information not covered by the questions asked. The name of the registrant will not be used if he has any objections.

Benj. O. Wist
Director, Volcano Summer Session

E. R. Lewis
Superintendent, Hawaii National Park

I - COURSES:

1. Are the courses offered this summer too limited in numbers ? Yes .... No ....

2. Check below the fields in which you recommend that courses should be offered. Bear in mind (a) the advantages and disadvantages of the location, and (b) the limitations as to library and other facilities. Space is provided for the listing of specific courses under the general heading, ie: History of Education under Education, Adult Literature under English etc., etc. Check in proper spaces the purpose of course proposed, ie: General Background, professional, primary, elementary, intermediate or high school.

FIELD	BACKGROUND	PROFESSIONAL	PRIMARY	ELEMENTARY	INTERMEDIATE	H.S.
(a) Agriculture ..						
.....						
.....						
.....						
(b) Anthropology .						
.....						
.....						
.....						

DOCUMENT CAPTURED AS RECEIVED

FIELD	BACKGROUND	PROFESSIONAL	PRIMARY	ELEMENTARY	INTERMEDIATE	H.S.
(c) Art						
.....						
.....						
.....						
(d) Botony						
.....						
.....						
.....						
(e) Economics						
.....						
.....						
.....						
(f) Education						
.....						
.....						
.....						
(g) English						
.....						
.....						
.....						
(h) Geography						
.....						
.....						
.....						
(i) Geology						
.....						
.....						
.....						
(j) Health Education						
.....						
.....						
.....						
(k) History						
.....						
.....						
.....						
(l) Mathematics ..						
.....						
.....						
.....						

DOCUMENT CAPTURED AS RECEIVED

FIELD	BACKGROUND	PROFESSIONAL	PRIMARY	ELEMENTARY	INTERMEDIATE	H.S.
(m) Music						
.....						
.....						
(n) Nature Study .						
.....						
.....						
(o) Political Science						
.....						
.....						
(p) Psychology ...						
.....						
.....						
(q) Sociology						
.....						
.....						
(r) Social Science						
.....						
.....						
(s) Others						
.....						
.....						
.....						
.....						
.....						

II - TIME:

1. Would you approve of a full quarter of work (12 weeks) at the Volcano Session if organized as two 6-weeks session, thus permitting the student to attend either session or both ? Yes..... No.....

2. If only one 6-weeks session is offered, should it be held (a) Immediately after the close of the regular school year ..... (b) In the middle of the summer ..... (c) Immediately before the opening of school in the fall .... ?

3. Should the Volcano Session run concurrently with the Honolulu Summer Session ? Yes ..... No .....

4. If given the preference, would you prefer (a) A six weeks seesion of five days a week ..... (b) a five weeks session of six days a week ..... ?

5. Suggestions not covered by above questions .....

DOCUMENT CAPTURED AS RECEIVED

III - PHYSICAL FACILITIES:

1. Are the present classroom facilities reasonably acceptable ? Yes.... No....

2. Would the present provisions at the Summer Camp be more suitable ? Yes... No...

3. Would the use of the Keakealani School building prove of advantage? Yes... No...

4. What are the main objections to the present classroom accomodations ?
(a) Size..... (b) Seating ..... (c) Light ..... (d) Heat .....
(e) Noise ..... (f) Blackboards ..... (g) Other Equipment .....
(h) Comments:

5. General Suggestions for the improvement of classroom accomodations:

IV - LIVING ACCOMODATIONS:

1. Considering the modest charges, are the Hotel accomodations satisfactory ?
Yes ..... No .....

2. What improvements can you suggest:

3. What suggestions can you make as to menu and food service:

4. If the session were held at the Summer Camp, would the present accomodations prove reasonably satisfactory ? Yes ..... No .....

5. What improvements to the Summer Camp facilities would have to be made to make accomodations satisfactory ?

6. Other comments and suggestions relative to living accomodations:

V - LIBRARY SERVICE:

1. Does the present library service meet the needs of students ? Yes... No...

2. Are the library quarters satisfactory ? Yes ..... No .....

3. Are the reading and study room quarters satisfactory ? Yes.... No.....

4. Do the number and type of books in the library meet the needs ? Yes... No...

5. Do the library hours meet the needs of students ? Yes .... No .....

6. How may greater cooperation be effected with the Hilo Library ?

7. Other suggestions for improvement of the library service:

DOCUMENT CAPTURED AS RECEIVED

III - PHYSICAL FACILITIES:

1. Are the present classroom facilities reasonably acceptable ? Yes.... No....

2. Would the present provisions at the Summar Camp be more suitable ? Yes... No...

3. Would the use of the Keakealani School building prove of advantage? Yes... No...

4. What are the main objections to the present classroom accomodations ?
(a) Size..... (b) Seating ..... (c) Light ..... (d) Heat .....
(e) Noise ..... (f) Blackboards ..... (g) Other Equipment .....
(h) Comments:

5. General Suggestions for the improvement of classroom accomodations:

IV - LIVING ACCOMODATIONS:

1. Considering the modest charges, are the Hotel accomodations satisfactory ?
Yes ..... No .....

2. What improvements can you suggest:

3. What suggestions can you make as to menu and food service:

4. If the session were held at the Summer Camp, would the present accomodations prove reasonably satisfactory ? Yes ..... No .....

5. What improvements to the Summer Camp facilities would have to be made to make accomodations satisfactory ?

6. Other comments and suggestions relative to living accomodations:

V - LIBRARY SERVICE:

1. Does the present library service meet the needs of students ? Yes... No...

2. Are the library quarters satisfactory ? Yes ..... No .....

3. Are the reading and study room quarters satisfactory ? Yes.... No.....

4. Do the number and type of books in the library meet the needs ? Yes... No...

5. Do the library hours meet the needs of students ? Yes .... No .....

6. How may greater cooperation be effected with the Hilo Library ?

7. Other suggestions for improvement of the library service:

DOCUMENT CAPTURED AS RECEIVED

VI - HAWAII NATIONAL PARK SERVICE:

1. Should the summer session be organized so as to make greater use of the National Park Service ? Yes ..... No .....

2. Do you believe that registrants would welcome (a) Organized expeditions under Park supervision ..... (b) Special lectures by Park officials .....?

3. What other opportunities could be provided through the Park Service ?

VII - PUBLICITY:

1. Do you believe that sufficient publicity has been given to the Volcano Summer Session ? Yes ..... No .....

2. How best can the session be given adequate publicity ? (a) Newspaper items ..... (b) *Hawaii Educational Review* ..... (c) *Mimeographed circulars* .... (d) Special printed pamphlet ..... (e) Personal endorsement .....

3. For personal endorsement, would you be willing to (a) permit the use of your name for reference ..... (b) Write a letter which might be used for publicity purposes ..... ?

4. What items of interest and value should be publicized ?

5. Other suggestions:

VIII - RECREATION:

1. In a general way, are there sufficient activities of a recreational nature ? Yes ..... No .....

2. Did you consider the get-together banquet of value ? Yes..... No.....

3. Should it be held earlier in the session ? Yes ..... No .....

4. Should there be more than one such event during the session ? Yes.... No....

5. Should there be a get-together picinic as well ? Yes .... No .....

6. Would weekly evening convocations with good lectures, music and the like prove of interest ? Yes ..... No .....

7. In your opinion, would such convocations be reasonably well attended ? Yes.... No .....

8. Should there be more informal excursions and hikes ? Yes ..... No .....

9. Should the Kona expedition be an annual event ? Yes ..... No .....

10. Should similar expeditions to Kalapana and Kapoho be undertaken ? Yes ..... No .....

DOCUMENT CAPTURED AS RECEIVED

VIII - RECREATION: (Continued)

11. Would special arrangements with the Golf Club for reduced greens fees (a) Attract attendents ..... (b) Stimulate recreation .....

12. Should attempts be made to organize some competitive sports, ie: barnyard golf ? Yes ..... No .....

13. What could be done by the Hotel management to provide evening recreation for student guests ?

14. Other suggestions for recreation:

_____(signature)

_____(School)

_____(Address)

DOCUMENT CAPTURED AS RECEIVED

Biological Seminar

Dean Hall 2

Polynesian Dye Plants and Dyes

Don Mitchell

I Distinction between the organic dyestuffs used by the Polynesians.

1. Dyes which stain the entire fiber or fabric.
2. Paints or pigments for surface decoration.
3. Mordants which aid in fixing the colors.

II Organic dyes used by the Polynesians were:

1. Stains for tapa, nets, and other cordage.
2. Paints for tapa, body decoration, and some decoration of wood.
3. Pigments for tatooing.

III Methods of preparing dyes from raw materials.

1. Most dyes were extracted by infusion.
2. Some colors were probably extracted by stone boiling.
3. Burning seeds or stems produced soot for some dyes.
4. Water, vegetable oils, and plant juices were used as solvents and dye bases.

IV Importance of the study of Polynesian dyes:

1. Economically of little importance as modern chemistry has produced synthetic dyes.
2. The ethnobotanist notes the Polynesian's remarkable knowledge of his flora.
3. Polynesian voyages and migrations may be traced through plant distribution.
4. Similar names and uses of plants confirm relationships between Polynesians.

V Some dye plants of Hawaii, Samoa, and Tahiti.

See chart on following pages.

- - - - - -

Literature

1. Ball, Stanley C., 1924 Museum Handbook Part II Clothing. Special Publication 9.

2. Brigham, Wm. T., 1911, Ka Hana Kapa. Bishop Museum Memoir Volume III.

3. Bryan, Wm. A., 1915, Natural History of Hawaii. Index for references.

DOCUMENT CAPTURED AS RECEIVED

4. Buck, P. H., 1930 (Te Rangi Hiroa), Samoan Material Culture. Bishop Museum Bulletin 75.

5. Degener, Otto, 1930, Plants of Hawaii National Park. Honolulu Star-Bulletin.

6. Hillebrand, 1888, Flora of Hawaiian Islands.

7. Judd, Albert F., Plants. Mimeographed paper prepared for the Senior Class at Kamehameha in Ancient Hawaiian Civilization.

8. Lowry, Mrs. Jenny, Waichinu, Hawaii. Unpublished manuscripts on Hawaiian dyes. Exhibit at the Territorial Fair, Honolulu, April 30 to May 5, 1928.

9. Pope, Willis T., 1929. Wayside Plants of Hawaii. Advertiser Publishing Company, Honolulu.

10. Rock, Joseph F., 1913. Indigenous Trees of the Hawaiian Islands. See index for references.

11. Safford, Wm. E., 1905. The Useful Plants of Guam. Vol. IX of the U. S. National Herbarium.

12. Setchell, W. A., 1924. Ethnobotany of American Samoa. Carnegie Institute Publication Vol. XV, June.

DOCUMENT CAPTURED AS RECEIVED

	Botanical Name	Color	Source of Dye	Hawaiian Name
1.	Abutilon Incanum G. Don	Green	Fresh leaves	Mao
2.	Aleurites moluccana Willd.	Brown	Bark of trunk	Kukui
	" "	Black	Juice of nut find	"
	" "	"	Soot - burned nuts	"
3.	Antidesma platyphyllum Mann.	Red	Berries	Haa
4.	Bischoffia javanica	Red-brown	Bark of tree	
5.	Bixa orellana Linn	Orange-red	Seed pulp	Alaea
6.	Caladium colocasia (1) Wright	Blue-black	Stem, root	Kalo
7.	Calophyllum Inophyllum Linn.	Yellow	Fruit	
	" "	Colorless	Oil from seed	Kamani
8.	Cordia subcordata Lam	Crimson	Leaves, with mati	Kou
9.	Curcuma longa Linn.	Lemon	Root	Olena
10.	Cyanthodes Tameiameiae Cham.	Red	Berries	Puakeawe
11.	Dianella Nemorosa Lam.	Pale Blue	Berries	Uki
12.	Dodonaea eriocarpa Smith	Red	Capsules	Aalii kumakua
13.	" spathulata "	"	"	" kumakani
14.	Eugenia malaccensis Linn.	Crimson	Bark of root	Ohia ai
15.	Ficus tinctoria	Red	Sap	
	"	Scarlet	" with tou leaves	
16.	Gardenia Brighamii Mann.	Yellow	Fruit pulp	Na'u
17.	Gardenia Remyi Mann.	"	" "	Nanu
18.	Gossypium Rockii	Brown	Bark	Kokio
19.	Hibiscus panctatus Populenus	Yellow	Juice of peduncles	
20.	" rosa-sinensis	Black	Sap from flower	
21.	Metrosideros polymorpha Gaud	"	Bark	Ohia ha

DOCUMENT CAPTURED AS RECEIVED

22.	Morinda citrifolia Linn.	Yellow	Bark of root	Noni
	" "	Red	" " stem	"
23.	Musca uranosaptha	Purple	Sap	
24.	Odontosoria chinensis (1) Smith	Red	Stems	Palaa
25.	Ochrosia sandwicensis Gray	Yellow	Bark	Hoolei
26.	Peperomia	Grey	Juice	Alaalawainui
27.	Phytolacca brachstachys Moq.	Red	Berries	Popolo lumae
28.	Plectronia odorata Forst	Black	Leaves	Walahee
29.	Rubus hawaiiensis Gray	Pink	Berry	Akala
30.	Saccharum officianarum L.	Black	Stem charcoal	Ko
31.	Sadleria cyantheoides Kaulf.	Red	Stem	Amaumau
32.	Sisyrinchium acre Mann	Brown	Juice of stem	Maumlaili
33.	Solanum nudiflorum Von J.	Green	Berries, leaves	Popolo
34.	Solanum repandum Forst	Rod	Leaves	
35.	Suttonia Lessertiana A. DC.	"	Bark	Kolea
36.	Tournefortia sericea	"	Leaves	

DOCUMENT CAPTURED AS RECEIVED

END

CERTIFICATION

I HEREBY CERTIFY THAT THE MICROPHOTOGRAPH APPEARING IN THIS REEL OF FILM ARE TRUE COPIES OF THE ORIGINAL DOCUMENTS.

2006
DATE

SIGNATURE OF OPERATOR

DOCUMENT CAPTURED AS RECEIVED

AIIM

Association for Information and Image Management
1100 Wayne Avenue, Suite 1100
Silver Spring, Maryland 20910
301/587-8202

Centimeter

Inches

MANUFACTURED TO AIIM STANDARDS
BY APPLIED IMAGE, INC.

DOCUMENT CAPTURED AS RECEIVED

DENSITY TARGET